

ALMANAQUE NÁUTICO PERSEIS 2019



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Portada: un oficial de la *Royal Navy* usando un sextante a bordo de un destructor en 1942. Imagen de dominio público.

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Introducción

El Almanaque Náutico Perseis proporciona efemérides astronómicas y tablas para su uso en navegación astronómica. Los datos se presentan en un formato similar al del *Almanaque Náutico* editado por el *Real Observatorio de la Armada*.

Su objetivo es educativo: proporcionar información para la resolución de problemas y ejercicios de navegación astronómica así como familiarizarse con el uso del Almanaque Náutico del R.O.A.

El Almanaque está generado usando métodos matemáticos rigurosos y datos fiables, por lo que es de esperar que ofrezca una exactitud comparable a la de los almanaques oficiales, salvo errores en la implementación de los algoritmos de cálculo.

En las primeras páginas del Almanaque se presentan unos datos sobre fenómenos astronómicos del año que pueden ser de interés. Los datos y figuras relativas a los eclipses se deben a Fred Espenak.

En su parte principal, el Almanaque Náutico Perseis incluye páginas diarias con las efemérides tabuladas cada hora del punto Aries, el Sol, la Luna y de los cuatro planetas visibles a simple vista¹: Venus, Marte, Júpiter y Saturno. También incluye tablas anuales de la posición aparente de 99 estrellas tabuladas para el día 15 de cada mes; hora de paso por el meridiano de Greenwich de 50 estrellas seleccionadas para el día 1 de cada mes; tabla anual para el cálculo de la latitud por observación de la altura de la estrella Polar; tabla del azimut de la estrella Polar y tablas de correcciones cuyos valores dependen de la fecha. Excepcionalmente se incluye una tabla de corrección por retardo y longitud, que es invariante con el tiempo con el único fin de mantener el orden y numeración de páginas idéntico al Almanaque Náutico del R.O.A.

Se mantiene el orden y numeración de páginas idéntico al Almanaque Náutico del R.O.A. por que, a veces, en la literatura didáctica española sobre Navegación Astronómica se hace referencia a una determinada página del Almanaque.

Se recomienda la adquisición, al menos una vez, del *Almanaque Náutico* del Real Observatorio de la Armada, que incluye más tablas que pueden aplicarse para cualquier año, una extensa explicación de su uso, otros datos interesantes y además tiene un precio asequible.

Advertencia: Este Almanaque se distribuye con la intención de que sea exacto y útil, pero sin ninguna garantía, por lo que no deben utilizarse en situaciones de navegación real. Se declina cualquier responsabilidad por daños causados por el uso de este Almanaque.

1. No se toma en consideración Mercurio por que, aunque a veces sea visible a simple vista, la escasa altura que adquiere sobre el horizonte no lo hace útil para la navegación astronómica.

Fenómenos astronómicos relevantes

En las siguientes páginas se muestran datos de fenómenos interesantes o curiosos que se producirán en el año.

Inicio de las estaciones

El inicio de las estaciones astronómicas se produce cuando el Sol alcanza su altura máxima, solsticio de verano, o mínima, solsticio de invierno, o cuando la duración del día y la noche son iguales, equinoccios de primavera y de otoño.

En la tabla de la página siguiente muestra el nombre de las estaciones del hemisferio norte. En el hemisferio sur el orden cronológico es otoño, invierno, primavera y verano.

En el siglo XXI, la fecha más tardía de comienzo de las estaciones se produjo en 2003, la fecha más temprana será en 2096.

Órbita terrestre

El punto de mayor acercamiento anual de la Tierra al Sol se denomina perihelio y tiene lugar en los primeros días del año. El mayor acercamiento al Sol del siglo XXI será el 5 de enero de 2020.

El punto de mayor alejamiento anual es el apogeo y se produce en los primeros días de julio. El mayor alejamiento al Sol de este siglo será el 4 de julio de 2019.

Las distancias al Sol se miden en *unidades astronómicas* (ua). 1 ua = 149 597 870 km.

Fases de la Luna

Los puntos culminantes de las fases de la Luna se producen cuando la longitud eclíptica geocéntrica del sol y la Luna forman ángulos de 0° para la luna nueva, 90° para el cuarto creciente, 180° para la luna llena y de 270° para el cuarto menguante.

Eclipses

Los eclipses son fenómenos astronómicos que se producen cuando se interpone un astro entre otros dos. Desde la Tierra es posible ver dos tipos: los eclipses de Sol y los eclipses de Luna. En un año pueden suceder hasta siete eclipses.

Los eclipses de Sol suceden cuando, en Luna nueva, esta se interpone entre el Sol y la Tierra. Pueden ser de tres tipos: eclipse total, cuando la Luna tapa toda la superficie del Sol, para lo que es necesario que el diámetro aparente de la Luna sea igual o mayor que el del Sol y el observador vea alineados ambos astros; eclipse anular, cuando se produce la situación anterior pero el diámetro aparente de la Luna es menor que el del Sol, por lo que queda visible el borde exterior del Sol; eclipse parcial, cuando la Luna tapa una parte del Sol al no coincidir los centros de ambos astros alineados con el observador. Los eclipses totales o anulares solo es posible verlos en una franja de terreno larga pero muy estrecha (de unos 150-200 km de anchura) y durante unos pocos minutos. fuera de esa franja el eclipse se ve como parcial, o, si se está muy alejado, no se vé. El próximo eclipse total de Sol visible desde España será en 2027.

Los eclipses de Luna se producen cuando, en Luna llena, esta pasa por la sombra producida por la interposición de la Tierra. Se distinguen tres tipos de eclipses de Luna: eclipse total, cuando toda la superficie de la Luna pasa por la sombra (umbra) de la Tierra; eclipse parcial, cuando solo una parte del disco lunar pasa por la umbra de la Tierra; eclipse penumbral, cuando la Luna penetra en la zona de penumbra creada por la Tierra pero no llega a entrar en la umbra. La zona de penumbra es un círculo concéntrico con la umbra y de mayor tamaño que esta. Los eclipses totales de Luna son visibles desde grandes zonas de la Tierra (del tamaño de continentes o más), viéndose como parciales en las zonas aledañas o como penumbrales en zonas más alejadas. Durante un eclipse total, la Luna adquiere un tono rojizo debido a la luz difractada por la atmósfera terrestre.

Fenómenos astronómicos relevantes, 2019

Estaciones

<i>Estación</i>	<i>Inicio (hora UT)</i>	<i>Duración (días)</i>
Primavera	20 de marzo a las 21 ^h 58 ^m	92.75
Verano	21 de junio a las 15 ^h 54 ^m	93.66
Otoño	23 de septiembre a las 07 ^h 50 ^m	89.85
Invierno	22 de diciembre a las 04 ^h 19 ^m	88.99

Órbita terrestre

<i>Ápside</i>	<i>Fecha (hora UT)</i>	<i>Distancia (ua)</i>
Perihelio	3 de enero a las 05 ^h 20 ^m	0.983301
Afelio	4 de julio a las 22 ^h 11 ^m	1.016754

Fases de la Luna (hora UT)

<i>Luna Nueva</i>			<i>Cuarto Creciente</i>		<i>Luna Llena</i>		<i>Cuarto Menguante</i>	
día	h	m	día	h m	día	h m	día	h m
6 ene	01:28		14 ene	06:45	21 ene	05:16	27 ene	21:10
4 feb	21:04		12 feb	22:26	19 feb	15:53	26 feb	11:28
6 mar	16:04		14 mar	10:27	21 mar	01:43	28 mar	04:10
5 abr	08:50		12 abr	19:06	19 abr	11:12	26 abr	22:18
4 may	22:45		12 may	01:12	18 may	21:11	26 may	16:33
3 jun	10:02		10 jun	05:59	17 jun	08:31	25 jun	09:46
2 jul	19:16		9 jul	10:55	16 jul	21:38	25 jul	01:18
1 ago	03:12		7 ago	17:31	15 ago	12:29	23 ago	14:56
30 ago	10:37		6 sep	03:10	14 sep	04:33	22 sep	02:41
28 sep	18:26		5 oct	16:47	13 oct	21:08	21 oct	12:39
28 oct	03:38		4 nov	10:23	12 nov	13:34	19 nov	21:11
26 nov	15:06		4 dic	06:58	12 dic	05:12	19 dic	04:57
26 dic	05:13							

Eclipses

- I. Eclipse parcial de Sol, el domingo 6 de enero.
- II. Eclipse total de Luna, el lunes 21 de enero.
- III. Eclipse total de Sol, el martes 2 de julio.
- IV. Eclipse parcial de Luna, el martes 16 de julio.
- V. Eclipse anular de Sol, el jueves 26 de diciembre.

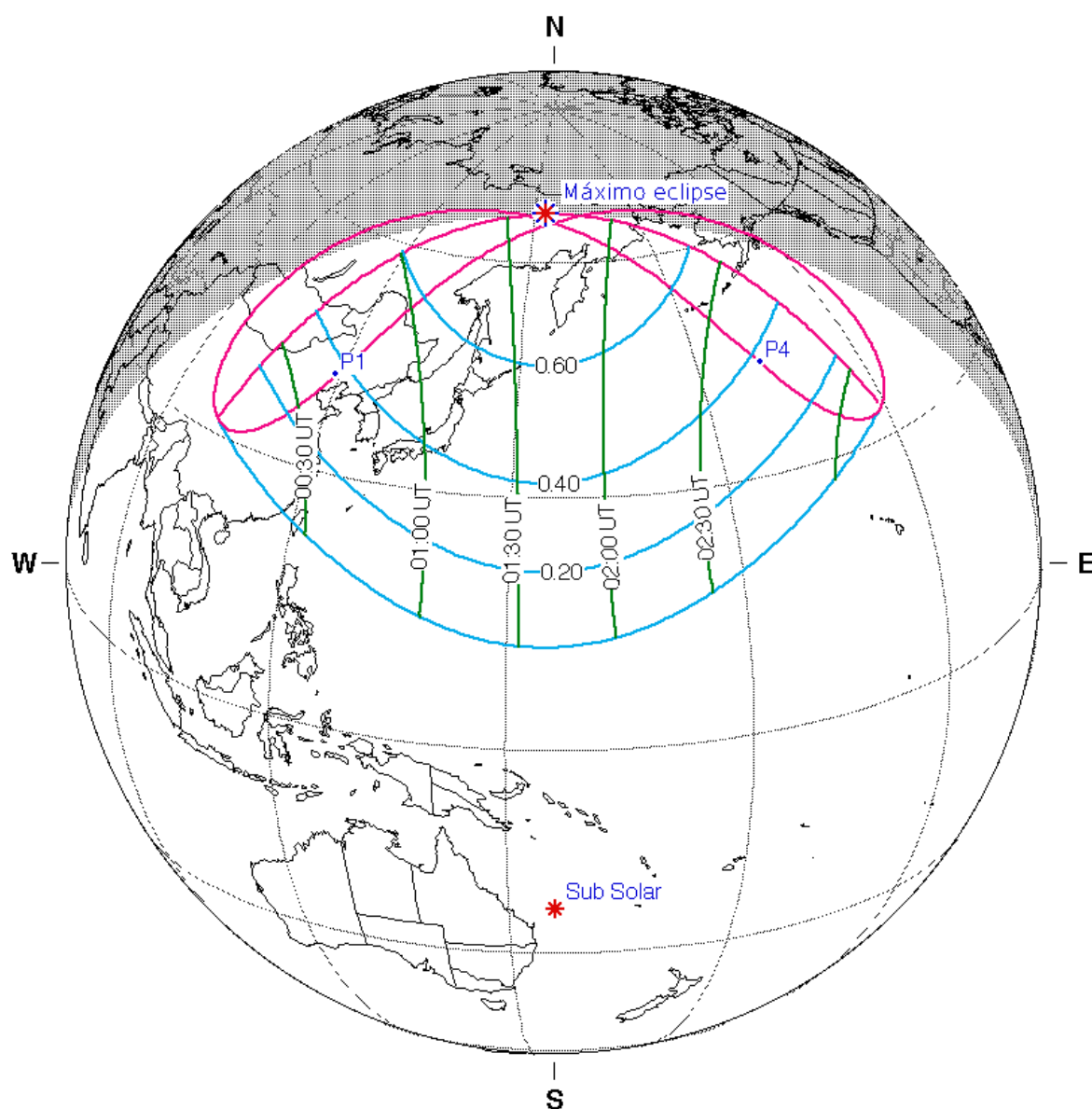
Eclipse parcial de Sol, el domingo 6 de enero

Este eclipse no será visible desde España.

El eclipse será visible en el noreste de Asia y el Pacífico Norte.

Empezará a las 23^h 34^m UT del día 5 de enero y terminará a las 3^h 49^m UT del día 6.

El máximo del eclipse tendrá lugar a la 1^h 41^m UT del día 6.



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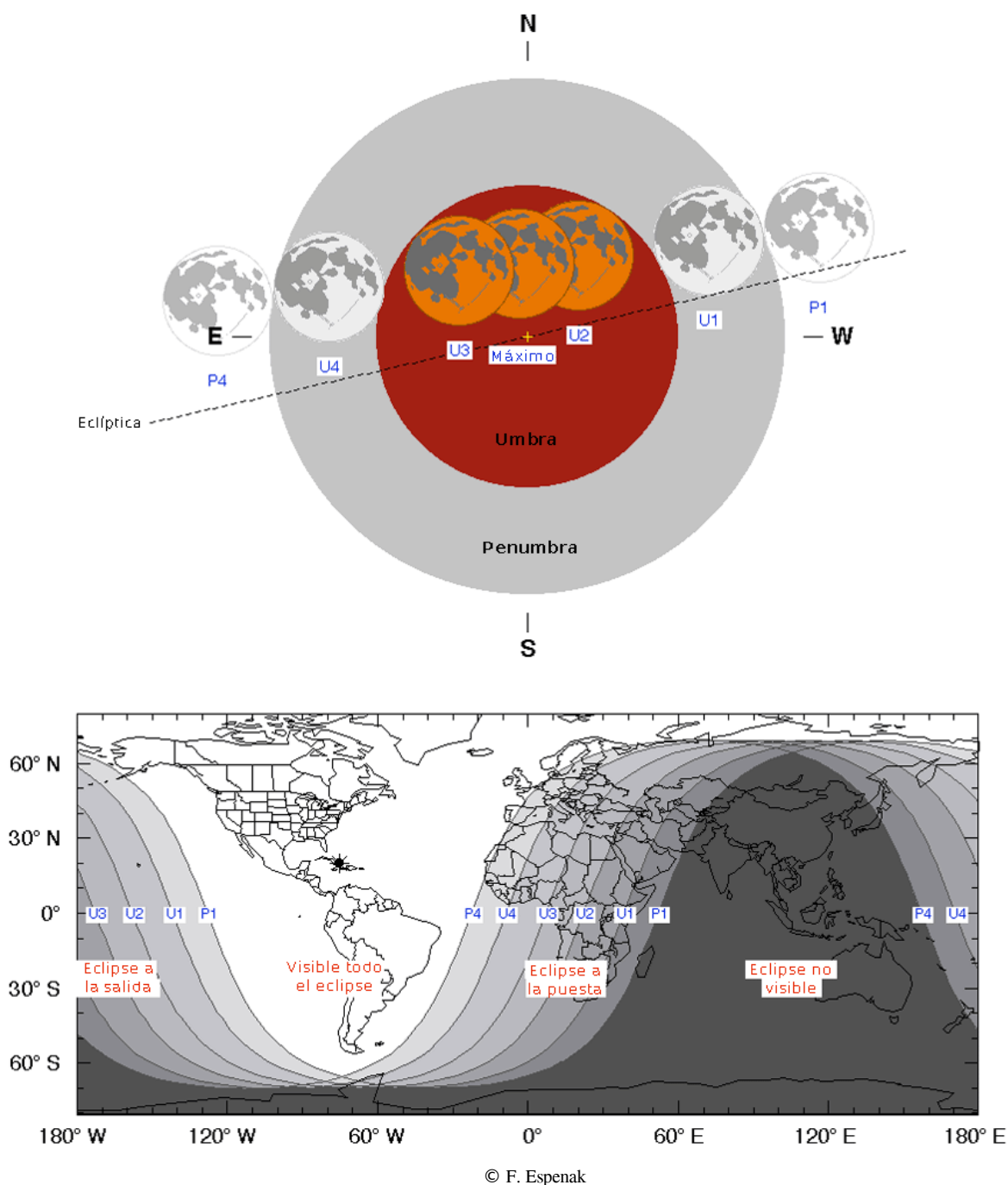
Eclipse total de Luna, el lunes 21 de enero

El eclipse será visible en el Pacífico Central, todo el continente americano, Europa y África.

Será visible desde España como total en la mitad occidental de la península y Canarias y como parcial en el resto.

El eclipse penumbral se iniciará a las 2^h 37^m UT y finalizará a las 7^h 48^m UT. El eclipse parcial se iniciará a las 3^h 34^m UT y finalizará a las 6^h 51^m UT.

El eclipse total comenzará a las 4^h 41^m UT finalizando a las 5^h 43^m UT. El máximo será a las 5^h 12^m UT.

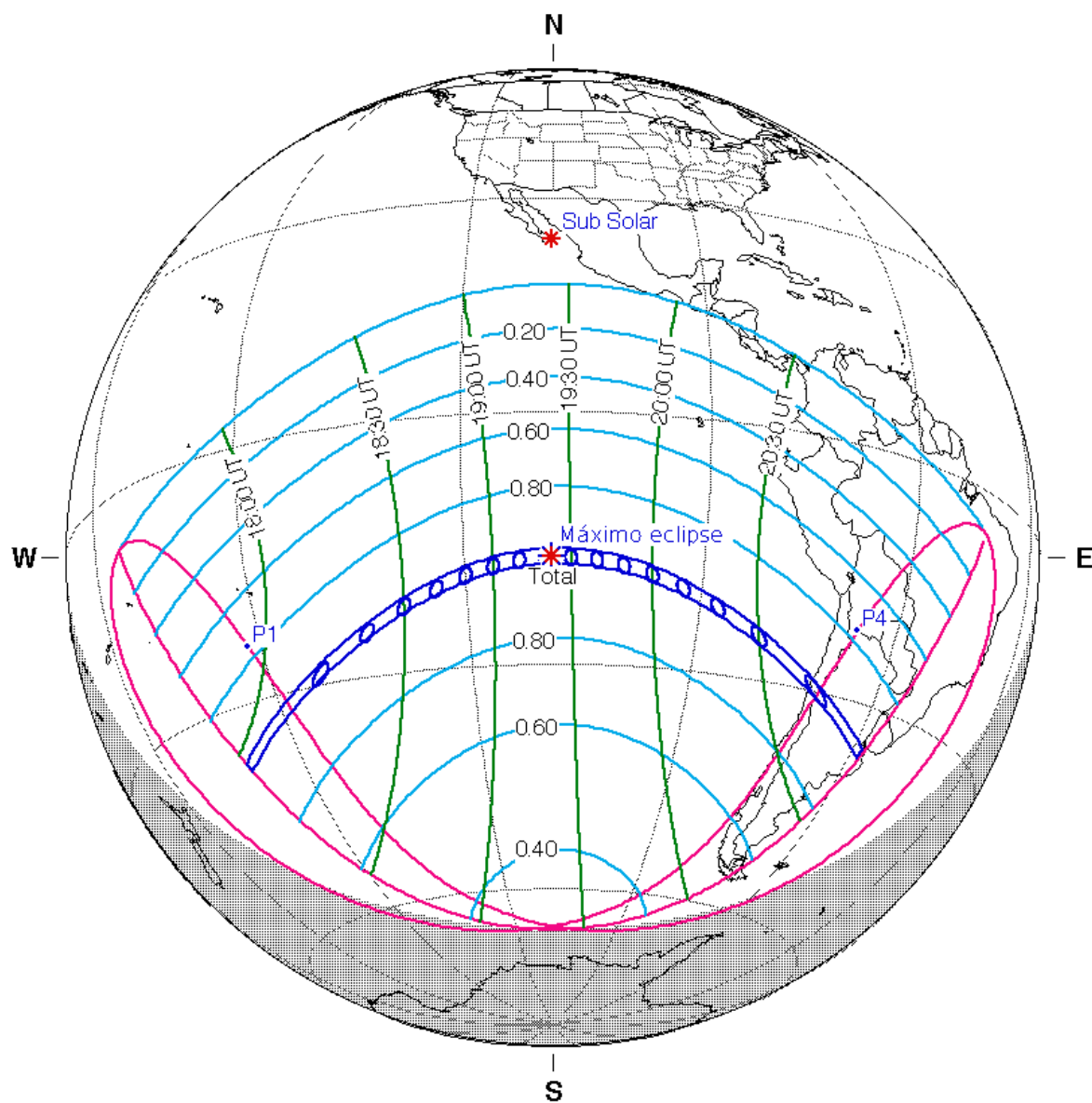


Eclipse total de Sol, el día 2 de julio

Este eclipse no será visible desde España.

El eclipse parcial será visible en el Pacífico Sur y America del Sur. Se iniciará en P1 a las 16^h 55^m UT y finalizará en P4 a las 21^h 51^m UT.

El eclipse total comenzará a las 18^h 03^m UT en el Pacífico Sur, en los 33° S, 151° W, atravesará Chile y Argentina, finalizando en las coordenadas 31° S, 67° W a las 20^h 42^m UT. El máximo será a las 19^h 23^m UT en 18° 23' S, 108° 59' W, donde la anchura de la sombra será de 201 km y la duración 4^m 03^s.



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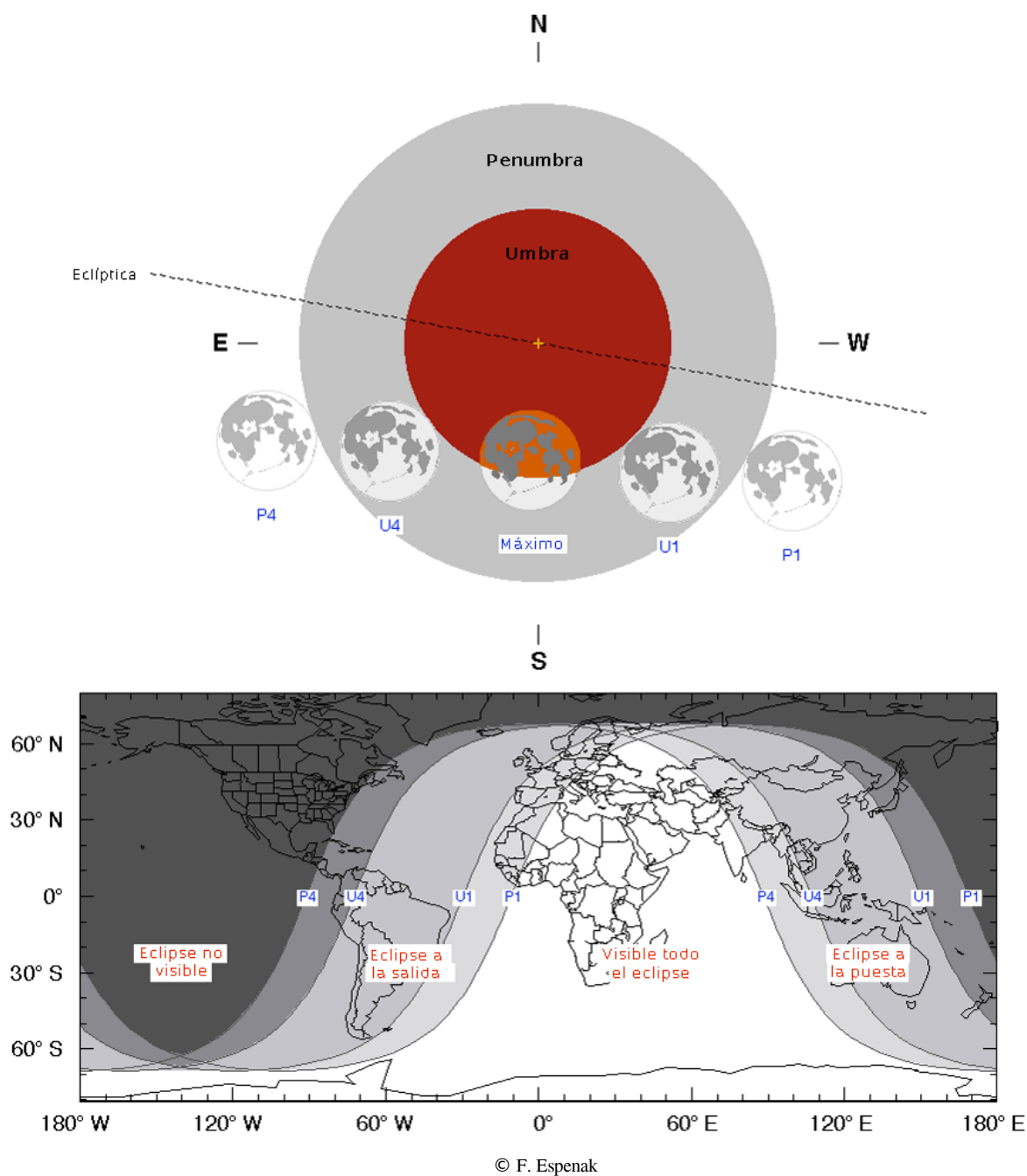
Eclipse parcial de Luna, el día 16 de julio

Este eclipse será visible como parcial desde España.

El eclipse será visible América del Sur, Europa, África, Asia y Australia

El eclipse penumbral se iniciará a las 18^h 44^m UT y finalizará a las 0^h 18^m UT del día 17 de julio.

El eclipse parcial se iniciará a las 20^h 02^m UT y finalizará a las 23^h 00^m UT. El máximo será a las 21^h 31^m UT.

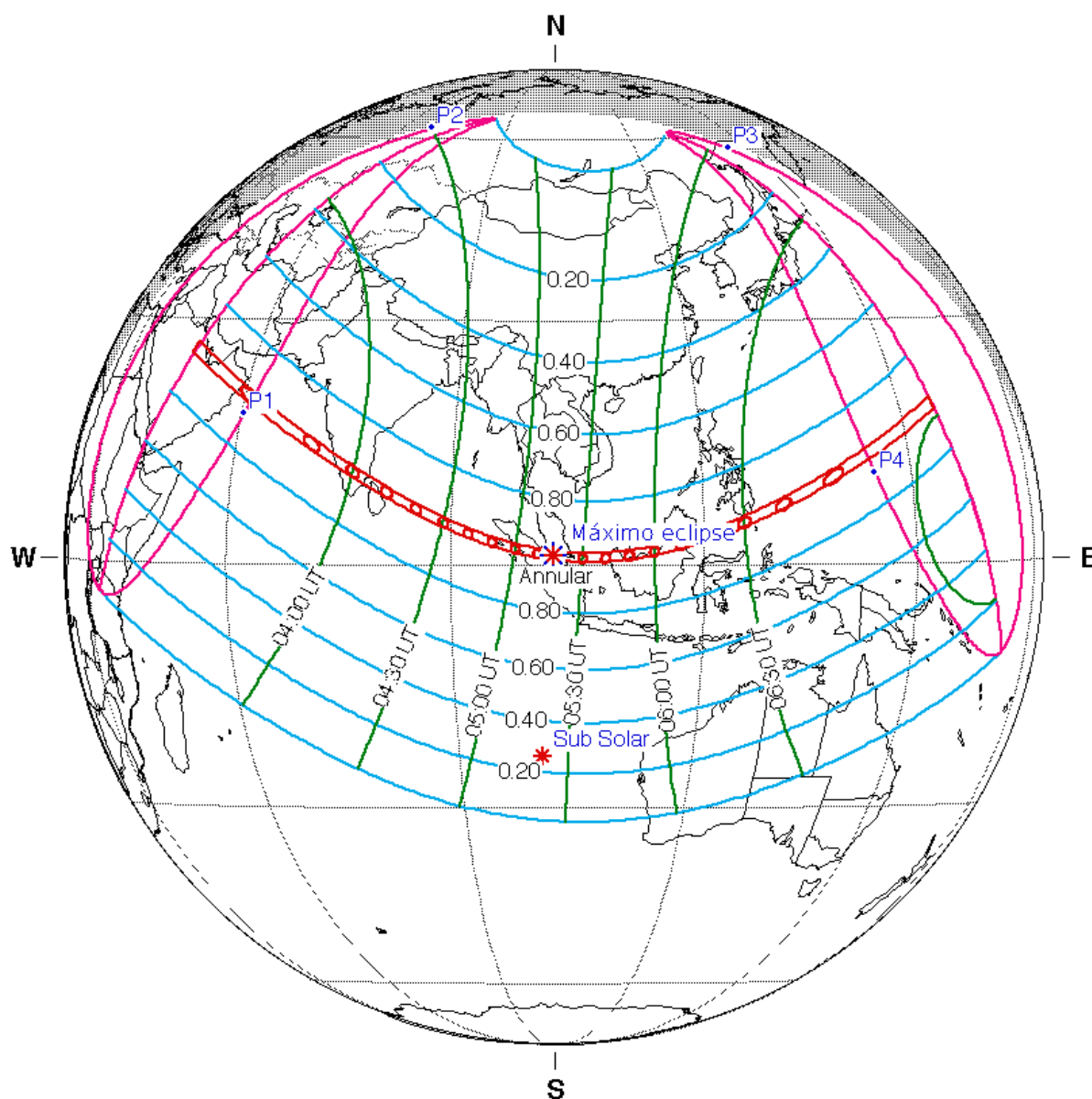


Eclipse anular de Sol, el día 26 de diciembre

Este eclipse no será visible desde España.

El eclipse parcial será visible en Asia y Australia. Se iniciará a las 2^h 30^m UT y finalizará a las 8^h 06^m UT.

El eclipse anular comenzará a las 3^h 36^m UT en Arabia Saudí, en los 21° N y 51° E, atravesará el sur de la India, Sumatra y Borneo, finalizando en las coordenadas 15° N y 149° E a las 6^h 58^m UT. El máximo será a las 5^h 18^m UT en 1° 00' N y 102° 17' E, donde la anchura de la sombra será de 118 km y la duración 4^m 40^s.



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UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16'3			SD: 15'4 Edad: 24 ^d 7																PHE { 4 ^h : 56'6 12 ^h : 56'4 20 ^h : 56'2
	PMG: 12 ^h 03 ^m 4			PMG: 08 ^h 21 ^m							Rº: 48 ^m									
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	179	12.0	-23	02.3	238	51.3	123	-10	42.3	104	60 N	7 09	8 06	9 02	3 34	80	12 55	18		
1	194	11.7		02.1	253	22.6	122	-10	52.7	103	58	7 02	7 54	8 45	27	77	13 03	21		
2	209	11.4		01.9	267	53.8	122	-11	03.0	103	56	6 56	44	31	21	75	10	23		
3	224	11.1		01.7	282	25.0	123		13.3	103	54	50	36	19	15	73	16	25		
4	239	10.8		01.5	296	56.3	122		23.6	101	52	44	28	8 08	10	71	21	27		
5	254	10.5	-23	01.3	311	27.5	122	-11	33.7	101	50	6 39	7 20	7 58	3 06	69	13 26	29		
6	269	10.2	-23	01.1	325	58.7	122	-11	43.8	101	45	6 28	7 05	7 38	2 57	65	13 37	32		
7	284	09.9		00.9	340	29.9	121	-11	53.9	99	40	17	6 51	22	49	62	46	35		
8	299	09.6		00.7	355	01.0	122	-12	03.8	99	35	08	40	7 08	42	60	13 53	38		
9	314	09.3		00.5	9	32.2	121		13.7	99	30	6 00	30	6 56	36	58	14 00	39		
10	329	09.0		00.3	24	03.3	121		23.6	97	20	5 44	6 11	35	26	54	12	43		
11	344	08.7	-23	00.1	38	34.4	121	-12	33.3	97	10 N	5 28	5 54	6 17	2 17	51	14 22	46		
12	359	08.5	-22	59.9	53	05.5	121	-12	43.0	97	0	5 11	5 37	6 00	2 09	48	14 32	48		
13	14	08.2		59.7	67	36.6	121	-12	52.7	95	10 S	4 52	5 19	5 42	2 01	45	42	51		
14	29	07.9		59.5	82	07.7	120	-13	02.2	95	20	30	4 59	24	1 52	42	14 52	54		
15	44	07.6		59.3	96	38.7	121		11.7	95	30	4 02	35	5 02	43	38	15 04	58		
16	59	07.3		59.1	111	09.8	120		21.2	93	35	3 43	20	4 49	37	36	11	60		
17	74	07.0	-22	58.9	125	40.8	120	-13	30.5	93	40	3 21	4 02	4 35	1 31	33	15 19	62		
18	89	06.7	-22	58.7	140	11.8	120	-13	39.8	92	45	2 51	3 40	4 17	1 23	31	15 28	65		
19	104	06.4		58.5	154	42.8	119		49.0	92	50	2 07	3 11	3 55	15	26	39	68		
20	119	06.1		58.3	169	13.7	120	-13	58.2	90	52	1 41	2 56	44	11	25	45	69		
21	134	05.8		58.0	183	44.7	119	-14	07.2	90	54	1 00	39	32	06	23	50	72		
22	149	05.5		57.8	198	15.6	119		16.2	89	56	** **	2 17	19	1 01	21	15 57	73		
23	164	05.2		57.6	212	46.5	119		25.1	88	58	** **	1 49	3 02	0 56	19	16 04	76		
24	179	04.9	-22	57.4	227	17.4		-14	33.9		60 S	** **	1 05	2 43	0 50	16	16 12	79		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 17 ^h 15 ^m 7		Mag: -4.6 PMG: 08 ^h 47 ^m				Mag: +0.5 PMG: 17 ^h 18 ^m				Mag: -1.8 PMG: 09 ^h 59 ^m				Mag: +0.5 PMG: 12 ^h 06 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	100	21.4	228	21.5	-15	18.7	100	17.9	-0	18.0	210	00.8	-21	34.3	178	01.9	-22	28.0		
1	115	23.9	243	21.5		19.2	115	18.8		17.2	225	02.7		34.4	193	04.1		28.0		
2	130	26.3	258	21.5		19.8	130	19.8		16.5	240	04.6		34.5	208	06.2		28.0		
3	145	28.8	273	21.5		20.4	145	20.7		15.8	255	06.5		34.5	223	08.3		28.0		
4	160	31.3	288	21.5		21.0	160	21.7		15.1	270	08.4		34.6	238	10.5		27.9		
5	175	33.7	303	21.5	-15	21.6	175	22.6	-0	14.4	285	10.3	-21	34.7	253	12.6	-22	27.9		
6	190	36.2	318	21.4	-15	22.1	190	23.6	-0	13.6	300	12.2	-21	34.7	268	14.8	-22	27.9		
7	205	38.6	333	21.4		22.7	205	24.5		12.9	315	14.1		34.8	283	16.9		27.9		
8	220	41.1	348	21.4		23.3	220	25.4		12.2	330	16.1		34.9	298	19.1		27.8		
9	235	43.6	3	21.4		23.9	235	26.4		11.5	345	18.0		35.0	313	21.2		27.8		
10	250	46.0	18	21.4		24.5	250	27.3		10.8	0	19.9		35.0	328	23.4		27.8		
11	265	48.5	33	21.4	-15	25.1	265	28.3	-0	10.0	15	21.8	-21	35.1	343	25.5	-22	27.8		
12	280	51.0	48	21.4	-15	25.6	280	29.2	-0	09.3	30	23.7	-21	35.2	358	27.7	-22	27.7		
13	295	53.4	63	21.4		26.2	295	30.2		08.6	45	25.6		35.2	13	29.8		27.7		
14	310	55.9	78	21.3		26.8	310	31.1		07.9	60	27.5		35.3	28	31.9		27.7		
15	325	58.4	93	21.3		27.4	325	32.1		07.2	75	29.4		35.4	43	34.1		27.7		
16	341	00.8	108	21.3		28.0	340	33.0		06.4	90	31.3		35.5	58	36.2		27.7		
17	356	03.3	123	21.3	-15	28.5	355	34.0	-0	05.7	105	33.2	-21	35.5	73	38.4	-22	27.6		
18	11	05.8	138	21.3	-15	29.1	10	34.9	-0	05.0	120	35.1	-21	35.6	88	40.5	-22	27.6		
19	26	08.2	153	21.3		29.7	25	35.8		04.3	135	37.0		35.7	103	42.7		27.6		
20	41	10.7	168	21.2		30.3	40	36.8		03.6	150	38.9		35.7	118	44.8		27.6		
21	56	13.1	183	21.2		30.9	55	37.7		02.8	165	40.8		35.8	133	47.0		27.5		
22	71	15.6	198	21.2		31.5	70	38.7		02.1	180	42.7		35.9	148	49.1		27.5		
23	86	18.1	213	21.2		32.0	85	39.6		01.4	195	44.6		35.9	163	51.3		27.5		
24	101	20.5	228	21.1	-15	32.6	100	40.6	-0	00.7	210	46.5	-21	36.0	178	53.4	-22	27.5		
Dif.	—		0		-6		+9		+7		+19		-1		+21		0		0	

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'3				SD: 15'3			PHE { 4 ^h : 56'0 12 ^h : 55'8 20 ^h : 55'7												
	PMG: 12 ^h 03 ^m 9				Edad: 25 ^d 7															
	hG ☉ Dec			hG ☾ Dif.			Dec					Dif.								
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	179	04.9	-22	57.4	227	17.4	119	-14	33.9	88	60 N	15 06	16 03	16 59	4 54	78		13 13	23	
1	194	04.6		57.2	241	48.3	118		42.7	87	58	23	14	17 06	44	75		24	26	
2	209	04.3		57.0	256	19.1	118	-14	51.4	86	56	37	24	13	36	72		33	28	
3	224	04.0		56.7	270	49.9	118	-15	00.0	85	54	15 49	33	19	28	70		41	30	
4	239	03.7		56.5	285	20.7	118		08.5	85	52	16 00	41	24	21	69		48	32	
5	254	03.4	-22	56.3	299	51.5	118	-15	17.0	83	50	16 10	16 48	17 29	4 15	67		13 55	33	
6	269	03.2	-22	56.1	314	22.3	117	-15	25.3	83	45	16 30	17 03	17 40	4 02	64		14 09	36	
7	284	02.9		55.9	328	53.0	117		33.6	82	40	16 46	16	50	3 51	61		21	38	
8	299	02.6		55.7	343	23.7	117		41.8	81	35	17 00	28	17 59	42	59		31	40	
9	314	02.3		55.4	357	54.4	117		49.9	81	30	12	38	18 08	34	57		39	42	
10	329	02.0		55.2	12	25.1	116	-15	58.0	79	20	33	17 56	24	20	54		14 55	44	
11	344	01.7	-22	55.0	26	55.7	117	-16	05.9	79	10 N	17 51	18 13	18 40	3 08	51		15 08	47	
12	359	01.4	-22	54.8	41	26.4	116	-16	13.8	78	0	18 08	18 30	18 56	2 57	49		15 20	50	
13	14	01.1		54.5	55	57.0	116		21.6	77	10 S	25	18 48	19 15	46	46		33	51	
14	29	00.8		54.3	70	27.6	115		29.3	76	20	18 43	19 08	19 37	34	44		15 46	54	
15	44	00.5		54.1	84	58.1	116		36.9	76	30	19 05	32	20 05	21	40		16 02	56	
16	59	00.2		53.9	99	28.7	115		44.5	74	35	17	19 47	23	13	38		11	57	
17	73	59.9	-22	53.6	113	59.2	115	-16	51.9	74	40	19 32	20 05	20 46	2 04	37		16 21	60	
18	88	59.6	-22	53.4	128	29.7	115	-16	59.3	72	45	19 50	20 27	21 15	1 54	34		16 33	62	
19	103	59.4		53.2	143	00.2	114	-17	06.5	72	50	20 11	20 55	21 59	41	31		47	65	
20	118	59.1		52.9	157	30.6	115		13.7	71	52	22	21 10	22 24	36	29		16 54	66	
21	133	58.8		52.7	172	01.1	114		20.8	70	54	34	27	23 03	29	28		17 02	68	
22	148	58.5		52.5	186	31.5	114		27.8	69	56	20 47	21 48	** **	22	26		10	70	
23	163	58.2		52.2	201	01.9	114		34.7	69	58	21 03	22 15	** **	15	23		20	72	
24	178	57.9	-22	52.0	215	32.3		-17	41.6		60 S	21 23	22 57	** **	1 06	20		17 31	75	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.6				Mag: +0.5				Mag: -1.8				Mag: +0.5			
	17 ^h 11 ^m 8		PMG: 08 ^h 47 ^m				PMG: 17 ^h 16 ^m				PMG: 09 ^h 56 ^m				PMG: 12 ^h 03 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	101	20.5	228	21.1	-15	32.6	100	40.6	-0	00.7	210	46.5	-21	-36.0	178	53.4	-22	27.5
1	116	23.0	243	21.1		33.2	115	41.5	+0	00.0	225	48.5		-36.1	193	55.5		27.4
2	131	25.5	258	21.1		33.8	130	42.5		00.8	240	50.4		-36.2	208	57.7		27.4
3	146	27.9	273	21.1		34.4	145	43.4		01.5	255	52.3		-36.2	223	59.8		27.4
4	161	30.4	288	21.0		34.9	160	44.3		02.2	270	54.2		-36.3	239	02.0		27.4
5	176	32.9	303	21.0	-15	35.5	175	45.3	+0	02.9	285	56.1	-21	-36.4	254	04.1	-22	27.4
6	191	35.3	318	21.0	-15	36.1	190	46.2	+0	03.6	300	58.0	-21	-36.4	269	06.3	-22	27.3
7	206	37.8	333	20.9		36.7	205	47.2		04.4	315	59.9		-36.5	284	08.4		27.3
8	221	40.3	348	20.9		37.3	220	48.1		05.1	331	01.8		-36.6	299	10.6		27.3
9	236	42.7	3	20.9		37.8	235	49.1		05.8	346	03.7		-36.7	314	12.7		27.3
10	251	45.2	18	20.8		38.4	250	50.0		06.5	1	05.6		-36.7	329	14.9		27.2
11	266	47.6	33	20.8	-15	39.0	265	50.9	+0	07.2	16	07.5	-21	-36.8	344	17.0	-22	27.2
12	281	50.1	48	20.7	-15	39.6	280	51.9	+0	08.0	31	09.4	-21	-36.9	359	19.2	-22	27.2
13	296	52.6	63	20.7		40.2	295	52.8		08.7	46	11.3		-36.9	14	21.3		27.2
14	311	55.0	78	20.7		40.7	310	53.8		09.4	61	13.2		-37.0	29	23.4		27.2
15	326	57.5	93	20.6		41.3	325	54.7		10.1	76	15.2		-37.1	44	25.6		27.1
16	342	00.0	108	20.6		41.9	340	55.7		10.8	91	17.1		-37.1	59	27.7		27.1
17	357	02.4	123	20.5	-15	42.5	355	56.6	+0	11.6	106	19.0	-21	-37.2	74	29.9	-22	27.1
18	12	04.9	138	20.5	-15	43.1	10	57.6	+0	12.3	121	20.9	-21	-37.3	89	32.0	-22	27.1
19	27	07.4	153	20.5		43.6	25	58.5		13.0	136	22.8		-37.3	104	34.2		27.1
20	42	09.8	168	20.4		44.2	40	59.4		13.7	151	24.7		-37.4	119	36.3		27.0
21	57	12.3	183	20.4		44.8	56	00.4		14.4	166	26.6		-37.5	134	38.5		27.0
22	72	14.8	198	20.3		45.4	71	01.3		15.2	181	28.5		-37.6	149	40.6		27.0
23	87	17.2	213	20.3		45.9	86	02.3		15.9	196	30.4		-37.6	164	42.8		27.0
24	102	19.7	228	20.2	-15	46.5	101	03.2	+0	16.6	211	32.3	-21	-37.7	179	44.9	-22	26.9
Dif.	—		0		-6		+9		+7		+19		-1		+21			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3			SD: 15'1			PHE { 4 ^h : 55'5 12 ^h : 55'4 20 ^h : 55'2				Edad: 26 ^d 7			Rº: 49 ^m					
	PMG: 12 ^h 04 ^m 4			PMG: 09 ^h 58 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	°	'	°	'	°			h m	h m		h m	m				
0	178	57.9	-22	215	32.3	113	-17	41.6	67	60 N	7 09	8 05	9 01	6 12	71	13 36	32		
1	193	57.6		230	02.6	114		48.3	67	58	7 02	7 54	8 45	5 59	68	13 50	33		
2	208	57.3		244	33.0	113	-17	55.0	65	56	6 55	44	31	48	66	14 01	35		
3	223	57.0		259	03.3	113	-18	01.5	65	54	49	35	19	38	65	11	37		
4	238	56.7		273	33.6	112		08.0	63	52	44	27	8 08	30	63	20	38		
5	253	56.4	-22	288	03.8	113	-18	14.3	63	50	6 39	7 20	7 58	5 22	62	14 28	39		
6	268	56.2	-22	302	34.1	112	-18	20.6	62	45	6 28	7 05	7 38	5 06	60	14 45	41		
7	283	55.9		317	04.3	112		26.8	61	40	18	6 52	22	4 52	59	14 59	43		
8	298	55.6		331	34.5	112		32.9	60	35	09	40	7 08	41	57	15 11	44		
9	313	55.3		346	04.7	112		38.9	59	30	6 00	30	6 56	31	55	21	45		
10	328	55.0		0	34.9	112		44.8	58	20	5 44	6 12	36	4 14	53	39	47		
11	343	54.7	-22	15	05.1	111	-18	50.6	57	10 N	5 29	5 55	6 18	3 59	52	15 55	48		
12	358	54.4	-22	29	35.2	111	-18	56.3	56	0	5 12	5 38	6 01	3 46	49	16 10	49		
13	13	54.1		44	05.3	111	-19	01.9	55	10 S	4 54	21	5 44	32	48	24	51		
14	28	53.8		58	35.4	111		07.4	54	20	32	5 01	25	18	45	40	53		
15	43	53.6		73	05.5	111		12.8	53	30	4 03	4 36	5 04	3 01	44	16 58	54		
16	58	53.3		87	35.6	110		18.1	52	35	3 45	21	4 51	2 51	43	17 08	56		
17	73	53.0	-22	102	05.6	111	-19	23.3	52	40	3 23	4 04	4 36	2 41	40	17 21	56		
18	88	52.7	-22	116	35.7	110	-19	28.5	50	45	2 53	3 42	4 19	2 28	38	17 35	58		
19	103	52.4		131	05.7	110		33.5	49	50	2 10	3 13	3 57	12	36	17 52	60		
20	118	52.1		145	35.7	110		38.4	48	52	1 44	2 59	47	2 05	35	18 00	61		
21	133	51.8		160	05.7	110		43.2	47	54	1 06	42	35	1 57	33	10	61		
22	148	51.5		174	35.7	109		47.9	47	56	** ** *	2 21	21	48	32	20	63		
23	163	51.3		189	05.6	110		52.6	45	58	** ** *	1 53	3 05	1 38	29	18 32	64		
24	178	51.0	-22	203	35.6		-19	57.1		60 S	** ** *	1 12	2 46	1 26	27	18 46	66		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG		Mag: -4.6				Mag: +0.5				Mag: -1.8				Mag: +0.5				
	17 ^h 07 ^m 9		PMG: 08 ^h 47 ^m				PMG: 17 ^h 15 ^m				PMG: 09 ^h 53 ^m				PMG: 11 ^h 59 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	102	19.7	228	20.2	-15	46.5	101	03.2	+0	16.6	211	32.3	-21	37.7	179	44.9	-22	26.9	
1	117	22.1	243	20.2		47.1	116	04.2		17.3	226	34.2		37.8	194	47.0		26.9	
2	132	24.6	258	20.1		47.7	131	05.1		18.0	241	36.1		37.8	209	49.2		26.9	
3	147	27.1	273	20.1		48.3	146	06.0		18.8	256	38.1		37.9	224	51.3		26.9	
4	162	29.5	288	20.0		48.8	161	07.0		19.5	271	40.0		38.0	239	53.5		26.8	
5	177	32.0	303	20.0	-15	49.4	176	07.9	+0	20.2	286	41.9	-21	38.0	254	55.6	-22	26.8	
6	192	34.5	318	19.9	-15	50.0	191	08.9	+0	20.9	301	43.8	-21	38.1	269	57.8	-22	26.8	
7	207	36.9	333	19.8		50.6	206	09.8		21.6	316	45.7		38.2	284	59.9		26.8	
8	222	39.4	348	19.8		51.1	221	10.8		22.4	331	47.6		38.3	300	02.1		26.8	
9	237	41.9	3	19.7		51.7	236	11.7		23.1	346	49.5		38.3	315	04.2		26.7	
10	252	44.3	18	19.7		52.3	251	12.6		23.8	1	51.4		38.4	330	06.3		26.7	
11	267	46.8	33	19.6	-15	52.9	266	13.6	+0	24.5	16	53.3	-21	38.5	345	08.5	-22	26.7	
12	282	49.2	48	19.6	-15	53.5	281	14.5	+0	25.2	31	55.2	-21	38.5	0	10.6	-22	26.7	
13	297	51.7	63	19.5		54.0	296	15.5		26.0	46	57.1		38.6	15	12.8		26.6	
14	312	54.2	78	19.4		54.6	311	16.4		26.7	61	59.1		38.7	30	14.9		26.6	
15	327	56.6	93	19.4		55.2	326	17.4		27.4	77	01.0		38.7	45	17.1		26.6	
16	342	59.1	108	19.3		55.8	341	18.3		28.1	92	02.9		38.8	60	19.2		26.6	
17	358	01.6	123	19.2	-15	56.3	356	19.2	+0	28.8	107	04.8	-21	38.9	75	21.4	-22	26.6	
18	13	04.0	138	19.2	-15	56.9	11	20.2	+0	29.6	122	06.7	-21	38.9	90	23.5	-22	26.5	
19	28	06.5	153	19.1		57.5	26	21.1		30.3	137	08.6		39.0	105	25.7		26.5	
20	43	09.0	168	19.0		58.1	41	22.1		31.0	152	10.5		39.1	120	27.8		26.5	
21	58	11.4	183	19.0		58.6	56	23.0		31.7	167	12.4		39.1	135	29.9		26.5	
22	73	13.9	198	18.9		59.2	71	23.9		32.4	182	14.3		39.2	150	32.1		26.4	
23	88	16.4	213	18.8	-15	59.8	86	24.9		33.2	197	16.3		39.3	165	34.2		26.4	
24	103	18.8	228	18.7	-16	00.4	101	25.8	+0	33.9	212	18.2	-21	39.3	180	36.4	-22	26.4	
Dif.	—		-1		-6		+9		+7		+19		-1		+21				

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 16'3				SD: 15'0												PHE { 4 ^h : 55'1 12 ^h : 55'0 20 ^h : 54'9					
	PMG: 12 ^h 04 ^m 8				Edad: 27 ^d 7																	
	PMG: 10 ^h 47 ^m				Rº: 50 ^m																	
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº							
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m							
0	178	51.0	-22	203	35.6	109	-19	57.1	44	60 N	15 09	16 05	17 01	7 23	61	14 08	42					
1	193	50.7		218	05.5	110	-20	01.5	43	58	26	16	08	7 07	60	23	44					
2	208	50.4		232	35.5	109		05.8	42	56	40	26	15	6 54	59	36	45					
3	223	50.1		247	05.4	109		10.0	42	54	15 52	35	21	43	58	48	45					
4	238	49.8		261	35.3	109		14.2	40	52	16 02	43	26	33	57	14 58	45					
5	253	49.5	-22	276	05.2	108	-20	18.2	39	50	16 12	16 50	17 31	6 24	57	15 07	46					
6	268	49.2	-22	290	35.0	109	-20	22.1	38	45	16 32	17 05	17 42	6 06	55	15 26	47					
7	283	49.0		305	04.9	109		25.9	37	40	16 48	18	17 52	5 51	54	42	47					
8	298	48.7		319	34.8	108		29.6	36	35	17 01	29	18 01	38	53	15 55	48					
9	313	48.4		334	04.6	109		33.2	35	30	13	40	09	26	53	16 06	49					
10	328	48.1		348	34.5	108		36.7	34	20	34	17 58	25	5 07	52	26	49					
11	343	47.8	-22	3	04.3	108	-20	40.1	33	10 N	17 52	18 14	18 41	4 51	51	16 43	50					
12	358	47.5	-22	17	34.1	108	-20	43.4	32	0	18 09	18 31	18 57	4 35	50	16 59	50					
13	13	47.3		32	03.9	109		46.6	30	10 S	26	18 48	19 15	20	49	17 15	51					
14	28	47.0		46	33.8	108		49.6	30	20	18 44	19 08	19 37	4 03	48	33	50					
15	43	46.7		61	03.6	108		52.6	29	30	19 05	32	20 05	3 45	46	17 52	52					
16	58	46.4		75	33.4	108		55.5	28	35	18	19 47	23	34	46	18 04	52					
17	73	46.1	-22	90	03.2	108	-20	58.3	26	40	19 32	20 05	20 46	3 21	45	18 17	52					
18	88	45.8	-22	104	33.0	108	-21	00.9	26	45	19 49	20 26	21 15	3 06	44	18 33	52					
19	103	45.5		119	02.8	108		03.5	24	50	20 11	20 55	21 57	2 48	43	18 52	53					
20	118	45.3		133	32.6	108		05.9	24	52	21	21 09	22 22	40	41	19 01	54					
21	133	45.0		148	02.4	107		08.3	22	54	33	26	22 59	30	41	11	54					
22	148	44.7		162	32.1	108		10.5	22	56	20 46	21 46	** ** *	20	39	23	54					
23	163	44.4		177	01.9	108		12.7	20	58	21 02	22 13	** ** *	2 07	39	36	55					
24	178	44.1	-22	191	31.7		-21	14.7		60 S	21 21	22 52	** ** *	1 53	37	19 52	55					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 17 ^h 03 ^m 9		Mag: -4.6 PMG: 08 ^h 47 ^m				Mag: +0.5 PMG: 17 ^h 13 ^m				Mag: -1.8 PMG: 09 ^h 50 ^m				Mag: +0.5 PMG: 11 ^h 56 ^m							
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄							
h	°	'	°	°	'	°	'	°	'	°	°	'	°	°	'	°	'					
0	103	18.8	228	18.7	-16	00.4	101	25.8	+0	33.9	212	18.2	-21	-39.3	180	36.4	-22	26.4				
1	118	21.3	243	18.7		00.9	116	26.8		34.6	227	20.1		-39.4	195	38.5		26.4				
2	133	23.7	258	18.6		01.5	131	27.7		35.3	242	22.0		-39.5	210	40.7		26.3				
3	148	26.2	273	18.5		02.1	146	28.6		36.0	257	23.9		-39.6	225	42.8		26.3				
4	163	28.7	288	18.4		02.7	161	29.6		36.8	272	25.8		-39.6	240	45.0		26.3				
5	178	31.1	303	18.4	-16	03.2	176	30.5	+0	37.5	287	27.7	-21	-39.7	255	47.1	-22	26.3				
6	193	33.6	318	18.3	-16	03.8	191	31.5	+0	38.2	302	29.6	-21	-39.8	270	49.3	-22	26.3				
7	208	36.1	333	18.2		04.4	206	32.4		38.9	317	31.5		-39.8	285	51.4		26.2				
8	223	38.5	348	18.1		05.0	221	33.4		39.6	332	33.4		-39.9	300	53.5		26.2				
9	238	41.0	3	18.0		05.5	236	34.3		40.4	347	35.4		-40.0	315	55.7		26.2				
10	253	43.5	18	18.0		06.1	251	35.2		41.1	2	37.3		-40.0	330	57.8		26.2				
11	268	45.9	33	17.9	-16	06.7	266	36.2	+0	41.8	17	39.2	-21	-40.1	346	00.0	-22	26.1				
12	283	48.4	48	17.8	-16	07.3	281	37.1	+0	42.5	32	41.1	-21	-40.2	1	02.1	-22	26.1				
13	298	50.9	63	17.7		07.8	296	38.1		43.2	47	43.0		-40.2	16	04.3		26.1				
14	313	53.3	78	17.6		08.4	311	39.0		44.0	62	44.9		-40.3	31	06.4		26.1				
15	328	55.8	93	17.5		09.0	326	39.9		44.7	77	46.8		-40.4	46	08.6		26.0				
16	343	58.2	108	17.5		09.5	341	40.9		45.4	92	48.7		-40.4	61	10.7		26.0				
17	359	00.7	123	17.4	-16	10.1	356	41.8	+0	46.1	107	50.7	-21	-40.5	76	12.9	-22	26.0				
18	14	03.2	138	17.3	-16	10.7	11	42.8	+0	46.8	122	52.6	-21	-40.6	91	15.0	-22	26.0				
19	29	05.6	153	17.2		11.3	26	43.7		47.5	137	54.5		-40.6	106	17.1		26.0				
20	44	08.1	168	17.1		11.8	41	44.6		48.3	152	56.4		-40.7	121	19.3		25.9				
21	59	10.6	183	17.0		12.4	56	45.6		49.0	167	58.3		-40.8	136	21.4		25.9				
22	74	13.0	198	16.9		13.0	71	46.5		49.7	183	00.2		-40.8	151	23.6		25.9				
23	89	15.5	213	16.8		13.5	86	47.5		50.4	198	02.1		-40.9	166	25.7		25.9				
24	104	18.0	228	16.7	-16	14.1	101	48.4	+0	51.1	213	04.0	-21	-41.0	181	27.9	-22	25.8				
Dif.	—		-1				+9				+19				-1				+21			

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 05 ^m 3				SD: 14'9 Edad: 28 ^d 7 PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5 PMG: 11 ^h 37 ^m Rº: 50 ^m															
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº		Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	178	44.1	-22	39.9	191	31.7	108	-21	14.7	19	60 N	7 08	8 04	9 00	8 24	48	14 50	54		
1	193	43.8		39.6	206	01.5	108		16.6	18	58	7 01	7 53	8 44	8 07	49	15 07	53		
2	208	43.6		39.3	220	31.3	108		18.4	17	56	6 55	43	30	7 53	49	21 52			
3	223	43.3		39.0	235	01.1	108		20.1	16	54	49	35	18	41	49	33 52			
4	238	43.0		38.8	249	30.9	108		21.7	15	52	44	27	8 07	30	50	43 53			
5	253	42.7	-22	38.5	264	00.7	108	-21	23.2	14	50	6 39	7 20	7 58	7 21	49	15 53	52		
6	268	42.4	-22	38.2	278	30.5	108	-21	24.6	13	45	6 28	7 05	7 38	7 01	50	16 13	52		
7	283	42.2		37.9	293	00.3	109		25.9	12	40	18	6 52	22	6 45	50	29 51			
8	298	41.9		37.7	307	30.2	108		27.1	11	35	09	41	7 08	31	50	43 51			
9	313	41.6		37.4	322	00.0	108		28.2	10	30	6 01	30	6 57	6 19	50	16 55	50		
10	328	41.3		37.1	336	29.8	109		29.2	8	20	5 45	6 12	36	5 59	50	17 15	50		
11	343	41.0	-22	36.8	350	59.7	108	-21	30.0	8	10 N	5 29	5 56	6 18	5 42	49	17 33	50		
12	358	40.8	-22	36.5	5	29.5	109	-21	30.8	6	0	5 13	5 39	6 02	5 25	50	17 49	50		
13	13	40.5		36.3	19	59.4	109		31.4	6	10 S	4 55	22	5 45	5 09	50	18 06	49		
14	28	40.2		36.0	34	29.3	108		32.0	4	20	33	5 02	26	4 51	50	23 49			
15	43	39.9		35.7	48	59.1	109		32.4	4	30	4 05	4 38	5 05	31	50	44 48			
16	58	39.6		35.4	63	29.0	109		32.8	2	35	3 47	23	4 53	20	49	18 56	47		
17	73	39.4	-22	35.1	77	58.9	110	-21	33.0	1	40	3 25	4 06	4 38	4 06	49	19 09	47		
18	88	39.1	-22	34.8	92	28.9	109	-21	33.1	1	45	2 56	3 44	4 21	3 50	49	19 25	47		
19	103	38.8		34.5	106	58.8	109		33.2	1	50	2 13	16	3 59	31	49	45 46			
20	118	38.5		34.3	121	28.7	110		33.1	2	52	1 48	3 02	49	21	49	19 55	45		
21	133	38.2		34.0	135	58.7	110		32.9	3	54	1 12	2 45	37	3 11	49	20 05	45		
22	148	38.0		33.7	150	28.7	110		32.6	4	56	** **	2 24	24	2 59	49	17 44			
23	163	37.7		33.4	164	58.7	110		32.2	5	58	** **	1 58	3 08	2 46	48	20 31	43		
24	178	37.4	-22	33.1	179	28.7		-21	31.7		60 S	** **	1 18	2 49	2 30	48	20 47	43		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 17 ^h 00 ^m 0		Mag: -4.6 PMG: 08 ^h 47 ^m				Mag: +0.5 PMG: 17 ^h 12 ^m				Mag: -1.8 PMG: 09 ^h 46 ^m				Mag: +0.5 PMG: 11 ^h 52 ^m					
	hG ♈		hG ♀	dec.			hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	104	18.0	228	16.7	-16	14.1	101	48.4	+0	51.1	213	04.0	-21	41.0	181	27.9	-22	25.8		
1	119	20.4	243	16.6		14.7	116	49.3		51.9	228	06.0		41.0	196	30.0		25.8		
2	134	22.9	258	16.5		15.3	131	50.3		52.6	243	07.9		41.1	211	32.2		25.8		
3	149	25.4	273	16.4		15.8	146	51.2		53.3	258	09.8		41.2	226	34.3		25.8		
4	164	27.8	288	16.3		16.4	161	52.2		54.0	273	11.7		41.2	241	36.5		25.7		
5	179	30.3	303	16.2	-16	17.0	176	53.1	+0	54.7	288	13.6	-21	41.3	256	38.6	-22	25.7		
6	194	32.7	318	16.1	-16	17.5	191	54.0	+0	55.5	303	15.5	-21	41.4	271	40.7	-22	25.7		
7	209	35.2	333	16.0		18.1	206	55.0		56.2	318	17.4		41.4	286	42.9		25.7		
8	224	37.7	348	15.9		18.7	221	55.9		56.9	333	19.3		41.5	301	45.0		25.7		
9	239	40.1	3	15.8		19.2	236	56.9		57.6	348	21.3		41.6	316	47.2		25.6		
10	254	42.6	18	15.7		19.8	251	57.8		58.3	3	23.2		41.6	331	49.3		25.6		
11	269	45.1	33	15.6	-16	20.4	266	58.7	+0	59.1	18	25.1	-21	41.7	346	51.5	-22	25.6		
12	284	47.5	48	15.5	-16	21.0	281	59.7	+0	59.8	33	27.0	-21	41.8	1	53.6	-22	25.6		
13	299	50.0	63	15.4		21.5	297	00.6	+1	00.5	48	28.9		41.8	16	55.8		25.5		
14	314	52.5	78	15.3		22.1	312	01.6		01.2	63	30.8		41.9	31	57.9		25.5		
15	329	54.9	93	15.2		22.7	327	02.5		01.9	78	32.7		42.0	47	00.1		25.5		
16	344	57.4	108	15.1		23.2	342	03.4		02.7	93	34.7		42.0	62	02.2		25.5		
17	359	59.9	123	15.0	-16	23.8	357	04.4	+1	03.4	108	36.6	-21	42.1	77	04.3	-22	25.4		
18	15	02.3	138	14.8	-16	24.4	12	05.3	+1	04.1	123	38.5	-21	42.2	92	06.5	-22	25.4		
19	30	04.8	153	14.7		24.9	27	06.2		04.8	138	40.4		42.2	107	08.6		25.4		
20	45	07.2	168	14.6		25.5	42	07.2		05.5	153	42.3		42.3	122	10.8		25.4		
21	60	09.7	183	14.5		26.1	57	08.1		06.2	168	44.2		42.4	137	12.9		25.3		
22	75	12.2	198	14.4		26.6	72	09.1		07.0	183	46.1		42.4	152	15.1		25.3		
23	90	14.6	213	14.3		27.2	87	10.0		07.7	198	48.1		42.5	167	17.2		25.3		
24	105	17.1	228	14.1	-16	27.8	102	10.9	+1	08.4	213	50.0	-21	42.6	182	19.4	-22	25.3		
Dif.	—		-1		-6		+9		+7		+19		-1		+21		0			

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 05 ^m 7				SD: 14'8 Edad: 29 ^d 7 PHE 4^h: 54'4 12^h: 54'3 20^h: 54'3														
	PMG: 12 ^h 27 ^m				Rº: 48 ^m														
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.													
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	178	37.4	-22	33.1	179	28.7	110	-21	31.7	6	60 N	15 13	16 08	17 04	9 12	37	15 44	63	
1	193	37.1		32.8	193	58.7	111		31.1	7	58	29	19	11	8 56	38	16 00	61	
2	208	36.8		32.5	208	28.8	110		30.4	8	56	43	29	17	42	40	13	61	
3	223	36.6		32.2	222	58.8	111		29.6	10	54	15 54	37	23	30	41	25	59	
4	238	36.3		31.9	237	28.9	111		28.6	10	52	16 05	45	28	20	41	36	58	
5	253	36.0	-22	31.6	251	59.0	112	-21	27.6	11	50	16 14	16 52	17 33	8 10	42	16 45	57	
6	268	35.7	-22	31.3	266	29.2	111	-21	26.5	12	45	16 34	17 07	17 44	7 51	43	17 05	55	
7	283	35.5		31.0	280	59.3	112		25.3	14	40	16 50	20	17 54	35	44	20	55	
8	298	35.2		30.8	295	29.5	112		23.9	14	35	17 03	31	18 02	21	45	34	53	
9	313	34.9		30.5	309	59.7	112		22.5	15	30	15	41	11	7 09	46	17 45	53	
10	328	34.6		30.2	324	29.9	113		21.0	17	20	35	17 59	26	6 49	47	18 05	51	
11	343	34.4	-22	29.9	339	00.2	112	-21	19.3	17	10 N	17 53	18 15	18 42	6 31	48	18 23	49	
12	358	34.1	-22	29.6	353	30.4	113	-21	17.6	18	0	18 09	18 32	18 58	6 15	49	18 39	48	
13	13	33.8		29.3	8	00.7	114		15.8	20	10 S	26	18 49	19 16	5 59	49	18 55	47	
14	28	33.5		29.0	22	31.1	113		13.8	20	20	18 44	19 09	19 38	41	51	19 12	45	
15	43	33.3		28.7	37	01.4	114		11.8	21	30	19 05	33	20 05	21	51	32	44	
16	58	33.0		28.4	51	31.8	114		09.7	23	35	18	19 47	23	5 09	52	43	43	
17	73	32.7	-22	28.1	66	02.2	114	-21	07.4	23	40	19 32	20 04	20 45	4 55	53	19 56	42	
18	88	32.4	-22	27.7	80	32.6	115	-21	05.1	25	45	19 49	20 26	21 14	4 39	54	20 12	40	
19	103	32.2		27.4	95	03.1	115		02.6	25	50	20 10	20 54	21 55	20	54	31	38	
20	118	31.9		27.1	109	33.6	115	-21	00.1	26	52	21	21 08	22 19	10	56	40	37	
21	133	31.6		26.8	124	04.1	116	-20	57.5	28	54	32	24	22 54	4 00	56	20 50	36	
22	148	31.3		26.5	138	34.7	116		54.7	28	56	20 45	21 44	** **	3 48	57	21 01	35	
23	163	31.1		26.2	153	05.3	116		51.9	29	58	21 01	22 10	** **	34	58	14	34	
24	178	30.8	-22	25.9	167	35.9		-20	49.0		60 S	21 19	22 47	** **	3 18	59	21 30	31	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 16 ^h 56 ^m 1		Mag: -4.6 PMG: 08 ^h 47 ^m				Mag: +0.5 PMG: 17 ^h 10 ^m				Mag: -1.8 PMG: 09 ^h 43 ^m				Mag: +0.5 PMG: 11 ^h 49 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	105	17.1	228	14.1	-16	27.8	102	10.9	+1	08.4	213	50.0	-21	-42.6	182	19.4	-22	25.3
1	120	19.6	243	14.0		28.3	117	11.9		09.1	228	51.9		-42.6	197	21.5		25.3
2	135	22.0	258	13.9		28.9	132	12.8		09.8	243	53.8		-42.7	212	23.7		25.2
3	150	24.5	273	13.8		29.5	147	13.8		10.6	258	55.7		-42.8	227	25.8		25.2
4	165	27.0	288	13.7		30.0	162	14.7		11.3	273	57.6		-42.8	242	27.9		25.2
5	180	29.4	303	13.5	-16	30.6	177	15.6	+1	12.0	288	59.6	-21	-42.9	257	30.1	-22	25.2
6	195	31.9	318	13.4	-16	31.2	192	16.6	+1	12.7	304	01.5	-21	-43.0	272	32.2	-22	25.1
7	210	34.4	333	13.3		31.7	207	17.5		13.4	319	03.4		-43.0	287	34.4		25.1
8	225	36.8	348	13.2		32.3	222	18.4		14.1	334	05.3		-43.1	302	36.5		25.1
9	240	39.3	3	13.0		32.8	237	19.4		14.9	349	07.2		-43.2	317	38.7		25.1
10	255	41.7	18	12.9		33.4	252	20.3		15.6	4	09.1		-43.2	332	40.8		25.0
11	270	44.2	33	12.8	-16	34.0	267	21.3	+1	16.3	19	11.0	-21	-43.3	347	43.0	-22	25.0
12	285	46.7	48	12.7	-16	34.5	282	22.2	+1	17.0	34	13.0	-21	-43.4	2	45.1	-22	25.0
13	300	49.1	63	12.5		35.1	297	23.1		17.7	49	14.9		-43.4	17	47.3		25.0
14	315	51.6	78	12.4		35.7	312	24.1		18.5	64	16.8		-43.5	32	49.4		24.9
15	330	54.1	93	12.3		36.2	327	25.0		19.2	79	18.7		-43.6	47	51.5		24.9
16	345	56.5	108	12.1		36.8	342	25.9		19.9	94	20.6		-43.6	62	53.7		24.9
17	0	59.0	123	12.0	-16	37.4	357	26.9	+1	20.6	109	22.5	-21	-43.7	77	55.8	-22	24.9
18	16	01.5	138	11.9	-16	37.9	12	27.8	+1	21.3	124	24.5	-21	-43.8	92	58.0	-22	24.9
19	31	03.9	153	11.7		38.5	27	28.8		22.1	139	26.4		-43.8	108	00.1		24.8
20	46	06.4	168	11.6		39.0	42	29.7		22.8	154	28.3		-43.9	123	02.3		24.8
21	61	08.8	183	11.5		39.6	57	30.6		23.5	169	30.2		-44.0	138	04.4		24.8
22	76	11.3	198	11.3		40.2	72	31.6		24.2	184	32.1		-44.0	153	06.6		24.8
23	91	13.8	213	11.2		40.7	87	32.5		24.9	199	34.0		-44.1	168	08.7		24.7
24	106	16.2	228	11.0	-16	41.3	102	33.4	+1	25.6	214	36.0	-21	-44.2	183	10.9	-22	24.7
Dif.	—		-1		-6		+9		+7		+19		-1		+21			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 06 ^m 2				SD: 14'8 Edad: 0 ^d 9 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1					PMG: 13 ^h 15 ^m Rº: 47 ^m			Hora Rº			Hora Rº			
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	178	30.8	-22	25.9	167	35.9	116	-20	49.0	30	60 N	7 07	8 03	8 58	9 49	26	16 47	70	
1	193	30.5		25.6	182	06.5	117		46.0	32	58	7 00	7 52	42	34	29	17 01	68	
2	208	30.2		25.3	196	37.2	117		42.8	32	56	6 54	43	29	22	30	14	65	
3	223	30.0		25.0	211	07.9	118		39.6	33	54	49	34	17	11	32	24	64	
4	238	29.7		24.7	225	38.7	118		36.3	34	52	43	26	8 07	9 01	34	34	62	
5	253	29.4	-22	24.4	240	09.5	118	-20	32.9	35	50	6 39	7 20	7 57	8 52	35	17 42	61	
6	268	29.1	-22	24.0	254	40.3	118	-20	29.4	36	45	6 28	7 05	7 38	8 34	37	18 00	58	
7	283	28.9		23.7	269	11.1	119		25.8	37	40	18	6 52	22	19	39	15	56	
8	298	28.6		23.4	283	42.0	119		22.1	38	35	09	41	7 09	8 06	41	27	54	
9	313	28.3		23.1	298	12.9	120		18.3	38	30	6 01	31	6 57	7 55	42	38	53	
10	328	28.1		22.8	312	43.9	120		14.5	40	20	5 46	6 13	37	36	44	18 56	51	
11	343	27.8	-22	22.5	327	14.9	120	-20	10.5	41	10 N	5 30	5 56	6 19	7 19	46	19 12	48	
12	358	27.5	-22	22.1	341	45.9	121	-20	06.4	41	0	5 14	5 40	6 02	7 04	47	19 27	46	
13	13	27.2		21.8	356	17.0	121	-20	02.3	43	10 S	4 56	23	5 46	6 48	49	42	44	
14	28	27.0		21.5	10	48.1	121	-19	58.0	43	20	34	5 03	28	32	50	19 57	43	
15	43	26.7		21.2	25	19.2	122		53.7	44	30	4 07	4 40	5 07	12	53	20 16	39	
16	58	26.4		20.9	39	50.4	122		49.3	45	35	3 49	25	4 54	6 01	54	26	39	
17	73	26.2	-22	20.5	54	21.6	123	-19	44.8	46	40	3 27	4 08	4 40	5 48	56	20 38	37	
18	88	25.9	-22	20.2	68	52.9	123	-19	40.2	47	45	2 58	3 46	4 23	5 33	57	20 52	35	
19	103	25.6		19.9	83	24.2	123		35.5	48	50	2 17	19	4 02	14	60	21 09	32	
20	118	25.4		19.6	97	55.5	124		30.7	48	52	1 53	3 05	3 52	5 06	60	17	31	
21	133	25.1		19.2	112	26.9	124		25.9	50	54	1 18	2 48	40	4 56	61	26	30	
22	148	24.8		18.9	126	58.3	125		20.9	50	56	** **	28	27	45	62	36	28	
23	163	24.6		18.6	141	29.8	125		15.9	52	58	** **	2 02	3 12	4 32	64	21 48	25	
24	178	24.3	-22	18.3	156	01.3		-19	10.7		60 S	** **	1 25	2 53	4 17	66	22 01	23	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 16 ^h 52 ^m 1		Mag: -4.6 PMG: 08 ^h 47 ^m				Mag: +0.5 PMG: 17 ^h 09 ^m				Mag: -1.8 PMG: 09 ^h 40 ^m				Mag: +0.5 PMG: 11 ^h 46 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	106	16.2	228	11.0	-16	41.3	102	33.4	+1	25.6	214	36.0	-21	44.2	183	10.9	-22	24.7	
1	121	18.7	243	10.9		41.8	117	34.4		26.4	229	37.9		44.2	198	13.0		24.7	
2	136	21.2	258	10.8		42.4	132	35.3		27.1	244	39.8		44.3	213	15.2		24.7	
3	151	23.6	273	10.6		43.0	147	36.3		27.8	259	41.7		44.3	228	17.3		24.6	
4	166	26.1	288	10.5		43.5	162	37.2		28.5	274	43.6		44.4	243	19.4		24.6	
5	181	28.6	303	10.3	-16	44.1	177	38.1	+1	29.2	289	45.6	-21	44.5	258	21.6	-22	24.6	
6	196	31.0	318	10.2	-16	44.6	192	39.1	+1	30.0	304	47.5	-21	44.5	273	23.7	-22	24.6	
7	211	33.5	333	10.0		45.2	207	40.0		30.7	319	49.4		44.6	288	25.9		24.5	
8	226	36.0	348	9.9		45.8	222	40.9		31.4	334	51.3		44.7	303	28.0		24.5	
9	241	38.4	3	09.7		46.3	237	41.9		32.1	349	53.2		44.7	318	30.2		24.5	
10	256	40.9	18	09.6		46.9	252	42.8		32.8	4	55.1		44.8	333	32.3		24.5	
11	271	43.3	33	09.5	-16	47.4	267	43.7	+1	33.5	19	57.1	-21	44.9	348	34.5	-22	24.4	
12	286	45.8	48	09.3	-16	48.0	282	44.7	+1	34.3	34	59.0	-21	44.9	3	36.6	-22	24.4	
13	301	48.3	63	09.2		48.5	297	45.6		35.0	50	00.9		45.0	18	38.8		24.4	
14	316	50.7	78	09.0		49.1	312	46.6		35.7	65	02.8		45.1	33	40.9		24.4	
15	331	53.2	93	08.8		49.7	327	47.5		36.4	80	04.7		45.1	48	43.1		24.4	
16	346	55.7	108	08.7		50.2	342	48.4		37.1	95	06.7		45.2	63	45.2		24.3	
17	1	58.1	123	08.5	-16	50.8	357	49.4	+1	37.8	110	08.6	-21	45.3	78	47.3	-22	24.3	
18	17	00.6	138	08.4	-16	51.3	12	50.3	+1	38.6	125	10.5	-21	45.3	93	49.5	-22	24.3	
19	32	03.1	153	08.2		51.9	27	51.2		39.3	140	12.4		45.4	108	51.6		24.3	
20	47	05.5	168	08.1		52.4	42	52.2		40.0	155	14.3		45.4	123	53.8		24.2	
21	62	08.0	183	07.9		53.0	57	53.1		40.7	170	16.3		45.5	138	55.9		24.2	
22	77	10.5	198	07.7		53.5	72	54.0		41.4	185	18.2		45.6	153	58.1		24.2	
23	92	12.9	213	07.6		54.1	87	55.0		42.2	200	20.1		45.6	169	00.2		24.2	
24	107	15.4	228	07.4	-16	54.7	102	55.9	+1	42.9	215	22.0	-21	45.7	184	02.4	-22	24.1	
Dif.	—		-1		-6		+9		+7		+19		-1		+21				

UT	SOL			 LUNA							Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3			SD: 14'7			PHE { 4 ^h : 54'0											
	PMG: 12 ^h 06 ^m 6			Edad: 1 ^d 9			{ 12 ^h : 54'0											
				PMG: 14 ^h 02 ^m			Rº: 46 ^m											
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	24.3	-22	18.3	156	01.3	125	-19	10.7	52	60 N	15 16	16 11	17 07	10 15	20	17 57	73
1	193	24.0		17.9	170	32.8	126		05.5	53	58	32	22	14	10 03	22	18 09	70
2	208	23.7		17.6	185	04.4	126	-19	00.2	53	56	46	31	20	9 52	25	19 68	
3	223	23.5		17.3	199	36.0	127	-18	54.9	55	54	15 57	40	25	43 26		28 66	
4	238	23.2		17.0	214	07.7	127		49.4	55	52	16 07	47	30	35 28		36 64	
5	253	22.9	-22	16.6	228	39.4	127	-18	43.9	56	50	16 17	16 54	17 35	9 27	30	18 43	63
6	268	22.7	-22	16.3	243	11.1	128	-18	38.3	58	45	16 36	17 09	17 46	9 11	32	18 58	60
7	283	22.4		16.0	257	42.9	128		32.5	57	40	16 52	22	17 55	8 58	35	19 11	57
8	298	22.1		15.6	272	14.7	129		26.8	59	35	17 05	33	18 04	47 36		21 55	
9	313	21.9		15.3	286	46.6	129		20.9	60	30	16	17 43	12	37 38		31 53	
10	328	21.6		15.0	301	18.5	129		14.9	60	20	36	18 00	27	20 41		19 47	50
11	343	21.3	-22	14.6	315	50.4	130	-18	08.9	61	10 N	17 54	18 16	18 43	8 05	43	20 00	48
12	358	21.1	-22	14.3	330	22.4	130	-18	02.8	62	0	18 10	18 33	18 59	7 51	46	20 13	45
13	13	20.8		13.9	344	54.4	131	-17	56.6	62	10 S	27	18 50	19 17	37 48		26 43	
14	28	20.6		13.6	359	26.5	131		50.4	64	20	18 45	19 09	19 38	22 51		40 40	
15	43	20.3		13.3	13	58.6	132		44.0	64	30	19 06	33	20 05	7 05	53	20 55	37
16	58	20.0		12.9	28	30.8	131		37.6	65	35	18	19 47	23	6 55	55	21 05	34
17	73	19.8	-22	12.6	43	02.9	133	-17	31.1	65	40	19 32	20 04	20 45	6 44	56	21 15	33
18	88	19.5	-22	12.2	57	35.2	132	-17	24.6	67	45	19 49	20 25	21 13	6 30	59	21 27	30
19	103	19.2		11.9	72	07.4	134		17.9	67	50	20 10	20 52	21 53	14 61		41 27	
20	118	19.0		11.6	86	39.8	133		11.2	68	52	20	21 06	22 17	6 06	63	48 26	
21	133	18.7		11.2	101	12.1	134	-17	04.4	68	54	31	22	22 49	5 57	65	21 56	24
22	148	18.4		10.9	115	44.5	135	-16	57.6	70	56	44	21 42	** **	47 67		22 04	22
23	163	18.2		10.5	130	17.0	134		50.6	70	58	20 59	22 07	** **	36 69		13 20	
24	178	17.9	-22	10.2	144	49.4		-16	43.6		60 S	21 17	22 42	** **	5 23	72	22 24	17
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.5				Mag: +0.6				Mag: -1.8				Mag: +0.5			
	16 ^h 48 ^m 2		PMG: 08 ^h 48 ^m				PMG: 17 ^h 07 ^m				PMG: 09 ^h 37 ^m				PMG: 11 ^h 42 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	107	15.4	228	07.4	-16	54.7	102	55.9	+1	42.9	215	22.0	-21	-45.7	184	02.4	-22	24.1
1	122	17.8	243	07.3		55.2	117	56.8		43.6	230	23.9		-45.8	199	04.5		24.1
2	137	20.3	258	07.1		55.8	132	57.8		44.3	245	25.9		-45.8	214	06.7		24.1
3	152	22.8	273	06.9		56.3	147	58.7		45.0	260	27.8		-45.9	229	08.8		24.1
4	167	25.2	288	06.8		56.9	162	59.6		45.7	275	29.7		-46.0	244	11.0		24.0
5	182	27.7	303	06.6	-16	57.4	178	00.6	+1	46.5	290	31.6	-21	-46.0	259	13.1	-22	24.0
6	197	30.2	318	06.4	-16	58.0	193	01.5	+1	47.2	305	33.5	-21	-46.1	274	15.2	-22	24.0
7	212	32.6	333	06.3		58.5	208	02.5		47.9	320	35.5		-46.1	289	17.4		24.0
8	227	35.1	348	06.1		59.1	223	03.4		48.6	335	37.4		-46.2	304	19.5		23.9
9	242	37.6	3	05.9	-16	59.6	238	04.3		49.3	350	39.3		-46.3	319	21.7		23.9
10	257	40.0	18	05.8	-17	00.2	253	05.3		50.0	5	41.2		-46.3	334	23.8		23.9
11	272	42.5	33	05.6	-17	00.7	268	06.2	+1	50.8	20	43.1	-21	-46.4	349	26.0	-22	23.9
12	287	45.0	48	05.4	-17	01.3	283	07.1	+1	51.5	35	45.1	-21	-46.5	4	28.1	-22	23.8
13	302	47.4	63	05.3		01.8	298	08.1		52.2	50	47.0		-46.5	19	30.3		23.8
14	317	49.9	78	05.1		02.4	313	09.0		52.9	65	48.9		-46.6	34	32.4		23.8
15	332	52.3	93	04.9		02.9	328	09.9		53.6	80	50.8		-46.7	49	34.6		23.8
16	347	54.8	108	04.7		03.5	343	10.9		54.3	95	52.7		-46.7	64	36.7		23.7
17	2	57.3	123	04.6	-17	04.0	358	11.8	+1	55.1	110	54.7	-21	-46.8	79	38.9	-22	23.7
18	17	59.7	138	04.4	-17	04.6	13	12.7	+1	55.8	125	56.6	-21	-46.8	94	41.0	-22	23.7
19	33	02.2	153	04.2		05.1	28	13.7		56.5	140	58.5		-46.9	109	43.2		23.7
20	48	04.7	168	04.0		05.7	43	14.6		57.2	156	00.4		-47.0	124	45.3		23.7
21	63	07.1	183	03.8		06.2	58	15.5		57.9	171	02.3		-47.0	139	47.4		23.6
22	78	09.6	198	03.7		06.8	73	16.5		58.6	186	04.3		-47.1	154	49.6		23.6
23	93	12.1	213	03.5		07.3	88	17.4	+1	59.4	201	06.2		-47.2	169	51.7		23.6
24	108	14.5	228	03.3	-17	07.9	103	18.3	+2	00.1	216	08.1	-21	-47.2	184	53.9	-22	23.6
Dif.	—		-2		-6		+9		+7		+19		-1		+21		0	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 16'3				SD: 14'7		PHE {		4 ^h : 54'0													
	PMG: 12 ^h 07 ^m 0				Edad: 2 ^d 9		20 ^h : 54'0															
	PMG: 14 ^h 48 ^m				Rº: 43 ^m																	
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.			Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'			°	'			h	m	h	m	h	m	m	h	m	m
0	178	17.9	-22	10.2	144	49.4	135	-16	43.6	71	60 N	7 06	8 01	8 56			10 35	15		19 10	74	
1	193	17.7		09.8	159	21.9	136		36.5	71	58	6 59	7 51	40			25	18		19	71	
2	208	17.4		09.5	173	54.5	136		29.4	72	56	53	41	27			17	20		27	69	
3	223	17.1		09.1	188	27.1	136		22.2	73	54	48	33	16			09	22		34	67	
4	238	16.9		08.8	202	59.7	137		14.9	74	52	43	26	8 06			10 03	23		40	65	
5	253	16.6	-22	08.5	217	32.4	137	-16	07.5	74	50	6 38	7 19	7 56			9 57	25		19 46	63	
6	268	16.3	-22	08.1	232	05.1	138	-16	00.1	75	45	6 27	7 04	7 37			9 43	29		19 58	60	
7	283	16.1		07.8	246	37.9	138	-15	52.6	75	40	18	6 52	22			33	31		20 08	57	
8	298	15.8		07.4	261	10.7	138		45.1	77	35	09	41	7 09			23	34		16	55	
9	313	15.6		07.0	275	43.5	139		37.4	76	30	6 01	31	6 57			15	35		24	53	
10	328	15.3		06.7	290	16.4	139		29.8	78	20	5 46	6 13	37			9 01	38		37	49	
11	343	15.0	-22	06.3	304	49.3	140	-15	22.0	78	10 N	5 31	5 57	6 20			8 48	42		20 48	46	
12	358	14.8	-22	06.0	319	22.3	139	-15	14.2	79	0	5 15	5 41	6 03			8 37	44		20 58	44	
13	13	14.5		05.6	333	55.2	141	-15	06.3	79	10 S	4 57	24	5 47			25	47		21 09	40	
14	28	14.3		05.3	348	28.3	140	-14	58.4	81	20	36	5 05	29			8 13	49		20	37	
15	43	14.0		04.9	3	01.3	141		50.3	80	30	4 08	4 41	5 08			7 58	53		32	34	
16	58	13.7		04.6	17	34.4	142		42.3	82	35	3 51	27	4 56			50	55		39	32	
17	73	13.5	-22	04.2	32	07.6	141	-14	34.1	81	40	3 29	4 10	4 42			7 40	57		21 48	29	
18	88	13.2	-22	03.8	46	40.7	142	-14	26.0	83	45	3 01	3 49	4 25			7 29	60		21 57	27	
19	103	13.0		03.5	61	13.9	143		17.7	83	50	2 21	21	4 04			15	64		22 08	24	
20	118	12.7		03.1	75	47.2	143		09.4	84	52	1 57	3 08	3 54			09	65		14	22	
21	133	12.4		02.8	90	20.5	143	-14	01.0	84	54	1 25	2 52	43			7 02	67		20	20	
22	148	12.2		02.4	104	53.8	143	-13	52.6	85	56	** **	32	30			6 54	69		26	18	
23	163	11.9		02.0	119	27.1	144		44.1	85	58	** **	2 07	3 15			6 45	71		22 33	16	
24	178	11.7	-22	01.7	134	00.5		-13	35.6		60 S	** **	1 32	2 57			6 35	74		22 41	14	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 16 ^h 44 ^m 3		Mag: -4.5 PMG: 08 ^h 48 ^m				Mag: +0.6 PMG: 17 ^h 06 ^m				Mag: -1.8 PMG: 09 ^h 34 ^m				Mag: +0.5 PMG: 11 ^h 39 ^m							
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	108	14.5	228	03.3	-17	07.9	103	18.3	+2	00.1	216	08.1	-21	47.2	184	53.9	-22	23.6				
1	123	17.0	243	03.1		08.4	118	19.3		00.8	231	10.0		47.3	199	56.0		23.5				
2	138	19.4	258	02.9		09.0	133	20.2		01.5	246	12.0		47.3	214	58.2		23.5				
3	153	21.9	273	02.7		09.5	148	21.1		02.2	261	13.9		47.4	230	00.3		23.5				
4	168	24.4	288	02.6		10.0	163	22.1		02.9	276	15.8		47.5	245	02.5		23.5				
5	183	26.8	303	02.4	-17	10.6	178	23.0	+2	03.7	291	17.7	-21	47.5	260	04.6	-22	23.4				
6	198	29.3	318	02.2	-17	11.1	193	23.9	+2	04.4	306	19.7	-21	47.6	275	06.8	-22	23.4				
7	213	31.8	333	02.0		11.7	208	24.9		05.1	321	21.6		47.7	290	08.9		23.4				
8	228	34.2	348	01.8		12.2	223	25.8		05.8	336	23.5		47.7	305	11.1		23.4				
9	243	36.7	3	01.6		12.8	238	26.7		06.5	351	25.4		47.8	320	13.2		23.3				
10	258	39.2	18	01.4		13.3	253	27.7		07.2	6	27.3		47.8	335	15.4		23.3				
11	273	41.6	33	01.2	-17	13.9	268	28.6	+2	08.0	21	29.3	-21	47.9	350	17.5	-22	23.3				
12	288	44.1	48	01.0	-17	14.4	283	29.5	+2	08.7	36	31.2	-21	48.0	5	19.6	-22	23.3				
13	303	46.6	63	00.9		14.9	298	30.5		09.4	51	33.1		48.0	20	21.8		23.2				
14	318	49.0	78	00.7		15.5	313	31.4		10.1	66	35.0		48.1	35	23.9		23.2				
15	333	51.5	93	00.5		16.0	328	32.3		10.8	81	37.0		48.2	50	26.1		23.2				
16	348	53.9	108	00.3		16.6	343	33.3		11.5	96	38.9		48.2	65	28.2		23.2				
17	3	56.4	123	00.1	-17	17.1	358	34.2	+2	12.3	111	40.8	-21	48.3	80	30.4	-22	23.1				
18	18	58.9	137	59.9	-17	17.6	13	35.1	+2	13.0	126	42.7	-21	48.3	95	32.5	-22	23.1				
19	34	01.3	152	59.7		18.2	28	36.1		13.7	141	44.7		48.4	110	34.7		23.1				
20	49	03.8	167	59.5		18.7	43	37.0		14.4	156	46.6		48.5	125	36.8		23.1				
21	64	06.3	182	59.3		19.3	58	37.9		15.1	171	48.5		48.5	140	39.0		23.0				
22	79	08.7	197	59.1		19.8	73	38.9		15.8	186	50.4		48.6	155	41.1		23.0				
23	94	11.2	212	58.9		20.3	88	39.8		16.5	201	52.4		48.7	170	43.3		23.0				
24	109	13.7	227	58.7	-17	20.9	103	40.7	+2	17.3	216	54.3	-21	48.7	185	45.4	-22	23.0				
Dif.	—		-2		-5		+9		+7		+19		-1		+21							

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'3				SD: 14'7												PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2	
	PMG: 12 ^h 07 ^m 4				Edad: 3 ^d 9													
	PMG: 15 ^h 31 ^m				Rº: 43 ^m													
	hG ☉	Dec			hG ☾	Dif.	Dec			Dif.		Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	178	11.7	-22	01.7	134	00.5	144	-13	35.6	86	60 N	15 20	16 15	17 10	10 50	13	20 24 75	
1	193	11.4		01.3	148	33.9	145		27.0	87	58	36	25	16	43	15	30 72	
2	208	11.2		00.9	163	07.4	144		18.3	87	56	15 49	34	22	37	17	36 69	
3	223	10.9		00.6	177	40.8	145		09.6	88	54	16 00	43	28	31	20	41 67	
4	238	10.7	-22	00.2	192	14.3	146	-13	00.8	88	52	10	50	33	26	21	45 66	
5	253	10.4	-21	59.8	206	47.9	146	-12	52.0	89	50	16 19	16 57	17 37	10 22	22	20 49 64	
6	268	10.1	-21	59.5	221	21.5	146	-12	43.1	89	45	16 38	17 11	17 48	10 12	26	20 58 60	
7	283	09.9		59.1	235	55.1	146		34.2	90	40	16 54	24	17 57	10 04	28	21 05 58	
8	298	09.6		58.7	250	28.7	147		25.2	90	35	17 07	34	18 06	9 57	31	11 55	
9	313	09.4		58.4	265	02.4	146		16.2	91	30	18	17 44	14	50	33	17 52	
10	328	09.1		58.0	279	36.0	148	-12	07.1	91	20	38	18 01	29	39	37	26 49	
11	343	08.9	-21	57.6	294	09.8	147	-11	58.0	92	10 N	17 55	18 17	18 44	9 30	40	21 34 46	
12	358	08.6	-21	57.3	308	43.5	148	-11	48.8	93	0	18 11	18 33	18 59	9 21	43	21 42 42	
13	13	08.4		56.9	323	17.3	148		39.5	92	10 S	27	18 50	19 17	12	46	49 40	
14	28	08.1		56.5	337	51.1	148		30.3	94	20	18 45	19 09	19 38	9 02	49	21 57 36	
15	43	07.9		56.1	352	24.9	149		20.9	94	30	19 06	33	20 05	8 51	53	22 06 33	
16	58	07.6		55.8	6	58.8	149		11.5	94	35	18	19 47	22	45	55	11 31	
17	73	07.3	-21	55.4	21	32.7	149	-11	02.1	95	40	19 31	20 03	20 44	8 37	58	22 17 28	
18	88	07.1	-21	55.0	36	06.6	149	-10	52.6	95	45	19 48	20 24	21 11	8 29	60	22 24 25	
19	103	06.8		54.6	50	40.5	149		43.1	95	50	20 09	20 51	21 51	19	63	32 22	
20	118	06.6		54.3	65	14.4	150		33.6	96	52	18	21 04	22 13	14	65	36 20	
21	133	06.3		53.9	79	48.4	150		24.0	97	54	29	20	22 44	09	67	40 18	
22	148	06.1		53.5	94	22.4	150		14.3	97	56	42	21 39	23 48	8 03	69	44 17	
23	163	05.8		53.1	108	56.4	151	-10	04.6	97	58	20 57	22 03	** **	7 56	72	49 15	
24	178	05.6	-21	52.7	123	30.5		-9	54.9		60 S	21 14	22 36	** **	7 49	74	22 55 12	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.5				Mag: +0.6				Mag: -1.8				Mag: +0.5			
	16 ^h 40 ^m 4		PMG: 08 ^h 48 ^m				PMG: 17 ^h 04 ^m				PMG: 09 ^h 31 ^m				PMG: 11 ^h 35 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	109	13.7	227	58.7	-17	20.9	103	40.7	+2	17.3	216	54.3	-21	-48.7	185	45.4	-22	23.0
1	124	16.1	242	58.5		21.4	118	41.7		18.0	231	56.2		-48.8	200	47.6		22.9
2	139	18.6	257	58.3		22.0	133	42.6		18.7	246	58.1		-48.8	215	49.7		22.9
3	154	21.1	272	58.1		22.5	148	43.5		19.4	262	00.1		-48.9	230	51.9		22.9
4	169	23.5	287	57.9		23.0	163	44.5		20.1	277	02.0		-49.0	245	54.0		22.9
5	184	26.0	302	57.6	-17	23.6	178	45.4	+2	20.8	292	03.9	-21	-49.0	260	56.1	-22	22.8
6	199	28.4	317	57.4	-17	24.1	193	46.3	+2	21.6	307	05.8	-21	-49.1	275	58.3	-22	22.8
7	214	30.9	332	57.2		24.6	208	47.2		22.3	322	07.8		-49.2	291	00.4		22.8
8	229	33.4	347	57.0		25.2	223	48.2		23.0	337	09.7		-49.2	306	02.6		22.8
9	244	35.8	2	56.8		25.7	238	49.1		23.7	352	11.6		-49.3	321	04.7		22.7
10	259	38.3	17	56.6		26.2	253	50.0		24.4	7	13.5		-49.3	336	06.9		22.7
11	274	40.8	32	56.4	-17	26.8	268	51.0	+2	25.1	22	15.5	-21	-49.4	351	09.0	-22	22.7
12	289	43.2	47	56.2	-17	27.3	283	51.9	+2	25.8	37	17.4	-21	-49.5	6	11.2	-22	22.7
13	304	45.7	62	56.0		27.9	298	52.8		26.6	52	19.3		-49.5	21	13.3		22.7
14	319	48.2	77	55.7		28.4	313	53.8		27.3	67	21.2		-49.6	36	15.5		22.6
15	334	50.6	92	55.5		28.9	328	54.7		28.0	82	23.2		-49.6	51	17.6		22.6
16	349	53.1	107	55.3		29.5	343	55.6		28.7	97	25.1		-49.7	66	19.8		22.6
17	4	55.5	122	55.1	-17	30.0	358	56.6	+2	29.4	112	27.0	-21	-49.8	81	21.9	-22	22.6
18	19	58.0	137	54.9	-17	30.5	13	57.5	+2	30.1	127	28.9	-21	-49.8	96	24.1	-22	22.5
19	35	00.5	152	54.7		31.0	28	58.4		30.9	142	30.9		-49.9	111	26.2		22.5
20	50	02.9	167	54.4		31.6	43	59.4		31.6	157	32.8		-49.9	126	28.4		22.5
21	65	05.4	182	54.2		32.1	59	00.3		32.3	172	34.7		-50.0	141	30.5		22.5
22	80	07.9	197	54.0		32.6	74	01.2		33.0	187	36.7		-50.1	156	32.7		22.4
23	95	10.3	212	53.8		33.2	89	02.1		33.7	202	38.6		-50.1	171	34.8		22.4
24	110	12.8	227	53.6	-17	33.7	104	03.1	+2	34.4	217	40.5	-21	-50.2	186	36.9	-22	22.4
Dif.	—		-2		-5		+9		+7		+19		-1		+21		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'3				PHE {	4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4				Náut.	Civil		Hora	Rº	Hora	Rº						
	PMG: 12 ^h 07 ^m 8					PMG: 16 ^h 14 ^m Rº: 42 ^m																
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.															
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	m						
0	178	05.6	-21	123	30.5	150	-9	54.9	98	60 N	7 05	8 00	8 54	11 03	11	21 39 75						
1	193	05.3		138	04.5	151		45.1	98	58	6 58	7 49	38	10 58	14	42 73						
2	208	05.1		152	38.6	151		35.3	99	56	52	40	26	54	16	45 71						
3	223	04.8		167	12.7	151		25.4	99	54	47	32	14	51	17	48 69						
4	238	04.6		181	46.8	152		15.5	100	52	42	25	8 04	47	20	51 66						
5	253	04.3	-21	196	21.0	151	-9	05.5	99	50	6 37	7 18	7 55	10 44	21	21 53 65						
6	268	04.1	-21	210	55.1	152	-8	55.6	101	45	6 27	7 04	7 37	10 38	24	21 58 61						
7	283	03.8		225	29.3	152		45.5	100	40	18	6 51	21	32	27	22 03 58						
8	298	03.6		240	03.5	152		35.5	101	35	09	41	7 08	28	29	06 56						
9	313	03.3		254	37.7	152		25.4	102	30	6 01	31	6 57	23	32	09 53						
10	328	03.1		269	11.9	152		15.2	101	20	5 46	6 14	37	16	36	15 49						
11	343	02.8	-21	283	46.1	153	-8	05.1	103	10 N	5 32	5 58	6 20	10 10	39	22 20 45						
12	358	02.6	-21	298	20.4	152	-7	54.8	102	0	5 16	5 42	6 04	10 04	42	22 24 42						
13	13	02.3		312	54.6	153		44.6	103	10 S	4 58	25	5 48	9 58	45	29 39						
14	28	02.1		327	28.9	153		34.3	103	20	37	5 06	30	51	49	33 36						
15	43	01.8		342	03.2	153		24.0	104	30	4 10	4 43	5 10	44	53	39 31						
16	58	01.6		356	37.5	152		13.6	103	35	3 53	29	4 58	40	55	42 29						
17	73	01.4	-21	11	11.7	154	-7	03.3	105	40	3 32	4 12	4 44	9 35	57	22 45 27						
18	88	01.1	-21	25	46.1	153	-6	52.8	104	45	3 04	3 51	4 28	9 29	61	22 49 24						
19	103	00.9		40	20.4	153		42.4	105	50	2 25	25	4 07	22	65	54 20						
20	118	00.6		54	54.7	153		31.9	105	52	2 02	3 11	3 57	19	66	56 19						
21	133	00.4		69	29.0	153		21.4	105	54	1 32	2 55	46	16	68	22 58 17						
22	148	00.1		84	03.3	154		10.9	106	56	0 29	37	34	12	70	23 01 15						
23	162	59.9		98	37.7	153	-6	00.3	106	58	** **	2 13	19	9 08	72	23 04 13						
24	177	59.6	-21	113	12.0		-5	49.7		60 S	** **	1 40	3 01	9 03	75	23 07 10						
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG		Mag: -4.5				Mag: +0.6				Mag: -1.8				Mag: +0.5							
	16 ^h 36 ^m 4		PMG: 08 ^h 49 ^m				PMG: 17 ^h 03 ^m				PMG: 09 ^h 28 ^m				PMG: 11 ^h 32 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.						
h	°	'	°	'	°	'	'	'	°	'	°	'	'	'	°	'	'					
0	110	12.8	227	53.6	-17	33.7			104	03.1	+2	34.4			217	40.5	-21	50.2	186	36.9	-22	22.4
1	125	15.3	242	53.3		34.2			119	04.0		35.1			232	42.4		50.3	201	39.1		22.4
2	140	17.7	257	53.1		34.8			134	04.9		35.9			247	44.4		50.3	216	41.2		22.3
3	155	20.2	272	52.9		35.3			149	05.9		36.6			262	46.3		50.4	231	43.4		22.3
4	170	22.7	287	52.6		35.8			164	06.8		37.3			277	48.2		50.4	246	45.5		22.3
5	185	25.1	302	52.4	-17	36.3			179	07.7	+2	38.0			292	50.1	-21	50.5	261	47.7	-22	22.3
6	200	27.6	317	52.2	-17	36.9			194	08.7	+2	38.7			307	52.1	-21	50.6	276	49.8	-22	22.2
7	215	30.0	332	52.0		37.4			209	09.6		39.4			322	54.0		50.6	291	52.0		22.2
8	230	32.5	347	51.7		37.9			224	10.5		40.1			337	55.9		50.7	306	54.1		22.2
9	245	35.0	2	51.5		38.5			239	11.5		40.9			352	57.9		50.7	321	56.3		22.2
10	260	37.4	17	51.3		39.0			254	12.4		41.6			7	59.8		50.8	336	58.4		22.1
11	275	39.9	32	51.0	-17	39.5			269	13.3	+2	42.3			23	01.7	-21	50.9	352	00.6	-22	22.1
12	290	42.4	47	50.8	-17	40.0			284	14.2	+2	43.0			38	03.6	-21	50.9	7	02.7	-22	22.1
13	305	44.8	62	50.6		40.6			299	15.2		43.7			53	05.6		51.0	22	04.9		22.1
14	320	47.3	77	50.3		41.1			314	16.1		44.4			68	07.5		51.0	37	07.0		22.0
15	335	49.8	92	50.1		41.6			329	17.0		45.1			83	09.4		51.1	52	09.2		22.0
16	350	52.2	107	49.9		42.1			344	18.0		45.9			98	11.4		51.2	67	11.3		22.0
17	5	54.7	122	49.6	-17	42.7			359	18.9	+2	46.6			113	13.3	-21	51.2	82	13.5	-22	22.0
18	20	57.2	137	49.4	-17	43.2			14	19.8	+2	47.3			128	15.2	-21	51.3	97	15.6	-22	21.9
19	35	59.6	152	49.2		43.7			29	20.7		48.0			143	17.1		51.3	112	17.8		21.9
20	51	02.1	167	48.9		44.2			44	21.7		48.7			158	19.1		51.4	127	19.9		21.9
21	66	04.5	182	48.7		44.7			59	22.6		49.4			173	21.0		51.5	142	22.1		21.9
22	81	07.0	197	48.4		45.3			74	23.5		50.1			188	22.9		51.5	157	24.2		21.8
23	96	09.5	212	48.2		45.8			89	24.5		50.8			203	24.9		51.6	172	26.3		21.8
24	111	11.9	227	47.9	-17	46.3			104	25.4	+2	51.6			218	26.8	-21	51.6	187	28.5	-22	21.8
Dif.	—		-2		-5		+9		+7		+19		-1		+21							

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'3				SD: 14'9														
	PMG: 12 ^h 08 ^m 2				Edad: 5 ^d 9														
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Rº: 43 ^m												
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	177	59.6	-21	43.4	113	12.0	153	-5	49.7	106	60 N	15 25	16 18	17 13	11 14	10	22 54	77	
1	192	59.4		43.0	127	46.3	154		39.1	107	58	39	28	19	12 13		55 74		
2	207	59.1		42.6	142	20.7	153		28.4	107	56	15 52	37	25	10 15		56 72		
3	222	58.9		42.2	156	55.0	154		17.7	107	54	16 03	45	30	08 17		57 69		
4	237	58.7		41.8	171	29.4	153	-5	07.0	107	52	13	53	35	07 18		57 68		
5	252	58.4	-21	41.4	186	03.7	154	-4	56.3	108	50	16 22	16 59	17 40	11 05	21	22 58	66	
6	267	58.2	-21	41.0	200	38.1	153	-4	45.5	108	45	16 40	17 13	17 50	11 02	24	22 59	63	
7	282	57.9		40.6	215	12.4	154		34.7	108	40	16 56	26	17 59	10 59	27	23 01	59	
8	297	57.7		40.1	229	46.8	153		23.9	108	35	17 08	36	18 07	57 30		02 56		
9	312	57.4		39.7	244	21.1	153		13.1	109	30	20	17 46	15	55 32		02 55		
10	327	57.2		39.3	258	55.4	153	-4	02.2	109	20	39	18 03	30	52 36		04 50		
11	342	57.0	-21	38.9	273	29.7	154	-3	51.3	109	10 N	17 56	18 18	18 45	10 49	39	23 05	47	
12	357	56.7	-21	38.5	288	04.1	153	-3	40.4	109	0	18 12	18 34	19 00	10 46	43	23 06	43	
13	12	56.5		38.1	302	38.4	153		29.5	110	10 S	28	18 51	17	43 46		08 39		
14	27	56.2		37.7	317	12.7	153		18.5	110	20	18 45	19 09	19 38	40 50		09 36		
15	42	56.0		37.3	331	47.0	153	-3	07.5	109	30	19 05	32	20 05	37 53		10 32		
16	57	55.8		36.9	346	21.3	153	-2	56.6	111	35	17	19 46	22	35 56		11 30		
17	72	55.5	-21	36.5	0	55.6	152	-2	45.5	110	40	19 31	20 03	20 43	10 32	59	23 12	27	
18	87	55.3	-21	36.1	15	29.8	153	-2	34.5	110	45	19 47	20 23	21 10	10 30	62	23 13	24	
19	102	55.0		35.6	30	04.1	152		23.5	111	50	20 07	20 49	21 48	27 65		14 21		
20	117	54.8		35.2	44	38.3	152		12.4	111	52	17	21 03	22 10	25 67		15 19		
21	132	54.6		34.8	59	12.5	153	-2	01.3	111	54	28	18	22 39	24 69		15 17		
22	147	54.3		34.4	73	46.8	152	-1	50.2	111	56	40	36	23 30	22 71		16 15		
23	162	54.1		34.0	88	21.0	151		39.1	111	58	20 54	21 59	** **	20 74		17 13		
24	177	53.8	-21	33.6	102	55.1		-1	28.0		60 S	21 11	22 30	** **	10 18	76	23 17	11	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 16 ^h 32 ^m 5		Mag: -4.5 PMG: 08 ^h 49 ^m				Mag: +0.6 PMG: 17 ^h 01 ^m				Mag: -1.8 PMG: 09 ^h 25 ^m				Mag: +0.5 PMG: 11 ^h 28 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	111	11.9	227	47.9	-17	46.3	104	25.4	+2	51.6	218	26.8	-21	-51.6	187	28.5	-22	21.8	
1	126	14.4	242	47.7		46.8	119	26.3		52.3	233	28.7		-51.7	202	30.6		21.8	
2	141	16.9	257	47.5		47.3	134	27.2		53.0	248	30.7		-51.8	217	32.8		21.7	
3	156	19.3	272	47.2		47.9	149	28.2		53.7	263	32.6		-51.8	232	34.9		21.7	
4	171	21.8	287	47.0		48.4	164	29.1		54.4	278	34.5		-51.9	247	37.1		21.7	
5	186	24.3	302	46.7	-17	48.9	179	30.0	+2	55.1	293	36.4	-21	-51.9	262	39.2	-22	21.7	
6	201	26.7	317	46.5	-17	49.4	194	31.0	+2	55.8	308	38.4	-21	-52.0	277	41.4	-22	21.6	
7	216	29.2	332	46.2		49.9	209	31.9		56.6	323	40.3		-52.1	292	43.5		21.6	
8	231	31.6	347	46.0		50.5	224	32.8		57.3	338	42.2		-52.1	307	45.7		21.6	
9	246	34.1	2	45.7		51.0	239	33.8		58.0	353	44.2		-52.2	322	47.8		21.6	
10	261	36.6	17	45.5		51.5	254	34.7		58.7	8	46.1		-52.2	337	50.0		21.5	
11	276	39.0	32	45.2	-17	52.0	269	35.6	+2	59.4	23	48.0	-21	-52.3	352	52.1	-22	21.5	
12	291	41.5	47	45.0	-17	52.5	284	36.5	+3	00.1	38	50.0	-21	-52.3	7	54.3	-22	21.5	
13	306	44.0	62	44.7		53.0	299	37.5		00.8	53	51.9		-52.4	22	56.4		21.5	
14	321	46.4	77	44.5		53.5	314	38.4		01.5	68	53.8		-52.5	37	58.6		21.4	
15	336	48.9	92	44.2		54.1	329	39.3		02.3	83	55.8		-52.5	53	00.7		21.4	
16	351	51.4	107	44.0		54.6	344	40.2		03.0	98	57.7		-52.6	68	02.9		21.4	
17	6	53.8	122	43.7	-17	55.1	359	41.2	+3	03.7	113	59.6	-21	-52.6	83	05.0	-22	21.4	
18	21	56.3	137	43.4	-17	55.6	14	42.1	+3	04.4	129	01.6	-21	-52.7	98	07.2	-22	21.3	
19	36	58.8	152	43.2		56.1	29	43.0		05.1	144	03.5		-52.8	113	09.3		21.3	
20	52	01.2	167	42.9		56.6	44	44.0		05.8	159	05.4		-52.8	128	11.5		21.3	
21	67	03.7	182	42.7		57.1	59	44.9		06.5	174	07.4		-52.9	143	13.6		21.3	
22	82	06.1	197	42.4		57.6	74	45.8		07.2	189	09.3		-52.9	158	15.8		21.2	
23	97	08.6	212	42.1		58.2	89	46.7		08.0	204	11.2		-53.0	173	17.9		21.2	
24	112	11.1	227	41.9	-17	58.7	104	47.7	+3	08.7	219	13.2	-21	-53.1	188	20.1	-22	21.2	
Dif.	—		-3		-5		+9		+7		+19		-1		+21		0		

UT	SOL			 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 08 ^m 6			SD: 15'0 Edad: 6 ^d 9 PHE { 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'5 PMG: 17 ^h 39 ^m Rº: 44 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	°	'	°	'		h m	h m	h m	h m m	h m m						
0	177	53.8	-21	102	55.1	152	-1	28.0	112	60 N	7 03	7 57	8 51	11 24 11	*** **				
1	192	53.6		117	29.3	151		16.8	111	58	6 57	47	36	25 13	*** **				
2	207	53.4		132	03.4	152	-1	05.7	112	56	51	39	24	25 16	*** **				
3	222	53.1		146	37.6	151	-0	54.5	112	54	46	31	13	25 18	*** **				
4	237	52.9		161	11.7	151		43.3	112	52	41	24	8 03	25 20	*** **				
5	252	52.7	-21	175	45.8	150	-0	32.1	112	50	6 37	7 17	7 54	11 26 21	*** **				
6	267	52.4	-21	190	19.8	151	-0	20.9	112	45	6 26	7 03	7 36	11 26 25	*** **				
7	282	52.2		204	53.9	150	-0	09.7	113	40	17	6 51	21	26 28	*** **				
8	297	52.0		219	27.9	150	+0	01.6	112	35	09	40	7 08	27 30	23 58 58				
9	312	51.7		234	01.9	149		12.8	113	30	6 02	31	6 57	27 33	57 55				
10	327	51.5		248	35.8	150		24.1	112	20	5 47	6 14	38	28 36	54 52				
11	342	51.2	-21	263	09.8	149	+0	35.3	113	10 N	5 32	5 58	6 21	11 28 41	23 52 48				
12	357	51.0	-21	277	43.7	148	+0	46.6	113	0	5 17	5 43	6 05	11 29 43	23 49 45				
13	12	50.8		292	17.5	149	+0	57.9	112	10 S	5 00	26	5 49	29 47	47 41				
14	27	50.5		306	51.4	148	+1	09.1	113	20	4 39	5 07	32	30 50	45 38				
15	42	50.3		321	25.2	148		20.4	113	30	4 12	4 45	12	30 55	42 34				
16	57	50.1		335	59.0	148		31.7	113	35	3 55	31	5 00	31 57	41 31				
17	72	49.8	-21	350	32.8	147	+1	43.0	113	40	3 34	4 14	4 46	11 31 60	23 39 29				
18	87	49.6	-21	5	06.5	147	+1	54.3	113	45	3 07	3 54	4 30	11 32 63	23 37 26				
19	102	49.4		19	40.2	146	+2	05.6	113	50	2 29	28	10	32 67	35 21				
20	117	49.1		34	13.8	146		16.9	113	52	2 07	3 15	4 00	32 69	34 20				
21	132	48.9		48	47.4	146		28.2	113	54	1 39	2 59	3 50	33 71	32 19				
22	147	48.7		63	21.0	146		39.5	113	56	0 48	41	37	33 73	31 16				
23	162	48.4		77	54.6	145	+2	50.8	113	58	** **	2 18	23	11 34 75	23 30 14				
24	177	48.2	-21	92	28.1		+3	02.1		60 S	** **	1 47	3 06	11 34 78	23 28 11				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 16 ^h 28 ^m 6		Mag: -4.5 PMG: 08 ^h 49 ^m			Mag: +0.6 PMG: 17 ^h 00 ^m			Mag: -1.8 PMG: 09 ^h 22 ^m			Mag: +0.5 PMG: 11 ^h 25 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	112	11.1	227	41.9	-17	58.7		104	47.7	+3	08.7	219	13.2	-21	53.1	188	20.1	-22	21.2
1	127	13.5		242	41.6		59.2	119	48.6		09.4	234	15.1		53.1	203	22.2		21.2
2	142	16.0		257	41.3	-17	59.7	134	49.5		10.1	249	17.0		53.2	218	24.4		21.1
3	157	18.5		272	41.1	-18	00.2	149	50.5		10.8	264	19.0		53.2	233	26.5		21.1
4	172	20.9		287	40.8		00.7	164	51.4		11.5	279	20.9		53.3	248	28.7		21.1
5	187	23.4		302	40.6	-18	01.2	179	52.3	+3	12.2	294	22.8	-21	53.3	263	30.8	-22	21.1
6	202	25.9		317	40.3	-18	01.7	194	53.2	+3	12.9	309	24.8	-21	53.4	278	33.0	-22	21.0
7	217	28.3		332	40.0		02.2	209	54.2		13.7	324	26.7		53.5	293	35.1		21.0
8	232	30.8		347	39.7		02.7	224	55.1		14.4	339	28.6		53.5	308	37.2		21.0
9	247	33.3		2	39.5		03.2	239	56.0		15.1	354	30.6		53.6	323	39.4		21.0
10	262	35.7		17	39.2		03.7	254	56.9		15.8	9	32.5		53.6	338	41.5		20.9
11	277	38.2		32	38.9	-18	04.3	269	57.9	+3	16.5	24	34.4	-21	53.7	353	43.7	-22	20.9
12	292	40.6		47	38.7	-18	04.8	284	58.8	+3	17.2	39	36.4	-21	53.8	8	45.8	-22	20.9
13	307	43.1		62	38.4		05.3	299	59.7		17.9	54	38.3		53.8	23	48.0		20.8
14	322	45.6		77	38.1		05.8	315	00.6		18.6	69	40.2		53.9	38	50.1		20.8
15	337	48.0		92	37.8		06.3	330	01.6		19.4	84	42.2		53.9	53	52.3		20.8
16	352	50.5		107	37.6		06.8	345	02.5		20.1	99	44.1		54.0	68	54.4		20.8
17	7	53.0		122	37.3	-18	07.3	0	03.4	+3	20.8	114	46.0	-21	54.0	83	56.6	-22	20.7
18	22	55.4		137	37.0	-18	07.8	15	04.4	+3	21.5	129	48.0	-21	54.1	98	58.7	-22	20.7
19	37	57.9		152	36.7		08.3	30	05.3		22.2	144	49.9		54.2	114	00.9		20.7
20	53	00.4		167	36.5		08.8	45	06.2		22.9	159	51.8		54.2	129	03.0		20.7
21	68	02.8		182	36.2		09.3	60	07.1		23.6	174	53.8		54.3	144	05.2		20.6
22	83	05.3		197	35.9		09.8	75	08.1		24.3	189	55.7		54.3	159	07.3		20.6
23	98	07.7		212	35.6		10.3	90	09.0		25.0	204	57.6		54.4	174	09.5		20.6
24	113	10.2		227	35.3	-18	10.8	105	09.9	+3	25.8	219	59.6	-21	54.4	189	11.6	-22	20.6
Dif.	—		-3		-5		+9		+7		+19		-1		+21				

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'3			PHE { 4 ^h : 55'7 12 ^h : 56'0 20 ^h : 56'2														
	PMG: 12 ^h 09 ^m 0			Edad: 7 ^d 9														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	177	48.2	-21	23.4	92	28.1	144	+3	02.1	113	60 N	15 29	16 22	17 16	11 35	13	0 11	79
1	192	48.0		22.9	107	01.5	144			113	58	43	32	23	38	15	09	77
2	207	47.8		22.5	121	34.9	144		24.7	114	56	15 56	41	28	41	17	08	74
3	222	47.5		22.1	136	08.3	143		36.1	112	54	16 07	48	33	43	19	06	72
4	237	47.3		21.6	150	41.6	143		47.3	113	52	16	16 55	38	45	21	05	70
5	252	47.1	-21	21.2	165	14.9	143	+3	58.6	113	50	16 25	17 02	17 42	11 47	23	0 04	68
6	267	46.8	-21	20.7	179	48.2	142	+4	09.9	113	45	16 43	17 16	17 52	11 51	27	0 02	64
7	282	46.6		20.3	194	21.4	141		21.2	113	40	16 58	28	18 01	54	30	***	***
8	297	46.4		19.9	208	54.5	141		32.5	113	35	17 10	38	09	11 57	33	***	***
9	312	46.1		19.4	223	27.6	141		43.8	112	30	21	17 47	17	12 00	35	***	***
10	327	45.9		19.0	238	00.7	140	+4	55.0	113	20	40	18 04	31	04	39	***	***
11	342	45.7	-21	18.5	252	33.7	139	+5	06.3	112	10 N	17 57	18 19	18 45	12 09	42	***	***
12	357	45.5	-21	18.1	267	06.6	139	+5	17.5	113	0	18 13	18 35	19 01	12 12	46	***	***
13	12	45.2		17.7	281	39.5	139		28.8	112	10 S	28	18 51	18	16	50	***	***
14	27	45.0		17.2	296	12.4	138		40.0	112	20	18 45	19 10	19 38	20	54	***	***
15	42	44.8		16.8	310	45.2	137	+5	51.2	112	30	19 05	32	20 04	25	57	***	***
16	57	44.6		16.3	325	17.9	137	+6	02.4	112	35	17	19 46	21	28	60	***	***
17	72	44.3	-21	15.9	339	50.6	136	+6	13.6	111	40	19 30	20 02	20 42	12 31	63	***	***
18	87	44.1	-21	15.4	354	23.2	136	+6	24.7	112	45	19 46	20 22	21 08	12 35	66	***	***
19	102	43.9		15.0	8	55.8	135		35.9	111	50	20 06	20 48	21 45	39	70	23 56	25
20	117	43.6		14.5	23	28.3	134		47.0	112	52	15	21 00	22 06	41	72	54	23
21	132	43.4		14.1	38	00.7	134	+6	58.2	111	54	26	15	22 33	44	73	51	21
22	147	43.2		13.6	52	33.1	133	+7	09.3	111	56	38	33	23 17	46	76	47	19
23	162	43.0		13.2	67	05.4	133		20.4	110	58	20 52	21 55	***	49	78	44	16
24	177	42.7	-21	12.7	81	37.7		+7	31.4		60 S	21 08	22 24	***	12 52	81	23 39	14
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.5				Mag: +0.6				Mag: -1.8				Mag: +0.5			
	16 ^h 24 ^m 6		PMG: 08 ^h 50 ^m				PMG: 16 ^h 58 ^m				PMG: 09 ^h 19 ^m				PMG: 11 ^h 22 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	113	10.2	227	35.3	-18	10.8	105	09.9	+3	25.8	219	59.6	-21	-54.4	189	11.6	-22	20.6
1	128	12.7	242	35.1		11.3	120	10.8		26.5	235	01.5		-54.5	204	13.8		20.5
2	143	15.1	257	34.8		11.8	135	11.8		27.2	250	03.4		-54.6	219	15.9		20.5
3	158	17.6	272	34.5		12.3	150	12.7		27.9	265	05.4		-54.6	234	18.1		20.5
4	173	20.1	287	34.2		12.8	165	13.6		28.6	280	07.3		-54.7	249	20.2		20.5
5	188	22.5	302	33.9	-18	13.3	180	14.5	+3	29.3	295	09.3	-21	-54.7	264	22.4	-22	20.4
6	203	25.0	317	33.6	-18	13.8	195	15.5	+3	30.0	310	11.2	-21	-54.8	279	24.5	-22	20.4
7	218	27.5	332	33.3		14.3	210	16.4		30.7	325	13.1		-54.9	294	26.7		20.4
8	233	29.9	347	33.1		14.8	225	17.3		31.4	340	15.1		-54.9	309	28.8		20.4
9	248	32.4	2	32.8		15.3	240	18.2		32.2	355	17.0		-55.0	324	31.0		20.3
10	263	34.9	17	32.5		15.8	255	19.2		32.9	10	18.9		-55.0	339	33.1		20.3
11	278	37.3	32	32.2	-18	16.2	270	20.1	+3	33.6	25	20.9	-21	-55.1	354	35.3	-22	20.3
12	293	39.8	47	31.9	-18	16.7	285	21.0	+3	34.3	40	22.8	-21	-55.1	9	37.4	-22	20.3
13	308	42.2	62	31.6		17.2	300	21.9		35.0	55	24.7		-55.2	24	39.6		20.2
14	323	44.7	77	31.3		17.7	315	22.9		35.7	70	26.7		-55.3	39	41.7		20.2
15	338	47.2	92	31.0		18.2	330	23.8		36.4	85	28.6		-55.3	54	43.9		20.2
16	353	49.6	107	30.7		18.7	345	24.7		37.1	100	30.6		-55.4	69	46.0		20.2
17	8	52.1	122	30.4	-18	19.2	0	25.6	+3	37.8	115	32.5	-21	-55.4	84	48.2	-22	20.1
18	23	54.6	137	30.1	-18	19.7	15	26.6	+3	38.5	130	34.4	-21	-55.5	99	50.3	-22	20.1
19	38	57.0	152	29.8		20.2	30	27.5		39.3	145	36.4		-55.5	114	52.5		20.1
20	53	59.5	167	29.5		20.7	45	28.4		40.0	160	38.3		-55.6	129	54.6		20.1
21	69	02.0	182	29.2		21.2	60	29.3		40.7	175	40.3		-55.6	144	56.8		20.0
22	84	04.4	197	28.9		21.7	75	30.3		41.4	190	42.2		-55.7	159	58.9		20.0
23	99	06.9	212	28.6		22.1	90	31.2		42.1	205	44.1		-55.8	175	01.1		20.0
24	114	09.3	227	28.3	-18	22.6	105	32.1	+3	42.8	220	46.1	-21	-55.8	190	03.2	-22	20.0
Dif.	—		-3		-5		+9		+7		+19		-1		+21			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 09 ^m 3				SD: 15'4 Edad: 8 ^d 9 PMG: 19 ^h 10 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	177	42.7	-21	12.7	81	37.7	132	+7	31.4	111	60 N	7 01	7 55	8 48	11 48	16	1 30	83
1	192	42.5		12.3	96	09.9	131		42.5	110	58	6 55	45	34	53	19	26	79
2	207	42.3		11.8	110	42.0	131	+7	53.5	110	56	50	37	22	11 58	21	22	77
3	222	42.1		11.4	125	14.1	130	+8	04.5	110	54	45	29	11	12 02	24	18	75
4	237	41.9		10.9	139	46.1	129		15.5	109	52	40	22	8 01	06	26	15	73
5	252	41.6	-21	10.5	154	18.0	129	+8	26.4	110	50	6 36	7 16	7 53	12 10	27	1 12	71
6	267	41.4	-21	10.0	168	49.9	128	+8	37.4	109	45	6 26	7 02	7 35	12 18	30	1 06	67
7	282	41.2		09.6	183	21.7	127		48.3	108	40	17	6 50	20	24	34	1 01	63
8	297	41.0		09.1	197	53.4	126	+8	59.1	109	35	09	40	7 08	30	36	0 56	61
9	312	40.7		08.7	212	25.0	126	+9	10.0	108	30	6 01	31	6 57	35	38	52	59
10	327	40.5		08.2	226	56.6	125		20.8	108	20	5 47	6 14	38	43	43	46	54
11	342	40.3	-21	07.7	241	28.1	125	+9	31.6	108	10 N	5 33	5 59	6 21	12 51	46	0 40	50
12	357	40.1	-21	07.3	255	59.6	123	+9	42.4	107	0	5 18	5 43	6 06	12 58	50	0 34	47
13	12	39.9		06.8	270	30.9	123	+9	53.1	107	10 S	5 01	27	5 50	13 06	52	28	45
14	27	39.6		06.4	285	02.2	122	+10	03.8	106	20	4 40	5 09	33	14	55	23	40
15	42	39.4		05.9	299	33.4	121		14.4	107	30	4 14	4 47	13	22	60	16	36
16	57	39.2		05.4	314	04.5	120		25.1	105	35	3 57	33	5 02	28	62	12	34
17	72	39.0	-21	05.0	328	35.5	120	+10	35.6	106	40	3 37	4 17	4 48	13 34	65	0 08	31
18	87	38.8	-21	04.5	343	06.5	119	+10	46.2	105	45	3 11	3 57	4 33	13 41	68	0 03	28
19	102	38.5		04.0	357	37.4	118	+10	56.7	105	50	2 33	31	13	49	72	***	***
20	117	38.3		03.6	12	08.2	117	+11	07.2	104	52	2 13	18	4 04	53	74	***	***
21	132	38.1		03.1	26	38.9	116		17.6	104	54	1 45	3 04	3 53	13 57	76	***	***
22	147	37.9		02.7	41	09.5	116		28.0	103	56	1 02	2 46	41	14 02	78	***	***
23	162	37.7		02.2	55	40.1	115		38.3	103	58	** **	2 24	27	14 07	81	***	***
24	177	37.5	-21	01.7	70	10.6		+11	48.6		60 S	** **	1 55	3 11	14 13	85	23 53	18

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 16 ^h 20 ^m 7		Mag: -4.5 PMG: 08 ^h 50 ^m				Mag: +0.7 PMG: 16 ^h 57 ^m				Mag: -1.8 PMG: 09 ^h 16 ^m				Mag: +0.5 PMG: 11 ^h 18 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	114	09.3	227	28.3	-18	22.6	105	32.1	+3	42.8	220	46.1	-21	55.8	190	03.2	-22	20.0
1	129	11.8	242	28.0		23.1	120	33.0		43.5	235	48.0		55.9	205	05.4		19.9
2	144	14.3	257	27.7		23.6	135	34.0		44.2	250	49.9		55.9	220	07.5		19.9
3	159	16.7	272	27.4		24.1	150	34.9		44.9	265	51.9		56.0	235	09.7		19.9
4	174	19.2	287	27.1		24.6	165	35.8		45.6	280	53.8		56.0	250	11.8		19.9
5	189	21.7	302	26.8	-18	25.1	180	36.7	+3	46.4	295	55.8	-21	56.1	265	14.0	-22	19.8
6	204	24.1	317	26.5	-18	25.5	195	37.7	+3	47.1	310	57.7	-21	56.2	280	16.1	-22	19.8
7	219	26.6	332	26.2		26.0	210	38.6		47.8	325	59.6		56.2	295	18.3		19.8
8	234	29.1	347	25.9		26.5	225	39.5		48.5	341	01.6		56.3	310	20.4		19.7
9	249	31.5	2	25.6		27.0	240	40.4		49.2	356	03.5		56.3	325	22.6		19.7
10	264	34.0	17	25.3		27.5	255	41.3		49.9	11	05.5		56.4	340	24.7		19.7
11	279	36.5	32	25.0	-18	28.0	270	42.3	+3	50.6	26	07.4	-21	56.4	355	26.9	-22	19.7
12	294	38.9	47	24.7	-18	28.4	285	43.2	+3	51.3	41	09.3	-21	56.5	10	29.0	-22	19.6
13	309	41.4	62	24.4		28.9	300	44.1		52.0	56	11.3		56.5	25	31.2		19.6
14	324	43.8	77	24.1		29.4	315	45.0		52.7	71	13.2		56.6	40	33.3		19.6
15	339	46.3	92	23.8		29.9	330	46.0		53.4	86	15.2		56.7	55	35.5		19.6
16	354	48.8	107	23.4		30.4	345	46.9		54.1	101	17.1		56.7	70	37.6		19.5
17	9	51.2	122	23.1	-18	30.8	0	47.8	+3	54.9	116	19.0	-21	56.8	85	39.8	-22	19.5
18	24	53.7	137	22.8	-18	31.3	15	48.7	+3	55.6	131	21.0	-21	56.8	100	41.9	-22	19.5
19	39	56.2	152	22.5		31.8	30	49.7		56.3	146	22.9		56.9	115	44.1		19.5
20	54	58.6	167	22.2		32.3	45	50.6		57.0	161	24.9		56.9	130	46.2		19.4
21	70	01.1	182	21.9		32.8	60	51.5		57.7	176	26.8		57.0	145	48.4		19.4
22	85	03.6	197	21.5		33.2	75	52.4		58.4	191	28.7		57.0	160	50.5		19.4
23	100	06.0	212	21.2		33.7	90	53.3		59.1	206	30.7		57.1	175	52.7		19.4
24	115	08.5	227	20.9	-18	34.2	105	54.3	+3	59.8	221	32.6	-21	57.2	190	54.8	-22	19.3
Dif.	—		-3		-5		+9		+7		+19		-1		+22			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16'3			SD: 15'6			PHE { 4 ^h : 57'4 12 ^h : 57'8 20 ^h : 58'1													
	PMG: 12 ^h 09 ^m 7			Edad: 9 ^d 9																
	PMG: 20 ^h 00 ^m			Rº: 54 ^m																
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'		°	'			h	m	h	m	h	m	m	h	m	m
0	177	37.5	-21 01.7	70	10.6	113	+11 48.6	103	60 N	15 33	16 26	17 20	12 04	21	2 53	85				
1	192	37.2	01.3	84	40.9	113	+11 58.9	102	58	47	35	26	12 25		45	82				
2	207	37.0	00.8	99	11.2	112	+12 09.1	102	56	15 59	44	31	19 27		39	79				
3	222	36.8	-21 00.3	113	41.4	112	19.3	101	54	16 10	51	36	26 29		33	77				
4	237	36.6	-20 59.8	128	11.6	110	29.4	101	52	19	16 58	41	32 31		28	75				
5	252	36.4	-20 59.4	142	41.6	109	+12 39.5	100	50	16 28	17 04	17 45	12 37	33	2 23	73				
6	267	36.2	-20 58.9	157	11.5	109	+12 49.5	99	45	16 45	17 18	17 54	12 48	37	2 13	69				
7	282	35.9	58.4	171	41.4	107	+12 59.4	99	40	17 00	30	18 03	12 58	39	2 04	66				
8	297	35.7	58.0	186	11.1	107	+13 09.3	99	35	12	40	11	13 06	42	1 57	64				
9	312	35.5	57.5	200	40.8	106	19.2	98	30	23	17 49	18	13 44		51	61				
10	327	35.3	57.0	215	10.4	105	29.0	97	20	42	18 05	32	26 47		40	57				
11	342	35.1	-20 56.5	229	39.9	104	+13 38.7	97	10 N	17 58	18 20	18 46	13 37	51	1 30	55				
12	357	34.9	-20 56.1	244	09.3	102	+13 48.4	96	0	18 13	18 35	19 01	13 48	53	1 21	51				
13	12	34.7	55.6	258	38.5	102	+13 58.0	96	10 S	29	18 51	18	13 58	56	13	47				
14	27	34.4	55.1	273	07.7	101	+14 07.6	95	20	18 46	19 10	19 38	14 09	60	1 03	45				
15	42	34.2	54.6	287	36.8	101	17.1	94	30	19 05	32	20 04	22 63		0 52	41				
16	57	34.0	54.1	302	05.9	99	26.5	94	35	16	19 45	20	30 65		46	39				
17	72	33.8	-20 53.7	316	34.8	98	+14 35.9	93	40	19 29	20 01	20 40	14 39	67	0 39	36				
18	87	33.6	-20 53.2	331	03.6	97	+14 45.2	92	45	19 45	20 20	21 06	14 49	70	0 31	33				
19	102	33.4	52.7	345	32.3	96	+14 54.4	92	50	20 04	45	21 42	15 01	74	21	29				
20	117	33.2	52.2	0	00.9	95	+15 03.6	91	52	13	20 58	22 02	07 76		17	27				
21	132	33.0	51.7	14	29.4	94	12.7	90	54	24	21 12	22 28	13 78		12	25				
22	147	32.7	51.3	28	57.8	94	21.7	90	56	35	29	23 07	20 81		06	24				
23	162	32.5	50.8	43	26.2	92	30.7	88	58	20 49	21 50	** **	28 83		0 00	21				
24	177	32.3	-20 50.3	57	54.4		+15 39.5		60 S	21 05	22 18	** **	15 38	86	** **	**				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 16 ^h 16 ^m 8		Mag: -4.5 PMG: 08 ^h 51 ^m				Mag: +0.7 PMG: 16 ^h 55 ^m				Mag: -1.8 PMG: 09 ^h 13 ^m				Mag: +0.5 PMG: 11 ^h 15 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	115	08.5	227	20.9	-18 34.2	105	54.3	+3 59.8	221	32.6	-21 -57.2	190	54.8	-22 19.3						
1	130	11.0	242	20.6	34.7	120	55.2	+4 00.5	236	34.6	-57.2	205	57.0	19.3						
2	145	13.4	257	20.3	35.1	135	56.1	01.2	251	36.5	-57.3	220	59.1	19.3						
3	160	15.9	272	20.0	35.6	150	57.0	01.9	266	38.5	-57.3	236	01.3	19.3						
4	175	18.3	287	19.6	36.1	165	58.0	02.6	281	40.4	-57.4	251	03.4	19.2						
5	190	20.8	302	19.3	-18 36.6	180	58.9	+4 03.4	296	42.3	-21 -57.4	266	05.6	-22 19.2						
6	205	23.3	317	19.0	-18 37.0	195	59.8	+4 04.1	311	44.3	-21 -57.5	281	07.7	-22 19.2						
7	220	25.7	332	18.7	37.5	211	00.7	04.8	326	46.2	-57.5	296	09.9	19.2						
8	235	28.2	347	18.3	38.0	226	01.6	05.5	341	48.2	-57.6	311	12.0	19.1						
9	250	30.7	2	18.0	38.4	241	02.6	06.2	356	50.1	-57.7	326	14.2	19.1						
10	265	33.1	17	17.7	38.9	256	03.5	06.9	11	52.1	-57.7	341	16.4	19.1						
11	280	35.6	32	17.4	-18 39.4	271	04.4	+4 07.6	26	54.0	-21 -57.8	356	18.5	-22 19.0						
12	295	38.1	47	17.0	-18 39.9	286	05.3	+4 08.3	41	55.9	-21 -57.8	11	20.7	-22 19.0						
13	310	40.5	62	16.7	40.3	301	06.3	09.0	56	57.9	-57.9	26	22.8	19.0						
14	325	43.0	77	16.4	40.8	316	07.2	09.7	71	59.8	-57.9	41	25.0	19.0						
15	340	45.5	92	16.0	41.3	331	08.1	10.4	87	01.8	-58.0	56	27.1	18.9						
16	355	47.9	107	15.7	41.7	346	09.0	11.1	102	03.7	-58.0	71	29.3	18.9						
17	10	50.4	122	15.4	-18 42.2	1	09.9	+4 11.8	117	05.7	-21 -58.1	86	31.4	-22 18.9						
18	25	52.8	137	15.0	-18 42.7	16	10.9	+4 12.6	132	07.6	-21 -58.1	101	33.6	-22 18.9						
19	40	55.3	152	14.7	43.1	31	11.8	13.3	147	09.5	-58.2	116	35.7	18.8						
20	55	57.8	167	14.4	43.6	46	12.7	14.0	162	11.5	-58.3	131	37.9	18.8						
21	71	00.2	182	14.0	44.1	61	13.6	14.7	177	13.4	-58.3	146	40.0	18.8						
22	86	02.7	197	13.7	44.5	76	14.5	15.4	192	15.4	-58.4	161	42.2	18.8						
23	101	05.2	212	13.4	45.0	91	15.5	16.1	207	17.3	-58.4	176	44.3	18.7						
24	116	07.6	227	13.0	-18 45.4	106	16.4	+4 16.8	222	19.3	-21 -58.5	191	46.5	-22 18.7						
Dif.	—		-3		-5	+9		+7	+19		-1		+22							

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			SD: 15'9			PHE { 4 ^h : 58'4 12 ^h : 58'7 20 ^h : 59'1											
	PMG: 12 ^h 10 ^m 0			Edad: 10 ^d 9														
				PMG: 20 ^h 54 ^m			Rº: 59 ^m											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	m	h m m	m		
0	177	32.3	-20	50.3	57	54.4	91	+15	39.5	88	60 N	6 59	7 53	8 45	12 25	31	4 18	85
1	192	32.1		49.8	72	22.5	90		48.3	88	58	53	43	31	37	33	4 07	82
2	207	31.9		49.3	86	50.5	89	+15	57.1	86	56	48	35	19	46	37	3 58	79
3	222	31.7		48.8	101	18.4	89	+16	05.7	86	54	43	28	09	12 55	38	50	77
4	237	31.5		48.3	115	46.3	87		14.3	85	52	39	21	8 00	13 03	40	43	75
5	252	31.3	-20	47.9	130	14.0	86	+16	22.8	84	50	6 34	7 15	7 51	13 10	41	3 36	74
6	267	31.1	-20	47.4	144	41.6	85	+16	31.2	83	45	6 25	7 01	7 34	13 25	44	3 22	71
7	282	30.9		46.9	159	09.1	84		39.5	82	40	16	6 50	19	37	47	10	68
8	297	30.7		46.4	173	36.5	83		47.7	82	35	09	40	7 07	48	49	3 01	65
9	312	30.5		45.9	188	03.8	82	+16	55.9	80	30	6 01	31	6 56	13 57	51	2 52	64
10	327	30.2		45.4	202	31.0	81	+17	03.9	80	20	5 47	6 14	38	14 13	53	37	61
11	342	30.0	-20	44.9	216	58.1	80	+17	11.9	78	10 N	5 33	5 59	6 22	14 28	55	2 25	57
12	357	29.8	-20	44.4	231	25.1	79	+17	19.7	78	0	5 19	5 44	6 06	14 41	57	2 12	56
13	12	29.6		43.9	245	52.0	78		27.5	77	10 S	5 02	28	5 51	14 54	60	2 00	53
14	27	29.4		43.4	260	18.8	77		35.2	76	20	4 42	5 10	34	15 09	62	1 48	50
15	42	29.2		42.9	274	45.5	76		42.8	75	30	16	4 48	15	25	65	33	47
16	57	29.0		42.4	289	12.1	75		50.3	74	35	4 00	35	5 04	35	66	25	45
17	72	28.8	-20	42.0	303	38.6	74	+17	57.7	73	40	3 40	4 19	4 51	15 46	68	1 15	43
18	87	28.6	-20	41.5	318	05.0	73	+18	05.0	72	45	3 14	4 00	4 35	15 59	71	1 04	40
19	102	28.4		41.0	332	31.3	72		12.2	71	50	2 38	3 35	16	16 15	74	0 50	37
20	117	28.2		40.5	346	57.5	70		19.3	70	52	2 18	22	4 07	23	75	44	35
21	132	28.0		40.0	1	23.5	70		26.3	68	54	1 52	3 08	3 57	31	77	37	33
22	147	27.8		39.5	15	49.5	69		33.1	68	56	1 14	2 51	45	41	78	30	30
23	162	27.6		39.0	30	15.4	68		39.9	67	58	** **	30	31	16 51	81	0 21	28
24	177	27.4	-20	38.5	44	41.2		+18	46.6		60 S	** **	2 02	3 16	17 04	83	0 11	25

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 16 ^h 12 ^m 8		Mag: -4.5 PMG: 08 ^h 51 ^m				Mag: +0.7 PMG: 16 ^h 54 ^m				Mag: -1.8 PMG: 09 ^h 10 ^m				Mag: +0.5 PMG: 11 ^h 11 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	116	07.6	227	13.0	-18	45.4	106	16.4	+4	16.8	222	19.3	-21	58.5	191	46.5	-22	18.7
1	131	10.1	242	12.7		45.9	121	17.3		17.5	237	21.2		58.5	206	48.6		18.7
2	146	12.6	257	12.4		46.4	136	18.2		18.2	252	23.2		58.6	221	50.8		18.7
3	161	15.0	272	12.0		46.8	151	19.2		18.9	267	25.1		58.6	236	52.9		18.6
4	176	17.5	287	11.7		47.3	166	20.1		19.6	282	27.0		58.7	251	55.1		18.6
5	191	19.9	302	11.3	-18	47.8	181	21.0	+4	20.3	297	29.0	-21	58.7	266	57.2	-22	18.6
6	206	22.4	317	11.0	-18	48.2	196	21.9	+4	21.0	312	30.9	-21	58.8	281	59.4	-22	18.6
7	221	24.9	332	10.7		48.7	211	22.8		21.7	327	32.9		58.9	297	01.5		18.5
8	236	27.3	347	10.3		49.1	226	23.8		22.4	342	34.8		58.9	312	03.7		18.5
9	251	29.8	2	10.0		49.6	241	24.7		23.1	357	36.8		59.0	327	05.8		18.5
10	266	32.3	17	09.6		50.0	256	25.6		23.9	12	38.7		59.0	342	08.0		18.4
11	281	34.7	32	09.3	-18	50.5	271	26.5	+4	24.6	27	40.7	-21	59.1	357	10.1	-22	18.4
12	296	37.2	47	08.9	-18	51.0	286	27.4	+4	25.3	42	42.6	-21	59.1	12	12.3	-22	18.4
13	311	39.7	62	08.6		51.4	301	28.4		26.0	57	44.6		59.2	27	14.4		18.4
14	326	42.1	77	08.2		51.9	316	29.3		26.7	72	46.5		59.2	42	16.6		18.3
15	341	44.6	92	07.9		52.3	331	30.2		27.4	87	48.4		59.3	57	18.8		18.3
16	356	47.1	107	07.5		52.8	346	31.1		28.1	102	50.4		59.3	72	20.9		18.3
17	11	49.5	122	07.2	-18	53.2	1	32.0	+4	28.8	117	52.3	-21	59.4	87	23.1	-22	18.3
18	26	52.0	137	06.8	-18	53.7	16	33.0	+4	29.5	132	54.3	-21	59.4	102	25.2	-22	18.2
19	41	54.4	152	06.5		54.1	31	33.9		30.2	147	56.2		59.5	117	27.4		18.2
20	56	56.9	167	06.1		54.6	46	34.8		30.9	162	58.2		59.6	132	29.5		18.2
21	71	59.4	182	05.8		55.0	61	35.7		31.6	178	00.1		59.6	147	31.7		18.2
22	87	01.8	197	05.4		55.5	76	36.6		32.3	193	02.1		59.7	162	33.8		18.1
23	102	04.3	212	05.1		55.9	91	37.6		33.0	208	04.0		59.7	177	36.0		18.1
24	117	06.8	227	04.7	-18	56.4	106	38.5	+4	33.7	223	06.0	-21	59.8	192	38.1	-22	18.1
Dif.	—		-3		-5		+9		+7		+19		-1		+22		0	

UT	SOL				☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 10 ^m 3				SD: 16'1 Edad: 11 ^d 9 PMG: 21 ^h 53 ^m PHE { 4^h: 59'4 12^h: 59'7 20^h: 60'0 Rº: 62 ^m															
	hG ☉	Dec			hG ☾	Dif.		Dec		Dif.										
	h	°	'	°	'	°	'	°	'	°			'	h	m	h	m	h	m	m
0	177	27.4	-20	38.5	44	41.2	67	+18	46.6	65	60 N	15 38	16 30	17 23	12 56	46	5 43	79		
1	192	27.2		38.0	59	06.9	65		53.1	65	58	15 52	39	29	13 10	48		29	77	
2	207	27.0		37.5	73	32.4	65	+18	59.6	63	56	16 03	47	34	23	49		17	76	
3	222	26.8		37.0	87	57.9	64	+19	05.9	62	54	13	16 55	39	33	51	5 07	74		
4	237	26.6		36.5	102	23.3	63		12.1	61	52	23	17 01	43	43	51	4 58	72		
5	252	26.4	-20	36.0	116	48.6	62	+19	18.2	60	50	16 31	17 07	17 47	13 51	53	4 50	71		
6	267	26.2	-20	35.4	131	13.8	61	+19	24.2	59	45	16 48	17 21	17 57	14 09	55	4 33	69		
7	282	26.0		34.9	145	38.9	60		30.1	57	40	17 02	32	18 05	24	56	18	68		
8	297	25.8		34.4	160	03.9	59		35.8	56	35	14	42	13	37	56	4 06	66		
9	312	25.6		33.9	174	28.8	58		41.4	55	30	25	17 50	20	14 48	57	3 56	65		
10	327	25.4		33.4	188	53.6	57		46.9	54	20	43	18 06	33	15 06	59	38	63		
11	342	25.2	-20	32.9	203	18.3	56	+19	52.3	52	10 N	17 59	18 21	18 47	15 23	60	3 22	61		
12	357	25.0	-20	32.4	217	42.9	56	+19	57.5	52	0	18 14	18 36	19 02	15 38	62	3 08	59		
13	12	24.8		31.9	232	07.5	54	+20	02.7	49	10 S	29	18 52	18	15 54	62	2 53	58		
14	27	24.6		31.4	246	31.9	53		07.6	49	20	18 45	19 09	19 38	16 11	63	38	56		
15	42	24.4		30.9	260	56.2	53		12.5	47	30	19 04	31	20 03	30	65	20	54		
16	57	24.2		30.4	275	20.5	52		17.2	46	35	16	19 44	19	41	66	2 10	52		
17	72	24.0	-20	29.9	289	44.7	51	+20	21.8	45	40	19 28	20 00	20 39	16 54	67	1 58	51		
18	87	23.8	-20	29.3	304	08.8	50	+20	26.3	43	45	19 44	20 19	21 04	17 10	67	1 44	49		
19	102	23.6		28.8	318	32.8	49		30.6	42	50	20 02	43	39	29	68	27	46		
20	117	23.4		28.3	332	56.7	48		34.8	41	52	11	20 55	21 58	38	69	19	45		
21	132	23.2		27.8	347	20.5	48		38.9	39	54	21	21 09	22 22	48	70	10	44		
22	147	23.0		27.3	1	44.3	47		42.8	38	56	33	26	22 57	17 59	71	1 00	42		
23	162	22.8		26.8	16	08.0	46		46.6	36	58	20 46	21 46	** ** *	18 12	72	0 49	40		
24	177	22.6	-20	26.2	30	31.6		+20	50.2		60 S	21 01	22 12	** ** *	18 27	74	0 36	37		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 16 ^h 08 ^m 9		Mag: -4.4 PMG: 08 ^h 52 ^m				Mag: +0.7 PMG: 16 ^h 52 ^m				Mag: -1.8 PMG: 09 ^h 06 ^m				Mag: +0.5 PMG: 11 ^h 08 ^m					
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	117	06.8	227	04.7	-18 56.4	106	38.5	+4 33.7	223	06.0	-21 -59.8	192	38.1	-22 18.1						
1	132	09.2	242	04.4	56.8	121	39.4	34.4	238	07.9	-59.8	207	40.3	18.1						
2	147	11.7	257	04.0	57.3	136	40.3	35.1	253	09.9	-59.9	222	42.4	18.0						
3	162	14.2	272	03.7	57.7	151	41.2	35.8	268	11.8	-21 -59.9	237	44.6	18.0						
4	177	16.6	287	03.3	58.2	166	42.2	36.5	283	13.8	-22 00.0	252	46.7	18.0						
5	192	19.1	302	02.9	-18 58.6	181	43.1	+4 37.3	298	15.7	-22 00.0	267	48.9	-22 17.9						
6	207	21.6	317	02.6	-18 59.1	196	44.0	+4 38.0	313	17.7	-22 -00.1	282	51.0	-22 17.9						
7	222	24.0	332	02.2	-18 59.5	211	44.9	38.7	328	19.6	-00.1	297	53.2	17.9						
8	237	26.5	347	01.9	-19 00.0	226	45.8	39.4	343	21.6	-00.2	312	55.3	17.9						
9	252	28.9	2	01.5	00.4	241	46.7	40.1	358	23.5	-00.2	327	57.5	17.8						
10	267	31.4	17	01.1	00.9	256	47.7	40.8	13	25.5	-00.3	342	59.6	17.8						
11	282	33.9	32	00.8	-19 01.3	271	48.6	+4 41.5	28	27.4	-22 -00.4	358	01.8	-22 17.8						
12	297	36.3	47	00.4	-19 01.7	286	49.5	+4 42.2	43	29.4	-22 -00.4	13	04.0	-22 17.8						
13	312	38.8	62	00.1	02.2	301	50.4	42.9	58	31.3	-00.5	28	06.1	17.7						
14	327	41.3	76	59.7	02.6	316	51.3	43.6	73	33.3	-00.5	43	08.3	17.7						
15	342	43.7	91	59.3	03.1	331	52.3	44.3	88	35.2	-00.6	58	10.4	17.7						
16	357	46.2	106	59.0	03.5	346	53.2	45.0	103	37.2	-00.6	73	12.6	17.7						
17	12	48.7	121	58.6	-19 04.0	1	54.1	+4 45.7	118	39.1	-22 -00.7	88	14.7	-22 17.6						
18	27	51.1	136	58.2	-19 04.4	16	55.0	+4 46.4	133	41.1	-22 -00.7	103	16.9	-22 17.6						
19	42	53.6	151	57.9	04.8	31	55.9	47.1	148	43.0	-00.8	118	19.0	17.6						
20	57	56.1	166	57.5	05.3	46	56.9	47.8	163	45.0	-00.8	133	21.2	17.6						
21	72	58.5	181	57.1	05.7	61	57.8	48.5	178	46.9	-00.9	148	23.3	17.5						
22	88	01.0	196	56.8	06.1	76	58.7	49.2	193	48.9	-00.9	163	25.5	17.5						
23	103	03.4	211	56.4	06.6	91	59.6	49.9	208	50.8	-01.0	178	27.6	17.5						
24	118	05.9	226	56.0	-19 07.0	107	00.5	+4 50.6	223	52.8	-22 -01.0	193	29.8	-22 17.4						
Dif.	—		-4		-4		+9	+7		+19	-1		+22							

UT	SOL				○ LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 16'3				SD: 16'4		PHE { 4^h: 60'2 12^h: 60'5 20^h: 60'7						Edad: 12 ^d 9			PMG: 22 ^h 55 ^m		R ^o : 63 ^m							
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.		Náut.	Civil		Hora	R ^o	Hora	R ^o						
h	°	'	°	'	°	'			°	'			h	m	h	m	h	m	m	h	m	m			
0	177	22.6	-20	26.2	30	31.6	45	+20	50.2	35	60 N	6 57	7 50	8 41	13 42	66	7 02	65							
1	192	22.4		25.7	44	55.1	44		53.7	33	58	51	41	28	13 58	66	6 46	65							
2	207	22.2		25.2	59	18.5	44	+20	57.0	33	56	46	33	17	14 12	65	33	65							
3	222	22.0		24.7	73	41.9	43	+21	00.3	30	54	41	26	8 07	24	65	21	65							
4	237	21.8		24.2	88	05.2	42		03.3	29	52	37	19	7 58	34	66	10	65							
5	252	21.7	-20	23.7	102	28.4	42	+21	06.2	28	50	6 33	7 13	7 50	14 44	65	6 01	65							
6	267	21.5	-20	23.1	116	51.6	41	+21	09.0	26	45	6 24	7 00	7 32	15 04	64	5 42	64							
7	282	21.3		22.6	131	14.7	40		11.6	25	40	16	6 49	18	20	64	26	64							
8	297	21.1		22.1	145	37.7	40		14.1	23	35	08	39	7 06	33	65	12	64							
9	312	20.9		21.6	160	00.7	38		16.4	22	30	6 01	30	6 56	15 45	64	5 01	63							
10	327	20.7		21.0	174	23.5	39		18.6	20	20	5 47	14	38	16 05	64	4 41	63							
11	342	20.5	-20	20.5	188	46.4	38	+21	20.6	18	10 N	5 34	6 00	6 22	16 23	64	4 23	63							
12	357	20.3	-20	20.0	203	09.2	37	+21	22.4	17	0	5 19	5 45	6 07	16 40	63	4 07	63							
13	12	20.1		19.5	217	31.9	36		24.1	16	10 S	5 03	29	5 52	16 56	63	3 51	62							
14	27	19.9		18.9	231	54.5	37		25.7	14	20	4 43	5 12	36	17 14	63	34	61							
15	42	19.7		18.4	246	17.2	35		27.1	12	30	18	4 50	17	35	62	14	61							
16	57	19.6		17.9	260	39.7	35		28.3	11	35	4 02	37	5 06	17 47	61	3 02	61							
17	72	19.4	-20	17.4	275	02.2	35	+21	29.4	10	40	3 43	4 22	4 53	18 01	61	2 49	60							
18	87	19.2	-20	16.8	289	24.7	34	+21	30.4	7	45	3 17	4 03	4 38	18 17	61	2 33	59							
19	102	19.0		16.3	303	47.1	34		31.1	6	50	2 42	3 38	19	37	60	13	59							
20	117	18.8		15.8	318	09.5	33		31.7	5	52	2 23	26	10	47	59	2 04	58							
21	132	18.6		15.2	332	31.8	33		32.2	3	54	1 59	3 12	4 00	18 58	59	1 54	58							
22	147	18.4		14.7	346	54.1	33		32.5	1	56	1 24	2 56	3 49	19 10	58	42	57							
23	162	18.2		14.2	1	16.4	32		32.6	0	58	** **	36	36	19 24	58	1 29	56							
24	177	18.0	-20	13.6	15	38.6		+21	32.6		60 S	** **	2 10	3 21	19 41	57	1 13	55							
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO										
	PMG: 16 ^h 05 ^m 0		Mag: -4.4 PMG: 08 ^h 52 ^m				Mag: +0.7 PMG: 16 ^h 51 ^m				Mag: -1.8 PMG: 09 ^h 03 ^m				Mag: +0.5 PMG: 11 ^h 04 ^m										
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	118	05.9	226	56.0	-19	07.0	107	00.5	+4	50.6	223	52.8	-22	01.0	193	29.8	-22	17.4							
1	133	08.4	241	55.6		07.4	122	01.4		51.3	238	54.7		01.1	208	31.9		17.4							
2	148	10.8	256	55.3		07.9	137	02.4		52.0	253	56.7		01.1	223	34.1		17.4							
3	163	13.3	271	54.9		08.3	152	03.3		52.7	268	58.6		01.2	238	36.3		17.4							
4	178	15.8	286	54.5		08.7	167	04.2		53.4	284	00.6		01.2	253	38.4		17.3							
5	193	18.2	301	54.1	-19	09.2	182	05.1	+4	54.1	299	02.5	-22	01.3	268	40.6	-22	17.3							
6	208	20.7	316	53.8	-19	09.6	197	06.0	+4	54.8	314	04.5	-22	01.3	283	42.7	-22	17.3							
7	223	23.2	331	53.4		10.0	212	06.9		55.5	329	06.4		01.4	298	44.9		17.3							
8	238	25.6	346	53.0		10.5	227	07.9		56.2	344	08.4		01.5	313	47.0		17.2							
9	253	28.1	1	52.6		10.9	242	08.8		57.0	359	10.3		01.5	328	49.2		17.2							
10	268	30.6	16	52.3		11.3	257	09.7		57.7	14	12.3		01.6	343	51.3		17.2							
11	283	33.0	31	51.9	-19	11.8	272	10.6	+4	58.4	29	14.2	-22	01.6	358	53.5	-22	17.2							
12	298	35.5	46	51.5	-19	12.2	287	11.5	+4	59.1	44	16.2	-22	01.7	13	55.6	-22	17.1							
13	313	37.9	61	51.1		12.6	302	12.5	+4	59.8	59	18.1		01.7	28	57.8		17.1							
14	328	40.4	76	50.7		13.0	317	13.4	+5	00.5	74	20.1		01.8	43	59.9		17.1							
15	343	42.9	91	50.3		13.5	332	14.3		01.2	89	22.0		01.8	59	02.1		17.0							
16	358	45.3	106	50.0		13.9	347	15.2		01.9	104	24.0		01.9	74	04.3		17.0							
17	13	47.8	121	49.6	-19	14.3	2	16.1	+5	02.6	119	25.9	-22	01.9	89	06.4	-22	17.0							
18	28	50.3	136	49.2	-19	14.8	17	17.0	+5	03.3	134	27.9	-22	02.0	104	08.6	-22	17.0							
19	43	52.7	151	48.8		15.2	32	18.0		04.0	149	29.8		02.0	119	10.7		16.9							
20	58	55.2	166	48.4		15.6	47	18.9		04.7	164	31.8		02.1	134	12.9		16.9							
21	73	57.7	181	48.0		16.0	62	19.8		05.4	179	33.8		02.1	149	15.0		16.9							
22	89	00.1	196	47.6		16.4	77	20.7		06.1	194	35.7		02.2	164	17.2		16.9							
23	104	02.6	211	47.3		16.9	92	21.6		06.8	209	37.7		02.2	179	19.3		16.8							
24	119	05.1	226	46.9	-19	17.3	107	22.5	+5	07.5	224	39.6	-22	02.3	194	21.5	-22	16.8							
Dif.	—		-4		-4		+9		+7		+20		-1		+22										

UT	SOL				○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 10 ^m 9				SD: 16'6 Edad: 13 ^d 9 PHE { 4 ^h : 60'9 12 ^h : 61'1 20 ^h : 61'2 PMG: 23 ^h 58 ^m Rº: 4 ^m													
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.					
	h	°	'	°	'	°	'	°	'	°			'	h	m	h	m	h
0	177	18.0	-20	13.6	15	38.6	32	+21	32.6	2	60 N	15 43	16 34	17 27	14 48	83	8 07	48
1	192	17.9		13.1	30	00.8	31		32.4	4	58	15 56	43	33	15 04	81	7 51	50
2	207	17.7		12.6	44	22.9	31		32.0	5	56	16 07	51	37	17 80		38	51
3	222	17.5		12.0	58	45.0	31		31.5	7	54	17	16 58	42	29 78		26	52
4	237	17.3		11.5	73	07.1	31		30.8	8	52	26	17 04	46	40 76		15	54
5	252	17.1	-20	11.0	87	29.2	31	+21	30.0	10	50	16 34	17 10	17 50	15 49	75	7 06	55
6	267	16.9	-20	10.4	101	51.3	30	+21	29.0	12	45	16 51	17 23	17 59	16 08	74	6 46	57
7	282	16.7		09.9	116	13.3	30		27.8	13	40	17 04	34	18 07	24 72		30	58
8	297	16.6		09.4	130	35.3	30		26.5	15	35	16	43	14	38 70		16	59
9	312	16.4		08.8	144	57.3	30		25.0	16	30	26	17 52	21	16 49	69	6 04	60
10	327	16.2		08.3	159	19.3	30		23.4	19	20	17 44	18 08	35	17 09	67	5 44	61
11	342	16.0	-20	07.7	173	41.3	30	+21	21.5	19	10 N	18 00	18 22	18 48	17 27	65	5 26	63
12	357	15.8	-20	07.2	188	03.3	29	+21	19.6	22	0	18 15	18 37	19 02	17 43	63	5 10	63
13	12	15.6		06.7	202	25.2	30		17.4	23	10 S	29	18 52	18	17 59	62	4 53	65
14	27	15.5		06.1	216	47.2	30		15.1	25	20	18 45	19 09	19 37	18 17	59	35	66
15	42	15.3		05.6	231	09.2	29		12.6	26	30	19 04	30	20 02	37 57		15	66
16	57	15.1		05.0	245	31.1	30		10.0	28	35	15	43	18	18 48	56	4 03	67
17	72	14.9	-20	04.5	259	53.1	29	+21	07.2	29	40	19 27	19 58	20 37	19 02	54	3 49	68
18	87	14.7	-20	03.9	274	15.0	30	+21	04.3	31	45	19 42	20 17	21 02	19 18	52	3 32	70
19	102	14.6		03.4	288	37.0	30	+21	01.2	33	50	20 00	41	36	37 50		12	71
20	117	14.4		02.9	302	59.0	30	+20	57.9	35	52	09	20 52	21 54	46 48		3 02	72
21	132	14.2		02.3	317	21.0	30		54.4	36	54	19	21 06	22 17	19 57	46	2 52	72
22	147	14.0		01.8	331	43.0	30		50.8	37	56	30	22	22 49	20 08	45	39	73
23	162	13.8		01.2	346	05.0	31		47.1	39	58	42	21 41	** **	22 42		25	74
24	177	13.7	-20	00.7	0	27.1		+20	43.2		60 S	20 57	22 06	** **	20 38	39	2 08	76

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 01 ^m 0		Mag: -4.4 PMG: 08 ^h 53 ^m				Mag: +0.7 PMG: 16 ^h 49 ^m				Mag: -1.8 PMG: 09 ^h 00 ^m				Mag: +0.5 PMG: 11 ^h 01 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	119	05.1	226	46.9	-19	17.3	107	22.5	+5	07.5	224	39.6	-22	-02.3	194	21.5	-22	16.8
1	134	07.5	241	46.5		17.7	122	23.4		08.2	239	41.6		-02.3	209	23.6		16.8
2	149	10.0	256	46.1		18.1	137	24.4		08.9	254	43.5		-02.4	224	25.8		16.8
3	164	12.4	271	45.7		18.5	152	25.3		09.6	269	45.5		-02.4	239	27.9		16.7
4	179	14.9	286	45.3		19.0	167	26.2		10.3	284	47.4		-02.5	254	30.1		16.7
5	194	17.4	301	44.9	-19	19.4	182	27.1	+5	11.0	299	49.4	-22	-02.5	269	32.3	-22	16.7
6	209	19.8	316	44.5	-19	19.8	197	28.0	+5	11.7	314	51.3	-22	-02.6	284	34.4	-22	16.6
7	224	22.3	331	44.1		20.2	212	28.9		12.4	329	53.3		-02.6	299	36.6		16.6
8	239	24.8	346	43.7		20.6	227	29.9		13.1	344	55.3		-02.7	314	38.7		16.6
9	254	27.2	1	43.3		21.0	242	30.8		13.8	359	57.2		-02.7	329	40.9		16.6
10	269	29.7	16	42.9		21.5	257	31.7		14.5	14	59.2		-02.8	344	43.0		16.5
11	284	32.2	31	42.5	-19	21.9	272	32.6	+5	15.2	30	01.1	-22	-02.8	359	45.2	-22	16.5
12	299	34.6	46	42.2	-19	22.3	287	33.5	+5	15.9	45	03.1	-22	-02.9	14	47.3	-22	16.5
13	314	37.1	61	41.8		22.7	302	34.4		16.6	60	05.0		-02.9	29	49.5		16.5
14	329	39.5	76	41.4		23.1	317	35.4		17.3	75	07.0		-03.0	44	51.6		16.4
15	344	42.0	91	41.0		23.5	332	36.3		18.0	90	08.9		-03.0	59	53.8		16.4
16	359	44.5	106	40.6		23.9	347	37.2		18.7	105	10.9		-03.1	74	56.0		16.4
17	14	46.9	121	40.2	-19	24.3	2	38.1	+5	19.4	120	12.9	-22	-03.1	89	58.1	-22	16.4
18	29	49.4	136	39.8	-19	24.8	17	39.0	+5	20.1	135	14.8	-22	-03.2	105	00.3	-22	16.3
19	44	51.9	151	39.4		25.2	32	39.9		20.8	150	16.8		-03.2	120	02.4		16.3
20	59	54.3	166	38.9		25.6	47	40.8		21.5	165	18.7		-03.3	135	04.6		16.3
21	74	56.8	181	38.5		26.0	62	41.8		22.2	180	20.7		-03.3	150	06.7		16.2
22	89	59.3	196	38.1		26.4	77	42.7		22.9	195	22.6		-03.4	165	08.9		16.2
23	105	01.7	211	37.7		26.8	92	43.6		23.6	210	24.6		-03.4	180	11.0		16.2
24	120	04.2	226	37.3	-19	27.2	107	44.5	+5	24.3	225	26.6	-22	-03.5	195	13.2	-22	16.2
Dif.	—		-4		-4		+9		+7		+20		-1		+22			

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			PHE { 4^h: 61'3 12^h: 61'3 20^h: 61'4														
	PMG: 12 ^h 11 ^m 2			SD: 16'7 Edad: 14 ^d 9							PMG: ** **			Rº: **				
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	177	13.7	-20	00.7	0	27.1	30	+20	43.2	41	60 N	6 54	7 47	8 38	16 11	94	8 55	33
1	192	13.5	-20	00.1	14	49.1	31		39.1	42	58	49	38	25	25	91	41	36
2	207	13.3	-19	59.6	29	11.2	31		34.9	44	56	44	30	14	37	87	29	39
3	222	13.1		59.0	43	33.3	31		30.5	46	54	40	23	8 04	47	85	18	41
4	237	12.9		58.5	57	55.4	32		25.9	47	52	35	17	7 55	16 56	83	09	43
5	252	12.8	-19	57.9	72	17.6	32	+20	21.2	49	50	6 31	7 11	7 48	17 04	82	8 01	44
6	267	12.6	-19	57.4	86	39.8	32	+20	16.3	50	45	6 23	6 59	7 31	17 22	77	7 43	47
7	282	12.4		56.8	101	02.0	33		11.3	51	40	15	48	17	36	74	28	50
8	297	12.2		56.3	115	24.3	33		06.2	54	35	08	38	7 06	48	72	15	53
9	312	12.1		55.7	129	46.6	33	+20	00.8	54	30	6 01	30	6 55	17 58	70	7 04	54
10	327	11.9		55.1	144	08.9	34	+19	55.4	57	20	5 47	14	38	18 16	67	6 45	57
11	342	11.7	-19	54.6	158	31.3	34	+19	49.7	57	10 N	5 34	6 00	6 22	18 32	63	6 29	59
12	357	11.5	-19	54.0	172	53.7	34	+19	44.0	60	0	5 20	5 46	6 08	18 46	61	6 13	62
13	12	11.4		53.5	187	16.1	35		38.0	60	10 S	5 04	30	5 53	19 01	57	5 58	64
14	27	11.2		52.9	201	38.6	36		32.0	63	20	4 45	5 13	37	16	55	41	67
15	42	11.0		52.4	216	01.2	35		25.7	63	30	20	4 52	19	34	51	21	70
16	57	10.8		51.8	230	23.7	37		19.4	65	35	4 05	39	5 08	44	49	5 10	72
17	72	10.7	-19	51.2	244	46.4	37	+19	12.9	67	40	3 45	4 24	4 55	19 56	46	4 57	74
18	87	10.5	-19	50.7	259	09.1	37	+19	06.2	68	45	3 21	4 06	4 41	20 10	43	4 42	76
19	102	10.3		50.1	273	31.8	38	+18	59.4	69	50	2 47	3 42	22	27	39	23	79
20	117	10.1		49.6	287	54.6	39		52.5	71	52	29	30	14	34	38	14	80
21	132	10.0		49.0	302	17.5	39		45.4	72	54	2 06	17	4 04	43	36	4 04	82
22	147	09.8		48.4	316	40.4	40		38.2	74	56	1 34	3 01	3 53	20 53	33	3 52	85
23	162	09.6		47.9	331	03.4	40		30.8	74	58	0 16	2 42	40	21 04	31	3 39	87
24	177	09.5	-19	47.3	345	26.4		+18	23.4		60 S	** **	2 17	3 26	21 17	27	3 24	90

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG		Mag: -4.4				Mag: +0.7				Mag: -1.8				Mag: +0.5							
	15 ^h 57 ^m 1		PMG: 08 ^h 54 ^m				PMG: 16 ^h 48 ^m				PMG: 08 ^h 57 ^m				PMG: 10 ^h 58 ^m							
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	120	04.2	226	37.3	-19	27.2	107	44.5	+5	24.3	225	26.6	-22	03.5	195	13.2	-22	16.2				
1	135	06.7	241	36.9		27.6	122	45.4		25.0	240	28.5		03.5	210	15.4		16.1				
2	150	09.1	256	36.5		28.0	137	46.3		25.7	255	30.5		03.6	225	17.5		16.1				
3	165	11.6	271	36.1		28.4	152	47.2		26.4	270	32.4		03.6	240	19.7		16.1				
4	180	14.0	286	35.7		28.8	167	48.2		27.1	285	34.4		03.7	255	21.8		16.1				
5	195	16.5	301	35.3	-19	29.2	182	49.1	+5	27.8	300	36.3	-22	03.7	270	24.0	-22	16.0				
6	210	19.0	316	34.9	-19	29.6	197	50.0	+5	28.5	315	38.3	-22	03.8	285	26.1	-22	16.0				
7	225	21.4	331	34.5		30.0	212	50.9		29.2	330	40.3		03.8	300	28.3		16.0				
8	240	23.9	346	34.1		30.4	227	51.8		29.9	345	42.2		03.9	315	30.4		16.0				
9	255	26.4	1	33.7		30.8	242	52.7		30.6	0	44.2		03.9	330	32.6		15.9				
10	270	28.8	16	33.2		31.2	257	53.6		31.3	15	46.1		04.0	345	34.8		15.9				
11	285	31.3	31	32.8	-19	31.6	272	54.6	+5	32.0	30	48.1	-22	04.0	0	36.9	-22	15.9				
12	300	33.8	46	32.4	-19	32.0	287	55.5	+5	32.7	45	50.1	-22	04.1	15	39.1	-22	15.8				
13	315	36.2	61	32.0		32.4	302	56.4		33.4	60	52.0		04.1	30	41.2		15.8				
14	330	38.7	76	31.6		32.8	317	57.3		34.1	75	54.0		04.2	45	43.4		15.8				
15	345	41.2	91	31.2		33.2	332	58.2		34.8	90	55.9		04.2	60	45.5		15.8				
16	0	43.6	106	30.8		33.6	347	59.1		35.5	105	57.9		04.3	75	47.7		15.7				
17	15	46.1	121	30.3	-19	34.0	3	00.0	+5	36.2	120	59.9	-22	04.3	90	49.8	-22	15.7				
18	30	48.5	136	29.9	-19	34.4	18	01.0	+5	36.9	136	01.8	-22	04.4	105	52.0	-22	15.7				
19	45	51.0	151	29.5		34.8	33	01.9		37.6	151	03.8		04.4	120	54.2		15.7				
20	60	53.5	166	29.1		35.2	48	02.8		38.2	166	05.7		04.5	135	56.3		15.6				
21	75	55.9	181	28.7		35.6	63	03.7		38.9	181	07.7		04.5	150	58.5		15.6				
22	90	58.4	196	28.2		36.0	78	04.6		39.6	196	09.7		04.6	166	00.6		15.6				
23	106	00.9	211	27.8		36.4	93	05.5		40.3	211	11.6		04.6	181	02.8		15.5				
24	121	03.3	226	27.4	-19	36.7	108	06.4	+5	41.0	226	13.6	-22	04.7	196	04.9	-22	15.5				
Dif.	—		-4				+9				+20				0				+22			

UT	SOL				○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna					
	SD: 16'3				SD: 16'7		PHE { 4 ^h : 61'3 12 ^h : 61'3 20 ^h : 61'2						Edad: 15 ^d 9			Rº: 60 ^m								
	PMG: 12 ^h 11 ^m 5				PMG: 01 ^h 01 ^m																			
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.							Civil	Náut.	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°		°	h m	h m	h m	h m	m	h m	m						
0	177	09.5	-19	47.3	345	26.4	41	+18	23.4	77	60 N	15 48	16 38	17 31	17 45	97	9 28	24						
1	192	09.3		46.7	359	49.5	42		15.7	77	58	16 00	47	36	17 56	92	17 27	29						
2	207	09.1		46.2	14	12.7	42		08.0	79	56	11	16 54	41	18 04	90	9 08	27						
3	222	08.9		45.6	28	35.9	43	+18	00.1	80	54	21	17 01	45	12	87	8 59	32						
4	237	08.8		45.0	42	59.2	43	+17	52.1	82	52	29	07	49	19	85	52	34						
5	252	08.6	-19	44.5	57	22.5	45	+17	43.9	82	50	16 37	17 13	17 53	18 26	82	8 45	36						
6	267	08.4	-19	43.9	71	46.0	45	+17	35.7	84	45	16 53	17 26	18 01	18 39	79	8 30	40						
7	282	08.3		43.3	86	09.5	45		27.3	86	40	17 07	36	09	18 50	75	18	43						
8	297	08.1		42.8	100	33.0	46		18.7	86	35	18	45	16	19 00	72	8 08	46						
9	312	07.9		42.2	114	56.6	48		10.1	88	30	28	17 54	23	08	69	7 58	49						
10	327	07.8		41.6	129	20.4	47	+17	01.3	89	20	17 46	18 09	36	23	64	42	53						
11	342	07.6	-19	41.1	143	44.1	49	+16	52.4	90	10 N	18 01	18 23	18 49	19 35	61	7 28	56						
12	357	07.4	-19	40.5	158	08.0	49	+16	43.4	91	0	18 15	18 37	19 03	19 47	57	7 15	59						
13	12	07.3		39.9	172	31.9	50		34.3	92	10 S	30	18 52	18	19 58	54	7 02	62						
14	27	07.1		39.4	186	55.9	51		25.1	94	20	18 45	19 09	19 37	20 11	50	6 48	66						
15	42	06.9		38.8	201	20.0	51		15.7	94	30	19 03	30	20 01	25	46	31	70						
16	57	06.8		38.2	215	44.1	53	+16	06.3	96	35	14	42	17	33	43	22	72						
17	72	06.6	-19	37.6	230	08.4	53	+15	56.7	97	40	19 26	19 57	20 35	20 42	41	6 11	75						
18	87	06.4	-19	37.1	244	32.7	54	+15	47.0	97	45	19 40	20 15	20 59	20 53	37	5 58	78						
19	102	06.3		36.5	258	57.1	54		37.3	99	50	19 58	38	21 32	21 06	33	42	83						
20	117	06.1		35.9	273	21.5	56		27.4	100	52	20 07	20 50	21 49	12	31	34	85						
21	132	05.9		35.3	287	46.1	56		17.4	101	54	16	21 03	22 11	19	28	26	87						
22	147	05.8		34.7	302	10.7	57	+15	07.3	102	56	27	18	22 40	26	26	17	89						
23	162	05.6		34.2	316	35.4	58	+14	57.1	103	58	39	36	23 33	35	23	5 06	93						
24	177	05.4	-19	33.6	331	00.2		+14	46.8		60 S	20 53	21 59	** **	21 44	20	4 54	96						
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO									
	PMG		Mag: -4.4				Mag: +0.8				Mag: -1.8				Mag: +0.5									
	15 ^h 53 ^m 2		PMG: 08 ^h 54 ^m				PMG: 16 ^h 47 ^m				PMG: 08 ^h 54 ^m				PMG: 10 ^h 54 ^m									
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	121	03.3	226	27.4	-19	36.7	108	06.4	+5	41.0	226	13.6	-22	-04.7	196	04.9	-22	15.5						
1	136	05.8	241	27.0		37.1	123	07.3		41.7	241	15.5		-04.7	211	07.1		15.5						
2	151	08.3	256	26.6		37.5	138	08.3		42.4	256	17.5		-04.8	226	09.3		15.5						
3	166	10.7	271	26.1		37.9	153	09.2		43.1	271	19.5		-04.8	241	11.4		15.4						
4	181	13.2	286	25.7		38.3	168	10.1		43.8	286	21.4		-04.9	256	13.6		15.4						
5	196	15.7	301	25.3	-19	38.7	183	11.0	+5	44.5	301	23.4	-22	-04.9	271	15.7	-22	15.4						
6	211	18.1	316	24.9	-19	39.1	198	11.9	+5	45.2	316	25.3	-22	-05.0	286	17.9	-22	15.4						
7	226	20.6	331	24.4		39.5	213	12.8		45.9	331	27.3		-05.0	301	20.0		15.3						
8	241	23.0	346	24.0		39.8	228	13.7		46.6	346	29.3		-05.1	316	22.2		15.3						
9	256	25.5	1	23.6		40.2	243	14.6		47.3	1	31.2		-05.1	331	24.3		15.3						
10	271	28.0	16	23.1		40.6	258	15.6		48.0	16	33.2		-05.2	346	26.5		15.3						
11	286	30.4	31	22.7	-19	41.0	273	16.5	+5	48.7	31	35.2	-22	-05.2	1	28.7	-22	15.2						
12	301	32.9	46	22.3	-19	41.4	288	17.4	+5	49.4	46	37.1	-22	-05.3	16	30.8	-22	15.2						
13	316	35.4	61	21.9		41.8	303	18.3		50.1	61	39.1		-05.3	31	33.0		15.2						
14	331	37.8	76	21.4		42.1	318	19.2		50.8	76	41.0		-05.4	46	35.1		15.1						
15	346	40.3	91	21.0		42.5	333	20.1		51.5	91	43.0		-05.4	61	37.3		15.1						
16	1	42.8	106	20.6		42.9	348	21.0		52.2	106	45.0		-05.5	76	39.4		15.1						
17	16	45.2	121	20.1	-19	43.3	3	21.9	+5	52.9	121	46.9	-22	-05.5	91	41.6	-22	15.1						
18	31	47.7	136	19.7	-19	43.7	18	22.8	+5	53.6	136	48.9	-22	-05.6	106	43.8	-22	15.0						
19	46	50.2	151	19.3		44.0	33	23.8		54.3	151	50.9		-05.6	121	45.9		15.0						
20	61	52.6	166	18.8		44.4	48	24.7		55.0	166	52.8		-05.7	136	48.1		15.0						
21	76	55.1	181	18.4		44.8	63	25.6		55.7	181	54.8		-05.7	151	50.2		15.0						
22	91	57.5	196	18.0		45.2	78	26.5		56.4	196	56.8		-05.8	166	52.4		14.9						
23	107	00.0	211	17.5		45.5	93	27.4		57.0	211	58.7		-05.8	181	54.5		14.9						
24	122	02.5	226	17.1	-19	45.9	108	28.3	+5	57.7	227	00.7	-22	-05.9	196	56.7	-22	14.9						
Dif.	—		-4		-4		+9		+7		+20		0		+22									

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 11 ^m 8				SD: 16'7 Edad: 16 ^d 9 PHE { 4 ^h : 61'1 12 ^h : 60'9 20 ^h : 60'7 PMG: 02 ^h 01 ^m Rº: 56 ^m																
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº								
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	° 177 ° 192 ° 207 ° 222 ° 237 ° 252 ° 267 ° 282 ° 297 ° 312 ° 327 ° 342 ° 357 ° 12 ° 27 ° 42 ° 57 ° 72 ° 87 ° 102 ° 117 ° 132 ° 147 ° 162 ° 177	' 05.4 ' 05.3 ' 05.1 ' 05.0 ' 04.8 ' 04.6 ' 04.5 ' 04.3 ' 04.1 ' 04.0 ' 03.8 ' 03.7 ' 03.5 ' 12 ' 03.3 ' 27 ' 03.2 ' 42 ' 03.0 ' 57 ' 02.9 ' 72 ' 87 ' 102 ' 117 ' 132 ' 147 ' 162 ' 177	° −19 ° −19	° 33.6 ° 33.0 ° 32.4 ° 31.8 ° 31.3 ° 30.7 ° 30.1 ° 29.5 ° 28.9 ° 28.3 ° 27.8 ° 27.2 ° 26.6 ° 26.0 ° 25.4 ° 24.8 ° 24.2 ° 23.6 ° 23.1 ° 22.5 ° 21.9 ° 21.3 ° 20.7 ° 20.1 ° 19.5	° 33.1 ° 34.5 ° 35.9 ° 14 ° 28 ° 43 ° 57 ° 71 ° 86 ° 100 ° 115 ° 129 ° 144 ° 158 ° 172 ° 187 ° 201 ° 216 ° 230 ° 245 ° 259 ° 273 ° 288 ° 302 ° 317	' 00.2 ' 25.1 ' 50.0 ' 15.0 ' 40.2 ' 05.4 ' 30.6 ' 56.0 ' 21.4 ' 47.0 ' 12.6 ' 38.3 ' 04.0 ' 29.9 ' 55.8 ' 21.8 ' 47.9 ' 14.1 ' 40.4 ' 06.7 ' 33.2 ' 59.7 ' 26.3 ' 52.9 ' 19.7	° +14 ° 36.4 ° 25.9 ° 15.4 ° +14 ° +13 ° +13 ° 43.1 ° 32.2 ° 21.2 ° +13 ° +12 ° +12 ° +12 ° 36.4 ° 25.0 ° 13.5 ° +12 ° +11 ° +11 ° +11 ° 15.2 ° +11 ° +10 ° 39.4 ° 27.4 ° +10	° 104 ° 105 ° 105 ° 107 ° 107 ° 109 ° 109 ° 110 ° 111 ° 111 ° 113 ° 113 ° 114 ° 115 ° 115 ° 116 ° 117 ° 117 ° 118 ° 119 ° 119 ° 120 ° 120 ° 121	° 60 N ° 58 ° 56 ° 54 ° 52 ° 50 ° 45 ° 40 ° 35 ° 30 ° 20 ° 10 N ° 0 ° 10 S ° 20 ° 30 ° 35 ° 40 ° 45 ° 50 ° 52 ° 54 ° 56 ° 58 ° 60 S	h m 6 51 h m 46 35 h m 42 28 h m 37 21 h m 34 15 h m 6 30 7 09 h m 6 21 6 57 h m 14 47 h m 07 38 h m 6 00 29 h m 5 47 14 h m 5 35 6 00 h m 5 21 5 46 h m 5 05 31 h m 4 46 5 14 h m 22 4 54 h m 4 07 41 h m 3 48 4 27 h m 3 24 4 09 h m 2 52 3 46 h m 34 34 h m 2 13 21 h m 1 44 3 06 h m 0 52 2 48 h m ** ** 2 25	h m 7 44 8 34 h m 35 22 h m 28 11 h m 21 8 01 h m 15 7 53 h m 7 09 7 45 h m 6 57 7 29 h m 47 16 h m 38 7 05 h m 29 6 55 h m 14 38 h m 6 00 6 22 h m 5 46 6 08 h m 31 5 54 h m 14 38 h m 4 54 20 h m 41 5 10 h m 4 27 4 58 h m 4 09 4 43 h m 3 46 26 h m 34 17 h m 21 4 08 h m 3 06 3 57 h m 2 48 45 h m 2 25 3 31	h m m 8 34 19 22 94 h m m 22 28 91 h m m 11 34 88 h m m 8 01 39 86 h m m 7 53 44 83 h m m 7 45 19 48 81 h m m 7 29 19 58 76 h m m 16 20 05 73 h m m 7 05 12 69 h m m 6 55 17 67 h m m 38 27 62 h m m 6 22 20 36 58 h m m 6 08 20 44 54 h m m 5 54 20 52 50 h m m 38 21 01 46 h m m 20 11 41 h m m 5 10 16 39 h m m 4 58 21 23 35 h m m 4 43 21 30 32 h m m 26 39 27 h m m 17 43 25 h m m 4 08 47 24 h m m 3 57 52 21 h m m 45 21 58 18 h m m 3 31 22 04 15	h m m 9 52 17 h m m 44 21 h m m 37 24 h m m 31 26 h m m 26 28 h m m 9 21 30 h m m 9 10 34 h m m 9 01 38 h m m 8 54 40 h m m 47 43 h m m 35 48 h m m 8 24 52 h m m 8 14 56 h m m 8 04 60 h m m 7 54 63 h m m 41 69 h m m 34 71 h m m 7 26 74 h m m 7 16 78 h m m 7 05 82 h m m 6 59 85 h m m 53 87 h m m 46 90 h m m 6 39 93 h m m 6 30 96								
UT	ARIES	VENUS				MARTE				JÚPITER				SATURNO							
	PMG 15 ^h 49 ^m 2	Mag: −4.4 PMG: 08 ^h 55 ^m				Mag: +0.8 PMG: 16 ^h 45 ^m				Mag: −1.8 PMG: 08 ^h 51 ^m				Mag: +0.5 PMG: 10 ^h 51 ^m							
	hG ☿	hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.							
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	° 122 ° 137 ° 152 ° 167 ° 182 ° 197 ° 212 ° 227 ° 242 ° 257 ° 272 ° 287 ° 302 ° 317 ° 332 ° 347 ° 362 ° 377 ° 392 ° 407 ° 422 ° 437 ° 452 ° 467 ° 482 ° 497	' 02.5 ' 04.9 ' 07.4 ' 09.9 ' 12.3 ' 14.8 ' 17.3 ' 19.7 ' 22.2 ' 24.6 ' 27.1 ' 29.6 ' 32.0 ' 34.5 ' 37.0 ' 39.4 ' 41.9 ' 44.4 ' 46.8 ' 49.3 ' 51.8 ' 54.3 ' 56.7 ' 59.1 ' 01.6	° 226 ° 241 ° 256 ° 271 ° 286 ° 301 ° 316 ° 331 ° 346 ° 1 ° 16 ° 31 ° 46 ° 61 ° 76 ° 91 ° 106 ° 121 ° 136 ° 151 ° 166 ° 181 ° 196 ° 211 ° 226	° −19 ° −19	° 108 ° 123 ° 138 ° 153 ° 168 ° 183 ° 198 ° 213 ° 228 ° 243 ° 258 ° 273 ° 288 ° 303 ° 318 ° 333 ° 348 ° 363 ° 378 ° 393 ° 408 ° 423 ° 438 ° 453 ° 468	' 28.3 ' 29.2 ' 30.1 ' 31.0 ' 32.0 ' 32.9 ' 33.8 ' 34.7 ' 35.6 ' 36.5 ' 37.4 ' 38.3 ' 39.2 ' 40.2 ' 41.1 ' 42.0 ' 42.9 ' 43.8 ' 44.7 ' 45.6 ' 46.5 ' 47.4 ' 48.3 ' 49.2 ' 50.2	° +5 ° 58.4 ° 59.1 ° +5 ° +6 ° +6 ° +6 ° 01.9 ° 02.6 ° 03.3 ° 04.0 ° 04.7 ° +6 ° 06.1 ° 06.8 ° 07.5 ° 08.2 ° 08.8 ° +6 ° 10.2 ° 10.9 ° 11.6 ° 12.3 ° 13.0 ° 13.7 ° +6	° 227 ° 242 ° 257 ° 272 ° 287 ° 302 ° 317 ° 332 ° 347 ° 2 ° 17 ° 32 ° 47 ° 62 ° 77 ° 92 ° 107 ° 122 ° 137 ° 152 ° 167 ° 182 ° 197 ° 212 ° 227	' 00.7 ' 02.6 ' 04.6 ' 06.6 ' 08.5 ' 10.5 ' 12.5 ' 14.4 ' 16.4 ' 18.4 ' 20.3 ' 22.3 ' 24.3 ' 26.2 ' 28.2 ' 30.2 ' 32.1 ' 34.1 ' 36.1 ' 38.0 ' 40.0 ' 42.0 ' 43.9 ' 45.9 ' 47.9	° −22 ° 05.9 ° 05.9 ° 06.0 ° 06.0 ° 06.1 ° 06.2 ° 06.2 ° 06.2 ° 06.3 ° 06.3 ° 06.4 ° 06.4 ° 06.5 ° 06.5 ° 06.6 ° 06.6 ° 06.7 ° 06.7 ° 06.8 ° 06.8 ° 06.9 ° 06.9 ° 07.0 ° −22	h m m −22 196 56.7 h m m 14.9 211 58.9 h m m 14.8 227 01.0 h m m 14.8 242 03.2 h m m 14.8 257 05.3 h m m 14.7 272 07.5 h m m −22 287 09.6 h m m 14.7 302 11.8 h m m 14.7 317 14.0 h m m 14.6 332 16.1 h m m 14.6 347 18.3 h m m −22 2 20.4 h m m −22 17 22.6 h m m 14.5 32 24.8 h m m 14.5 47 26.9 h m m 14.5 62 29.1 h m m 14.4 77 31.2 h m m −22 92 33.4 h m m −22 107 35.5 h m m 14.4 122 37.7 h m m 14.3 137 39.9 h m m 14.3 152 42.0 h m m 14.3 167 44.2 h m m 14.2 182 46.3 h m m −22 197 48.5										
Dif.	—	−4				−4				+20				0				+22			

UT	SOL			○ LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2			SD: 16'5 Edad: 17 ^d 9														
	PMG: 12 ^h 12 ^m 0			PMG: 02 ^h 57 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.											
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	177	01.6	-19	19.5	317	19.7	78	+10	15.3	122	60 N	15 53	16 43	17 35	20 56	91	10 09	14
1	192	01.5		18.9	331	46.5	79	+10	03.1	122	58	16 05	51	40	20 59	88	05	17
2	207	01.3		18.3	346	13.4	80	+9	50.9	122	56	15	16 58	44	21 02	86	10 01	19
3	222	01.2		17.7	0	40.4	81		38.7	123	54	25	17 05	48	05	83	9 57	22
4	237	01.0		17.1	15	07.5	81		26.4	124	52	33	11	52	07	81	54	24
5	252	00.8	-19	16.5	29	34.6	82	+9	14.0	124	50	16 40	17 16	17 56	21 09	79	9 51	26
6	267	00.7	-19	15.9	44	01.8	83	+9	01.6	124	45	16 56	17 28	18 04	21 14	74	9 44	31
7	282	00.5		15.3	58	29.1	84	+8	49.2	125	40	17 09	38	11	18	70	39	34
8	297	00.4		14.7	72	56.5	84		36.7	125	35	20	47	18	21	67	34	37
9	312	00.2		14.1	87	23.9	86		24.2	126	30	30	17 55	24	24	64	30	40
10	327	00.1		13.5	101	51.5	86	+8	11.6	126	20	17 47	18 10	37	29	60	23	44
11	341	59.9	-19	12.9	116	19.1	86	+7	59.0	126	10 N	18 02	18 24	18 49	21 34	55	9 16	49
12	356	59.8	-19	12.3	130	46.7	88	+7	46.4	127	0	18 16	18 37	19 03	21 38	51	9 10	53
13	11	59.6		11.7	145	14.5	88		33.7	126	10 S	30	18 52	18	42	47	9 04	56
14	26	59.5		11.1	159	42.3	89		21.1	128	20	18 45	19 09	19 37	47	43	8 57	61
15	41	59.3		10.5	174	10.2	89	+7	08.3	127	30	19 02	29	20 00	52	38	50	65
16	56	59.2		09.9	188	38.1	90	+6	55.6	128	35	13	41	15	55	35	45	69
17	71	59.0	-19	09.3	203	06.1	91	+6	42.8	128	40	19 25	19 55	20 33	21 58	33	8 40	72
18	86	58.9	-19	08.7	217	34.2	92	+6	30.0	128	45	19 39	20 13	20 57	22 02	29	8 34	76
19	101	58.7		08.1	232	02.4	92		17.2	129	50	19 56	35	21 28	06	25	27	80
20	116	58.6		07.5	246	30.6	93	+6	04.3	128	52	20 04	46	21 45	08	23	24	82
21	131	58.4		06.9	260	58.9	94	+5	51.5	129	54	13	20 59	22 05	11	21	20	84
22	146	58.3		06.3	275	27.3	94		38.6	129	56	23	21 14	22 32	13	19	16	87
23	161	58.1		05.7	289	55.7	95		25.7	130	58	35	31	23 15	16	16	12	89
24	176	58.0	-19	05.1	304	24.2		+5	12.7		60 S	20 49	21 53	** **	22 19	13	8 06	94

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 45 ^m 3		Mag: -4.4 PMG: 08 ^h 56 ^m			Mag: +0.8 PMG: 16 ^h 44 ^m			Mag: -1.8 PMG: 08 ^h 48 ^m			Mag: +0.5 PMG: 10 ^h 47 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	123	01.6	226	06.4	-19	54.7	108	50.2	+6	14.4	227	47.9	-22	-07.0	197	48.5	-22	14.2
1	138	04.1	241	05.9		55.0	123	51.1		15.1	242	49.8		-07.1	212	50.7		14.2
2	153	06.5	256	05.5		55.4	138	52.0		15.8	257	51.8		-07.1	227	52.8		14.2
3	168	09.0	271	05.0		55.7	153	52.9		16.5	272	53.8		-07.1	242	55.0		14.1
4	183	11.5	286	04.6		56.1	168	53.8		17.2	287	55.7		-07.2	257	57.1		14.1
5	198	13.9	301	04.1	-19	56.4	183	54.7	+6	17.9	302	57.7	-22	-07.2	272	59.3	-22	14.1
6	213	16.4	316	03.7	-19	56.8	198	55.6	+6	18.5	317	59.7	-22	-07.3	288	01.4	-22	14.1
7	228	18.9	331	03.2		57.1	213	56.5		19.2	333	01.6		-07.3	303	03.6		14.0
8	243	21.3	346	02.7		57.5	228	57.4		19.9	348	03.6		-07.4	318	05.8		14.0
9	258	23.8	1	02.3		57.8	243	58.3		20.6	3	05.6		-07.4	333	07.9		14.0
10	273	26.3	16	01.8		58.2	258	59.2		21.3	18	07.6		-07.5	348	10.1		13.9
11	288	28.7	31	01.4	-19	58.5	274	00.2	+6	22.0	33	09.5	-22	-07.5	3	12.2	-22	13.9
12	303	31.2	46	00.9	-19	58.9	289	01.1	+6	22.7	48	11.5	-22	-07.6	18	14.4	-22	13.9
13	318	33.6	61	00.4		59.2	304	02.0		23.4	63	13.5		-07.6	33	16.6		13.9
14	333	36.1	76	00.0		59.6	319	02.9		24.1	78	15.4		-07.7	48	18.7		13.8
15	348	38.6	90	59.5	-19	59.9	334	03.8		24.8	93	17.4		-07.7	63	20.9		13.8
16	3	41.0	105	59.1	-20	00.3	349	04.7		25.5	108	19.4		-07.8	78	23.0		13.8
17	18	43.5	120	58.6	-20	00.6	4	05.6	+6	26.2	123	21.3	-22	-07.8	93	25.2	-22	13.8
18	33	46.0	135	58.1	-20	01.0	19	06.5	+6	26.8	138	23.3	-22	-07.9	108	27.4	-22	13.7
19	48	48.4	150	57.7		01.3	34	07.4		27.5	153	25.3		-07.9	123	29.5		13.7
20	63	50.9	165	57.2		01.7	49	08.3		28.2	168	27.3		-07.9	138	31.7		13.7
21	78	53.4	180	56.7		02.0	64	09.2		28.9	183	29.2		-08.0	153	33.8		13.6
22	93	55.8	195	56.3		02.3	79	10.1		29.6	198	31.2		-08.0	168	36.0		13.6
23	108	58.3	210	55.8		02.7	94	11.1		30.3	213	33.2		-08.1	183	38.2		13.6
24	124	00.7	225	55.3	-20	03.0	109	12.0	+6	31.0	228	35.1	-22	-08.1	198	40.3	-22	13.6
Dif.	—		-5		-3		+9		+7		+20		0		+22			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2				SD: 16'3 Edad: 18 ^d 9											
	PMG: 12 ^h 12 ^m 3				PMG: 03 ^h 50 ^m Rº: 51 ^m											
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº		
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m			
0	176	58.0	-19	05.1	304	24.2	96	+5 12.7	129	60 N	6 48	7 40	8 30	22 27 88	10 23 13	
1	191	57.8		04.5	318	52.8	96	+4 59.8	130	58	44	32	18	27 85	22 15	
2	206	57.7		03.8	333	21.4	97	46.8	129	56	39	25	8 08	28 82	20 19	
3	221	57.5		03.2	347	50.1	97	33.9	130	54	35	19	7 59	28 79	19 21	
4	236	57.4		02.6	2	18.8	98	20.9	130	52	31	13	50	28 77	18 22	
5	251	57.3	-19	02.0	16	47.6	99	+4 07.9	130	50	6 28	7 07	7 43	22 28 75	10 17 24	
6	266	57.1	-19	01.4	31	16.5	99	+3 54.9	130	45	6 20	6 56	7 28	22 28 71	10 15 28	
7	281	57.0		00.8	45	45.4	100	41.9	130	40	13	46	15	28 68	13 32	
8	296	56.8	-19	00.2	60	14.4	101	28.9	130	35	06	37	7 04	28 65	11 35	
9	311	56.7	-18	59.6	74	43.5	100	15.9	130	30	6 00	29	6 54	28 62	10 37	
10	326	56.5		58.9	89	12.5	102	+3 02.9	130	20	5 47	14	37	29 57	07 42	
11	341	56.4	-18	58.3	103	41.7	102	+2 49.9	130	10 N	5 35	6 00	6 23	22 29 53	10 05 46	
12	356	56.2	-18	57.7	118	10.9	103	+2 36.9	130	0	5 21	5 47	6 09	22 29 49	10 03 50	
13	11	56.1		57.1	132	40.2	103	23.9	130	10 S	5 06	32	5 55	29 46	10 00 54	
14	26	56.0		56.5	147	09.5	103	+2 10.9	130	20	4 48	5 16	40	30 41	9 58 58	
15	41	55.8		55.9	161	38.8	105	+1 57.9	130	30	24	4 56	22	30 37	55 63	
16	56	55.7		55.2	176	08.3	104	44.9	130	35	4 09	44	12	30 35	54 65	
17	71	55.5	-18	54.6	190	37.7	105	+1 31.9	130	40	3 51	4 29	5 00	22 31 31	9 52 69	
18	86	55.4	-18	54.0	205	07.2	106	+1 18.9	129	45	3 28	4 12	4 46	22 31 28	9 50 72	
19	101	55.3		53.4	219	36.8	106	+1 06.0	130	50	2 56	3 49	29	31 24	47 77	
20	116	55.1		52.8	234	06.4	107	+0 53.0	129	52	40	38	21	31 22	46 79	
21	131	55.0		52.1	248	36.1	107	40.1	130	54	2 19	26	12	32 20	44 82	
22	146	54.8		51.5	263	05.8	107	27.1	129	56	1 53	3 11	4 02	32 18	43 84	
23	161	54.7		50.9	277	35.5	108	14.2	129	58	1 10	2 54	3 50	22 32 15	9 41 87	
24	176	54.6	-18	50.3	292	05.3		+0 01.3		60 S	** **	2 32	3 36	22 32 13	9 40 89	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.4				Mag: +0.8				Mag: -1.8				Mag: +0.5			
	15 ^h 41 ^m 4		PMG: 08 ^h 57 ^m				PMG: 16 ^h 42 ^m				PMG: 08 ^h 45 ^m				PMG: 10 ^h 44 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	124	00.7	225	55.3	-20	03.0	109	12.0	+6	31.0	228	35.1	-22	08.1	198	40.3	-22	13.6
1	139	03.2	240	54.9		03.4	124	12.9		31.7	243	37.1		08.2	213	42.5		13.5
2	154	05.7	255	54.4		03.7	139	13.8		32.4	258	39.1		08.2	228	44.6		13.5
3	169	08.1	270	53.9		04.0	154	14.7		33.1	273	41.1		08.3	243	46.8		13.5
4	184	10.6	285	53.4		04.4	169	15.6		33.7	288	43.0		08.3	258	49.0		13.5
5	199	13.1	300	53.0	-20	04.7	184	16.5	+6	34.4	303	45.0	-22	08.4	273	51.1	-22	13.4
6	214	15.5	315	52.5	-20	05.0	199	17.4	+6	35.1	318	47.0	-22	08.4	288	53.3	-22	13.4
7	229	18.0	330	52.0		05.4	214	18.3		35.8	333	48.9		08.5	303	55.4		13.4
8	244	20.5	345	51.6		05.7	229	19.2		36.5	348	50.9		08.5	318	57.6		13.3
9	259	22.9	0	51.1		06.0	244	20.1		37.2	3	52.9		08.5	333	59.8		13.3
10	274	25.4	15	50.6		06.4	259	21.0		37.9	18	54.9		08.6	349	01.9		13.3
11	289	27.9	30	50.1	-20	06.7	274	21.9	+6	38.6	33	56.8	-22	08.6	4	04.1	-22	13.3
12	304	30.3	45	49.7	-20	07.0	289	22.8	+6	39.3	48	58.8	-22	08.7	19	06.2	-22	13.2
13	319	32.8	60	49.2		07.4	304	23.7		40.0	64	00.8		08.7	34	08.4		13.2
14	334	35.2	75	48.7		07.7	319	24.7		40.6	79	02.8		08.8	49	10.6		13.2
15	349	37.7	90	48.2		08.0	334	25.6		41.3	94	04.7		08.8	64	12.7		13.1
16	4	40.2	105	47.8		08.3	349	26.5		42.0	109	06.7		08.9	79	14.9		13.1
17	19	42.6	120	47.3	-20	08.7	4	27.4	+6	42.7	124	08.7	-22	08.9	94	17.0	-22	13.1
18	34	45.1	135	46.8	-20	09.0	19	28.3	+6	43.4	139	10.7	-22	09.0	109	19.2	-22	13.1
19	49	47.6	150	46.3		09.3	34	29.2		44.1	154	12.6		09.0	124	21.4		13.0
20	64	50.0	165	45.8		09.6	49	30.1		44.8	169	14.6		09.0	139	23.5		13.0
21	79	52.5	180	45.4		10.0	64	31.0		45.5	184	16.6		09.1	154	25.7		13.0
22	94	55.0	195	44.9		10.3	79	31.9		46.2	199	18.5		09.1	169	27.8		13.0
23	109	57.4	210	44.4		10.6	94	32.8		46.8	214	20.5		09.2	184	30.0		12.9
24	124	59.9	225	43.9	-20	10.9	109	33.7	+6	47.5	229	22.5	-22	09.2	199	32.2	-22	12.9
Dif.	—		-5	-3			+9	+7			+20	0			+22			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 12 ^m 5				SD: 16'1 Edad: 19 ^d 9 PHE { 4 ^h : 58'9 12 ^h : 58'6 20 ^h : 58'3 PMG: 04 ^h 41 ^m Rº: 49 ^m													
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.					
	h	°	'	°	'	°	'	°			'	h	m	h	m	h	m	m
0	176	54.6	-18	50.3	292	05.3	109	+0	01.3	129	60 N	15 58	16 47	17 39	23 55	85	10 36	13
1	191	54.4		49.6	306	35.2	108	-0	11.6	128	58	16 09	16 55	44	52	82	37	16
2	206	54.3		49.0	321	05.0	110		24.4	129	56	19	17 02	48	50	79	39	18
3	221	54.1		48.4	335	35.0	109		37.3	128	54	28	08	52	47	77	40	20
4	236	54.0		47.8	350	04.9	110	-0	50.1	128	52	36	14	55	45	75	40	23
5	251	53.9	-18	47.1	4	34.9	110	-1	02.9	128	50	16 44	17 19	17 59	23 43	73	10 41	24
6	266	53.7	-18	46.5	19	04.9	111	-1	15.7	128	45	16 59	17 31	18 06	23 39	69	10 43	28
7	281	53.6		45.9	33	35.0	111		28.5	127	40	17 11	41	13	36	65	45	31
8	296	53.5		45.3	48	05.1	112		41.2	127	35	22	49	20	33	62	46	34
9	311	53.3		44.6	62	35.3	112	-1	53.9	127	30	32	17 57	26	30	60	47	37
10	326	53.2		44.0	77	05.5	112	-2	06.6	126	20	17 48	18 11	38	26	56	49	41
11	341	53.0	-18	43.4	91	35.7	112	-2	19.2	127	10 N	18 02	18 25	18 50	23 22	52	10 51	45
12	356	52.9	-18	42.7	106	05.9	113	-2	31.9	126	0	18 16	18 38	19 03	23 18	49	10 53	49
13	11	52.8		42.1	120	36.2	113		44.5	125	10 S	30	18 52	18	15	45	54	53
14	26	52.6		41.5	135	06.5	114	-2	57.0	126	20	18 45	19 08	36	11	41	56	57
15	41	52.5		40.9	149	36.9	113	-3	09.6	125	30	19 02	28	19 59	07	37	58	61
16	56	52.4		40.2	164	07.2	114		22.1	124	35	12	40	20 14	05	34	10 59	64
17	71	52.2	-18	39.6	178	37.6	115	-3	34.5	125	40	19 23	19 54	20 31	23 02	31	11 01	66
18	86	52.1	-18	39.0	193	08.1	114	-3	47.0	124	45	19 37	20 11	20 54	22 59	28	11 02	70
19	101	52.0		38.3	207	38.5	115	-3	59.4	123	50	19 53	32	21 24	55	24	04	74
20	116	51.8		37.7	222	09.0	115	-4	11.7	123	52	20 01	43	21 40	53	23	05	76
21	131	51.7		37.0	236	39.5	115		24.0	123	54	10	20 55	22 00	52	20	06	78
22	146	51.6		36.4	251	10.0	116		36.3	123	56	20	21 09	22 25	50	18	07	81
23	161	51.4		35.8	265	40.6	116	-4	48.6	122	58	31	26	23 02	47	16	08	83
24	176	51.3	-18	35.1	280	11.2		-5	00.8		60 S	20 44	21 47	** **	22 45	13	11 09	87

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 37 ^m 4		Mag: -4.4 PMG: 08 ^h 57 ^m				Mag: +0.8 PMG: 16 ^h 41 ^m				Mag: -1.9 PMG: 08 ^h 41 ^m				Mag: +0.5 PMG: 10 ^h 40 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	124	59.9	225	43.9	-20	10.9	109	33.7	+6	47.5	229	22.5	-22	-09.2	199	32.2	-22	12.9
1	140	02.3	240	43.4		11.3	124	34.6		48.2	244	24.5		-09.3	214	34.3		12.9
2	155	04.8	255	42.9		11.6	139	35.5		48.9	259	26.5		-09.3	229	36.5		12.8
3	170	07.3	270	42.5		11.9	154	36.4		49.6	274	28.4		-09.4	244	38.6		12.8
4	185	09.7	285	42.0		12.2	169	37.3		50.3	289	30.4		-09.4	259	40.8		12.8
5	200	12.2	300	41.5	-20	12.5	184	38.2	+6	51.0	304	32.4	-22	-09.5	274	43.0	-22	12.8
6	215	14.7	315	41.0	-20	12.9	199	39.1	+6	51.7	319	34.4	-22	-09.5	289	45.1	-22	12.7
7	230	17.1	330	40.5		13.2	214	40.0		52.3	334	36.3		-09.5	304	47.3		12.7
8	245	19.6	345	40.0		13.5	229	40.9		53.0	349	38.3		-09.6	319	49.5		12.7
9	260	22.1	0	39.5		13.8	244	41.9		53.7	4	40.3		-09.6	334	51.6		12.7
10	275	24.5	15	39.1		14.1	259	42.8		54.4	19	42.3		-09.7	349	53.8		12.6
11	290	27.0	30	38.6	-20	14.4	274	43.7	+6	55.1	34	44.2	-22	-09.7	4	55.9	-22	12.6
12	305	29.5	45	38.1	-20	14.7	289	44.6	+6	55.8	49	46.2	-22	-09.8	19	58.1	-22	12.6
13	320	31.9	60	37.6		15.1	304	45.5		56.5	64	48.2		-09.8	35	00.3		12.5
14	335	34.4	75	37.1		15.4	319	46.4		57.1	79	50.2		-09.9	50	02.4		12.5
15	350	36.8	90	36.6		15.7	334	47.3		57.8	94	52.1		-09.9	65	04.6		12.5
16	5	39.3	105	36.1		16.0	349	48.2		58.5	109	54.1		-09.9	80	06.7		12.5
17	20	41.8	120	35.6	-20	16.3	4	49.1	+6	59.2	124	56.1	-22	-10.0	95	08.9	-22	12.4
18	35	44.2	135	35.1	-20	16.6	19	50.0	+6	59.9	139	58.1	-22	-10.0	110	11.1	-22	12.4
19	50	46.7	150	34.6		16.9	34	50.9	+7	00.6	155	00.1		-10.1	125	13.2		12.4
20	65	49.2	165	34.1		17.2	49	51.8		01.3	170	02.0		-10.1	140	15.4		12.3
21	80	51.6	180	33.7		17.5	64	52.7		02.0	185	04.0		-10.2	155	17.6		12.3
22	95	54.1	195	33.2		17.8	79	53.6		02.6	200	06.0		-10.2	170	19.7		12.3
23	110	56.6	210	32.7		18.1	94	54.5		03.3	215	08.0		-10.3	185	21.9		12.3
24	125	59.0	225	32.2	-20	18.4	109	55.4	+7	04.0	230	09.9	-22	-10.3	200	24.0	-22	12.2
Dif.	—		-5		-3		+9		+7		+20		0		+22		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'2					PHE {		Edad: 20 ^d 9									R°: 48 ^m					
	PMG: 12 ^h 12 ^m 7					4 ^h : 58'0 12 ^h : 57'7 20 ^h : 57'4																
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	R°		Hora	R°								
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m				
0	176	51.3	-18	35.1	280	11.2	116	-5	00.8	121	60 N	6 45	7 37	8 26	** ** *	**	10 49	14				
1	191	51.2		34.5	294	41.8	116		12.9	121	58	41	29	14	** ** *	**	53	17				
2	206	51.1		33.9	309	12.4	116		25.0	121	56	37	22	8 04	** ** *	**	10 57	19				
3	221	50.9		33.2	323	43.0	117		37.1	120	54	33	16	7 56	** ** *	**	11 00	21				
4	236	50.8		32.6	338	13.7	117	-5	49.1	120	52	29	10	48	** ** *	**	03	23				
5	251	50.7	-18	31.9	352	44.4	117	-6	01.1	120	50	6 26	7 05	7 41	** ** *	**	11 05	25				
6	266	50.5	-18	31.3	7	15.1	117	-6	13.1	119	45	6 18	6 54	7 26	** ** *	**	11 11	29				
7	281	50.4		30.7	21	45.8	117		25.0	118	40	11	44	13	** ** *	**	16	32				
8	296	50.3		30.0	36	16.5	117		36.8	118	35	6 05	36	7 02	** ** *	**	20	35				
9	311	50.1		29.4	50	47.2	118	-6	48.6	117	30	5 59	28	6 53	** ** *	**	24	37				
10	326	50.0		28.7	65	18.0	118	-7	00.3	117	20	47	14	37	** ** *	**	30	42				
11	341	49.9	-18	28.1	79	48.8	118	-7	12.0	117	10 N	5 35	6 01	6 23	** ** *	**	11 36	45				
12	356	49.8	-18	27.4	94	19.6	118	-7	23.7	116	0	5 22	5 47	6 09	** ** *	**	11 42	48				
13	11	49.6		26.8	108	50.4	118		35.3	115	10 S	5 07	33	5 55	** ** *	**	47	52				
14	26	49.5		26.1	123	21.2	118		46.8	115	20	4 49	5 17	41	23 52	42	53	55				
15	41	49.4		25.5	137	52.0	118	-7	58.3	114	30	26	4 58	24	44	37	11 59	60				
16	56	49.3		24.9	152	22.8	119	-8	09.7	114	35	4 12	46	14	39	35	12 03	62				
17	71	49.1	-18	24.2	166	53.7	118	-8	21.1	113	40	3 54	4 32	5 02	23 33	33	12 07	65				
18	86	49.0	-18	23.6	181	24.5	119	-8	32.4	113	45	3 32	4 15	4 49	23 27	30	12 12	68				
19	101	48.9		22.9	195	55.4	118		43.7	112	50	3 01	3 53	32	19	27	18	72				
20	116	48.8		22.3	210	26.2	119	-8	54.9	111	52	2 45	43	25	16	24	21	74				
21	131	48.6		21.6	224	57.1	119	-9	06.0	111	54	26	31	16	12	23	24	76				
22	146	48.5		21.0	239	28.0	119		17.1	111	56	2 01	17	4 06	08	20	28	78				
23	161	48.4		20.3	253	58.9	119		28.2	109	58	1 24	3 00	3 55	23 03	18	12 31	81				
24	176	48.3	-18	19.7	268	29.8		-9	39.1		60 S	** ** *	2 39	3 42	22 58	15	12 36	83				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG		Mag: -4.4				Mag: +0.8				Mag: -1.9				Mag: +0.6							
	15 ^h 33 ^m 5		PMG: 08 ^h 58 ^m				PMG: 16 ^h 39 ^m				PMG: 08 ^h 38 ^m				PMG: 10 ^h 37 ^m							
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	125	59.0	225	32.2	-20	18.4	109	55.4	+7	04.0	230	09.9	-22	10.3	200	24.0	-22	12.2				
1	141	01.5	240	31.7		18.7	124	56.3		04.7	245	11.9		10.3	215	26.2		12.2				
2	156	04.0	255	31.2		19.0	139	57.2		05.4	260	13.9		10.4	230	28.4		12.2				
3	171	06.4	270	30.7		19.3	154	58.1		06.1	275	15.9		10.4	245	30.5		12.2				
4	186	08.9	285	30.2		19.6	169	59.0		06.8	290	17.9		10.5	260	32.7		12.1				
5	201	11.3	300	29.7	-20	19.9	184	59.9	+7	07.4	305	19.8	-22	10.5	275	34.9	-22	12.1				
6	216	13.8	315	29.2	-20	20.2	200	00.8	+7	08.1	320	21.8	-22	10.6	290	37.0	-22	12.1				
7	231	16.3	330	28.7		20.5	215	01.7		08.8	335	23.8		10.6	305	39.2		12.0				
8	246	18.7	345	28.2		20.8	230	02.6		09.5	350	25.8		10.7	320	41.3		12.0				
9	261	21.2	0	27.7		21.1	245	03.5		10.2	5	27.8		10.7	335	43.5		12.0				
10	276	23.7	15	27.2		21.4	260	04.4		10.9	20	29.7		10.7	350	45.7		12.0				
11	291	26.1	30	26.7	-20	21.7	275	05.3	+7	11.5	35	31.7	-22	10.8	5	47.8	-22	11.9				
12	306	28.6	45	26.2	-20	22.0	290	06.2	+7	12.2	50	33.7	-22	10.8	20	50.0	-22	11.9				
13	321	31.1	60	25.7		22.3	305	07.1		12.9	65	35.7		10.9	35	52.2		11.9				
14	336	33.5	75	25.2		22.6	320	08.1		13.6	80	37.7		10.9	50	54.3		11.8				
15	351	36.0	90	24.7		22.9	335	09.0		14.3	95	39.7		11.0	65	56.5		11.8				
16	6	38.4	105	24.2		23.2	350	09.9		15.0	110	41.6		11.0	80	58.6		11.8				
17	21	40.9	120	23.6	-20	23.5	5	10.8	+7	15.6	125	43.6	-22	11.0	96	00.8	-22	11.8				
18	36	43.4	135	23.1	-20	23.8	20	11.7	+7	16.3	140	45.6	-22	11.1	111	03.0	-22	11.7				
19	51	45.8	150	22.6		24.0	35	12.6		17.0	155	47.6		11.1	126	05.1		11.7				
20	66	48.3	165	22.1		24.3	50	13.5		17.7	170	49.6		11.2	141	07.3		11.7				
21	81	50.8	180	21.6		24.6	65	14.4		18.4	185	51.5		11.2	156	09.5		11.7				
22	96	53.2	195	21.1		24.9	80	15.3		19.1	200	53.5		11.3	171	11.6		11.6				
23	111	55.7	210	20.6		25.2	95	16.2		19.7	215	55.5		11.3	186	13.8		11.6				
24	126	58.2	225	20.1	-20	25.5	110	17.1	+7	20.4	230	57.5	-22	11.3	201	16.0	-22	11.6				
Dif.	—		-5				+9				+20				0				+22			

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'2				SD: 15'6												PHE { 4 ^h : 57'1 12 ^h : 56'9 20 ^h : 56'6			
	PMG: 12 ^h 12 ^m 9				Edad: 21 ^d 9															
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.							
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	176	48.3	-18	19.7	268	29.8	119	-9	39.1	109	60 N	16 03	16 52	17 43	1	20	82	11	03	17
1	191	48.1		19.0	283	00.7	118	-9	50.0	109	58	14	16 59	47	14	79		10	19	
2	206	48.0		18.4	297	31.5	119	-10	00.9	108	56	24	17 06	51	09	77		16	22	
3	221	47.9		17.7	312	02.4	119		11.7	107	54	32	12	55	04	75		21	24	
4	236	47.8		17.0	326	33.3	119		22.4	106	52	40	17	17 58	1	00	72		26	26
5	251	47.7	-18	16.4	341	04.2	119	-10	33.0	106	50	16 47	17 22	18 02	0	56	71	11	30	28
6	266	47.5	-18	15.7	355	35.1	119	-10	43.6	106	45	17 02	17 33	18 09	0	48	67	11	40	31
7	281	47.4		15.1	10	06.0	120	-10	54.2	104	40	14	43	15	41	64		48	34	
8	296	47.3		14.4	24	37.0	119	-11	04.6	104	35	24	51	22	35	61		11	55	37
9	311	47.2		13.8	39	07.9	119		15.0	103	30	33	17 59	28	30	59		12	01	39
10	326	47.1		13.1	53	38.8	119		25.3	103	20	17 49	18 12	39	22	54		12	42	
11	341	46.9	-18	12.5	68	09.7	118	-11	35.6	102	10 N	18 03	18 25	18 51	0	14	51	12	21	45
12	356	46.8	-18	11.8	82	40.5	119	-11	45.8	101	0	18 16	18 38	19 03	0	07	48	12	30	48
13	11	46.7		11.1	97	11.4	119	-11	55.9	100	10 S	30	18 52	18	** ** *	**		39	51	
14	26	46.6		10.5	111	42.3	119	-12	05.9	100	20	18 44	19 08	35	** ** *	**		48	54	
15	41	46.5		09.8	126	13.2	119		15.9	99	30	19 01	27	19 58	** ** *	**		12	59	58
16	56	46.3		09.2	140	44.1	119		25.8	99	35	10	38	20 12	** ** *	**		13	05	60
17	71	46.2	-18	08.5	155	15.0	118	-12	35.7	97	40	19 21	19 52	20 29	** ** *	**		13	12	63
18	86	46.1	-18	07.8	169	45.8	119	-12	45.4	97	45	19 35	20 08	20 51	23	57	33	13	20	66
19	101	46.0		07.2	184	16.7	119	-12	55.1	96	50	51	29	21 20	46	29		30	69	
20	116	45.9		06.5	198	47.6	118	-13	04.7	96	52	19 58	40	36	40	28		35	71	
21	131	45.8		05.8	213	18.4	119		14.3	94	54	20 07	20 51	21 54	35	26		40	73	
22	146	45.6		05.2	227	49.3	118		23.7	94	56	16	21 05	22 17	28	24		46	75	
23	161	45.5		04.5	242	20.1	118		33.1	93	58	27	21	22 50	21	22		52	78	
24	176	45.4	-18	03.9	256	50.9		-13	42.4		60 S	20 39	21 40	** ** *	23	13	19	13	59	81

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 29 ^m 6		Mag: -4.4 PMG: 08 ^h 59 ^m				Mag: +0.8 PMG: 16 ^h 38 ^m				Mag: -1.9 PMG: 08 ^h 35 ^m				Mag: +0.6 PMG: 10 ^h 33 ^m			
	hG ♂		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	126	58.2	225	20.1	-20	25.5	110	17.1	+7	20.4	230	57.5	-22	-11.3	201	16.0	-22	11.6
1	142	00.6	240	19.6		25.8	125	18.0		21.1	245	59.5		-11.4	216	18.1		11.5
2	157	03.1	255	19.1		26.0	140	18.9		21.8	261	01.5		-11.4	231	20.3		11.5
3	172	05.6	270	18.6		26.3	155	19.8		22.5	276	03.4		-11.5	246	22.4		11.5
4	187	08.0	285	18.0		26.6	170	20.7		23.2	291	05.4		-11.5	261	24.6		11.5
5	202	10.5	300	17.5	-20	26.9	185	21.6	+7	23.8	306	07.4	-22	-11.6	276	26.8	-22	11.4
6	217	12.9	315	17.0	-20	27.2	200	22.5	+7	24.5	321	09.4	-22	-11.6	291	28.9	-22	11.4
7	232	15.4	330	16.5		27.4	215	23.4		25.2	336	11.4		-11.7	306	31.1		11.4
8	247	17.9	345	16.0		27.7	230	24.3		25.9	351	13.4		-11.7	321	33.3		11.3
9	262	20.3	0	15.5		28.0	245	25.2		26.6	6	15.3		-11.7	336	35.4		11.3
10	277	22.8	15	15.0		28.3	260	26.1		27.3	21	17.3		-11.8	351	37.6		11.3
11	292	25.3	30	14.4	-20	28.5	275	27.0	+7	27.9	36	19.3	-22	-11.8	6	39.8	-22	11.3
12	307	27.7	45	13.9	-20	28.8	290	27.9	+7	28.6	51	21.3	-22	-11.9	21	41.9	-22	11.2
13	322	30.2	60	13.4		29.1	305	28.8		29.3	66	23.3		-11.9	36	44.1		11.2
14	337	32.7	75	12.9		29.4	320	29.7		30.0	81	25.3		-12.0	51	46.2		11.2
15	352	35.1	90	12.4		29.6	335	30.6		30.7	96	27.2		-12.0	66	48.4		11.2
16	7	37.6	105	11.9		29.9	350	31.5		31.3	111	29.2		-12.0	81	50.6		11.1
17	22	40.1	120	11.3	-20	30.2	5	32.4	+7	32.0	126	31.2	-22	-12.1	96	52.7	-22	11.1
18	37	42.5	135	10.8	-20	30.4	20	33.3	+7	32.7	141	33.2	-22	-12.1	111	54.9	-22	11.1
19	52	45.0	150	10.3		30.7	35	34.2		33.4	156	35.2		-12.2	126	57.1		11.0
20	67	47.4	165	09.8		31.0	50	35.1		34.1	171	37.2		-12.2	141	59.2		11.0
21	82	49.9	180	09.3		31.3	65	36.0		34.7	186	39.2		-12.2	157	01.4		11.0
22	97	52.4	195	08.7		31.5	80	36.9		35.4	201	41.1		-12.3	172	03.6		11.0
23	112	54.8	210	08.2		31.8	95	37.8		36.1	216	43.1		-12.3	187	05.7		10.9
24	127	57.3	225	07.7	-20	32.1	110	38.7	+7	36.8	231	45.1	-22	-12.4	202	07.9	-22	10.9
Dif.	—		-5		-3		+9		+7		+20		0		+22			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 12 ^h 13 ^m 1				SD: 15'4 Edad: 22 ^d 9 PMG: 07 ^h 06 ^m												PHE { 4 ^h : 56'4 12 ^h : 56'1 20 ^h : 55'9 Rº: 49 ^m		
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº	Hora	Rº						
h	°	'	°	'	°	'			h m	h m	h m	h m	m	m	m	m			
0	176	45.4	-18	03.9	256	50.9	118	-13	42.4	93	60 N	6 42	7 33	8 21	2 42	79	11 20	21	
1	191	45.3		03.2	271	21.7	119	-13	51.7	91	58	38	26	10	33	76	29	25	
2	206	45.2		02.5	285	52.6	118	-14	00.8	91	56	34	19	8 01	26	73	38	26	
3	221	45.1		01.9	300	23.4	118		09.9	90	54	30	13	7 53	19	71	45	29	
4	236	45.0		01.2	314	54.2	117		18.9	90	52	27	08	45	12	70	52	30	
5	251	44.8	-18	00.5	329	24.9	118	-14	27.9	88	50	6 24	7 03	7 38	2 07	67	11 58	32	
6	266	44.7	-17	59.9	343	55.7	118	-14	36.7	88	45	6 17	6 52	7 24	1 55	64	12 11	35	
7	281	44.6		59.2	358	26.5	117		45.5	86	40	10	43	12	45	61	22	37	
8	296	44.5		58.5	12	57.2	118	-14	54.1	86	35	6 04	34	7 01	36	60	32	39	
9	311	44.4		57.8	27	28.0	117	-15	02.7	86	30	5 58	27	6 52	29	57	40	41	
10	326	44.3		57.2	41	58.7	117		11.3	84	20	47	13	36	16	54	12 54	44	
11	341	44.2	-17	56.5	56	29.4	117	-15	19.7	84	10 N	5 35	6 01	6 23	1 05	51	13 06	47	
12	356	44.1	-17	55.8	71	00.1	117	-15	28.1	82	0	5 22	5 48	6 10	0 55	48	13 18	49	
13	11	44.0		55.2	85	30.8	117		36.3	82	10 S	5 08	34	5 56	45	45	30	51	
14	26	43.8		54.5	100	01.5	117		44.5	81	20	4 51	19	42	34	43	42	54	
15	41	43.7		53.8	114	32.2	116	-15	52.6	80	30	29	5 00	26	21	40	13 57	56	
16	56	43.6		53.1	129	02.8	117	-16	00.6	80	35	4 14	4 48	16	14	38	14 05	58	
17	71	43.5	-17	52.5	143	33.5	116	-16	08.6	78	40	3 57	4 35	5 05	0 06	36	14 15	60	
18	86	43.4	-17	51.8	158	04.1	116	-16	16.4	78	45	3 35	4 18	4 52	***	***	14 26	63	
19	101	43.3		51.1	172	34.7	117		24.2	76	50	3 06	3 57	36	***	***	39	66	
20	116	43.2		50.4	187	05.4	115		31.8	76	52	2 51	47	28	***	***	46	67	
21	131	43.1		49.8	201	35.9	116		39.4	75	54	33	35	20	***	***	14 53	69	
22	146	43.0		49.1	216	06.5	116		46.9	74	56	2 09	22	10	23 52	30	15 01	71	
23	161	42.9		48.4	230	37.1	116	-16	54.3	74	58	1 37	3 06	4 00	23 43	27	15 10	73	
24	176	42.8	-17	47.7	245	07.7		-17	01.7		60 S	**	**	2 47	3 47	23 32	25	15 20	76
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 15 ^h 25 ^m 6		Mag: -4.3 PMG: 09 ^h 00 ^m				Mag: +0.8 PMG: 16 ^h 36 ^m				Mag: -1.9 PMG: 08 ^h 32 ^m				Mag: +0.6 PMG: 10 ^h 30 ^m				
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	127	57.3	225	07.7	-20	32.1	110	38.7	+7	36.8	231	45.1	-22	12.4	202	07.9	-22	10.9	
1	142	59.8	240	07.2		32.3	125	39.6		37.5	246	47.1		12.4	217	10.1		10.9	
2	158	02.2	255	06.7		32.6	140	40.5		38.2	261	49.1		12.5	232	12.2		10.8	
3	173	04.7	270	06.1		32.8	155	41.4		38.8	276	51.1		12.5	247	14.4		10.8	
4	188	07.2	285	05.6		33.1	170	42.3		39.5	291	53.1		12.5	262	16.6		10.8	
5	203	09.6	300	05.1	-20	33.4	185	43.2	+7	40.2	306	55.1	-22	12.6	277	18.7	-22	10.8	
6	218	12.1	315	04.6	-20	33.6	200	44.1	+7	40.9	321	57.0	-22	12.6	292	20.9	-22	10.7	
7	233	14.5	330	04.0		33.9	215	45.0		41.6	336	59.0		12.7	307	23.0		10.7	
8	248	17.0	345	03.5		34.1	230	45.9		42.2	352	01.0		12.7	322	25.2		10.7	
9	263	19.5	0	03.0		34.4	245	46.8		42.9	7	03.0		12.8	337	27.4		10.6	
10	278	21.9	15	02.4		34.7	260	47.7		43.6	22	05.0		12.8	352	29.5		10.6	
11	293	24.4	30	01.9	-20	34.9	275	48.6	+7	44.3	37	07.0	-22	12.8	7	31.7	-22	10.6	
12	308	26.9	45	01.4	-20	35.2	290	49.5	+7	44.9	52	09.0	-22	12.9	22	33.9	-22	10.6	
13	323	29.3	60	00.9		35.4	305	50.4		45.6	67	11.0		12.9	37	36.0		10.5	
14	338	31.8	75	00.3		35.7	320	51.2		46.3	82	13.0		13.0	52	38.2		10.5	
15	353	34.3	89	59.8		35.9	335	52.1		47.0	97	14.9		13.0	67	40.4		10.5	
16	8	36.7	104	59.3		36.2	350	53.0		47.7	112	16.9		13.0	82	42.5		10.5	
17	23	39.2	119	58.7	-20	36.4	5	53.9	+7	48.3	127	18.9	-22	13.1	97	44.7	-22	10.4	
18	38	41.7	134	58.2	-20	36.7	20	54.8	+7	49.0	142	20.9	-22	13.1	112	46.9	-22	10.4	
19	53	44.1	149	57.7		36.9	35	55.7		49.7	157	22.9		13.2	127	49.0		10.4	
20	68	46.6	164	57.1		37.2	50	56.6		50.4	172	24.9		13.2	142	51.2		10.3	
21	83	49.0	179	56.6		37.4	65	57.5		51.1	187	26.9		13.3	157	53.4		10.3	
22	98	51.5	194	56.1		37.7	80	58.4		51.7	202	28.9		13.3	172	55.5		10.3	
23	113	54.0	209	55.5		37.9	95	59.3		52.4	217	30.9		13.3	187	57.7		10.3	
24	128	56.4	224	55.0	-20	38.2	111	00.2	+7	53.1	232	32.9	-22	13.4	202	59.9	-22	10.2	
Dif.	—		-5 -3				+9 +7				+20 0				+22 0				

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 2			SD: 15'2 Edad: 23 ^d 9		PHE { 4 ^h : 55'7 12 ^h : 55'5 20 ^h : 55'3		PMG: 07 ^h 55 ^m Rº: 49 ^m				Civil		Náut.	Hora	Rº	Hora	Rº
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.											
h	°	'	°	°	'	°	'	°		°	h m	h m	h m	h m	m	h m	m	
0	176	42.8	-17	47.7		245	07.7	115	-17	01.7	72	60 N	16 08	16 56	17 47	4 01	73	
1	191	42.7		47.0		259	38.2	115		08.9	71	58	19	17 03	51	3 49	70	
2	206	42.6		46.4		274	08.7	115		16.0	71	56	28	10	55	39	68	
3	221	42.5		45.7		288	39.2	115		23.1	69	54	36	15	17 58	30	66	
4	236	42.3		45.0		303	09.7	115		30.0	69	52	44	21	18 01	22	65	
5	251	42.2	-17	44.3		317	40.2	115	-17	36.9	68	50	16 50	17 25	18 04	3 14	64	
6	266	42.1	-17	43.6		332	10.7	114	-17	43.7	67	45	17 04	17 36	18 11	2 59	61	
7	281	42.0		43.0		346	41.1	115		50.4	66	40	16	45	18	46	59	
8	296	41.9		42.3		1	11.6	114	-17	57.0	65	35	26	17 53	23	36	57	
9	311	41.8		41.6		15	42.0	114	-18	03.5	64	30	35	18 00	29	26	56	
10	326	41.7		40.9		30	12.4	114		09.9	63	20	17 51	14	40	2 10	53	
11	341	41.6	-17	40.2		44	42.8	114	-18	16.2	62	10 N	18 04	18 26	18 51	1 56	51	
12	356	41.5	-17	39.5		59	13.2	114	-18	22.4	61	0	18 17	18 38	19 04	1 43	49	
13	11	41.4		38.8		73	43.6	114		28.5	60	10 S	30	18 52	18	30	47	
14	26	41.3		38.2		88	14.0	113		34.5	60	20	18 44	19 07	35	17	44	
15	41	41.2		37.5		102	44.3	114		40.5	58	30	19 00	25	19 56	1 01	42	
16	56	41.1		36.8		117	14.7	113		46.3	58	35	09	37	20 10	0 52	41	
17	71	41.0	-17	36.1		131	45.0	113	-18	52.1	56	40	19 20	19 50	20 27	0 42	39	
18	86	40.9	-17	35.4		146	15.3	113	-18	57.7	56	45	19 32	20 06	20 48	0 30	36	
19	101	40.8		34.7		160	45.6	113	-19	03.3	54	50	48	26	21 16	15	34	
20	116	40.7		34.0		175	15.9	113		08.7	54	52	19 55	36	31	08	33	
21	131	40.6		33.3		189	46.2	112		14.1	52	54	20 03	20 47	21 48	0 01	31	
22	146	40.5		32.7		204	16.4	113		19.3	52	56	12	21 00	22 10	** ** *	**	
23	161	40.4		32.0		218	46.7	112		24.5	51	58	23	15	22 39	** ** *	**	
24	176	40.3	-17	31.3		233	16.9		-19	29.6		60 S	20 35	21 34	23 32	23 57	33	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 21 ^m 7		Mag: -4.3 PMG: 09 ^h 01 ^m				Mag: +0.9 PMG: 16 ^h 35 ^m				Mag: -1.9 PMG: 08 ^h 29 ^m				Mag: +0.6 PMG: 10 ^h 27 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	128	56.4	224	55.0	-20	38.2	111	00.2	+7	53.1	232	32.9	-22	-13.4	202	59.9	-22	10.2
1	143	58.9	239	54.5		38.4	126	01.1		53.8	247	34.8		-13.4	218	52.0		10.2
2	159	01.4	254	53.9		38.7	141	02.0		54.4	262	36.8		-13.5	233	04.2		10.2
3	174	03.8	269	53.4		38.9	156	02.9		55.1	277	38.8		-13.5	248	06.4		10.1
4	189	06.3	284	52.9		39.1	171	03.8		55.8	292	40.8		-13.5	263	08.5		10.1
5	204	08.8	299	52.3	-20	39.4	186	04.7	+7	56.5	307	42.8	-22	-13.6	278	10.7	-22	10.1
6	219	11.2	314	51.8	-20	39.6	201	05.6	+7	57.2	322	44.8	-22	-13.6	293	12.9	-22	10.1
7	234	13.7	329	51.3		39.9	216	06.5		57.8	337	46.8		-13.7	308	15.0		10.0
8	249	16.2	344	50.7		40.1	231	07.4		58.5	352	48.8		-13.7	323	17.2		10.0
9	264	18.6	359	50.2		40.3	246	08.3		59.2	7	50.8		-13.7	338	19.4		10.0
10	279	21.1	14	49.6		40.6	261	09.2	+7	59.9	22	52.8		-13.8	353	21.5		09.9
11	294	23.5	29	49.1	-20	40.8	276	10.1	+8	00.5	37	54.8	-22	-13.8	8	23.7	-22	09.9
12	309	26.0	44	48.6	-20	41.0	291	11.0	+8	01.2	52	56.8	-22	-13.9	23	25.9	-22	09.9
13	324	28.5	59	48.0		41.3	306	11.9		01.9	67	58.7		-13.9	38	28.0		09.9
14	339	30.9	74	47.5		41.5	321	12.8		02.6	83	00.7		-14.0	53	30.2		09.8
15	354	33.4	89	46.9		41.7	336	13.7		03.2	98	02.7		-14.0	68	32.4		09.8
16	9	35.9	104	46.4		42.0	351	14.6		03.9	113	04.7		-14.0	83	34.5		09.8
17	24	38.3	119	45.8	-20	42.2	6	15.5	+8	04.6	128	06.7	-22	-14.1	98	36.7	-22	09.7
18	39	40.8	134	45.3	-20	42.4	21	16.4	+8	05.3	143	08.7	-22	-14.1	113	38.9	-22	09.7
19	54	43.3	149	44.8		42.7	36	17.2		05.9	158	10.7		-14.2	128	41.0		09.7
20	69	45.7	164	44.2		42.9	51	18.1		06.6	173	12.7		-14.2	143	43.2		09.7
21	84	48.2	179	43.7		43.1	66	19.0		07.3	188	14.7		-14.2	158	45.4		09.6
22	99	50.6	194	43.1		43.3	81	19.9		08.0	203	16.7		-14.3	173	47.5		09.6
23	114	53.1	209	42.6		43.6	96	20.8		08.6	218	18.7		-14.3	188	49.7		09.6
24	129	55.6	224	42.0	-20	43.8	111	21.7	+8	09.3	233	20.7	-22	-14.4	203	51.9	-22	09.6
Dif.	—		-5		-2	+9		+7		+20		0		+22				

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2			SD: 15'0			PHE { 4 ^h : 55'1 12 ^h : 55'0 20 ^h : 54'8				Edad: 24 ^d 9			Rº: 50 ^m		Rº		Rº	
	PMG: 12 ^h 13 ^m 4			PMG: 08 ^h 44 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	176	40.3	-17	233	16.9	113	-19	29.6	49	60 N	6 38	7 29	8 17	5 14	64	12 10			
1	191	40.2		247	47.2	112		34.5	49	58	34	22	8 06	4 59	63	24 40			
2	206	40.1		262	17.4	112		39.4	47	56	31	16	7 57	47	61	37 41			
3	221	40.0		276	47.6	112		44.1	47	54	28	10	49	36	60	48 42			
4	236	39.9		291	17.8	112		48.8	46	52	24	05	42	27	58	12 58			
5	251	39.8	-17	305	48.0	112	-19	53.4	44	50	6 22	7 00	7 35	4 18	58	13 07			
6	266	39.7	-17	320	18.2	111	-19	57.8	44	45	6 15	6 50	7 21	4 00	56	13 25			
7	281	39.6		334	48.3	112	-20	02.2	43	40	09	41	10	3 45	56	40 46			
8	296	39.5		349	18.5	111		06.5	41	35	6 03	33	7 00	33	54	13 53			
9	311	39.4		3	48.6	112		10.6	41	30	5 57	26	6 51	22	53	14 04			
10	326	39.4		18	18.8	111		14.7	40	20	46	13	36	3 03	52	24 48			
11	341	39.3	-17	32	48.9	111	-20	18.7	38	10 N	5 35	6 01	6 23	2 47	51	14 40			
12	356	39.2	-17	47	19.0	112	-20	22.5	38	0	5 23	5 48	6 10	2 32	50	14 56			
13	11	39.1		61	49.2	111		26.3	36	10 S	5 09	35	5 57	17	49	15 12			
14	26	39.0		76	19.3	111		29.9	36	20	4 52	20	43	2 01	47	29 51			
15	41	38.9		90	49.4	111		33.5	35	30	31	5 02	27	1 43	46	48 52			
16	56	38.8		105	19.5	111		37.0	33	35	17	4 50	18	33	44	15 59			
17	71	38.7	-17	119	49.6	111	-20	40.3	33	40	4 00	4 37	5 07	1 21	43	16 12			
18	86	38.6	-17	134	19.7	111	-20	43.6	31	45	3 39	4 21	4 55	1 06	42	16 27			
19	101	38.5		148	49.8	110		46.7	30	50	3 11	4 01	39	0 49	40	46 55			
20	116	38.4		163	19.8	111		49.7	30	52	2 56	3 51	32	41	39	16 55			
21	131	38.3		177	49.9	111		52.7	28	54	39	40	24	32	38	17 05			
22	146	38.2		192	20.0	111		55.5	27	56	2 17	27	15	22	36	17 56			
23	161	38.2		206	50.1	110	-20	58.2	27	58	1 48	3 12	4 05	0 10	35	17 30			
24	176	38.1	-17	221	20.1		-21	00.9		60 S	0 57	2 54	3 53	** ** *	**	17 45			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.3				Mag: +0.9				Mag: -1.9				Mag: +0.6			
	15 ^h 17 ^m 8		PMG: 09 ^h 02 ^m				PMG: 16 ^h 34 ^m				PMG: 08 ^h 26 ^m				PMG: 10 ^h 23 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	129	55.6	224	42.0	-20	43.8		111	21.7	+8	09.3	233	20.7	-22	14.4	203	51.9	
1	144	58.0	239	41.5		44.0		126	22.6		10.0	248	22.7		14.4	218	54.0	
2	160	00.5	254	40.9		44.2		141	23.5		10.7	263	24.7		14.4	233	56.2	
3	175	03.0	269	40.4		44.5		156	24.4		11.3	278	26.7		14.5	248	58.4	
4	190	05.4	284	39.8		44.7		171	25.3		12.0	293	28.7		14.5	264	00.6	
5	205	07.9	299	39.3	-20	44.9		186	26.2	+8	12.7	308	30.7	-22	14.6	279	02.7	
6	220	10.4	314	38.7	-20	45.1		201	27.1	+8	13.4	323	32.6	-22	14.6	294	04.9	
7	235	12.8	329	38.2		45.3		216	28.0		14.0	338	34.6		14.6	309	07.1	
8	250	15.3	344	37.6		45.6		231	28.9		14.7	353	36.6		14.7	324	09.2	
9	265	17.8	359	37.1		45.8		246	29.8		15.4	8	38.6		14.7	339	11.4	
10	280	20.2	14	36.5		46.0		261	30.7		16.1	23	40.6		14.8	354	13.6	
11	295	22.7	29	36.0	-20	46.2		276	31.6	+8	16.7	38	42.6	-22	14.8	9	15.7	
12	310	25.1	44	35.4	-20	46.4		291	32.4	+8	17.4	53	44.6	-22	14.8	24	17.9	
13	325	27.6	59	34.9		46.6		306	33.3		18.1	68	46.6		14.9	39	20.1	
14	340	30.1	74	34.3		46.9		321	34.2		18.8	83	48.6		14.9	54	22.2	
15	355	32.5	89	33.8		47.1		336	35.1		19.4	98	50.6		15.0	69	24.4	
16	10	35.0	104	33.2		47.3		351	36.0		20.1	113	52.6		15.0	84	26.6	
17	25	37.5	119	32.7	-20	47.5		6	36.9	+8	20.8	128	54.6	-22	15.0	99	28.7	
18	40	39.9	134	32.1	-20	47.7		21	37.8	+8	21.4	143	56.6	-22	15.1	114	30.9	
19	55	42.4	149	31.6		47.9		36	38.7		22.1	158	58.6		15.1	129	33.1	
20	70	44.9	164	31.0		48.1		51	39.6		22.8	174	00.6		15.2	144	35.2	
21	85	47.3	179	30.4		48.3		66	40.5		23.5	189	02.6		15.2	159	37.4	
22	100	49.8	194	29.9		48.5		81	41.4		24.1	204	04.6		15.2	174	39.6	
23	115	52.3	209	29.3		48.7		96	42.3		24.8	219	06.6		15.3	189	41.8	
24	130	54.7	224	28.8	-20	48.9		111	43.2	+8	25.5	234	08.6	-22	15.3	204	43.9	
Dif.	—		-6	-2				+9	+7			+20	0			+22	0	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2			SD: 14'9			PHE { 4^h: 54'7 12^h: 54'6 20^h: 54'5										
	PMG: 12 ^h 13 ^m 5			Edad: 25 ^d 9													
	hG ☉		Dec	hG ☾		Dif.	Dec		Dif.			Civil	Náut.	Hora	Rº	Hora	Rº
h	°	'	°	°	'		°	'		°	h m	h m	h m	h m m		h m m	m
0	176	38.1	-17 14.5	221	20.1	111	-21	00.9	25	60 N	16 13	17 01	17 52	6 18	52	12 48	49
1	191	38.0	13.8	235	50.2	111		03.4	24	58	23	08	55	6 02	52	13 04	50
2	206	37.9	13.1	250	20.3	110		05.8	23	56	32	14	17 59	5 48	52	18	50
3	221	37.8	12.4	264	50.3	111		08.1	23	54	40	19	18 02	36	52	30	50
4	236	37.7	11.7	279	20.4	111		10.4	21	52	47	24	05	25	52	40	50
5	251	37.6	-17 11.0	293	50.5	110	-21	12.5	20	50	16 54	17 29	18 07	5 16	51	13 50	50
6	266	37.5	-17 10.3	308	20.5	111	-21	14.5	19	45	17 07	17 39	18 14	4 56	52	14 10	49
7	281	37.4	09.6	322	50.6	111		16.4	18	40	19	47	20	41	50	26	50
8	296	37.4	08.9	337	20.7	111		18.2	17	35	28	17 55	25	27	51	39	50
9	311	37.3	08.1	351	50.8	110		19.9	16	30	37	18 02	31	4 15	51	14 51	50
10	326	37.2	07.4	6	20.8	111		21.5	14	20	17 52	15	41	3 55	50	15 12	49
11	341	37.1	-17 06.7	20	50.9	111	-21	22.9	14	10 N	18 05	18 27	18 52	3 38	50	15 29	50
12	356	37.0	-17 06.0	35	21.0	111	-21	24.3	13	0	18 17	18 39	19 04	3 22	49	15 46	49
13	11	36.9	05.3	49	51.1	111		25.6	12	10 S	29	18 52	17	3 06	49	16 02	49
14	26	36.8	04.6	64	21.2	111		26.8	10	20	43	19 06	34	2 48	49	20	49
15	41	36.8	03.9	78	51.3	111		27.8	10	30	18 58	24	19 55	29	48	40	49
16	56	36.7	03.2	93	21.4	111		28.8	9	35	19 07	35	20 08	17	48	16 52	48
17	71	36.6	-17 02.4	107	51.5	111	-21	29.7	7	40	19 18	19 48	20 24	2 04	47	17 05	49
18	86	36.5	-17 01.7	122	21.6	111	-21	30.4	7	45	19 30	20 03	20 45	1 48	47	17 21	49
19	101	36.4	01.0	136	51.7	112		31.1	5	50	45	23	21 12	29	46	41	48
20	116	36.3	-17 00.3	151	21.9	111		31.6	4	52	19 52	32	26	20	46	17 51	47
21	131	36.3	-16 59.6	165	52.0	112		32.0	4	54	20 00	43	21 42	1 10	45	18 01	47
22	146	36.2	58.9	180	22.2	111		32.4	2	56	08	20 55	22 03	0 58	45	13	47
23	161	36.1	58.2	194	52.3	112		32.6	2	58	18	21 10	22 30	45	45	27	47
24	176	36.0	-16 57.4	209	22.5		-21	32.8		60 S	20 30	21 27	23 12	0 30	43	18 43	46
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG		Mag: -4.3			Mag: +0.9			Mag: -1.9			Mag: +0.6					
	15 ^h 13 ^m 9		PMG: 09 ^h 02 ^m			PMG: 16 ^h 32 ^m			PMG: 08 ^h 22 ^m			PMG: 10 ^h 20 ^m					
	hG ♈		hG ♀		dec.	hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	130	54.7	224	28.8	-20 48.9	111	43.2	+8 25.5	234	08.6	-22 -15.3	204	43.9	-22 08.9			
1	145	57.2	239	28.2	49.1	126	44.1	26.2	249	10.6	-15.4	219	46.1	08.8			
2	160	59.6	254	27.7	49.3	141	44.9	26.8	264	12.6	-15.4	234	48.3	08.8			
3	176	02.1	269	27.1	49.5	156	45.8	27.5	279	14.6	-15.4	249	50.4	08.8			
4	191	04.6	284	26.5	49.7	171	46.7	28.2	294	16.6	-15.5	264	52.6	08.8			
5	206	07.0	299	26.0	-20 49.9	186	47.6	+8 28.8	309	18.6	-22 -15.5	279	54.8	-22 08.7			
6	221	09.5	314	25.4	-20 50.1	201	48.5	+8 29.5	324	20.6	-22 -15.6	294	56.9	-22 08.7			
7	236	12.0	329	24.9	50.3	216	49.4	30.2	339	22.6	-15.6	309	59.1	08.7			
8	251	14.4	344	24.3	50.5	231	50.3	30.9	354	24.6	-15.6	325	01.3	08.6			
9	266	16.9	359	23.7	50.7	246	51.2	31.5	9	26.6	-15.7	340	03.5	08.6			
10	281	19.4	14	23.2	50.9	261	52.1	32.2	24	28.6	-15.7	355	05.6	08.6			
11	296	21.8	29	22.6	-20 51.1	276	53.0	+8 32.9	39	30.6	-22 -15.7	10	07.8	-22 08.6			
12	311	24.3	44	22.1	-20 51.3	291	53.9	+8 33.5	54	32.6	-22 -15.8	25	10.0	-22 08.5			
13	326	26.8	59	21.5	51.5	306	54.8	34.2	69	34.6	-15.8	40	12.1	08.5			
14	341	29.2	74	20.9	51.7	321	55.6	34.9	84	36.6	-15.9	55	14.3	08.5			
15	356	31.7	89	20.4	51.9	336	56.5	35.5	99	38.6	-15.9	70	16.5	08.5			
16	11	34.1	104	19.8	52.1	351	57.4	36.2	114	40.6	-15.9	85	18.6	08.4			
17	26	36.6	119	19.2	-20 52.3	6	58.3	+8 36.9	129	42.6	-22 -16.0	100	20.8	-22 08.4			
18	41	39.1	134	18.7	-20 52.5	21	59.2	+8 37.6	144	44.6	-22 -16.0	115	23.0	-22 08.4			
19	56	41.5	149	18.1	52.7	37	00.1	38.2	159	46.6	-16.1	130	25.2	08.3			
20	71	44.0	164	17.5	52.8	52	01.0	38.9	174	48.6	-16.1	145	27.3	08.3			
21	86	46.5	179	17.0	53.0	67	01.9	39.6	189	50.6	-16.1	160	29.5	08.3			
22	101	48.9	194	16.4	53.2	82	02.8	40.2	204	52.6	-16.2	175	31.7	08.3			
23	116	51.4	209	15.8	53.4	97	03.7	40.9	219	54.6	-16.2	190	33.8	08.2			
24	131	53.9	224	15.3	-20 53.6	112	04.5	+8 41.6	234	56.6	-22 -16.3	205	36.0	-22 08.2			
Dif.	—		-6		-2	+9		+7	+20		0		+22		0		

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'2			SD: 14'8			PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2				Edad: 26 ^d 9			Rº: 49 ^m		Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 13 ^m 7			PMG: 10 ^h 23 ^m																		
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Náut.	Civil		Hora	Rº	Hora	Rº						
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	m						
0	176	36.0	-16	57.4	209	22.5	112	-21	32.8	0	60 N	6 35	7 25	8 12	7 10	40	13 37 61					
1	191	35.9		56.7	223	52.7	112		32.8	1	58	31	18	8 02	6 54	41	13 54 59					
2	206	35.9		56.0	238	22.9	112		32.7	2	56	28	13	7 54	40	42	14 08 57					
3	221	35.8		55.3	252	53.1	112		32.5	3	54	25	07	46	28	42	20 56					
4	236	35.7		54.6	267	23.3	112		32.2	4	52	22	7 02	39	17	43	30 56					
5	251	35.6	-16	53.8	281	53.5	113	-21	31.8	4	50	6 19	6 58	7 33	6 07	44	14 40 55					
6	266	35.5	-16	53.1	296	23.8	113	-21	31.4	6	45	6 13	6 48	7 19	5 48	45	14 59 55					
7	281	35.5		52.4	310	54.1	113		30.8	7	40	07	39	7 08	31	46	15 16 53					
8	296	35.4		51.7	325	24.4	113		30.1	8	35	6 02	32	6 58	18	46	29 52					
9	311	35.3		51.0	339	54.7	113		29.3	9	30	5 56	25	50	5 06	47	15 41 52					
10	326	35.2		50.2	354	25.0	113		28.4	10	20	46	12	35	4 45	48	16 01 50					
11	341	35.1	-16	49.5	8	55.3	114	-21	27.4	11	10 N	5 35	6 00	6 22	4 28	48	16 19 49					
12	356	35.1	-16	48.8	23	25.7	113	-21	26.3	12	0	5 23	5 49	6 10	4 11	49	16 35 48					
13	11	35.0		48.1	37	56.0	114		25.1	13	10 S	5 10	36	5 58	3 55	49	16 51 48					
14	26	34.9		47.3	52	26.4	114		23.8	15	20	4 54	21	45	37	50	17 09 46					
15	41	34.8		46.6	66	56.8	114		22.3	15	30	33	5 03	29	17	50	29 45					
16	56	34.8		45.9	81	27.2	115		20.8	16	35	19	4 53	20	3 05	51	40 45					
17	71	34.7	-16	45.2	95	57.7	115	-21	19.2	17	40	4 03	4 40	5 10	2 51	52	17 54 43					
18	86	34.6	-16	44.4	110	28.2	115	-21	17.5	18	45	3 43	4 24	4 58	2 35	52	18 10 42					
19	101	34.5		43.7	124	58.7	115		15.7	19	50	16	4 05	43	15	53	29 40					
20	116	34.5		43.0	139	29.2	115		13.8	20	52	3 02	3 56	36	2 06	53	38 40					
21	131	34.4		42.3	153	59.7	116		11.8	21	54	2 45	45	28	1 55	54	18 48 39					
22	146	34.3		41.5	168	30.3	116		09.7	22	56	2 25	33	19	43	54	19 00 38					
23	161	34.2		40.8	183	00.9	116		07.5	24	58	1 58	18	4 10	1 30	54	19 14 36					
24	176	34.2	-16	40.1	197	31.5		-21	05.1		60 S	1 17	3 01	3 58	1 13	55	19 29 35					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 15 ^h 09 ^m 9		Mag: -4.3 PMG: 09 ^h 03 ^m				Mag: +0.9 PMG: 16 ^h 31 ^m				Mag: -1.9 PMG: 08 ^h 19 ^m				Mag: +0.6 PMG: 10 ^h 16 ^m							
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.						
h	°	'	°	°	'		°	°	'		°	°	'		°	°	'					
0	131	53.9	224	15.3	-20	53.6	112	04.5	+8	41.6	234	56.6	-22	16.3	205	36.0	-22	08.2				
1	146	56.3	239	14.7		53.8	127	05.4		42.2	249	58.6		16.3	220	38.2		08.2				
2	161	58.8	254	14.1		53.9	142	06.3		42.9	265	00.6		16.3	235	40.4		08.1				
3	177	01.3	269	13.6		54.1	157	07.2		43.6	280	02.6		16.4	250	42.5		08.1				
4	192	03.7	284	13.0		54.3	172	08.1		44.3	295	04.6		16.4	265	44.7		08.1				
5	207	06.2	299	12.4	-20	54.5	187	09.0	+8	44.9	310	06.7	-22	16.4	280	46.9	-22	08.1				
6	222	08.6	314	11.8	-20	54.7	202	09.9	+8	45.6	325	08.7	-22	16.5	295	49.0	-22	08.0				
7	237	11.1	329	11.3		54.8	217	10.8		46.3	340	10.7		16.5	310	51.2		08.0				
8	252	13.6	344	10.7		55.0	232	11.7		46.9	355	12.7		16.6	325	53.4		08.0				
9	267	16.0	359	10.1		55.2	247	12.6		47.6	10	14.7		16.6	340	55.6		07.9				
10	282	18.5	14	09.6		55.4	262	13.4		48.3	25	16.7		16.6	355	57.7		07.9				
11	297	21.0	29	09.0	-20	55.5	277	14.3	+8	48.9	40	18.7	-22	16.7	10	59.9	-22	07.9				
12	312	23.4	44	08.4	-20	55.7	292	15.2	+8	49.6	55	20.7	-22	16.7	26	02.1	-22	07.9				
13	327	25.9	59	07.8		55.9	307	16.1		50.3	70	22.7		16.7	41	04.2		07.8				
14	342	28.4	74	07.3		56.1	322	17.0		50.9	85	24.7		16.8	56	06.4		07.8				
15	357	30.8	89	06.7		56.2	337	17.9		51.6	100	26.7		16.8	71	08.6		07.8				
16	12	33.3	104	06.1		56.4	352	18.8		52.3	115	28.7		16.9	86	10.8		07.7				
17	27	35.7	119	05.5	-20	56.6	7	19.7	+8	52.9	130	30.7	-22	16.9	101	12.9	-22	07.7				
18	42	38.2	134	05.0	-20	56.7	22	20.6	+8	53.6	145	32.7	-22	16.9	116	15.1	-22	07.7				
19	57	40.7	149	04.4		56.9	37	21.4		54.3	160	34.7		17.0	131	17.3		07.7				
20	72	43.1	164	03.8		57.1	52	22.3		54.9	175	36.7		17.0	146	19.4		07.6				
21	87	45.6	179	03.2		57.2	67	23.2		55.6	190	38.7		17.1	161	21.6		07.6				
22	102	48.1	194	02.7		57.4	82	24.1		56.3	205	40.7		17.1	176	23.8		07.6				
23	117	50.5	209	02.1		57.6	97	25.0		56.9	220	42.8		17.1	191	26.0		07.5				
24	132	53.0	224	01.5	-20	57.7	112	25.9	+8	57.6	235	44.8	-22	17.2	206	28.1	-22	07.5				
Dif.	—		-6				-2				+20				0				+22			

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna													
	SD: 16'2				SD: 14'8 Edad: 27 ^d 9														PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'0											
	PMG: 12 ^h 13 ^m 8				PMG: 11 ^h 12 ^m															Rº: 47 ^m										
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.																								
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m													
0	176	34.2	-16	40.1	197	31.5	116	-21	05.1	24	60 N	16 19	17 05	17 56	7 50	29	14 38	68												
1	191	34.1		39.3	212	02.1	117		02.7	25	58	28	12	17 59	35	31	14 53	65												
2	206	34.0		38.6	226	32.8	116	-21	00.2	26	56	37	18	18 02	22	33	15 05	64												
3	221	34.0		37.9	241	03.4	118	-20	57.6	27	54	44	23	05	10	35	16	63												
4	236	33.9		37.2	255	34.2	117		54.9	28	52	51	27	08	7 00	36	26	61												
5	251	33.8	-16	36.4	270	04.9	118	-20	52.1	29	50	16 57	17 32	18 10	6 51	38	15 35	60												
6	266	33.7	-16	35.7	284	35.7	118	-20	49.2	30	45	17 10	17 41	18 16	6 33	39	15 54	57												
7	281	33.7		35.0	299	06.5	118		46.2	31	40	21	50	22	17	41	16 09	55												
8	296	33.6		34.2	313	37.3	118		43.1	31	35	30	17 57	27	6 04	42	21	54												
9	311	33.5		33.5	328	08.1	119		40.0	33	30	39	18 04	32	5 53	43	33	52												
10	326	33.5		32.8	342	39.0	119		36.7	34	20	17 53	16	42	33	45	16 51	51												
11	341	33.4	-16	32.0	357	09.9	120	-20	33.3	35	10 N	18 05	18 27	18 53	5 16	46	17 08	49												
12	356	33.3	-16	31.3	11	40.9	119	-20	29.8	35	0	18 17	18 39	19 04	5 00	48	17 23	47												
13	11	33.3		30.5	26	11.8	120		26.3	37	10 S	29	18 51	17	4 44	49	39	45												
14	26	33.2		29.8	40	42.8	121		22.6	37	20	42	19 05	33	27	51	17 55	43												
15	41	33.1		29.1	55	13.9	120		18.9	39	30	18 57	23	19 53	4 07	53	18 14	41												
16	56	33.0		28.3	69	44.9	121		15.0	39	35	19 06	33	20 06	3 56	53	25	39												
17	71	33.0	-16	27.6	84	16.0	121	-20	11.1	40	40	19 16	19 46	20 22	3 43	54	18 37	38												
18	86	32.9	-16	26.9	98	47.1	122	-20	07.1	42	45	19 28	20 00	20 42	3 27	56	18 52	36												
19	101	32.8		26.1	113	18.3	122	-20	02.9	42	50	42	19	21 08	3 08	58	19 09	34												
20	116	32.8		25.4	127	49.5	122	-19	58.7	43	52	49	28	21	2 59	59	18	33												
21	131	32.7		24.6	142	20.7	123		54.4	44	54	19 56	39	37	49	60	27	32												
22	146	32.7		23.9	156	52.0	123		50.0	44	56	20 04	20 50	21 56	37	61	38	30												
23	161	32.6		23.2	171	23.3	123		45.6	46	58	14	21 04	22 20	24	62	19 50	28												
24	176	32.5	-16	22.4	185	54.6		-19	41.0		60 S	20 25	21 21	22 56	2 08	65	20 04	25												
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG: 15 ^h 06 ^m 0		Mag: -4.3 PMG: 09 ^h 04 ^m				Mag: +0.9 PMG: 16 ^h 29 ^m				Mag: -1.9 PMG: 08 ^h 16 ^m				Mag: +0.6 PMG: 10 ^h 13 ^m															
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.														
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'														
0	132	53.0	224	01.5	-20	57.7	112	25.9	+8	57.6	235	44.8	-22	-17.2	206	28.1	-22	07.5												
1	147	55.5	239	00.9		57.9	127	26.8		58.3	250	46.8		-17.2	221	30.3		07.5												
2	162	57.9	254	00.4		58.0	142	27.7		58.9	265	48.8		-17.2	236	32.5		07.5												
3	178	00.4	268	59.8		58.2	157	28.5	+8	59.6	280	50.8		-17.3	251	34.7		07.4												
4	193	02.9	283	59.2		58.4	172	29.4	+9	00.3	295	52.8		-17.3	266	36.8		07.4												
5	208	05.3	298	58.6	-20	58.5	187	30.3	+9	00.9	310	54.8	-22	-17.4	281	39.0	-22	07.4												
6	223	07.8	313	58.0	-20	58.7	202	31.2	+9	01.6	325	56.8	-22	-17.4	296	41.2	-22	07.3												
7	238	10.2	328	57.5		58.8	217	32.1		02.3	340	58.8		-17.4	311	43.3		07.3												
8	253	12.7	343	56.9		59.0	232	33.0		02.9	356	00.8		-17.5	326	45.5		07.3												
9	268	15.2	358	56.3		59.1	247	33.9		03.6	11	02.8		-17.5	341	47.7		07.3												
10	283	17.6	13	55.7		59.3	262	34.8		04.3	26	04.8		-17.5	356	49.9		07.2												
11	298	20.1	28	55.1	-20	59.4	277	35.6	+9	04.9	41	06.9	-22	-17.6	11	52.0	-22	07.2												
12	313	22.6	43	54.5	-20	59.6	292	36.5	+9	05.6	56	08.9	-22	-17.6	26	54.2	-22	07.2												
13	328	25.0	58	54.0		59.7	307	37.4		06.2	71	10.9		-17.7	41	56.4		07.1												
14	343	27.5	73	53.4	-20	59.9	322	38.3		06.9	86	12.9		-17.7	56	58.6		07.1												
15	358	30.0	88	52.8	-21	00.0	337	39.2		07.6	101	14.9		-17.7	72	00.7		07.1												
16	13	32.4	103	52.2		00.2	352	40.1		08.2	116	16.9		-17.8	87	02.9		07.1												
17	28	34.9	118	51.6	-21	00.3	7	41.0	+9	08.9	131	18.9	-22	-17.8	102	05.1	-22	07.0												
18	43	37.4	133	51.0	-21	00.5	22	41.8	+9	09.6	146	20.9	-22	-17.8	117	07.3	-22	07.0												
19	58	39.8	148	50.5		00.6	37	42.7		10.2	161	22.9		-17.9	132	09.4		07.0												
20	73	42.3	163	49.9		00.8	52	43.6		10.9	176	25.0		-17.9	147	11.6		06.9												
21	88	44.7	178	49.3		00.9	67	44.5		11.6	191	27.0		-17.9	162	13.8		06.9												
22	103	47.2	193	48.7		01.1	82	45.4		12.2	206	29.0		-18.0	177	15.9		06.9												
23	118	49.7	208	48.1		01.2	97	46.3		12.9	221	31.0		-18.0	192	18.1		06.9												
24	133	52.1	223	47.5	-21	01.3	112	47.2	+9	13.5	236	33.0	-22	-18.1	207	20.3	-22	06.8												
Dif.	—		-6				-2				+9				+7				+20				0				+22			

UT	SOL				LUNA								Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 13 ^m 9				SD: 14'7 Edad: 28 ^d 9 PMG: 11 ^h 59 ^m				PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 53'9 Rº: 46 ^m												
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº	Hora	Rº									
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	° 176 ° 191 ° 206 ° 221 ° 236 ° 251 ° 266 ° 281 ° 296 ° 311 ° 326 ° 341 ° 356 ° 11 ° 26 ° 41 ° 56 ° 71 ° 86 ° 101 ° 116 ° 131 ° 146 ° 161 ° 176	' 32.5 ' 32.5 ' 32.4 ' 32.3 ' 32.3 ' 32.2 ' 32.1 ' 32.1 ' 32.0 ' 32.0 ' 31.9 ' 31.8 ' 31.8 ' 31.8 ' 31.7 ' 31.7 ' 31.6 ' 31.5 ' 31.5 ' 31.4 ' 31.4 ' 31.3 ' 31.2 ' 31.2 ' 31.1 ' 31.1	° -16 ° ° ° -16	° 185 ° 200 ° 214 ° 229 ° 244 ° 258 ° 273 ° 287 ° 302 ° 316 ° 331 ° 345 ° 0 ° 14 ° 29 ° 43 ° 58 ° 72 ° 87 ° 101 ° 116 ° 131 ° 145 ° 160 ° 174	' 54.6 ' 26.0 ' 57.4 ' 28.8 ' 00.3 ' 31.8 ' 03.3 ' 34.9 ' 06.5 ' 38.2 ' 09.9 ' 41.6 ' 13.3 ' 45.1 ' 17.0 ' 48.8 ' 20.8 ' 52.7 ' 24.7 ' 56.7 ' 28.8 ' 00.9 ' 33.0 ' 05.2 ' 37.4	124 124 124 125 125 126 126 127 127 127 127 127 128 129 128 130 129 130 130 131 131 132 132 132 132 132 132 132 132 132	° -19 ° ° ° -19 ° -18 ° -19 ° -19 ° -17 ° -19 ° -18 ° -18 ° -18 ° -18 ° -18 ° -17 ° -17 ° -18 ° -18 ° -18 ° -17 ° -17 ° -17 ° -17 ° -17 ° -17 ° -17 ° -17 ° -17 ° -17	' 41.0 ' 36.3 ' 31.6 ' 26.8 ' 21.8 ' 16.8 ' 11.7 ' 06.5 ' 01.3 ' 55.9 ' 50.5 ' 45.0 ' 39.4 ' 33.7 ' 27.9 ' 22.1 ' 16.1 ' 10.1 ' 04.0 ' 57.9 ' 51.6 ' 45.3 ' 38.9 ' 32.4 ' 25.9	° 60 N ° 58 ° 56 ° 54 ° 52 ° 50 ° 45 ° 40 ° 35 ° 30 ° 20 ° 10 N ° 0 ° 10 S ° 20 ° 30 ° 35 ° 40 ° 45 ° 50 ° 52 ° 54 ° 56 ° 58 ° 60 S	h m 6 31 h m 27 15 h m 24 09 h m 22 7 04 h m 19 6 59 h m 6 16 6 55 h m 6 11 6 46 h m 05 38 h m 6 00 30 h m 5 55 24 h m 45 12 h m 5 35 6 00 h m 5 24 5 49 h m 5 11 37 h m 4 55 22 h m 35 5 05 h m 22 4 55 h m 4 06 4 43 h m 3 47 4 28 h m 20 09 h m 3 07 4 00 h m 2 52 3 50 h m 33 38 h m 2 08 24 h m 1 33 3 08	h m 8 07 7 21 h m 15 7 58 h m 50 50 h m 42 45 28 h m 36 36 30 h m 7 30 7 29 h m 7 17 7 12 h m 38 7 06 h m 6 57 46 38 h m 49 36 39 h m 35 18 42 h m 6 22 6 02 h m 6 10 5 48 h m 5 58 33 48 h m 46 18 50 h m 31 5 00 53 h m 22 4 49 55 h m 5 12 4 37 57 h m 5 01 4 23 59 h m 4 46 4 06 61 h m 40 3 58 62 h m 32 49 63 h m 24 38 66 h m 15 3 26 68 h m 4 04 3 13 70	h m m 8 19 22 h m m 25 8 06 25 h m m 27 7 55 27 h m m 28 45 28 h m m 30 36 30 h m m 31 7 29 31 h m m 33 7 12 33 h m m 36 6 58 36 h m m 38 46 38 h m m 39 36 39 h m m 42 18 42 h m m 44 6 02 44 h m m 46 5 48 46 h m m 48 33 48 h m m 50 18 50 h m m 53 5 00 53 h m m 55 4 49 55 h m m 57 4 37 57 h m m 59 4 23 59 h m m 61 4 06 61 h m m 62 3 58 62 h m m 63 49 63 h m m 66 38 66 h m m 68 3 26 68 h m m 70 3 13 70	h m m 15 46 72 h m m 25 15 58 70 h m m 27 16 09 67 h m m 28 19 65 h m m 30 27 64 h m m 31 16 35 62 h m m 33 16 51 59 h m m 36 17 04 57 h m m 38 15 55 h m m 39 25 53 h m m 42 50 h m m 47 17 57 47 h m m 46 18 10 46 h m m 48 24 43 h m m 41 38 41 h m m 38 18 55 38 h m m 36 19 04 36 h m m 34 19 15 34 h m m 32 19 28 32 h m m 29 43 29 h m m 27 51 27 h m m 25 19 59 25 h m m 23 20 08 23 h m m 21 20 18 21 h m m 19 20 29 19								
UT	ARIES	VENUS				MARTE				JÚPITER				SATURNO							
	PMG 15 ^h 02 ^m 1	Mag: -4.3 PMG: 09 ^h 05 ^m				Mag: +0.9 PMG: 16 ^h 28 ^m				Mag: -1.9 PMG: 08 ^h 13 ^m				Mag: +0.6 PMG: 10 ^h 09 ^m							
	hG ☿	hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.							
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	° 133 ° 148 ° 163 ° 178 ° 194 ° 209 ° 224 ° 239 ° 254 ° 269 ° 284 ° 299 ° 314 ° 329 ° 344 ° 359 ° 14 ° 29 ° 44 ° 59 ° 74 ° 89 ° 104 ° 119 ° 134	' 52.1 ' 54.6 ' 57.1 ' 59.5 ' 02.0 ' 04.5 ' 06.9 ' 09.4 ' 11.9 ' 14.3 ' 16.8 ' 19.2 ' 21.7 ' 24.2 ' 26.6 ' 29.1 ' 31.6 ' 34.0 ' 36.5 ' 39.0 ' 41.4 ' 43.9 ' 46.3 ' 48.8 ' 51.3	° 223 ° 238 ° 253 ° 268 ° 283 ° 298 ° 313 ° 328 ° 343 ° 358 ° 13 ° 28 ° 43 ° 58 ° 73 ° 88 ° 103 ° 118 ° 133 ° 148 ° 163 ° 178 ° 193 ° 208 ° 223	' 47.5 ' 46.9 ' 46.3 ' 45.8 ' 45.2 ' 44.6 ' 44.0 ' 43.4 ' 42.8 ' 42.2 ' 41.6 ' 41.0 ' 40.4 ' 39.9 ' 39.3 ' 38.7 ' 38.1 ' 37.5 ' 36.9 ' 36.3 ' 35.7 ' 35.1 ' 34.5 ' 33.9 ' 33.3	° -21 ° ° ° -21	° 112 ° 127 ° 142 ° 157 ° 172 ° 187 ° 202 ° 217 ° 232 ° 247 ° 262 ° 277 ° 292 ° 307 ° 322 ° 338 ° 353 ° 8 ° 23 ° 38 ° 53 ° 68 ° 83 ° 98 ° 113	' 13.5 ' 14.2 ' 14.9 ' 15.5 ' 16.2 ' 16.9 ' 17.5 ' 18.2 ' 18.8 ' 19.5 ' 20.2 ' 20.8 ' 21.5 ' 22.2 ' 22.8 ' 23.5 ' 24.1 ' 24.8 ' 25.5 ' 26.1 ' 26.8 ' 27.4 ' 28.1 ' 28.8 ' 29.4	° 236 ° 251 ° 266 ° 281 ° 296 ° 311 ° 326 ° 341 ° 356 ° 11 ° 26 ° 41 ° 56 ° 71 ° 87 ° 102 ° 117 ° 132 ° 147 ° 162 ° 177 ° 192 ° 207 ° 222 ° 237	' 33.0 ' 35.0 ' 37.0 ' 39.0 ' 41.1 ' 43.1 ' 45.1 ' 47.1 ' 49.1 ' 51.1 ' 53.1 ' 55.1 ' 57.2 ' 59.2 ' 01.2 ' 03.2 ' 05.2 ' 07.2 ' 09.3 ' 11.3 ' 13.3 ' 15.3 ' 17.3 ' 19.3 ' 21.3	° -22 ° ° ° -22	h m 18.1 h m 18.1 h m 18.1 h m 18.2 h m 18.2 h m 18.2 h m 18.3 h m 18.3 h m 18.3 h m 18.4 h m 18.4 h m 18.5 h m 18.5 h m 18.5 h m 18.6 h m 18.6 h m 18.6 h m 18.7 h m 18.7 h m 18.8 h m 18.8 h m 18.9 h m 18.9 h m 18.9 h m 18.9	h m 20.3 h m 22.5 h m 24.6 h m 26.8 h m 29.0 h m 31.2 h m 33.3 h m 35.5 h m 37.7 h m 39.9 h m 42.0 h m 44.2 h m 46.4 h m 48.6 h m 50.7 h m 52.9 h m 55.1 h m 57.3 h m 59.4 h m 01.6 h m 03.8 h m 06.0 h m 08.2 h m 10.3 h m 12.5	h m -22 h m h m h m -22								
Dif.	—	-6				+9				+20				0				+22			

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'2 PMG: 12 ^h 14 ^m 0				SD: 14'7 Edad: 0 ^d 1 PHE { 4 ^h : 53'9 12 ^h : 53'9 20 ^h : 53'9 PMG: 12 ^h 45 ^m Rº: 44 ^m																
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.								
	h	°	'	°	'	h	°	'	°	'			h	°	h	m	h	m	h	m	m
0	176	31.1	-16	04.5	174	37.4	132	-17	25.9	67	60 N	16 24	17 10	18 00	8 41	17	16 58	74			
1	191	31.0		03.7	189	09.6	133		19.2	67	58	33	16	03	31	19	17 08	71			
2	206	31.0		03.0	203	41.9	134		12.5	68	56	41	22	06	22	21	16	69			
3	221	30.9		02.2	218	14.3	133	-17	05.7	68	54	48	26	09	13	24	24	67			
4	236	30.9		01.5	232	46.6	134	-16	58.9	69	52	16 55	31	11	06	25	31	65			
5	251	30.8	-16	00.7	247	19.0	135	-16	52.0	70	50	17 01	17 35	18 14	8 00	26	17 37	63			
6	266	30.7	-15	59.9	261	51.5	135	-16	45.0	71	45	17 13	17 44	18 19	7 45	30	17 50	60			
7	281	30.7		59.2	276	24.0	135		37.9	72	40	23	52	24	34	32	18 01	57			
8	296	30.6		58.4	290	56.5	135		30.7	72	35	32	17 59	29	24	34	10	55			
9	311	30.6		57.7	305	29.0	136		23.5	73	30	40	18 05	34	15	36	18	53			
10	326	30.5		56.9	320	01.6	137		16.2	73	20	17 54	17	43	7 00	39	32	50			
11	341	30.5	-15	56.2	334	34.3	136	-16	08.9	75	10 N	18 06	18 28	18 53	6 46	43	18 44	47			
12	356	30.4	-15	55.4	349	06.9	137	-16	01.4	74	0	18 17	18 39	19 04	6 34	45	18 56	44			
13	11	30.4		54.6	3	39.6	138	-15	54.0	76	10 S	29	18 51	17	21	48	19 07	41			
14	26	30.3		53.9	18	12.4	138		46.4	76	20	41	19 05	32	6 08	50	19	38			
15	41	30.3		53.1	32	45.2	138		38.8	77	30	18 56	21	19 52	5 53	53	33	34			
16	56	30.2		52.4	47	18.0	138		31.1	78	35	19 04	31	20 04	44	55	40	33			
17	71	30.2	-15	51.6	61	50.8	139	-15	23.3	78	40	19 14	19 43	20 19	5 34	57	19 49	31			
18	86	30.1	-15	50.8	76	23.7	140	-15	15.5	79	45	19 25	19 58	20 38	5 22	59	20 00	28			
19	101	30.1		50.1	90	56.7	139	-15	07.6	80	50	39	20 16	21 03	07	63	12	25			
20	116	30.0		49.3	105	29.6	140	-14	59.6	80	52	45	24	16	5 00	65	18	23			
21	131	30.0		48.5	120	02.6	141		51.6	81	54	19 52	34	31	4 52	67	24	22			
22	146	29.9		47.8	134	35.7	140		43.5	81	56	20 00	46	21 49	44	68	31	20			
23	161	29.9		47.0	149	08.7	141		35.4	82	58	09	20 59	22 11	34	71	39	18			
24	176	29.8	-15	46.3	163	41.8		-14	27.2		60 S	20 20	21 14	22 43	4 23	73	20 48	15			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 14 ^h 58 ^m 1		Mag: -4.3 PMG: 09 ^h 06 ^m				Mag: +0.9 PMG: 16 ^h 26 ^m				Mag: -1.9 PMG: 08 ^h 09 ^m				Mag: +0.6 PMG: 10 ^h 06 ^m						
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	134	51.3	223	33.3	-21	04.4	113	08.4	+9	29.4	237	21.3	-22	-18.9	208	12.5	-22	06.2			
1	149	53.7	238	32.7		04.5	128	09.3		30.1	252	23.4		-19.0	223	14.7		06.1			
2	164	56.2	253	32.1		04.7	143	10.1		30.7	267	25.4		-19.0	238	16.9		06.1			
3	179	58.7	268	31.5		04.8	158	11.0		31.4	282	27.4		-19.0	253	19.0		06.1			
4	195	01.1	283	30.9		04.9	173	11.9		32.1	297	29.4		-19.1	268	21.2		06.0			
5	210	03.6	298	30.3	-21	05.0	188	12.8	+9	32.7	312	31.4	-22	-19.1	283	23.4	-22	06.0			
6	225	06.1	313	29.7	-21	05.1	203	13.7	+9	33.4	327	33.5	-22	-19.1	298	25.6	-22	06.0			
7	240	08.5	328	29.1		05.2	218	14.5		34.0	342	35.5		-19.2	313	27.7		06.0			
8	255	11.0	343	28.5		05.3	233	15.4		34.7	357	37.5		-19.2	328	29.9		05.9			
9	270	13.5	358	27.9		05.5	248	16.3		35.4	12	39.5		-19.2	343	32.1		05.9			
10	285	15.9	13	27.3		05.6	263	17.2		36.0	27	41.5		-19.3	358	34.3		05.9			
11	300	18.4	28	26.7	-21	05.7	278	18.1	+9	36.7	42	43.5	-22	-19.3	13	36.4	-22	05.8			
12	315	20.8	43	26.1	-21	05.8	293	19.0	+9	37.3	57	45.6	-22	-19.4	28	38.6	-22	05.8			
13	330	23.3	58	25.5		05.9	308	19.8		38.0	72	47.6		-19.4	43	40.8		05.8			
14	345	25.8	73	24.9		06.0	323	20.7		38.6	87	49.6		-19.4	58	43.0		05.8			
15	0	28.2	88	24.3		06.1	338	21.6		39.3	102	51.6		-19.5	73	45.2		05.7			
16	15	30.7	103	23.7		06.2	353	22.5		40.0	117	53.6		-19.5	88	47.3		05.7			
17	30	33.2	118	23.1	-21	06.3	8	23.4	+9	40.6	132	55.7	-22	-19.5	103	49.5	-22	05.7			
18	45	35.6	133	22.5	-21	06.4	23	24.2	+9	41.3	147	57.7	-22	-19.6	118	51.7	-22	05.6			
19	60	38.1	148	21.9		06.5	38	25.1		41.9	162	59.7		-19.6	133	53.9		05.6			
20	75	40.6	163	21.3		06.6	53	26.0		42.6	178	01.7		-19.6	148	56.0		05.6			
21	90	43.0	178	20.7		06.7	68	26.9		43.2	193	03.7		-19.7	163	58.2		05.6			
22	105	45.5	193	20.1		06.8	83	27.8		43.9	208	05.8		-19.7	179	00.4		05.5			
23	120	48.0	208	19.5		06.9	98	28.6		44.6	223	07.8		-19.7	194	02.6		05.5			
24	135	50.4	223	18.9	-21	07.0	113	29.5	+9	45.2	238	09.8	-22	-19.8	209	04.8	-22	05.5			
Dif.	—		-6		-1		+9		+7		+20		0		+22						

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 14 ^m 0				SD: 14'7 Edad: 1 ^d 1 PHE { 4^h: 54'0 12^h: 54'0 20^h: 54'0													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	176 191 206 221 236 251 266 281 296 311 326 341 356 11 26 41 56 71 86 101 116 131 146 161 176	29.8 29.8 29.7 29.7 29.7 29.6 29.6 29.5 29.5 29.4 29.4 29.3 29.3 29.3 29.2 29.2 29.1 29.1 29.0 29.0 29.0 28.9 28.9 28.8 28.8	-15 -15 -15 -15 -15 -15 -15 -15 -15	46.3 45.5 44.7 44.0 43.2 42.4 41.7 40.9 40.1 39.4 38.6 37.8 37.0 36.3 35.5 34.7 34.0 33.2 32.4 31.6 30.9 30.1 29.3 28.5 27.8	163 178 192 207 221 236 251 265 280 294 309 323 338 352 7 22 36 51 65 80 94 109 123 138 153	41.8 15.0 48.2 21.4 54.6 27.9 01.2 34.6 07.9 41.3 14.8 48.3 21.8 55.3 28.9 02.5 36.1 09.8 43.5 17.2 50.9 24.7 58.5 32.3 06.2	142 142 142 142 143 143 144 143 144 145 145 145 145 146 146 146 147 147 147 147 148 148 148 149	-14 -14 -13 -13 -13 -13 -12 -12 -12 -11 -11 -11 -10	27.2 18.9 10.6 02.2 53.7 45.2 36.7 28.0 19.4 10.6 01.8 53.0 44.1 35.1 26.1 17.1 08.0 58.8 49.6 40.4 31.0 21.7 12.3 02.8 53.3	83 83 84 85 85 85 87 86 88 88 88 89 90 90 90 91 92 92 92 94 93 94 95 95	60 N 58 56 54 52 50 45 40 35 30 20 10 N 0 10 S 20 30 35 40 45 50 52 54 56 58 60 S	6 27 24 21 18 16 6 14 6 08 6 03 5 59 54 45 5 35 5 24 5 12 4 56 37 24 4 09 3 50 25 3 13 2 58 40 2 17 1 46	7 16 11 05 7 01 6 56 6 52 6 43 36 29 22 11 6 00 5 49 37 24 5 07 4 57 4 45 4 31 13 4 04 3 54 43 30 3 15	8 02 7 53 46 39 32 7 26 7 14 7 04 6 55 47 34 6 22 6 11 5 59 47 33 24 5 15 5 04 4 50 44 36 29 20 4 09	8 58 50 43 37 31 8 26 8 15 8 06 7 58 51 39 7 29 7 19 7 09 6 58 46 39 6 31 6 21 10 6 05 5 59 52 5 45 5 36	13 16 18 20 22 23 27 29 32 34 37 40 43 46 49 53 55 57 61 64 65 67 69 71 75	18 12 19 25 31 36 18 40 18 50 18 58 19 05 11 22 19 31 19 40 48 19 57 20 07 13 20 20 20 28 20 28 37 41 46 51 20 57 21 03	74 72 70 67 65 64 61 58 55 53 49 46 42 40 37 33 31 28 25 22 21 18 17 14 12
UT	ARIES	VENUS				MARTE				JÚPITER				SATURNO				
	PMG 14 ^h 54 ^m 2	Mag: -4.3 PMG: 09 ^h 07 ^m				Mag: +0.9 PMG: 16 ^h 25 ^m				Mag: -1.9 PMG: 08 ^h 06 ^m				Mag: +0.6 PMG: 10 ^h 02 ^m				
	hG ☿	hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	135 150 165 180 196 211 226 241 256 271 286 301 316 331 346 1 16 31 46 61 76 91 106 121 136	50.4 52.9 55.3 57.8 00.3 02.7 05.2 07.7 10.1 12.6 15.1 17.5 20.0 22.4 24.9 27.4 29.8 32.3 34.8 37.2 39.7 42.2 44.6 47.1 49.6	223 238 253 268 283 298 313 328 343 358 13 28 43 58 73 88 103 118 133 148 163 178 193 208 223	18.9 18.3 17.7 17.1 16.5 15.9 15.3 14.7 14.1 13.5 12.8 12.2 11.6 11.0 10.4 9.8 09.2 08.6 08.0 07.4 06.8 06.1 05.5 04.9 04.3	-21 -21 -21 -21 -21 -21 -21 -21 -21	07.0 07.1 07.2 07.3 07.4 07.5 07.5 07.6 07.7 07.8 07.9 08.0 08.1 08.2 08.2 08.3 08.4 08.5 08.6 08.6 08.7 08.8 08.9 08.9 09.0	113 128 143 158 173 188 203 218 233 248 263 278 293 308 323 338 353 8 23 38 53 68 83 98 113	29.5 30.4 31.3 32.2 33.1 33.9 34.8 35.7 36.6 37.4 38.3 39.2 40.1 41.0 41.8 42.7 43.6 44.5 45.4 46.2 47.1 48.0 48.9 49.8 50.6	+9 +9 +9 +9 +9 +9 +9 +9 +9 +10 +10	45.2 45.9 46.5 47.2 47.8 48.5 49.2 49.8 50.5 51.1 51.8 52.4 53.1 53.7 54.4 55.1 55.7 56.4 57.0 57.7 58.3 59.0 59.6 00.3 00.9	238 253 268 283 298 313 328 343 358 13 28 43 58 73 88 103 118 133 148 163 178 193 208 223 238	09.8 11.8 13.8 15.9 17.9 19.9 21.9 24.0 26.0 28.0 30.0 32.1 34.1 36.1 38.1 40.1 42.2 44.2 46.2 48.2 50.3 52.3 54.3 56.3 58.4	-22 -22 -22 -22 -22 -22 -22 -22 -22	19.8 19.8 19.8 19.9 19.9 19.9 20.0 20.0 20.0 20.1 20.1 20.2 20.2 20.2 20.3 20.3 20.3 20.4 20.4 20.4 20.5 20.5 20.5 20.6 20.6	209 224 239 254 269 284 299 314 329 344 359 14 29 44 59 74 89 104 119 134 149 164 179 194 209	04.8 06.9 09.1 11.3 13.5 15.6 17.8 20.0 22.2 24.4 26.5 28.7 30.9 33.1 35.2 37.4 39.6 41.8 44.0 46.1 48.3 50.5 52.7 54.9 57.0	-22 -22 -22 -22 -22 -22 -22 -22 -22	05.5 05.4 05.4 05.4 05.4 05.3 05.3 05.3 05.2 05.2 05.2 05.2 05.1 05.1 05.1 05.0 05.0 05.0 05.0 04.9 04.9 04.9 04.8 04.8 04.8
Dif.	—	-6	-1		+9	+7		+20	0		+22							

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2				SD: 14'7		PHE {		Rº: 42 ^m										
	PMG: 12 ^h 14 ^m 1				Edad: 2 ^d 1		{ 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2												
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.													
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m			
0	176	28.8	-15	27.8	153	06.2	149	-10	53.3	95	60 N	16 29	17 15	18 05	9 11 11	19 26 75			
1	191	28.8		27.0	167	40.1	149		43.8	96	58	38	21	08	06 13	31 72			
2	206	28.7		26.2	182	14.0	149		34.2	96	56	46	26	10	9 01 16	35 70			
3	221	28.7		25.4	196	47.9	150		24.6	97	54	52	30	12	8 57 17	38 68			
4	236	28.6		24.7	211	21.9	149		14.9	97	52	16 58	34	15	53 19	41 67			
5	251	28.6	-15	23.9	225	55.8	150	-10	05.2	98	50	17 04	17 38	18 17	8 49 21	19 44 65			
6	266	28.6	-15	23.1	240	29.8	151	-9	55.4	98	45	17 16	17 47	18 22	8 42 24	19 51 60			
7	281	28.5		22.3	255	03.9	150		45.6	98	40	26	17 54	26	35 28	19 56 58			
8	296	28.5		21.5	269	37.9	151		35.8	99	35	34	18 01	31	30 30	20 00 55			
9	311	28.5		20.8	284	12.0	151		25.9	99	30	42	07	35	25 32	04 53			
10	326	28.4		20.0	298	46.1	151		16.0	100	20	17 55	18	44	16 36	11 49			
11	341	28.4	-15	19.2	313	20.2	151	-9	06.0	100	10 N	18 07	18 28	18 53	8 09 39	20 17 45			
12	356	28.4	-15	18.4	327	54.3	152	-8	56.0	101	0	18 18	18 39	19 04	8 02 42	20 22 43			
13	11	28.3		17.6	342	28.5	152		45.9	100	10 S	29	18 50	16	7 55 45	28 39			
14	26	28.3		16.9	357	02.7	152		35.9	101	20	41	19 04	31	47 49	34 35			
15	41	28.3		16.1	11	36.9	152		25.8	102	30	18 54	20	19 50	39 52	40 32			
16	56	28.2		15.3	26	11.1	152		15.6	102	35	19 02	29	20 02	34 55	44 29			
17	71	28.2	-15	14.5	40	45.3	152	-8	05.4	102	40	19 12	19 41	20 17	7 28 58	20 48 27			
18	86	28.2	-15	13.7	55	19.5	153	-7	55.2	103	45	19 22	19 55	20 35	7 22 60	20 53 24			
19	101	28.1		12.9	69	53.8	153		44.9	103	50	35	20 12	20 59	14 64	20 59 20			
20	116	28.1		12.2	84	28.1	153		34.6	103	52	42	20	21 11	10 66	21 02 19			
21	131	28.1		11.4	99	02.4	153		24.3	103	54	48	30	25	06 68	04 18			
22	146	28.0		10.6	113	36.7	153		14.0	104	56	19 56	41	21 42	7 01 70	08 15			
23	161	28.0		09.8	128	11.0	153	-7	03.6	105	58	20 05	20 53	22 03	6 56 72	11 13			
24	176	28.0	-15	09.0	142	45.3		-6	53.1		60 S	20 14	21 08	22 31	6 51 74	21 15 11			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 14 ^h 50 ^m 3		Mag: -4.3 PMG: 09 ^h 08 ^m				Mag: +0.9 PMG: 16 ^h 24 ^m				Mag: -1.9 PMG: 08 ^h 03 ^m				Mag: +0.6 PMG: 09 ^h 59 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	136	49.6	223	04.3	-21	09.0	113	50.6	+10	00.9	238	58.4	-22	-20.6	209	57.0	-22	04.8	
1	151	52.0	238	03.7		09.1	128	51.5		01.6	254	00.4		-20.6	224	59.2		04.8	
2	166	54.5	253	03.1		09.2	143	52.4		02.2	269	02.4		-20.7	240	01.4		04.7	
3	181	56.9	268	02.5		09.2	158	53.3		02.9	284	04.5		-20.7	255	03.6		04.7	
4	196	59.4	283	01.9		09.3	173	54.1		03.5	299	06.5		-20.7	270	05.8		04.7	
5	212	01.9	298	01.2	-21	09.4	188	55.0	+10	04.2	314	08.5	-22	-20.8	285	07.9	-22	04.6	
6	227	04.3	313	00.6	-21	09.4	203	55.9	+10	04.9	329	10.5	-22	-20.8	300	10.1	-22	04.6	
7	242	06.8	328	00.0		09.5	218	56.8		05.5	344	12.6		-20.8	315	12.3		04.6	
8	257	09.3	342	59.4		09.6	233	57.6		06.2	359	14.6		-20.9	330	14.5		04.6	
9	272	11.7	357	58.8		09.6	248	58.5		06.8	14	16.6		-20.9	345	16.7		04.5	
10	287	14.2	12	58.2		09.7	263	59.4		07.5	29	18.6		-20.9	0	18.8		04.5	
11	302	16.7	27	57.6	-21	09.8	279	00.3	+10	08.1	44	20.7	-22	-21.0	15	21.0	-22	04.5	
12	317	19.1	42	56.9	-21	09.8	294	01.2	+10	08.8	59	22.7	-22	-21.0	30	23.2	-22	04.4	
13	332	21.6	57	56.3		09.9	309	02.0		09.4	74	24.7		-21.0	45	25.4		04.4	
14	347	24.0	72	55.7		09.9	324	02.9		10.1	89	26.8		-21.1	60	27.6		04.4	
15	2	26.5	87	55.1		10.0	339	03.8		10.7	104	28.8		-21.1	75	29.7		04.4	
16	17	29.0	102	54.5		10.1	354	04.7		11.4	119	30.8		-21.1	90	31.9		04.3	
17	32	31.4	117	53.9	-21	10.1	9	05.5	+10	12.0	134	32.8	-22	-21.2	105	34.1	-22	04.3	
18	47	33.9	132	53.2	-21	10.2	24	06.4	+10	12.7	149	34.9	-22	-21.2	120	36.3	-22	04.3	
19	62	36.4	147	52.6		10.2	39	07.3		13.3	164	36.9		-21.2	135	38.5		04.2	
20	77	38.8	162	52.0		10.3	54	08.2		14.0	179	38.9		-21.3	150	40.7		04.2	
21	92	41.3	177	51.4		10.3	69	09.0		14.6	194	41.0		-21.3	165	42.8		04.2	
22	107	43.8	192	50.8		10.4	84	09.9		15.3	209	43.0		-21.3	180	45.0		04.2	
23	122	46.2	207	50.2		10.4	99	10.8		15.9	224	45.0		-21.4	195	47.2		04.1	
24	137	48.7	222	49.5	-21	10.5	114	11.7	+10	16.6	239	47.1	-22	-21.4	210	49.4	-22	04.1	
Dif.	—		-6		-1		+9		+7		+20		0		+22				

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2				PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5			Náut.		Civil	Hora		Rº	Hora	Rº				
	PMG: 12 ^h 14 ^m 2				Edad: 3 ^d 1														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.												
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m				
0	176	28.0	-15	09.0	142	45.3	154	-6	53.1	104	60 N	6 22	7 12	7 57	9 22	11	20 41	76	
1	191	27.9		08.2	157	19.7	153		42.7	105	58	20	06	49	19	13	43	73	
2	206	27.9		07.4	171	54.0	154		32.2	105	56	17	7 02	41	17	15	45	70	
3	221	27.9		06.7	186	28.4	154		21.7	105	54	15	6 57	35	14	17	46	69	
4	236	27.8		05.9	201	02.8	154		11.2	106	52	13	53	29	12	19	48	66	
5	251	27.8	-15	05.1	215	37.2	153	-6	00.6	106	50	6 11	6 49	7 23	9 10	21	20 49	65	
6	266	27.8	-15	04.3	230	11.5	155	-5	50.0	106	45	6 06	6 41	7 12	9 06	24	20 51	62	
7	281	27.8		03.5	244	46.0	154		39.4	107	40	6 02	34	7 02	03	26	54	58	
8	296	27.7		02.7	259	20.4	154		28.7	106	35	5 57	27	6 53	9 00	29	55	56	
9	311	27.7		01.9	273	54.8	154		18.1	107	30	53	21	46	8 57	31	20 57	53	
10	326	27.7		01.1	288	29.2	154	-5	07.4	108	20	44	10	33	52	36	21 00	49	
11	341	27.6	-15	00.3	303	03.6	155	-4	56.6	107	10 N	5 35	6 00	6 22	8 48	39	21 02	46	
12	356	27.6	-14	59.5	317	38.1	154	-4	45.9	108	0	5 24	5 49	6 11	8 44	42	21 05	42	
13	11	27.6		58.8	332	12.5	155		35.1	108	10 S	5 12	38	6 00	40	46	07	39	
14	26	27.6		58.0	346	47.0	154		24.3	108	20	4 58	25	5 48	36	49	09	36	
15	41	27.5		57.2	1	21.4	155		13.5	108	30	39	5 09	34	31	53	12	31	
16	56	27.5		56.4	15	55.9	154	-4	02.7	109	35	27	4 59	26	29	55	13	30	
17	71	27.5	-14	55.6	30	30.3	155	-3	51.8	109	40	4 12	4 48	5 17	8 26	58	21 15	27	
18	86	27.5	-14	54.8	45	04.8	154	-3	40.9	108	45	3 54	4 34	5 07	8 22	61	21 17	24	
19	101	27.4		54.0	59	39.2	155		30.1	110	50	30	17	4 53	18	64	19	21	
20	116	27.4		53.2	74	13.7	154		19.1	109	52	18	4 09	47	16	66	21	18	
21	131	27.4		52.4	88	48.1	154	-3	08.2	109	54	3 04	3 59	41	14	68	22	16	
22	146	27.4		51.6	103	22.5	155	-2	57.3	110	56	2 47	48	33	11	70	23	15	
23	161	27.3		50.8	117	57.0	154		46.3	110	58	2 26	36	25	8 08	73	21 24	13	
24	176	27.3	-14	50.0	132	31.4		-2	35.3		60 S	1 58	3 22	4 15	8 05	76	21 26	10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 14 ^h 46 ^m 3		Mag: -4.3 PMG: 09 ^h 09 ^m			Mag: +1.0 PMG: 16 ^h 22 ^m			Mag: -1.9 PMG: 08 ^h 00 ^m			Mag: +0.6 PMG: 09 ^h 55 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	137	48.7	222	49.5	-21	10.5	114	11.7	+10	16.6	239	47.1	-22	21.4	210	49.4	-22	04.1	
1	152	51.2	237	48.9		10.5	129	12.5		17.2	254	49.1		21.4	225	51.6		04.1	
2	167	53.6	252	48.3		10.6	144	13.4		17.9	269	51.1		21.5	240	53.7		04.0	
3	182	56.1	267	47.7		10.6	159	14.3		18.5	284	53.1		21.5	255	55.9		04.0	
4	197	58.5	282	47.1		10.7	174	15.2		19.2	299	55.2		21.5	270	58.1		04.0	
5	213	01.0	297	46.4	-21	10.7	189	16.0	+10	19.8	314	57.2	-22	21.6	286	00.3	-22	04.0	
6	228	03.5	312	45.8	-21	10.8	204	16.9	+10	20.5	329	59.2	-22	21.6	301	02.5	-22	03.9	
7	243	05.9	327	45.2		10.8	219	17.8		21.1	345	01.3		21.6	316	04.7		03.9	
8	258	08.4	342	44.6		10.9	234	18.7		21.8	0	03.3		21.7	331	06.8		03.9	
9	273	10.9	357	44.0		10.9	249	19.5		22.4	15	05.3		21.7	346	09.0		03.8	
10	288	13.3	12	43.3		10.9	264	20.4		23.1	30	07.4		21.7	1	11.2		03.8	
11	303	15.8	27	42.7	-21	11.0	279	21.3	+10	23.7	45	09.4	-22	21.8	16	13.4	-22	03.8	
12	318	18.3	42	42.1	-21	11.0	294	22.2	+10	24.4	60	11.4	-22	21.8	31	15.6	-22	03.8	
13	333	20.7	57	41.5		11.1	309	23.0		25.0	75	13.5		21.8	46	17.7		03.7	
14	348	23.2	72	40.8		11.1	324	23.9		25.7	90	15.5		21.9	61	19.9		03.7	
15	3	25.7	87	40.2		11.1	339	24.8		26.3	105	17.5		21.9	76	22.1		03.7	
16	18	28.1	102	39.6		11.2	354	25.7		26.9	120	19.6		21.9	91	24.3		03.6	
17	33	30.6	117	39.0	-21	11.2	9	26.5	+10	27.6	135	21.6	-22	22.0	106	26.5	-22	03.6	
18	48	33.0	132	38.4	-21	11.2	24	27.4	+10	28.2	150	23.6	-22	22.0	121	28.7	-22	03.6	
19	63	35.5	147	37.7		11.3	39	28.3		28.9	165	25.7		22.0	136	30.8		03.6	
20	78	38.0	162	37.1		11.3	54	29.2		29.5	180	27.7		22.1	151	33.0		03.5	
21	93	40.4	177	36.5		11.3	69	30.0		30.2	195	29.7		22.1	166	35.2		03.5	
22	108	42.9	192	35.9		11.4	84	30.9		30.8	210	31.8		22.1	181	37.4		03.5	
23	123	45.4	207	35.2		11.4	99	31.8		31.5	225	33.8		22.2	196	39.6		03.4	
24	138	47.8	222	34.6	-21	11.4	114	32.7	+10	32.1	240	35.9	-22	22.2	211	41.8	-22	03.4	
Dif.	—		-6			0	+9			+6	+20			0	+22				

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna															
	SD: 16'2				SD: 14'9 Edad: 4 ^d 1												PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'9													
	PMG: 12 ^h 14 ^m 2				PMG: 15 ^h 37 ^m																									
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Civil	Náut.			Hora	Rº	Hora	Rº																
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m														
0	176	27.3	-14	50.0	132	31.4	155	-2	35.3	110	60 N	16 34	17 20	18 09	9 33	10	21 57	77												
1	191	27.3		49.2	147	05.9	154		24.3	110	58	43	25	12	32	13	56	75												
2	206	27.3		48.4	161	40.3	154		13.3	110	56	50	30	14	32	15	55	72												
3	221	27.3		47.6	176	14.7	154	-2	02.3	111	54	16 56	34	16	31	17	55	70												
4	236	27.2		46.8	190	49.1	154	-1	51.2	110	52	17 02	38	18	31	19	54	68												
5	251	27.2	-14	46.0	205	23.5	154	-1	40.2	111	50	17 07	17 41	18 20	9 31	20	21 54	66												
6	266	27.2	-14	45.2	219	57.9	154	-1	29.1	111	45	17 19	17 49	18 24	9 30	24	21 53	62												
7	281	27.2		44.4	234	32.3	154		18.0	111	40	28	17 56	28	29	27	52	59												
8	296	27.2		43.6	249	06.7	153	-1	06.9	110	35	36	18 03	33	29	29	51	57												
9	311	27.1		42.8	263	41.0	154	-0	55.9	112	30	44	08	37	28	32	50	54												
10	326	27.1		42.0	278	15.4	153		44.7	111	20	17 56	19	45	28	35	49	50												
11	341	27.1	-14	41.2	292	49.7	154	-0	33.6	111	10 N	18 07	18 29	18 54	9 27	39	21 48	46												
12	356	27.1	-14	40.4	307	24.1	153	-0	22.5	111	0	18 18	18 39	19 04	9 26	43	21 47	43												
13	11	27.1		39.6	321	58.4	153		11.4	112	10 S	28	18 50	15	26	46	46	40												
14	26	27.0		38.8	336	32.7	153	-0	00.2	111	20	40	19 03	30	25	50	45	36												
15	41	27.0		38.0	351	07.0	152	+0	10.9	112	30	18 53	18	19 48	24	54	43	33												
16	56	27.0		37.2	5	41.2	153		22.1	111	35	19 00	27	20 00	24	56	43	30												
17	71	27.0	-14	36.4	20	15.5	152	+0	33.2	112	40	19 09	19 38	20 14	9 24	58	21 42	27												
18	86	27.0	-14	35.6	34	49.7	152	+0	44.4	112	45	19 20	19 52	20 31	9 23	62	21 41	24												
19	101	27.0		34.8	49	23.9	152	+0	55.6	111	50	32	20 08	20 54	22	66	40	20												
20	116	27.0		34.0	63	58.1	152	+1	06.7	112	52	38	16	21 06	22	67	39	19												
21	131	26.9		33.2	78	32.3	151		17.9	112	54	44	25	19	22	69	38	18												
22	146	26.9		32.4	93	06.4	151		29.1	112	56	19 52	35	35	21	72	38	15												
23	161	26.9		31.6	107	40.5	151		40.3	111	58	20 00	20 47	21 55	21	74	37	13												
24	176	26.9	-14	30.7	122	14.6		+1	51.4		60 S	20 09	21 01	22 20	9 21	76	21 36	11												
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG 14 ^h 42 ^m 4		Mag: -4.3 PMG: 09 ^h 10 ^m				Mag: +1.0 PMG: 16 ^h 21 ^m				Mag: -1.9 PMG: 07 ^h 57 ^m				Mag: +0.6 PMG: 09 ^h 52 ^m															
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'												
0	138	47.8	222	34.6	-21	11.4	114	32.7	+10	32.1	240	35.9	-22	-22.2	211	41.8	-22	03.4												
1	153	50.3	237	34.0		11.4	129	33.5		32.8	255	37.9		-22.2	226	43.9		03.4												
2	168	52.8	252	33.4		11.5	144	34.4		33.4	270	39.9		-22.2	241	46.1		03.4												
3	183	55.2	267	32.7		11.5	159	35.3		34.1	285	42.0		-22.3	256	48.3		03.3												
4	198	57.7	282	32.1		11.5	174	36.1		34.7	300	44.0		-22.3	271	50.5		03.3												
5	214	00.1	297	31.5	-21	11.5	189	37.0	+10	35.4	315	46.0	-22	-22.3	286	52.7	-22	03.3												
6	229	02.6	312	30.9	-21	11.6	204	37.9	+10	36.0	330	48.1	-22	-22.4	301	54.9	-22	03.2												
7	244	05.1	327	30.2		11.6	219	38.8		36.6	345	50.1		-22.4	316	57.1		03.2												
8	259	07.5	342	29.6		11.6	234	39.6		37.3	0	52.1		-22.4	331	59.2		03.2												
9	274	10.0	357	29.0		11.6	249	40.5		37.9	15	54.2		-22.5	347	01.4		03.2												
10	289	12.5	12	28.3		11.6	264	41.4		38.6	30	56.2		-22.5	2	03.6		03.1												
11	304	14.9	27	27.7	-21	11.7	279	42.2	+10	39.2	45	58.3	-22	-22.5	17	05.8	-22	03.1												
12	319	17.4	42	27.1	-21	11.7	294	43.1	+10	39.9	61	00.3	-22	-22.6	32	08.0	-22	03.1												
13	334	19.9	57	26.5		11.7	309	44.0		40.5	76	02.3		-22.6	47	10.2		03.0												
14	349	22.3	72	25.8		11.7	324	44.9		41.2	91	04.4		-22.6	62	12.3		03.0												
15	4	24.8	87	25.2		11.7	339	45.7		41.8	106	06.4		-22.7	77	14.5		03.0												
16	19	27.3	102	24.6		11.7	354	46.6		42.4	121	08.5		-22.7	92	16.7		03.0												
17	34	29.7	117	23.9	-21	11.7	9	47.5	+10	43.1	136	10.5	-22	-22.7	107	18.9	-22	02.9												
18	49	32.2	132	23.3	-21	11.8	24	48.3	+10	43.7	151	12.5	-22	-22.8	122	21.1	-22	02.9												
19	64	34.6	147	22.7		11.8	39	49.2		44.4	166	14.6		-22.8	137	23.3		02.9												
20	79	37.1	162	22.1		11.8	54	50.1		45.0	181	16.6		-22.8	152	25.5		02.8												
21	94	39.6	177	21.4		11.8	69	51.0		45.7	196	18.7		-22.9	167	27.6		02.8												
22	109	42.0	192	20.8		11.8	84	51.8		46.3	211	20.7		-22.9	182	29.8		02.8												
23	124	44.5	207	20.2		11.8	99	52.7		46.9	226	22.7		-22.9	197	32.0		02.8												
24	139	47.0	222	19.5	-21	11.8	114	53.6	+10	47.6	241	24.8	-22	-22.9	212	34.2	-22	02.7												
Dif.	—		-6				0				+9				+6				+20				0				+22			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16°2 PMG: 12 ^h 14 ^m 2				SD: 15°0 Edad: 5 ^d 1 PHE { 4 ^h : 55°1 12 ^h : 55°2 20 ^h : 55°4 PMG: 16 ^h 19 ^m Rº: 45 ^m															
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m				
0	176	26.9	-14	30.7	122	14.6	151	+1	51.4	112	60 N	6 18	7 07	7 52	9 43	12	23 14 79			
1	191	26.9		29.9	136	48.7	151	+2	02.6	112	58	16	7 02	44	45	14	11 76			
2	206	26.9		29.1	151	22.8	150		13.8	112	56	14	6 58	37	47	16	07 74			
3	221	26.9		28.3	165	56.8	150		25.0	111	54	12	53	31	48	19	05 71			
4	236	26.8		27.5	180	30.8	149		36.1	112	52	10	50	25	50	20	02 70			
5	251	26.8	-14	26.7	195	04.7	150	+2	47.3	112	50	6 08	6 46	7 20	9 51	22	23 00 68			
6	266	26.8	-14	25.9	209	38.7	149	+2	58.5	111	45	6 04	6 38	7 09	9 54	25	22 55 64			
7	281	26.8		25.1	224	12.6	149	+3	09.6	112	40	5 59	31	6 59	56	29	51 61			
8	296	26.8		24.3	238	46.5	148		20.8	111	35	55	25	51	9 58	31	48 58			
9	311	26.8		23.5	253	20.3	148		31.9	112	30	51	20	44	10 00	34	44 56			
10	326	26.8		22.7	267	54.1	148		43.1	111	20	43	6 09	32	03	38	39 52			
11	341	26.8	-14	21.8	282	27.9	148	+3	54.2	111	10 N	5 34	5 59	6 21	10 06	41	22 34 49			
12	356	26.7	-14	21.0	297	01.7	147	+4	05.3	112	0	5 25	5 49	6 11	10 09	44	22 30 45			
13	11	26.7		20.2	311	35.4	147		16.5	111	10 S	5 13	39	6 00	12	47	26 41			
14	26	26.7		19.4	326	09.1	146		27.6	111	20	4 59	26	5 49	15	51	21 38			
15	41	26.7		18.6	340	42.7	146		38.7	111	30	41	11	36	18	55	16 34			
16	56	26.7		17.8	355	16.3	146	+4	49.8	110	35	29	5 01	28	20	58	13 32			
17	71	26.7	-14	17.0	9	49.9	145	+5	00.8	111	40	4 15	4 51	5 20	10 22	61	22 09 30			
18	86	26.7	-14	16.1	24	23.4	145	+5	11.9	111	45	3 58	4 37	5 09	10 25	63	22 05 27			
19	101	26.7		15.3	38	56.9	144		23.0	110	50	35	21	4 57	28	67	22 00 23			
20	116	26.7		14.5	53	30.3	144		34.0	110	52	23	13	51	29	69	21 58 21			
21	131	26.7		13.7	68	03.7	144		45.0	110	54	3 10	4 04	45	31	71	56 19			
22	146	26.7		12.9	82	37.1	143	+5	56.0	110	56	2 54	3 54	38	33	73	53 17			
23	161	26.7		12.1	97	10.4	142	+6	07.0	110	58	35	42	30	10 35	75	21 50 15			
24	176	26.7	-14	11.2	111	43.6		+6	18.0		60 S	2 09	3 28	4 20	10 37	78	21 47 12			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 14 ^h 38 ^m 5		Mag: -4.2 PMG: 09 ^h 11 ^m				Mag: +1.0 PMG: 16 ^h 19 ^m				Mag: -1.9 PMG: 07 ^h 53 ^m				Mag: +0.6 PMG: 09 ^h 48 ^m					
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	139	47.0	222	19.5	-21	11.8	114	53.6	+10	47.6	241	24.8	-22	22.9	212	34.2	-22	02.7		
1	154	49.4	237	18.9		11.8	129	54.4		48.2	256	26.8		23.0	227	36.4		02.7		
2	169	51.9	252	18.3		11.8	144	55.3		48.9	271	28.9		23.0	242	38.6		02.7		
3	184	54.4	267	17.6		11.8	159	56.2		49.5	286	30.9		23.0	257	40.8		02.6		
4	199	56.8	282	17.0		11.8	174	57.1		50.2	301	32.9		23.1	272	42.9		02.6		
5	214	59.3	297	16.4	-21	11.8	189	57.9	+10	50.8	316	35.0	-22	23.1	287	45.1	-22	02.6		
6	230	01.7	312	15.7	-21	11.8	204	58.8	+10	51.4	331	37.0	-22	23.1	302	47.3	-22	02.6		
7	245	04.2	327	15.1		11.8	219	59.7		52.1	346	39.1		23.2	317	49.5		02.5		
8	260	06.7	342	14.5		11.8	235	00.5		52.7	1	41.1		23.2	332	51.7		02.5		
9	275	09.1	357	13.8		11.8	250	01.4		53.4	16	43.1		23.2	347	53.9		02.5		
10	290	11.6	12	13.2		11.8	265	02.3		54.0	31	45.2		23.3	2	56.1		02.4		
11	305	14.1	27	12.6	-21	11.8	280	03.1	+10	54.6	46	47.2	-22	23.3	17	58.2	-22	02.4		
12	320	16.5	42	11.9	-21	11.8	295	04.0	+10	55.3	61	49.3	-22	23.3	33	00.4	-22	02.4		
13	335	19.0	57	11.3		11.8	310	04.9		55.9	76	51.3		23.3	48	02.6		02.4		
14	350	21.5	72	10.7		11.8	325	05.8		56.6	91	53.4		23.4	63	04.8		02.3		
15	5	23.9	87	10.0		11.7	340	06.6		57.2	106	55.4		23.4	78	07.0		02.3		
16	20	26.4	102	09.4		11.7	355	07.5		57.8	121	57.5		23.4	93	09.2		02.3		
17	35	28.9	117	08.8	-21	11.7	10	08.4	+10	58.5	136	59.5	-22	23.5	108	11.4	-22	02.2		
18	50	31.3	132	08.1	-21	11.7	25	09.2	+10	59.1	152	01.5	-22	23.5	123	13.6	-22	02.2		
19	65	33.8	147	07.5		11.7	40	10.1	+10	59.8	167	03.6		23.5	138	15.7		02.2		
20	80	36.2	162	06.9		11.7	55	11.0	+11	00.4	182	05.6		23.6	153	17.9		02.2		
21	95	38.7	177	06.2		11.7	70	11.8		01.0	197	07.7		23.6	168	20.1		02.1		
22	110	41.2	192	05.6		11.6	85	12.7		01.7	212	09.7		23.6	183	22.3		02.1		
23	125	43.6	207	05.0		11.6	100	13.6		02.3	227	11.8		23.7	198	24.5		02.1		
24	140	46.1	222	04.3	-21	11.6	115	14.4	+11	03.0	242	13.8	-22	23.7	213	26.7	-22	02.0		
Dif.	—		-6				+9				+20				+22				0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 12 ^h 14 ^m 2				SD: 15'1 Edad: 6 ^d 1 PHE { 4 ^h : 55'6 12 ^h : 55'9 20 ^h : 56'1															
	PMG: 17 ^h 04 ^m				Rº: 47 ^m															
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Civil	Náut.			Hora	Rº	Hora	Rº						
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	176	26.7	-14	11.2	111	43.6	143	+6	18.0	110	60 N	16 40	17 25	18 14	9 55	14	*** **			
1	191	26.6		10.4	126	16.9	141		29.0	109	58	47	29	16	9 59	17	*** **			
2	206	26.6		09.6	140	50.0	142		39.9	109	56	16 54	34	18	10 03	19	*** **			
3	221	26.6		08.8	155	23.2	140	+6	50.8	109	54	17 00	38	19	07	21	*** **			
4	236	26.6		08.0	169	56.2	141	+7	01.7	109	52	06	41	21	10	23	*** **			
5	251	26.6	-14	07.2	184	29.3	139	+7	12.6	109	50	17 11	17 45	18 23	10 13	24	*** **			
6	266	26.6	-14	06.3	199	02.2	140	+7	23.5	108	45	17 22	17 52	18 27	10 19	28	23 59 66			
7	281	26.6		05.5	213	35.2	138		34.3	108	40	31	17 59	31	25	31	52 63			
8	296	26.6		04.7	228	08.0	139		45.1	108	35	38	18 05	34	29	34	46 60			
9	311	26.6		03.9	242	40.9	137	+7	55.9	108	30	45	10	38	34	35	40 59			
10	326	26.6		03.1	257	13.6	138	+8	06.7	107	20	17 57	20	46	41	40	31 54			
11	341	26.6	-14	02.2	271	46.4	136	+8	17.4	108	10 N	18 08	18 29	18 54	10 47	43	23 23 51			
12	356	26.6	-14	01.4	286	19.0	136	+8	28.2	106	0	18 18	18 39	19 04	10 53	47	23 15 48			
13	11	26.6	-14	00.6	300	51.6	136		38.8	107	10 S	28	18 49	15	10 59	50	23 07 45			
14	26	26.6	-13	59.8	315	24.2	134	+8	49.5	106	20	39	19 02	28	11 06	53	22 59 42			
15	41	26.6		58.9	329	56.6	135	+9	00.1	106	30	51	16	46	13	57	50 38			
16	56	26.6		58.1	344	29.1	133		10.7	106	35	18 58	25	19 57	18	59	45 35			
17	71	26.6	-13	57.3	359	01.4	133	+9	21.3	105	40	19 07	19 36	20 11	11 23	62	22 39 32			
18	86	26.6	-13	56.5	13	33.7	133	+9	31.8	105	45	19 17	19 49	20 28	11 28	66	22 32 29			
19	101	26.6		55.6	28	06.0	132		42.3	105	50	29	20 04	20 50	35	69	23 26			
20	116	26.6		54.8	42	38.2	131	+9	52.8	105	52	34	12	21 01	38	71	19 25			
21	131	26.6		54.0	57	10.3	130	+10	03.3	104	54	40	21	14	42	73	15 23			
22	146	26.6		53.2	71	42.3	130		13.7	103	56	47	30	28	46	75	10 21			
23	161	26.6		52.3	86	14.3	129		24.0	104	58	19 55	42	21 47	50	78	22 05 18			
24	176	26.6	-13	51.5	100	46.2		+10	34.4		60 S	20 04	20 55	22 10	11 55	81	21 59 16			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 14 ^h 34 ^m 5		Mag: -4.2 PMG: 09 ^h 12 ^m				Mag: +1.0 PMG: 16 ^h 18 ^m				Mag: -1.9 PMG: 07 ^h 50 ^m				Mag: +0.6 PMG: 09 ^h 45 ^m					
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	140	46.1	222	04.3	-21	11.6	115	14.4	+11	03.0	242	13.8	-22	-23.7	213	26.7	-22	02.0		
1	155	48.6	237	03.7		11.6	130	15.3		03.6	257	15.9		-23.7	228	28.9		02.0		
2	170	51.0	252	03.0		11.6	145	16.2		04.2	272	17.9		-23.7	243	31.1		02.0		
3	185	53.5	267	02.4		11.5	160	17.0		04.9	287	19.9		-23.8	258	33.2		02.0		
4	200	56.0	282	01.8		11.5	175	17.9		05.5	302	22.0		-23.8	273	35.4		01.9		
5	215	58.4	297	01.1	-21	11.5	190	18.8	+11	06.2	317	24.0	-22	-23.8	288	37.6	-22	01.9		
6	231	00.9	312	00.5	-21	11.5	205	19.6	+11	06.8	332	26.1	-22	-23.9	303	39.8	-22	01.9		
7	246	03.3	326	59.9		11.4	220	20.5		07.4	347	28.1		-23.9	318	42.0		01.8		
8	261	05.8	341	59.2		11.4	235	21.4		08.1	2	30.2		-23.9	333	44.2		01.8		
9	276	08.3	356	58.6		11.4	250	22.2		08.7	17	32.2		-24.0	348	46.4		01.8		
10	291	10.7	11	57.9		11.4	265	23.1		09.3	32	34.3		-24.0	3	48.6		01.8		
11	306	13.2	26	57.3	-21	11.3	280	24.0	+11	10.0	47	36.3	-22	-24.0	18	50.7	-22	01.7		
12	321	15.7	41	56.7	-21	11.3	295	24.8	+11	10.6	62	38.4	-22	-24.0	33	52.9	-22	01.7		
13	336	18.1	56	56.0		11.3	310	25.7		11.3	77	40.4		-24.1	48	55.1		01.7		
14	351	20.6	71	55.4		11.2	325	26.6		11.9	92	42.5		-24.1	63	57.3		01.6		
15	6	23.1	86	54.7		11.2	340	27.4		12.5	107	44.5		-24.1	78	59.5		01.6		
16	21	25.5	101	54.1		11.2	355	28.3		13.2	122	46.6		-24.2	94	01.7		01.6		
17	36	28.0	116	53.5	-21	11.1	10	29.2	+11	13.8	137	48.6	-22	-24.2	109	03.9	-22	01.6		
18	51	30.5	131	52.8	-21	11.1	25	30.0	+11	14.4	152	50.7	-22	-24.2	124	06.1	-22	01.5		
19	66	32.9	146	52.2		11.1	40	30.9		15.1	167	52.7		-24.3	139	08.3		01.5		
20	81	35.4	161	51.5		11.0	55	31.8		15.7	182	54.8		-24.3	154	10.4		01.5		
21	96	37.8	176	50.9		11.0	70	32.6		16.3	197	56.8		-24.3	169	12.6		01.4		
22	111	40.3	191	50.3		10.9	85	33.5		17.0	212	58.9		-24.3	184	14.8		01.4		
23	126	42.8	206	49.6		10.9	100	34.4		17.6	228	00.9		-24.4	199	17.0		01.4		
24	141	45.2	221	49.0	-21	10.9	115	35.2	+11	18.3	243	03.0	-22	-24.4	214	19.2	-22	01.4		
Dif.	—		-6				+9				+20				+22				0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna										
	SD: 16'2				SD: 15'3												PHE { 4 ^h : 56'3 12 ^h : 56'6 20 ^h : 56'9								
	PMG: 12 ^h 14 ^m 2				Edad: 7 ^d 1																				
	PMG: 17 ^h 51 ^m				Rº: 51 ^m																				
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.		Náut.		Civil		h m		Hora		Rº		Hora		Rº
h	°	'	°	'	°	'			°	'			h m	h m	h m	h m	h m	m	h m	m		h m	m		
0	176	26.6	-13	51.5	100	46.2	129	+10	34.4	102	60 N	6 13	7 02	7 47	10 09	18	0 33	82							
1	191	26.6		50.7	115	18.1	128		44.6	103	58	12	6 58	39	16	21	27	78							
2	206	26.6		49.9	129	49.9	127	+10	54.9	102	56	10	54	33	22	23	21	76							
3	221	26.6		49.0	144	21.6	126	+11	05.1	102	54	08	50	27	28	25	16	74							
4	236	26.6		48.2	158	53.2	126		15.3	101	52	06	46	21	33	27	12	72							
5	251	26.6	-13	47.4	173	24.8	125	+11	25.4	101	50	6 05	6 43	7 17	10 37	29	0 08	70							
6	266	26.6	-13	46.5	187	56.3	125	+11	35.5	100	45	6 01	6 36	7 06	10 47	33	***	***							
7	281	26.6		45.7	202	27.8	123		45.5	100	40	5 57	29	6 57	10 56	35	***	***							
8	296	26.6		44.9	216	59.1	123	+11	55.5	100	35	54	23	49	11 03	38	***	***							
9	311	26.7		44.1	231	30.4	122	+12	05.5	99	30	50	18	43	09	40	***	***							
10	326	26.7		43.2	246	01.6	122		15.4	99	20	42	6 08	31	21	43	***	***							
11	341	26.7	-13	42.4	260	32.8	120	+12	25.3	98	10 N	5 34	5 59	6 21	11 30	47	***	***							
12	356	26.7	-13	41.6	275	03.8	120	+12	35.1	97	0	5 25	5 50	6 11	11 40	49	***	***							
13	11	26.7		40.7	289	34.8	119		44.8	98	10 S	14	39	6 01	49	52	23	52	49						
14	26	26.7		39.9	304	05.7	118	+12	54.6	96	20	5 00	27	5 50	11 59	56	41	45							
15	41	26.7		39.1	318	36.5	118	+13	04.2	96	30	4 43	13	38	12 10	60	28	42							
16	56	26.7		38.2	333	07.3	117		13.8	96	35	32	5 04	30	17	62	20	40							
17	71	26.7	-13	37.4	347	38.0	116	+13	23.4	95	40	4 18	4 53	5 22	12 25	64	23	11	38						
18	86	26.7	-13	36.6	2	08.6	115	+13	32.9	94	45	4 01	4 40	5 12	12 34	67	23	01	36						
19	101	26.7		35.7	16	39.1	114		42.3	94	50	3 39	25	5 01	44	71	22	49	32						
20	116	26.7		34.9	31	09.5	113	+13	51.7	93	52	28	17	4 55	49	73	44	30							
21	131	26.7		34.1	45	39.8	113	+14	01.0	93	54	16	4 09	49	12 55	75	38	28							
22	146	26.8		33.2	60	10.1	112		10.3	92	56	3 01	3 59	42	13 01	77	31	26							
23	161	26.8		32.4	74	40.3	111		19.5	91	58	2 43	48	35	13 08	80	22	23	24						
24	176	26.8	-13	31.6	89	10.4		+14	28.6		60 S	2 19	3 35	4 26	13 16	83	22	15	20						
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO										
	PMG		Mag: -4.2				Mag: +1.0				Mag: -1.9				Mag: +0.6										
	14 ^h 30 ^m 6		PMG: 09 ^h 13 ^m				PMG: 16 ^h 17 ^m				PMG: 07 ^h 47 ^m				PMG: 09 ^h 41 ^m										
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	141	45.2	221	49.0	-21	10.9	115	35.2	+11	18.3	243	03.0	-22	24.4	214	19.2	-22	01.4							
1	156	47.7	236	48.3		10.8	130	36.1		18.9	258	05.0		24.4	229	21.4		01.3							
2	171	50.2	251	47.7		10.8	145	37.0		19.5	273	07.1		24.5	244	23.6		01.3							
3	186	52.6	266	47.1		10.7	160	37.8		20.2	288	09.1		24.5	259	25.8		01.3							
4	201	55.1	281	46.4		10.7	175	38.7		20.8	303	11.2		24.5	274	28.0		01.2							
5	216	57.6	296	45.8	-21	10.6	190	39.6	+11	21.4	318	13.2	-22	24.6	289	30.2	-22	01.2							
6	232	00.0	311	45.1	-21	10.6	205	40.4	+11	22.1	333	15.3	-22	24.6	304	32.3	-22	01.2							
7	247	02.5	326	44.5		10.5	220	41.3		22.7	348	17.3		24.6	319	34.5		01.2							
8	262	05.0	341	43.9		10.5	235	42.2		23.3	3	19.4		24.6	334	36.7		01.1							
9	277	07.4	356	43.2		10.4	250	43.0		24.0	18	21.4		24.7	349	38.9		01.1							
10	292	09.9	11	42.6		10.4	265	43.9		24.6	33	23.5		24.7	4	41.1		01.1							
11	307	12.3	26	41.9	-21	10.3	280	44.8	+11	25.2	48	25.5	-22	24.7	19	43.3	-22	01.0							
12	322	14.8	41	41.3	-21	10.3	295	45.6	+11	25.9	63	27.6	-22	24.8	34	45.5	-22	01.0							
13	337	17.3	56	40.6		10.2	310	46.5		26.5	78	29.6		24.8	49	47.7		01.0							
14	352	19.7	71	40.0		10.2	325	47.3		27.1	93	31.7		24.8	64	49.9		01.0							
15	7	22.2	86	39.3		10.1	340	48.2		27.8	108	33.8		24.8	79	52.1		00.9							
16	22	24.7	101	38.7		10.0	355	49.1		28.4	123	35.8		24.9	94	54.3		00.9							
17	37	27.1	116	38.1	-21	10.0	10	49.9	+11	29.0	138	37.9	-22	24.9	109	56.4	-22	00.9							
18	52	29.6	131	37.4	-21	09.9	25	50.8	+11	29.7	153	39.9	-22	24.9	124	58.6	-22	00.8							
19	67	32.1	146	36.8		09.9	40	51.7		30.3	168	42.0		25.0	140	00.8		00.8							
20	82	34.5	161	36.1		09.8	55	52.5		30.9	183	44.0		25.0	155	03.0		00.8							
21	97	37.0	176	35.5		09.7	70	53.4		31.6	198	46.1		25.0	170	05.2		00.8							
22	112	39.4	191	34.8		09.7	85	54.3		32.2	213	48.1		25.0	185	07.4		00.7							
23	127	41.9	206	34.2		09.6	100	55.1		32.8	228	50.2		25.1	200	09.6		00.7							
24	142	44.4	221	33.5	-21	09.5	115	56.0	+11	33.4	243	52.2	-22	25.1	215	11.8	-22	00.7							
Dif.	—		-6		+1		+9		+6		+21		0		+22										

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2				SD: 15'5		PHE { 4 ^h : 57'2													
	PMG: 12 ^h 14 ^m 2				Edad: 8 ^d 1		{ 12 ^h : 57'4													
							{ 20 ^h : 57'8													
	PMG: 18 ^h 42 ^m				Rº: 54 ^m															
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'			°	'			°	'	h	m	h	m	h	m
0	176	26.8	-13	31.6	89	10.4	110	+14	28.6	91	60 N	16 45	17 29	18 19	10 27	25	1 55	82		
1	191	26.8		30.7	103	40.4	109		37.7	90	58	52	34	20	37	27	45	80		
2	206	26.8		29.9	118	10.3	109		46.7	90	56	16 59	38	22	45	31	37	77		
3	221	26.8		29.0	132	40.2	107	+14	55.7	89	54	17 04	42	23	10 53	32	30	75		
4	236	26.8		28.2	147	09.9	107	+15	04.6	88	52	10	45	25	11 00	34	24	72		
5	251	26.8	-13	27.4	161	39.6	106	+15	13.4	87	50	17 14	17 48	18 26	11 06	36	1 18	71		
6	266	26.8	-13	26.5	176	09.2	104	+15	22.1	87	45	17 25	17 55	18 29	11 20	39	1 05	68		
7	281	26.9		25.7	190	38.6	104		30.8	86	40	33	18 01	33	31	42	0 55	65		
8	296	26.9		24.8	205	08.0	104		39.4	86	35	40	06	36	41	43	46	63		
9	311	26.9		24.0	219	37.4	102		48.0	85	30	47	11	40	11 49	46	39	60		
10	326	26.9		23.2	234	06.6	101	+15	56.5	83	20	17 58	21	47	12 04	49	25	57		
11	341	26.9	-13	22.3	248	35.7	100	+16	04.8	84	10 N	18 08	18 30	18 55	12 17	51	0 14	54		
12	356	26.9	-13	21.5	263	04.7	100	+16	13.2	82	0	18 18	18 39	19 04	12 29	54	0 03	51		
13	11	26.9		20.6	277	33.7	99		21.4	82	10 S	27	18 49	14	41	56	***	***		
14	26	27.0		19.8	292	02.6	97		29.6	81	20	38	19 00	27	12 55	58	***	***		
15	41	27.0		19.0	306	31.3	97		37.7	80	30	49	14	44	13 10	61	***	***		
16	56	27.0		18.1	321	00.0	96		45.7	79	35	18 56	23	19 55	19	63	***	***		
17	71	27.0	-13	17.3	335	28.6	95	+16	53.6	78	40	19 04	19 33	20 08	13 29	65	23 49	45		
18	86	27.0	-13	16.4	349	57.1	94	+17	01.4	78	45	19 14	19 45	20 24	13 41	68	23 37	42		
19	101	27.0		15.6	4	25.5	93		09.2	77	50	25	20 01	45	13 55	71	21	40		
20	116	27.0		14.7	18	53.8	92		16.9	75	52	30	08	20 56	14 02	73	14	38		
21	131	27.1		13.9	33	22.0	91		24.4	75	54	36	16	21 08	10	74	23 06	37		
22	146	27.1		13.1	47	50.1	90		31.9	74	56	42	25	22	18	77	22 57	35		
23	161	27.1		12.2	62	18.1	89		39.3	74	58	50	36	21 39	28	79	47	32		
24	176	27.1	-13	11.4	76	46.0		+17	46.7		60 S	19 58	20 48	22 00	14 39	82	22 35	30		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG		Mag: -4.2				Mag: +1.0				Mag: -1.9				Mag: +0.6					
	14 ^h 26 ^m 7		PMG: 09 ^h 14 ^m				PMG: 16 ^h 15 ^m				PMG: 07 ^h 43 ^m				PMG: 09 ^h 38 ^m					
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	142	44.4	221	33.5	-21	09.5	115	56.0	+11	33.4	243	52.2	-22	-25.1	215	11.8	-22	00.7		
1	157	46.8	236	32.9		09.5	130	56.8		34.1	258	54.3		-25.1	230	14.0		00.6		
2	172	49.3	251	32.3		09.4	145	57.7		34.7	273	56.4		-25.2	245	16.2		00.6		
3	187	51.8	266	31.6		09.3	160	58.6		35.3	288	58.4		-25.2	260	18.4		00.6		
4	202	54.2	281	31.0		09.3	175	59.4		36.0	304	00.5		-25.2	275	20.6		00.6		
5	217	56.7	296	30.3	-21	09.2	191	00.3	+11	36.6	319	02.5	-22	-25.2	290	22.8	-22	00.5		
6	232	59.2	311	29.7	-21	09.1	206	01.2	+11	37.2	334	04.6	-22	-25.3	305	24.9	-22	00.5		
7	248	01.6	326	29.0		09.0	221	02.0		37.9	349	06.6		-25.3	320	27.1		00.5		
8	263	04.1	341	28.4		09.0	236	02.9		38.5	4	08.7		-25.3	335	29.3		00.4		
9	278	06.6	356	27.7		08.9	251	03.7		39.1	19	10.8		-25.4	350	31.5		00.4		
10	293	09.0	11	27.1		08.8	266	04.6		39.7	34	12.8		-25.4	5	33.7		00.4		
11	308	11.5	26	26.4	-21	08.7	281	05.5	+11	40.4	49	14.9	-22	-25.4	20	35.9	-22	00.4		
12	323	13.9	41	25.8	-21	08.7	296	06.3	+11	41.0	64	16.9	-22	-25.4	35	38.1	-22	00.3		
13	338	16.4	56	25.1		08.6	311	07.2		41.6	79	19.0		-25.5	50	40.3		00.3		
14	353	18.9	71	24.5		08.5	326	08.1		42.3	94	21.1		-25.5	65	42.5		00.3		
15	8	21.3	86	23.9		08.4	341	08.9		42.9	109	23.1		-25.5	80	44.7		00.2		
16	23	23.8	101	23.2		08.3	356	09.8		43.5	124	25.2		-25.6	95	46.9		00.2		
17	38	26.3	116	22.6	-21	08.3	11	10.6	+11	44.2	139	27.2	-22	-25.6	110	49.1	-22	00.2		
18	53	28.7	131	21.9	-21	08.2	26	11.5	+11	44.8	154	29.3	-22	-25.6	125	51.3	-22	00.2		
19	68	31.2	146	21.3		08.1	41	12.4		45.4	169	31.4		-25.6	140	53.5		00.1		
20	83	33.7	161	20.6		08.0	56	13.2		46.0	184	33.4		-25.7	155	55.6		00.1		
21	98	36.1	176	20.0		07.9	71	14.1		46.7	199	35.5		-25.7	170	57.8		00.1		
22	113	38.6	191	19.3		07.8	86	14.9		47.3	214	37.5		-25.7	186	00.0		00.0		
23	128	41.1	206	18.7		07.7	101	15.8		47.9	229	39.6		-25.8	201	02.2		00.0		
24	143	43.5	221	18.0	-21	07.6	116	16.7	+11	48.5	244	41.7	-22	-25.8	216	04.4	-22	00.0		
Dif.	—		-6		+1		+9		+6		+21		0		+22					

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna										
	SD: 16°2					SD: 15°8		PHE {		R°: 58 ^m																		
	PMG: 12 ^h 14 ^m 2					Edad: 9 ^d 1		4 ^h : 58°1 12 ^h : 58°4 20 ^h : 58°7																				
	hG ☉		Dec		hG ☾		Dif.		Dec			Dif.			Náut.	Civil	Hora	R°	Hora	R°								
h	°	'	°	'	°	'		°	'			h m	h m	h m	h m m	h m m	h m m											
0	176	27.1	-13	11.4	76	46.0	89	+17	46.7	72	60 N	6 09	6 58	7 42	10 52	36	3 17 80											
1	191	27.1		10.5	91	13.9	87	+17	53.9	71	58	07	53	35	11 04	40	3 05 77											
2	206	27.2		09.7	105	41.6	86	+18	01.0	71	56	06	49	28	16 41		2 54 75											
3	221	27.2		08.8	120	09.2	86		08.1	69	54	04	46	23	25 43		45 73											
4	236	27.2		08.0	134	36.8	84		15.0	69	52	03	43	18	34 44		36 72											
5	251	27.2	-13	07.1	149	04.2	84	+18	21.9	67	50	6 02	6 40	7 13	11 42	45	2 29 70											
6	266	27.2	-13	06.3	163	31.6	83	+18	28.6	67	45	5 58	6 33	7 03	11 59	47	2 13 67											
7	281	27.3		05.4	177	58.9	81		35.3	65	40	55	27	6 55	12 13	49	2 00 65											
8	296	27.3		04.6	192	26.0	81		41.8	65	35	52	22	47	24 51		1 49 63											
9	311	27.3		03.7	206	53.1	80		48.3	63	30	48	17	41	35 52		39 62											
10	326	27.3		02.9	221	20.1	79	+18	54.6	63	20	41	6 07	30	12 53	54	22 60											
11	341	27.3	-13	02.0	235	47.0	78	+19	00.9	61	10 N	5 34	5 59	6 20	13 08	56	1 08 57											
12	356	27.4	-13	01.2	250	13.8	77	+19	07.0	61	0	5 25	5 50	6 11	13 23	57	0 54 56											
13	11	27.4	-13	00.3	264	40.5	76		13.1	59	10 S	14	40	6 01	37 59		41 53											
14	26	27.4	-12	59.5	279	07.1	75		19.0	58	20	5 01	28	5 51	13 53	61	26 51											
15	41	27.4		58.6	293	33.6	74		24.8	57	30	4 45	14	39	14 11	63	10 48											
16	56	27.5		57.8	308	00.0	73		30.5	56	35	34	5 06	32	22 64		0 00 47											
17	71	27.5	-12	56.9	322	26.3	73	+19	36.1	55	40	4 21	4 56	5 25	14 34	65	*** ** *											
18	86	27.5	-12	56.1	336	52.6	71	+19	41.6	54	45	4 05	4 44	5 15	14 49	67	*** ** *											
19	101	27.5		55.2	351	18.7	71		47.0	52	50	3 44	29	5 04	15 06	69	*** ** *											
20	116	27.6		54.4	5	44.8	69		52.2	52	52	33	21	4 59	15 70		23 52 50											
21	131	27.6		53.5	20	10.7	69	+19	57.4	50	54	21	13	53	24 71		43 48											
22	146	27.6		52.7	34	36.6	68	+20	02.4	49	56	3 07	4 04	47	35 72		32 47											
23	161	27.6		51.8	49	02.4	67		07.3	48	58	2 50	3 54	40	15 47	74	23 19 46											
24	176	27.7	-12	51.0	63	28.1		+20	12.1		60 S	2 29	3 41	4 31	16 01	77	23 05 44											
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO													
	PMG 14 ^h 22 ^m 7		Mag: -4.2 PMG: 09 ^h 15 ^m				Mag: +1.0 PMG: 16 ^h 14 ^m				Mag: -1.9 PMG: 07 ^h 40 ^m				Mag: +0.6 PMG: 09 ^h 34 ^m													
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.											
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'										
0	143	43.5	221	18.0	-21	07.6	116	16.7	+11	48.5	244	41.7	-22	25.8	216	04.4	-22	00.0										
1	158	46.0	236	17.4		07.6	131	17.5		49.2	259	43.7		25.8	231	06.6	-22	00.0										
2	173	48.4	251	16.7		07.5	146	18.4		49.8	274	45.8		25.8	246	08.8	-21	59.9										
3	188	50.9	266	16.1		07.4	161	19.2		50.4	289	47.8		25.9	261	11.0		59.9										
4	203	53.4	281	15.4		07.3	176	20.1		51.1	304	49.9		25.9	276	13.2		59.9										
5	218	55.8	296	14.8	-21	07.2	191	21.0	+11	51.7	319	52.0	-22	25.9	291	15.4	-21	59.8										
6	233	58.3	311	14.1	-21	07.1	206	21.8	+11	52.3	334	54.0	-22	26.0	306	17.6	-21	59.8										
7	249	00.8	326	13.5		07.0	221	22.7		52.9	349	56.1		26.0	321	19.8		59.8										
8	264	03.2	341	12.8		06.9	236	23.5		53.6	4	58.2		26.0	336	22.0		59.8										
9	279	05.7	356	12.2		06.8	251	24.4		54.2	20	00.2		26.0	351	24.2		59.7										
10	294	08.2	11	11.5		06.7	266	25.3		54.8	35	02.3		26.1	6	26.4		59.7										
11	309	10.6	26	10.9	-21	06.6	281	26.1	+11	55.4	50	04.3	-22	26.1	21	28.6	-21	59.7										
12	324	13.1	41	10.2	-21	06.5	296	27.0	+11	56.1	65	06.4	-22	26.1	36	30.8	-21	59.6										
13	339	15.6	56	09.6		06.4	311	27.8		56.7	80	08.5		26.1	51	33.0		59.6										
14	354	18.0	71	08.9		06.3	326	28.7		57.3	95	10.5		26.2	66	35.2		59.6										
15	9	20.5	86	08.3		06.2	341	29.6		57.9	110	12.6		26.2	81	37.3		59.6										
16	24	22.9	101	07.6		06.1	356	30.4		58.6	125	14.7		26.2	96	39.5		59.5										
17	39	25.4	116	07.0	-21	06.0	11	31.3	+11	59.2	140	16.7	-22	26.3	111	41.7	-21	59.5										
18	54	27.9	131	06.3	-21	05.9	26	32.1	+11	59.8	155	18.8	-22	26.3	126	43.9	-21	59.5										
19	69	30.3	146	05.7		05.7	41	33.0	+12	00.4	170	20.9		26.3	141	46.1		59.4										
20	84	32.8	161	05.0		05.6	56	33.9		01.1	185	22.9		26.3	156	48.3		59.4										
21	99	35.3	176	04.4		05.5	71	34.7		01.7	200	25.0		26.4	171	50.5		59.4										
22	114	37.7	191	03.7		05.4	86	35.6		02.3	215	27.1		26.4	186	52.7		59.4										
23	129	40.2	206	03.1		05.3	101	36.4		02.9	230	29.1		26.4	201	54.9		59.3										
24	144	42.7	221	02.4	-21	05.2	116	37.3	+12	03.5	245	31.2	-22	26.4	216	57.1	-21	59.3										
Dif.	—		-7		+1		+9		+6		+21		0		+22													

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 12 ^h 14 ^m 1			SD: 16:0 Edad: 10 ^d 1 PHE { 4 ^h : 59:0 12 ^h : 59:3 20 ^h : 59:6 PMG: 20 ^h 34 ^m Rº: 62 ^m																		
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº					
	°	'	°	'	°	'	°	'	°			h	m	h	m	h	m	h	m			
h																						
0	176	27.7	-12	51.0	63	28.1	66	+20	12.1	46	60 N	16 50	17 34	18 23	11 28	54	4 37	71				
1	191	27.7		50.1	77	53.7	65		16.7	46	58	16 57	38	24	44	54	22	69				
2	206	27.7		49.3	92	19.2	64		21.3	44	56	17 03	42	26	11 57	55	4 09	68				
3	221	27.7		48.4	106	44.6	64		25.7	43	54	09	45	27	12 08	56	3 58	67				
4	236	27.8		47.5	121	10.0	62		30.0	41	52	13	48	28	18	57	48	67				
5	251	27.8	-12	46.7	135	35.2	62	+20	34.1	41	50	17 18	17 51	18 29	12 27	57	3 39	66				
6	266	27.8	-12	45.8	150	00.4	61	+20	38.2	39	45	17 27	17 58	18 32	12 46	58	3 20	65				
7	281	27.8		45.0	164	25.5	60		42.1	38	40	35	18 03	35	13 02	58	3 05	64				
8	296	27.9		44.1	178	50.5	59		45.9	36	35	42	08	38	15	59	2 52	63				
9	311	27.9		43.3	193	15.4	59		49.5	35	30	48	13	41	27	59	41	63				
10	326	27.9		42.4	207	40.3	57		53.0	34	20	17 59	22	48	13 47	59	22	61				
11	341	28.0	-12	41.6	222	05.0	57	+20	56.4	32	10 N	18 09	18 30	18 55	14 04	60	2 05	60				
12	356	28.0	-12	40.7	236	29.7	56	+20	59.6	32	0	18 18	18 39	19 03	14 20	61	1 50	59				
13	11	28.0		39.8	250	54.3	56	+21	02.8	29	10 S	27	48	13	36	62	34	58				
14	26	28.1		39.0	265	18.9	54		05.7	29	20	36	18 59	26	14 54	61	1 17	57				
15	41	28.1		38.1	279	43.3	54		08.6	27	30	48	19 13	42	15 14	62	0 58	56				
16	56	28.1		37.3	294	07.7	53		11.3	25	35	18 54	21	19 52	26	62	47	55				
17	71	28.2	-12	36.4	308	32.0	52	+21	13.8	25	40	19 02	19 30	20 05	15 39	63	0 34	54				
18	86	28.2	-12	35.5	322	56.2	52	+21	16.3	23	45	19 11	19 42	20 21	15 56	62	0 19	53				
19	101	28.2		34.7	337	20.4	51		18.6	21	50	21	19 57	41	16 15	63	0 01	51				
20	116	28.2		33.8	351	44.5	50		20.7	20	52	26	20 03	20 51	25	63	***	***				
21	131	28.3		33.0	6	08.5	49		22.7	18	54	32	11	21 02	35	64	***	***				
22	146	28.3		32.1	20	32.4	49		24.5	18	56	38	20	15	16 47	64	***	***				
23	161	28.3		31.2	34	56.3	49		26.3	15	58	45	30	31	17 01	64	***	***				
24	176	28.4	-12	30.4	49	20.2		+21	27.8		60 S	19 52	20 42	21 51	17 18	64	23 49	63				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG 14 ^h 18 ^m 8		Mag: -4.2 PMG: 09 ^h 16 ^m				Mag: +1.0 PMG: 16 ^h 13 ^m				Mag: -2.0 PMG: 07 ^h 37 ^m				Mag: +0.6 PMG: 09 ^h 31 ^m							
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	144	42.7	221	02.4	-21	05.2	116	37.3	+12	03.5	245	31.2	-22	-26.4	216	57.1	-21	59.3				
1	159	45.1	236	01.8		05.1	131	38.1		04.2	260	33.3		-26.5	231	59.3		59.3				
2	174	47.6	251	01.1		04.9	146	39.0		04.8	275	35.3		-26.5	247	01.5		59.2				
3	189	50.0	266	00.5		04.8	161	39.9		05.4	290	37.4		-26.5	262	03.7		59.2				
4	204	52.5	280	59.8		04.7	176	40.7		06.0	305	39.5		-26.6	277	05.9		59.2				
5	219	55.0	295	59.2	-21	04.6	191	41.6	+12	06.7	320	41.5	-22	-26.6	292	08.1	-21	59.2				
6	234	57.4	310	58.5	-21	04.5	206	42.4	+12	07.3	335	43.6	-22	-26.6	307	10.3	-21	59.1				
7	249	59.9	325	57.8		04.4	221	43.3		07.9	350	45.7		-26.6	322	12.5		59.1				
8	265	02.4	340	57.2		04.2	236	44.1		08.5	5	47.7		-26.7	337	14.7		59.1				
9	280	04.8	355	56.5		04.1	251	45.0		09.1	20	49.8		-26.7	352	16.9		59.1				
10	295	07.3	10	55.9		04.0	266	45.9		09.8	35	51.9		-26.7	7	19.1		59.0				
11	310	09.8	25	55.2	-21	03.9	281	46.7	+12	10.4	50	53.9	-22	-26.7	22	21.3	-21	59.0				
12	325	12.2	40	54.6	-21	03.7	296	47.6	+12	11.0	65	56.0	-22	-26.8	37	23.5	-21	59.0				
13	340	14.7	55	53.9		03.6	311	48.4		11.6	80	58.1		-26.8	52	25.7		58.9				
14	355	17.2	70	53.3		03.5	326	49.3		12.3	96	00.1		-26.8	67	27.9		58.9				
15	10	19.6	85	52.6		03.3	341	50.1		12.9	111	02.2		-26.8	82	30.1		58.9				
16	25	22.1	100	52.0		03.2	356	51.0		13.5	126	04.3		-26.9	97	32.3		58.9				
17	40	24.5	115	51.3	-21	03.1	11	51.9	+12	14.1	141	06.4	-22	-26.9	112	34.5	-21	58.8				
18	55	27.0	130	50.7	-21	03.0	26	52.7	+12	14.7	156	08.4	-22	-26.9	127	36.7	-21	58.8				
19	70	29.5	145	50.0		02.8	41	53.6		15.4	171	10.5		-27.0	142	38.9		58.8				
20	85	31.9	160	49.4		02.7	56	54.4		16.0	186	12.6		-27.0	157	41.1		58.7				
21	100	34.4	175	48.7		02.6	71	55.3		16.6	201	14.6		-27.0	172	43.3		58.7				
22	115	36.9	190	48.0		02.4	86	56.1		17.2	216	16.7		-27.0	187	45.5		58.7				
23	130	39.3	205	47.4		02.3	101	57.0		17.8	231	18.8		-27.1	202	47.7		58.7				
24	145	41.8	220	46.7	-21	02.1	116	57.8	+12	18.5	246	20.9	-22	-27.1	217	49.9	-21	58.6				
Dif.	—		-7				+9				+6				+21				0			

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 14 ^m 1				SD: 16'3 Edad: 11 ^d 1 PHE 4^h: 59'9 12^h: 60'2 20^h: 60'4 PMG: 21 ^h 36 ^m Rº: 62^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº					
h	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	m	
0	176	28.4	-12	30.4	49	20.2	47	+21	27.8	14	60 N	6 04	6 53	7 36	12 22	73	5 48 55	
1	191	28.4		29.5	63	43.9	47		29.2	13	58	03	49	30	38	72	31 57	
2	206	28.5		28.6	78	07.6	47		30.5	11	56	02	45	24	12 52	71	17 58	
3	221	28.5		27.8	92	31.3	45		31.6	10	54	6 01	42	18	13 04	70	5 05 58	
4	236	28.5		26.9	106	54.8	46		32.6	8	52	5 59	39	14	15	69	4 55 58	
5	251	28.6	-12	26.0	121	18.4	44	+21	33.4	7	50	5 58	6 36	7 09	13 24	69	4 45 59	
6	266	28.6	-12	25.2	135	41.8	44	+21	34.1	5	45	5 56	6 30	7 00	13 44	68	4 25 60	
7	281	28.6		24.3	150	05.2	44		34.6	4	40	53	24	6 52	14 00	67	4 09 60	
8	296	28.7		23.5	164	28.6	43		35.0	2	35	50	19	45	14	66	3 55 61	
9	311	28.7		22.6	178	51.9	43		35.2	1	30	47	15	39	26	65	44 60	
10	326	28.7		21.7	193	15.2	42		35.3	1	20	40	6 06	29	14 46	65	23 61	
11	341	28.8	-12	20.9	207	38.4	42	+21	35.2	2	10 N	5 33	5 58	6 20	15 04	63	3 05 62	
12	356	28.8	-12	20.0	222	01.6	41	+21	35.0	4	0	5 25	5 50	6 11	15 21	62	2 49 61	
13	11	28.9		19.1	236	24.7	41		34.6	6	10 S	15	40	6 02	38	61	32 62	
14	26	28.9		18.3	250	47.8	40		34.0	7	20	5 03	29	5 52	15 55	60	2 14 62	
15	41	28.9		17.4	265	10.8	40		33.3	9	30	4 46	16	41	16 16	59	1 54 62	
16	56	29.0		16.5	279	33.8	40		32.4	10	35	36	5 08	34	28	58	42 62	
17	71	29.0	-12	15.6	293	56.8	39	+21	31.4	11	40	4 24	4 58	5 27	16 42	57	1 28 63	
18	86	29.0	-12	14.8	308	19.7	39	+21	30.3	14	45	4 08	4 47	5 18	16 58	56	1 12 63	
19	101	29.1		13.9	322	42.6	39		28.9	15	50	3 48	32	08	17 18	54	0 52 63	
20	116	29.1		13.0	337	05.5	38		27.4	16	52	38	26	5 03	28	53	42 63	
21	131	29.2		12.2	351	28.3	39		25.8	18	54	27	18	4 57	39	52	31 63	
22	146	29.2		11.3	5	51.2	37		24.0	20	56	3 14	4 09	51	17 51	51	19 63	
23	161	29.2		10.4	20	13.9	38		22.0	21	58	2 58	3 59	44	18 05	49	0 05 63	
24	176	29.3	-12	09.6	34	36.7		+21	19.9		60 S	2 38	3 48	4 37	18 22	47	*** **	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG		Mag: -4.2			Mag: +1.0			Mag: -2.0			Mag: +0.6		
	14 ^h 14 ^m 9		PMG: 09 ^h 17 ^m			PMG: 16 ^h 11 ^m			PMG: 07 ^h 34 ^m			PMG: 09 ^h 27 ^m		
	hG ♈	hG ♀	dec.	hG ♂	dec.	hG ♃	dec.	hG ♄	dec.	hG ♅	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	145	41.8	220	46.7	-21 02.1	116	57.8	+12 18.5	246	20.9	-22 27.1	217	49.9	-21 58.6
1	160	44.3	235	46.1	02.0	131	58.7	19.1	261	22.9	27.1	232	52.1	58.6
2	175	46.7	250	45.4	01.9	146	59.6	19.7	276	25.0	27.1	247	54.3	58.6
3	190	49.2	265	44.8	01.7	162	00.4	20.3	291	27.1	27.2	262	56.4	58.5
4	205	51.7	280	44.1	01.6	177	01.3	20.9	306	29.1	27.2	277	58.6	58.5
5	220	54.1	295	43.5	-21 01.4	192	02.1	+12 21.5	321	31.2	-22 27.2	293	00.8	-21 58.5
6	235	56.6	310	42.8	-21 01.3	207	03.0	+12 22.2	336	33.3	-22 27.2	308	03.0	-21 58.5
7	250	59.0	325	42.2	01.1	222	03.8	22.8	351	35.4	27.3	323	05.2	58.4
8	266	01.5	340	41.5	01.0	237	04.7	23.4	6	37.4	27.3	338	07.4	58.4
9	281	04.0	355	40.8	00.9	252	05.5	24.0	21	39.5	27.3	353	09.6	58.4
10	296	06.4	10	40.2	00.7	267	06.4	24.6	36	41.6	27.3	8	11.8	58.3
11	311	08.9	25	39.5	-21 00.6	282	07.3	+12 25.2	51	43.7	-22 27.4	23	14.0	-21 58.3
12	326	11.4	40	38.9	-21 00.4	297	08.1	+12 25.9	66	45.7	-22 27.4	38	16.2	-21 58.3
13	341	13.8	55	38.2	00.3	312	09.0	26.5	81	47.8	27.4	53	18.4	58.3
14	356	16.3	70	37.6	-21 00.1	327	09.8	27.1	96	49.9	27.5	68	20.6	58.2
15	11	18.8	85	36.9	-20 59.9	342	10.7	27.7	111	52.0	27.5	83	22.8	58.2
16	26	21.2	100	36.3	59.8	357	11.5	28.3	126	54.0	27.5	98	25.0	58.2
17	41	23.7	115	35.6	-20 59.6	12	12.4	+12 28.9	141	56.1	-22 27.5	113	27.2	-21 58.1
18	56	26.2	130	34.9	-20 59.5	27	13.2	+12 29.6	156	58.2	-22 27.6	128	29.4	-21 58.1
19	71	28.6	145	34.3	59.3	42	14.1	30.2	172	00.3	27.6	143	31.6	58.1
20	86	31.1	160	33.6	59.2	57	14.9	30.8	187	02.3	27.6	158	33.8	58.1
21	101	33.5	175	33.0	59.0	72	15.8	31.4	202	04.4	27.6	173	36.0	58.0
22	116	36.0	190	32.3	58.8	87	16.6	32.0	217	06.5	27.7	188	38.2	58.0
23	131	38.5	205	31.7	58.7	102	17.5	32.6	232	08.6	27.7	203	40.4	58.0
24	146	40.9	220	31.0	-20 58.5	117	18.4	+12 33.3	247	10.6	-22 27.7	218	42.6	-21 57.9
Dif.	—		-7		+2	+9		+6	+21		0	+22		0

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2			SD: 16'5 Edad: 12 ^d 1	PHE { 4 ^h : 60'7 12 ^h : 60'9 20 ^h : 61'1	PMG: 22 ^h 38 ^m			R ^o : 61 ^m									
	hG ☉	Dec				hG ☾	Dif.	Dec				Dif.						
	h	°	'	°	'	°	'	°	'			°	h m	h m	h m	h m m	h m m	
0	176	29.3	-12	09.6	34	36.7	37	+21	19.9	23	60 N	16 56	17 39	18 28	13 35	89	6 43	40
1	191	29.3		08.7	48	59.4	38		17.6	24	58	17 02	43	29	13 50	86	28	42
2	206	29.4		07.8	63	22.2	37		15.2	26	56	07	46	30	14 03	84	15	44
3	221	29.4		06.9	77	44.9	37		12.6	27	54	13	49	30	14	82	6 03	47
4	236	29.5		06.1	92	07.6	36		09.9	29	52	17	52	31	24	80	5 53	48
5	251	29.5	-12	05.2	106	30.2	37	+21	07.0	31	50	17 21	17 55	18 32	14 33	78	5 44	49
6	266	29.5	-12	04.3	120	52.9	37	+21	03.9	32	45	17 30	18 00	18 35	14 52	75	5 25	51
7	281	29.6		03.5	135	15.6	36	+21	00.7	34	40	38	05	37	15 07	73	5 09	54
8	296	29.6		02.6	149	38.2	36	+20	57.3	35	35	44	10	40	20	71	4 56	55
9	311	29.7		01.7	164	00.8	37		53.8	37	30	17 50	14	42	31	70	44	57
10	326	29.7		00.8	178	23.5	36		50.1	39	20	18 00	22	48	15 51	66	24	59
11	341	29.8	-12	00.0	192	46.1	36	+20	46.2	40	10 N	18 09	18 30	18 55	16 07	65	4 07	60
12	356	29.8	-11	59.1	207	08.7	37	+20	42.2	42	0	18 17	18 39	19 03	16 23	62	3 50	63
13	11	29.9		58.2	221	31.4	36		38.0	43	10 S	26	47	13	39	59	34	64
14	26	29.9		57.3	235	54.0	36		33.7	45	20	35	18 58	24	16 55	58	3 16	66
15	41	29.9		56.5	250	16.6	37		29.2	46	30	46	19 11	40	17 15	54	2 56	68
16	56	30.0		55.6	264	39.3	36		24.6	48	35	52	18	19 50	26	52	44	69
17	71	30.0	-11	54.7	279	01.9	37	+20	19.8	49	40	18 59	19 28	20 02	17 39	50	2 31	70
18	86	30.1	-11	53.8	293	24.6	37	+20	14.9	51	45	19 08	19 39	20 17	17 54	48	2 15	71
19	101	30.1		53.0	307	47.3	37		09.8	53	50	18	52	36	18 12	45	1 55	74
20	116	30.2		52.1	322	10.0	37	+20	04.5	54	52	22	19 59	45	21	43	45	75
21	131	30.2		51.2	336	32.7	37	+19	59.1	55	54	27	20 06	20 56	31	41	34	77
22	146	30.3		50.3	350	55.4	37		53.6	57	56	33	15	21 09	42	39	22	78
23	161	30.3		49.4	5	18.1	38		47.9	59	58	39	24	24	18 54	37	1 08	80
24	176	30.4	-11	48.6	19	40.9		+19	42.0		60 S	19 47	20 35	21 42	19 09	33	0 52	82
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 10 ^m 9		Mag: -4.2 PMG: 09 ^h 18 ^m				Mag: +1.1 PMG: 16 ^h 10 ^m				Mag: -2.0 PMG: 07 ^h 30 ^m				Mag: +0.6 PMG: 09 ^h 24 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	146	40.9	220	31.0	-20	58.5	117	18.4	+12	33.3	247	10.6	-22	-27.7	218	42.6	-21	57.9
1	161	43.4	235	30.4		58.4	132	19.2		33.9	262	12.7		-27.7	233	44.9		57.9
2	176	45.9	250	29.7		58.2	147	20.1		34.5	277	14.8		-27.8	248	47.1		57.9
3	191	48.3	265	29.0		58.0	162	20.9		35.1	292	16.9		-27.8	263	49.3		57.9
4	206	50.8	280	28.4		57.9	177	21.8		35.7	307	19.0		-27.8	278	51.5		57.8
5	221	53.3	295	27.7	-20	57.7	192	22.6	+12	36.3	322	21.0	-22	-27.8	293	53.7	-21	57.8
6	236	55.7	310	27.1	-20	57.5	207	23.5	+12	36.9	337	23.1	-22	-27.9	308	55.9	-21	57.8
7	251	58.2	325	26.4		57.4	222	24.3		37.6	352	25.2		-27.9	323	58.1		57.7
8	267	00.7	340	25.8		57.2	237	25.2		38.2	7	27.3		-27.9	339	00.3		57.7
9	282	03.1	355	25.1		57.0	252	26.0		38.8	22	29.4		-27.9	354	02.5		57.7
10	297	05.6	10	24.4		56.8	267	26.9		39.4	37	31.4		-28.0	9	04.7		57.7
11	312	08.0	25	23.8	-20	56.7	282	27.7	+12	40.0	52	33.5	-22	-28.0	24	06.9	-21	57.6
12	327	10.5	40	23.1	-20	56.5	297	28.6	+12	40.6	67	35.6	-22	-28.0	39	09.1	-21	57.6
13	342	13.0	55	22.5		56.3	312	29.4		41.2	82	37.7		-28.0	54	11.3		57.6
14	357	15.4	70	21.8		56.1	327	30.3		41.8	97	39.8		-28.1	69	13.5		57.6
15	12	17.9	85	21.2		56.0	342	31.1		42.5	112	41.8		-28.1	84	15.7		57.5
16	27	20.4	100	20.5		55.8	357	32.0		43.1	127	43.9		-28.1	99	17.9		57.5
17	42	22.8	115	19.8	-20	55.6	12	32.8	+12	43.7	142	46.0	-22	-28.1	114	20.1	-21	57.5
18	57	25.3	130	19.2	-20	55.4	27	33.7	+12	44.3	157	48.1	-22	-28.2	129	22.3	-21	57.4
19	72	27.8	145	18.5		55.2	42	34.5		44.9	172	50.2		-28.2	144	24.5		57.4
20	87	30.2	160	17.9		55.1	57	35.4		45.5	187	52.2		-28.2	159	26.7		57.4
21	102	32.7	175	17.2		54.9	72	36.2		46.1	202	54.3		-28.2	174	28.9		57.4
22	117	35.1	190	16.6		54.7	87	37.1		46.7	217	56.4		-28.3	189	31.1		57.3
23	132	37.6	205	15.9		54.5	102	37.9		47.3	232	58.5		-28.3	204	33.3		57.3
24	147	40.1	220	15.2	-20	54.3	117	38.8	+12	48.0	248	00.6	-22	-28.3	219	35.5	-21	57.3
Dif.	—		-7		+2		+9		+6		+21		0		+22		0	

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 13 ^m 9				SD: 16'7 Edad: 13 ^d 1		PHE { 4 ^h : 61'2 12 ^h : 61'3 20 ^h : 61'4		PMG: 23 ^h 39 ^m Rº: 60 ^m									
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº					
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	30.4	-11	48.6	19	40.9	38	+19	42.0	60	5 59	6 47	7 31	15 04	97	7 23	28	
1	191	30.4		47.7	34	03.7	38		36.0	61	58	58	44	25	16	93	7 10	32
2	206	30.5		46.8	48	26.5	38		29.9	63	56	57	41	19	27	90	6 59	34
3	221	30.5		45.9	62	49.3	39		23.6	65	54	57	38	14	36	87	50	36
4	236	30.6		45.0	77	12.2	39		17.1	66	52	56	35	10	44	85	41	38
5	251	30.6	-11	44.2	91	35.1	39	+19	10.5	67	50	5 55	6 33	7 06	15 51	84	6 33	40
6	266	30.7	-11	43.3	105	58.0	39	+19	03.8	69	45	5 53	6 27	6 57	16 07	79	6 16	44
7	281	30.7		42.4	120	20.9	40	+18	56.9	70	40	50	22	50	20	76	6 03	47
8	296	30.8		41.5	134	43.9	40		49.9	72	35	48	17	43	31	73	5 51	49
9	311	30.8		40.6	149	06.9	41		42.7	73	30	45	13	37	41	70	41	51
10	326	30.9		39.8	163	30.0	41		35.4	75	20	39	6 05	28	16 57	67	23	55
11	341	30.9	-11	38.9	177	53.1	41	+18	27.9	76	10 N	5 33	5 57	6 19	17 12	63	5 07	58
12	356	31.0	-11	38.0	192	16.2	42	+18	20.3	77	0	5 25	5 49	6 11	17 25	60	4 53	61
13	11	31.0		37.1	206	39.4	42		12.6	79	10 S	16	41	6 02	38	57	38	64
14	26	31.1		36.2	221	02.6	43	+18	04.7	80	20	5 04	30	5 53	17 53	53	22	67
15	41	31.1		35.3	235	25.9	43	+17	56.7	81	30	4 48	18	42	18 09	49	4 04	70
16	56	31.2		34.5	249	49.2	43		48.6	83	35	38	10	36	18	47	3 53	73
17	71	31.3	-11	33.6	264	12.5	44	+17	40.3	84	40	4 27	5 01	5 29	18 29	44	3 41	75
18	86	31.3	-11	32.7	278	35.9	45	+17	31.9	85	45	4 12	4 50	5 21	18 42	40	3 26	78
19	101	31.4		31.8	292	59.4	45		23.4	86	50	3 53	36	11	18 57	36	09	81
20	116	31.4		30.9	307	22.9	45		14.8	88	52	43	30	07	19 04	34	3 00	84
21	131	31.5		30.0	321	46.4	46	+17	06.0	89	54	32	22	5 01	12	32	2 51	85
22	146	31.5		29.2	336	10.0	47	+16	57.1	91	56	20	14	4 56	21	29	40	88
23	161	31.6		28.3	350	33.7	47		48.0	91	58	3 05	4 05	4 49	19 31	26	2 28	91
24	176	31.6	-11	27.4	4	57.4		+16	38.9		60 S	2 47	3 54	4 42	19 42	23	2 14	94

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 14 ^h 07 ^m 0		Mag: -4.2 PMG: 09 ^h 19 ^m				Mag: +1.1 PMG: 16 ^h 08 ^m				Mag: -2.0 PMG: 07 ^h 27 ^m				Mag: +0.6 PMG: 09 ^h 20 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	147	40.1	220	15.2	-20	54.3	117	38.8	+12	48.0	248	00.6	-22	28.3	219	35.5	-21	57.3
1	162	42.5	235	14.6		54.1	132	39.6		48.6	263	02.7		28.3	234	37.7		57.2
2	177	45.0	250	13.9		54.0	147	40.5		49.2	278	04.7		28.4	249	39.9		57.2
3	192	47.5	265	13.3		53.8	162	41.3		49.8	293	06.8		28.4	264	42.1		57.2
4	207	49.9	280	12.6		53.6	177	42.2		50.4	308	08.9		28.4	279	44.3		57.2
5	222	52.4	295	11.9	-20	53.4	192	43.0	+12	51.0	323	11.0	-22	28.4	294	46.5	-21	57.1
6	237	54.9	310	11.3	-20	53.2	207	43.9	+12	51.6	338	13.1	-22	28.5	309	48.7	-21	57.1
7	252	57.3	325	10.6		53.0	222	44.7		52.2	353	15.2		28.5	324	50.9		57.1
8	267	59.8	340	10.0		52.8	237	45.6		52.8	8	17.2		28.5	339	53.1		57.0
9	283	02.3	355	09.3		52.6	252	46.4		53.4	23	19.3		28.5	354	55.3		57.0
10	298	04.7	10	08.7		52.4	267	47.3		54.0	38	21.4		28.6	9	57.5		57.0
11	313	07.2	25	08.0	-20	52.2	282	48.1	+12	54.7	53	23.5	-22	28.6	24	59.7	-21	57.0
12	328	09.6	40	07.3	-20	52.0	297	49.0	+12	55.3	68	25.6	-22	28.6	40	02.0	-21	56.9
13	343	12.1	55	06.7		51.8	312	49.8		55.9	83	27.7		28.6	55	04.2		56.9
14	358	14.6	70	06.0		51.6	327	50.7		56.5	98	29.8		28.7	70	06.4		56.9
15	13	17.0	85	05.4		51.4	342	51.5		57.1	113	31.8		28.7	85	08.6		56.8
16	28	19.5	100	04.7		51.2	357	52.4		57.7	128	33.9		28.7	100	10.8		56.8
17	43	22.0	115	04.0	-20	51.0	12	53.2	+12	58.3	143	36.0	-22	28.7	115	13.0	-21	56.8
18	58	24.4	130	03.4	-20	50.8	27	54.1	+12	58.9	158	38.1	-22	28.8	130	15.2	-21	56.8
19	73	26.9	145	02.7		50.6	42	54.9	+12	59.5	173	40.2		28.8	145	17.4		56.7
20	88	29.4	160	02.1		50.4	57	55.8	+13	00.1	188	42.3		28.8	160	19.6		56.7
21	103	31.8	175	01.4		50.2	72	56.6		00.7	203	44.4		28.8	175	21.8		56.7
22	118	34.3	190	00.8		50.0	87	57.5		01.3	218	46.5		28.9	190	24.0		56.6
23	133	36.8	205	00.1		49.8	102	58.3		01.9	233	48.5		28.9	205	26.2		56.6
24	148	39.2	219	59.4	-20	49.6	117	59.2	+13	02.5	248	50.6	-22	28.9	220	28.4	-21	56.6
Dif.	—		-7		+2		+8		+6		+21		0		+22			

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2			SD: 16 ^h 7		PHE { 4 ^h : 61 ^m 5 12 ^h : 61 ^m 5 20 ^h : 61 ^m 4						Edad: 14 ^d 1		Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 13 ^m 8			PMG: ** **		Rº: **												
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº
h	°	'	''	°	'	''	°	'	''	°	h m	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	31.6	-11 27.4	4	57.4	47	+16 38.9	93	60 N	17 01	17 44	18 33	16 41 98	7 51 21				
1	191	31.7	26.5	19	21.1	49	29.6	94	58	07	47	33	49 95	42 23				
2	206	31.8	25.6	33	45.0	48	20.2	96	56	12	50	34	16 57 91	33 27				
3	221	31.8	24.7	48	08.8	50	10.6	96	54	17	53	34	17 03 89	26 29				
4	236	31.9	23.8	62	32.8	49	+16 01.0	97	52	21	55	35	09 87	19 32				
5	251	31.9	-11 22.9	76	56.7	51	+15 51.3	99	50	17 25	17 58	18 35	17 15 84	7 13 34				
6	266	32.0	-11 22.1	91	20.8	51	+15 41.4	100	45	17 33	18 03	18 37	17 26 80	7 00 38				
7	281	32.0	21.2	105	44.9	52	31.4	101	40	40	08	39	36 76	6 50 41				
8	296	32.1	20.3	120	09.1	52	21.3	102	35	46	12	41	44 73	40 44				
9	311	32.2	19.4	134	33.3	53	11.1	103	30	17 52	16	44	17 51 70	32 47				
10	326	32.2	18.5	148	57.6	53	+15 00.8	104	20	18 01	23	49	18 04 65	18 51				
11	341	32.3	-11 17.6	163	21.9	54	+14 50.4	105	10 N	18 09	18 31	18 55	18 15 61	6 05 55				
12	356	32.3	-11 16.7	177	46.3	55	+14 39.9	107	0	18 17	18 38	19 03	18 25 57	5 54 58				
13	11	32.4	15.8	192	10.8	55	29.2	107	10 S	25	47	12	35 53	42 62				
14	26	32.5	14.9	206	35.3	56	18.5	108	20	34	18 57	23	46 49	29 66				
15	41	32.5	14.1	220	59.9	57	+14 07.7	109	30	44	19 09	38	18 58 44	14 71				
16	56	32.6	13.2	235	24.6	57	+13 56.8	110	35	50	16	47	19 05 41	5 06 73				
17	71	32.6	-11 12.3	249	49.3	58	+13 45.8	112	40	18 56	19 25	19 59	19 13 38	4 56 76				
18	86	32.7	-11 11.4	264	14.1	59	+13 34.6	112	45	19 04	19 35	20 13	19 22 35	4 44 80				
19	101	32.8	10.5	278	39.0	59	23.4	113	50	14	48	31	33 31	30 85				
20	116	32.8	09.6	293	03.9	60	12.1	113	52	18	19 55	40	38 29	24 86				
21	131	32.9	08.7	307	28.9	61	+13 00.8	115	54	23	20 02	20 50	44 26	16 89				
22	146	32.9	07.8	321	54.0	61	+12 49.3	116	56	28	09	21 02	50 24	4 08 92				
23	161	33.0	06.9	336	19.1	62	37.7	116	58	34	18	16	19 57 21	3 59 95				
24	176	33.1	-11 06.0	350	44.3		+12 26.1		60 S	19 41	20 29	21 33	20 05 18	3 48 99				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 14 ^h 03 ^m 1		Mag: -4.2 PMG: 09 ^h 20 ^m			Mag: +1.1 PMG: 16 ^h 07 ^m			Mag: -2.0 PMG: 07 ^h 24 ^m			Mag: +0.6 PMG: 09 ^h 17 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	148	39.2	219 59.4	-20 49.6	117 59.2	+13 02.5	248 50.6	-22 -28.9	220 28.4	-21 56.6								
1	163	41.7	234 58.8	49.3	133 00.0	03.2	263 52.7	-28.9	235 30.6	56.6								
2	178	44.1	249 58.1	49.1	148 00.9	03.8	278 54.8	-29.0	250 32.8	56.5								
3	193	46.6	264 57.5	48.9	163 01.7	04.4	293 56.9	-29.0	265 35.0	56.5								
4	208	49.1	279 56.8	48.7	178 02.6	05.0	308 59.0	-29.0	280 37.2	56.5								
5	223	51.5	294 56.1	-20 48.5	193 03.4	+13 05.6	324 01.1	-22 -29.0	295 39.4	-21 56.5								
6	238	54.0	309 55.5	-20 48.3	208 04.3	+13 06.2	339 03.2	-22 -29.0	310 41.7	-21 56.4								
7	253	56.5	324 54.8	48.1	223 05.1	06.8	354 05.3	-29.1	325 43.9	56.4								
8	268	58.9	339 54.2	47.8	238 06.0	07.4	9 07.3	-29.1	340 46.1	56.4								
9	284	01.4	354 53.5	47.6	253 06.8	08.0	24 09.4	-29.1	355 48.3	56.3								
10	299	03.9	9 52.8	47.4	268 07.6	08.6	39 11.5	-29.1	10 50.5	56.3								
11	314	06.3	24 52.2	-20 47.2	283 08.5	+13 09.2	54 13.6	-22 -29.2	25 52.7	-21 56.3								
12	329	08.8	39 51.5	-20 46.9	298 09.3	+13 09.8	69 15.7	-22 -29.2	40 54.9	-21 56.3								
13	344	11.2	54 50.9	46.7	313 10.2	10.4	84 17.8	-29.2	55 57.1	56.2								
14	359	13.7	69 50.2	46.5	328 11.0	11.0	99 19.9	-29.2	70 59.3	56.2								
15	14	16.2	84 49.5	46.3	343 11.9	11.6	114 22.0	-29.3	86 01.5	56.2								
16	29	18.6	99 48.9	46.0	358 12.7	12.2	129 24.1	-29.3	101 03.7	56.1								
17	44	21.1	114 48.2	-20 45.8	13 13.6	+13 12.8	144 26.2	-22 -29.3	116 05.9	-21 56.1								
18	59	23.6	129 47.6	-20 45.6	28 14.4	+13 13.4	159 28.3	-22 -29.3	131 08.1	-21 56.1								
19	74	26.0	144 46.9	45.4	43 15.3	14.0	174 30.4	-29.4	146 10.3	56.1								
20	89	28.5	159 46.3	45.1	58 16.1	14.6	189 32.4	-29.4	161 12.6	56.0								
21	104	31.0	174 45.6	44.9	73 17.0	15.2	204 34.5	-29.4	176 14.8	56.0								
22	119	33.4	189 44.9	44.7	88 17.8	15.8	219 36.6	-29.4	191 17.0	56.0								
23	134	35.9	204 44.3	44.4	103 18.6	16.4	234 38.7	-29.4	206 19.2	55.9								
24	149	38.4	219 43.6	-20 44.2	118 19.5	+13 17.0	249 40.8	-22 -29.5	221 21.4	-21 55.9								
Dif.	—		-7	+2	+8	+6	+21	0	+22	0								

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 16'2 PMG: 12 ^h 13 ^m 7				SD: 16'7 Edad: 15 ^d 1 PHE { 4^h: 61'4 12^h: 61'2 20^h: 61'1																			
	hG ☉		Dec		hG ☾		Dif.		Dec			Dif.			Náut.	Civil	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'			°	'			h	m	h	m	h	m	m					
0	176	33.1	-11	06.0	350	44.3	63	+12	26.1	117	60 N	5	54	6	42	7	25	18	19	96	8	12	15	
1	191	33.1		05.1	5	09.6	63		14.4	118	58	54	39	19			24	93		05	20			
2	206	33.2		04.2	19	34.9	64	+12	02.6	119	56	53	36	14			28	90		8	00	22		
3	221	33.3		03.3	34	00.3	65	+11	50.7	119	54	53	34	10			32	87		7	55	25		
4	236	33.3		02.4	48	25.8	65		38.8	121	52	52	31	06			36	85		51	26			
5	251	33.4	-11	01.6	62	51.3	66	+11	26.7	121	50	5	51	6	29	7	02	18	39	83	7	47	28	
6	266	33.5	-11	00.7	77	16.9	67	+11	14.6	121	45	5	50	6	24	6	54	18	46	78	7	38	33	
7	281	33.5	-10	59.8	91	42.6	67	+11	02.5	123	40	48	19	47			52	74		31	36			
8	296	33.6		58.9	106	08.3	68	+10	50.2	123	35	46	15	41			18	57	71	24	40			
9	311	33.7		58.0	120	34.1	69		37.9	124	30	43	11	36			19	01	68	19	42			
10	326	33.7		57.1	135	00.0	69		25.5	124	20	38	6	04	26			09	63	09	47			
11	341	33.8	-10	56.2	149	25.9	70	+10	13.1	125	10 N	5	32	5	57	6	18	19	16	58	7	00	52	
12	356	33.9	-10	55.3	163	51.9	71	+10	00.6	125	0	5	25	5	49	6	10	19	22	54	6	52	56	
13	11	33.9		54.4	178	18.0	72	+9	48.1	127	10 S	16	41	6	02			28	50	44	60			
14	26	34.0		53.5	192	44.2	72		35.4	126	20	5	05	31	5	54		35	46	35	64			
15	41	34.1		52.6	207	10.4	72		22.8	127	30	4	50	19	44			42	41	25	69			
16	56	34.1		51.7	221	36.6	74	+9	10.1	128	35	41	12	38			46	39		19	72			
17	71	34.2	-10	50.8	236	03.0	74	+8	57.3	128	40	4	29	5	03	5	32	19	51	35	6	12	75	
18	86	34.3	-10	49.9	250	29.4	74	+8	44.5	129	45	4	15	4	53	5	24	19	57	31	6	04	79	
19	101	34.3		49.0	264	55.8	76		31.6	129	50	3	57	40	15			20	04	27	5	55	83	
20	116	34.4		48.1	279	22.4	76		18.7	130	52	48	34	10			07	25		50	86			
21	131	34.5		47.2	293	49.0	76	+8	05.7	130	54	38	27	06			10	23		45	89			
22	146	34.5		46.3	308	15.6	78	+7	52.7	130	56	26	19	5	00			14	20	40	91			
23	161	34.6		45.4	322	42.4	78		39.7	131	58	3	12	10	4	54		20	18	18	5	34	94	
24	176	34.7	-10	44.5	337	09.2		+7	26.6		60 S	2	55	4	00	4	48	20	23	14	5	27	97	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO									
	PMG 13 ^h 59 ^m 1		Mag: -4.2 PMG: 09 ^h 22 ^m				Mag: +1.1 PMG: 16 ^h 06 ^m				Mag: -2.0 PMG: 07 ^h 20 ^m				Mag: +0.6 PMG: 09 ^h 13 ^m									
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	149	38.4	219	43.6	-20	44.2	118	19.5	+13	17.0	249	40.8	-22	29.5	221	21.4	-21	55.9						
1	164	40.8	234	43.0		44.0	133	20.3		17.6	264	42.9		29.5	236	23.6		55.9						
2	179	43.3	249	42.3		43.7	148	21.2		18.2	279	45.0		29.5	251	25.8		55.9						
3	194	45.7	264	41.6		43.5	163	22.0		18.8	294	47.1		29.5	266	28.0		55.8						
4	209	48.2	279	41.0		43.2	178	22.9		19.4	309	49.2		29.6	281	30.2		55.8						
5	224	50.7	294	40.3	-20	43.0	193	23.7	+13	20.0	324	51.3	-22	29.6	296	32.4	-21	55.8						
6	239	53.1	309	39.7	-20	42.8	208	24.6	+13	20.6	339	53.4	-22	29.6	311	34.6	-21	55.8						
7	254	55.6	324	39.0		42.5	223	25.4		21.2	354	55.5		29.6	326	36.8		55.7						
8	269	58.1	339	38.3		42.3	238	26.3		21.8	9	57.6		29.7	341	39.1		55.7						
9	285	00.5	354	37.7		42.0	253	27.1		22.4	24	59.7		29.7	356	41.3		55.7						
10	300	03.0	9	37.0		41.8	268	27.9		23.0	40	01.8		29.7	11	43.5		55.6						
11	315	05.5	24	36.4	-20	41.6	283	28.8	+13	23.6	55	03.9	-22	29.7	26	45.7	-21	55.6						
12	330	07.9	39	35.7	-20	41.3	298	29.6	+13	24.2	70	06.0	-22	29.7	41	47.9	-21	55.6						
13	345	10.4	54	35.0		41.1	313	30.5		24.8	85	08.1		29.8	56	50.1		55.6						
14	0	12.9	69	34.4		40.8	328	31.3		25.4	100	10.2		29.8	71	52.3		55.5						
15	15	15.3	84	33.7		40.6	343	32.2		26.0	115	12.3		29.8	86	54.5		55.5						
16	30	17.8	99	33.1		40.3	358	33.0		26.6	130	14.4		29.8	101	56.7		55.5						
17	45	20.2	114	32.4	-20	40.1	13	33.8	+13	27.2	145	16.5	-22	29.9	116	58.9	-21	55.4						
18	60	22.7	129	31.7	-20	39.8	28	34.7	+13	27.8	160	18.6	-22	29.9	132	01.1	-21	55.4						
19	75	25.2	144	31.1		39.5	43	35.5		28.4	175	20.7		29.9	147	03.4		55.4						
20	90	27.6	159	30.4		39.3	58	36.4		29.0	190	22.8		29.9	162	05.6		55.4						
21	105	30.1	174	29.8		39.0	73	37.2		29.6	205	24.9		30.0	177	07.8		55.3						
22	120	32.6	189	29.1		38.8	88	38.1		30.2	220	27.0		30.0	192	10.0		55.3						
23	135	35.0	204	28.5		38.5	103	38.9		30.8	235	29.1		30.0	207	12.2		55.3						
24	150	37.5	219	27.8	-20	38.3	118	39.7	+13	31.4	250	31.2	-22	30.0	222	14.4	-21	55.3						
Dif.	—		-7				+2		+8		+6		+21		0		+22							

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 13 ^m 6			SD: 16'6 Edad: 16'1			PHE { 4 ^h : 60'9 12 ^h : 60'7 20 ^h : 60'5													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	Rº: 54 ^m												
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m			
0	176	34.7	-10	44.5	337	09.2	78	+7	26.6	132	60 N	17 06	17 49	18 37	19 55	93	8 27	14		
1	191	34.7		43.6	351	36.0	79		13.4	131	58	11	52	37	57	90	25	16		
2	206	34.8		42.7	6	02.9	80	+7	00.3	132	56	16	54	38	58	87	22	19		
3	221	34.9		41.8	20	29.9	80	+6	47.1	132	54	21	57	38	19	59	85	20	21	
4	236	35.0		40.9	34	56.9	81		33.9	133	52	24	17 59	38	20	01	82	17	24	
5	251	35.0	-10	40.0	49	24.0	82	+6	20.6	133	50	17 28	18 01	18 39	20	02	80	8 15	26	
6	266	35.1	-10	39.1	63	51.2	82	+6	07.3	133	45	17 36	18 06	18 40	20	04	75	8 11	30	
7	281	35.2		38.2	78	18.4	83	+5	54.0	133	40	42	10	41	06	72		07	34	
8	296	35.2		37.3	92	45.7	84		40.7	134	35	48	14	43	08	68		04	37	
9	311	35.3		36.4	107	13.1	84		27.3	134	30	17 53	17	45	09	66		8	01	40
10	326	35.4		35.5	121	40.5	84		13.9	134	20	18 02	24	50	12	60		7	56	45
11	341	35.5	-10	34.6	136	07.9	85	+5	00.5	134	10 N	18 10	18 31	18 56	20	14	56	7	52	49
12	356	35.5	-10	33.7	150	35.4	86	+4	47.1	135	0	18 17	18 38	19 02	20	16	52	7	48	53
13	11	35.6		32.8	165	03.0	86		33.6	134	10 S	25	46	11	18	48		44	57	
14	26	35.7		31.9	179	30.6	87		20.2	135	20	33	18 55	22	21	43		39	62	
15	41	35.8		30.9	193	58.3	88	+4	06.7	135	30	42	19 07	36	23	39		34	67	
16	56	35.8		30.0	208	26.1	87	+3	53.2	134	35	47	14	45	25	36		31	69	
17	71	35.9	-10	29.1	222	53.8	89	+3	39.8	135	40	18 54	19 22	19 56	20	26	33	7	27	73
18	86	36.0	-10	28.2	237	21.7	89	+3	26.3	135	45	19 01	19 32	20 09	20	28	30	7	23	77
19	101	36.1		27.3	251	49.6	90	+3	12.8	136	50	10	44	27	31	25		18	82	
20	116	36.1		26.4	266	17.6	90	+2	59.2	135	52	14	50	35	32	23		16	84	
21	131	36.2		25.5	280	45.6	90		45.7	135	54	18	19 57	45	33	21		14	86	
22	146	36.3		24.6	295	13.6	91		32.2	135	56	23	20 04	20 56	34	19		11	89	
23	161	36.4		23.7	309	41.7	92		18.7	135	58	29	12	21 09	36	16		08	91	
24	176	36.4	-10	22.8	324	09.9		+2	05.2		60 S	19 35	20 22	21 25	20	37	13	7	04	95
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 13 ^h 55 ^m 2		Mag: -4.2 PMG: 09 ^h 23 ^m				Mag: +1.1 PMG: 16 ^h 04 ^m				Mag: -2.0 PMG: 07 ^h 17 ^m				Mag: +0.6 PMG: 09 ^h 10 ^m					
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	150	37.5	219	27.8	-20	38.3	118	39.7	+13	31.4	250	31.2	-22	-30.0	222	14.4	-21	55.3		
1	165	40.0	234	27.1		38.0	133	40.6		32.0	265	33.3		-30.0	237	16.6		55.2		
2	180	42.4	249	26.5		37.7	148	41.4		32.6	280	35.4		-30.1	252	18.8		55.2		
3	195	44.9	264	25.8		37.5	163	42.3		33.2	295	37.5		-30.1	267	21.0		55.2		
4	210	47.3	279	25.2		37.2	178	43.1		33.8	310	39.6		-30.1	282	23.3		55.1		
5	225	49.8	294	24.5	-20	37.0	193	44.0	+13	34.4	325	41.7	-22	-30.1	297	25.5	-21	55.1		
6	240	52.3	309	23.8	-20	36.7	208	44.8	+13	35.0	340	43.8	-22	-30.2	312	27.7	-21	55.1		
7	255	54.7	324	23.2		36.4	223	45.6		35.6	355	45.9		-30.2	327	29.9		55.1		
8	270	57.2	339	22.5		36.2	238	46.5		36.2	10	48.0		-30.2	342	32.1		55.0		
9	285	59.7	354	21.9		35.9	253	47.3		36.8	25	50.1		-30.2	357	34.3		55.0		
10	301	02.1	9	21.2		35.6	268	48.2		37.4	40	52.2		-30.2	12	36.5		55.0		
11	316	04.6	24	20.5	-20	35.4	283	49.0	+13	38.0	55	54.3	-22	-30.3	27	38.7	-21	54.9		
12	331	07.1	39	19.9	-20	35.1	298	49.9	+13	38.6	70	56.4	-22	-30.3	42	40.9	-21	54.9		
13	346	09.5	54	19.2		34.8	313	50.7		39.2	85	58.5		-30.3	57	43.2		54.9		
14	1	12.0	69	18.6		34.5	328	51.5		39.7	101	00.6		-30.3	72	45.4		54.9		
15	16	14.5	84	17.9		34.3	343	52.4		40.3	116	02.7		-30.4	87	47.6		54.8		
16	31	16.9	99	17.2		34.0	358	53.2		40.9	131	04.8		-30.4	102	49.8		54.8		
17	46	19.4	114	16.6	-20	33.7	13	54.1	+13	41.5	146	06.9	-22	-30.4	117	52.0	-21	54.8		
18	61	21.8	129	15.9	-20	33.4	28	54.9	+13	42.1	161	09.0	-22	-30.4	132	54.2	-21	54.8		
19	76	24.3	144	15.3		33.2	43	55.7		42.7	176	11.1		-30.4	147	56.4		54.7		
20	91	26.8	159	14.6		32.9	58	56.6		43.3	191	13.2		-30.5	162	58.6		54.7		
21	106	29.2	174	14.0		32.6	73	57.4		43.9	206	15.3		-30.5	178	00.9		54.7		
22	121	31.7	189	13.3		32.3	88	58.3		44.5	221	17.4		-30.5	193	03.1		54.6		
23	136	34.2	204	12.6		32.0	103	59.1		45.1	236	19.5		-30.5	208	05.3		54.6		
24	151	36.6	219	12.0	-20	31.8	118	59.9	+13	45.7	251	21.6	-22	-30.6	223	07.5	-21	54.6		
Dif.	—		-7	+3		+3	+8	+6		+6	+21		0		+22			0		

UT	SOL				○ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna																																																												
	SD: 16°2 PMG: 12 ^h 13 ^m 5				SD: 16°4 Edad: 17 ^d 1 PHE { 4 ^h : 60°2 12 ^h : 59°9 20 ^h : 59°6 PMG: 02 ^h 29 ^m R°: 51 ^m																																																																						
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	R°		Hora	R°																																																													
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′ ° ′	° <

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 12 ^h 13 ^m 4				SD: 16:2 Edad: 18 ^d 1		PHE { 4 ^h : 59:3 12 ^h : 59:0 20 ^h : 58:7		PMG: 03 ^h 20 ^m				Rº: 51 ^m									
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.		Civil	Náut.	Hora	Rº	Hora	Rº		
	h	°	'	°	'	h	°	'	°	'			h	°	'	h	m	h	m	h	m	
0	176	38.3	-10	00.9	311	38.7	102	-3	14.9	131	60 N	17 11	17 54	18 42	22 58	87	8 54	14				
1	191	38.4	-10	00.0	326	07.9	102		28.0	129	58	16	56	42	53	84	8 57	17				
2	206	38.5	-9	59.1	340	37.1	102		40.9	130	56	21	17 58	42	49	81	9 00	19				
3	221	38.6		58.2	355	06.3	102	-3	53.9	129	54	25	18 01	42	45	79	02	22				
4	236	38.7		57.3	9	35.5	103	-4	06.8	128	52	28	02	42	42	76	04	24				
5	251	38.8	-9	56.4	24	04.8	103	-4	19.6	128	50	17 31	18 04	18 42	22 39	74	9 06	26				
6	266	38.8	-9	55.4	38	34.1	104	-4	32.4	128	45	17 39	18 08	18 43	22 32	70	9 10	30				
7	281	38.9		54.5	53	03.5	103		45.2	127	40	45	12	44	27	67	14	33				
8	296	39.0		53.6	67	32.8	104	-4	57.9	127	35	50	15	45	22	64	17	36				
9	311	39.1		52.7	82	02.2	105	-5	10.6	127	30	17 55	19	47	18	61	20	38				
10	326	39.2		51.8	96	31.7	104		23.3	125	20	18 03	25	51	11	57	24	43				
11	341	39.3	-9	50.9	111	01.1	105	-5	35.8	126	10 N	18 10	18 31	18 56	22 05	53	9 28	47				
12	356	39.4	-9	49.9	125	30.6	104	-5	48.4	125	0	18 17	18 38	19 02	21 59	50	9 32	51				
13	11	39.4		49.0	140	00.0	106	-6	00.9	124	10 S	24	45	10	53	46	36	54				
14	26	39.5		48.1	154	29.6	105		13.3	124	20	31	18 54	20	47	43	40	58				
15	41	39.6		47.2	168	59.1	105		25.7	123	30	40	19 04	33	40	39	45	62				
16	56	39.7		46.3	183	28.6	106		38.0	123	35	45	11	42	36	36	48	65				
17	71	39.8	-9	45.3	197	58.2	106	-6	50.3	123	40	18 51	19 19	19 52	21 32	33	9 51	68				
18	86	39.9	-9	44.4	212	27.8	106	-7	02.6	121	45	18 58	19 28	20 05	21 27	30	9 54	72				
19	101	40.0		43.5	226	57.4	107		14.7	121	50	19 06	40	22	21	26	9 59	76				
20	116	40.1		42.6	241	27.1	106		26.8	121	52	10	45	30	18	24	10 01	78				
21	131	40.1		41.7	255	56.7	107		38.9	120	54	14	52	39	15	22	03	80				
22	146	40.2		40.8	270	26.4	106	-7	50.9	119	56	18	19 59	20 50	12	20	05	83				
23	161	40.3		39.8	284	56.0	107	-8	02.8	119	58	24	20 06	21 02	08	17	08	85				
24	176	40.4	-9	38.9	299	25.7		-8	14.7		60 S	19 29	20 16	21 17	21 04	14	10 11	88				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 13 ^h 47 ^m 4		Mag: -4.1 PMG: 09 ^h 25 ^m				Mag: +1.1 PMG: 16 ^h 02 ^m				Mag: -2.0 PMG: 07 ^h 10 ^m				Mag: +0.6 PMG: 09 ^h 03 ^m							
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	152	35.8	218	56.2	-20	24.7	119	20.1	+13	59.8	252	12.2	-22	-31.1	224	00.7	-21	53.9				
1	167	38.2	233	55.5		24.4	134	20.9	+14	00.4	267	14.3		-31.1	239	02.9		53.9				
2	182	40.7	248	54.9		24.0	149	21.7		01.0	282	16.5		-31.1	254	05.1		53.9				
3	197	43.2	263	54.2		23.7	164	22.6		01.6	297	18.6		-31.1	269	07.3		53.8				
4	212	45.6	278	53.5		23.4	179	23.4		02.2	312	20.7		-31.2	284	09.5		53.8				
5	227	48.1	293	52.9	-20	23.1	194	24.3	+14	02.8	327	22.8	-22	-31.2	299	11.7	-21	53.8				
6	242	50.6	308	52.2	-20	22.8	209	25.1	+14	03.4	342	24.9	-22	-31.2	314	13.9	-21	53.8				
7	257	53.0	323	51.6		22.5	224	25.9		03.9	357	27.0		-31.2	329	16.2		53.7				
8	272	55.5	338	50.9		22.2	239	26.8		04.5	12	29.1		-31.2	344	18.4		53.7				
9	287	57.9	353	50.3		21.9	254	27.6		05.1	27	31.2		-31.3	359	20.6		53.7				
10	303	00.4	8	49.6		21.5	269	28.4		05.7	42	33.4		-31.3	14	22.8		53.6				
11	318	02.9	23	48.9	-20	21.2	284	29.3	+14	06.3	57	35.5	-22	-31.3	29	25.0	-21	53.6				
12	333	05.3	38	48.3	-20	20.9	299	30.1	+14	06.9	72	37.6	-22	-31.3	44	27.3	-21	53.6				
13	348	07.8	53	47.6		20.6	314	30.9		07.4	87	39.7		-31.3	59	29.5		53.6				
14	3	10.3	68	47.0		20.3	329	31.8		08.0	102	41.8		-31.4	74	31.7		53.5				
15	18	12.7	83	46.3		19.9	344	32.6		08.6	117	43.9		-31.4	89	33.9		53.5				
16	33	15.2	98	45.7		19.6	359	33.5		09.2	132	46.1		-31.4	104	36.1		53.5				
17	48	17.7	113	45.0	-20	19.3	14	34.3	+14	09.8	147	48.2	-22	-31.4	119	38.3	-21	53.5				
18	63	20.1	128	44.3	-20	19.0	29	35.1	+14	10.4	162	50.3	-22	-31.4	134	40.6	-21	53.4				
19	78	22.6	143	43.7		18.6	44	36.0		11.0	177	52.4		-31.5	149	42.8		53.4				
20	93	25.0	158	43.0		18.3	59	36.8		11.5	192	54.5		-31.5	164	45.0		53.4				
21	108	27.5	173	42.4		18.0	74	37.6		12.1	207	56.6		-31.5	179	47.2		53.3				
22	123	30.0	188	41.7		17.7	89	38.5		12.7	222	58.8		-31.5	194	49.4		53.3				
23	138	32.4	203	41.1		17.3	104	39.3		13.3	238	00.9		-31.5	209	51.6		53.3				
24	153	34.9	218	40.4	-20	17.0	119	40.1	+14	13.9	253	03.0	-22	-31.6	224	53.9	-21	53.3				
Dif.	—		-7				+3				+8				+21				+22			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'2			SD: 15'9 Edad: 19 ^d 1	PHE { 4 ^h : 58'4 12 ^h : 58'0 20 ^h : 57'7	PMG: 04 ^h 11 ^m	Rº: 50 ^m	Náut.		Civil	Hora		Rº	Hora	Rº			
	hG ☉	Dec														hG ☾	Dif.	Dec
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	176	40.4	-9	38.9	299	25.7	108	-8	14.7	118	60 N	5 43	6 31	7 14	** ** *	9 08	16	
1	191	40.5		38.0	313	55.5	107		26.5	118	58	44	29	09	** ** *		14 19	
2	206	40.6		37.1	328	25.2	107		38.3	117	56	44	27	05	** ** *		19 22	
3	221	40.7		36.2	342	54.9	108	-8	50.0	116	54	44	25	7 01	** ** *		24 23	
4	236	40.8		35.2	357	24.7	108	-9	01.6	116	52	44	23	6 57	23 58	73	28 26	
5	251	40.9	-9	34.3	11	54.5	107	-9	13.2	115	50	5 44	6 21	6 54	23 53	71	9 32 27	
6	266	41.0	-9	33.4	26	24.2	108	-9	24.7	114	45	5 43	6 17	6 47	23 42	68	9 40 31	
7	281	41.0		32.5	40	54.0	108		36.1	113	40	43	14	41	34	64	47 34	
8	296	41.1		31.5	55	23.8	109		47.4	113	35	41	11	36	26	62	53 37	
9	311	41.2		30.6	69	53.7	108	-9	58.7	113	30	40	07	32	19	60	9 58 39	
10	326	41.3		29.7	84	23.5	108	-10	10.0	111	20	36	6 01	24	23 08	56	10 07 43	
11	341	41.4	-9	28.8	98	53.3	109	-10	21.1	111	10 N	5 31	5 55	6 17	22 58	53	10 15 47	
12	356	41.5	-9	27.8	113	23.2	108	-10	32.2	110	0	5 25	5 49	6 10	22 49	49	10 23 49	
13	11	41.6		26.9	127	53.0	109		43.2	109	10 S	17	42	6 03	39	47	30 53	
14	26	41.7		26.0	142	22.9	108	-10	54.1	109	20	5 07	33	5 56	30	43	38 57	
15	41	41.8		25.1	156	52.7	109	-11	05.0	108	30	4 54	23	47	19	40	47 61	
16	56	41.9		24.2	171	22.6	109		15.8	107	35	45	16	42	12	38	53 63	
17	71	42.0	-9	23.2	185	52.5	109	-11	26.5	107	40	4 35	5 08	5 36	22 05	36	10 59 66	
18	86	42.1	-9	22.3	200	22.4	109	-11	37.2	105	45	4 22	4 59	5 30	21 57	32	11 06 69	
19	101	42.1		21.4	214	52.3	109		47.7	105	50	4 05	47	22	47	29	15 72	
20	116	42.2		20.5	229	22.2	109	-11	58.2	104	52	3 57	42	18	42	27	19 74	
21	131	42.3		19.5	243	52.1	109	-12	08.6	104	54	48	36	14	37	25	23 77	
22	146	42.4		18.6	258	22.0	109		19.0	102	56	38	29	09	32	23	28 79	
23	161	42.5		17.7	272	51.9	109		29.2	102	58	25	21	5 04	21 25	21	11 33 82	
24	176	42.6	-9	16.8	287	21.8		-12	39.4		60 S	3 11	4 12	4 58	21 18	18	11 39 85	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 13 ^h 43 ^m 4		Mag: -4.1 PMG: 09 ^h 26 ^m				Mag: +1.1 PMG: 16 ^h 00 ^m				Mag: -2.0 PMG: 07 ^h 07 ^m				Mag: +0.6 PMG: 08 ^h 59 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	153	34.9	218	40.4	-20	17.0	119	40.1	+14	13.9	253	03.0	-22	31.6	224	53.9	-21	53.3
1	168	37.4	233	39.7		16.7	134	41.0		14.5	268	05.1		31.6	239	56.1		53.2
2	183	39.8	248	39.1		16.3	149	41.8		15.0	283	07.2		31.6	254	58.3		53.2
3	198	42.3	263	38.4		16.0	164	42.6		15.6	298	09.3		31.6	270	00.5		53.2
4	213	44.8	278	37.8		15.7	179	43.5		16.2	313	11.5		31.7	285	02.7		53.1
5	228	47.2	293	37.1	-20	15.3	194	44.3	+14	16.8	328	13.6	-22	31.7	300	05.0	-21	53.1
6	243	49.7	308	36.5	-20	15.0	209	45.1	+14	17.4	343	15.7	-22	31.7	315	07.2	-21	53.1
7	258	52.2	323	35.8		14.6	224	46.0		17.9	358	17.8		31.7	330	09.4		53.1
8	273	54.6	338	35.2		14.3	239	46.8		18.5	13	19.9		31.7	345	11.6		53.0
9	288	57.1	353	34.5		14.0	254	47.6		19.1	28	22.1		31.8	0	13.8		53.0
10	303	59.5	8	33.8		13.6	269	48.5		19.7	43	24.2		31.8	15	16.1		53.0
11	319	02.0	23	33.2	-20	13.3	284	49.3	+14	20.3	58	26.3	-22	31.8	30	18.3	-21	53.0
12	334	04.5	38	32.5	-20	12.9	299	50.1	+14	20.8	73	28.4	-22	31.8	45	20.5	-21	52.9
13	349	06.9	53	31.9		12.6	314	51.0		21.4	88	30.5		31.8	60	22.7		52.9
14	4	09.4	68	31.2		12.3	329	51.8		22.0	103	32.7		31.9	75	24.9		52.9
15	19	11.9	83	30.6		11.9	344	52.6		22.6	118	34.8		31.9	90	27.2		52.8
16	34	14.3	98	29.9		11.6	359	53.5		23.2	133	36.9		31.9	105	29.4		52.8
17	49	16.8	113	29.3	-20	11.2	14	54.3	+14	23.7	148	39.0	-22	31.9	120	31.6	-21	52.8
18	64	19.3	128	28.6	-20	10.9	29	55.1	+14	24.3	163	41.1	-22	31.9	135	33.8	-21	52.8
19	79	21.7	143	27.9		10.5	44	56.0		24.9	178	43.3		32.0	150	36.0		52.7
20	94	24.2	158	27.3		10.2	59	56.8		25.5	193	45.4		32.0	165	38.3		52.7
21	109	26.6	173	26.6		09.8	74	57.6		26.1	208	47.5		32.0	180	40.5		52.7
22	124	29.1	188	26.0		09.5	89	58.5		26.6	223	49.6		32.0	195	42.7		52.7
23	139	31.6	203	25.3		09.1	104	59.3		27.2	238	51.8		32.0	210	44.9		52.6
24	154	34.0	218	24.7	-20	08.8	120	00.1	+14	27.8	253	53.9	-22	32.1	225	47.1	-21	52.6
Dif.	—		-7		+3		+8		+6		+21		0		+22			0

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2			SD: 15'7			PHE { 4 ^h : 57'4 12 ^h : 57'1 20 ^h : 56'8											
	PMG: 12 ^h 13 ^m 1			Edad: 20 ^d 1														
	PMG: 05 ^h 01 ^m			Rº: 49 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.				Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	176	42.6	-9	16.8		287	21.8	109	-12	39.4	101	60 N	17 16	17 59	18 47	0 25 82	9 24 20	
1	191	42.7		15.8		301	51.7	110		49.5	100	58	21	18 01	46	17 79	33 23	
2	206	42.8		14.9		316	21.7	109	-12	59.5	99	56	25	03	46	10 77	41 25	
3	221	42.9		14.0		330	51.6	109	-13	09.4	99	54	28	04	45	0 04 74	47 28	
4	236	43.0		13.0		345	21.5	109		19.3	97	52	32	06	45	** ** *	54 29	
5	251	43.1	-9	12.1		359	51.4	110	-13	29.0	97	50	17 35	18 08	18 45	** ** *	9 59 31	
6	266	43.2	-9	11.2		14	21.4	109	-13	38.7	96	45	17 41	18 11	18 45	** ** *	10 11 34	
7	281	43.3		10.3		28	51.3	109		48.3	95	40	47	14	46	** ** *	21 37	
8	296	43.4		09.3		43	21.2	110	-13	57.8	95	35	52	17	47	** ** *	30 39	
9	311	43.5		08.4		57	51.2	109	-14	07.3	93	30	17 56	20	48	** ** *	37 41	
10	326	43.6		07.5		72	21.1	109		16.6	93	20	18 03	26	51	** ** *	10 50 45	
11	341	43.7	-9	06.5		86	51.0	110	-14	25.9	91	10 N	18 10	18 31	18 56	23 51 52	11 02 47	
12	356	43.8	-9	05.6		101	21.0	109	-14	35.0	91	0	18 16	18 37	19 02	23 38 50	11 12 50	
13	11	43.9		04.7		115	50.9	109		44.1	90	10 S	23	44	09	26 48	23 53	
14	26	44.0		03.8		130	20.8	110	-14	53.1	89	20	30	18 52	18	23 13 45	35 55	
15	41	44.1		02.8		144	50.8	109	-15	02.0	88	30	38	19 02	31	22 59 42	48 59	
16	56	44.2		01.9		159	20.7	109		10.8	88	35	43	09	39	50 41	11 56 60	
17	71	44.3	-9	01.0		173	50.6	110	-15	19.6	86	40	18 48	19 16	19 49	22 41 38	12 05 62	
18	86	44.4	-9	00.0		188	20.6	109	-15	28.2	86	45	18 54	19 25	20 01	22 29 36	12 15 65	
19	101	44.5	-8	59.1		202	50.5	109		36.8	84	50	19 02	36	17	16 33	27 69	
20	116	44.6		58.2		217	20.4	109		45.2	84	52	05	41	25	09 32	33 71	
21	131	44.7		57.2		231	50.3	109	-15	53.6	83	54	09	47	33	22 02 30	40 72	
22	146	44.8		56.3		246	20.2	110	-16	01.9	81	56	13	19 53	43	21 55 28	47 74	
23	161	44.9		55.4		260	50.2	109		10.0	81	58	18	20 01	20 55	46 26	12 55 77	
24	176	45.0	-8	54.4		275	20.1		-16	18.1		60 S	19 24	20 09	21 09	21 36 23	13 04 80	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.1				Mag: +1.1				Mag: -2.0				Mag: +0.6			
	13 ^h 39 ^m 5		PMG: 09 ^h 27 ^m				PMG: 15 ^h 59 ^m				PMG: 07 ^h 03 ^m				PMG: 08 ^h 56 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	154	34.0	218	24.7	-20	08.8		120	00.1	+14	27.8	253	53.9	-22	-32.1	225	47.1	
1	169	36.5	233	24.0		08.4		135	01.0		28.4	268	56.0		-32.1	240	49.4	
2	184	39.0	248	23.4		08.0		150	01.8		28.9	283	58.1		-32.1	255	51.6	
3	199	41.4	263	22.7		07.7		165	02.6		29.5	299	00.3		-32.1	270	53.8	
4	214	43.9	278	22.1		07.3		180	03.4		30.1	314	02.4		-32.1	285	56.0	
5	229	46.4	293	21.4	-20	07.0		195	04.3	+14	30.7	329	04.5	-22	-32.1	300	58.2	
6	244	48.8	308	20.8	-20	06.6		210	05.1	+14	31.3	344	06.6	-22	-32.2	316	00.5	
7	259	51.3	323	20.1		06.2		225	05.9		31.8	359	08.8		-32.2	331	02.7	
8	274	53.8	338	19.4		05.9		240	06.8		32.4	14	10.9		-32.2	346	04.9	
9	289	56.2	353	18.8		05.5		255	07.6		33.0	29	13.0		-32.2	1	07.1	
10	304	58.7	8	18.1		05.2		270	08.4		33.6	44	15.1		-32.2	16	09.4	
11	320	01.1	23	17.5	-20	04.8		285	09.3	+14	34.1	59	17.3	-22	-32.3	31	11.6	
12	335	03.6	38	16.8	-20	04.4		300	10.1	+14	34.7	74	19.4	-22	-32.3	46	13.8	
13	350	06.1	53	16.2		04.1		315	10.9		35.3	89	21.5		-32.3	61	16.0	
14	5	08.5	68	15.5		03.7		330	11.8		35.9	104	23.6		-32.3	76	18.2	
15	20	11.0	83	14.9		03.3		345	12.6		36.4	119	25.8		-32.3	91	20.5	
16	35	13.5	98	14.2		02.9		0	13.4		37.0	134	27.9		-32.4	106	22.7	
17	50	15.9	113	13.6	-20	02.6		15	14.2	+14	37.6	149	30.0	-22	-32.4	121	24.9	
18	65	18.4	128	12.9	-20	02.2		30	15.1	+14	38.2	164	32.2	-22	-32.4	136	27.1	
19	80	20.9	143	12.3		01.8		45	15.9		38.7	179	34.3		-32.4	151	29.4	
20	95	23.3	158	11.6		01.4		60	16.7		39.3	194	36.4		-32.4	166	31.6	
21	110	25.8	173	11.0		01.1		75	17.6		39.9	209	38.5		-32.5	181	33.8	
22	125	28.3	188	10.3		00.7		90	18.4		40.5	224	40.7		-32.5	196	36.0	
23	140	30.7	203	09.7	-20	00.3		105	19.2		41.0	239	42.8		-32.5	211	38.3	
24	155	33.2	218	09.0	-19	59.9		120	20.0	+14	41.6	254	44.9	-22	-32.5	226	40.5	
Dif.	—		-7		+4		+8		+6		+21		0		+22			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2 PMG: 12 ^h 12 ^m 9				SD: 15 ^h 4 Edad: 21 ^d 1 PMG: 05 ^h 50 ^m												PHE { 4 ^h : 56 ^s 5 12 ^h : 56 ^s 2 20 ^h : 56 ^s 0 Rº: 50 ^m	
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	176	45.0	-8	54.4	275	20.1	109	-16	18.1	80	60 N	5 38	6 26	7 08	1 47	77	9 44	27
1	191	45.1		53.5	289	50.0	109		26.1	79	58	39	24	04	36	74	9 56	29
2	206	45.2		52.6	304	19.9	109		34.0	78	56	39	22	7 00	27	71	10 06	31
3	221	45.3		51.7	318	49.8	109		41.8	77	54	40	21	6 56	18	70	15	33
4	236	45.4		50.7	333	19.7	109		49.5	77	52	40	19	53	11	68	23	34
5	251	45.5	-8	49.8	347	49.6	109	-16	57.2	75	50	5 40	6 18	6 50	1 04	66	10 30	36
6	266	45.6	-8	48.9	2	19.5	109	-17	04.7	74	45	5 40	6 14	6 44	0 50	63	10 45	39
7	281	45.7		47.9	16	49.4	109		12.1	73	40	40	11	38	38	61	10 58	40
8	296	45.8		47.0	31	19.3	109		19.4	73	35	39	08	34	28	59	11 09	42
9	311	45.9		46.0	45	49.2	109		26.7	71	30	38	05	30	19	57	18	44
10	326	46.0		45.1	60	19.1	108		33.8	70	20	34	6 00	22	0 04	54	35	46
11	341	46.1	-8	44.2	74	48.9	109	-17	40.8	70	10 N	5 30	5 55	6 16	** ** *	**	11 49	48
12	356	46.2	-8	43.2	89	18.8	109	-17	47.8	68	0	5 24	5 49	6 10	** ** *	**	12 02	50
13	11	46.3		42.3	103	48.7	108	-17	54.6	68	10 S	17	42	6 03	** ** *	**	16	52
14	26	46.4		41.4	118	18.5	109	-18	01.4	66	20	5 08	34	5 56	23 58	47	30	54
15	41	46.5		40.4	132	48.4	109		08.0	66	30	4 55	24	49	41	45	47	56
16	56	46.6		39.5	147	18.3	108		14.6	64	35	47	18	44	31	43	12 56	58
17	71	46.7	-8	38.6	161	48.1	109	-18	21.0	64	40	4 37	5 11	5 39	23 19	42	13 07	60
18	86	46.8	-8	37.6	176	18.0	109	-18	27.4	62	45	4 25	5 02	5 32	23 05	41	13 20	62
19	101	46.9		36.7	190	47.9	108		33.6	62	50	10	4 51	25	22 49	38	36	64
20	116	47.0		35.8	205	17.7	109		39.8	60	52	4 02	46	22	41	37	44	65
21	131	47.1		34.8	219	47.6	108		45.8	59	54	3 53	40	18	32	36	13 52	66
22	146	47.3		33.9	234	17.4	108		51.7	59	56	43	34	14	23	34	14 01	68
23	161	47.4		32.9	248	47.2	109	-18	57.6	57	58	32	26	09	22 12	32	14 12	70
24	176	47.5	-8	32.0	263	17.1		-19	03.3		60 S	3 18	4 18	5 04	21 59	30	14 24	73
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 13 ^h 35 ^m 6		Mag: -4.1 PMG: 09 ^h 28 ^m				Mag: +1.2 PMG: 15 ^h 58 ^m				Mag: -2.0 PMG: 07 ^h 00 ^m				Mag: +0.6 PMG: 08 ^h 52 ^m			
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	155	33.2	218	09.0	-19	59.9	120	20.0	+14	41.6	254	44.9	-22	32.5	226	40.5	-21	51.9
1	170	35.6	233	08.4		59.6	135	20.9		42.2	269	47.1		32.5	241	42.7		51.9
2	185	38.1	248	07.7		59.2	150	21.7		42.7	284	49.2		32.6	256	44.9		51.9
3	200	40.6	263	07.0		58.8	165	22.5		43.3	299	51.3		32.6	271	47.2		51.9
4	215	43.0	278	06.4		58.4	180	23.4		43.9	314	53.5		32.6	286	49.4		51.8
5	230	45.5	293	05.7	-19	58.0	195	24.2	+14	44.5	329	55.6	-22	32.6	301	51.6	-21	51.8
6	245	48.0	308	05.1	-19	57.6	210	25.0	+14	45.0	344	57.7	-22	32.6	316	53.8	-21	51.8
7	260	50.4	323	04.4		57.3	225	25.8		45.6	359	59.8		32.6	331	56.1		51.8
8	275	52.9	338	03.8		56.9	240	26.7		46.2	15	02.0		32.7	346	58.3		51.7
9	290	55.4	353	03.1		56.5	255	27.5		46.7	30	04.1		32.7	2	00.5		51.7
10	305	57.8	8	02.5		56.1	270	28.3		47.3	45	06.2		32.7	17	02.7		51.7
11	321	00.3	23	01.8	-19	55.7	285	29.2	+14	47.9	60	08.4	-22	32.7	32	05.0	-21	51.6
12	336	02.7	38	01.2	-19	55.3	300	30.0	+14	48.5	75	10.5	-22	32.7	47	07.2	-21	51.6
13	351	05.2	53	00.5		54.9	315	30.8		49.0	90	12.6		32.8	62	09.4		51.6
14	6	07.7	67	59.9		54.5	330	31.6		49.6	105	14.8		32.8	77	11.6		51.6
15	21	10.1	82	59.2		54.1	345	32.5		50.2	120	16.9		32.8	92	13.9		51.5
16	36	12.6	97	58.6		53.7	0	33.3		50.7	135	19.0		32.8	107	16.1		51.5
17	51	15.1	112	57.9	-19	53.4	15	34.1	+14	51.3	150	21.2	-22	32.8	122	18.3	-21	51.5
18	66	17.5	127	57.3	-19	53.0	30	34.9	+14	51.9	165	23.3	-22	32.9	137	20.5	-21	51.5
19	81	20.0	142	56.6		52.6	45	35.8		52.4	180	25.4		32.9	152	22.8		51.4
20	96	22.5	157	56.0		52.2	60	36.6		53.0	195	27.6		32.9	167	25.0		51.4
21	111	24.9	172	55.3		51.8	75	37.4		53.6	210	29.7		32.9	182	27.2		51.4
22	126	27.4	187	54.7		51.4	90	38.3		54.1	225	31.9		32.9	197	29.4		51.4
23	141	29.9	202	54.0		51.0	105	39.1		54.7	240	34.0		32.9	212	31.7		51.3
24	156	32.3	217	53.4	-19	50.6	120	39.9	+14	55.3	255	36.1	-22	33.0	227	33.9	-21	51.3
Dif.	—		-7 +4				+8 +6				+21 0				+22			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2			SD: 15 ^h 2 Edad: 22 ^d 1																		
	PMG: 12 ^h 12 ^m 7			PMG: 06 ^h 40 ^m																		
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº					
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m							
0	176	47.5	-8	263	17.1	108	-19	03.3	57	60 N	17 21	18 04	18 52	3 04	68	10 11	35					
1	191	47.6		277	46.9	109		09.0	55	58	25	05	51	2 50	66	25	37					
2	206	47.7		292	16.8	108		14.5	54	56	29	07	50	38	64	37	38					
3	221	47.8		306	46.6	108		19.9	54	54	32	08	49	28	63	48	39					
4	236	47.9		321	16.4	109		25.3	52	52	35	09	49	19	61	10 57	41					
5	251	48.0	-8	335	46.3	108	-19	30.5	51	50	17 38	18 11	18 48	2 10	61	11 06	41					
6	266	48.1	-8	350	16.1	108	-19	35.6	51	45	17 44	18 14	18 48	1 53	59	11 24	43					
7	281	48.2		4	45.9	109		40.7	49	40	49	16	48	39	57	38	45					
8	296	48.3		19	15.8	108		45.6	48	35	54	19	48	27	56	11 51	45					
9	311	48.4		33	45.6	108		50.4	47	30	17 57	21	49	1 16	55	12 02	46					
10	326	48.5		48	15.4	108		55.1	46	20	18 04	26	52	0 58	53	21	47					
11	341	48.7	-8	62	45.2	109	-19	59.7	45	10 N	18 10	18 31	18 56	0 43	51	12 37	49					
12	356	48.8	-8	77	15.1	108	-20	04.2	44	0	18 16	18 37	19 01	0 28	50	12 52	50					
13	11	48.9		91	44.9	108		08.6	43	10 S	22	43	08	0 14	48	13 08	51					
14	26	49.0		106	14.7	109		12.9	42	20	28	18 51	17	** ** *	**	24	52					
15	41	49.1		120	44.6	108		17.1	41	30	36	19 00	29	** ** *	**	43	53					
16	56	49.2		135	14.4	108		21.2	40	35	40	06	37	** ** *	**	13 54	54					
17	71	49.3	-8	149	44.2	109	-20	25.2	39	40	18 45	19 13	19 46	** ** *	**	14 07	55					
18	86	49.4	-8	164	14.1	108	-20	29.1	38	45	18 51	19 21	19 57	23 46	46	14 22	56					
19	101	49.5		178	43.9	108		32.9	36	50	18 58	31	20 12	27	45	40	57					
20	116	49.6		193	13.7	109		36.5	36	52	19 01	36	20	18	44	49	58					
21	131	49.8		207	43.6	108		40.1	35	54	05	42	28	23 08	44	14 58	59					
22	146	49.9		222	13.4	109		43.6	33	56	08	48	37	22 57	43	15 09	60					
23	161	50.0		236	43.3	108		46.9	33	58	13	19 55	20 48	44	42	22	61					
24	176	50.1	-8	251	13.1		-20	50.2		60 S	19 18	20 03	21 01	22 29	41	15 37	62					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 13 ^h 31 ^m 6		Mag: -4.1 PMG: 09 ^h 29 ^m				Mag: +1.2 PMG: 15 ^h 56 ^m				Mag: -2.0 PMG: 06 ^h 57 ^m				Mag: +0.6 PMG: 08 ^h 48 ^m							
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°		°	°	'	°	°	'	°					
0	156	32.3		217	53.4	-19	120	39.9	+14	255	36.1	-22	-33.0	227	33.9	-21	51.3					
1	171	34.8		232	52.7		135	40.7		270	38.3		-33.0	242	36.1		51.3					
2	186	37.2		247	52.1		150	41.6		285	40.4		-33.0	257	38.3		51.2					
3	201	39.7		262	51.5		165	42.4		300	42.5		-33.0	272	40.6		51.2					
4	216	42.2		277	50.8		180	43.2		315	44.7		-33.0	287	42.8		51.2					
5	231	44.6		292	50.2	-19	195	44.0	+14	330	46.8	-22	-33.1	302	45.0	-21	51.2					
6	246	47.1		307	49.5	-19	210	44.9	+14	345	48.9	-22	-33.1	317	47.3	-21	51.1					
7	261	49.6		322	48.9		225	45.7		0	51.1		-33.1	332	49.5		51.1					
8	276	52.0		337	48.2		240	46.5	+14	15	53.2		-33.1	347	51.7		51.1					
9	291	54.5		352	47.6		255	47.3	+15	30	55.4		-33.1	2	53.9		51.1					
10	306	57.0		7	46.9		270	48.2		45	57.5		-33.1	17	56.2		51.0					
11	321	59.4		22	46.3	-19	285	49.0	+15	60	59.6	-22	-33.2	32	58.4	-21	51.0					
12	337	01.9		37	45.6	-19	300	49.8	+15	76	01.8	-22	-33.2	48	00.6	-21	51.0					
13	352	04.4		52	45.0		315	50.6		91	03.9		-33.2	63	02.8		50.9					
14	7	06.8		67	44.3		330	51.5		106	06.1		-33.2	78	05.1		50.9					
15	22	09.3		82	43.7		345	52.3		121	08.2		-33.2	93	07.3		50.9					
16	37	11.7		97	43.0		0	53.1		136	10.3		-33.3	108	09.5		50.9					
17	52	14.2		112	42.4	-19	15	53.9	+15	151	12.5	-22	-33.3	123	11.8	-21	50.8					
18	67	16.7		127	41.7	-19	30	54.8	+15	166	14.6	-22	-33.3	138	14.0	-21	50.8					
19	82	19.1		142	41.1		45	55.6		181	16.8		-33.3	153	16.2		50.8					
20	97	21.6		157	40.5		60	56.4		196	18.9		-33.3	168	18.4		50.8					
21	112	24.1		172	39.8		75	57.2		211	21.0		-33.3	183	20.7		50.7					
22	127	26.5		187	39.2		90	58.0		226	23.2		-33.4	198	22.9		50.7					
23	142	29.0		202	38.5		105	58.9		241	25.3		-33.4	213	25.1		50.7					
24	157	31.5		217	37.9	-19	120	59.7	+15	256	27.5	-22	-33.4	228	27.4	-21	50.7					
Dif.	—		-6				+4				+21				0				+22			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			SD: 15'0		PHE {		Edad: 23 ^d 1										
	PMG: 12 ^h 12 ^m 6			PMG: 07 ^h 30 ^m		Rº: 50 ^m												
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m			
0	176	50.1	-8	09.4	251	13.1	109	-20	50.2	31	60 N	5 32	6 20	7 02	4 12 56	10 46 46		
1	191	50.2		08.5	265	43.0	108		53.3	30	58	34	19	6 58	3 56 56	11 02 46		
2	206	50.3		07.6	280	12.8	109		56.3	30	56	35	17	55	42 55	15 47		
3	221	50.4		06.6	294	42.7	109	-20	59.3	28	54	35	16	52	31 54	27 48		
4	236	50.5		05.7	309	12.6	109	-21	02.1	27	52	36	15	49	20 54	38 47		
5	251	50.7	-8	04.7	323	42.5	109	-21	04.8	26	50	5 36	6 14	6 46	3 11 54	11 47 48		
6	266	50.8	-8	03.8	338	12.4	108	-21	07.4	25	45	5 37	6 11	6 40	2 52 53	12 07 48		
7	281	50.9		02.8	352	42.2	109		09.9	24	40	37	08	35	36 52	23 48		
8	296	51.0		01.9	7	12.1	110		12.3	23	35	36	06	31	23 52	36 49		
9	311	51.1		01.0	21	42.1	109		14.6	22	30	36	6 03	27	2 11 52	12 48 49		
10	326	51.2	-8	00.0	36	12.0	109		16.8	21	20	33	5 59	21	1 51 51	13 08 49		
11	341	51.3	-7	59.1	50	41.9	109	-21	18.9	20	10 N	5 29	5 54	6 15	1 34 50	13 26 49		
12	356	51.5	-7	58.1	65	11.8	110	-21	20.9	19	0	5 24	5 48	6 09	1 18 50	13 42 50		
13	11	51.6		57.2	79	41.8	109		22.8	17	10 S	17	42	6 03	1 02 49	13 59 49		
14	26	51.7		56.2	94	11.7	110		24.5	17	20	5 09	35	5 57	0 45 49	14 16 50		
15	41	51.8		55.3	108	41.7	109		26.2	16	30	4 57	26	50	26 47	36 50		
16	56	51.9		54.3	123	11.6	110		27.8	14	35	49	20	46	14 47	14 48 50		
17	71	52.0	-7	53.4	137	41.6	110	-21	29.2	13	40	4 40	5 13	5 41	0 01 47	15 02 50		
18	86	52.1	-7	52.4	152	11.6	110	-21	30.5	13	45	4 28	5 05	5 35	*** **	15 18 50		
19	101	52.3		51.5	166	41.6	110		31.8	11	50	14	4 55	28	*** **	37 51		
20	116	52.4		50.5	181	11.6	111		32.9	10	52	4 06	50	25	*** **	47 50		
21	131	52.5		49.6	195	41.7	110		33.9	10	54	3 58	45	22	23 52 51	15 57 50		
22	146	52.6		48.7	210	11.7	110		34.9	8	56	49	38	18	40 51	16 09 50		
23	161	52.7		47.7	224	41.7	111		35.7	7	58	38	32	14	23 26 51	16 23 50		
24	176	52.8	-7	46.8	239	11.8		-21	36.4		60 S	3 25	4 24	5 09	23 10 51	16 39 50		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.1				Mag: +1.2				Mag: -2.0				Mag: +0.6			
	13 ^h 27 ^m 7		PMG: 09 ^h 30 ^m				PMG: 15 ^h 55 ^m				PMG: 06 ^h 53 ^m				PMG: 08 ^h 45 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	157	31.5	217	37.9	-19	40.6	120	59.7	+15	08.9	256	27.5	-22	33.4	228	27.4	-21	50.7
1	172	33.9	232	37.2		40.2	136	00.5		09.4	271	29.6		33.4	243	29.6		50.6
2	187	36.4	247	36.6		39.8	151	01.3		10.0	286	31.8		33.4	258	31.8		50.6
3	202	38.9	262	35.9		39.3	166	02.2		10.5	301	33.9		33.5	273	34.1		50.6
4	217	41.3	277	35.3		38.9	181	03.0		11.1	316	36.0		33.5	288	36.3		50.5
5	232	43.8	292	34.6	-19	38.5	196	03.8	+15	11.7	331	38.2	-22	33.5	303	38.5	-21	50.5
6	247	46.2	307	34.0	-19	38.0	211	04.6	+15	12.2	346	40.3	-22	33.5	318	40.7	-21	50.5
7	262	48.7	322	33.4		37.6	226	05.4		12.8	1	42.5		33.5	333	43.0		50.5
8	277	51.2	337	32.7		37.2	241	06.3		13.3	16	44.6		33.5	348	45.2		50.4
9	292	53.6	352	32.1		36.7	256	07.1		13.9	31	46.8		33.6	3	47.4		50.4
10	307	56.1	7	31.4		36.3	271	07.9		14.5	46	48.9		33.6	18	49.7		50.4
11	322	58.6	22	30.8	-19	35.9	286	08.7	+15	15.0	61	51.1	-22	33.6	33	51.9	-21	50.4
12	338	01.0	37	30.1	-19	35.4	301	09.6	+15	15.6	76	53.2	-22	33.6	48	54.1	-21	50.3
13	353	03.5	52	29.5		35.0	316	10.4		16.2	91	55.3		33.6	63	56.4		50.3
14	8	06.0	67	28.9		34.6	331	11.2		16.7	106	57.5		33.6	78	58.6		50.3
15	23	08.4	82	28.2		34.1	346	12.0		17.3	121	59.6		33.7	94	00.8		50.2
16	38	10.9	97	27.6		33.7	1	12.8		17.8	137	01.8		33.7	109	03.0		50.2
17	53	13.3	112	26.9	-19	33.2	16	13.7	+15	18.4	152	03.9	-22	33.7	124	05.3	-21	50.2
18	68	15.8	127	26.3	-19	32.8	31	14.5	+15	18.9	167	06.1	-22	33.7	139	07.5	-21	50.2
19	83	18.3	142	25.6		32.3	46	15.3		19.5	182	08.2		33.7	154	09.7		50.1
20	98	20.7	157	25.0		31.9	61	16.1		20.1	197	10.4		33.8	169	12.0		50.1
21	113	23.2	172	24.4		31.5	76	16.9		20.6	212	12.5		33.8	184	14.2		50.1
22	128	25.7	187	23.7		31.0	91	17.8		21.2	227	14.7		33.8	199	16.4		50.1
23	143	28.1	202	23.1		30.6	106	18.6		21.7	242	16.8		33.8	214	18.7		50.0
24	158	30.6	217	22.4	-19	30.1	121	19.4	+15	22.3	257	19.0	-22	33.8	229	20.9	-21	50.0
Dif.	—		-6		+4		+8		+6		+21		0		+22		0	

UT	SOL			 LUNA							Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1			SD: 14'9			PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4											
	PMG: 12 ^h 12 ^m 4			Edad: 24 ^d 1														
	PMG: 08 ^h 20 ^m			Rº: 49 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.				Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°		°	h m	h m	h m	h m m	h m m	h m m		
0	176	52.8	-7 46.8	239	11.8 111	-21 36.4 6		60 N		17 26	18 08	18 57	5 08 44		11 32 57			
1	191	53.0		253	41.9 111		37.0 5	58		30	10	55	4 52 44		11 48 56			
2	206	53.1		268	12.0 111		37.5 4	56		33	11	54	37 45		12 02 56			
3	221	53.2		282	42.1 111		37.9 3	54		36	12	53	25 46		15 54			
4	236	53.3		297	12.2 112		38.2 2	52		39	13	52	14 46		25 55			
5	251	53.4	-7 42.0	311	42.4 111	-21 38.4 1		50		17 42	18 14	18 51	4 05 46		12 35 54			
6	266	53.6	-7 41.1	326	12.5 112	-21 38.5 1		45		17 47	18 16	18 50	3 45 47		12 55 53			
7	281	53.7		340	42.7 112		38.4 1	40		51	19	50	28 48		13 11 52			
8	296	53.8		355	12.9 112		38.3 2	35		55	21	50	15 47		25 51			
9	311	53.9		9	43.1 113		38.1 3	30		17 59	23	51	3 03 48		37 51			
10	326	54.0		24	13.4 112		37.8 5	20		18 05	27	53	2 42 49		13 57 50			
11	341	54.1	-7 36.3	38	43.6 113	-21 37.3 5		10 N		18 10	18 32	18 56	2 24 49		14 15 49			
12	356	54.3	-7 35.4	53	13.9 113	-21 36.8 7		0		18 16	18 37	19 01	2 08 49		14 32 48			
13	11	54.4		67	44.2 113		36.1 7	10 S		21	42	07	1 51 50		14 48 48			
14	26	54.5		82	14.5 113		35.4 9	20		27	49	15	34 49		15 06 47			
15	41	54.6		96	44.8 114		34.5 9	30		34	18 58	26	13 50		26 46			
16	56	54.7		111	15.2 113		33.6 11	35		38	19 03	34	1 01 50		38 45			
17	71	54.9	-7 30.6	125	45.5 114	-21 32.5 11		40		18 42	19 10	19 43	0 48 50		15 52 44			
18	86	55.0	-7 29.7	140	15.9 114	-21 31.4 13		45		18 47	19 17	19 54	0 32 50		16 08 43			
19	101	55.1		154	46.3 115		30.1 13	50		54	27	20 08	12 50		28 42			
20	116	55.2		169	16.8 114		28.8 15	52		18 57	32	14	0 02 51		37 42			
21	131	55.4		183	47.2 115		27.3 15	54		19 00	37	22	** ** *	**	47 42			
22	146	55.5		198	17.7 115		25.8 17	56		03	42	31	** ** *	**	16 59 41			
23	161	55.6		212	48.2 116		24.1 18	58		07	49	41	** ** *	**	17 13 39			
24	176	55.7	-7 24.0	227	18.8	-21 22.3		60 S		19 12	19 56	20 53	** ** *	**	17 29 38			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 23 ^m 8		Mag: -4.1 PMG: 09 ^h 31 ^m			Mag: +1.2 PMG: 15 ^h 54 ^m			Mag: -2.0 PMG: 06 ^h 50 ^m			Mag: +0.6 PMG: 08 ^h 41 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°				
0	158	30.6	217	22.4 -19 30.1		121	19.4 +15 22.3		257	19.0 -22 -33.8		229	20.9 -21 50.0					
1	173	33.1	232	21.8 29.7		136	20.2 22.9		272	21.1 -33.8		244	23.1 50.0					
2	188	35.5	247	21.1 29.2		151	21.0 23.4		287	23.3 -33.9		259	25.4 50.0					
3	203	38.0	262	20.5 28.8		166	21.9 24.0		302	25.4 -33.9		274	27.6 49.9					
4	218	40.5	277	19.9 28.3		181	22.7 24.5		317	27.6 -33.9		289	29.8 49.9					
5	233	42.9	292	19.2 -19 27.9		196	23.5 +15 25.1		332	29.7 -22 -33.9		304	32.1 -21 49.9					
6	248	45.4	307	18.6 -19 27.4		211	24.3 +15 25.6		347	31.9 -22 -33.9		319	34.3 -21 49.9					
7	263	47.8	322	17.9 26.9		226	25.1 26.2		2	34.0 -33.9		334	36.5 49.8					
8	278	50.3	337	17.3 26.5		241	26.0 26.8		17	36.2 -34.0		349	38.8 49.8					
9	293	52.8	352	16.7 26.0		256	26.8 27.3		32	38.3 -34.0		4	41.0 49.8					
10	308	55.2	7	16.0 25.6		271	27.6 27.9		47	40.5 -34.0		19	43.2 49.7					
11	323	57.7	22	15.4 -19 25.1		286	28.4 +15 28.4		62	42.6 -22 -34.0		34	45.5 -21 49.7					
12	339	00.2	37	14.7 -19 24.6		301	29.2 +15 29.0		77	44.8 -22 -34.0		49	47.7 -21 49.7					
13	354	02.6	52	14.1 24.2		316	30.1 29.5		92	46.9 -34.0		64	49.9 49.7					
14	9	05.1	67	13.5 23.7		331	30.9 30.1		107	49.1 -34.1		79	52.2 49.6					
15	24	07.6	82	12.8 23.3		346	31.7 30.6		122	51.2 -34.1		94	54.4 49.6					
16	39	10.0	97	12.2 22.8		1	32.5 31.2		137	53.4 -34.1		109	56.6 49.6					
17	54	12.5	112	11.6 -19 22.3		16	33.3 +15 31.7		152	55.5 -22 -34.1		124	58.9 -21 49.6					
18	69	15.0	127	10.9 -19 21.9		31	34.1 +15 32.3		167	57.7 -22 -34.1		140	01.1 -21 49.5					
19	84	17.4	142	10.3 21.4		46	35.0 32.9		182	59.9 -34.1		155	03.3 49.5					
20	99	19.9	157	09.6 20.9		61	35.8 33.4		198	02.0 -34.2		170	05.6 49.5					
21	114	22.3	172	09.0 20.5		76	36.6 34.0		213	04.2 -34.2		185	07.8 49.5					
22	129	24.8	187	08.4 20.0		91	37.4 34.5		228	06.3 -34.2		200	10.0 49.4					
23	144	27.3	202	07.7 19.5		106	38.2 35.1		243	08.5 -34.2		215	12.3 49.4					
24	159	29.7	217	07.1 -19 19.0		121	39.1 +15 35.6		258	10.6 -22 -34.2		230	14.5 -21 49.4					
Dif.	—		-6 +5			+8 +6			+22 0			+22						

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1				SD: 14'8 Edad: 25 ^d 1					PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'1									
	PMG: 12 ^h 12 ^m 2				PMG: 09 ^h 09 ^m					Rº: 47 ^m									
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.		Náut.	Civil		Hora	Rº	Hora	Rº
h	°	'	°	'	°	'			°	'			h m	h m	h m	h m m		h m m	
0	176	55.7	-7	24.0	227	18.8	115	-21	22.3	18	60 N	5 27	6 15	6 57	5 52	32	12 29	66	
1	191	55.8		23.0	241	49.3	116		20.5	20	58	28	14	53	36	34	44	64	
2	206	56.0		22.1	256	19.9	116		18.5	21	56	30	13	50	22	36	12 58	62	
3	221	56.1		21.1	270	50.5	117		16.4	21	54	31	12	47	11	37	13 09	6	
4	236	56.2		20.2	285	21.2	116		14.3	23	52	32	11	44	5 00	38	20	59	
5	251	56.3	-7	19.2	299	51.8	117	-21	12.0	23	50	5 32	6 10	6 42	4 51	39	13 29	58	
6	266	56.5	-7	18.2	314	22.5	117	-21	09.7	25	45	5 34	6 07	6 37	4 32	40	13 48	56	
7	281	56.6		17.3	328	53.2	118		07.2	25	40	34	05	32	16	42	14 03	55	
8	296	56.7		16.3	343	24.0	118		04.7	27	35	34	03	29	4 02	43	16	54	
9	311	56.8		15.4	357	54.8	118	-21	02.0	27	30	34	6 01	25	3 51	44	28	52	
10	326	57.0		14.4	12	25.6	118	-20	59.3	29	20	32	5 57	19	31	45	14 47	51	
11	341	57.1	-7	13.5	26	56.4	119	-20	56.4	29	10 N	5 28	5 53	6 14	3 13	47	15 04	49	
12	356	57.2	-7	12.5	41	27.3	118	-20	53.5	31	0	5 24	5 48	6 09	2 57	48	15 20	48	
13	11	57.3		11.6	55	58.1	120		50.4	31	10 S	18	42	6 04	41	49	36	46	
14	26	57.5		10.6	70	29.1	119		47.3	32	20	5 10	36	5 58	23	51	15 53	44	
15	41	57.6		09.7	85	00.0	120		44.1	33	30	4 59	27	51	2 03	52	16 12	42	
16	56	57.7		08.7	99	31.0	120		40.8	35	35	51	22	48	1 51	53	23	41	
17	71	57.8	-7	07.7	114	02.0	120	-20	37.3	35	40	4 43	5 15	5 43	1 38	54	16 36	40	
18	86	58.0	-7	06.8	128	33.0	121	-20	33.8	36	45	4 32	5 08	5 38	1 22	55	16 51	38	
19	101	58.1		05.8	143	04.1	121		30.2	37	50	18	4 58	32	1 02	57	17 10	36	
20	116	58.2		04.9	157	35.2	121		26.5	38	52	11	54	29	0 53	57	19	34	
21	131	58.3		03.9	172	06.3	122		22.7	39	54	4 03	49	26	43	58	29	33	
22	146	58.5		03.0	186	37.5	122		18.8	39	56	3 54	43	22	31	59	40	31	
23	161	58.6		02.0	201	08.7	122		14.9	41	58	44	37	18	0 17	60	17 52	30	
24	176	58.7	-7	01.1	215	39.9		-20	10.8		60 S	3 32	4 29	5 14	0 01	62	18 07	28	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG		Mag: -4.1				Mag: +1.2				Mag: -2.0				Mag: +0.6				
	13 ^h 19 ^m 8		PMG: 09 ^h 32 ^m				PMG: 15 ^h 53 ^m				PMG: 06 ^h 46 ^m				PMG: 08 ^h 38 ^m				
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	159	29.7	217	07.1	-19	19.0	121	39.1	+15	35.6	258	10.6	-22	34.2	230	14.5	-21	49.4	
1	174	32.2	232	06.5		18.6	136	39.9		36.2	273	12.8		34.2	245	16.8		49.3	
2	189	34.7	247	05.8		18.1	151	40.7		36.7	288	14.9		34.3	260	19.0		49.3	
3	204	37.1	262	05.2		17.6	166	41.5		37.3	303	17.1		34.3	275	21.2		49.3	
4	219	39.6	277	04.5		17.2	181	42.3		37.8	318	19.3		34.3	290	23.5		49.3	
5	234	42.1	292	03.9	-19	16.7	196	43.1	+15	38.4	333	21.4	-22	34.3	305	25.7	-21	49.2	
6	249	44.5	307	03.3	-19	16.2	211	44.0	+15	38.9	348	23.6	-22	34.3	320	27.9	-21	49.2	
7	264	47.0	322	02.6		15.7	226	44.8		39.5	3	25.7		34.3	335	30.2		49.2	
8	279	49.4	337	02.0		15.2	241	45.6		40.0	18	27.9		34.4	350	32.4		49.2	
9	294	51.9	352	01.4		14.8	256	46.4		40.6	33	30.0		34.4	5	34.6		49.1	
10	309	54.4	7	00.7		14.3	271	47.2		41.1	48	32.2		34.4	20	36.9		49.1	
11	324	56.8	22	00.1	-19	13.8	286	48.0	+15	41.7	63	34.4	-22	34.4	35	39.1	-21	49.1	
12	339	59.3	36	59.5	-19	13.3	301	48.8	+15	42.2	78	36.5	-22	34.4	50	41.3	-21	49.1	
13	355	01.8	51	58.8		12.8	316	49.7		42.8	93	38.7		34.4	65	43.6		49.0	
14	10	04.2	66	58.2		12.3	331	50.5		43.3	108	40.8		34.5	80	45.8		49.0	
15	25	06.7	81	57.6		11.9	346	51.3		43.9	123	43.0		34.5	95	48.1		49.0	
16	40	09.2	96	56.9		11.4	1	52.1		44.4	138	45.2		34.5	110	50.3		49.0	
17	55	11.6	111	56.3	-19	10.9	16	52.9	+15	45.0	153	47.3	-22	34.5	125	52.5	-21	48.9	
18	70	14.1	126	55.7	-19	10.4	31	53.7	+15	45.5	168	49.5	-22	34.5	140	54.8	-21	48.9	
19	85	16.6	141	55.0		09.9	46	54.6		46.1	183	51.6		34.5	155	57.0		48.9	
20	100	19.0	156	54.4		09.4	61	55.4		46.6	198	53.8		34.5	170	59.2		48.8	
21	115	21.5	171	53.8		08.9	76	56.2		47.2	213	56.0		34.6	186	01.5		48.8	
22	130	23.9	186	53.1		08.4	91	57.0		47.7	228	58.1		34.6	201	03.7		48.8	
23	145	26.4	201	52.5		07.9	106	57.8		48.3	244	00.3		34.6	216	06.0		48.8	
24	160	28.9	216	51.9	-19	07.4	121	58.6	+15	48.8	259	02.4	-22	34.6	231	08.2	-21	48.7	
Dif.	—		-6		+5		+8		+5		+22		0		+22				

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'1			SD: 14'7 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0														
	PMG: 12 ^h 12 ^m 0			Edad: 26 ^d 1														
	PMG: 09 ^h 56 ^m			Rº: 46 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°		h m	h m	h m m		h m m				
0	176	58.7	-7 01.1	215	39.9	123	-20 10.8	42	60 N	17 32	18 13	19 02	6 24	23	13 35	71		
1	191	58.9	-7 00.1	230	11.2	123	06.6	42	58	35	14	19 00	6 10	26	13 48	69		
2	206	59.0	-6 59.1	244	42.5	123	-20 02.4	44	56	38	15	18 58	5 58	28	14 00	66		
3	221	59.1	58.2	259	13.8	124	-19 58.0	44	54	40	16	57	48	30	10	65		
4	236	59.2	57.2	273	45.2	124	53.6	45	52	43	17	56	38	32	19	63		
5	251	59.4	-6 56.3	288	16.6	124	-19 49.1	46	50	17 45	18 17	18 55	5 30	33	14 27	62		
6	266	59.5	-6 55.3	302	48.0	125	-19 44.5	47	45	17 50	18 19	18 53	5 12	35	14 44	59		
7	281	59.6	54.4	317	19.5	125	39.8	48	40	54	21	52	4 58	37	14 58	57		
8	296	59.8	53.4	331	51.0	125	35.0	49	35	17 57	22	52	45	39	15 10	55		
9	311	59.9	52.4	346	22.5	126	30.1	50	30	18 00	24	52	35	40	20	53		
10	327	00.0	51.5	0	54.1	126	25.1	50	20	06	28	53	16	43	38	50		
11	342	00.1	-6 50.5	15	25.7	126	-19 20.1	52	10 N	18 11	18 32	18 56	4 00	45	15 53	48		
12	357	00.3	-6 49.6	29	57.3	127	-19 14.9	52	0	18 15	18 36	19 00	3 45	46	16 08	45		
13	12	00.4	48.6	44	29.0	127	09.7	53	10 S	20	41	06	30	48	22	44		
14	27	00.5	47.6	59	00.7	127	-19 04.4	54	20	25	48	14	3 14	50	37	41		
15	42	00.7	46.7	73	32.4	128	-18 59.0	55	30	31	18 56	24	2 55	53	16 54	39		
16	57	00.8	45.7	88	04.2	128	53.5	55	35	35	19 01	31	44	54	17 04	37		
17	72	00.9	-6 44.8	102	36.0	128	-18 48.0	57	40	18 39	19 07	19 39	2 32	55	17 16	35		
18	87	01.1	-6 43.8	117	07.8	129	-18 42.3	57	45	18 44	19 14	19 50	2 17	57	17 29	33		
19	102	01.2	42.8	131	39.7	129	36.6	58	50	49	23	20 03	1 59	60	46	30		
20	117	01.3	41.9	146	11.6	130	30.8	59	52	52	27	09	50	62	17 53	29		
21	132	01.4	40.9	160	43.6	130	24.9	60	54	55	32	17	41	62	18 02	27		
22	147	01.6	40.0	175	15.6	130	18.9	60	56	18 58	37	25	30	64	11	26		
23	162	01.7	39.0	189	47.6	131	12.9	62	58	19 02	43	34	17	67	22	23		
24	177	01.8	-6 38.0	204	19.7		-18 06.7		60 S	19 06	19 50	20 46	1 03	69	18 35	20		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 13 ^h 15 ^m 9		Mag: -4.1 PMG: 09 ^h 33 ^m				Mag: +1.2 PMG: 15 ^h 51 ^m				Mag: -2.0 PMG: 06 ^h 43 ^m				Mag: +0.6 PMG: 08 ^h 34 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	160	28.9	216	51.9	-19 07.4	121	58.6	+15 48.8	259	02.4	-22 -34.6	231	08.2	-21 48.7				
1	175	31.3	231	51.2	06.9	136	59.4	49.4	274	04.6	-34.6	246	10.4	48.7				
2	190	33.8	246	50.6	06.4	152	00.3	49.9	289	06.8	-34.6	261	12.7	48.7				
3	205	36.3	261	50.0	05.9	167	01.1	50.5	304	08.9	-34.7	276	14.9	48.7				
4	220	38.7	276	49.3	05.4	182	01.9	51.0	319	11.1	-34.7	291	17.2	48.6				
5	235	41.2	291	48.7	-19 05.0	197	02.7	+15 51.5	334	13.3	-22 -34.7	306	19.4	-21 48.6				
6	250	43.7	306	48.1	-19 04.4	212	03.5	+15 52.1	349	15.4	-22 -34.7	321	21.6	-21 48.6				
7	265	46.1	321	47.4	03.9	227	04.3	52.6	4	17.6	-34.7	336	23.9	48.6				
8	280	48.6	336	46.8	03.4	242	05.1	53.2	19	19.7	-34.7	351	26.1	48.5				
9	295	51.1	351	46.2	02.9	257	05.9	53.7	34	21.9	-34.8	6	28.3	48.5				
10	310	53.5	6	45.5	02.4	272	06.8	54.3	49	24.1	-34.8	21	30.6	48.5				
11	325	56.0	21	44.9	-19 01.9	287	07.6	+15 54.8	64	26.2	-22 -34.8	36	32.8	-21 48.5				
12	340	58.4	36	44.3	-19 01.4	302	08.4	+15 55.4	79	28.4	-22 -34.8	51	35.1	-21 48.4				
13	356	00.9	51	43.7	00.9	317	09.2	55.9	94	30.6	-34.8	66	37.3	48.4				
14	11	03.4	66	43.0	-19 00.4	332	10.0	56.5	109	32.7	-34.8	81	39.5	48.4				
15	26	05.8	81	42.4	-18 59.9	347	10.8	57.0	124	34.9	-34.8	96	41.8	48.4				
16	41	08.3	96	41.8	59.4	2	11.6	57.5	139	37.1	-34.9	111	44.0	48.3				
17	56	10.8	111	41.1	-18 58.9	17	12.4	+15 58.1	154	39.2	-22 -34.9	126	46.3	-21 48.3				
18	71	13.2	126	40.5	-18 58.4	32	13.3	+15 58.6	169	41.4	-22 -34.9	141	48.5	-21 48.3				
19	86	15.7	141	39.9	57.9	47	14.1	59.2	184	43.6	-34.9	156	50.7	48.2				
20	101	18.2	156	39.3	57.3	62	14.9	+15 59.7	199	45.7	-34.9	171	53.0	48.2				
21	116	20.6	171	38.6	56.8	77	15.7	+16 00.3	214	47.9	-34.9	186	55.2	48.2				
22	131	23.1	186	38.0	56.3	92	16.5	00.8	229	50.1	-35.0	201	57.5	48.2				
23	146	25.5	201	37.4	55.8	107	17.3	01.3	244	52.2	-35.0	216	59.7	48.1				
24	161	28.0	216	36.8	-18 55.3	122	18.1	+16 01.9	259	54.4	-22 -35.0	232	01.9	-21 48.1				
Dif.	—		-6		+5	+8		+5	+22		0		+22					

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 11 ^m 8				SD: 14'7 Edad: 27 ^d 1 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 10 ^h 42 ^m Rº: 45 ^m					Náut.	Civil		Hora	Rº	Hora	Rº	
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.											
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	01.8	-6	38.0	204	19.7	131	-18	06.7	62	60 N	5 21	6 09	6 51	6 47	18	14 46
1	192	02.0		37.1	218	51.8	131	-18	00.5	63	58	23	08	48	36	21	14 57
2	207	02.1		36.1	233	23.9	132	-17	54.2	63	56	25	08	45	26	23	15 06
3	222	02.2		35.2	247	56.1	132		47.9	65	54	26	07	42	18	24	15 66
4	237	02.4		34.2	262	28.3	132		41.4	65	52	27	06	40	10	26	22 65
5	252	02.5	-6	33.2	277	00.5	133	-17	34.9	66	50	5 28	6 06	6 38	6 03	27	15 29
6	267	02.6	-6	32.3	291	32.8	133	-17	28.3	67	45	5 30	6 04	6 33	5 47	31	15 43
7	282	02.8		31.3	306	05.1	133		21.6	67	40	31	02	29	35	33	15 55
8	297	02.9		30.4	320	37.4	134		14.9	69	35	31	6 01	26	24	36	16 05
9	312	03.0		29.4	335	09.8	134		08.0	69	30	31	5 59	23	5 15	37	13 54
10	327	03.2		28.4	349	42.2	135	-17	01.1	70	20	30	56	18	4 59	40	28 50
11	342	03.3	-6	27.5	4	14.7	135	-16	54.1	70	10 N	5 27	5 52	6 13	4 45	42	16 41
12	357	03.4	-6	26.5	18	47.2	135	-16	47.1	71	0	5 24	5 48	6 08	4 31	46	16 53
13	12	03.6		25.5	33	19.7	136		40.0	72	10 S	18	43	6 04	18	48	17 06
14	27	03.7		24.6	47	52.3	135		32.8	73	20	10	36	5 59	4 04	50	18 39
15	42	03.8		23.6	62	24.8	137		25.5	74	30	5 00	29	53	3 48	53	33 36
16	57	04.0		22.7	76	57.5	136		18.1	74	35	4 53	24	49	38	55	41 34
17	72	04.1	-6	21.7	91	30.1	137	-16	10.7	75	40	4 45	5 18	5 45	3 27	57	17 51
18	87	04.3	-6	20.7	106	02.8	138	-16	03.2	75	45	4 35	5 11	5 41	3 14	60	18 02
19	102	04.4		19.8	120	35.6	137	-15	55.7	76	50	22	5 02	35	2 59	62	16 25
20	117	04.5		18.8	135	08.3	138		48.1	77	52	15	4 58	33	52	64	22 24
21	132	04.7		17.8	149	41.1	139		40.4	78	54	08	53	30	43	66	29 22
22	147	04.8		16.9	164	14.0	138		32.6	78	56	4 00	48	27	34	68	37 20
23	162	04.9		15.9	178	46.8	139		24.8	79	58	3 50	42	23	2 24	70	18 45
24	177	05.1	-6	14.9	193	19.7		-15	16.9		60 S	3 39	4 35	5 19	2 12	72	18 55

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 13 ^h 12 ^m 0		Mag: -4.1 PMG: 09 ^h 34 ^m				Mag: +1.2 PMG: 15 ^h 50 ^m				Mag: -2.1 PMG: 06 ^h 39 ^m				Mag: +0.6 PMG: 08 ^h 31 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	161	28.0	216	36.8	-18	55.3	122	18.1	+16	01.9	259	54.4	-22	35.0	232	01.9	-21	48.1
1	176	30.5	231	36.1		54.8	137	18.9		02.4	274	56.6		35.0	247	04.2		48.1
2	191	32.9	246	35.5		54.2	152	19.7		03.0	289	58.8		35.0	262	06.4		48.1
3	206	35.4	261	34.9		53.7	167	20.6		03.5	305	00.9		35.0	277	08.7		48.0
4	221	37.9	276	34.2		53.2	182	21.4		04.0	320	03.1		35.0	292	10.9		48.0
5	236	40.3	291	33.6	-18	52.7	197	22.2	+16	04.6	335	05.3	-22	35.1	307	13.2	-21	48.0
6	251	42.8	306	33.0	-18	52.2	212	23.0	+16	05.1	350	07.4	-22	35.1	322	15.4	-21	48.0
7	266	45.3	321	32.4		51.6	227	23.8		05.7	5	09.6		35.1	337	17.6		47.9
8	281	47.7	336	31.7		51.1	242	24.6		06.2	20	11.8		35.1	352	19.9		47.9
9	296	50.2	351	31.1		50.6	257	25.4		06.7	35	13.9		35.1	7	22.1		47.9
10	311	52.7	6	30.5		50.1	272	26.2		07.3	50	16.1		35.1	22	24.4		47.9
11	326	55.1	21	29.9	-18	49.5	287	27.0	+16	07.8	65	18.3	-22	35.2	37	26.6	-21	47.8
12	341	57.6	36	29.2	-18	49.0	302	27.8	+16	08.4	80	20.5	-22	35.2	52	28.9	-21	47.8
13	357	00.0	51	28.6		48.5	317	28.7		08.9	95	22.6		35.2	67	31.1		47.8
14	12	02.5	66	28.0		47.9	332	29.5		09.4	110	24.8		35.2	82	33.3		47.8
15	27	05.0	81	27.4		47.4	347	30.3		10.0	125	27.0		35.2	97	35.6		47.7
16	42	07.4	96	26.7		46.9	2	31.1		10.5	140	29.1		35.2	112	37.8		47.7
17	57	09.9	111	26.1	-18	46.3	17	31.9	+16	11.1	155	31.3	-22	35.2	127	40.1	-21	47.7
18	72	12.4	126	25.5	-18	45.8	32	32.7	+16	11.6	170	33.5	-22	35.3	142	42.3	-21	47.7
19	87	14.8	141	24.9		45.3	47	33.5		12.1	185	35.7		35.3	157	44.6		47.6
20	102	17.3	156	24.3		44.7	62	34.3		12.7	200	37.8		35.3	172	46.8		47.6
21	117	19.8	171	23.6		44.2	77	35.1		13.2	215	40.0		35.3	187	49.0		47.6
22	132	22.2	186	23.0		43.7	92	35.9		13.7	230	42.2		35.3	202	51.3		47.6
23	147	24.7	201	22.4		43.1	107	36.7		14.3	245	44.4		35.3	217	53.5		47.5
24	162	27.2	216	21.8	-18	42.6	122	37.6	+16	14.8	260	46.5	-22	35.3	232	55.8	-21	47.5
Dif.	—		-6		+5		+8		+5		+22		0		+22			

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			SD: 14 ^h 7 Edad: 28 ^d 1							PHE { 4 ^h : 54 ^m 0 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0							
	PMG: 12 ^h 11 ^m 5			PMG: 11 ^h 27 ^m							Rº: 44 ^m							
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m				
0	177	05.1	-6	14.9	193	19.7	140	-15	16.9	79	60 N	17 37	18 18	19 07	7 05	14	16 00	75
1	192	05.2		14.0	207	52.7	139		09.0	81	58	39	19	04	6 57	16	08	72
2	207	05.3		13.0	222	25.6	140	-15	00.9	81	56	42	19	02	49	19	15	70
3	222	05.5		12.1	236	58.6	141	-14	52.8	81	54	44	20	19 01	42	21	21	68
4	237	05.6		11.1	251	31.7	140		44.7	82	52	46	20	18 59	36	22	27	66
5	252	05.8	-6	10.1	266	04.7	141	-14	36.5	83	50	17 48	18 20	18 58	6 30	24	16 32	64
6	267	05.9	-6	09.2	280	37.8	142	-14	28.2	83	45	17 52	18 22	18 56	6 18	28	16 43	61
7	282	06.0		08.2	295	11.0	141		19.9	84	40	56	23	54	08	30	16 52	58
8	297	06.2		07.2	309	44.1	142		11.5	85	35	17 59	24	54	6 00	32	17 00	55
9	312	06.3		06.3	324	17.3	142	-14	03.0	85	30	18 02	26	53	5 52	34	07	53
10	327	06.5		05.3	338	50.5	143	-13	54.5	86	20	06	28	54	39	38	18	50
11	342	06.6	-6	04.3	353	23.8	143	-13	45.9	86	10 N	18 11	18 32	18 56	5 27	41	17 28	47
12	357	06.7	-6	03.4	7	57.1	143	-13	37.3	88	0	18 15	18 36	19 00	5 17	43	17 38	43
13	12	06.9		02.4	22	30.4	144		28.5	87	10 S	19	40	05	5 06	46	47	40
14	27	07.0		01.4	37	03.8	143		19.8	88	20	24	46	12	4 54	50	17 57	37
15	42	07.1	-6	00.5	51	37.1	144		11.0	89	30	29	53	22	41	53	18 09	33
16	57	07.3	-5	59.5	66	10.5	145	-13	02.1	89	35	32	18 58	28	33	55	15	31
17	72	07.4	-5	58.5	80	44.0	144	-12	53.2	90	40	18 36	19 03	19 36	4 24	58	18 23	28
18	87	07.6	-5	57.6	95	17.4	145	-12	44.2	91	45	18 40	19 10	19 46	4 14	60	18 31	26
19	102	07.7		56.6	109	50.9	145		35.1	90	50	45	18	19 58	4 01	64	41	23
20	117	07.8		55.6	124	24.4	146		26.1	92	52	48	22	20 04	3 56	65	46	21
21	132	08.0		54.7	138	58.0	146		16.9	92	54	50	27	11	49	67	51	20
22	147	08.1		53.7	153	31.6	146	-12	07.7	92	56	53	31	19	42	69	18 57	18
23	162	08.3		52.7	168	05.2	146	-11	58.5	93	58	18 56	37	28	34	71	19 04	15
24	177	08.4	-5	51.8	182	38.8		-11	49.2		60 S	19 00	19 43	20 38	3 24	75	19 11	13
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 13 ^h 08 ^m 0		Mag: -4.1 PMG: 09 ^h 35 ^m				Mag: +1.2 PMG: 15 ^h 49 ^m				Mag: -2.1 PMG: 06 ^h 36 ^m				Mag: +0.6 PMG: 08 ^h 27 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	'		
0	162	27.2	216	21.8	-18	42.6	122	37.6	+16	14.8	260	46.5	-22	-35.3	232	55.8	-21	47.5
1	177	29.6	231	21.1		42.0	137	38.4		15.4	275	48.7		-35.4	247	58.0		47.5
2	192	32.1	246	20.5		41.5	152	39.2		15.9	290	50.9		-35.4	263	00.3		47.4
3	207	34.5	261	19.9		41.0	167	40.0		16.4	305	53.1		-35.4	278	02.5		47.4
4	222	37.0	276	19.3		40.4	182	40.8		17.0	320	55.3		-35.4	293	04.8		47.4
5	237	39.5	291	18.7	-18	39.9	197	41.6	+16	17.5	335	57.4	-22	-35.4	308	07.0	-21	47.4
6	252	41.9	306	18.0	-18	39.3	212	42.4	+16	18.0	350	59.6	-22	-35.4	323	09.2	-21	47.3
7	267	44.4	321	17.4		38.8	227	43.2		18.6	6	01.8		-35.5	338	11.5		47.3
8	282	46.9	336	16.8		38.2	242	44.0		19.1	21	04.0		-35.5	353	13.7		47.3
9	297	49.3	351	16.2		37.7	257	44.8		19.6	36	06.1		-35.5	8	16.0		47.3
10	312	51.8	6	15.6		37.1	272	45.6		20.2	51	08.3		-35.5	23	18.2		47.2
11	327	54.3	21	14.9	-18	36.6	287	46.4	+16	20.7	66	10.5	-22	-35.5	38	20.5	-21	47.2
12	342	56.7	36	14.3	-18	36.0	302	47.2	+16	21.2	81	12.7	-22	-35.5	53	22.7	-21	47.2
13	357	59.2	51	13.7		35.5	317	48.0		21.8	96	14.9		-35.5	68	25.0		47.2
14	13	01.6	66	13.1		34.9	332	48.9		22.3	111	17.0		-35.6	83	27.2		47.1
15	28	04.1	81	12.5		34.4	347	49.7		22.8	126	19.2		-35.6	98	29.5		47.1
16	43	06.6	96	11.9		33.8	2	50.5		23.4	141	21.4		-35.6	113	31.7		47.1
17	58	09.0	111	11.2	-18	33.3	17	51.3	+16	23.9	156	23.6	-22	-35.6	128	33.9	-21	47.1
18	73	11.5	126	10.6	-18	32.7	32	52.1	+16	24.4	171	25.8	-22	-35.6	143	36.2	-21	47.0
19	88	14.0	141	10.0		32.2	47	52.9		25.0	186	27.9		-35.6	158	38.4		47.0
20	103	16.4	156	09.4		31.6	62	53.7		25.5	201	30.1		-35.6	173	40.7		47.0
21	118	18.9	171	08.8		31.0	77	54.5		26.0	216	32.3		-35.7	188	42.9		47.0
22	133	21.4	186	08.2		30.5	92	55.3		26.6	231	34.5		-35.7	203	45.2		46.9
23	148	23.8	201	07.5		29.9	107	56.1		27.1	246	36.7		-35.7	218	47.4		46.9
24	163	26.3	216	06.9	-18	29.4	122	56.9	+16	27.6	261	38.8	-22	-35.7	233	49.7	-21	46.9
Dif.	—		-6		+6	+8		+5	+22		0		+22		0			

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 11 ^m 3			SD: 14'7 Edad: 29 ^d 1 PHE 4^h: 54'1 12^h: 54'1 20^h: 54'2												
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	Náut.		Civil	Hora	Rº	Hora	Rº		
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	177 08.4 192 08.6 207 08.7 222 08.8 237 09.0 252 09.1 267 09.3 282 09.4 297 09.6 312 09.7 327 09.8 342 10.0 357 10.1 12 10.3 27 10.4 42 10.6 57 10.7 72 10.8 87 11.0 102 11.1 117 11.3 132 11.4 147 11.6 162 11.7 177 11.9	-5 51.8 50.8 49.8 48.9 47.9 -5 46.9 -5 45.9 45.0 44.0 43.0 42.1 -5 41.1 -5 40.1 39.2 38.2 37.2 36.3 -5 35.3 -5 34.3 33.3 32.4 31.4 30.4 29.5 -5 28.5	182 38.8 197 12.4 211 46.1 226 19.8 240 53.6 255 27.3 270 01.1 284 34.9 299 08.7 313 42.6 328 16.4 342 50.3 357 24.2 11 58.2 26 32.1 41 06.1 55 40.1 70 14.1 84 48.1 99 22.2 113 56.2 128 30.3 143 04.4 157 38.5 172 12.6	146 147 147 148 147 148 148 148 149 148 149 149 150 149 150 150 150 151 150 151 151 151 151 151	-11 49.2 39.8 30.4 20.9 11.4 -11 01.9 -10 52.3 42.6 32.9 23.2 13.4 -10 03.6 -9 53.7 43.8 33.8 23.8 13.8 -9 03.7 -8 53.6 43.4 33.2 23.0 12.7 -8 02.4 -7 52.0	94 94 95 95 95 96 97 97 97 98 98 99 99 100 100 100 101 101 102 102 102 103 103 104	60 N 58 56 54 52 50 45 40 35 30 20 10 N 0 10 S 20 30 35 40 45 50 52 54 56 58 60 S	5 15 18 20 21 23 5 24 5 27 28 29 29 29 5 27 5 23 18 11 5 02 4 55 4 48 4 38 25 19 13 4 05 3 56 3 46	6 03 03 03 02 02 6 02 6 00 5 59 58 57 54 5 51 5 47 43 37 30 25 5 20 5 14 05 5 02 4 57 52 47 4 41	6 45 42 40 38 36 6 34 6 30 26 23 21 16 6 12 6 08 6 04 5 59 54 51 5 48 5 43 38 36 34 31 28 5 24	h m m 7 19 12 13 14 08 16 7 03 18 6 58 20 6 54 22 6 46 25 38 28 32 30 26 33 17 36 6 08 40 6 00 43 5 52 46 44 49 34 53 28 56 5 22 58 5 14 61 05 65 5 01 66 4 56 68 51 70 4 45 73 4 39 75	h m m 17 15 75 20 73 25 70 29 68 33 66 17 36 65 17 44 61 50 58 17 55 55 18 00 53 08 49 18 15 45 18 21 43 27 40 34 36 42 32 46 30 18 51 28 18 57 25 19 04 21 07 20 11 17 15 15 19 19 13 19 24 11				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 13 ^h 04 ^m 1		Mag: -4.1 PMG: 09 ^h 36 ^m			Mag: +1.2 PMG: 15 ^h 47 ^m			Mag: -2.1 PMG: 06 ^h 32 ^m			Mag: +0.6 PMG: 08 ^h 23 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	163 26.3 178 28.8 193 31.2 208 33.7 223 36.1 238 38.6 253 41.1 268 43.5 283 46.0 298 48.5 313 50.9 328 53.4 343 55.9 358 58.3 14 00.8 29 03.2 44 05.7 59 08.2 74 10.6 89 13.1 104 15.6 119 18.0 134 20.5 149 23.0 164 25.4	216 06.9 231 06.3 246 05.7 261 05.1 276 04.5 291 03.9 306 03.2 321 02.6 336 02.0 351 01.4 6 00.8 21 00.2 35 59.6 50 58.9 65 58.3 80 57.7 95 57.1 110 56.5 125 55.9 140 55.3 155 54.7 170 54.1 185 53.4 200 52.8 215 52.2	-18 29.4 28.8 28.2 27.7 27.1 -18 26.5 -18 26.0 25.4 24.8 24.3 23.7 -18 23.1 -18 22.5 22.0 21.4 20.8 20.2 19.7 19.1 18.5 17.9 17.3 16.8 16.2 15.6	122 56.9 137 57.7 152 58.5 167 59.3 183 00.1 198 00.9 213 01.7 228 02.5 243 03.3 258 04.2 273 05.0 288 05.8 303 06.6 318 07.4 333 08.2 348 09.0 3 09.8 18 10.6 33 11.4 48 12.2 63 13.0 78 13.8 93 14.6 108 15.4 123 16.2	+16 27.6 28.2 28.7 29.2 29.7 30.3 30.8 31.3 31.9 32.4 32.9 +16 33.5 +16 34.0 34.5 35.0 35.6 36.1 +16 36.6 +16 37.1 37.7 38.2 38.7 39.2 39.8 +16 40.3	261 38.8 276 41.0 291 43.2 306 45.4 321 47.6 336 49.8 351 51.9 6 54.1 21 56.3 36 58.5 52 00.7 67 02.9 82 05.1 97 07.2 112 09.4 127 11.6 142 13.8 157 16.0 172 18.2 187 20.4 202 22.5 217 24.7 232 26.9 247 29.1 262 31.3	-22 35.7 35.7 35.7 35.7 35.8 -22 35.8 -22 35.8 35.8 35.8 35.8 35.8 -22 35.8 -22 35.9 35.9 35.9 35.9 35.9 -22 35.9 -22 35.9 36.0 36.0 36.0 36.0 36.0 -22 36.0	233 49.7 248 51.9 263 54.2 278 56.4 293 58.7 309 00.9 324 03.2 339 05.4 354 07.7 9 09.9 24 12.2 39 14.4 54 16.7 69 18.9 84 21.2 99 23.4 114 25.6 129 27.9 144 30.1 159 32.4 174 34.6 189 36.9 204 39.1 219 41.4 234 43.6	-21 46.9 46.9 46.8 46.8 46.8 -21 46.8 -21 46.7 46.7 46.7 46.7 46.6 -21 46.6 -21 46.6 46.6 46.5 46.5 46.5 -21 46.5 -21 46.4 46.4 46.4 46.4 46.3 46.3 -21 46.3							
Dif.	—		-6 +6			+8 +5			+22 0			+22 0				

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo				Salida de Luna		Puesta de Luna							
	SD: 16'1				SD: 14'8 Edad: 0 ^d 3								PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5													
	PMG: 12 ^h 11 ^m 1				PMG: 12 ^h 53 ^m Rº: 43 ^m																					
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.		Civil		Náut.		Hora Rº		Hora Rº					
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m				
0	177	11.9	-5	28.5	172	12.6	152	-7	52.0	103	60 N	17 42	18 23	19 12	7 31	10	18 30	76								
1	192	12.0		27.5	186	46.8	151		41.7	105	58	44	23	09	27	13	33	73								
2	207	12.2		26.5	201	20.9	152		31.2	104	56	46	23	06	24	15	35	71								
3	222	12.3		25.6	215	55.1	152		20.8	105	54	48	23	04	21	17	37	69								
4	237	12.4		24.6	230	29.3	152	-7	10.3	105	52	50	24	03	18	19	39	67								
5	252	12.6	-5	23.6	245	03.5	152	-6	59.8	106	50	17 51	18 24	19 01	7 16	20	18 41	65								
6	267	12.7	-5	22.7	259	37.7	152	-6	49.2	106	45	17 55	18 24	18 58	7 11	24	18 45	61								
7	282	12.9		21.7	274	11.9	152		38.6	106	40	17 58	25	56	06	27	48	58								
8	297	13.0		20.7	288	46.1	153		28.0	106	35	18 01	26	55	7 02	30	50	56								
9	312	13.2		19.7	303	20.4	152		17.4	107	30	03	27	55	6 59	32	53	53								
10	327	13.3		18.8	317	54.6	153	-6	06.7	107	20	07	29	55	53	36	18 57	49								
11	342	13.5	-5	17.8	332	28.9	152	-5	56.0	107	10 N	18 11	18 32	18 56	6 48	39	19 00	46								
12	357	13.6	-5	16.8	347	03.1	153	-5	45.3	108	0	18 14	18 35	18 59	6 43	42	19 04	42								
13	12	13.8		15.9	1	37.4	153		34.5	108	10 S	18	39	19 04	38	46	07	39								
14	27	13.9		14.9	16	11.7	153		23.7	108	20	22	44	10	33	49	10	36								
15	42	14.1		13.9	30	46.0	153		12.9	108	30	27	51	19	27	53	14	32								
16	57	14.2		12.9	45	20.3	153	-5	02.1	109	35	30	18 55	25	24	55	16	29								
17	72	14.4	-5	12.0	59	54.6	153	-4	51.2	108	40	18 33	19 00	19 33	6 20	58	19 19	26								
18	87	14.5	-5	11.0	74	28.9	153	-4	40.4	110	45	18 37	19 06	19 42	6 15	61	19 22	23								
19	102	14.7		10.0	89	03.2	153		29.4	109	50	41	14	53	10	65	25	20								
20	117	14.8		09.0	103	37.5	153		18.5	109	52	43	18	19 59	07	67	27	18								
21	132	15.0		08.1	118	11.8	153	-4	07.6	110	54	45	22	20 06	04	69	28	17								
22	147	15.1		07.1	132	46.1	153	-3	56.6	110	56	48	26	13	6 01	71	30	15								
23	162	15.3		06.1	147	20.4	153		45.6	110	58	51	31	21	5 58	73	32	13								
24	177	15.4	-5	05.1	161	54.7		-3	34.6		60 S	18 54	19 37	20 31	5 54	76	19 35	10								
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO											
	PMG: 13 ^h 00 ^m 2		Mag: -4.1 PMG: 09 ^h 37 ^m				Mag: +1.2 PMG: 15 ^h 46 ^m				Mag: -2.1 PMG: 06 ^h 29 ^m				Mag: +0.6 PMG: 08 ^h 20 ^m											
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄											
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'						
0	164	25.4	215	52.2	-18	15.6	123	16.2	+16	40.3	262	31.3	-22	-36.0	234	43.6	-21	46.3								
1	179	27.9	230	51.6		15.0	138	17.0		40.8	277	33.5		-36.0	249	45.9		46.3								
2	194	30.4	245	51.0		14.4	153	17.8		41.4	292	35.7		-36.1	264	48.2		46.2								
3	209	32.8	260	50.4		13.8	168	18.6		41.9	307	37.9		-36.1	279	50.4		46.2								
4	224	35.3	275	49.8		13.2	183	19.4		42.4	322	40.1		-36.1	294	52.7		46.2								
5	239	37.7	290	49.2	-18	12.7	198	20.2	+16	42.9	337	42.3	-22	-36.1	309	54.9	-21	46.2								
6	254	40.2	305	48.6	-18	12.1	213	21.0	+16	43.4	352	44.4	-22	-36.1	324	57.2	-21	46.1								
7	269	42.7	320	48.0		11.5	228	21.8		44.0	7	46.6		-36.1	339	59.4		46.1								
8	284	45.1	335	47.4		10.9	243	22.6		44.5	22	48.8		-36.1	355	01.7		46.1								
9	299	47.6	350	46.8		10.3	258	23.4		45.0	37	51.0		-36.1	10	03.9		46.1								
10	314	50.1	5	46.1		09.7	273	24.2		45.5	52	53.2		-36.2	25	06.2		46.0								
11	329	52.5	20	45.5	-18	09.1	288	25.0	+16	46.1	67	55.4	-22	-36.2	40	08.4	-21	46.0								
12	344	55.0	35	44.9	-18	08.5	303	25.8	+16	46.6	82	57.6	-22	-36.2	55	10.7	-21	46.0								
13	359	57.5	50	44.3		07.9	318	26.6		47.1	97	59.8		-36.2	70	12.9		46.0								
14	14	59.9	65	43.7		07.3	333	27.4		47.6	113	02.0		-36.2	85	15.2		45.9								
15	30	02.4	80	43.1		06.7	348	28.2		48.2	128	04.2		-36.2	100	17.4		45.9								
16	45	04.9	95	42.5		06.1	3	29.0		48.7	143	06.4		-36.2	115	19.7		45.9								
17	60	07.3	110	41.9	-18	05.5	18	29.8	+16	49.2	158	08.6	-22	-36.3	130	21.9	-21	45.9								
18	75	09.8	125	41.3	-18	04.9	33	30.6	+16	49.7	173	10.8	-22	-36.3	145	24.2	-21	45.8								
19	90	12.2	140	40.7		04.3	48	31.4		50.2	188	13.0		-36.3	160	26.4		45.8								
20	105	14.7	155	40.1		03.7	63	32.2		50.8	203	15.2		-36.3	175	28.7		45.8								
21	120	17.2	170	39.5		03.1	78	33.0		51.3	218	17.3		-36.3	190	30.9		45.8								
22	135	19.6	185	38.9		02.5	93	33.8		51.8	233	19.5		-36.3	205	33.2		45.7								
23	150	22.1	200	38.3		01.9	108	34.6		52.3	248	21.7		-36.3	220	35.4		45.7								
24	165	24.6	215	37.7	-18	01.3	123	35.4	+16	52.8	263	23.9	-22	-36.3	235	37.7	-21	45.7								
Dif.	—		-6				+8				+5				+22				0				+23			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'1				SD: 14'9 Edad: 1 ^d 3	PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'8		Náut.		Civil	Hora		Rº	Hora	Rº							
	PMG: 12 ^h 10 ^m 9					PMG: 13 ^h 36 ^m Rº: 42 ^m																
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.															
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m						
0	177	15.4	-5	05.1	161	54.7	153	-3	34.6	110	60 N	5 09	5 57	6 39	7 41	10	19 46	77				
1	192	15.6		04.2	176	29.0	153		23.6	111	58	12	58	37	40	13	46	74				
2	207	15.7		03.2	191	03.3	154		12.5	111	56	15	58	35	39	15	46	72				
3	222	15.9		02.2	205	37.7	153	-3	01.4	111	54	17	58	33	38	17	46	70				
4	237	16.0		01.3	220	12.0	153	-2	50.3	111	52	18	57	31	37	19	46	68				
5	252	16.2	-5	00.3	234	46.3	153	-2	39.2	111	50	5 20	5 57	6 30	7 36	21	19 46	66				
6	267	16.3	-4	59.3	249	20.6	153	-2	28.1	111	45	5 23	5 57	6 26	7 35	23	19 46	62				
7	282	16.5		58.3	263	54.9	153		17.0	112	40	25	56	23	33	27	46	59				
8	297	16.6		57.4	278	29.2	153	-2	05.8	111	35	26	56	21	32	29	46	57				
9	312	16.8		56.4	293	03.5	152	-1	54.7	112	30	27	55	19	31	31	46	54				
10	327	16.9		55.4	307	37.7	153		43.5	112	20	27	53	15	29	35	46	50				
11	342	17.1	-4	54.4	322	12.0	153	-1	32.3	112	10 N	5 26	5 50	6 11	7 27	39	19 46	46				
12	357	17.2	-4	53.5	336	46.3	152	-1	21.1	112	0	5 23	5 47	6 08	7 25	43	19 46	43				
13	12	17.4		52.5	351	20.5	153	-1	09.9	112	10 S	18	43	04	24	46	46	39				
14	27	17.5		51.5	5	54.8	152	-0	58.7	112	20	12	38	6 00	22	50	46	36				
15	42	17.7		50.5	20	29.0	153		47.5	113	30	5 03	31	5 55	20	54	46	32				
16	57	17.8		49.6	35	03.3	152		36.2	112	35	4 57	27	53	19	56	45	30				
17	72	18.0	-4	48.6	49	37.5	152	-0	25.0	113	40	4 50	5 22	5 50	7 18	59	19 45	27				
18	87	18.1	-4	47.6	64	11.7	152	-0	13.7	112	45	4 41	5 16	5 46	7 16	62	19 45	24				
19	102	18.3		46.6	78	45.9	152	-0	02.5	113	50	29	09	42	15	65	45	21				
20	117	18.4		45.6	93	20.1	152	+0	08.8	112	52	24	05	40	14	67	45	19				
21	132	18.6		44.7	107	54.3	151		20.0	113	54	17	5 01	38	13	69	45	17				
22	147	18.7		43.7	122	28.4	152		31.3	113	56	10	4 57	35	12	72	45	15				
23	162	18.9		42.7	137	02.6	151		42.6	113	58	4 02	52	32	7 11	74	19 45	13				
24	177	19.1	-4	41.7	151	36.7		+0	53.9		60 S	3 52	4 46	5 29	7 10	76	19 45	10				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 12 ^h 56 ^m 2		Mag: -4.1 PMG: 09 ^h 38 ^m				Mag: +1.2 PMG: 15 ^h 45 ^m				Mag: -2.1 PMG: 06 ^h 25 ^m				Mag: +0.6 PMG: 08 ^h 16 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	165	24.6	215	37.7	-18	01.3	123	35.4	+16	52.8	263	23.9	-22	36.3	235	37.7	-21	45.7				
1	180	27.0	230	37.1		00.7	138	36.2		53.4	278	26.1		36.4	250	40.0		45.7				
2	195	29.5	245	36.5	-18	00.1	153	37.0		53.9	293	28.3		36.4	265	42.2		45.6				
3	210	32.0	260	35.9	-17	59.5	168	37.8		54.4	308	30.5		36.4	280	44.5		45.6				
4	225	34.4	275	35.3		58.9	183	38.6		54.9	323	32.7		36.4	295	46.7		45.6				
5	240	36.9	290	34.7	-17	58.3	198	39.4	+16	55.4	338	34.9	-22	36.4	310	49.0	-21	45.6				
6	255	39.3	305	34.1	-17	57.7	213	40.2	+16	56.0	353	37.1	-22	36.4	325	51.2	-21	45.5				
7	270	41.8	320	33.5		57.1	228	41.0		56.5	8	39.3		36.4	340	53.5		45.5				
8	285	44.3	335	32.9		56.4	243	41.8		57.0	23	41.5		36.4	355	55.7		45.5				
9	300	46.7	350	32.3		55.8	258	42.6		57.5	38	43.7		36.5	10	58.0		45.5				
10	315	49.2	5	31.7		55.2	273	43.4		58.0	53	45.9		36.5	26	00.2		45.4				
11	330	51.7	20	31.1	-17	54.6	288	44.2	+16	58.5	68	48.1	-22	36.5	41	02.5	-21	45.4				
12	345	54.1	35	30.5	-17	54.0	303	45.0	+16	59.1	83	50.3	-22	36.5	56	04.8	-21	45.4				
13	0	56.6	50	29.9		53.4	318	45.8	+16	59.6	98	52.5		36.5	71	07.0		45.4				
14	15	59.1	65	29.3		52.7	333	46.6	+17	00.1	113	54.7		36.5	86	09.3		45.3				
15	31	01.5	80	28.7		52.1	348	47.4		00.6	128	56.9		36.5	101	11.5		45.3				
16	46	04.0	95	28.1		51.5	3	48.2		01.1	143	59.1		36.6	116	13.8		45.3				
17	61	06.5	110	27.5	-17	50.9	18	49.0	+17	01.6	159	01.3	-22	36.6	131	16.0	-21	45.3				
18	76	08.9	125	26.9	-17	50.3	33	49.8	+17	02.2	174	03.5	-22	36.6	146	18.3	-21	45.2				
19	91	11.4	140	26.3		49.6	48	50.6		02.7	189	05.7		36.6	161	20.5		45.2				
20	106	13.8	155	25.7		49.0	63	51.4		03.2	204	07.9		36.6	176	22.8		45.2				
21	121	16.3	170	25.1		48.4	78	52.2		03.7	219	10.1		36.6	191	25.1		45.2				
22	136	18.8	185	24.5		47.8	93	53.0		04.2	234	12.3		36.6	206	27.3		45.1				
23	151	21.2	200	23.9		47.1	108	53.8		04.7	249	14.5		36.6	221	29.6		45.1				
24	166	23.7	215	23.3	-17	46.5	123	54.6	+17	05.2	264	16.7	-22	36.7	236	31.8	-21	45.1				
Dif.	—		-6				+8				+22				0				+23			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'1				SD: 14'9												PHE { 4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'2			
	PMG: 12 ^h 10 ^m 6				Edad: 2 ^d 3															
	PMG: 14 ^h 18 ^m				Rº: 44 ^m															
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m				
0	177	19.1	-4	41.7	151	36.7	151	+0	53.9	113	60 N	17 47	18 28	19 17	7 51	11				
1	192	19.2		40.8	166	10.8	151	+1	05.2	112	58	49	28	13	53	13				
2	207	19.4		39.8	180	44.9	150		16.4	113	56	50	27	11	54	15				
3	222	19.5		38.8	195	18.9	151		27.7	113	54	52	27	08	55	17				
4	237	19.7		37.8	209	53.0	150		39.0	113	52	53	27	06	56	19				
5	252	19.8	-4	36.9	224	27.0	150	+1	50.3	113	50	17 55	18 27	19 04	7 57	21				
6	267	20.0	-4	35.9	239	01.0	150	+2	01.6	113	45	17 58	18 27	19 01	7 58	25				
7	282	20.1		34.9	253	35.0	150		12.9	112	40	18 00	27	18 59	8 00	28				
8	297	20.3		33.9	268	09.0	150		24.1	113	35	02	28	57	01	30				
9	312	20.4		32.9	282	43.0	149		35.4	113	30	04	28	56	02	33				
10	327	20.6		32.0	297	16.9	149		46.7	112	20	08	30	55	04	37				
11	342	20.8	-4	31.0	311	50.8	148	+2	57.9	113	10 N	18 11	18 32	18 56	8 06	40				
12	357	20.9	-4	30.0	326	24.6	149	+3	09.2	113	0	18 14	18 35	18 59	8 08	44				
13	12	21.1		29.0	340	58.5	148		20.5	112	10 S	17	38	19 03	10	47				
14	27	21.2		28.1	355	32.3	148		31.7	112	20	21	43	08	12	50				
15	42	21.4		27.1	10	06.1	148		42.9	113	30	25	49	17	14	55				
16	57	21.5		26.1	24	39.9	147	+3	54.2	112	35	27	52	22	15	57				
17	72	21.7	-4	25.1	39	13.6	147	+4	05.4	112	40	18 30	18 57	19 29	8 17	59				
18	87	21.8	-4	24.1	53	47.3	147	+4	16.6	112	45	18 33	19 03	19 38	8 18	63				
19	102	22.0		23.2	68	21.0	147		27.8	112	50	37	09	49	20	67				
20	117	22.2		22.2	82	54.7	146		39.0	111	52	39	13	19 54	21	69				
21	132	22.3		21.2	97	28.3	146	+4	50.1	112	54	41	16	20 00	22	71				
22	147	22.5		20.2	112	01.9	145	+5	01.3	111	56	43	21	07	24	72				
23	162	22.6		19.3	126	35.4	145		12.4	112	58	45	25	15	25	75				
24	177	22.8	-4	18.3	141	08.9		+5	23.6		60 S	18 48	19 31	20 24	8 26	78				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 12 ^h 52 ^m 3		Mag: -4.1 PMG: 09 ^h 39 ^m				Mag: +1.3 PMG: 15 ^h 44 ^m				Mag: -2.1 PMG: 06 ^h 22 ^m				Mag: +0.6 PMG: 08 ^h 13 ^m					
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♅		dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	166	23.7	215	23.3	-17	46.5	123	54.6	+17	05.2	264	16.7	-22	-36.7	236	31.8	-21	45.1		
1	181	26.2	230	22.7		45.9	138	55.4		05.8	279	18.9		-36.7	251	34.1		45.1		
2	196	28.6	245	22.1		45.3	153	56.1		06.3	294	21.1		-36.7	266	36.3		45.0		
3	211	31.1	260	21.5		44.6	168	56.9		06.8	309	23.3		-36.7	281	38.6		45.0		
4	226	33.6	275	20.9		44.0	183	57.7		07.3	324	25.5		-36.7	296	40.9		45.0		
5	241	36.0	290	20.3	-17	43.4	198	58.5	+17	07.8	339	27.8	-22	-36.7	311	43.1	-21	45.0		
6	256	38.5	305	19.7	-17	42.7	213	59.3	+17	08.3	354	30.0	-22	-36.7	326	45.4	-21	44.9		
7	271	40.9	320	19.1		42.1	229	00.1		08.8	9	32.2		-36.7	341	47.6		44.9		
8	286	43.4	335	18.5		41.5	244	00.9		09.3	24	34.4		-36.7	356	49.9		44.9		
9	301	45.9	350	17.9		40.8	259	01.7		09.9	39	36.6		-36.8	11	52.1		44.9		
10	316	48.3	5	17.4		40.2	274	02.5		10.4	54	38.8		-36.8	26	54.4		44.8		
11	331	50.8	20	16.8	-17	39.6	289	03.3	+17	10.9	69	41.0	-22	-36.8	41	56.7	-21	44.8		
12	346	53.3	35	16.2	-17	38.9	304	04.1	+17	11.4	84	43.2	-22	-36.8	56	58.9	-21	44.8		
13	1	55.7	50	15.6		38.3	319	04.9		11.9	99	45.4		-36.8	72	01.2		44.8		
14	16	58.2	65	15.0		37.7	334	05.7		12.4	114	47.6		-36.8	87	03.4		44.7		
15	32	00.7	80	14.4		37.0	349	06.5		12.9	129	49.8		-36.8	102	05.7		44.7		
16	47	03.1	95	13.8		36.4	4	07.3		13.4	144	52.0		-36.8	117	08.0		44.7		
17	62	05.6	110	13.2	-17	35.7	19	08.1	+17	13.9	159	54.2	-22	-36.9	132	10.2	-21	44.7		
18	77	08.1	125	12.6	-17	35.1	34	08.9	+17	14.5	174	56.4	-22	-36.9	147	12.5	-21	44.6		
19	92	10.5	140	12.0		34.4	49	09.7		15.0	189	58.7		-36.9	162	14.7		44.6		
20	107	13.0	155	11.4		33.8	64	10.5		15.5	205	00.9		-36.9	177	17.0		44.6		
21	122	15.4	170	10.8		33.2	79	11.2		16.0	220	03.1		-36.9	192	19.3		44.6		
22	137	17.9	185	10.3		32.5	94	12.0		16.5	235	05.3		-36.9	207	21.5		44.5		
23	152	20.4	200	09.7		31.9	109	12.8		17.0	250	07.5		-36.9	222	23.8		44.5		
24	167	22.8	215	09.1	-17	31.2	124	13.6	+17	17.5	265	09.7	-22	-36.9	237	26.0	-21	44.5		
Dif.	—		-6		+6		+8		+5		+22		0		+23					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 12 ^h 10 ^m 4			SD: 15'1 Edad: 3 ^d 3 PMG: 15 ^h 02 ^m											PHE { 4 ^h : 55'3 12 ^h : 55'5 20 ^h : 55'6 Rº: 46 ^m			
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.	Náut.		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	177	22.8	-4	18.3	141	08.9	145	+5	23.6	111	60 N	5 03	5 52	6 33	8 02	13	22 22	80
1	192	22.8		17.3	155	42.4	144		34.7	111	58	07	52	31	06	15	16	78
2	207	23.1		16.3	170	15.8	145		45.8	110	56	09	52	29	09	18	11	75
3	222	23.3		15.3	184	49.3	143	+5	56.8	111	54	12	53	28	12	20	07	73
4	237	23.4		14.4	199	22.6	144	+6	07.9	110	52	14	53	27	15	22	03	71
5	252	23.6	-4	13.4	213	56.0	143	+6	18.9	111	50	5 16	5 53	6 25	8 18	23	22 00	68
6	267	23.7	-4	12.4	228	29.3	142	+6	30.0	110	45	5 19	5 53	6 23	8 23	27	21 52	65
7	282	23.9		11.4	243	02.5	142		41.0	109	40	22	53	20	28	29	46	61
8	297	24.1		10.4	257	35.7	142	+6	51.9	110	35	24	53	18	31	33	40	59
9	312	24.2		09.5	272	08.9	141	+7	02.9	109	30	25	52	16	35	35	35	57
10	327	24.4		08.5	286	42.0	141		13.8	109	20	25	51	13	41	39	27	53
11	342	24.5	-4	07.5	301	15.1	141	+7	24.7	109	10 N	5 25	5 49	6 10	8 46	43	21 20	49
12	357	24.7	-4	06.5	315	48.2	140	+7	35.6	109	0	5 22	5 46	6 07	8 52	45	21 13	46
13	12	24.9		05.5	330	21.2	139		46.5	108	10 S	18	43	04	8 57	48	21 06	44
14	27	25.0		04.6	344	54.1	140	+7	57.3	108	20	13	39	6 01	9 02	52	20 59	40
15	42	25.2		03.6	359	27.1	138	+8	08.1	108	30	5 05	33	5 57	09	56	51	36
16	57	25.3		02.6	13	59.9	138		18.9	107	35	4 59	29	55	12	59	46	34
17	72	25.5	-4	01.6	28	32.7	138	+8	29.6	108	40	4 52	5 25	5 52	9 16	62	20 41	31
18	87	25.7	-4	00.6	43	05.5	137	+8	40.4	106	45	4 44	5 19	5 49	9 21	65	20 35	28
19	102	25.8	-3	59.7	57	38.2	137	+8	51.0	107	50	33	12	45	27	68	27	25
20	117	26.0		58.7	72	10.9	136	+9	01.7	106	52	28	09	43	30	70	24	23
21	132	26.1		57.7	86	43.5	136		12.3	106	54	22	05	41	33	72	20	21
22	147	26.3		56.7	101	16.1	135		22.9	106	56	15	5 01	39	36	74	16	19
23	162	26.5		55.7	115	48.6	135		33.5	105	58	4 07	4 57	37	9 40	77	20 12	16
24	177	26.6	-3	54.7	130	21.1		+9	44.0		60 S	3 58	4 52	5 34	9 44	80	20 07	13

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 12 ^h 48 ^m 4		Mag: -4.0 PMG: 09 ^h 40 ^m				Mag: +1.3 PMG: 15 ^h 42 ^m				Mag: -2.1 PMG: 06 ^h 18 ^m				Mag: +0.6 PMG: 08 ^h 09 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	167	22.8	215	09.1	-17	31.2	124	13.6	+17	17.5	265	09.7	-22	36.9	237	26.0	-21	44.5
1	182	25.3	230	08.5		30.6	139	14.4		18.0	280	11.9		37.0	252	28.3		44.5
2	197	27.8	245	07.9		29.9	154	15.2		18.5	295	14.1		37.0	267	30.6		44.5
3	212	30.2	260	07.3		29.3	169	16.0		19.0	310	16.3		37.0	282	32.8		44.4
4	227	32.7	275	06.7		28.6	184	16.8		19.5	325	18.5		37.0	297	35.1		44.4
5	242	35.2	290	06.1	-17	28.0	199	17.6	+17	20.0	340	20.8	-22	37.0	312	37.3	-21	44.4
6	257	37.6	305	05.6	-17	27.3	214	18.4	+17	20.6	355	23.0	-22	37.0	327	39.6	-21	44.4
7	272	40.1	320	05.0		26.7	229	19.2		21.1	10	25.2		37.0	342	41.9		44.3
8	287	42.5	335	04.4		26.0	244	20.0		21.6	25	27.4		37.0	357	44.1		44.3
9	302	45.0	350	03.8		25.4	259	20.8		22.1	40	29.6		37.0	12	46.4		44.3
10	317	47.5	5	03.2		24.7	274	21.6		22.6	55	31.8		37.1	27	48.6		44.3
11	332	49.9	20	02.6	-17	24.0	289	22.3	+17	23.1	70	34.0	-22	37.1	42	50.9	-21	44.2
12	347	52.4	35	02.0	-17	23.4	304	23.1	+17	23.6	85	36.2	-22	37.1	57	53.2	-21	44.2
13	2	54.9	50	01.5		22.7	319	23.9		24.1	100	38.5		37.1	72	55.4		44.2
14	17	57.3	65	00.9		22.1	334	24.7		24.6	115	40.7		37.1	87	57.7		44.2
15	32	59.8	80	00.3		21.4	349	25.5		25.1	130	42.9		37.1	103	00.0		44.1
16	48	02.3	94	59.7		20.7	4	26.3		25.6	145	45.1		37.1	118	02.2		44.1
17	63	04.7	109	59.1	-17	20.1	19	27.1	+17	26.1	160	47.3	-22	37.1	133	04.5	-21	44.1
18	78	07.2	124	58.5	-17	19.4	34	27.9	+17	26.6	175	49.5	-22	37.2	148	06.7	-21	44.1
19	93	09.7	139	57.9		18.8	49	28.7		27.1	190	51.8		37.2	163	09.0		44.0
20	108	12.1	154	57.4		18.1	64	29.5		27.6	205	54.0		37.2	178	11.3		44.0
21	123	14.6	169	56.8		17.4	79	30.3		28.1	220	56.2		37.2	193	13.5		44.0
22	138	17.0	184	56.2		16.8	94	31.0		28.6	235	58.4		37.2	208	15.8		44.0
23	153	19.5	199	55.6		16.1	109	31.8		29.1	251	00.6		37.2	223	18.1		43.9
24	168	22.0	214	55.0	-17	15.4	124	32.6	+17	29.6	266	02.8	-22	37.2	238	20.3	-21	43.9
Dif.	—		-6		+7		+8		+5		+22		0		+23			0

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1			PHE { 4 ^h : 55'8 12 ^h : 56'0 20 ^h : 56'2													
	PMG: 12 ^h 10 ^m 1			Edad: 4 ^d 3													
	PMG: 15 ^h 48 ^m			Rº: 49 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	m	
0	177	26.6	-3 54.7	130	21.1	134	+9 44.0	105	60 N	17 52	18 33	19 22	8 15	16	23 42	81	
1	192	26.8		144	53.5	134	+9 54.5	104	58	53	32	18		21	19	34 78	
2	207	26.9		159	25.9	133	+10 04.9	104	56	55	32	15		27	21	26 76	
3	222	27.1		173	58.2	133		15.3	104	54	56	31	12	32	23	20 73	
4	237	27.3		188	30.5	132		25.7	103	52	57	31	10	37	25	14 71	
5	252	27.4	-3 49.8	203	02.7	131	+10 36.0	103	50	17 58	18 30	19 08	8 41	26	23 08	70	
6	267	27.6	-3 48.9	217	34.8	131	+10 46.3	103	45	18 00	18 30	19 04	8 50	30	22 57	66	
7	282	27.8		232	06.9	130	+10 56.6	102	40	02	29	19 01	8 57	33	47	64	
8	297	27.9		246	38.9	130	+11 06.8	101	35	04	29	18 59	9 04	35	39	61	
9	312	28.1		261	10.9	129		16.9	102	30	06	29	57	10	37	32 59	
10	327	28.2		275	42.8	129		27.1	100	20	08	30	56	20	41	20 55	
11	342	28.4	-3 44.0	290	14.7	128	+11 37.1	101	10 N	18 11	18 32	18 56	9 29	44	22 09	52	
12	357	28.6	-3 43.0	304	46.5	127	+11 47.2	99	0	18 13	18 34	18 58	9 37	48	21 59	50	
13	12	28.7		319	18.2	127	+11 57.1	100	10 S	16	37	19 01		45	51	50 46	
14	27	28.9		333	49.9	126	+12 07.1	99	20	19	41	07		9 54	54	39 43	
15	42	29.1		348	21.5	125		17.0	98	30	22	46	14	10 05	58	27 40	
16	57	29.2		2	53.0	125		26.8	98	35	24	50	19	11	60	20 38	
17	72	29.4	-3 38.1	17	24.5	124	+12 36.6	97	40	18 27	18 54	19 26	10 18	62	21 12	35	
18	87	29.5	-3 37.1	31	55.9	124	+12 46.3	97	45	18 29	18 59	19 34	10 26	65	21 03	32	
19	102	29.7		46	27.3	122	+12 56.0	96	50	32	19 05	44		35	70	20 52	
20	117	29.9		60	58.5	123	+13 05.6	96	52	34	08	49		40	71	47 27	
21	132	30.0		75	29.8	121		15.2	95	54	36	11	19 55	45	73	41 26	
22	147	30.2		90	00.9	121		24.7	95	56	37	15	20 01	50	76	35 23	
23	162	30.4		104	32.0	120		34.2	94	58	40	19	08	10 57	78	28 21	
24	177	30.5	-3 31.2	119	03.0		+13 43.6		60 S	18 42	19 24	20 17	11 04	81	20 20	18	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.0				Mag: +1.3				Mag: -2.1				Mag: +0.6			
	12 ^h 44 ^m 4		PMG: 09 ^h 41 ^m				PMG: 15 ^h 41 ^m				PMG: 06 ^h 15 ^m				PMG: 08 ^h 05 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	°	'	°	°	°	'	°	°	°	'	°	°	°	'	
0	168	22.0	214	55.0	-17 15.4		124	32.6	+17 29.6		266	02.8	-22 -37.2		238	20.3	-21 43.9	
1	183	24.4	229	54.5		14.8	139	33.4		30.1	281	05.1		-37.2	253	22.6		43.9
2	198	26.9	244	53.9		14.1	154	34.2		30.6	296	07.3		-37.2	268	24.8		43.9
3	213	29.4	259	53.3		13.4	169	35.0		31.1	311	09.5		-37.3	283	27.1		43.8
4	228	31.8	274	52.7		12.7	184	35.8		31.6	326	11.7		-37.3	298	29.4		43.8
5	243	34.3	289	52.1	-17 12.1		199	36.6	+17 32.1		341	13.9	-22 -37.3		313	31.6	-21 43.8	
6	258	36.8	304	51.6	-17 11.4		214	37.4	+17 32.6		356	16.2	-22 -37.3		328	33.9	-21 43.8	
7	273	39.2	319	51.0		10.7	229	38.2		33.1	11	18.4		-37.3	343	36.2		43.8
8	288	41.7	334	50.4		10.0	244	38.9		33.6	26	20.6		-37.3	358	38.4		43.7
9	303	44.2	349	49.8		09.4	259	39.7		34.1	41	22.8		-37.3	13	40.7		43.7
10	318	46.6	4	49.2		08.7	274	40.5		34.6	56	25.0		-37.3	28	43.0		43.7
11	333	49.1	19	48.7	-17 08.0		289	41.3	+17 35.1		71	27.3	-22 -37.3		43	45.2	-21 43.7	
12	348	51.5	34	48.1	-17 07.3		304	42.1	+17 35.6		86	29.5	-22 -37.4		58	47.5	-21 43.6	
13	3	54.0	49	47.5		06.7	319	42.9		36.1	101	31.7		-37.4	73	49.8		43.6
14	18	56.5	64	46.9		06.0	334	43.7		36.6	116	33.9		-37.4	88	52.0		43.6
15	33	58.9	79	46.3		05.3	349	44.5		37.1	131	36.1		-37.4	103	54.3		43.6
16	49	01.4	94	45.8		04.6	4	45.3		37.6	146	38.4		-37.4	118	56.6		43.5
17	64	03.9	109	45.2	-17 03.9		19	46.0	+17 38.1		161	40.6	-22 -37.4		133	58.8	-21 43.5	
18	79	06.3	124	44.6	-17 03.2		34	46.8	+17 38.6		176	42.8	-22 -37.4		149	01.1	-21 43.5	
19	94	08.8	139	44.0		02.6	49	47.6		39.1	191	45.0		-37.4	164	03.3		43.5
20	109	11.3	154	43.5		01.9	64	48.4		39.6	206	47.3		-37.4	179	05.6		43.4
21	124	13.7	169	42.9		01.2	79	49.2		40.1	221	49.5		-37.5	194	07.9		43.4
22	139	16.2	184	42.3	-17 00.5		94	50.0		40.6	236	51.7		-37.5	209	10.1		43.4
23	154	18.6	199	41.7	-16 59.8		109	50.8		41.1	251	53.9		-37.5	224	12.4		43.4
24	169	21.1	214	41.2	-16 59.1		124	51.6	+17 41.6		266	56.2	-22 -37.5		239	14.7	-21 43.3	
Dif.	—		-6		+7		+8		+5		+22		0		+23			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1				SD: 15'3												PHE { 4 ^h : 56'4	
	PMG: 12 ^h 09 ^m 8				Edad: 5 ^d 3					{ 12 ^h : 56'6								
				PMG: 16 ^h 37 ^m				Rº: 51 ^m										
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°		°	'	°			h m	h m	h m	h m	m	m		
0	177	30.5	-3	119	03.0	120	+13	43.6	93	60 N	4 57	5 46	6 27	8 31	21	*** **		
1	192	30.7		133	34.0	118	+13	52.9	93	58	5 01	47	25	40	24	*** **		
2	207	30.9		148	04.8	119	+14	02.2	92	56	04	47	24	48	27	*** **		
3	222	31.0		162	35.7	117		11.4	92	54	07	48	23	8 55	29	*** **		
4	237	31.2		177	06.4	117		20.6	91	52	09	48	22	9 02	30	*** **		
5	252	31.4	-3	191	37.1	116	+14	29.7	90	50	5 11	5 49	6 21	9 07	33	*** **		
6	267	31.5	-3	206	07.7	115	+14	38.7	90	45	5 16	5 50	6 19	9 20	36	*** **		
7	282	31.7		220	38.2	114		47.7	89	40	19	50	17	30	39	23 51 63		
8	297	31.9		235	08.6	114	+14	56.6	89	35	21	50	15	39	41	40 62		
9	312	32.0		249	39.0	113	+15	05.5	88	30	22	50	14	9 47	43	31 60		
10	327	32.2		264	09.3	113		14.3	87	20	24	49	11	10 01	46	15 57		
11	342	32.4	-3	278	39.6	111	+15	23.0	86	10 N	5 24	5 48	6 09	10 13	49	23 01 55		
12	357	32.5	-3	293	09.7	111	+15	31.6	86	0	5 22	5 46	6 07	10 25	51	22 49 52		
13	12	32.7		307	39.8	110		40.2	85	10 S	19	43	04	36	54	36 50		
14	27	32.9		322	09.8	110		48.7	84	20	14	39	6 01	10 48	57	22 48		
15	42	33.0		336	39.8	108	+15	57.1	83	30	06	34	5 58	11 03	59	22 07 45		
16	57	33.2		351	09.6	108	+16	05.4	83	35	5 01	31	56	11	61	21 58 43		
17	72	33.4	-3	5	39.4	107	+16	13.7	82	40	4 55	5 27	5 54	11 20	64	21 47 42		
18	87	33.5	-3	20	09.1	107	+16	21.9	81	45	4 47	5 22	5 51	11 31	67	21 35 39		
19	102	33.7		34	38.8	105		30.0	81	50	37	16	48	45	70	21 36		
20	117	33.9		49	08.3	105		38.1	79	52	32	13	47	51	72	14 34		
21	132	34.0		63	37.8	104		46.0	79	54	26	09	45	11 58	73	21 07 32		
22	147	34.2		78	07.2	103	+16	53.9	78	56	20	06	44	12 06	75	20 58 31		
23	162	34.4		92	36.5	103	+17	01.7	78	58	13	5 02	42	12 15	78	20 49 28		
24	177	34.5	-3	107	05.8		+17	09.5		60 S	4 04	4 57	5 39	12 25	81	20 38 25		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.0				Mag: +1.3				Mag: -2.1				Mag: +0.6			
	12 ^h 40 ^m 5		PMG: 09 ^h 42 ^m				PMG: 15 ^h 40 ^m				PMG: 06 ^h 11 ^m				PMG: 08 ^h 02 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	169	21.1	214	41.2	-16	59.1	124	51.6	+17	41.6	266	56.2	-22	37.5	239	14.7	-21	43.3
1	184	23.6	229	40.6		58.4	139	52.3		42.1	281	58.4		37.5	254	16.9		43.3
2	199	26.0	244	40.0		57.8	154	53.1		42.6	297	00.6		37.5	269	19.2		43.3
3	214	28.5	259	39.4		57.1	169	53.9		43.1	312	02.8		37.5	284	21.5		43.3
4	229	31.0	274	38.9		56.4	184	54.7		43.6	327	05.1		37.5	299	23.7		43.3
5	244	33.4	289	38.3	-16	55.7	199	55.5	+17	44.1	342	07.3	-22	37.5	314	26.0	-21	43.2
6	259	35.9	304	37.7	-16	55.0	214	56.3	+17	44.6	357	09.5	-22	37.6	329	28.3	-21	43.2
7	274	38.4	319	37.2		54.3	229	57.1		45.1	12	11.7		37.6	344	30.6		43.2
8	289	40.8	334	36.6		53.6	244	57.9		45.6	27	14.0		37.6	359	32.8		43.2
9	304	43.3	349	36.0		52.9	259	58.6		46.1	42	16.2		37.6	14	35.1		43.1
10	319	45.8	4	35.4		52.2	274	59.4		46.6	57	18.4		37.6	29	37.4		43.1
11	334	48.2	19	34.9	-16	51.5	290	00.2	+17	47.1	72	20.6	-22	37.6	44	39.6	-21	43.1
12	349	50.7	34	34.3	-16	50.8	305	01.0	+17	47.6	87	22.9	-22	37.6	59	41.9	-21	43.1
13	4	53.1	49	33.7		50.1	320	01.8		48.0	102	25.1		37.6	74	44.2		43.0
14	19	55.6	64	33.2		49.4	335	02.6		48.5	117	27.3		37.6	89	46.4		43.0
15	34	58.1	79	32.6		48.7	350	03.4		49.0	132	29.6		37.6	104	48.7		43.0
16	50	00.5	94	32.0		48.0	5	04.1		49.5	147	31.8		37.7	119	51.0		43.0
17	65	03.0	109	31.5	-16	47.3	20	04.9	+17	50.0	162	34.0	-22	37.7	134	53.2	-21	42.9
18	80	05.5	124	30.9	-16	46.6	35	05.7	+17	50.5	177	36.3	-22	37.7	149	55.5	-21	42.9
19	95	07.9	139	30.3		45.9	50	06.5		51.0	192	38.5		37.7	164	57.8		42.9
20	110	10.4	154	29.7		45.2	65	07.3		51.5	207	40.7		37.7	180	00.0		42.9
21	125	12.9	169	29.2		44.5	80	08.1		52.0	222	42.9		37.7	195	02.3		42.9
22	140	15.3	184	28.6		43.8	95	08.9		52.5	237	45.2		37.7	210	04.6		42.8
23	155	17.8	199	28.0		43.1	110	09.6		53.0	252	47.4		37.7	225	06.9		42.8
24	170	20.2	214	27.5	-16	42.4	125	10.4	+17	53.5	267	49.6	-22	37.7	240	09.1	-21	42.8
Dif.	—		-6	+7			+8	+5			+22	0			+23			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'1			PHE { 4 ^h : 57'1 12 ^h : 57'3 20 ^h : 57'6														
	PMG: 12 ^h 09 ^m 6			Edad: 6 ^d 3														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.				Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°		°	h m	h m	h m	h m m	h m m	h m m		
0	177	34.5	-3	107	05.8	102	+17	09.5	76	60 N	17 57	18 38	19 27	8 52	31	1 03	79	
1	192	34.7		121	35.0	100		17.1	75	58	58	37	23	9 04	33	0 52	76	
2	207	34.9		136	04.0	101		24.6	75	56	17 59	36	19	15 35		42	74	
3	222	35.0		150	33.1	99		32.1	74	54	18 00	35	16	24 37		33	72	
4	237	35.2		165	02.0	98		39.5	73	52	00	34	13	32 39		25	70	
5	252	35.4	-3	179	30.8	98	+17	46.8	72	50	18 01	18 33	19 11	9 40	40	0 18	69	
6	267	35.5	-3	193	59.6	97	+17	54.0	71	45	18 03	18 32	19 06	9 56	42	0 03	66	
7	282	35.7	-3	208	28.3	96	+18	01.1	71	40	04	31	03	10 09	44	***	***	
8	297	35.9	-2	222	56.9	96		08.2	69	35	06	31	19 00	20 46		***	***	
9	312	36.0		237	25.5	94		15.1	68	30	07	31	18 58	30 48		***	***	
10	327	36.2		251	53.9	94		21.9	68	20	09	31	56	10 47	50	***	***	
11	342	36.4	-2	266	22.3	93	+18	28.7	66	10 N	18 11	18 32	18 56	11 02	52	23 56	57	
12	357	36.5	-2	280	50.6	92	+18	35.3	66	0	18 13	18 34	18 58	11 16	54	23 41	56	
13	12	36.7		295	18.8	92		41.9	65	10 S	15	36	19 00	30 56		26	54	
14	27	36.9		309	47.0	90		48.4	63	20	17	39	05	11 45	58	23 10	53	
15	42	37.1		324	15.0	90	+18	54.7	63	30	20	44	12	12 02	61	22 52	50	
16	57	37.2		338	43.0	89	+19	01.0	62	35	21	47	17	12 62		41	50	
17	72	37.4	-2	353	10.9	88	+19	07.2	60	40	18 23	18 50	19 22	12 24	63	22 29	48	
18	87	37.6	-2	7	38.7	88	+19	13.2	60	45	18 26	18 55	19 30	12 38	65	22 14	47	
19	102	37.7		22	06.5	86		19.2	58	50	28	19 01	39	12 55	68	21 57	44	
20	117	37.9		36	34.1	86		25.0	58	52	29	03	44	13 03	69	48	44	
21	132	38.1		51	01.7	85		30.8	56	54	31	06	49	11 71		39	42	
22	147	38.3		65	29.2	85		36.4	56	56	32	10	19 55	21 73		29	40	
23	162	38.4		79	56.7	83		42.0	54	58	34	14	20 02	33 74		17	39	
24	177	38.6	-2	94	24.0		+19	47.4		60 S	18 36	19 18	20 10	13 46	77	21 03	36	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.0				Mag: +1.3				Mag: -2.1				Mag: +0.6			
	12 ^h 36 ^m 6		PMG: 09 ^h 43 ^m				PMG: 15 ^h 38 ^m				PMG: 06 ^h 08 ^m				PMG: 07 ^h 58 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	170	20.2		214	27.5	-16	125	10.4	+17	267	49.6	-22	240	09.1	-21	240	09.1	
1	185	22.7		229	26.9		140	11.2		282	51.9		255	11.4		255	11.4	
2	200	25.2		244	26.3		155	12.0		297	54.1		270	13.7		270	13.7	
3	215	27.6		259	25.8		170	12.8		312	56.3		285	15.9		285	15.9	
4	230	30.1		274	25.2		185	13.6		327	58.6		300	18.2		300	18.2	
5	245	32.6		289	24.7	-16	200	14.3	+17	343	00.8	-22	315	20.5	-21	315	20.5	
6	260	35.0		304	24.1	-16	215	15.1	+17	358	03.0	-22	330	22.7	-21	330	22.7	
7	275	37.5		319	23.5		230	15.9		13	05.3		345	25.0		345	25.0	
8	290	40.0		334	23.0		245	16.7		28	07.5		0	27.3		0	27.3	
9	305	42.4		349	22.4		260	17.5		43	09.7		15	29.6		15	29.6	
10	320	44.9		4	21.8		275	18.3		58	12.0		30	31.8		30	31.8	
11	335	47.4		19	21.3	-16	290	19.0	+17	73	14.2	-22	45	34.1	-21	45	34.1	
12	350	49.8		34	20.7	-16	305	19.8	+17	88	16.5	-22	60	36.4	-21	60	36.4	
13	5	52.3		49	20.1		320	20.6	+17	103	18.7		75	38.6		75	38.6	
14	20	54.7		64	19.6		335	21.4	+18	118	20.9		90	40.9		90	40.9	
15	35	57.2		79	19.0		350	22.2		133	23.2		105	43.2		105	43.2	
16	50	59.7		94	18.5		5	23.0		148	25.4		120	45.5		120	45.5	
17	66	02.1		109	17.9	-16	20	23.7	+18	163	27.6	-22	135	47.7	-21	135	47.7	
18	81	04.6		124	17.3	-16	35	24.5	+18	178	29.9	-22	150	50.0	-21	150	50.0	
19	96	07.1		139	16.8		50	25.3		193	32.1		165	52.3		165	52.3	
20	111	09.5		154	16.2		65	26.1		208	34.4		180	54.6		180	54.6	
21	126	12.0		169	15.7		80	26.9		223	36.6		195	56.8		195	56.8	
22	141	14.5		184	15.1		95	27.7		238	38.8		210	59.1		210	59.1	
23	156	16.9		199	14.5		110	28.4		253	41.1		226	01.4		226	01.4	
24	171	19.4		214	14.0	-16	125	29.2	+18	268	43.3	-22	241	03.7	-21	241	03.7	
Dif.	—		-6	+7		+8	+5			+22		0	+23		0		0	

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			SD: 15'7		PHE {		4 ^h : 57'8										
	PMG: 12 ^h 09 ^m 3			Edad: 7 ^d 3				12 ^h : 58'1										
								20 ^h : 58'3										
				PMG: 18 ^h 23 ^m		Rº: 58 ^m												
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m	
0	177	38.6	-2	94	24.0	83	+19	47.4	53	60 N	4 51	5 40	6 21	9 23	44	2 22	73	
1	192	38.8		108	51.3	82		52.7	53	58	55	41	20	37	47	2 08	71	
2	207	38.9		123	18.5	81	+19	58.0	51	56	4 59	42	19	9 50	48	1 56	69	
3	222	39.1		137	45.6	81	+20	03.1	50	54	5 02	43	18	10 01	49	45	68	
4	237	39.3		152	12.7	79		08.1	48	52	05	44	17	11	49	35	67	
5	252	39.4	-2	166	39.6	79	+20	12.9	48	50	5 07	5 45	6 17	10 20	50	1 27	66	
6	267	39.6	-2	181	06.5	78	+20	17.7	47	45	5 12	5 46	6 15	10 38	52	1 09	64	
7	282	39.8		195	33.3	78		22.4	45	40	16	47	14	10 53	53	0 54	63	
8	297	40.0		210	00.1	77		26.9	44	35	18	47	13	11 06	54	42	61	
9	312	40.1		224	26.8	75		31.3	43	30	20	48	12	18	54	31	60	
10	327	40.3		238	53.3	76		35.6	42	20	22	48	10	37	56	0 12	59	
11	342	40.5	-2	253	19.9	74	+20	39.8	41	10 N	5 22	5 47	6 08	11 54	56	***	***	
12	357	40.7	-2	267	46.3	74	+20	43.9	39	0	5 21	5 45	6 06	12 10	57	***	***	
13	12	40.8		282	12.7	73		47.8	38	10 S	19	43	04	26	58	***	***	
14	27	41.0		296	39.0	72		51.6	37	20	14	40	6 02	12 43	59	***	***	
15	42	41.2		311	05.2	72		55.3	36	30	07	35	5 59	13 03	60	23 42	58	
16	57	41.3		325	31.4	71	+20	58.9	34	35	5 03	33	58	14	61	31	57	
17	72	41.5	-2	339	57.5	70	+21	02.3	34	40	4 57	5 29	5 56	13 27	62	23 17	57	
18	87	41.7	-2	354	23.5	70	+21	05.7	32	45	4 50	5 25	5 54	13 43	62	23 01	56	
19	102	41.9		8	49.5	69		08.9	30	50	40	19	52	14 03	63	22 41	56	
20	117	42.0		23	15.4	68		11.9	30	52	36	16	50	12	64	32	55	
21	132	42.2		37	41.2	68		14.9	28	54	31	13	49	22	65	21	55	
22	147	42.4		52	07.0	67		17.7	27	56	25	10	48	34	65	22 09	55	
23	162	42.6		66	32.7	66		20.4	25	58	18	06	46	14 47	66	21 56	53	
24	177	42.7	-2	80	58.3		+21	22.9		60 S	4 10	5 02	5 44	15 03	67	21 39	53	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.0				Mag: +1.3				Mag: -2.1				Mag: +0.6			
	12 ^h 32 ^m 6		PMG: 09 ^h 43 ^m				PMG: 15 ^h 37 ^m				PMG: 06 ^h 04 ^m				PMG: 07 ^h 55 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°	'	°	'
0	171	19.4	214	14.0	-16	125	29.2	+18	268	43.3	-22	241	03.7	-21	256	05.9	-21	42.2
1	186	21.9	229	13.4		140	30.0		283	45.5		256	05.9		271	08.2		42.2
2	201	24.3	244	12.9		155	30.8		298	47.8		271	08.2		286	10.5		42.2
3	216	26.8	259	12.3		170	31.6		313	50.0		286	10.5		301	12.7		42.2
4	231	29.2	274	11.7		185	32.3		328	52.3		301	12.7		316	15.0		42.1
5	246	31.7	289	11.2	-16	200	33.1	+18	343	54.5	-22	316	15.0	-21	346	19.6	-21	42.1
6	261	34.2	304	10.6	-16	215	33.9	+18	358	56.8	-22	331	17.3	-21	346	19.6	-21	42.1
7	276	36.6	319	10.1		230	34.7		13	59.0		346	19.6		1	21.8		42.0
8	291	39.1	334	09.5		245	35.5		29	01.2		1	21.8		16	24.1		42.0
9	306	41.6	349	09.0		260	36.2		44	03.5		16	24.1		31	26.4		42.0
10	321	44.0	4	08.4		275	37.0		59	05.7		31	26.4		46	28.7	-21	42.0
11	336	46.5	19	07.9	-16	290	37.8	+18	74	08.0	-22	46	28.7	-21	61	30.9	-21	42.0
12	351	49.0	34	07.3	-16	305	38.6	+18	89	10.2	-22	61	30.9	-21	76	33.2		41.9
13	6	51.4	49	06.7		320	39.4		104	12.5		76	33.2		91	35.5		41.9
14	21	53.9	64	06.2		335	40.2		119	14.7		91	35.5		106	37.8		41.9
15	36	56.4	79	05.6		350	40.9		134	16.9		106	37.8		121	40.0		41.9
16	51	58.8	94	05.1		5	41.7		149	19.2		121	40.0		136	42.3	-21	41.8
17	67	01.3	109	04.5	-16	20	42.5	+18	164	21.4	-22	136	42.3	-21	151	44.6	-21	41.8
18	82	03.7	124	04.0	-16	35	43.3	+18	179	23.7	-22	151	44.6	-21	166	46.9		41.8
19	97	06.2	139	03.4		50	44.0		194	25.9		166	46.9		181	49.2		41.8
20	112	08.7	154	02.9		65	44.8		209	28.2		181	49.2		196	51.4		41.7
21	127	11.1	169	02.3		80	45.6		224	30.4		196	51.4		211	53.7		41.7
22	142	13.6	184	01.8		95	46.4		239	32.7		211	53.7		226	56.0		41.7
23	157	16.1	199	01.2		110	47.2		254	34.9		226	56.0		241	58.3	-21	41.7
24	172	18.5	214	00.7	-16	125	47.9	+18	269	37.2	-22	241	58.3	-21				
Dif.	—		-6		+7	+8		+5	+22		0		+23					

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1			PHE { 4 ^h : 58'6 12 ^h : 58'9 20 ^h : 59'1													
	PMG: 12 ^h 09 ^m 0			Edad: 8 ^d 3													
	PMG: 19 ^h 21 ^m			R ^o : 60 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m
0	177	42.7	-2 20.2	80	58.3	66	+21 22.9	24	60 N	18 01	18 43	19 32	10 07	63	3 35	60	
1	192	42.9	19.3	95	23.9	65	25.3	23	58	02	41	28	24	62	19	59	
2	207	43.1	18.3	109	49.4	64	27.6	22	56	03	40	24	38	61	3 05	60	
3	222	43.3	17.3	124	14.8	64	29.8	20	54	03	39	20	10 50	61	2 53	59	
4	237	43.4	16.3	138	40.2	63	31.8	19	52	04	38	17	11 00	62	42	60	
5	252	43.6	-2 15.3	153	05.5	63	+21 33.7	18	50	18 04	18 37	19 14	11 10	61	2 33	59	
6	267	43.8	-2 14.3	167	30.8	62	+21 35.5	16	45	18 05	18 35	19 09	11 30	61	2 13	59	
7	282	43.9	13.3	181	56.0	62	37.1	15	40	06	33	05	11 46	61	1 57	59	
8	297	44.1	12.4	196	21.2	61	38.6	13	35	07	33	02	12 00	61	43	59	
9	312	44.3	11.4	210	46.3	60	39.9	12	30	08	32	19 00	12	60	31	59	
10	327	44.5	10.4	225	11.3	60	41.1	11	20	10	32	18 57	33	60	1 11	59	
11	342	44.6	-2 09.4	239	36.3	60	+21 42.2	9	10 N	18 11	18 32	18 56	12 50	60	0 53	59	
12	357	44.8	-2 08.4	254	01.3	59	+21 43.1	8	0	18 12	18 33	18 57	13 07	60	0 37	58	
13	12	45.0	07.4	268	26.2	58	43.9	6	10 S	14	35	18 59	24	59	20	59	
14	27	45.2	06.4	282	51.0	58	44.5	5	20	15	37	19 03	13 42	58	0 03	58	
15	42	45.4	05.4	297	15.8	58	45.0	4	30	17	41	09	14 03	58	***	***	
16	57	45.5	04.5	311	40.6	57	45.4	2	35	19	44	14	15	57	***	***	
17	72	45.7	-2 03.5	326	05.3	56	+21 45.6	1	40	18 20	18 47	19 19	14 29	57	***	***	
18	87	45.9	-2 02.5	340	29.9	56	+21 45.7	1	45	18 22	18 51	19 26	14 45	57	23 57	66	
19	102	46.1	01.5	354	54.5	56	45.6	2	50	24	56	35	15 06	56	37	67	
20	117	46.2	-2 00.5	9	19.1	56	45.4	3	52	25	18 59	39	16	55	27	68	
21	132	46.4	-1 59.5	23	43.7	55	45.1	5	54	26	19 01	44	27	54	16	68	
22	147	46.6	58.5	38	08.2	54	44.6	7	56	27	04	49	39	54	23 04	69	
23	162	46.8	57.5	52	32.6	54	43.9	8	58	28	08	19 56	15 53	54	22 49	70	
24	177	46.9	-1 56.6	66	57.0		+21 43.1		60 S	18 30	19 12	20 03	16 10	53	22 32	72	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.0				Mag: +1.3				Mag: -2.1				Mag: +0.6			
	12 ^h 28 ^m 7		PMG: 09 ^h 44 ^m				PMG: 15 ^h 36 ^m				PMG: 06 ^h 01 ^m				PMG: 07 ^h 51 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'	°	'		
0	172	18.5	214	00.7	-16	07.4	125	47.9	+18	16.7	269	37.2	-22	-38.2	241	58.3		
1	187	21.0	229	00.1		06.6	140	48.7		17.2	284	39.4		-38.2	257	00.5		
2	202	23.5	243	59.6		05.9	155	49.5		17.7	299	41.6		-38.2	272	02.8		
3	217	25.9	258	59.0		05.1	170	50.3		18.1	314	43.9		-38.2	287	05.1		
4	232	28.4	273	58.5		04.4	185	51.1		18.6	329	46.1		-38.3	302	07.4		
5	247	30.8	288	57.9	-16	03.6	200	51.8	+18	19.1	344	48.4	-22	-38.3	317	09.6		
6	262	33.3	303	57.4	-16	02.9	215	52.6	+18	19.6	359	50.6	-22	-38.3	332	11.9		
7	277	35.8	318	56.8		02.1	230	53.4		20.0	14	52.9		-38.3	347	14.2		
8	292	38.2	333	56.3		01.4	245	54.2		20.5	29	55.1		-38.3	2	16.5		
9	307	40.7	348	55.7	-16	00.6	260	55.0		21.0	44	57.4		-38.3	17	18.8		
10	322	43.2	3	55.2	-15	59.9	275	55.7		21.5	59	59.6		-38.3	32	21.0		
11	337	45.6	18	54.6	-15	59.1	290	56.5	+18	21.9	75	01.9	-22	-38.3	47	23.3		
12	352	48.1	33	54.1	-15	58.4	305	57.3	+18	22.4	90	04.1	-22	-38.3	62	25.6		
13	7	50.6	48	53.5		57.6	320	58.1		22.9	105	06.4		-38.3	77	27.9		
14	22	53.0	63	53.0		56.9	335	58.8		23.4	120	08.6		-38.3	92	30.2		
15	37	55.5	78	52.4		56.1	350	59.6		23.8	135	10.9		-38.4	107	32.4		
16	52	58.0	93	51.9		55.3	6	00.4		24.3	150	13.1		-38.4	122	34.7		
17	68	00.4	108	51.4	-15	54.6	21	01.2	+18	24.8	165	15.4	-22	-38.4	137	37.0		
18	83	02.9	123	50.8	-15	53.8	36	01.9	+18	25.3	180	17.7	-22	-38.4	152	39.3		
19	98	05.3	138	50.3		53.0	51	02.7		25.7	195	19.9		-38.4	167	41.5		
20	113	07.8	153	49.7		52.3	66	03.5		26.2	210	22.2		-38.4	182	43.8		
21	128	10.3	168	49.2		51.5	81	04.3		26.7	225	24.4		-38.4	197	46.1		
22	143	12.7	183	48.6		50.8	96	05.1		27.2	240	26.7		-38.4	212	48.4		
23	158	15.2	198	48.1		50.0	111	05.8		27.6	255	28.9		-38.4	227	50.7		
24	173	17.7	213	47.5	-15	49.2	126	06.6	+18	28.1	270	31.2	-22	-38.4	242	53.0		
Dif.	—		-5		+8		+8		+5		+22		0		+23			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1			SD: 16'1 Edad: 9 ^d 3							PHE { 4 ^h : 59'4 12 ^h : 59'6 20 ^h : 59'9			Rº: 60 ^m							
	PMG: 12 ^h 08 ^m 7			PMG: 20 ^h 21 ^m																	
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº						
h	°	'	°	°	'	°	'	°													
0	177	46.9	-1	56.6	66	57.0	54	+21	43.1	9	60 N	4 45	5 34	6 15	11 10	79	4 35	44			
1	192	47.1		55.6	81	21.4	54		42.2	11	58	49	35	14	26	77	18	47			
2	207	47.3		54.6	95	45.8	53		41.1	12	56	53	37	14	39	76	4 05	48			
3	222	47.5		53.6	110	10.1	53		39.9	14	54	4 57	38	13	11 51	75	3 52	50			
4	237	47.6		52.6	124	34.4	53		38.5	15	52	5 00	39	13	12 02	73	42	50			
5	252	47.8	-1	51.6	138	58.7	52	+21	37.0	17	50	5 03	5 40	6 12	12 11	72	3 32	52			
6	267	48.0	-1	50.6	153	22.9	52	+21	35.3	18	45	5 08	5 42	6 11	12 31	70	3 12	53			
7	282	48.2		49.6	167	47.1	52		33.5	20	40	12	44	11	12 47	68	2 56	54			
8	297	48.3		48.7	182	11.3	52		31.5	21	35	15	45	10	13 01	66	42	56			
9	312	48.5		47.7	196	35.5	51		29.4	22	30	18	45	09	12	66	30	57			
10	327	48.7		46.7	210	59.6	51		27.2	25	20	20	46	08	33	63	2 10	58			
11	342	48.9	-1	45.7	225	23.7	51	+21	24.7	25	10 N	5 21	5 46	6 07	13 50	62	1 52	59			
12	357	49.1	-1	44.7	239	47.8	51	+21	22.2	27	0	5 21	5 45	6 05	14 07	60	1 35	60			
13	12	49.2		43.7	254	11.9	51		19.5	29	10 S	19	43	04	23	58	19	60			
14	27	49.4		42.7	268	36.0	50		16.6	30	20	15	41	03	14 40	57	1 01	61			
15	42	49.6		41.7	283	00.0	51		13.6	31	30	09	37	01	15 01	54	0 40	63			
16	57	49.8		40.8	297	24.1	50		10.5	33	35	5 05	34	6 00	12	53	28	64			
17	72	49.9	-1	39.8	311	48.1	50	+21	07.2	35	40	4 59	5 31	5 58	15 26	51	0 14	64			
18	87	50.1	-1	38.8	326	12.1	50	+21	03.7	36	45	4 53	5 27	5 57	15 42	49	***	***			
19	102	50.3		37.8	340	36.1	50	+21	00.1	37	50	44	22	55	16 02	47	***	***			
20	117	50.5		36.8	355	00.1	50	+20	56.4	39	52	40	20	54	11	46	***	***			
21	132	50.7		35.8	9	24.1	50		52.5	40	54	35	17	53	21	44	***	***			
22	147	50.8		34.8	23	48.1	50		48.5	42	56	29	14	52	33	43	***	***			
23	162	51.0		33.8	38	12.1	50		44.3	44	58	23	11	51	16 47	40	23 59	84			
24	177	51.2	-1	32.8	52	36.1		+20	39.9		60 S	4 16	5 07	5 49	17 03	37	23 44	87			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG		Mag: -4.0				Mag: +1.3				Mag: -2.1				Mag: +0.6						
	12 ^h 24 ^m 8		PMG: 09 ^h 45 ^m				PMG: 15 ^h 35 ^m				PMG: 05 ^h 57 ^m				PMG: 07 ^h 47 ^m						
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.				
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	°	'	°				
0	173	17.7	213	47.5	-15	49.2	126	06.6	+18	28.1	270	31.2	-22	38.4	242	53.0	-21	41.1			
1	188	20.1	228	47.0		48.5	141	07.4		28.6	285	33.4		38.4	257	55.2		41.1			
2	203	22.6	243	46.5		47.7	156	08.2		29.0	300	35.7		38.5	272	57.5		41.1			
3	218	25.1	258	45.9		46.9	171	08.9		29.5	315	37.9		38.5	287	59.8		41.1			
4	233	27.5	273	45.4		46.2	186	09.7		30.0	330	40.2		38.5	303	02.1		41.0			
5	248	30.0	288	44.8	-15	45.4	201	10.5	+18	30.5	345	42.5	-22	38.5	318	04.4	-21	41.0			
6	263	32.5	303	44.3	-15	44.6	216	11.3	+18	30.9	0	44.7	-22	38.5	333	06.6	-21	41.0			
7	278	34.9	318	43.8		43.8	231	12.0		31.4	15	47.0		38.5	348	08.9		41.0			
8	293	37.4	333	43.2		43.1	246	12.8		31.9	30	49.2		38.5	3	11.2		41.0			
9	308	39.8	348	42.7		42.3	261	13.6		32.3	45	51.5		38.5	18	13.5		40.9			
10	323	42.3	3	42.1		41.5	276	14.4		32.8	60	53.7		38.5	33	15.8		40.9			
11	338	44.8	18	41.6	-15	40.7	291	15.1	+18	33.3	75	56.0	-22	38.5	48	18.0	-21	40.9			
12	353	47.2	33	41.1	-15	40.0	306	15.9	+18	33.7	90	58.3	-22	38.5	63	20.3	-21	40.9			
13	8	49.7	48	40.5		39.2	321	16.7		34.2	106	00.5		38.5	78	22.6		40.8			
14	23	52.2	63	40.0		38.4	336	17.5		34.7	121	02.8		38.6	93	24.9		40.8			
15	38	54.6	78	39.4		37.6	351	18.2		35.1	136	05.0		38.6	108	27.2		40.8			
16	53	57.1	93	38.9		36.9	6	19.0		35.6	151	07.3		38.6	123	29.5		40.8			
17	68	59.6	108	38.4	-15	36.1	21	19.8	+18	36.1	166	09.5	-22	38.6	138	31.7	-21	40.8			
18	84	02.0	123	37.8	-15	35.3	36	20.6	+18	36.5	181	11.8	-22	38.6	153	34.0	-21	40.7			
19	99	04.5	138	37.3		34.5	51	21.3		37.0	196	14.1		38.6	168	36.3		40.7			
20	114	07.0	153	36.8		33.7	66	22.1		37.5	211	16.3		38.6	183	38.6		40.7			
21	129	09.4	168	36.2		33.0	81	22.9		37.9	226	18.6		38.6	198	40.9		40.7			
22	144	11.9	183	35.7		32.2	96	23.7		38.4	241	20.9		38.6	213	43.2		40.7			
23	159	14.3	198	35.1		31.4	111	24.4		38.9	256	23.1		38.6	228	45.4		40.6			
24	174	16.8	213	34.6	-15	30.6	126	25.2	+18	39.3	271	25.4	-22	38.6	243	47.7	-21	40.6			
Dif.	—		-5				+8	+8				+5	+23				0	+23			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'1			SD: 16'3 Edad: 10 ^d 3	PHE { 4 ^h : 60'1 12 ^h : 60'3 20 ^h : 60'5													
	PMG: 12 ^h 08 ^m 4				PMG: 21 ^h 21 ^m Rº: 59 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	Civil	Náut.			Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	177	51.2	-1	32.8	52	36.1	50	+20	39.9	44	60 N	18 06	18 48	19 37	12 29	92	5 19	32
1	192	51.4		31.9	67	00.1	49		35.5	47	58	07	46	32	43	89	5 05	35
2	207	51.6		30.9	81	24.0	50		30.8	47	56	07	44	28	12 55	86	4 53	37
3	222	51.7		29.9	95	48.0	50		26.1	50	54	07	42	24	13 06	83	42	39
4	237	51.9		28.9	110	12.0	50		21.1	50	52	07	41	21	15	81	32	41
5	252	52.1	-1	27.9	124	36.0	50	+20	16.1	52	50	18 08	18 40	19 18	13 23	80	4 24	42
6	267	52.3	-1	26.9	139	00.0	50	+20	10.9	54	45	18 08	18 37	19 12	13 41	76	4 05	46
7	282	52.5		25.9	153	24.0	50		05.5	55	40	09	36	07	13 55	73	3 50	49
8	297	52.6		24.9	167	48.0	51	+20	00.0	56	35	09	34	04	14 07	71	38	50
9	312	52.8		24.0	182	12.1	50	+19	54.4	58	30	09	33	19 01	18	68	27	52
10	327	53.0		23.0	196	36.1	50		48.6	59	20	10	32	18 58	36	65	3 08	55
11	342	53.2	-1	22.0	211	00.1	51	+19	42.7	61	10 N	18 11	18 32	18 56	14 52	62	2 51	57
12	357	53.4	-1	21.0	225	24.2	51	+19	36.6	62	0	18 12	18 32	18 56	15 07	59	2 35	60
13	12	53.5		20.0	239	48.3	51		30.4	64	10 S	13	34	18 58	21	57	19	62
14	27	53.7		19.0	254	12.4	51		24.0	65	20	14	36	19 01	37	53	2 02	65
15	42	53.9		18.0	268	36.5	51		17.5	66	30	15	39	07	15 55	50	1 43	67
16	57	54.1		17.0	283	00.6	52		10.9	68	35	16	41	11	16 05	48	32	68
17	72	54.3	-1	16.0	297	24.8	51	+19	04.1	69	40	18 17	18 44	19 16	16 17	46	1 18	71
18	87	54.4	-1	15.1	311	48.9	52	+18	57.2	70	45	18 18	18 47	19 22	16 31	43	1 03	73
19	102	54.6		14.1	326	13.1	53		50.2	72	50	20	52	30	49	38	0 44	76
20	117	54.8		13.1	340	37.4	52		43.0	73	52	20	54	34	16 57	37	35	77
21	132	55.0		12.1	355	01.6	53		35.7	74	54	21	56	38	17 05	35	24	80
22	147	55.2		11.1	9	25.9	53		28.3	76	56	22	18 59	44	16	32	0 13	81
23	162	55.3		10.1	23	50.2	53		20.7	77	58	23	19 02	49	27	30	***	***
24	177	55.5	-1	09.1	38	14.5		+18	13.0		60 S	18 24	19 05	19 56	17 40	26	***	***

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 12 ^h 20 ^m 9		Mag: -4.0 PMG: 09 ^h 46 ^m			Mag: +1.3 PMG: 15 ^h 34 ^m			Mag: -2.1 PMG: 05 ^h 53 ^m			Mag: +0.6 PMG: 07 ^h 44 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	174	16.8	213	34.6	-15	30.6	126	25.2	+18	39.3	271	25.4	-22	-38.6	243	47.7	-21	40.6
1	189	19.3	228	34.1		29.8	141	26.0		39.8	286	27.6		-38.7	258	50.0		40.6
2	204	21.7	243	33.5		29.0	156	26.7		40.3	301	29.9		-38.7	273	52.3		40.6
3	219	24.2	258	33.0		28.2	171	27.5		40.7	316	32.2		-38.7	288	54.6		40.5
4	234	26.7	273	32.5		27.5	186	28.3		41.2	331	34.4		-38.7	303	56.9		40.5
5	249	29.1	288	31.9	-15	26.7	201	29.1	+18	41.7	346	36.7	-22	-38.7	318	59.1	-21	40.5
6	264	31.6	303	31.4	-15	25.9	216	29.8	+18	42.1	1	39.0	-22	-38.7	334	01.4	-21	40.5
7	279	34.1	318	30.9		25.1	231	30.6		42.6	16	41.2		-38.7	349	03.7		40.5
8	294	36.5	333	30.3		24.3	246	31.4		43.1	31	43.5		-38.7	4	06.0		40.4
9	309	39.0	348	29.8		23.5	261	32.2		43.5	46	45.8		-38.7	19	08.3		40.4
10	324	41.4	3	29.3		22.7	276	32.9		44.0	61	48.0		-38.7	34	10.6		40.4
11	339	43.9	18	28.8	-15	21.9	291	33.7	+18	44.4	76	50.3	-22	-38.7	49	12.9	-21	40.4
12	354	46.4	33	28.2	-15	21.1	306	34.5	+18	44.9	91	52.5	-22	-38.7	64	15.1	-21	40.3
13	9	48.8	48	27.7		20.3	321	35.2		45.4	106	54.8		-38.8	79	17.4		40.3
14	24	51.3	63	27.2		19.5	336	36.0		45.8	121	57.1		-38.8	94	19.7		40.3
15	39	53.8	78	26.6		18.7	351	36.8		46.3	136	59.3		-38.8	109	22.0		40.3
16	54	56.2	93	26.1		17.9	6	37.6		46.8	152	01.6		-38.8	124	24.3		40.3
17	69	58.7	108	25.6	-15	17.2	21	38.3	+18	47.2	167	03.9	-22	-38.8	139	26.6	-21	40.2
18	85	01.2	123	25.0	-15	16.4	36	39.1	+18	47.7	182	06.1	-22	-38.8	154	28.9	-21	40.2
19	100	03.6	138	24.5		15.6	51	39.9		48.1	197	08.4		-38.8	169	31.1		40.2
20	115	06.1	153	24.0		14.8	66	40.6		48.6	212	10.7		-38.8	184	33.4		40.2
21	130	08.6	168	23.5		14.0	81	41.4		49.1	227	13.0		-38.8	199	35.7		40.2
22	145	11.0	183	22.9		13.2	96	42.2		49.5	242	15.2		-38.8	214	38.0		40.1
23	160	13.5	198	22.4		12.4	111	43.0		50.0	257	17.5		-38.8	229	40.3		40.1
24	175	15.9	213	21.9	-15	11.5	126	43.7	+18	50.4	272	19.8	-22	-38.8	244	42.6	-21	40.1
Dif.	—		-5	+8			+8	+5			+23		0		+23			

UT	SOL			☉ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 08 ^m 2			SD: 16'5 Edad: 11 ^d 3 PHE { 4 ^h : 60'6 12 ^h : 60'8 20 ^h : 60'9 PMG: 22 ^h 20 ^m Rº: 56 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	55.5	-1	09.1	38	14.5	53	+18	13.0	79	60 N	4 38	5 27	6 09	14 01	97	5 51 23
1	192	55.7		08.1	52	38.8	54	+18	05.1	80	58	43	30	09	12	93	40 26
2	207	55.9		07.2	67	03.2	54	+17	57.1	81	56	48	32	08	21	90	30 29
3	222	56.1		06.2	81	27.6	55		49.0	82	54	52	33	08	29	87	21 32
4	237	56.2		05.2	95	52.1	54		40.8	84	52	55	35	08	36	85	13 34
5	252	56.4	-1	04.2	110	16.5	56	+17	32.4	84	50	4 58	5 36	6 08	14 43	82	5 06 36
6	267	56.6	-1	03.2	124	41.1	55	+17	24.0	87	45	5 04	5 39	6 08	14 57	78	4 51 40
7	282	56.8		02.2	139	05.6	56		15.3	87	40	09	40	07	15 08	75	39 42
8	297	57.0		01.2	153	30.2	56	+17	06.6	89	35	13	42	07	18	72	28 46
9	312	57.2	-1	00.2	167	54.8	56	+16	57.7	89	30	15	43	07	26	70	19 47
10	327	57.3	-0	59.2	182	19.4	57		48.8	91	20	19	44	06	41	65	4 03 51
11	342	57.5	-0	58.3	196	44.1	58	+16	39.7	93	10 N	5 20	5 45	6 06	15 54	61	3 48 55
12	357	57.7	-0	57.3	211	08.9	57	+16	30.4	93	0	5 20	5 44	6 05	16 06	57	3 35 58
13	12	57.9		56.3	225	33.6	58		21.1	95	10 S	19	43	04	18	54	21 62
14	27	58.1		55.3	239	58.4	59		11.6	96	20	16	41	03	30	50	3 07 65
15	42	58.2		54.3	254	23.3	58	+16	02.0	96	30	10	38	02	45	46	2 50 69
16	57	58.4		53.3	268	48.1	60	+15	52.4	98	35	06	36	01	16 53	43	40 72
17	72	58.6	-0	52.3	283	13.1	59	+15	42.6	100	40	5 01	5 33	6 00	17 03	40	2 29 74
18	87	58.8	-0	51.3	297	38.0	61	+15	32.6	100	45	4 55	5 30	5 59	17 14	37	2 16 77
19	102	59.0		50.4	312	03.1	60		22.6	101	50	47	26	58	27	33	2 00 81
20	117	59.2		49.4	326	28.1	61		12.5	103	52	43	24	57	34	30	1 52 84
21	132	59.3		48.4	340	53.2	61	+15	02.2	103	54	39	21	57	40	29	44 85
22	147	59.5		47.4	355	18.3	62	+14	51.9	105	56	34	19	56	48	26	34 89
23	162	59.7		46.4	9	43.5	63		41.4	105	58	28	16	55	17 57	22	1 23 92
24	177	59.9	-0	45.4	24	08.8		+14	30.9		60 S	4 22	5 12	5 54	18 06	20	1 11 95

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 12 ^h 16 ^m 9		Mag: -4.0 PMG: 09 ^h 47 ^m				Mag: +1.3 PMG: 15 ^h 32 ^m				Mag: -2.1 PMG: 05 ^h 50 ^m				Mag: +0.6 PMG: 07 ^h 40 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	175	15.9	213	21.9	-15	11.5	126	43.7	+18	50.4	272	19.8	-22	38.8	244	42.6	-21	40.1
1	190	18.4	228	21.4		10.7	141	44.5		50.9	287	22.0		38.9	259	44.9		40.1
2	205	20.9	243	20.8		09.9	156	45.3		51.4	302	24.3		38.9	274	47.2		40.0
3	220	23.3	258	20.3		09.1	171	46.0		51.8	317	26.6		38.9	289	49.4		40.0
4	235	25.8	273	19.8		08.3	186	46.8		52.3	332	28.8		38.9	304	51.7		40.0
5	250	28.3	288	19.2	-15	07.5	201	47.6	+18	52.7	347	31.1	-22	38.9	319	54.0	-21	40.0
6	265	30.7	303	18.7	-15	06.7	216	48.3	+18	53.2	2	33.4	-22	38.9	334	56.3	-21	40.0
7	280	33.2	318	18.2		05.9	231	49.1		53.6	17	35.7		38.9	349	58.6		39.9
8	295	35.7	333	17.7		05.1	246	49.9		54.1	32	37.9		38.9	5	00.9		39.9
9	310	38.1	348	17.2		04.3	261	50.7		54.6	47	40.2		38.9	20	03.2		39.9
10	325	40.6	3	16.6		03.5	276	51.4		55.0	62	42.5		38.9	35	05.5		39.9
11	340	43.1	18	16.1	-15	02.7	291	52.2	+18	55.5	77	44.7	-22	38.9	50	07.8	-21	39.8
12	355	45.5	33	15.6	-15	01.9	306	53.0	+18	55.9	92	47.0	-22	38.9	65	10.0	-21	39.8
13	10	48.0	48	15.1		01.0	321	53.7		56.4	107	49.3		38.9	80	12.3		39.8
14	25	50.4	63	14.5	-15	00.2	336	54.5		56.8	122	51.6		39.0	95	14.6		39.8
15	40	52.9	78	14.0	-14	59.4	351	55.3		57.3	137	53.8		39.0	110	16.9		39.8
16	55	55.4	93	13.5		58.6	6	56.0		57.8	152	56.1		39.0	125	19.2		39.7
17	70	57.8	108	13.0	-14	57.8	21	56.8	+18	58.2	167	58.4	-22	39.0	140	21.5	-21	39.7
18	86	00.3	123	12.5	-14	57.0	36	57.6	+18	58.7	183	00.7	-22	39.0	155	23.8	-21	39.7
19	101	02.8	138	11.9		56.2	51	58.3		59.1	198	02.9		39.0	170	26.1		39.7
20	116	05.2	153	11.4		55.3	66	59.1	+18	59.6	213	05.2		39.0	185	28.4		39.7
21	131	07.7	168	10.9		54.5	81	59.9	+19	00.0	228	07.5		39.0	200	30.7		39.6
22	146	10.2	183	10.4		53.7	97	00.7		00.5	243	09.8		39.0	215	32.9		39.6
23	161	12.6	198	09.9		52.9	112	01.4		00.9	258	12.1		39.0	230	35.2		39.6
24	176	15.1	213	09.3	-14	52.1	127	02.2	+19	01.4	273	14.3	-22	39.0	245	37.5	-21	39.6
Dif.	—		-5		+8		+8		+5		+23		0		+23			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'1			SD: 16'6 Edad: 12 ^d 3	PHE { 4 ^h : 61'0 12 ^h : 61'0 20 ^h : 61'0			R ^o : 55 ^m				Civil	Náut.	Hora	R ^o	Hora	R ^o	
	PMG: 12 ^h 07 ^m 9				PMG: 23 ^h 16 ^m													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.										
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	177	59.9	-0	45.4	24	08.8	62	+14	30.9	107	60 N	18 11	18 53	19 43	15 38	97	6 14 17	
1	193	00.1		44.4	38	34.0	63		20.2	108	58	11	50	37	45	94	6 06 20	
2	208	00.3		43.4	52	59.3	64	+14	09.4	108	56	11	48	32	51	91	5 59 23	
3	223	00.4		42.4	67	24.7	64	+13	58.6	110	54	11	46	28	15	56	53 25	
4	238	00.6		41.5	81	50.1	65		47.6	110	52	11	45	24	16	01	47 28	
5	253	00.8	-0	40.5	96	15.6	65	+13	36.6	112	50	18 11	18 43	19 21	16	05	5 42 30	
6	268	01.0	-0	39.5	110	41.1	65	+13	25.4	112	45	18 11	18 40	19 14	16	15	5 31 34	
7	283	01.2		38.5	125	06.6	66		14.2	114	40	11	38	09	23	75	21 39	
8	298	01.4		37.5	139	32.2	67	+13	02.8	114	35	11	36	05	30	71	14 41	
9	313	01.5		36.5	153	57.9	67	+12	51.4	115	30	11	34	19 02	36	68	5 06 44	
10	328	01.7		35.5	168	23.6	67		39.9	116	20	11	33	18 58	46	64	4 54 49	
11	343	01.9	-0	34.5	182	49.3	68	+12	28.3	117	10 N	18 11	18 32	18 56	16	55	4 43 53	
12	358	02.1	-0	33.6	197	15.1	68	+12	16.6	117	0	18 11	18 32	18 56	17	03	4 33 57	
13	13	02.3		32.6	211	40.9	69	+12	04.9	119	10 S	11	32	18 57	12	51	23 60	
14	28	02.5		31.6	226	06.8	70	+11	53.0	119	20	12	34	19 00	20	48	4 12 64	
15	43	02.6		30.6	240	32.8	69		41.1	120	30	13	37	04	31	42	3 59 69	
16	58	02.8		29.6	254	58.7	71		29.1	121	35	13	38	08	36	40	52 72	
17	73	03.0	-0	28.6	269	24.8	71	+11	17.0	122	40	18 14	18 41	19 12	17	43	3 43 76	
18	88	03.2	-0	27.6	283	50.9	71	+11	04.8	122	45	18 14	18 44	19 18	17	51	3 33 79	
19	103	03.4		26.6	298	17.0	71	+10	52.6	123	50	15	47	25	18	00	21 84	
20	118	03.6		25.6	312	43.1	73		40.3	124	52	16	49	29	04	26	16 85	
21	133	03.7		24.7	327	09.4	72		27.9	125	54	16	51	33	09	23	09 89	
22	148	03.9		23.7	341	35.6	74		15.4	125	56	16	54	38	14	21	3 03 90	
23	163	04.1		22.7	356	02.0	73	+10	02.9	126	58	17	56	43	19	19	2 55 94	
24	178	04.3	-0	21.7	10	28.3		+9	50.3		60 S	18 18	18 59	19 49	18	26	2 46 97	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 12 ^h 13 ^m 0		Mag: -4.0 PMG: 09 ^h 48 ^m				Mag: +1.3 PMG: 15 ^h 31 ^m				Mag: -2.2 PMG: 05 ^h 46 ^m				Mag: +0.6 PMG: 07 ^h 36 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	176	15.1	213	09.3	-14	52.1	127	02.2	+19	01.4	273	14.3	-22	-39.0	245	37.5	-21	39.6
1	191	17.5	228	08.8		51.2	142	03.0		01.8	288	16.6		-39.0	260	39.8		39.6
2	206	20.0	243	08.3		50.4	157	03.7		02.3	303	18.9		-39.0	275	42.1		39.5
3	221	22.5	258	07.8		49.6	172	04.5		02.7	318	21.2		-39.1	290	44.4		39.5
4	236	24.9	273	07.3		48.8	187	05.3		03.2	333	23.4		-39.1	305	46.7		39.5
5	251	27.4	288	06.7	-14	47.9	202	06.0	+19	03.6	348	25.7	-22	-39.1	320	49.0	-21	39.5
6	266	29.9	303	06.2	-14	47.1	217	06.8	+19	04.1	3	28.0	-22	-39.1	335	51.3	-21	39.4
7	281	32.3	318	05.7		46.3	232	07.6		04.5	18	30.3		-39.1	350	53.6		39.4
8	296	34.8	333	05.2		45.5	247	08.3		05.0	33	32.6		-39.1	5	55.9		39.4
9	311	37.3	348	04.7		44.6	262	09.1		05.4	48	34.8		-39.1	20	58.2		39.4
10	326	39.7	3	04.2		43.8	277	09.9		05.9	63	37.1		-39.1	36	00.4		39.4
11	341	42.2	18	03.7	-14	43.0	292	10.6	+19	06.3	78	39.4	-22	-39.1	51	02.7	-21	39.3
12	356	44.7	33	03.1	-14	42.2	307	11.4	+19	06.8	93	41.7	-22	-39.1	66	05.0	-21	39.3
13	11	47.1	48	02.6		41.3	322	12.2		07.2	108	44.0		-39.1	81	07.3		39.3
14	26	49.6	63	02.1		40.5	337	12.9		07.7	123	46.2		-39.1	96	09.6		39.3
15	41	52.0	78	01.6		39.7	352	13.7		08.1	138	48.5		-39.1	111	11.9		39.3
16	56	54.5	93	01.1		38.8	7	14.5		08.6	153	50.8		-39.2	126	14.2		39.2
17	71	57.0	108	00.6	-14	38.0	22	15.2	+19	09.0	168	53.1	-22	-39.2	141	16.5	-21	39.2
18	86	59.4	123	00.1	-14	37.2	37	16.0	+19	09.5	183	55.4	-22	-39.2	156	18.8	-21	39.2
19	102	01.9	137	59.5		36.3	52	16.8		09.9	198	57.7		-39.2	171	21.1		39.2
20	117	04.4	152	59.0		35.5	67	17.5		10.4	213	59.9		-39.2	186	23.4		39.2
21	132	06.8	167	58.5		34.7	82	18.3		10.8	229	02.2		-39.2	201	25.7		39.1
22	147	09.3	182	58.0		33.8	97	19.1		11.3	244	04.5		-39.2	216	28.0		39.1
23	162	11.8	197	57.5		33.0	112	19.8		11.7	259	06.8		-39.2	231	30.3		39.1
24	177	14.2	212	57.0	-14	32.2	127	20.6	+19	12.2	274	09.1	-22	-39.2	246	32.6	-21	39.1
Dif.	—		-5		+8		+8		+4		+23		0		+23			

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 07 ^m 6			SD: 16'6 Edad: 13 ^d 3			PHE { 4 ^h : 61'0 12 ^h : 60'9 20 ^h : 60'9											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°										
0	178	04.3	-0	10	28.3	74	+9	50.3	126	60 N	4 32	5 21	6 03	17 15	96	6 31	14	
1	193	04.5		24	54.7	75		37.7	127	58	37	24	03	19	92	26	18	
2	208	04.7		39	21.2	75		25.0	128	56	42	26	03	22	89	22	20	
3	223	04.9		53	47.7	75	+9	12.2	128	54	47	28	03	24	87	18	23	
4	238	05.0		68	14.2	76	+8	59.4	129	52	50	30	04	27	84	15	25	
5	253	05.2	-0	82	40.8	77	+8	46.5	129	50	4 54	5 32	6 04	17 29	82	6 12	27	
6	268	05.4	-0	97	07.5	77	+8	33.6	130	45	5 00	5 35	6 04	17 34	78	6 05	32	
7	283	05.6		111	34.2	77		20.6	130	40	06	37	04	38	74	6 00	35	
8	298	05.8		126	00.9	78	+8	07.6	131	35	10	39	04	41	71	5 55	38	
9	313	06.0		140	27.7	78	+7	54.5	132	30	13	41	04	44	68	50	41	
10	328	06.1		154	54.5	79		41.3	132	20	17	42	04	50	62	43	46	
11	343	06.3	-0	169	21.4	79	+7	28.1	132	10 N	5 19	5 43	6 04	17 54	58	5 36	50	
12	358	06.5	-0	183	48.3	80	+7	14.9	133	0	5 20	5 44	6 04	17 59	53	5 30	54	
13	13	06.7		198	15.3	80	+7	01.6	133	10 S	19	43	04	18 03	49	23	59	
14	28	06.9		212	42.3	80	+6	48.3	133	20	16	42	04	08	45	16	63	
15	43	07.1		227	09.3	81		35.0	134	30	11	39	03	13	40	08	69	
16	58	07.3		241	36.4	82		21.6	135	35	08	38	03	16	37	5 04	71	
17	73	07.4	-0	256	03.6	82	+6	08.1	134	40	5 04	5 35	6 02	18 19	34	4 59	74	
18	88	07.6	-0	270	30.8	82	+5	54.7	135	45	4 58	5 33	6 02	18 23	30	4 52	79	
19	103	07.8		284	58.0	82		41.2	135	50	51	29	01	28	26	45	83	
20	118	08.0		299	25.2	83		27.7	136	52	47	27	01	30	24	41	86	
21	133	08.2	-0	313	52.5	84		14.1	136	54	43	25	01	32	22	38	88	
22	148	08.4	+0	328	19.9	84	+5	00.5	136	56	38	23	00	35	19	33	91	
23	163	08.6		342	47.3	84	+4	46.9	136	58	33	20	6 00	18 38	16	4 29	93	
24	178	08.7	+0	357	14.7		+4	33.3		60 S	4 27	5 17	5 59	18 41	14	4 23	98	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 12 ^h 09 ^m 1		Mag: -4.0 PMG: 09 ^h 49 ^m				Mag: +1.4 PMG: 15 ^h 30 ^m				Mag: -2.2 PMG: 05 ^h 43 ^m				Mag: +0.6 PMG: 07 ^h 33 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	°	'		°	°	'		°	°	'		°	°	'	
0	177	14.2		212	57.0	-14	127	20.6	+19	274	09.1	-22	39.2	246	32.6	-21	39.1	
1	192	16.7		227	56.5		142	21.4		289	11.4		39.2	261	34.9		39.0	
2	207	19.2		242	56.0		157	22.1		304	13.7		39.2	276	37.2		39.0	
3	222	21.6		257	55.5		172	22.9		319	15.9		39.2	291	39.4		39.0	
4	237	24.1		272	54.9		187	23.6		334	18.2		39.2	306	41.7		39.0	
5	252	26.5		287	54.4	-14	202	24.4	+19	349	20.5	-22	39.2	321	44.0	-21	39.0	
6	267	29.0		302	53.9	-14	217	25.2	+19	4	22.8	-22	39.3	336	46.3	-21	38.9	
7	282	31.5		317	53.4		232	25.9		19	25.1		39.3	351	48.6		38.9	
8	297	33.9		332	52.9		247	26.7		34	27.4		39.3	6	50.9		38.9	
9	312	36.4		347	52.4		262	27.5		49	29.7		39.3	21	53.2		38.9	
10	327	38.9		2	51.9		277	28.2		64	31.9		39.3	36	55.5		38.9	
11	342	41.3		17	51.4	-14	292	29.0	+19	79	34.2	-22	39.3	51	57.8	-21	38.8	
12	357	43.8		32	50.9	-14	307	29.8	+19	94	36.5	-22	39.3	67	00.1	-21	38.8	
13	12	46.3		47	50.4		322	30.5		109	38.8		39.3	82	02.4		38.8	
14	27	48.7		62	49.9		337	31.3		124	41.1		39.3	97	04.7		38.8	
15	42	51.2		77	49.4		352	32.1		139	43.4		39.3	112	07.0		38.8	
16	57	53.6		92	48.9		7	32.8		154	45.7		39.3	127	09.3		38.7	
17	72	56.1		107	48.4	-14	22	33.6	+19	169	48.0	-22	39.3	142	11.6	-21	38.7	
18	87	58.6		122	47.9	-14	37	34.3	+19	184	50.3	-22	39.3	157	13.9	-21	38.7	
19	103	01.0		137	47.3		52	35.1		199	52.6		39.3	172	16.2		38.7	
20	118	03.5		152	46.8		67	35.9		214	54.8		39.3	187	18.5		38.7	
21	133	06.0		167	46.3		82	36.6		229	57.1		39.4	202	20.8		38.6	
22	148	08.4		182	45.8		97	37.4		244	59.4		39.4	217	23.1		38.6	
23	163	10.9		197	45.3		112	38.2		260	01.7		39.4	232	25.4		38.6	
24	178	13.4		212	44.8	-14	127	38.9	+19	275	04.0	-22	39.4	247	27.7	-21	38.6	
Dif.	—		-5		+8	+8		+4		+23		0		+23				

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16'1			SD: 16'6			PHE { 4 ^h : 60'7 12 ^h : 60'6 20 ^h : 60'4															
	PMG: 12 ^h 07 ^m 3			Edad: 14 ^d 3																		
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	R°: 54 ^m														
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m							
0	178	08.7	+0	02.0	357	14.7	84	+4	33.3	137	60 N	18 16	18 58	19 48	18 51	94	6 45	13				
1	193	08.9		03.0	11	42.1	85		19.6	136	58	16	55	42	51	91	44	16				
2	208	09.1		04.0	26	09.6	86	+4	06.0	137	56	15	52	37	51	88	42	19				
3	223	09.3		05.0	40	37.2	86	+3	52.3	137	54	15	50	32	51	85	41	21				
4	238	09.5		06.0	55	04.8	86		38.6	138	52	14	48	28	51	83	40	23				
5	253	09.7	+0	06.9	69	32.4	86	+3	24.8	137	50	18 14	18 46	19 24	18 51	81	6 39	25				
6	268	09.9	+0	07.9	84	00.0	87	+3	11.1	137	45	18 13	18 43	19 17	18 52	76	6 37	29				
7	283	10.1		08.9	98	27.7	87	+2	57.4	138	40	13	40	11	52	72	35	33				
8	298	10.2		09.9	112	55.4	88		43.6	138	35	12	37	07	52	69	33	37				
9	313	10.4		10.9	127	23.2	88		29.8	137	30	12	36	19 04	52	66	31	40				
10	328	10.6		11.9	141	51.0	88		16.1	138	20	11	33	18 59	52	61	29	44				
11	343	10.8	+0	12.9	156	18.8	89	+2	02.3	138	10 N	18 11	18 32	18 56	18 52	57	6 26	49				
12	358	11.0	+0	13.9	170	46.7	89	+1	48.5	138	0	18 11	18 31	18 55	18 52	53	6 24	53				
13	13	11.2		14.8	185	14.6	89		34.7	138	10 S	10	31	56	52	49	22	57				
14	28	11.4		15.8	199	42.5	89		20.9	138	20	10	32	18 58	53	44	19	62				
15	43	11.5		16.8	214	10.4	90	+1	07.1	137	30	10	34	19 02	53	39	17	66				
16	58	11.7		17.8	228	38.4	91	+0	53.4	138	35	10	36	05	53	36	15	70				
17	73	11.9	+0	18.8	243	06.5	90	+0	39.6	138	40	18 10	18 37	19 09	18 53	33	6 13	73				
18	88	12.1	+0	19.8	257	34.5	91	+0	25.8	137	45	18 11	18 40	19 14	18 53	30	6 11	77				
19	103	12.3		20.8	272	02.6	91	+0	12.1	138	50	11	43	21	54	25	08	82				
20	118	12.5		21.8	286	30.7	91	-0	01.7	137	52	11	45	24	54	23	07	84				
21	133	12.7		22.7	300	58.8	92		15.4	138	54	11	46	28	54	21	06	86				
22	148	12.9		23.7	315	27.0	92		29.2	137	56	11	48	32	54	19	04	89				
23	163	13.0		24.7	329	55.2	92		42.9	137	58	11	50	37	54	16	02	92				
24	178	13.2	+0	25.7	344	23.4		-0	56.6		60 S	18 12	18 53	19 43	18 55	13	6 01	95				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 12 ^h 05 ^m 1		Mag: -4.0 PMG: 09 ^h 49 ^m				Mag: +1.4 PMG: 15 ^h 29 ^m				Mag: -2.2 PMG: 05 ^h 39 ^m				Mag: +0.6 PMG: 07 ^h 29 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	178	13.4	212	44.8	-14	11.8	127	38.9	+19	22.8	275	04.0	-22	-39.4	247	27.7	-21	38.6				
1	193	15.8	227	44.3		11.0	142	39.7		23.2	290	06.3		-39.4	262	30.0		38.6				
2	208	18.3	242	43.8		10.1	157	40.4		23.7	305	08.6		-39.4	277	32.3		38.5				
3	223	20.8	257	43.3		09.3	172	41.2		24.1	320	10.9		-39.4	292	34.6		38.5				
4	238	23.2	272	42.8		08.4	187	42.0		24.6	335	13.2		-39.4	307	36.9		38.5				
5	253	25.7	287	42.3	-14	07.6	202	42.7	+19	25.0	350	15.5	-22	-39.4	322	39.2	-21	38.5				
6	268	28.1	302	41.8	-14	06.7	217	43.5	+19	25.4	5	17.8	-22	-39.4	337	41.5	-21	38.5				
7	283	30.6	317	41.3		05.8	232	44.3		25.9	20	20.1		-39.4	352	43.8		38.4				
8	298	33.1	332	40.8		05.0	247	45.0		26.3	35	22.4		-39.4	7	46.1		38.4				
9	313	35.5	347	40.3		04.1	262	45.8		26.7	50	24.7		-39.4	22	48.4		38.4				
10	328	38.0	2	39.8		03.3	277	46.5		27.2	65	27.0		-39.4	37	50.7		38.4				
11	343	40.5	17	39.3	-14	02.4	292	47.3	+19	27.6	80	29.3	-22	-39.5	52	53.0	-21	38.4				
12	358	42.9	32	38.8	-14	01.5	307	48.1	+19	28.0	95	31.6	-22	-39.5	67	55.3	-21	38.3				
13	13	45.4	47	38.3	-14	00.7	322	48.8		28.5	110	33.9		-39.5	82	57.6		38.3				
14	28	47.9	62	37.8	-13	59.8	337	49.6		28.9	125	36.1		-39.5	97	59.9		38.3				
15	43	50.3	77	37.3		58.9	352	50.4		29.4	140	38.4		-39.5	113	02.2		38.3				
16	58	52.8	92	36.8		58.1	7	51.1		29.8	155	40.7		-39.5	128	04.5		38.3				
17	73	55.2	107	36.3	-13	57.2	22	51.9	+19	30.2	170	43.0	-22	-39.5	143	06.8	-21	38.2				
18	88	57.7	122	35.8	-13	56.3	37	52.6	+19	30.7	185	45.3	-22	-39.5	158	09.1	-21	38.2				
19	104	00.2	137	35.3		55.5	52	53.4		31.1	200	47.6		-39.5	173	11.4		38.2				
20	119	02.6	152	34.9		54.6	67	54.2		31.5	215	49.9		-39.5	188	13.7		38.2				
21	134	05.1	167	34.4		53.7	82	54.9		32.0	230	52.2		-39.5	203	16.0		38.2				
22	149	07.6	182	33.9		52.9	97	55.7		32.4	245	54.5		-39.5	218	18.3		38.1				
23	164	10.0	197	33.4		52.0	112	56.4		32.8	260	56.8		-39.5	233	20.6		38.1				
24	179	12.5	212	32.9	-13	51.1	127	57.2	+19	33.3	275	59.1	-22	-39.5	248	22.9	-21	38.1				
Dif.	—		-5				+9				+23				0				+23			

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 07 ^m 0			SD: 16'4 Edad: 15 ^d 3			PHE { 4 ^h : 60'2 12 ^h : 60'0 20 ^h : 59'7											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil		Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	'		h	m	h	m	h	m	m	h	m	m
0	178	13.2	+0 25.7	344	23.4	92	-0 56.6	136	60 N	4 25	5 15	5 57	20 25	91		6 58	14	
1	193	13.4	26.7	358	51.6	93	-1 10.2	137	58	31	18	57	22	88		7 00	16	
2	208	13.6	27.7	13	19.9	93	23.9	137	56	37	21	58	19	85		01	19	
3	223	13.8	28.7	27	48.2	93	37.6	136	54	41	23	58	16	83		02	22	
4	238	14.0	29.7	42	16.5	94	-1 51.2	136	52	45	25	59	14	81		03	24	
5	253	14.2	+0 30.6	56	44.9	93	-2 04.8	135	50	4 49	5 27	5 59	20 12	78		7 04	26	
6	268	14.4	+0 31.6	71	13.2	94	-2 18.3	136	45	4 57	5 31	6 00	20 08	73		7 06	30	
7	283	14.5	32.6	85	41.6	94	31.9	135	40	5 02	34	01	04	70		08	33	
8	298	14.7	33.6	100	10.0	94	45.4	135	35	07	36	01	20 01	67		10	36	
9	313	14.9	34.6	114	38.4	95	-2 58.9	134	30	10	38	02	19 58	64		11	39	
10	328	15.1	35.6	129	06.9	95	-3 12.3	135	20	15	41	03	53	59		13	44	
11	343	15.3	+0 36.6	143	35.4	95	-3 25.8	134	10 N	5 18	5 42	6 03	19 49	55		7 15	48	
12	358	15.5	+0 37.5	158	03.9	95	-3 39.2	133	0	5 19	5 43	6 04	19 45	51		7 17	52	
13	13	15.7	38.5	172	32.4	95	-3 52.5	133	10 S	19	43	04	41	48		19	56	
14	28	15.9	39.5	187	00.9	95	-4 05.8	133	20	17	42	04	37	43		21	60	
15	43	16.0	40.5	201	29.4	96	19.1	133	30	13	41	04	32	39		23	66	
16	58	16.2	41.5	215	58.0	96	32.4	132	35	10	39	04	29	37		25	68	
17	73	16.4	+0 42.5	230	26.6	96	-4 45.6	131	40	5 06	5 37	6 04	19 26	34		7 26	71	
18	88	16.6	+0 43.5	244	55.2	96	-4 58.7	131	45	5 01	5 35	6 04	19 23	30		7 28	75	
19	103	16.8	44.4	259	23.8	96	-5 11.8	131	50	4 54	32	04	19	26		30	80	
20	118	17.0	45.4	273	52.4	97	24.9	130	52	51	31	04	17	24		31	82	
21	133	17.2	46.4	288	21.1	96	37.9	130	54	47	29	04	15	22		32	84	
22	148	17.4	47.4	302	49.7	97	-5 50.9	129	56	43	27	04	13	19		33	87	
23	163	17.5	48.4	317	18.4	97	-6 03.8	129	58	38	25	04	19 10	17		7 34	90	
24	178	17.7	+0 49.4	331	47.1		-6 16.7		60 S	4 33	5 22	6 04	19 08	13		7 36	92	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 12 ^h 01 ^m 2		Mag: -4.0 PMG: 09 ^h 50 ^m				Mag: +1.4 PMG: 15 ^h 27 ^m				Mag: -2.2 PMG: 05 ^h 35 ^m				Mag: +0.6 PMG: 07 ^h 25 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	179	12.5	212	32.9	-13 51.1		127	57.2	+19 33.3		275	59.1	-22 39.5		248	22.9	-21 38.1	
1	194	15.0	227	32.4	50.2		142	58.0	33.7		291	01.4	39.5		263	25.2	38.1	
2	209	17.4	242	31.9	49.4		157	58.7	34.1		306	03.7	39.5		278	27.5	38.1	
3	224	19.9	257	31.4	48.5		172	59.5	34.6		321	06.0	39.6		293	29.8	38.0	
4	239	22.4	272	30.9	47.6		188	00.2	35.0		336	08.3	39.6		308	32.1	38.0	
5	254	24.8	287	30.4	-13 46.7		203	01.0	+19 35.4		351	10.6	-22 39.6		323	34.4	-21 38.0	
6	269	27.3	302	29.9	-13 45.9		218	01.8	+19 35.9		6	13.0	-22 39.6		338	36.7	-21 38.0	
7	284	29.7	317	29.4	45.0		233	02.5	36.3		21	15.3	39.6		353	39.0	38.0	
8	299	32.2	332	28.9	44.1		248	03.3	36.7		36	17.6	39.6		8	41.3	37.9	
9	314	34.7	347	28.4	43.2		263	04.0	37.1		51	19.9	39.6		23	43.6	37.9	
10	329	37.1	2	27.9	42.4		278	04.8	37.6		66	22.2	39.6		38	45.9	37.9	
11	344	39.6	17	27.5	-13 41.5		293	05.5	+19 38.0		81	24.5	-22 39.6		53	48.2	-21 37.9	
12	359	42.1	32	27.0	-13 40.6		308	06.3	+19 38.4		96	26.8	-22 39.6		68	50.5	-21 37.9	
13	14	44.5	47	26.5	39.7		323	07.1	38.9		111	29.1	39.6		83	52.8	37.8	
14	29	47.0	62	26.0	38.8		338	07.8	39.3		126	31.4	39.6		98	55.1	37.8	
15	44	49.5	77	25.5	38.0		353	08.6	39.7		141	33.7	39.6		113	57.4	37.8	
16	59	51.9	92	25.0	37.1		8	09.3	40.2		156	36.0	39.6		128	59.7	37.8	
17	74	54.4	107	24.5	-13 36.2		23	10.1	+19 40.6		171	38.3	-22 39.6		144	02.0	-21 37.8	
18	89	56.8	122	24.0	-13 35.3		38	10.9	+19 41.0		186	40.6	-22 39.6		159	04.3	-21 37.7	
19	104	59.3	137	23.5	34.4		53	11.6	41.4		201	42.9	39.7		174	06.7	37.7	
20	120	01.8	152	23.0	33.5		68	12.4	41.9		216	45.2	39.7		189	09.0	37.7	
21	135	04.2	167	22.6	32.7		83	13.1	42.3		231	47.5	39.7		204	11.3	37.7	
22	150	06.7	182	22.1	31.8		98	13.9	42.7		246	49.8	39.7		219	13.6	37.7	
23	165	09.2	197	21.6	30.9		113	14.6	43.1		261	52.1	39.7		234	15.9	37.6	
24	180	11.6	212	21.1	-13 30.0		128	15.4	+19 43.6		276	54.5	-22 39.7		249	18.2	-21 37.6	
Dif.	—		-5	+9			+8	+4			+23	0			+23			

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 12 ^h 06 ^m 7			SD: 16:2 Edad: 16:3 PMG:01 ^h 57 ^m PHE { 4^h: 59:5 12^h: 59:2 20^h: 58:9 Rº: 52^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	
0	178	17.7	+0	49.4	331	47.1	97	-6	16.7	128	60 N	18 21	19 03	19 54	21 56	89	7 12	15
1	193	17.9		50.4	346	15.8	97		29.5	128	58	20	19 00	47	50	85	16	18
2	208	18.1		51.3	0	44.5	97		42.3	127	56	19	18 57	41	44	82	20	21
3	223	18.3		52.3	15	13.2	97	-6	55.0	127	54	18	54	36	39	80	24	22
4	238	18.5		53.3	29	41.9	98	-7	07.7	126	52	18	52	32	35	77	27	25
5	253	18.7	+0	54.3	44	10.7	97	-7	20.3	126	50	18 17	18 50	19 28	21 30	76	7 30	27
6	268	18.9	+0	55.3	58	39.4	98	-7	32.9	125	45	18 16	18 45	19 20	21 21	72	7 36	31
7	283	19.0		56.3	73	08.2	98		45.4	124	40	15	42	14	14	68	41	35
8	298	19.2		57.3	87	37.0	98	-7	57.8	124	35	14	39	09	08	65	46	37
9	313	19.4		58.2	102	05.8	97	-8	10.2	123	30	13	37	19 05	21 02	63	50	40
10	328	19.6	+0	59.2	116	34.5	98		22.5	122	20	12	34	18 59	20 52	59	7 57	44
11	343	19.8	+1	00.2	131	03.3	99	-8	34.7	122	10 N	18 11	18 32	18 56	20 44	55	8 03	48
12	358	20.0	+1	01.2	145	32.2	98	-8	46.9	122	0	18 10	18 31	18 55	20 36	52	8 09	52
13	13	20.2		02.2	160	01.0	98	-8	59.1	120	10 S	09	30	55	29	48	15	55
14	28	20.4		03.2	174	29.8	98	-9	11.1	120	20	09	30	56	20	45	21	60
15	43	20.6		04.2	188	58.6	99		23.1	119	30	08	32	18 59	11	41	29	63
16	58	20.7		05.1	203	27.5	98		35.0	119	35	08	33	19 02	06	38	33	66
17	73	20.9	+1	06.1	217	56.3	98	-9	46.9	118	40	18 07	18 34	19 06	20 00	35	8 37	70
18	88	21.1	+1	07.1	232	25.1	99	-9	58.7	117	45	18 07	18 36	19 10	19 53	32	8 43	73
19	103	21.3		08.1	246	54.0	98	-10	10.4	116	50	06	39	16	45	28	50	77
20	118	21.5		09.1	261	22.8	99		22.0	116	52	06	40	19	41	26	53	79
21	133	21.7		10.1	275	51.7	99		33.6	114	54	06	41	23	37	24	8 56	81
22	148	21.9		11.1	290	20.6	98		45.0	115	56	06	43	27	32	22	9 00	83
23	163	22.1		12.0	304	49.4	99	-10	56.5	113	58	06	45	31	27	20	04	86
24	178	22.2	+1	13.0	319	18.3		-11	07.8		60 S	18 05	18 47	19 36	19 21	17	9 08	90
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 11 ^h 57 ^m 3		Mag: -4.0 PMG: 09 ^h 51 ^m				Mag: +1.4 PMG: 15 ^h 26 ^m				Mag: -2.2 PMG: 05 ^h 32 ^m				Mag: +0.6 PMG: 07 ^h 22 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	180	11.6	212	21.1	-13	30.0	128	15.4	+19	43.6	276	54.5	-22	-39.7	249	18.2	-21	37.6
1	195	14.1	227	20.6		29.1	143	16.2		44.0	291	56.8		-39.7	264	20.5		37.6
2	210	16.6	242	20.1		28.2	158	16.9		44.4	306	59.1		-39.7	279	22.8		37.6
3	225	19.0	257	19.6		27.3	173	17.7		44.8	322	01.4		-39.7	294	25.1		37.6
4	240	21.5	272	19.2		26.4	188	18.4		45.3	337	03.7		-39.7	309	27.4		37.5
5	255	24.0	287	18.7	-13	25.6	203	19.2	+19	45.7	352	06.0	-22	-39.7	324	29.7	-21	37.5
6	270	26.4	302	18.2	-13	24.7	218	19.9	+19	46.1	7	08.3	-22	-39.7	339	32.0	-21	37.5
7	285	28.9	317	17.7		23.8	233	20.7		46.5	22	10.6		-39.7	354	34.3		37.5
8	300	31.3	332	17.2		22.9	248	21.5		47.0	37	12.9		-39.7	9	36.6		37.5
9	315	33.8	347	16.7		22.0	263	22.2		47.4	52	15.2		-39.7	24	38.9		37.4
10	330	36.3	2	16.3		21.1	278	23.0		47.8	67	17.6		-39.7	39	41.2		37.4
11	345	38.7	17	15.8	-13	20.2	293	23.7	+19	48.2	82	19.9	-22	-39.7	54	43.6	-21	37.4
12	0	41.2	32	15.3	-13	19.3	308	24.5	+19	48.7	97	22.2	-22	-39.8	69	45.9	-21	37.4
13	15	43.7	47	14.8		18.4	323	25.2		49.1	112	24.5		-39.8	84	48.2		37.4
14	30	46.1	62	14.3		17.5	338	26.0		49.5	127	26.8		-39.8	99	50.5		37.3
15	45	48.6	77	13.8		16.6	353	26.7		49.9	142	29.1		-39.8	114	52.8		37.3
16	60	51.1	92	13.4		15.7	8	27.5		50.4	157	31.4		-39.8	129	55.1		37.3
17	75	53.5	107	12.9	-13	14.8	23	28.3	+19	50.8	172	33.7	-22	-39.8	144	57.4	-21	37.3
18	90	56.0	122	12.4	-13	13.9	38	29.0	+19	51.2	187	36.1	-22	-39.8	159	59.7	-21	37.3
19	105	58.4	137	11.9		13.0	53	29.8		51.6	202	38.4		-39.8	175	02.0		37.3
20	121	00.9	152	11.4		12.1	68	30.5		52.0	217	40.7		-39.8	190	04.3		37.2
21	136	03.4	167	11.0		11.2	83	31.3		52.5	232	43.0		-39.8	205	06.6		37.2
22	151	05.8	182	10.5		10.3	98	32.0		52.9	247	45.3		-39.8	220	08.9		37.2
23	166	08.3	197	10.0		09.4	113	32.8		53.3	262	47.6		-39.8	235	11.3		37.2
24	181	10.8	212	09.5	-13	08.5	128	33.5	+19	53.7	277	50.0	-22	-39.8	250	13.6	-21	37.2
Dif.	—		-5		+9		+8		+4		+23		0		+23		0	

UT	SOL			☉ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 06 ^m 4			SD: 16'0 Edad: 17 ^d 3 PMG: 02 ^h 49 ^m			PHE { 4 ^h : 58'6 12 ^h : 58'3 20 ^h : 57'9 Rº: 51 ^m										
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	°	h	m	h	m	h	m	m	
0	178	22.2	+1 13.0	319	18.3	99	-11 07.8	112	60 N	4 18	5 09	5 51	23 25	82	7 27	18	
1	193	22.4		333	47.2	98		19.0	58	25	12	52		15 79	34	21	
2	208	22.6		348	16.0	99		30.2	56	31	15	53	23 06	77	41	24	
3	223	22.8		2	44.9	99		41.3	54	36	18	54	22 59	74	46	25	
4	238	23.0		17	13.8	99	-11 52.3	110	52	40	21	54		52 73	52	28	
5	253	23.2	+1 17.9	31	42.7	99	-12 03.3	108	50	4 44	5 23	5 55	22 46	71	7 57	30	
6	268	23.4	+1 18.9	46	11.6	99	-12 14.1	108	45	4 53	5 27	5 56	22 33	67	8 07	34	
7	283	23.6		60	40.5	98		24.9	40	4 59	31	58		22 65	16	37	
8	298	23.8		75	09.3	99		35.6	35	5 04	33	5 59		13 62	23	40	
9	313	23.9		89	38.2	99		46.2	30	08	36	6 00	22 05	60	30	41	
10	328	24.1		104	07.1	99	-12 56.7	105	20	13	39	01	21 51	57	41	46	
11	343	24.3	+1 23.9	118	36.0	99	-13 07.2	103	10 N	5 17	5 41	6 02	21 39	54	8 51	49	
12	358	24.5	+1 24.8	133	04.9	99	-13 17.5	103	0	5 18	5 42	6 03	21 28	51	9 01	52	
13	13	24.7		147	33.8	99		27.8	10 S	19	43	04		17 49	10	55	
14	28	24.9		162	02.7	99		37.9	20	17	43	05	21 05	46	21	58	
15	43	25.1		176	31.6	99		48.0	30	14	42	06	20 52	42	32	62	
16	58	25.3		191	00.5	99	-13 58.0	99	35	11	41	06		44 41	39	64	
17	73	25.5	+1 29.8	205	29.4	98	-14 07.9	98	40	5 08	5 40	6 07	20 35	39	9 47	66	
18	88	25.6	+1 30.7	219	58.2	99	-14 17.7	97	45	5 03	5 38	6 07	20 25	36	9 56	69	
19	103	25.8		234	27.1	99		27.4	50	4 57	35	08		13 32	10 07	73	
20	118	26.0		248	56.0	99		37.1	52	54	34	08		07 31	12	75	
21	133	26.2		263	24.9	99		46.6	54	51	33	08	20 01	29	17	78	
22	148	26.4		277	53.8	99	-14 56.0	94	56	47	31	08	19 54	27	23	80	
23	163	26.6		292	22.7	99	-15 05.4	92	58	43	29	09	19 47	23	10 30	83	
24	178	26.8	+1 36.6	306	51.6		-15 14.6		60 S	4 38	5 27	6 09	19 38	21	10 38	86	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 53 ^m 3		Mag: -4.0 PMG: 09 ^h 52 ^m			Mag: +1.4 PMG: 15 ^h 25 ^m			Mag: -2.2 PMG: 05 ^h 28 ^m			Mag: +0.6 PMG: 07 ^h 18 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	181	10.8	212	09.5	-13 08.5	128	33.5	+19 53.7	277	50.0	-22 39.8	250	13.6	-21 37.2
1	196	13.2	227	09.0	07.6	143	34.3	54.1	292	52.3	39.8	265	15.9	37.1
2	211	15.7	242	08.6	06.7	158	35.1	54.6	307	54.6	39.8	280	18.2	37.1
3	226	18.2	257	08.1	05.8	173	35.8	55.0	322	56.9	39.8	295	20.5	37.1
4	241	20.6	272	07.6	04.9	188	36.6	55.4	337	59.2	39.8	310	22.8	37.1
5	256	23.1	287	07.1	-13 04.0	203	37.3	+19 55.8	353	01.5	-22 39.8	325	25.1	-21 37.1
6	271	25.6	302	06.7	-13 03.1	218	38.1	+19 56.2	8	03.9	-22 39.9	340	27.4	-21 37.0
7	286	28.0	317	06.2	02.2	233	38.8	56.6	23	06.2	39.9	355	29.7	37.0
8	301	30.5	332	05.7	01.3	248	39.6	57.1	38	08.5	39.9	10	32.0	37.0
9	316	32.9	347	05.2	-13 00.3	263	40.3	57.5	53	10.8	39.9	25	34.4	37.0
10	331	35.4	2	04.8	-12 59.4	278	41.1	57.9	68	13.1	39.9	40	36.7	37.0
11	346	37.9	17	04.3	-12 58.5	293	41.8	+19 58.3	83	15.5	-22 39.9	55	39.0	-21 36.9
12	1	40.3	32	03.8	-12 57.6	308	42.6	+19 58.7	98	17.8	-22 39.9	70	41.3	-21 36.9
13	16	42.8	47	03.3	56.7	323	43.3	59.1	113	20.1	39.9	85	43.6	36.9
14	31	45.3	62	02.9	55.8	338	44.1	+19 59.6	128	22.4	39.9	100	45.9	36.9
15	46	47.7	77	02.4	54.9	353	44.8	+20 00.0	143	24.7	39.9	115	48.2	36.9
16	61	50.2	92	01.9	54.0	8	45.6	00.4	158	27.1	39.9	130	50.5	36.9
17	76	52.7	107	01.4	-12 53.1	23	46.4	+20 00.8	173	29.4	-22 39.9	145	52.8	-21 36.8
18	91	55.1	122	01.0	-12 52.1	38	47.1	+20 01.2	188	31.7	-22 39.9	160	55.2	-21 36.8
19	106	57.6	137	00.5	51.2	53	47.9	01.6	203	34.0	39.9	175	57.5	36.8
20	122	00.1	152	00.0	50.3	68	48.6	02.1	218	36.3	39.9	190	59.8	36.8
21	137	02.5	166	59.5	49.4	83	49.4	02.5	233	38.7	39.9	206	02.1	36.8
22	152	05.0	181	59.1	48.5	98	50.1	02.9	248	41.0	39.9	221	04.4	36.7
23	167	07.4	196	58.6	47.6	113	50.9	03.3	263	43.3	39.9	236	06.7	36.7
24	182	09.9	211	58.1	-12 46.6	128	51.6	+20 03.7	278	45.6	-22 39.9	251	09.0	-21 36.7
Dif.	—		-5 +9			+8 +4			+23 0			+23 0		

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0			PHE { 4 ^h : 57'6 12 ^h : 57'3 20 ^h : 57'0													
	PMG: 12 ^h 06 ^m 1			Edad: 18 ^d 3													
	PMG: 03 ^h 40 ^m			Rº: 52 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°		h m	h m	h m	m	h m	m		
0	178	26.8	+1	306	51.6	99	-15	14.6	92	60 N	18 26	19 08	19 59	** ** *	7 45	24	
1	193	27.0		321	20.5	98		23.8	90	58	25	04	52	** ** *	7 55	27	
2	208	27.2		335	49.3	99		32.8	90	56	23	19 01	46	** ** *	8 05	29	
3	223	27.3		350	18.2	99		41.8	88	54	22	18 58	40	** ** *	13	31	
4	238	27.5		4	47.1	99		50.6	88	52	21	55	36	** ** *	20	33	
5	253	27.7	+1	19	16.0	99	-15	59.4	87	50	18 20	18 53	19 31	23 57	65	8 27	34
6	268	27.9	+1	33	44.9	99	-16	08.1	85	45	18 18	18 48	19 23	23 40	63	8 41	37
7	283	28.1		48	13.8	98		16.6	85	40	17	44	16	27	60	8 53	40
8	298	28.3		62	42.6	99		25.1	83	35	15	41	10	15	59	9 03	42
9	313	28.5		77	11.5	99		33.4	83	30	14	38	06	23 05	58	11	44
10	328	28.7		91	40.4	99		41.7	82	20	12	34	19 00	22 48	55	27	46
11	343	28.9	+1	106	09.3	99	-16	49.9	80	10 N	18 11	18 32	18 56	22 33	54	9 40	49
12	358	29.0	+1	120	38.2	98	-16	57.9	80	0	18 09	18 30	18 54	22 19	52	9 53	51
13	13	29.2		135	07.0	99	-17	05.9	78	10 S	08	29	53	22 06	49	10 05	54
14	28	29.4		149	35.9	99		13.7	78	20	07	29	54	21 51	47	19	56
15	43	29.6		164	04.8	99		21.5	76	30	05	29	57	34	45	34	59
16	58	29.8		178	33.7	99		29.1	75	35	05	30	18 59	25	43	43	61
17	73	30.0	+1	193	02.6	98	-17	36.6	75	40	18 04	18 31	19 02	21 14	41	10 53	63
18	88	30.2	+1	207	31.4	99	-17	44.1	73	45	18 03	18 32	19 06	21 01	39	11 05	66
19	103	30.4		222	00.3	99		51.4	72	50	02	34	12	20 45	37	20	68
20	118	30.6		236	29.2	99	-17	58.6	71	52	02	35	15	38	35	27	70
21	133	30.8		250	58.1	99	-18	05.7	70	54	01	36	18	30	34	35	71
22	148	30.9		265	27.0	98		12.7	69	56	01	38	21	21	32	43	74
23	163	31.1	+1	279	55.8	99		19.6	68	58	18 00	39	25	20 10	30	11 53	76
24	178	31.3	+2	294	24.7		-18	26.4		60 S	17 59	18 41	19 30	19 59	27	12 04	79

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG 11 ^h 49 ^m 4		Mag: -4.0 PMG: 09 ^h 52 ^m				Mag: +1.4 PMG: 15 ^h 24 ^m				Mag: -2.2 PMG: 05 ^h 24 ^m				Mag: +0.6 PMG: 07 ^h 14 ^m							
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.						
h	°	'	°	°	'		°	°	'		°	°	'		°	°	'					
0	182	09.9	211	58.1	-12	46.6	128	51.6	+20	03.7	278	45.6	-22	-39.9	251	09.0	-21	36.7				
1	197	12.4	226	57.7		45.7	143	52.4		04.1	293	48.0		-40.0	266	11.3		36.7				
2	212	14.8	241	57.2		44.8	158	53.1		04.5	308	50.3		-40.0	281	13.7		36.7				
3	227	17.3	256	56.7		43.9	173	53.9		04.9	323	52.6		-40.0	296	16.0		36.6				
4	242	19.8	271	56.2		43.0	188	54.6		05.4	338	54.9		-40.0	311	18.3		36.6				
5	257	22.2	286	55.8	-12	42.0	203	55.4	+20	05.8	353	57.3	-22	-40.0	326	20.6	-21	36.6				
6	272	24.7	301	55.3	-12	41.1	218	56.1	+20	06.2	8	59.6	-22	-40.0	341	22.9	-21	36.6				
7	287	27.2	316	54.8		40.2	233	56.9		06.6	24	01.9		-40.0	356	25.2		36.6				
8	302	29.6	331	54.4		39.3	248	57.6		07.0	39	04.3		-40.0	11	27.5		36.6				
9	317	32.1	346	53.9		38.3	263	58.4		07.4	54	06.6		-40.0	26	29.9		36.5				
10	332	34.5	1	53.4		37.4	278	59.1		07.8	69	08.9		-40.0	41	32.2		36.5				
11	347	37.0	16	53.0	-12	36.5	293	59.9	+20	08.2	84	11.2	-22	-40.0	56	34.5	-21	36.5				
12	2	39.5	31	52.5	-12	35.6	309	00.6	+20	08.6	99	13.6	-22	-40.0	71	36.8	-21	36.5				
13	17	41.9	46	52.0		34.6	324	01.4		09.0	114	15.9		-40.0	86	39.1		36.5				
14	32	44.4	61	51.6		33.7	339	02.1		09.5	129	18.2		-40.0	101	41.4		36.4				
15	47	46.9	76	51.1		32.8	354	02.9		09.9	144	20.5		-40.0	116	43.7		36.4				
16	62	49.3	91	50.6		31.9	9	03.6		10.3	159	22.9		-40.0	131	46.1		36.4				
17	77	51.8	106	50.2	-12	30.9	24	04.4	+20	10.7	174	25.2	-22	-40.0	146	48.4	-21	36.4				
18	92	54.3	121	49.7	-12	30.0	39	05.1	+20	11.1	189	27.5	-22	-40.0	161	50.7	-21	36.4				
19	107	56.7	136	49.2		29.1	54	05.9		11.5	204	29.9		-40.0	176	53.0		36.4				
20	122	59.2	151	48.8		28.1	69	06.6		11.9	219	32.2		-40.1	191	55.3		36.3				
21	138	01.7	166	48.3		27.2	84	07.4		12.3	234	34.5		-40.1	206	57.6		36.3				
22	153	04.1	181	47.8		26.3	99	08.1		12.7	249	36.9		-40.1	222	00.0		36.3				
23	168	06.6	196	47.4		25.3	114	08.9		13.1	264	39.2		-40.1	237	02.3		36.3				
24	183	09.0	211	46.9	-12	24.4	129	09.6	+20	13.5	279	41.5	-22	-40.1	252	04.6	-21	36.3				
Dif.	—		-5				+8				+4				+23				0			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 05 ^m 8			SD: 15'5 Edad: 19 ^d 3 PHE { 4 ^h : 56'7 12 ^h : 56'4 20 ^h : 56'2 PMG: 04 ^h 32 ^m Rº: 51 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	178	31.3	+2 00.2	294	24.7	99	-18 26.4	67	60 N	4 11	5 03	5 45	0 47	75	8 09	32		
1	193	31.5		308	53.6	99		33.1	66	58	19	07	46	34	72	22	34	
2	208	31.7		323	22.5	99		39.7	65	56	25	10	47	23	70	34	36	
3	223	31.9		337	51.4	99		46.2	63	54	31	13	49	13	68	44	38	
4	238	32.1		352	20.3	99		52.5	63	52	35	16	50	0 05	66	8 53	39	
5	253	32.3	+2 05.1	6	49.2	99	-18 58.8	61	50	4 40	5 18	5 51	** ** *	**	9 01	40		
6	268	32.5	+2 06.1	21	18.1	99	-19 04.9	61	45	4 49	5 23	5 53	** ** *	**	9 18	43		
7	283	32.6		35	47.0	99		11.0	59	40	4 56	27	54	** ** *	**	33	44	
8	298	32.8		50	15.9	99		16.9	58	35	5 01	31	56	** ** *	**	45	45	
9	313	33.0		64	44.8	100		22.7	57	30	05	33	57	** ** *	**	9 55	47	
10	328	33.2		79	13.8	99		28.4	56	20	12	37	5 59	23 43	53	10 13	49	
11	343	33.4	+2 11.0	93	42.7	99	-19 34.0	55	10 N	5 16	5 40	6 01	23 27	52	10 29	50		
12	358	33.6	+2 12.0	108	11.6	99	-19 39.5	54	0	5 18	5 42	6 03	23 11	51	10 44	51		
13	13	33.8		122	40.5	100		44.9	53	10 S	19	43	04	22 55	50	10 59	53	
14	28	34.0		137	09.5	99		50.2	51	20	18	43	05	38	49	11 15	54	
15	43	34.2		151	38.4	100	-19 55.3	51	30	15	43	07	19	48	33	56		
16	58	34.3		166	07.4	99	-20 00.4	49	35	13	42	08	22 08	47	44	57		
17	73	34.5	+2 16.9	180	36.3	100	-20 05.3	48	40	5 10	5 42	6 09	21 55	46	11 56	59		
18	88	34.7	+2 17.9	195	05.3	100	-20 10.1	47	45	5 06	5 40	6 10	21 40	45	12 11	60		
19	103	34.9		209	34.3	100		14.8	46	50	5 01	38	11	22	43	28	62	
20	118	35.1		224	03.3	100		19.4	45	52	4 58	38	11	13	43	37	63	
21	133	35.3		238	32.3	100		23.9	44	54	55	37	12	21 04	41	46	64	
22	148	35.5		253	01.3	100		28.3	42	56	52	35	12	20 53	40	12 57	65	
23	163	35.7		267	30.3	100		32.5	42	58	48	34	13	20 40	39	13 09	67	
24	178	35.9	+2 23.8	281	59.3		-20 36.7		60 S	4 43	5 32	6 14	20 26	37	13 23	69		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 45 ^m 5		Mag: -4.0 PMG: 09 ^h 53 ^m			Mag: +1.4 PMG: 15 ^h 23 ^m			Mag: -2.2 PMG: 05 ^h 20 ^m			Mag: +0.6 PMG: 07 ^h 11 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	183	09.0	211	46.9	-12 24.4	129	09.6	+20 13.5	279	41.5	-22 40.1	252	04.6	-21 36.3
1	198	11.5	226	46.5		144	10.4		294	43.9		267	06.9	
2	213	14.0	241	46.0		159	11.1		309	46.2		282	09.2	
3	228	16.4	256	45.5		174	11.9		324	48.5		297	11.5	
4	243	18.9	271	45.1		189	12.6		339	50.9		312	13.9	
5	258	21.4	286	44.6	-12 19.7	204	13.4	+20 15.6	354	53.2	-22 40.1	327	16.2	-21 36.2
6	273	23.8	301	44.2	-12 18.8	219	14.1	+20 16.0	9	55.5	-22 40.1	342	18.5	-21 36.1
7	288	26.3	316	43.7		234	14.9		24	57.9		357	20.8	
8	303	28.8	331	43.2		249	15.6		40	00.2		12	23.1	
9	318	31.2	346	42.8		264	16.4		55	02.5		27	25.5	
10	333	33.7	1	42.3		279	17.1		70	04.9		42	27.8	
11	348	36.2	16	41.8	-12 14.1	294	17.9	+20 18.0	85	07.2	-22 40.1	57	30.1	-21 36.1
12	3	38.6	31	41.4	-12 13.2	309	18.6	+20 18.4	100	09.5	-22 40.1	72	32.4	-21 36.0
13	18	41.1	46	40.9		324	19.4		115	11.9		87	34.7	
14	33	43.5	61	40.5		339	20.1		130	14.2		102	37.0	
15	48	46.0	76	40.0		354	20.9		145	16.6		117	39.4	
16	63	48.5	91	39.6		9	21.6		160	18.9		132	41.7	
17	78	50.9	106	39.1	-12 08.4	24	22.4	+20 20.4	175	21.2	-22 40.2	147	44.0	-21 36.0
18	93	53.4	121	38.6	-12 07.5	39	23.1	+20 20.8	190	23.6	-22 40.2	162	46.3	-21 35.9
19	108	55.9	136	38.2		54	23.8		205	25.9		177	48.6	
20	123	58.3	151	37.7		69	24.6		220	28.2		192	51.0	
21	139	00.8	166	37.3		84	25.3		235	30.6		207	53.3	
22	154	03.3	181	36.8		99	26.1		250	32.9		222	55.6	
23	169	05.7	196	36.4		114	26.8		265	35.3		237	57.9	
24	184	08.2	211	35.9	-12 01.8	129	27.6	+20 23.2	280	37.6	-22 40.2	253	00.3	-21 35.8
Dif.	—		-5		+9	+7		+4	+23		0	+23		0

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0			SD: 15'3		PHE {		4 ^h : 55'9									
	PMG: 12 ^h 05 ^m 5			Edad: 20 ^d 3				12 ^h : 55'6									
								20 ^h : 55'4									
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.				Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	35.9	+2 23.8	281	59.3	100	-20 36.7	40	60 N	18 31	19 13	20 05	2 02	62	8 41	42	
1	193	36.0	24.7	296	28.3	100	40.7	40	58	29	09	19 57	1 46	61	8 56	44	
2	208	36.2	25.7	310	57.3	101	44.7	38	56	27	05	50	33	60	9 10	45	
3	223	36.4	26.7	325	26.4	101	48.5	37	54	26	19 02	45	21	59	22	45	
4	238	36.6	27.7	339	55.5	100	52.2	36	52	25	18 59	39	11	58	32	46	
5	253	36.8	+2 28.7	354	24.5	101	-20 55.8	35	50	18 23	18 56	19 35	1 02	58	9 41	47	
6	268	37.0	+2 29.6	8	53.6	101	-20 59.3	33	45	18 21	18 50	19 25	0 43	56	10 01	47	
7	283	37.2	30.6	23	22.7	101	-21 02.6	33	40	19	46	18	27	56	17	48	
8	298	37.4	31.6	37	51.8	102	05.9	31	35	17	42	12	14	55	30	49	
9	313	37.6	32.6	52	21.0	101	09.0	31	30	15	39	07	0 03	54	10 42	49	
10	328	37.7	33.6	66	50.1	101	12.1	29	20	13	35	19 01	** ** *	**	11 02	49	
11	343	37.9	+2 34.5	81	19.2	102	-21 15.0	28	10 N	18 11	18 32	18 56	** ** *	**	11 19	50	
12	358	38.1	+2 35.5	95	48.4	102	-21 17.8	27	0	18 09	18 29	18 53	** ** *	**	11 35	51	
13	13	38.3	36.5	110	17.6	102	20.5	26	10 S	07	28	52	23 45	50	11 52	51	
14	28	38.5	37.5	124	46.8	102	23.1	24	20	05	27	53	27	50	12 09	52	
15	43	38.7	38.4	139	16.0	103	25.5	24	30	03	27	55	23 07	50	29	53	
16	58	38.9	39.4	153	45.3	102	27.9	22	35	02	27	56	22 55	50	41	53	
17	73	39.1	+2 40.4	168	14.5	103	-21 30.1	22	40	18 01	18 28	18 59	22 41	50	12 55	52	
18	88	39.3	+2 41.4	182	43.8	103	-21 32.3	20	45	17 59	18 29	19 03	22 25	50	13 11	53	
19	103	39.4	42.4	197	13.1	103	34.3	19	50	58	30	07	22 05	50	30	54	
20	118	39.6	43.3	211	42.4	103	36.2	18	52	57	31	10	21 56	49	40	54	
21	133	39.8	44.3	226	11.7	103	38.0	17	54	56	31	13	45	49	13 50	54	
22	148	40.0	45.3	240	41.0	104	39.7	16	56	55	32	16	33	49	14 02	55	
23	163	40.2	46.3	255	10.4	104	41.3	14	58	54	33	19	19	49	16	55	
24	178	40.4	+2 47.2	269	39.8		-21 42.7		60 S	17 53	18 35	19 23	21 03	48	14 32	56	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 11 ^h 41 ^m 5		Mag: -4.0 PMG: 09 ^h 54 ^m				Mag: +1.4 PMG: 15 ^h 21 ^m				Mag: -2.2 PMG: 05 ^h 17 ^m				Mag: +0.6 PMG: 07 ^h 07 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	184	08.2	211	35.9	-12	01.8	129	27.6	+20	23.2	280	37.6	-22	-40.2	253	00.3	-21	35.8
1	199	10.7	226	35.4	-12	00.9	144	28.3		23.6	295	39.9		-40.2	268	02.6		35.8
2	214	13.1	241	35.0	-11	59.9	159	29.1		24.0	310	42.3		-40.2	283	04.9		35.8
3	229	15.6	256	34.5		59.0	174	29.8		24.4	325	44.6		-40.2	298	07.2		35.8
4	244	18.0	271	34.1		58.0	189	30.6		24.8	340	47.0		-40.2	313	09.5		35.8
5	259	20.5	286	33.6	-11	57.1	204	31.3	+20	25.2	355	49.3	-22	-40.2	328	11.9	-21	35.7
6	274	23.0	301	33.2	-11	56.1	219	32.1	+20	25.6	10	51.7	-22	-40.2	343	14.2	-21	35.7
7	289	25.4	316	32.7		55.2	234	32.8		26.0	25	54.0		-40.2	358	16.5		35.7
8	304	27.9	331	32.3		54.2	249	33.6		26.4	40	56.3		-40.2	13	18.8		35.7
9	319	30.4	346	31.8		53.3	264	34.3		26.8	55	58.7		-40.2	28	21.1		35.7
10	334	32.8	1	31.4		52.3	279	35.0		27.2	71	01.0		-40.2	43	23.5		35.7
11	349	35.3	16	30.9	-11	51.4	294	35.8	+20	27.6	86	03.4	-22	-40.2	58	25.8	-21	35.6
12	4	37.8	31	30.5	-11	50.4	309	36.5	+20	27.9	101	05.7	-22	-40.2	73	28.1	-21	35.6
13	19	40.2	46	30.0		49.4	324	37.3		28.3	116	08.1		-40.2	88	30.4		35.6
14	34	42.7	61	29.6		48.5	339	38.0		28.7	131	10.4		-40.2	103	32.8		35.6
15	49	45.1	76	29.1		47.5	354	38.8		29.1	146	12.8		-40.2	118	35.1		35.6
16	64	47.6	91	28.7		46.6	9	39.5		29.5	161	15.1		-40.3	133	37.4		35.5
17	79	50.1	106	28.2	-11	45.6	24	40.3	+20	29.9	176	17.4	-22	-40.3	148	39.7	-21	35.5
18	94	52.5	121	27.8	-11	44.7	39	41.0	+20	30.3	191	19.8	-22	-40.3	163	42.1	-21	35.5
19	109	55.0	136	27.3		43.7	54	41.7		30.7	206	22.1		-40.3	178	44.4		35.5
20	124	57.5	151	26.9		42.7	69	42.5		31.1	221	24.5		-40.3	193	46.7		35.5
21	139	59.9	166	26.4		41.8	84	43.2		31.5	236	26.8		-40.3	208	49.0		35.5
22	155	02.4	181	26.0		40.8	99	44.0		31.9	251	29.2		-40.3	223	51.3		35.4
23	170	04.9	196	25.5		39.9	114	44.7		32.3	266	31.5		-40.3	238	53.7		35.4
24	185	07.3	211	25.1	-11	38.9	129	45.5	+20	32.7	281	33.9	-22	-40.3	253	56.0	-21	35.4
Dif.	—		-5	+10			+7	+4			+23		0		+23			

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 05 ^m 2			SD: 15'1 Edad: 21 ^d 3			PHE { 4 ^h : 55'2 12 ^h : 55'0 20 ^h : 54'8											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°			h m	h m	h m	h m m	m	h m m	m	
0	178	40.4	+2	47.2	269	39.8	104	-21	42.7	14	60 N	4 05	4 56	5 39	3 04	49	9 23	55
1	193	40.6		48.2	284	09.2	104		44.1	12	58	12	5 01	40	2 47	49	40	54
2	208	40.8		49.2	298	38.6	105		45.3	12	56	19	05	42	33	49	9 55	53
3	223	41.0		50.2	313	08.1	104		46.5	10	54	25	08	44	20	50	10 07	53
4	238	41.1		51.2	327	37.5	105		47.5	9	52	30	11	45	09	50	18	53
5	253	41.3	+2	52.1	342	07.0	105	-21	48.4	8	50	4 35	5 14	5 46	2 00	49	10 28	52
6	268	41.5	+2	53.1	356	36.5	106	-21	49.2	7	45	4 45	5 20	5 49	1 39	50	10 48	52
7	283	41.7		54.1	11	06.1	106		49.9	6	40	52	24	51	23	50	11 05	51
8	298	41.9		55.1	25	35.7	105		50.5	5	35	4 58	28	53	1 09	50	19	51
9	313	42.1		56.0	40	05.2	107		51.0	4	30	5 03	31	55	0 57	50	31	51
10	328	42.3		57.0	54	34.9	106		51.4	2	20	10	35	5 57	36	51	11 51	51
11	343	42.5	+2	58.0	69	04.5	107	-21	51.6	2	10 N	5 14	5 39	6 00	0 19	50	12 09	50
12	358	42.7	+2	59.0	83	34.2	107	-21	51.8	0	0	5 17	5 41	6 02	0 02	50	12 26	50
13	13	42.8	+3	00.0	98	03.9	107		51.8	0	10 S	19	43	04	***	***	12 43	49
14	28	43.0		00.9	112	33.6	107		51.8	2	20	18	44	06	***	***	13 01	48
15	43	43.2		01.9	127	03.3	108		51.6	3	30	16	44	08	23 57	52	22	47
16	58	43.4		02.9	141	33.1	108		51.3	4	35	15	44	09	45	52	34	47
17	73	43.6	+3	03.9	156	02.9	109	-21	50.9	5	40	5 12	5 44	6 11	23 31	53	13 47	47
18	88	43.8	+3	04.8	170	32.8	108	-21	50.4	6	45	5 09	5 43	6 12	23 15	54	14 04	46
19	103	44.0		05.8	185	02.6	109		49.8	7	50	04	42	14	22 55	55	24	46
20	118	44.2		06.8	199	32.5	109		49.1	8	52	5 02	41	15	45	56	34	45
21	133	44.4		07.8	214	02.4	110		48.3	9	54	4 59	40	15	34	57	44	45
22	148	44.5		08.7	228	32.4	110		47.4	10	56	56	39	16	22	57	14 57	44
23	163	44.7		09.7	243	02.4	110		46.4	11	58	52	38	17	22 08	58	15 11	43
24	178	44.9	+3	10.7	257	32.4		-21	45.3		60 S	4 48	5 37	6 19	21 51	60	15 28	42
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 11 ^h 37 ^m 6		Mag: -4.0 PMG: 09 ^h 55 ^m				Mag: +1.4 PMG: 15 ^h 20 ^m				Mag: -2.2 PMG: 05 ^h 13 ^m				Mag: +0.6 PMG: 07 ^h 03 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	185	07.3	211	25.1	-11	38.9	129	45.5	+20	32.7	281	33.9	-22	40.3	253	56.0	-21	35.4
1	200	09.8	226	24.6		37.9	144	46.2		33.1	296	36.2		40.3	268	58.3		35.4
2	215	12.3	241	24.2		37.0	159	47.0		33.5	311	38.6		40.3	284	00.6		35.4
3	230	14.7	256	23.7		36.0	174	47.7		33.8	326	40.9		40.3	299	03.0		35.4
4	245	17.2	271	23.3		35.0	189	48.4		34.2	341	43.3		40.3	314	05.3		35.3
5	260	19.6	286	22.8	-11	34.1	204	49.2	+20	34.6	356	45.6	-22	40.3	329	07.6	-21	35.3
6	275	22.1	301	22.4	-11	33.1	219	49.9	+20	35.0	11	48.0	-22	40.3	344	09.9	-21	35.3
7	290	24.6	316	21.9		32.2	234	50.7		35.4	26	50.3		40.3	359	12.3		35.3
8	305	27.0	331	21.5		31.2	249	51.4		35.8	41	52.7		40.3	14	14.6		35.3
9	320	29.5	346	21.0		30.2	264	52.2		36.2	56	55.0		40.3	29	16.9		35.3
10	335	32.0	1	20.6		29.3	279	52.9		36.6	71	57.4		40.3	44	19.3		35.2
11	350	34.4	16	20.2	-11	28.3	294	53.6	+20	37.0	86	59.7	-22	40.3	59	21.6	-21	35.2
12	5	36.9	31	19.7	-11	27.3	309	54.4	+20	37.4	102	02.1	-22	40.3	74	23.9	-21	35.2
13	20	39.4	46	19.3		26.3	324	55.1		37.7	117	04.4		40.3	89	26.2		35.2
14	35	41.8	61	18.8		25.4	339	55.9		38.1	132	06.8		40.3	104	28.6		35.2
15	50	44.3	76	18.4		24.4	354	56.6		38.5	147	09.1		40.3	119	30.9		35.1
16	65	46.8	91	17.9		23.4	9	57.4		38.9	162	11.5		40.3	134	33.2		35.1
17	80	49.2	106	17.5	-11	22.5	24	58.1	+20	39.3	177	13.9	-22	40.4	149	35.5	-21	35.1
18	95	51.7	121	17.1	-11	21.5	39	58.8	+20	39.7	192	16.2	-22	40.4	164	37.9	-21	35.1
19	110	54.1	136	16.6		20.5	54	59.6		40.1	207	18.6		40.4	179	40.2		35.1
20	125	56.6	151	16.2		19.5	70	00.3		40.5	222	20.9		40.4	194	42.5		35.1
21	140	59.1	166	15.7		18.6	85	01.1		40.8	237	23.3		40.4	209	44.9		35.0
22	156	01.5	181	15.3		17.6	100	01.8		41.2	252	25.6		40.4	224	47.2		35.0
23	171	04.0	196	14.8		16.6	115	02.5		41.6	267	28.0		40.4	239	49.5		35.0
24	186	06.5	211	14.4	-11	15.6	130	03.3	+20	42.0	282	30.3	-22	40.4	254	51.8	-21	35.0
Dif.	—		-4		+10		+7		+4		+24		0		+23		0	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0			SD: 14'9			PHE { 4 ^h : 54'7 12 ^h : 54'5 20 ^h : 54'4											
	PMG: 12 ^h 04 ^m 9			Edad: 22 ^d 3														
	PMG: 07 ^h 04 ^m			R ^o : 48 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	R ^o	Hora	R ^o			
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m			
0	178	44.9	+3 10.7	257	32.4 110	-21 45.3 13		60 N	18 36	19 18	20 11	3 53 35		10 18 64				
1	193	45.1	11.7	272	02.4 111		44.0 13	58	33	13	20 02	36 38		34 62				
2	208	45.3	12.6	286	32.5 111		42.7 14	56	31	09	19 55	22 39		10 48 61				
3	223	45.5	13.6	301	02.6 112		41.3 16	54	30	06	49	3 10 40		11 00 59				
4	238	45.7	14.6	315	32.8 111		39.7 16	52	28	19 02	43	2 59 41		11 58				
5	253	45.9	+3 15.6	330	02.9 112	-21 38.1 18		50	18 27	18 59	19 38	2 49 42		11 20 58				
6	268	46.0	+3 16.5	344	33.1 113	-21 36.3 18		45	18 23	18 53	19 28	2 29 43		11 40 56				
7	283	46.2	17.5	359	03.4 113		34.5 20	40	21	48	20	2 13 44		11 56 55				
8	298	46.4	18.5	13	33.7 113		32.5 20	35	19	44	14	1 59 45		12 10 53				
9	313	46.6	19.5	28	04.0 113		30.5 22	30	17	41	09	47 46		22 52				
10	328	46.8	20.4	42	34.3 114		28.3 22	20	13	35	19 01	27 46		42 51				
11	343	47.0	+3 21.4	57	04.7 114	-21 26.1 24		10 N	18 11	18 32	18 56	1 09 48		12 59 50				
12	358	47.2	+3 22.4	71	35.1 114	-21 23.7 25		0	18 08	18 29	18 53	0 52 49		13 16 48				
13	13	47.4	23.4	86	05.5 115		21.2 25	10 S	06	27	51	35 50		32 47				
14	28	47.6	24.3	100	36.0 116		18.7 27	20	03	25	51	0 17 51		13 49 46				
15	43	47.7	25.3	115	06.6 115		16.0 27	30	18 01	24	52	*** ** *		14 09 44				
16	58	47.9	26.3	129	37.1 116		13.3 29	35	17 59	24	54	*** ** *		21 43				
17	73	48.1	+3 27.3	144	07.7 116	-21 10.4 29		40	17 57	18 24	18 56	*** ** *		14 34 42				
18	88	48.3	+3 28.2	158	38.3 117	-21 07.5 31		45	17 56	18 25	18 59	*** ** *		14 50 40				
19	103	48.5	29.2	173	09.0 117		04.4 31	50	53	26	19 03	23 50 59		15 10 38				
20	118	48.7	30.2	187	39.7 117	-21 01.3 33		52	52	26	05	41 60		19 37				
21	133	48.9	31.1	202	10.4 118	-20 58.0 33		54	51	26	08	31 61		29 36				
22	148	49.1	32.1	216	41.2 118		54.7 35	56	50	27	10	19 64		41 34				
23	163	49.2	33.1	231	12.0 119		51.2 35	58	49	28	13	23 06 65		15 54 33				
24	178	49.4	+3 34.1	245	42.9	-20 47.7		60 S	17 47	18 29	19 17	22 51 67		16 10 30				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 11 ^h 33 ^m 7		Mag: -3.9 PMG: 09 ^h 55 ^m				Mag: +1.4 PMG: 15 ^h 19 ^m				Mag: -2.2 PMG: 05 ^h 09 ^m				Mag: +0.6 PMG: 06 ^h 59 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	186	06.5	211	14.4	-11 15.6		130	03.3	+20 42.0		282	30.3	-22 -40.4		254	51.8	-21 35.0	
1	201	08.9	226	14.0	14.7		145	04.0	42.4		297	32.7	-40.4		269	54.2	35.0	
2	216	11.4	241	13.5	13.7		160	04.8	42.8		312	35.1	-40.4		284	56.5	35.0	
3	231	13.9	256	13.1	12.7		175	05.5	43.2		327	37.4	-40.4		299	58.8	34.9	
4	246	16.3	271	12.6	11.7		190	06.3	43.5		342	39.8	-40.4		315	01.2	34.9	
5	261	18.8	286	12.2	-11 10.8		205	07.0	+20 43.9		357	42.1	-22 -40.4		330	03.5	-21 34.9	
6	276	21.2	301	11.8	-11 09.8		220	07.7	+20 44.3		12	44.5	-22 -40.4		345	05.8	-21 34.9	
7	291	23.7	316	11.3	08.8		235	08.5	44.7		27	46.9	-40.4		0	08.1	34.9	
8	306	26.2	331	10.9	07.8		250	09.2	45.1		42	49.2	-40.4		15	10.5	34.9	
9	321	28.6	346	10.5	06.8		265	10.0	45.5		57	51.6	-40.4		30	12.8	34.8	
10	336	31.1	1	10.0	05.9		280	10.7	45.8		72	53.9	-40.4		45	15.1	34.8	
11	351	33.6	16	09.6	-11 04.9		295	11.4	+20 46.2		87	56.3	-22 -40.4		60	17.5	-21 34.8	
12	6	36.0	31	09.1	-11 03.9		310	12.2	+20 46.6		102	58.7	-22 -40.4		75	19.8	-21 34.8	
13	21	38.5	46	08.7	02.9		325	12.9	47.0		118	01.0	-40.4		90	22.1	34.8	
14	36	41.0	61	08.3	01.9		340	13.7	47.4		133	03.4	-40.4		105	24.5	34.8	
15	51	43.4	76	07.8	01.0		355	14.4	47.7		148	05.7	-40.4		120	26.8	34.7	
16	66	45.9	91	07.4	-11 00.0		10	15.1	48.1		163	08.1	-40.4		135	29.1	34.7	
17	81	48.4	106	07.0	-10 59.0		25	15.9	+20 48.5		178	10.5	-22 -40.4		150	31.4	-21 34.7	
18	96	50.8	121	06.5	-10 58.0		40	16.6	+20 48.9		193	12.8	-22 -40.4		165	33.8	-21 34.7	
19	111	53.3	136	06.1	57.0		55	17.4	49.3		208	15.2	-40.5		180	36.1	34.7	
20	126	55.7	151	05.7	56.0		70	18.1	49.6		223	17.6	-40.5		195	38.4	34.7	
21	141	58.2	166	05.2	55.0		85	18.8	50.0		238	19.9	-40.5		210	40.8	34.6	
22	157	00.7	181	04.8	54.0		100	19.6	50.4		253	22.3	-40.5		225	43.1	34.6	
23	172	03.1	196	04.4	53.1		115	20.3	50.8		268	24.7	-40.5		240	45.4	34.6	
24	187	05.6	211	03.9	-10 52.1		130	21.0	+20 51.2		283	27.0	-22 -40.5		255	47.8	-21 34.6	
Dif.	—		-4		+10		+7		+4		+24		0		+23			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 04 ^m 6			SD: 14'8 Edad: 23 ^d 3 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 PMG: 07 ^h 52 ^m Rº: 47 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº	Hora	Rº	
h	° ' "	° ' "		° ' "		° ' "			h m	h m	h m	h m m		h m m	h m m			
0	178 49.4	+3 34.1		245 42.9	119	-20 47.7	36	60 N	3 58	4 50	5 32	4 28 26		11 22 70				
1	193 49.6		35.0	260 13.8	119		44.1 37	58	4 06	55	35	14 28	26		36 68			
2	208 49.8		36.0	274 44.7	120		40.4 38	56	13	4 59	37	4 01 30			49 65			
3	223 50.0		37.0	289 15.7	120		36.6 40	54	20	5 03	39	3 50 32		11 59 64				
4	238 50.2		38.0	303 46.7	120		32.6 40	52	25	06	40	40 33		12 09 62				
5	253 50.4	+3 38.9		318 17.7	121	-20 28.6	41	50	4 30	5 09	5 42	3 31 34		12 18 61				
6	268 50.6	+3 39.9		332 48.8	121	-20 24.5	41	45	4 41	5 16	5 45	3 12 37		12 36 58				
7	283 50.7		40.9	347 19.9	122		20.4 43	40	49	21	48	2 57 39		12 51 56				
8	298 50.9		41.8	1 51.1	122		16.1 44	35	4 55	25	50	44 40		13 03 55				
9	313 51.1		42.8	16 22.3	123		11.7 45	30	5 00	28	52	33 41		14 53				
10	328 51.3		43.8	30 53.6	122		07.2 45	20	08	34	56	2 13 44		33 50				
11	343 51.5	+3 44.8		45 24.8	124	-20 02.7	46	10 N	5 13	5 38	5 59	1 57 45		13 49 48				
12	358 51.7	+3 45.7		59 56.2	123	-19 58.1	48	0	5 17	5 41	6 01	1 41 47		14 04 46				
13	13 51.9		46.7	74 27.5	124		53.3 48	10 S	18	43	04	25 49		19 44				
14	28 52.1		47.7	88 58.9	125		48.5 49	20	19	44	06	1 08 51		35 42				
15	43 52.2		48.6	103 30.4	124		43.6 50	30	18	45	09	0 49 52		14 53 40				
16	58 52.4		49.6	118 01.8	126		38.6 51	35	16	46	11	37 54		15 04 38				
17	73 52.6	+3 50.6		132 33.4	125	-19 33.5	52	40	5 14	5 46	6 13	0 24 56		15 16 36				
18	88 52.8	+3 51.6		147 04.9	126	-19 28.3	52	45	5 11	5 45	6 15	0 09 57		15 30 35				
19	103 53.0		52.5	161 36.5	126		23.1 53	50	07	45	17	** ** *	**	48 31				
20	118 53.2		53.5	176 08.1	127		17.8 55	52	05	44	18	** ** *	**	15 56 30				
21	133 53.4		54.5	190 39.8	127		12.3 55	54	03	44	19	** ** *	**	16 05 29				
22	148 53.5		55.4	205 11.5	128		06.8 56	56	5 00	43	20	** ** *	**	15 27				
23	163 53.7		56.4	219 43.3	128	-19 01.2	57	58	4 57	43	22	** ** *	**	16 27 25				
24	178 53.9	+3 57.4		234 15.1		-18 55.5		60 S	4 53	5 42	6 23	23 58 72		16 40 23				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 11 ^h 29 ^m 7		Mag: -3.9 PMG: 09 ^h 56 ^m				Mag: +1.4 PMG: 15 ^h 18 ^m				Mag: -2.2 PMG: 05 ^h 05 ^m				Mag: +0.6 PMG: 06 ^h 56 ^m			
h	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
0	187 05.6		211 03.9	-10 52.1		130 21.0	+20 51.2		283 27.0	-22 40.5		255 47.8	-21 34.6					
1	202 08.1		226 03.5	51.1		145 21.8	51.5		298 29.4	40.5		270 50.1	34.6					
2	217 10.5		241 03.1	50.1		160 22.5	51.9		313 31.7	40.5		285 52.4	34.6					
3	232 13.0		256 02.6	49.1		175 23.3	52.3		328 34.1	40.5		300 54.8	34.6					
4	247 15.5		271 02.2	48.1		190 24.0	52.7		343 36.5	40.5		315 57.1	34.5					
5	262 17.9		286 01.8	-10 47.1		205 24.7	+20 53.0		358 38.8	-22 40.5		330 59.4	-21 34.5					
6	277 20.4		301 01.3	-10 46.1		220 25.5	+20 53.4		13 41.2	-22 40.5		346 01.8	-21 34.5					
7	292 22.9		316 00.9	45.1		235 26.2	53.8		28 43.6	40.5		1 04.1	34.5					
8	307 25.3		331 00.5	44.1		250 27.0	54.2		43 45.9	40.5		16 06.4	34.5					
9	322 27.8		346 00.0	43.2		265 27.7	54.5		58 48.3	40.5		31 08.8	34.5					
10	337 30.2		0 59.6	42.2		280 28.4	54.9		73 50.7	40.5		46 11.1	34.4					
11	352 32.7		15 59.2	-10 41.2		295 29.2	+20 55.3		88 53.1	-22 40.5		61 13.4	-21 34.4					
12	7 35.2		30 58.8	-10 40.2		310 29.9	+20 55.7		103 55.4	-22 40.5		76 15.8	-21 34.4					
13	22 37.6		45 58.3	39.2		325 30.6	56.0		118 57.8	40.5		91 18.1	34.4					
14	37 40.1		60 57.9	38.2		340 31.4	56.4		134 00.2	40.5		106 20.4	34.4					
15	52 42.6		75 57.5	37.2		355 32.1	56.8		149 02.5	40.5		121 22.8	34.4					
16	67 45.0		90 57.0	36.2		10 32.9	57.2		164 04.9	40.5		136 25.1	34.3					
17	82 47.5		105 56.6	-10 35.2		25 33.6	+20 57.5		179 07.3	-22 40.5		151 27.4	-21 34.3					
18	97 50.0		120 56.2	-10 34.2		40 34.3	+20 57.9		194 09.6	-22 40.5		166 29.8	-21 34.3					
19	112 52.4		135 55.8	33.2		55 35.1	58.3		209 12.0	40.5		181 32.1	34.3					
20	127 54.9		150 55.3	32.2		70 35.8	58.7		224 14.4	40.5		196 34.5	34.3					
21	142 57.3		165 54.9	31.2		85 36.5	59.0		239 16.8	40.5		211 36.8	34.3					
22	157 59.8		180 54.5	30.2		100 37.3	59.4		254 19.1	40.5		226 39.1	34.2					
23	173 02.3		195 54.0	29.2		115 38.0	+20 59.8		269 21.5	40.5		241 41.5	34.2					
24	188 04.7		210 53.6	-10 28.2		130 38.7	+21 00.1		284 23.9	-22 40.5		256 43.8	-21 34.2					
Dif.	—		-4 +10		+7 +4				+24 0		+23							

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0			SD: 14'8 Edad: 24 ^d 3								PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1							
	PMG: 12 ^h 04 ^m 3			PMG: 08 ^h 39 ^m Rº: 45 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m	m	h m	m			
0	178	53.9	+3	57.4	234	15.1	128	-18	55.5	57	60 N	18 41	19 23	20 17	4 54	19 12 32 74			
1	193	54.1		58.3	248	46.9	129		49.8	59	58	38	18	08	42	21 44 71			
2	208	54.3	+3	59.3	263	18.8	129		43.9	59	56	36	14	20 00	31	24 12 54 69			
3	223	54.5	+4	00.3	277	50.7	130		38.0	60	54	33	09	19 53	22	25 13 03 67			
4	238	54.7		01.3	292	22.7	130		32.0	61	52	32	06	47	13	28 11 65			
5	253	54.9	+4	02.2	306	54.7	130	-18	25.9	62	50	18 30	19 03	19 42	4 05	29 13 19 63			
6	268	55.0	+4	03.2	321	26.7	131	-18	19.7	62	45	18 26	18 56	19 31	3 49	32 13 34 60			
7	283	55.2		04.2	335	58.8	131		13.5	64	40	23	50	22	36	34 47 57			
8	298	55.4		05.1	350	30.9	131		07.1	64	35	20	46	16	24	37 13 58 55			
9	313	55.6		06.1	5	03.0	132	-18	00.7	65	30	18	42	10	3 14	38 14 07 53			
10	328	55.8		07.1	19	35.2	132	-17	54.2	65	20	14	36	19 02	2 57	41 23 50			
11	343	56.0	+4	08.0	34	07.4	133	-17	47.7	67	10 N	18 11	18 32	18 56	2 42	43 14 37 47			
12	358	56.2	+4	09.0	48	39.7	133	-17	41.0	67	0	18 08	18 28	18 52	2 28	46 14 50 45			
13	13	56.3		10.0	63	12.0	134		34.3	68	10 S	05	26	50	2 14	48 15 03 43			
14	28	56.5		10.9	77	44.4	133		27.5	68	20	18 02	24	49	1 59	50 17 40			
15	43	56.7		11.9	92	16.7	135		20.7	70	30	17 58	22	50	41	54 33 36			
16	58	56.9		12.9	106	49.2	134		13.7	70	35	56	22	51	31	55 42 35			
17	73	57.1	+4	13.8	121	21.6	135	-17	06.7	71	40	17 54	18 21	18 53	1 20	56 15 52 33			
18	88	57.3	+4	14.8	135	54.1	135	-16	59.6	72	45	17 52	18 21	18 55	1 06	59 16 05 29			
19	103	57.5		15.8	150	26.6	136		52.4	72	50	49	21	18 59	0 49	62 19 27			
20	118	57.6		16.7	164	59.2	136		45.2	73	52	48	21	19 00	41	64 26 25			
21	133	57.8		17.7	179	31.8	136		37.9	74	54	46	22	03	32	66 34 23			
22	148	58.0		18.7	194	04.4	137		30.5	75	56	45	22	05	23	67 42 22			
23	163	58.2		19.6	208	37.1	137		23.0	75	58	43	22	08	0 11	70 16 52 19			
24	178	58.4	+4	20.6	223	09.8		-16	15.5		60 S	17 41	18 23	19 11	** ** *	** 17 03 16			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 11 ^h 25 ^m 8		Mag: -3.9 PMG: 09 ^h 57 ^m				Mag: +1.4 PMG: 15 ^h 17 ^m				Mag: -2.2 PMG: 05 ^h 02 ^m				Mag: +0.6 PMG: 06 ^h 52 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	188	04.7	210	53.6	-10	28.2	130	38.7	+21	00.1	284	23.9	-22	-40.5	256	43.8	-21	34.2	
1	203	07.2	225	53.2		27.2	145	39.5		00.5	299	26.3		-40.5	271	46.1		34.2	
2	218	09.7	240	52.8		26.2	160	40.2		00.9	314	28.6		-40.6	286	48.5		34.2	
3	233	12.1	255	52.3		25.2	175	41.0		01.3	329	31.0		-40.6	301	50.8		34.2	
4	248	14.6	270	51.9		24.2	190	41.7		01.6	344	33.4		-40.6	316	53.1		34.2	
5	263	17.1	285	51.5	-10	23.2	205	42.4	+21	02.0	359	35.8	-22	-40.6	331	55.5	-21	34.1	
6	278	19.5	300	51.1	-10	22.2	220	43.2	+21	02.4	14	38.1	-22	-40.6	346	57.8	-21	34.1	
7	293	22.0	315	50.6		21.2	235	43.9		02.7	29	40.5		-40.6	2	00.2		34.1	
8	308	24.5	330	50.2		20.2	250	44.6		03.1	44	42.9		-40.6	17	02.5		34.1	
9	323	26.9	345	49.8		19.2	265	45.4		03.5	59	45.3		-40.6	32	04.8		34.1	
10	338	29.4	0	49.4		18.2	280	46.1		03.8	74	47.6		-40.6	47	07.2		34.1	
11	353	31.8	15	49.0	-10	17.1	295	46.8	+21	04.2	89	50.0	-22	-40.6	62	09.5	-21	34.0	
12	8	34.3	30	48.5	-10	16.1	310	47.6	+21	04.6	104	52.4	-22	-40.6	77	11.8	-21	34.0	
13	23	36.8	45	48.1		15.1	325	48.3		04.9	119	54.8		-40.6	92	14.2		34.0	
14	38	39.2	60	47.7		14.1	340	49.0		05.3	134	57.1		-40.6	107	16.5		34.0	
15	53	41.7	75	47.3		13.1	355	49.8		05.7	149	59.5		-40.6	122	18.9		34.0	
16	68	44.2	90	46.8		12.1	10	50.5		06.0	165	01.9		-40.6	137	21.2		34.0	
17	83	46.6	105	46.4	-10	11.1	25	51.2	+21	06.4	180	04.3	-22	-40.6	152	23.5	-21	33.9	
18	98	49.1	120	46.0	-10	10.1	40	52.0	+21	06.8	195	06.7	-22	-40.6	167	25.9	-21	33.9	
19	113	51.6	135	45.6		09.1	55	52.7		07.1	210	09.0		-40.6	182	28.2		33.9	
20	128	54.0	150	45.2		08.1	70	53.4		07.5	225	11.4		-40.6	197	30.6		33.9	
21	143	56.5	165	44.7		07.0	85	54.2		07.9	240	13.8		-40.6	212	32.9		33.9	
22	158	59.0	180	44.3		06.0	100	54.9		08.2	255	16.2		-40.6	227	35.2		33.9	
23	174	01.4	195	43.9		05.0	115	55.6		08.6	270	18.6		-40.6	242	37.6		33.9	
24	189	03.9	210	43.5	-10	04.0	130	56.4	+21	09.0	285	20.9	-22	-40.6	257	39.9	-21	33.8	
Dif.	—		-4		+10		+7		+4		+24		0		+23		0		

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 04 ^m 0			SD: 14'7 Edad: 25 ^d 3 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 PMG: 09 ^h 24 ^m Rº: 44 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	178	58.4	+4	20.6	223	09.8	138	-16	15.5	76	60 N	3 51	4 44	5 26	5 13	15	13 46	75	
1	193	58.6		21.6	237	42.6	138		07.9	77	58	4 00	49	29	5 03	18	13 55	72	
2	208	58.8		22.5	252	15.4	138	-16	00.2	77	56	07	54	32	4 55	19	14 03	69	
3	223	58.9		23.5	266	48.2	138	-15	52.5	78	54	14	4 58	34	47	22	10	67	
4	238	59.1		24.5	281	21.0	139		44.7	79	52	20	5 02	36	41	23	16	66	
5	253	59.3	+4	25.4	295	53.9	139	-15	36.8	79	50	4 26	5 05	5 38	4 34	25	14 22	64	
6	268	59.5	+4	26.4	310	26.8	140	-15	28.9	80	45	4 37	5 12	5 42	4 21	28	14 34	61	
7	283	59.7		27.4	324	59.8	140		20.9	81	40	45	17	45	10	31	44	58	
8	298	59.9		28.3	339	32.8	140		12.8	81	35	52	22	47	4 01	33	14 53	55	
9	314	00.1		29.3	354	05.8	141	-15	04.7	82	30	4 58	26	50	3 52	35	15 00	53	
10	329	00.2		30.3	8	38.9	140	-14	56.5	83	20	5 06	32	54	38	38	13	50	
11	344	00.4	+4	31.2	23	11.9	142	-14	48.2	83	10 N	5 12	5 36	5 58	3 25	42	15 24	47	
12	359	00.6	+4	32.2	37	45.1	141	-14	39.9	84	0	5 16	5 40	6 01	3 14	44	15 35	44	
13	14	00.8		33.2	52	18.2	142		31.5	85	10 S	18	43	04	3 02	47	46	40	
14	29	01.0		34.1	66	51.4	142		23.0	85	20	19	45	07	2 49	50	15 57	37	
15	44	01.2		35.1	81	24.6	143		14.5	86	30	19	47	10	35	53	16 09	34	
16	59	01.4		36.1	95	57.9	142	-14	05.9	86	35	18	47	12	26	55	17	31	
17	74	01.5	+4	37.0	110	31.1	143	-13	57.3	87	40	5 16	5 48	6 15	2 16	58	16 25	29	
18	89	01.7	+4	38.0	125	04.4	144	-13	48.6	88	45	5 14	5 48	6 17	2 05	60	16 34	27	
19	104	01.9		39.0	139	37.8	143		39.8	88	50	10	48	20	1 51	64	46	23	
20	119	02.1		39.9	154	11.1	144		31.0	89	52	09	48	21	45	65	51	22	
21	134	02.3		40.9	168	44.5	145		22.1	89	54	07	48	23	38	67	16 57	20	
22	149	02.5		41.8	183	18.0	144		13.2	90	56	04	47	25	30	69	17 04	18	
23	164	02.6		42.8	197	51.4	145	-13	04.2	91	58	5 01	47	26	1 21	71	17 11	16	
24	179	02.8	+4	43.8	212	24.9		-12	55.1		60 S	4 58	5 47	6 28	1 10	75	17 19	13	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 11 ^h 21 ^m 9		Mag: -3.9 PMG: 09 ^h 57 ^m				Mag: +1.4 PMG: 15 ^h 15 ^m				Mag: -2.2 PMG: 04 ^h 58 ^m				Mag: +0.6 PMG: 06 ^h 48 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°
0	189	03.9	210	43.5	-10	04.0	130	56.4	+21	09.0	285	20.9	-22	40.6	257	39.9	-21	33.8	
1	204	06.3	225	43.1		03.0	145	57.1		09.3	300	23.3		40.6	272	42.3		33.8	
2	219	08.8	240	42.7		02.0	160	57.8		09.7	315	25.7		40.6	287	44.6		33.8	
3	234	11.3	255	42.2		01.0	175	58.6		10.0	330	28.1		40.6	302	46.9		33.8	
4	249	13.7	270	41.8	-10	00.0	190	59.3		10.4	345	30.5		40.6	317	49.3		33.8	
5	264	16.2	285	41.4	-9	58.9	206	00.0	+21	10.8	0	32.9	-22	40.6	332	51.6	-21	33.8	
6	279	18.7	300	41.0	-9	57.9	221	00.8	+21	11.1	15	35.2	-22	40.6	347	54.0	-21	33.8	
7	294	21.1	315	40.6		56.9	236	01.5		11.5	30	37.6		40.6	2	56.3		33.7	
8	309	23.6	330	40.1		55.9	251	02.2		11.9	45	40.0		40.6	17	58.7		33.7	
9	324	26.1	345	39.7		54.9	266	03.0		12.2	60	42.4		40.6	33	01.0		33.7	
10	339	28.5	0	39.3		53.9	281	03.7		12.6	75	44.8		40.6	48	03.3		33.7	
11	354	31.0	15	38.9	-9	52.8	296	04.4	+21	12.9	90	47.2	-22	40.6	63	05.7	-21	33.7	
12	9	33.4	30	38.5	-9	51.8	311	05.2	+21	13.3	105	49.6	-22	40.7	78	08.0	-21	33.7	
13	24	35.9	45	38.1		50.8	326	05.9		13.7	120	51.9		40.7	93	10.4		33.6	
14	39	38.4	60	37.7		49.8	341	06.6		14.0	135	54.3		40.7	108	12.7		33.6	
15	54	40.8	75	37.2		48.8	356	07.4		14.4	150	56.7		40.7	123	15.0		33.6	
16	69	43.3	90	36.8		47.7	11	08.1		14.7	165	59.1		40.7	138	17.4		33.6	
17	84	45.8	105	36.4	-9	46.7	26	08.8	+21	15.1	181	01.5	-22	40.7	153	19.7	-21	33.6	
18	99	48.2	120	36.0	-9	45.7	41	09.6	+21	15.5	196	03.9	-22	40.7	168	22.1	-21	33.6	
19	114	50.7	135	35.6		44.7	56	10.3		15.8	211	06.3		40.7	183	24.4		33.6	
20	129	53.2	150	35.2		43.6	71	11.0		16.2	226	08.7		40.7	198	26.8		33.5	
21	144	55.6	165	34.8		42.6	86	11.8		16.5	241	11.0		40.7	213	29.1		33.5	
22	159	58.1	180	34.3		41.6	101	12.5		16.9	256	13.4		40.7	228	31.5		33.5	
23	175	00.6	195	33.9		40.6	116	13.2		17.2	271	15.8		40.7	243	33.8		33.5	
24	190	03.0	210	33.5	-9	39.5	131	14.0	+21	17.6	286	18.2	-22	40.7	258	36.1	-21	33.5	
Dif.	—		-4		+10		+7		+4		+24		0		+23		0		

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0				 SD: 14'7 Edad: 26 ^d 3		PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3											
	PMG: 12 ^h 03 ^m 7																	
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Civil	Náut.	Hora	Rº			Hora	Rº				
h	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	m	
0	179	02.8	+4	43.8	212	24.9	145	-12	55.1	91	60 N	18 45	19 29	20 23	5 28	12	15 01	75
1	194	03.0		44.7	226	58.4	145		46.0	91	58	42	23	13	21	14	07	73
2	209	03.2		45.7	241	31.9	146		36.9	93	56	40	18	20 05	14	17	12	71
3	224	03.4		46.7	256	05.5	146		27.6	92	54	37	13	19 57	09	19	17	69
4	239	03.6		47.6	270	39.1	146		18.4	94	52	35	09	51	5 04	20	22	66
5	254	03.8	+4	48.6	285	12.7	146	-12	09.0	93	50	18 33	19 06	19 45	4 59	22	15 26	65
6	269	03.9	+4	49.6	299	46.3	146	-11	59.7	95	45	18 29	18 58	19 34	4 49	26	15 35	61
7	284	04.1		50.5	314	19.9	147		50.2	95	40	25	52	25	41	28	42	58
8	299	04.3		51.5	328	53.6	147		40.7	95	35	22	47	17	34	31	48	56
9	314	04.5		52.4	343	27.3	148		31.2	96	30	19	43	11	27	33	15 53	54
10	329	04.7		53.4	358	01.1	147		21.6	96	20	14	37	19 02	16	37	16 03	49
11	344	04.9	+4	54.4	12	34.8	148	-11	12.0	97	10 N	18 11	18 32	18 56	4 07	40	16 11	46
12	359	05.0	+4	55.3	27	08.6	148	-11	02.3	97	0	18 07	18 28	18 52	3 58	43	16 19	42
13	14	05.2		56.3	41	42.4	148	-10	52.6	98	10 S	03	24	49	49	46	26	40
14	29	05.4		57.2	56	16.2	148		42.8	98	20	18 00	22	47	39	49	34	36
15	44	05.6		58.2	70	50.0	149		33.0	99	30	17 56	20	47	28	53	43	33
16	59	05.8	+4	59.2	85	23.9	148		23.1	99	35	54	19	48	21	56	48	31
17	74	06.0	+5	00.1	99	57.7	149	-10	13.2	100	40	17 51	18 18	18 49	3 14	58	16 54	28
18	89	06.1	+5	01.1	114	31.6	150	-10	03.2	100	45	17 48	18 17	18 51	3 05	61	17 01	25
19	104	06.3		02.1	129	05.6	149	-9	53.2	101	50	45	17	54	2 55	64	09	22
20	119	06.5		03.0	143	39.5	149		43.1	101	52	43	17	56	50	66	13	20
21	134	06.7		04.0	158	13.4	150		33.0	101	54	42	17	18 58	45	68	17	18
22	149	06.9		04.9	172	47.4	150		22.9	102	56	40	17	19 00	39	70	22	16
23	164	07.1		05.9	187	21.4	150		12.7	102	58	38	17	02	32	73	27	13
24	179	07.2	+5	06.9	201	55.4		-9	02.5		60 S	17 35	18 17	19 05	2 25	75	17 32	11
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 11 ^h 17 ^m 9		Mag: -3.9 PMG: 09 ^h 58 ^m			Mag: +1.5 PMG: 15 ^h 14 ^m			Mag: -2.3 PMG: 04 ^h 54 ^m			Mag: +0.6 PMG: 06 ^h 45 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	190	03.0	210	33.5	-9	39.5	131	14.0	+21	17.6	286	18.2	-22	-40.7	258	36.1	-21	33.5
1	205	05.5	225	33.1		38.5	146	14.7		18.0	301	20.6		-40.7	273	38.5		33.5
2	220	07.9	240	32.7		37.5	161	15.4		18.3	316	23.0		-40.7	288	40.8		33.5
3	235	10.4	255	32.3		36.5	176	16.1		18.7	331	25.4		-40.7	303	43.2		33.4
4	250	12.9	270	31.9		35.4	191	16.9		19.0	346	27.8		-40.7	318	45.5		33.4
5	265	15.3	285	31.5	-9	34.4	206	17.6	+21	19.4	1	30.2	-22	-40.7	333	47.9	-21	33.4
6	280	17.8	300	31.1	-9	33.4	221	18.3	+21	19.7	16	32.6	-22	-40.7	348	50.2	-21	33.4
7	295	20.3	315	30.6		32.4	236	19.1		20.1	31	35.0		-40.7	3	52.6		33.4
8	310	22.7	330	30.2		31.3	251	19.8		20.4	46	37.3		-40.7	18	54.9		33.4
9	325	25.2	345	29.8		30.3	266	20.5		20.8	61	39.7		-40.7	33	57.3		33.3
10	340	27.7	0	29.4		29.3	281	21.3		21.1	76	42.1		-40.7	48	59.6		33.3
11	355	30.1	15	29.0	-9	28.2	296	22.0	+21	21.5	91	44.5	-22	-40.7	64	01.9	-21	33.3
12	10	32.6	30	28.6	-9	27.2	311	22.7	+21	21.9	106	46.9	-22	-40.7	79	04.3	-21	33.3
13	25	35.1	45	28.2		26.2	326	23.4		22.2	121	49.3		-40.7	94	06.6		33.3
14	40	37.5	60	27.8		25.1	341	24.2		22.6	136	51.7		-40.7	109	09.0		33.3
15	55	40.0	75	27.4		24.1	356	24.9		22.9	151	54.1		-40.7	124	11.3		33.3
16	70	42.4	90	27.0		23.1	11	25.6		23.3	166	56.5		-40.7	139	13.7		33.2
17	85	44.9	105	26.6	-9	22.0	26	26.4	+21	23.6	181	58.9	-22	-40.7	154	16.0	-21	33.2
18	100	47.4	120	26.2	-9	21.0	41	27.1	+21	24.0	197	01.3	-22	-40.7	169	18.4	-21	33.2
19	115	49.8	135	25.7		20.0	56	27.8		24.3	212	03.7		-40.7	184	20.7		33.2
20	130	52.3	150	25.3		18.9	71	28.6		24.7	227	06.1		-40.7	199	23.1		33.2
21	145	54.8	165	24.9		17.9	86	29.3		25.0	242	08.5		-40.7	214	25.4		33.2
22	160	57.2	180	24.5		16.9	101	30.0		25.4	257	10.9		-40.7	229	27.8		33.2
23	175	59.7	195	24.1		15.8	116	30.7		25.7	272	13.3		-40.7	244	30.1		33.1
24	191	02.2	210	23.7	-9	14.8	131	31.5	+21	26.1	287	15.7	-22	-40.7	259	32.5	-21	33.1
Dif.	—		-4		+10		+7		+4		+24		0		+23			

UT	SOL			 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 12 ^h 03 ^m 4			SD: 14'8 Edad: 27 ^d 3	PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'5													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'		h	m	h	m	h	m	m			
0	179	07.2	+5 06.9	201	55.4	150	-9 02.5	103	60 N	3 43	4 37	5 20	5 40	10	16 16 77			
1	194	07.2	07.8	216	29.4	150	-8 52.2	103	58	3 53	43	24	35	13	20 74			
2	209	07.6	08.8	231	03.4	150	41.9	104	56	4 01	48	26	31	15	23 72			
3	224	07.8	09.7	245	37.4	151	31.5	104	54	09	53	29	28	17	26 69			
4	239	08.0	10.7	260	11.5	150	21.1	104	52	15	4 57	31	24	19	28 68			
5	254	08.2	+5 11.6	274	45.5	151	-8 10.7	105	50	4 21	5 00	5 33	5 21	21	16 31 65			
6	269	08.3	+5 12.6	289	19.6	151	-8 00.2	105	45	4 33	5 08	5 38	5 15	24	16 36 62			
7	284	08.5	13.6	303	53.7	151	-7 49.7	105	40	42	14	42	09	27	40 59			
8	299	08.7	14.5	318	27.8	151	39.2	106	35	49	19	45	05	29	44 56			
9	314	08.9	15.5	333	01.9	151	28.6	106	30	4 55	23	48	5 00	32	47 53			
10	329	09.1	16.4	347	36.0	151	18.0	106	20	5 04	30	52	4 53	36	52 50			
11	344	09.3	+5 17.4	2	10.1	152	-7 07.4	107	10 N	5 11	5 35	5 56	4 47	39	16 57 46			
12	359	09.4	+5 18.4	16	44.3	151	-6 56.7	107	0	5 15	5 39	6 00	4 41	42	17 01 43			
13	14	09.6	19.3	31	18.4	152	46.0	108	10 S	18	43	04	35	46	06 39			
14	29	09.8	20.3	45	52.6	151	35.2	108	20	20	45	07	28	50	10 36			
15	44	10.0	21.2	60	26.7	152	24.4	108	30	20	48	12	21	53	16 31			
16	59	10.2	22.2	75	00.9	152	13.6	108	35	19	49	14	17	55	19 29			
17	74	10.3	+5 23.1	89	35.1	151	-6 02.8	109	40	5 18	5 50	6 17	4 12	58	17 22 27			
18	89	10.5	+5 24.1	104	09.2	152	-5 51.9	109	45	5 16	5 50	6 20	4 06	62	17 26 24			
19	104	10.7	25.1	118	43.4	152	41.0	109	50	13	51	23	3 59	66	31 20			
20	119	10.9	26.0	133	17.6	152	30.1	110	52	12	51	25	56	67	33 18			
21	134	11.1	27.0	147	51.8	152	19.1	110	54	10	51	27	53	69	35 17			
22	149	11.3	27.9	162	26.0	151	-5 08.1	110	56	08	51	29	49	71	38 14			
23	164	11.4	28.9	177	00.1	152	-4 57.1	110	58	06	51	31	3 45	73	17 40 13			
24	179	11.6	+5 29.8	191	34.3		-4 46.1		60 S	5 03	5 52	6 33	3 40	76	17 43 11			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 11 ^h 14 ^m 0		Mag: -3.9 PMG: 09 ^h 59 ^m			Mag: +1.5 PMG: 15 ^h 13 ^m			Mag: -2.3 PMG: 04 ^h 50 ^m			Mag: +0.6 PMG: 06 ^h 41 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	191	02.2	210	23.7	-9	14.8	131	31.5	+21	26.1	287	15.7	-22	40.7	259	32.5	-21	33.1
1	206	04.6	225	23.3		13.8	146	32.2		26.4	302	18.1		40.7	274	34.8		33.1
2	221	07.1	240	22.9		12.7	161	32.9		26.8	317	20.5		40.7	289	37.2		33.1
3	236	09.5	255	22.5		11.7	176	33.7		27.1	332	22.9		40.7	304	39.5		33.1
4	251	12.0	270	22.1		10.7	191	34.4		27.5	347	25.3		40.7	319	41.9		33.1
5	266	14.5	285	21.7	-9	09.6	206	35.1	+21	27.8	2	27.7	-22	40.7	334	44.2	-21	33.1
6	281	16.9	300	21.3	-9	08.6	221	35.8	+21	28.2	17	30.1	-22	40.7	349	46.6	-21	33.0
7	296	19.4	315	20.9		07.5	236	36.6		28.5	32	32.5		40.8	4	48.9		33.0
8	311	21.9	330	20.5		06.5	251	37.3		28.9	47	34.9		40.8	19	51.3		33.0
9	326	24.3	345	20.1		05.5	266	38.0		29.2	62	37.3		40.8	34	53.6		33.0
10	341	26.8	0	19.7		04.4	281	38.7		29.5	77	39.7		40.8	49	56.0		33.0
11	356	29.3	15	19.3	-9	03.4	296	39.5	+21	29.9	92	42.1	-22	40.8	64	58.3	-21	33.0
12	11	31.7	30	18.9	-9	02.3	311	40.2	+21	30.2	107	44.5	-22	40.8	80	00.7	-21	33.0
13	26	34.2	45	18.5		01.3	326	40.9		30.6	122	46.9		40.8	95	03.0		32.9
14	41	36.7	60	18.1	-9	00.2	341	41.7		30.9	137	49.3		40.8	110	05.4		32.9
15	56	39.1	75	17.7	-8	59.2	356	42.4		31.3	152	51.7		40.8	125	07.7		32.9
16	71	41.6	90	17.3		58.2	11	43.1		31.6	167	54.1		40.8	140	10.1		32.9
17	86	44.0	105	16.9	-8	57.1	26	43.8	+21	32.0	182	56.5	-22	40.8	155	12.4	-21	32.9
18	101	46.5	120	16.5	-8	56.1	41	44.6	+21	32.3	197	58.9	-22	40.8	170	14.8	-21	32.9
19	116	49.0	135	16.1		55.0	56	45.3		32.7	213	01.3		40.8	185	17.1		32.9
20	131	51.4	150	15.7		54.0	71	46.0		33.0	228	03.7		40.8	200	19.5		32.9
21	146	53.9	165	15.3		52.9	86	46.7		33.3	243	06.1		40.8	215	21.8		32.8
22	161	56.4	180	14.9		51.9	101	47.5		33.7	258	08.5		40.8	230	24.2		32.8
23	176	58.8	195	14.5		50.8	116	48.2		34.0	273	10.9		40.8	245	26.5		32.8
24	192	01.3	210	14.1	-8	49.8	131	48.9	+21	34.4	288	13.4	-22	40.8	260	28.9	-21	32.8
Dif.	—		-4		+10		+7		+3		+24		0		+23			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 12 ^h 03 ^m 1			SD: 14 ^h 9 Edad: 28 ^d 3 PHE { 4^h: 54^m6 12^h: 54^m8 20^h: 54^m9														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	179	11.6	+5	29.8	191	34.3	152	-4	46.1	111	60 N	18 50	19 34	20 29	5 50	10	17 33	78
1	194	11.8		30.8	206	08.5	152		35.0	111	58	47	28	19	48	13	34	75
2	209	12.0		31.8	220	42.7	152		23.9	111	56	44	22	10	46	15	35	72
3	224	12.2		32.7	235	16.9	152		12.8	112	54	41	17	20 02	45	16	35	71
4	239	12.3		33.7	249	51.1	152	-4	01.6	111	52	38	13	19 55	43	19	36	68
5	254	12.5	+5	34.6	264	25.3	151	-3	50.5	112	50	18 36	19 09	19 49	5 42	20	17 36	67
6	269	12.7	+5	35.6	278	59.4	152	-3	39.3	112	45	18 31	19 01	19 37	5 39	24	17 38	62
7	284	12.9		36.5	293	33.6	152		28.1	112	40	27	18 54	27	36	27	39	59
8	299	13.1		37.5	308	07.8	152		16.9	113	35	23	49	19	34	30	40	56
9	314	13.2		38.4	322	42.0	151	-3	05.6	113	30	20	44	13	32	32	40	55
10	329	13.4		39.4	337	16.1	152	-2	54.3	112	20	15	37	19 03	29	36	42	50
11	344	13.6	+5	40.3	351	50.3	151	-2	43.1	113	10 N	18 11	18 32	18 56	5 26	39	17 43	46
12	359	13.8	+5	41.3	6	24.4	152	-2	31.8	114	0	18 06	18 27	18 51	5 23	43	17 44	43
13	14	14.0		42.3	20	58.6	151		20.4	113	10 S	18 02	23	48	21	46	45	40
14	29	14.1		43.2	35	32.7	151	-2	09.1	114	20	17 58	20	46	18	50	46	36
15	44	14.3		44.2	50	06.8	151	-1	57.7	113	30	53	17	45	14	54	47	32
16	59	14.5		45.1	64	40.9	151		46.4	114	35	51	16	45	12	57	48	29
17	74	14.7	+5	46.1	79	15.0	151	-1	35.0	114	40	17 48	18 15	18 46	5 10	59	17 49	27
18	89	14.9	+5	47.0	93	49.1	151	-1	23.6	114	45	17 45	18 14	18 48	5 08	62	17 50	23
19	104	15.1		48.0	108	23.2	151		12.2	114	50	41	13	50	05	66	51	20
20	119	15.2		48.9	122	57.3	150	-1	00.8	114	52	39	12	51	03	68	51	19
21	134	15.4		49.9	137	31.3	151	-0	49.4	115	54	37	12	53	02	70	52	16
22	149	15.6		50.8	152	05.4	150		37.9	114	56	35	12	55	5 00	72	52	15
23	164	15.8		51.8	166	39.4	150		26.5	115	58	32	11	57	4 58	75	53	12
24	179	16.0	+5	52.7	181	13.4		-0	15.0		60 S	17 29	18 11	18 59	4 56	77	17 54	9
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 11 ^h 10 ^m 1		Mag: -3.9 PMG: 09 ^h 59 ^m			Mag: +1.5 PMG: 15 ^h 12 ^m			Mag: -2.3 PMG: 04 ^h 46 ^m			Mag: +0.6 PMG: 06 ^h 37 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	192	01.3	210	14.1	-8	49.8	131	48.9	+21	34.4	288	13.4	-22	-40.8	260	28.9	-21	32.8
1	207	03.8	225	13.7		48.7	146	49.6		34.7	303	15.8		-40.8	275	31.2		32.8
2	222	06.2	240	13.3		47.7	161	50.4		35.0	318	18.2		-40.8	290	33.6		32.8
3	237	08.7	255	12.9		46.6	176	51.1		35.4	333	20.6		-40.8	305	35.9		32.8
4	252	11.1	270	12.5		45.6	191	51.8		35.7	348	23.0		-40.8	320	38.3		32.7
5	267	13.6	285	12.1	-8	44.5	206	52.6	+21	36.1	3	25.4	-22	-40.8	335	40.6	-21	32.7
6	282	16.1	300	11.7	-8	43.5	221	53.3	+21	36.4	18	27.8	-22	-40.8	350	43.0	-21	32.7
7	297	18.5	315	11.3		42.4	236	54.0		36.7	33	30.2		-40.8	5	45.3		32.7
8	312	21.0	330	10.9		41.4	251	54.7		37.1	48	32.6		-40.8	20	47.7		32.7
9	327	23.5	345	10.5		40.3	266	55.5		37.4	63	35.0		-40.8	35	50.1		32.7
10	342	25.9	0	10.1		39.3	281	56.2		37.8	78	37.4		-40.8	50	52.4		32.7
11	357	28.4	15	09.7	-8	38.2	296	56.9	+21	38.1	93	39.9	-22	-40.8	65	54.8	-21	32.6
12	12	30.9	30	09.3	-8	37.2	311	57.6	+21	38.4	108	42.3	-22	-40.8	80	57.1	-21	32.6
13	27	33.3	45	08.9		36.1	326	58.4		38.8	123	44.7		-40.8	95	59.5		32.6
14	42	35.8	60	08.5		35.1	341	59.1		39.1	138	47.1		-40.8	111	01.8		32.6
15	57	38.3	75	08.1		34.0	356	59.8		39.5	153	49.5		-40.8	126	04.2		32.6
16	72	40.7	90	07.7		33.0	12	00.5		39.8	168	51.9		-40.8	141	06.5		32.6
17	87	43.2	105	07.3	-8	31.9	27	01.3	+21	40.1	183	54.3	-22	-40.8	156	08.9	-21	32.6
18	102	45.6	120	06.9	-8	30.9	42	02.0	+21	40.5	198	56.7	-22	-40.8	171	11.3	-21	32.6
19	117	48.1	135	06.5		29.8	57	02.7		40.8	213	59.2		-40.8	186	13.6		32.5
20	132	50.6	150	06.1		28.8	72	03.4		41.1	229	01.6		-40.8	201	16.0		32.5
21	147	53.0	165	05.8		27.7	87	04.2		41.5	244	04.0		-40.8	216	18.3		32.5
22	162	55.5	180	05.4		26.6	102	04.9		41.8	259	06.4		-40.8	231	20.7		32.5
23	177	58.0	195	05.0		25.6	117	05.6		42.1	274	08.8		-40.8	246	23.0		32.5
24	193	00.4	210	04.6	-8	24.5	132	06.3	+21	42.5	289	11.2	-22	-40.8	261	25.4	-21	32.5
Dif.	—		-4 +11			+7 +3			+24 0			+24 0						

UT	SOL			● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 02 ^m 8			SD: 15'0 Edad: 29 ^d 3 PMG: 12 ^h 16 ^m PHE { 4^h: 55'0 12^h: 55'1 20^h: 55'3 Rº: 44 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	179	16.0	+5	52.7	181	13.4	150	-0	15.0	115	60 N	3 36	4 31	5 14	6 00	10	18 51 79		
1	194	16.1		53.7	195	47.4	150	-0	03.5	114	58	46	37	18	01	12	49 76		
2	209	16.3		54.6	210	21.4	150	+0	07.9	115	56	3 55	43	21	01	15	47 74		
3	224	16.5		55.6	224	55.4	149		19.4	115	54	4 03	48	24	01	17	46 71		
4	239	16.7		56.5	239	29.3	149		30.9	115	52	10	52	27	02	19	44 70		
5	254	16.8	+5	57.5	254	03.2	149	+0	42.4	115	50	4 16	4 56	5 29	6 02	20	18 43 68		
6	269	17.0	+5	58.4	268	37.1	149	+0	53.9	115	45	4 29	5 04	5 34	6 03	24	18 40 64		
7	284	17.2	+5	59.4	283	11.0	149	+1	05.4	115	40	38	11	38	03	27	38 61		
8	299	17.4	+6	00.3	297	44.9	148		16.9	115	35	46	16	42	04	30	36 58		
9	314	17.6		01.3	312	18.7	148		28.4	115	30	4 53	21	45	04	32	35 55		
10	329	17.7		02.2	326	52.5	148		39.9	115	20	5 03	28	51	05	36	32 51		
11	344	17.9	+6	03.2	341	26.3	148	+1	51.4	115	10 N	5 10	5 34	5 55	6 05	41	18 29 48		
12	359	18.1	+6	04.1	356	00.1	148	+2	02.9	115	0	5 15	5 39	6 00	6 06	44	18 27 44		
13	14	18.3		05.1	10	33.9	147		14.4	116	10 S	18	43	04	07	47	25 40		
14	29	18.5		06.0	25	07.6	147		26.0	115	20	20	46	08	08	50	22 37		
15	44	18.6		07.0	39	41.3	147		37.5	115	30	21	49	13	08	55	19 33		
16	59	18.8		07.9	54	15.0	146	+2	49.0	114	35	21	50	16	09	57	17 31		
17	74	19.0	+6	08.9	68	48.6	146	+3	00.4	115	40	5 20	5 52	6 19	6 09	61	18 16 28		
18	89	19.2	+6	09.8	83	22.2	146	+3	11.9	115	45	5 19	5 53	6 22	6 10	64	18 13 25		
19	104	19.4		10.8	97	55.8	146		23.4	115	50	17	54	26	11	67	11 21		
20	119	19.5		11.7	112	29.4	145		34.9	115	52	15	54	28	11	69	10 19		
21	134	19.7		12.7	127	02.9	145		46.4	114	54	14	55	30	12	71	08 18		
22	149	19.9		13.6	141	36.4	145	+3	57.8	115	56	12	55	33	12	73	07 15		
23	164	20.1		14.6	156	09.9	144	+4	09.3	114	58	10	56	35	6 13	75	18 05 14		
24	179	20.2	+6	15.5	170	43.3		+4	20.7		60 S	5 08	5 56	6 38	6 13	79	18 03 11		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 11 ^h 06 ^m 1		Mag: -3.9 PMG: 10 ^h 00 ^m			Mag: +1.5 PMG: 15 ^h 11 ^m			Mag: -2.3 PMG: 04 ^h 42 ^m			Mag: +0.6 PMG: 06 ^h 33 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	193	00.4	210	04.6	-8	24.5	132	06.3	+21	42.5	289	11.2	-22	40.8	261	25.4	-21	32.5	
1	208	02.9	225	04.2		23.5	147	07.0		42.8	304	13.6		40.8	276	27.7		32.5	
2	223	05.4	240	03.8		22.4	162	07.8		43.2	319	16.1		40.8	291	30.1		32.4	
3	238	07.8	255	03.4		21.4	177	08.5		43.5	334	18.5		40.8	306	32.5		32.4	
4	253	10.3	270	03.0		20.3	192	09.2		43.8	349	20.9		40.8	321	34.8		32.4	
5	268	12.7	285	02.6	-8	19.2	207	09.9	+21	44.2	4	23.3	-22	40.8	336	37.2	-21	32.4	
6	283	15.2	300	02.2	-8	18.2	222	10.7	+21	44.5	19	25.7	-22	40.8	351	39.5	-21	32.4	
7	298	17.7	315	01.8		17.1	237	11.4		44.8	34	28.1		40.8	6	41.9		32.4	
8	313	20.1	330	01.4		16.1	252	12.1		45.1	49	30.6		40.8	21	44.2		32.4	
9	328	22.6	345	01.1		15.0	267	12.8		45.5	64	33.0		40.8	36	46.6		32.4	
10	343	25.1	0	00.7		13.9	282	13.6		45.8	79	35.4		40.8	51	49.0		32.3	
11	358	27.5	15	00.3	-8	12.9	297	14.3	+21	46.1	94	37.8	-22	40.8	66	51.3	-21	32.3	
12	13	30.0	29	59.9	-8	11.8	312	15.0	+21	46.5	109	40.2	-22	40.8	81	53.7	-21	32.3	
13	28	32.5	44	59.5		10.7	327	15.7		46.8	124	42.7		40.8	96	56.0		32.3	
14	43	34.9	59	59.1		09.7	342	16.4		47.1	139	45.1		40.8	111	58.4		32.3	
15	58	37.4	74	58.7		08.6	357	17.2		47.5	154	47.5		40.8	127	00.8		32.3	
16	73	39.9	89	58.3		07.6	12	17.9		47.8	169	49.9		40.8	142	03.1		32.3	
17	88	42.3	104	57.9	-8	06.5	27	18.6	+21	48.1	184	52.3	-22	40.8	157	05.5	-21	32.3	
18	103	44.8	119	57.6	-8	05.4	42	19.3	+21	48.5	199	54.8	-22	40.8	172	07.8	-21	32.2	
19	118	47.2	134	57.2		04.4	57	20.1		48.8	214	57.2		40.8	187	10.2		32.2	
20	133	49.7	149	56.8		03.3	72	20.8		49.1	229	59.6		40.8	202	12.6		32.2	
21	148	52.2	164	56.4		02.2	87	21.5		49.4	245	02.0		40.8	217	14.9		32.2	
22	163	54.6	179	56.0		01.2	102	22.2		49.8	260	04.5		40.9	232	17.3		32.2	
23	178	57.1	194	55.6	-8	00.1	117	22.9		50.1	275	06.9		40.9	247	19.6		32.2	
24	193	59.6	209	55.2	-7	59.0	132	23.7	+21	50.4	290	09.3	-22	40.9	262	22.0	-21	32.2	
Dif.	—		-4			+11	+7			+3	+24			0			+24		

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0				SD: 15'1												PHE { 4 ^h : 55'4 12 ^h : 55'6 20 ^h : 55'7	
	PMG: 12 ^h 02 ^m 5				Edad: 0 ^d 6													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.			PMG: 13 ^h 00 ^m	Rº: 46 ^m						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	20.2	+6	15.5	170	43.3	144	+4	20.7	114	60 N	18 55	19 39	20 35	6 10	12	20 10	81
1	194	20.4		16.5	185	16.7	144		32.1	115	58	51	32	24	13	15		05 78
2	209	20.6		17.4	199	50.1	143		43.6	114	56	48	27	15	16	17	20 01	76
3	224	20.8		18.4	214	23.4	143	+4	55.0	114	54	45	21	20 06	18	19	19 57	74
4	239	21.0		19.3	228	56.7	143	+5	06.4	113	52	42	17	19 59	21	20		54 71
5	254	21.1	+6	20.3	243	30.0	142	+5	17.7	114	50	18 39	19 12	19 53	6 22	23	19 51	69
6	269	21.3	+6	21.2	258	03.2	142	+5	29.1	113	45	18 34	19 04	19 40	6 27	26	19 44	66
7	284	21.5		22.1	272	36.4	142		40.4	114	40	29	18 57	29	30	30		39 62
8	299	21.7		23.1	287	09.6	141	+5	51.8	113	35	25	51	21	34	31		34 60
9	314	21.8		24.0	301	42.7	141	+6	03.1	113	30	22	46	14	36	34		30 57
10	329	22.0		25.0	316	15.8	140		14.4	113	20	16	38	19 04	41	38		23 53
11	344	22.2	+6	25.9	330	48.8	140	+6	25.7	112	10 N	18 10	18 32	18 56	6 46	41	19 17	49
12	359	22.4	+6	26.9	345	21.8	140	+6	36.9	112	0	18 06	18 27	18 51	6 50	45	19 11	46
13	14	22.5		27.8	359	54.8	139		48.1	113	10 S	18 01	22	47	54	48	19 05	43
14	29	22.7		28.8	14	27.7	139	+6	59.4	111	20	17 56	19	44	6 58	52	18 59	39
15	44	22.9		29.7	29	00.6	138	+7	10.5	112	30	51	15	43	7 03	57		52 35
16	59	23.1		30.7	43	33.4	138		21.7	111	35	48	13	43	06	59		48 33
17	74	23.3	+6	31.6	58	06.2	137	+7	32.8	111	40	17 45	18 12	18 43	7 10	61	18 44	30
18	89	23.4	+6	32.5	72	38.9	137	+7	43.9	111	45	17 41	18 10	18 44	7 14	64	18 38	28
19	104	23.6		33.5	87	11.6	137	+7	55.0	111	50	36	09	46	18	69		32 23
20	119	23.8		34.4	101	44.3	136	+8	06.1	110	52	34	08	47	20	71		29 22
21	134	24.0		35.4	116	16.9	135		17.1	110	54	32	07	48	23	72		26 20
22	149	24.1		36.3	130	49.4	136		28.1	110	56	29	07	49	25	75		22 18
23	164	24.3		37.3	145	22.0	134		39.1	109	58	27	06	51	28	78		19 15
24	179	24.5	+6	38.2	159	54.4		+8	50.0		60 S	17 24	18 05	18 53	7 32	80	18 14	13
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: +1.5				Mag: -2.3				Mag: +0.6			
	11 ^h 02 ^m 2		PMG: 10 ^h 01 ^m				PMG: 15 ^h 10 ^m				PMG: 04 ^h 39 ^m				PMG: 06 ^h 30 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	193	59.6	209	55.2	-7	59.0	132	23.7	+21	50.4	290	09.3	-22	-40.9	262	22.0	-21	32.2
1	209	02.0	224	54.8		58.0	147	24.4		50.8	305	11.7		-40.9	277	24.4		32.2
2	224	04.5	239	54.5		56.9	162	25.1		51.1	320	14.2		-40.9	292	26.7		32.1
3	239	07.0	254	54.1		55.8	177	25.8		51.4	335	16.6		-40.9	307	29.1		32.1
4	254	09.4	269	53.7		54.8	192	26.6		51.7	350	19.0		-40.9	322	31.4		32.1
5	269	11.9	284	53.3	-7	53.7	207	27.3	+21	52.1	5	21.4	-22	-40.9	337	33.8	-21	32.1
6	284	14.3	299	52.9	-7	52.6	222	28.0	+21	52.4	20	23.9	-22	-40.9	352	36.2	-21	32.1
7	299	16.8	314	52.5		51.5	237	28.7		52.7	35	26.3		-40.9	7	38.5		32.1
8	314	19.3	329	52.1		50.5	252	29.4		53.0	50	28.7		-40.9	22	40.9		32.1
9	329	21.7	344	51.8		49.4	267	30.2		53.4	65	31.1		-40.9	37	43.3		32.1
10	344	24.2	359	51.4		48.3	282	30.9		53.7	80	33.6		-40.9	52	45.6		32.0
11	359	26.7	14	51.0	-7	47.3	297	31.6	+21	54.0	95	36.0	-22	-40.9	67	48.0	-21	32.0
12	14	29.1	29	50.6	-7	46.2	312	32.3	+21	54.3	110	38.4	-22	-40.9	82	50.3	-21	32.0
13	29	31.6	44	50.2		45.1	327	33.0		54.7	125	40.8		-40.9	97	52.7		32.0
14	44	34.1	59	49.8		44.0	342	33.8		55.0	140	43.3		-40.9	112	55.1		32.0
15	59	36.5	74	49.5		43.0	357	34.5		55.3	155	45.7		-40.9	127	57.4		32.0
16	74	39.0	89	49.1		41.9	12	35.2		55.6	170	48.1		-40.9	142	59.8		32.0
17	89	41.5	104	48.7	-7	40.8	27	35.9	+21	55.9	185	50.6	-22	-40.9	158	02.2	-21	32.0
18	104	43.9	119	48.3	-7	39.7	42	36.6	+21	56.3	200	53.0	-22	-40.9	173	04.5	-21	31.9
19	119	46.4	134	47.9		38.7	57	37.4		56.6	215	55.4		-40.9	188	06.9		31.9
20	134	48.8	149	47.6		37.6	72	38.1		56.9	230	57.9		-40.9	203	09.3		31.9
21	149	51.3	164	47.2		36.5	87	38.8		57.2	246	00.3		-40.9	218	11.6		31.9
22	164	53.8	179	46.8		35.4	102	39.5		57.5	261	02.7		-40.9	233	14.0		31.9
23	179	56.2	194	46.4		34.4	117	40.2		57.9	276	05.2		-40.9	248	16.3		31.9
24	194	58.7	209	46.0	-7	33.3	132	41.0	+21	58.2	291	07.6	-22	-40.9	263	18.7	-21	31.9
Dif.	—		-4		+11		+7		+3		+24		0		+24		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 02 ^m 2				SD: 15'2 Edad: 1 ^d 6 PMG: 13 ^h 46 ^m PHE { 4 ^h : 55'9 12 ^h : 56'0 20 ^h : 56'2 Rº: 48 ^m															
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m		
0	179	24.5	+6	38.2	159	54.4	134	+8	50.0	109	60 N	3 29	4 24	5 08		6 22	14	21 31	82	
1	194	24.7		39.1	174	26.8	134	+9	00.9	109	58	40	31	12		28	17	23	79	
2	209	24.8		40.1	188	59.2	133		11.8	108	56	49	37	16		33	19	17	76	
3	224	25.0		41.0	203	31.5	133		22.6	108	54	3 58	43	19		37	22	11	74	
4	239	25.2		42.0	218	03.8	132		33.4	108	52	4 05	47	22		41	24	05	72	
5	254	25.4	+6	42.9	232	36.0	131	+9	44.2	107	50	4 11	4 52	5 25		6 45	25	21 00	71	
6	269	25.5	+6	43.9	247	08.1	131	+9	54.9	107	45	4 25	5 00	5 30		6 53	29	20 50	66	
7	284	25.7		44.8	261	40.2	131	+10	05.6	107	40	35	08	35		7 00	32	41	64	
8	299	25.9		45.7	276	12.3	130		16.3	106	35	43	14	39		05	35	34	61	
9	314	26.1		46.7	290	44.3	129		26.9	106	30	4 50	19	43		10	37	27	59	
10	329	26.2		47.6	305	16.2	129		37.5	105	20	5 01	27	49		19	41	16	55	
11	344	26.4	+6	48.6	319	48.1	129	+10	48.0	105	10 N	5 08	5 33	5 54		7 27	45	20 06	52	
12	359	26.6	+6	49.5	334	20.0	128	+10	58.5	104	0	5 14	5 38	5 59		7 35	47	19 57	49	
13	14	26.8		50.4	348	51.8	127	+11	08.9	104	10 S	18	43	6 04		42	51	48	46	
14	29	26.9		51.4	3	23.5	126		19.3	104	20	21	46	09		7 50	54	38	43	
15	44	27.1		52.3	17	55.1	126		29.7	103	30	22	50	14		8 00	58	27	39	
16	59	27.3		53.3	32	26.7	126		40.0	102	35	22	52	17		05	60	21	37	
17	74	27.5	+6	54.2	46	58.3	125	+11	50.2	102	40	5 22	5 54	6 21		8 11	63	19 14	34	
18	89	27.6	+6	55.1	61	29.8	124	+12	00.4	102	45	5 21	5 55	6 25		8 18	67	19 06	31	
19	104	27.8		56.1	76	01.2	124		10.6	101	50	20	57	29		27	70	18 55	28	
20	119	28.0		57.0	90	32.6	123		20.7	101	52	19	58	32		31	72	51	26	
21	134	28.2		58.0	105	03.9	123		30.8	100	54	18	58	34		35	74	46	24	
22	149	28.3		58.9	119	35.2	121		40.8	99	56	16	5 59	37		40	77	40	22	
23	164	28.5	+6	59.8	134	06.3	122	+12	50.7	99	58	15	6 00	39		8 46	79	18 34	19	
24	179	28.7	+7	00.8	148	37.5		+13	00.6		60 S	5 13	6 01	6 43		8 52	82	18 27	16	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 10 ^h 58 ^m 3		Mag: -3.9 PMG: 10 ^h 01 ^m			Mag: +1.5 PMG: 15 ^h 09 ^m			Mag: -2.3 PMG: 04 ^h 35 ^m			Mag: +0.6 PMG: 06 ^h 26 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	194	58.7	209	46.0	-7	33.3	132	41.0	+21	58.2	291	07.6	-22	40.9	263	18.7	-21	31.9		
1	210	01.2	224	45.6		32.2	147	41.7		58.5	306	10.0		40.9	278	21.1		31.9		
2	225	03.6	239	45.3		31.1	162	42.4		58.8	321	12.5		40.9	293	23.4		31.8		
3	240	06.1	254	44.9		30.1	177	43.1		59.1	336	14.9		40.9	308	25.8		31.8		
4	255	08.6	269	44.5		29.0	192	43.8		59.5	351	17.3		40.9	323	28.2		31.8		
5	270	11.0	284	44.1	-7	27.9	207	44.5	+21	59.8	6	19.8	-22	40.9	338	30.5	-21	31.8		
6	285	13.5	299	43.8	-7	26.8	222	45.3	+22	00.1	21	22.2	-22	40.9	353	32.9	-21	31.8		
7	300	16.0	314	43.4		25.7	237	46.0		00.4	36	24.6		40.9	8	35.3		31.8		
8	315	18.4	329	43.0		24.7	252	46.7		00.7	51	27.1		40.9	23	37.6		31.8		
9	330	20.9	344	42.6		23.6	267	47.4		01.1	66	29.5		40.9	38	40.0		31.8		
10	345	23.3	359	42.2		22.5	282	48.1		01.4	81	31.9		40.9	53	42.4		31.7		
11	0	25.8	14	41.9	-7	21.4	297	48.9	+22	01.7	96	34.4	-22	40.9	68	44.7	-21	31.7		
12	15	28.3	29	41.5	-7	20.3	312	49.6	+22	02.0	111	36.8	-22	40.9	83	47.1	-21	31.7		
13	30	30.7	44	41.1		19.3	327	50.3		02.3	126	39.2		40.9	98	49.5		31.7		
14	45	33.2	59	40.7		18.2	342	51.0		02.6	141	41.7		40.9	113	51.8		31.7		
15	60	35.7	74	40.3		17.1	357	51.7		02.9	156	44.1		40.9	128	54.2		31.7		
16	75	38.1	89	40.0		16.0	12	52.5		03.3	171	46.6		40.9	143	56.6		31.7		
17	90	40.6	104	39.6	-7	14.9	27	53.2	+22	03.6	186	49.0	-22	40.9	158	58.9	-21	31.7		
18	105	43.1	119	39.2	-7	13.8	42	53.9	+22	03.9	201	51.4	-22	40.9	174	01.3	-21	31.7		
19	120	45.5	134	38.8		12.8	57	54.6		04.2	216	53.9		40.9	189	03.7		31.6		
20	135	48.0	149	38.5		11.7	72	55.3		04.5	231	56.3		40.9	204	06.1		31.6		
21	150	50.4	164	38.1		10.6	87	56.0		04.8	246	58.7		40.9	219	08.4		31.6		
22	165	52.9	179	37.7		09.5	102	56.8		05.1	262	01.2		40.9	234	10.8		31.6		
23	180	55.4	194	37.3		08.4	117	57.5		05.5	277	03.6		40.9	249	13.2		31.6		
24	195	57.8	209	37.0	-7	07.3	132	58.2	+22	05.8	292	06.1	-22	40.9	264	15.5	-21	31.6		
Dif.	—		-4		+11		+7		+3		+24		0		+24					

UT	SOL			 LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0			PHE { 4 ^h : 56'4 12 ^h : 56'5 20 ^h : 56'7												
	PMG: 12 ^h 01 ^m 9			Edad: 2 ^d 6												
	PMG: 14 ^h 34 ^m			Rº: 51 ^m												
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m	
0	179	28.7	+7 00.8	148	37.5	120	+13 00.6	98	60 N	19 00	19 45	20 42	6 36	19	22 53	81
1	194	28.9	01.7	163	08.5	120	10.4	98	58	18 56	37	30	45	22	42	78
2	209	29.0	02.6	177	39.5	120	20.2	97	56	52	31	20	52	25	33	75
3	224	29.2	03.6	192	10.5	119	29.9	97	54	48	25	11	6 59	26	25	73
4	239	29.4	04.5	206	41.4	118	39.6	96	52	45	20	20 03	7 05	28	17	72
5	254	29.5	+7 05.5	221	12.2	117	+13 49.2	96	50	18 42	19 16	19 56	7 10	30	22 11	69
6	269	29.7	+7 06.4	235	42.9	117	+13 58.8	94	45	18 36	19 06	19 42	7 22	34	21 56	67
7	284	29.9	07.3	250	13.6	116	+14 08.2	95	40	31	18 59	32	32	36	45	64
8	299	30.1	08.3	264	44.2	116	17.7	93	35	27	52	23	40	39	35	61
9	314	30.2	09.2	279	14.8	114	27.0	93	30	23	47	16	7 47	41	26	60
10	329	30.4	10.1	293	45.2	115	36.3	92	20	16	38	19 04	8 00	45	21 11	57
11	344	30.6	+7 11.1	308	15.7	113	+14 45.5	92	10 N	18 10	18 32	18 56	8 12	47	20 58	54
12	359	30.8	+7 12.0	322	46.0	113	+14 54.7	91	0	18 05	18 26	18 50	8 22	50	20 46	52
13	14	30.9	12.9	337	16.3	112	+15 03.8	90	10 S	18 00	21	46	33	53	34	49
14	29	31.1	13.9	351	46.5	112	12.8	89	20	17 55	17	43	44	56	21	46
15	44	31.3	14.8	6	16.7	111	21.7	89	30	49	13	41	8 58	59	20 06	43
16	59	31.4	15.8	20	46.8	110	30.6	88	35	45	11	40	9 05	62	19 58	41
17	74	31.6	+7 16.7	35	16.8	109	+15 39.4	87	40	17 42	18 09	18 40	9 14	64	19 48	39
18	89	31.8	+7 17.6	49	46.7	109	+15 48.1	87	45	17 37	18 07	18 41	9 25	66	19 37	36
19	104	32.0	18.6	64	16.6	108	+15 56.8	86	50	32	04	42	37	70	23	33
20	119	32.1	19.5	78	46.4	108	+16 05.4	85	52	30	04	42	43	72	17	31
21	134	32.3	20.4	93	16.2	106	13.9	84	54	27	03	43	49	75	10	29
22	149	32.5	21.4	107	45.8	106	22.3	84	56	24	02	44	9 57	76	19 02	27
23	164	32.6	22.3	122	15.4	106	30.7	82	58	21	18 01	46	10 05	79	18 53	25
24	179	32.8	+7 23.2	136	45.0		+16 38.9		60 S	17 18	17 59	18 47	10 14	83	18 43	22
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 10 ^h 54 ^m 4		Mag: -3.9 PMG: 10 ^h 02 ^m			Mag: +1.5 PMG: 15 ^h 07 ^m			Mag: -2.3 PMG: 04 ^h 31 ^m			Mag: +0.6 PMG: 06 ^h 22 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	195	57.8	209	37.0	-7 07.3	132	58.2	+22 05.8	292	06.1	-22 -40.9	264	15.5	-21 31.6		
1	211	00.3	224	36.6	06.2	147	58.9	06.1	307	08.5	-40.9	279	17.9	31.6		
2	226	02.8	239	36.2	05.2	162	59.6	06.4	322	11.0	-40.9	294	20.3	31.6		
3	241	05.2	254	35.8	04.1	178	00.3	06.7	337	13.4	-40.9	309	22.6	31.5		
4	256	07.7	269	35.5	03.0	193	01.1	07.0	352	15.8	-40.9	324	25.0	31.5		
5	271	10.2	284	35.1	-7 01.9	208	01.8	+22 07.3	7	18.3	-22 -40.9	339	27.4	-21 31.5		
6	286	12.6	299	34.7	-7 00.8	223	02.5	+22 07.6	22	20.7	-22 -40.9	354	29.7	-21 31.5		
7	301	15.1	314	34.3	-6 59.7	238	03.2	08.0	37	23.2	-40.9	9	32.1	31.5		
8	316	17.6	329	34.0	58.6	253	03.9	08.3	52	25.6	-40.9	24	34.5	31.5		
9	331	20.0	344	33.6	57.5	268	04.6	08.6	67	28.1	-40.9	39	36.9	31.5		
10	346	22.5	359	33.2	56.5	283	05.4	08.9	82	30.5	-40.9	54	39.2	31.5		
11	1	24.9	14	32.9	-6 55.4	298	06.1	+22 09.2	97	32.9	-22 -40.9	69	41.6	-21 31.5		
12	16	27.4	29	32.5	-6 54.3	313	06.8	+22 09.5	112	35.4	-22 -40.9	84	44.0	-21 31.4		
13	31	29.9	44	32.1	53.2	328	07.5	09.8	127	37.8	-40.9	99	46.3	31.4		
14	46	32.3	59	31.7	52.1	343	08.2	10.1	142	40.3	-40.9	114	48.7	31.4		
15	61	34.8	74	31.4	51.0	358	08.9	10.4	157	42.7	-40.9	129	51.1	31.4		
16	76	37.3	89	31.0	49.9	13	09.7	10.7	172	45.2	-40.9	144	53.5	31.4		
17	91	39.7	104	30.6	-6 48.8	28	10.4	+22 11.0	187	47.6	-22 -40.9	159	55.8	-21 31.4		
18	106	42.2	119	30.3	-6 47.7	43	11.1	+22 11.3	202	50.1	-22 -40.9	174	58.2	-21 31.4		
19	121	44.7	134	29.9	46.6	58	11.8	11.6	217	52.5	-40.9	190	00.6	31.4		
20	136	47.1	149	29.5	45.5	73	12.5	12.0	232	55.0	-40.9	205	02.9	31.4		
21	151	49.6	164	29.1	44.4	88	13.2	12.3	247	57.4	-40.9	220	05.3	31.3		
22	166	52.0	179	28.8	43.3	103	13.9	12.6	262	59.9	-40.9	235	07.7	31.3		
23	181	54.5	194	28.4	42.3	118	14.7	12.9	278	02.3	-40.9	250	10.1	31.3		
24	196	57.0	209	28.0	-6 41.2	133	15.4	+22 13.2	293	04.8	-22 -40.9	265	12.4	-21 31.3		
Dif.	—		-4	+11		+7	+3		+24		0		+24			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0			SD: 15'5											PHE { 4 ^h : 56'9 12 ^h : 57'0 20 ^h : 57'2			
	PMG: 12 ^h 01 ^m 7			Edad: 3 ^d 6														
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.	Náut.		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	179	32.8	+7	23.2	136	45.0	104	+16	38.9	82	60 N	3 21	4 18	5 02	6 55 27	*** **		
1	194	33.0		24.2	151	14.4	104		47.1	81	58	33	25	07	7 07 29	*** **		
2	209	33.2		25.1	165	43.8	104	+16	55.2	80	56	43	32	11	17 32	23 48 71		
3	224	33.3		26.0	180	13.2	102	+17	03.2	80	54	3 52	37	14	25 34	38 69		
4	239	33.5		27.0	194	42.4	102		11.2	78	52	4 00	43	18	33 36	29 68		
5	254	33.7	+7	27.9	209	11.6	101	+17	19.0	78	50	4 07	4 47	5 20	7 40 38	23 20 67		
6	269	33.8	+7	28.8	223	40.7	101	+17	26.8	77	45	4 21	4 57	5 27	7 56 40	23 03 64		
7	284	34.0		29.7	238	09.8	99		34.5	76	40	32	5 04	32	8 08 43	22 49 62		
8	299	34.2		30.7	252	38.7	99		42.1	75	35	40	11	37	19 44	36 62		
9	314	34.4		31.6	267	07.6	99		49.6	74	30	48	16	40	28 46	26 60		
10	329	34.5		32.5	281	36.5	97	+17	57.0	73	20	4 59	25	47	45 48	22 08 58		
11	344	34.7	+7	33.5	296	05.2	97	+18	04.3	72	10 N	5 07	5 32	5 53	8 59 51	21 52 56		
12	359	34.9	+7	34.4	310	33.9	97	+18	11.5	72	0	5 13	5 38	5 58	9 12 54	21 38 54		
13	14	35.0		35.3	325	02.6	95		18.7	70	10 S	18	43	6 04	26 55	23 53		
14	29	35.2		36.3	339	31.1	95		25.7	70	20	21	47	09	40 58	21 07 51		
15	44	35.4		37.2	353	59.6	94		32.7	68	30	23	51	15	9 57 60	20 49 49		
16	59	35.5		38.1	8	28.0	94		39.5	68	35	24	53	19	10 07 62	39 47		
17	74	35.7	+7	39.0	22	56.4	92	+18	46.3	66	40	5 24	5 55	6 23	10 18 64	20 27 46		
18	89	35.9	+7	40.0	37	24.6	93	+18	52.9	66	45	5 24	5 58	6 27	10 31 66	20 13 44		
19	104	36.0		40.9	51	52.9	91	+18	59.5	64	50	23	6 00	33	47 69	19 56 41		
20	119	36.2		41.8	66	21.0	91	+19	05.9	64	52	22	01	35	10 55 70	48 40		
21	134	36.4		42.8	80	49.1	90		12.3	62	54	21	02	38	11 04 71	39 39		
22	149	36.6		43.7	95	17.1	89		18.5	62	56	20	03	41	13 74	29 37		
23	164	36.7		44.6	109	45.0	89		24.7	60	58	19	04	44	11 24 76	19 18 34		
24	179	36.9	+7	45.5	124	12.9		+19	30.7		60 S	5 17	6 06	6 48	11 37 79	19 05 32		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 50 ^m 4		Mag: -3.9 PMG: 10 ^h 02 ^m			Mag: +1.5 PMG: 15 ^h 06 ^m			Mag: -2.3 PMG: 04 ^h 27 ^m			Mag: +0.5 PMG: 06 ^h 18 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'			
0	196	57.0	209	28.0	-6	41.2	133	15.4	+22	13.2	293	04.8	-22	40.9	265	12.4	-21	31.3
1	211	59.4	224	27.7		40.1	148	16.1		13.5	308	07.2		40.9	280	14.8		31.3
2	227	01.9	239	27.3		39.0	163	16.8		13.8	323	09.7		40.9	295	17.2		31.3
3	242	04.4	254	26.9		37.9	178	17.5		14.1	338	12.1		40.9	310	19.6		31.3
4	257	06.8	269	26.6		36.8	193	18.2		14.4	353	14.6		40.9	325	21.9		31.3
5	272	09.3	284	26.2	-6	35.7	208	18.9	+22	14.7	8	17.0	-22	40.9	340	24.3	-21	31.3
6	287	11.8	299	25.8	-6	34.6	223	19.7	+22	15.0	23	19.5	-22	40.9	355	26.7	-21	31.2
7	302	14.2	314	25.5		33.5	238	20.4		15.3	38	21.9		40.9	10	29.1		31.2
8	317	16.7	329	25.1		32.4	253	21.1		15.6	53	24.4		40.9	25	31.4		31.2
9	332	19.2	344	24.7		31.3	268	21.8		15.9	68	26.8		40.9	40	33.8		31.2
10	347	21.6	359	24.3		30.2	283	22.5		16.2	83	29.3		40.9	55	36.2		31.2
11	2	24.1	14	24.0	-6	29.1	298	23.2	+22	16.5	98	31.7	-22	40.9	70	38.6	-21	31.2
12	17	26.5	29	23.6	-6	28.0	313	23.9	+22	16.8	113	34.2	-22	40.9	85	40.9	-21	31.2
13	32	29.0	44	23.2		26.9	328	24.7		17.1	128	36.6		40.9	100	43.3		31.2
14	47	31.5	59	22.9		25.8	343	25.4		17.4	143	39.1		40.9	115	45.7		31.2
15	62	33.9	74	22.5		24.7	358	26.1		17.7	158	41.5		40.9	130	48.1		31.1
16	77	36.4	89	22.1		23.6	13	26.8		18.0	173	44.0		40.9	145	50.4		31.1
17	92	38.9	104	21.8	-6	22.5	28	27.5	+22	18.3	188	46.5	-22	40.9	160	52.8	-21	31.1
18	107	41.3	119	21.4	-6	21.4	43	28.2	+22	18.6	203	48.9	-22	40.9	175	55.2	-21	31.1
19	122	43.8	134	21.0		20.3	58	28.9		18.9	218	51.4		40.9	190	57.6		31.1
20	137	46.3	149	20.7		19.2	73	29.7		19.2	233	53.8		40.9	205	59.9		31.1
21	152	48.7	164	20.3		18.1	88	30.4		19.5	248	56.3		40.9	221	02.3		31.1
22	167	51.2	179	20.0		17.0	103	31.1		19.8	263	58.7		40.9	236	04.7		31.1
23	182	53.7	194	19.6		15.9	118	31.8		20.1	279	01.2		40.9	251	07.1		31.1
24	197	56.1	209	19.2	-6	14.8	133	32.5	+22	20.4	294	03.7	-22	40.9	266	09.5	-21	31.1
Dif.	—		-4		+11		+7		+3		+25		0		+24			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0			SD: 15'6 Edad: 4 ^d 6														
	PMG: 12 ^h 01 ^m 4			PMG: 16 ^h 19 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	36.9	+7	45.5	124	12.9	88	+19	30.7	59	60 N	19 05	19 50	20 48	7 22	39	0 14	75
1	194	37.1		46.5	138	40.7	87		36.6	59	58	19 00	42	36	36	41	0 00	73
2	209	37.2		47.4	153	08.4	87		42.5	57	56	18 56	35	25	49	42	***	***
3	224	37.4		48.3	167	36.1	86		48.2	56	54	52	29	15	7 59	44	***	***
4	239	37.6		49.3	182	03.7	85		53.8	55	52	49	24	07	8 09	45	***	***
5	254	37.7	+7	50.2	196	31.2	85	+19	59.3	54	50	18 45	19 19	20 00	8 18	46	***	***
6	269	37.9	+7	51.1	210	58.7	84	+20	04.7	53	45	18 39	19 09	19 45	8 36	48	***	***
7	284	38.1		52.0	225	26.1	83		10.0	52	40	33	19 01	34	8 51	49	23 51	60
8	299	38.2		53.0	239	53.4	83		15.2	50	35	28	18 54	25	9 03	51	38	59
9	314	38.4		53.9	254	20.7	82		20.2	50	30	24	48	17	14	52	26	59
10	329	38.6		54.8	268	47.9	82		25.2	48	20	17	39	19 05	33	54	23 06	58
11	344	38.7	+7	55.7	283	15.1	81	+20	30.0	47	10 N	18 10	18 32	18 56	9 50	55	22 48	58
12	359	38.9	+7	56.7	297	42.2	80	+20	34.7	46	0	18 05	18 26	18 50	10 06	55	22 32	57
13	14	39.1		57.6	312	09.2	80		39.3	45	10 S	17 59	20	45	21	57	22 16	56
14	29	39.2		58.5	326	36.2	79		43.8	44	20	53	15	41	38	58	21 58	55
15	44	39.4	+7	59.4	341	03.1	78		48.2	42	30	47	11	38	10 57	60	38	54
16	59	39.6	+8	00.4	355	29.9	78		52.4	41	35	43	08	38	11 09	60	26	54
17	74	39.7	+8	01.3	9	56.7	77	+20	56.5	41	40	17 39	18 06	18 37	11 22	61	21 13	53
18	89	39.9	+8	02.2	24	23.4	77	+21	00.6	38	45	17 34	18 03	18 37	11 37	63	20 57	52
19	104	40.1		03.1	38	50.1	76		04.4	38	50	28	18 00	38	11 56	65	37	51
20	119	40.2		04.0	53	16.7	76		08.2	36	52	25	17 59	38	12 05	66	28	51
21	134	40.4		05.0	67	43.3	75		11.8	36	54	22	58	39	15	67	18	49
22	149	40.6		05.9	82	09.8	74		15.4	33	56	19	57	39	27	67	20 06	49
23	164	40.7		06.8	96	36.2	74		18.7	33	58	16	55	40	40	69	19 52	48
24	179	40.9	+8	07.7	111	02.6		+21	22.0		60 S	17 12	17 54	18 42	12 56	70	19 37	46
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: +1.5				Mag: -2.3				Mag: +0.5			
	10 ^h 46 ^m 5		PMG: 10 ^h 03 ^m				PMG: 15 ^h 05 ^m				PMG: 04 ^h 23 ^m				PMG: 06 ^h 14 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	197	56.1	209	19.2	-6	14.8	133	32.5	+22	20.4	294	03.7	-22	-40.9	266	09.5	-21	31.1
1	212	58.6	224	18.9		13.7	148	33.2		20.7	309	06.1		-40.9	281	11.8		31.0
2	228	01.0	239	18.5		12.6	163	33.9		21.0	324	08.6		-40.9	296	14.2		31.0
3	243	03.5	254	18.1		11.5	178	34.6		21.3	339	11.0		-40.9	311	16.6		31.0
4	258	06.0	269	17.8		10.4	193	35.4		21.6	354	13.5		-40.9	326	19.0		31.0
5	273	08.4	284	17.4	-6	09.3	208	36.1	+22	21.9	9	15.9	-22	-40.9	341	21.3	-21	31.0
6	288	10.9	299	17.0	-6	08.2	223	36.8	+22	22.2	24	18.4	-22	-40.9	356	23.7	-21	31.0
7	303	13.4	314	16.7		07.1	238	37.5		22.5	39	20.9		-40.9	11	26.1		31.0
8	318	15.8	329	16.3		06.0	253	38.2		22.8	54	23.3		-40.9	26	28.5		31.0
9	333	18.3	344	16.0		04.9	268	38.9		23.1	69	25.8		-40.9	41	30.9		31.0
10	348	20.8	359	15.6		03.8	283	39.6		23.4	84	28.3		-40.9	56	33.2		30.9
11	3	23.2	14	15.2	-6	02.6	298	40.3	+22	23.6	99	30.7	-22	-40.9	71	35.6	-21	30.9
12	18	25.7	29	14.9	-6	01.5	313	41.1	+22	23.9	114	33.2	-22	-40.9	86	38.0	-21	30.9
13	33	28.2	44	14.5	-6	00.4	328	41.8		24.2	129	35.6		-40.9	101	40.4		30.9
14	48	30.6	59	14.1	-5	59.3	343	42.5		24.5	144	38.1		-40.9	116	42.8		30.9
15	63	33.1	74	13.8		58.2	358	43.2		24.8	159	40.6		-40.9	131	45.1		30.9
16	78	35.5	89	13.4		57.1	13	43.9		25.1	174	43.0		-40.9	146	47.5		30.9
17	93	38.0	104	13.1	-5	56.0	28	44.6	+22	25.4	189	45.5	-22	-40.9	161	49.9	-21	30.9
18	108	40.5	119	12.7	-5	54.9	43	45.3	+22	25.7	204	48.0	-22	-40.9	176	52.3	-21	30.9
19	123	42.9	134	12.3		53.8	58	46.0		26.0	219	50.4		-40.9	191	54.7		30.9
20	138	45.4	149	12.0		52.7	73	46.8		26.3	234	52.9		-40.9	206	57.0		30.8
21	153	47.9	164	11.6		51.6	88	47.5		26.6	249	55.3		-40.9	221	59.4		30.8
22	168	50.3	179	11.3		50.5	103	48.2		26.9	264	57.8		-40.9	237	01.8		30.8
23	183	52.8	194	10.9		49.4	118	48.9		27.2	280	00.3		-40.9	252	04.2		30.8
24	198	55.3	209	10.5	-5	48.2	133	49.6	+22	27.4	295	02.7	-22	-40.9	267	06.6	-21	30.8
Dif.	—		-4		+11		+7		+3		+25		0		+24			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0			SD: 15'8		PHE { 4 ^h : 58'0 12 ^h : 58'1 20 ^h : 58'3					Edad: 5 ^d 6			Rº: 58 ^m		Rº		Rº	
	PMG: 12 ^h 01 ^m 1			PMG: 17 ^h 15 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	179	40.9	+8	111	02.6	74	+21	22.0	31	60 N	3 13	4 12	4 56	8 01	55	1 29	63		
1	194	41.1		125	29.0	73		25.1	31	58	26	19	5 01	17	56	1 13	62		
2	209	41.2		139	55.3	72		28.2	28	56	37	26	06	31	56	0 59	62		
3	224	41.4		154	21.5	72		31.0	28	54	46	32	10	43	57	47	62		
4	239	41.6		168	47.7	71		33.8	26	52	3 54	38	13	8 54	57	37	61		
5	254	41.7	+8	183	13.8	71	+21	36.4	25	50	4 02	4 43	5 16	9 04	56	0 27	61		
6	269	41.9	+8	197	39.9	71	+21	38.9	24	45	4 17	4 53	5 23	9 24	57	0 07	61		
7	284	42.1		212	06.0	70		41.3	22	40	28	5 01	29	40	57	***	***		
8	299	42.2		226	32.0	69		43.5	21	35	37	08	34	9 54	57	***	***		
9	314	42.4		240	57.9	69		45.6	20	30	45	14	38	10 06	57	***	***		
10	329	42.6		255	23.8	69		47.6	18	20	4 57	23	46	27	57	***	***		
11	344	42.7	+8	269	49.7	68	+21	49.4	18	10 N	5 06	5 31	5 52	10 45	57	23 46	57		
12	359	42.9	+8	284	15.5	68	+21	51.2	15	0	5 13	5 37	5 58	11 01	58	23 29	58		
13	14	43.1		298	41.3	67		52.7	15	10 S	18	42	6 04	18	58	23 12	58		
14	29	43.2		313	07.0	67		54.2	13	20	22	47	10	36	58	22 53	60		
15	44	43.4		327	32.7	67		55.5	11	30	25	52	16	11 57	58	32	60		
16	59	43.6		341	58.4	66		56.6	11	35	25	55	20	12 09	58	20	60		
17	74	43.7	+8	356	24.0	66	+21	57.7	9	40	5 26	5 57	6 25	12 23	58	22 06	61		
18	89	43.9	+8	10	49.6	65	+21	58.6	7	45	5 26	6 00	6 30	12 40	57	21 49	61		
19	104	44.0		25	15.1	66	+21	59.3	7	50	26	03	36	13 01	57	28	62		
20	119	44.2		39	40.7	64	+22	00.0	4	52	25	04	38	11	57	19	62		
21	134	44.4		54	06.1	65		00.4	4	54	25	06	41	22	56	21 07	63		
22	149	44.5		68	31.6	64		00.8	2	56	24	07	45	34	57	20 55	63		
23	164	44.7		82	57.0	64		01.0	1	58	23	09	48	13 49	56	20 40	63		
24	179	44.9	+8	97	22.4		+22	01.1		60 S	5 22	6 10	6 52	14 06	56	20 23	64		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 10 ^h 42 ^m 6		Mag: -3.9 PMG: 10 ^h 04 ^m			Mag: +1.5 PMG: 15 ^h 04 ^m			Mag: -2.3 PMG: 04 ^h 19 ^m			Mag: +0.5 PMG: 06 ^h 11 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	198	55.3	209	10.5	-5	48.2	133	49.6	+22	27.4	295	02.7	-22	40.9	267	06.6	-21	30.8	
1	213	57.7	224	10.2		47.1	148	50.3		27.7	310	05.2		40.9	282	08.9		30.8	
2	229	00.2	239	09.8		46.0	163	51.0		28.0	325	07.7		40.9	297	11.3		30.8	
3	244	02.6	254	09.5		44.9	178	51.7		28.3	340	10.1		40.9	312	13.7		30.8	
4	259	05.1	269	09.1		43.8	193	52.4		28.6	355	12.6		40.9	327	16.1		30.8	
5	274	07.6	284	08.7	-5	42.7	208	53.2	+22	28.9	10	15.1	-22	40.9	342	18.5	-21	30.8	
6	289	10.0	299	08.4	-5	41.6	223	53.9	+22	29.2	25	17.6	-22	40.9	357	20.9	-21	30.7	
7	304	12.5	314	08.0		40.5	238	54.6		29.5	40	20.0		40.9	12	23.2		30.7	
8	319	15.0	329	07.7		39.4	253	55.3		29.7	55	22.5		40.9	27	25.6		30.7	
9	334	17.4	344	07.3		38.2	268	56.0		30.0	70	25.0		40.9	42	28.0		30.7	
10	349	19.9	359	06.9		37.1	283	56.7		30.3	85	27.4		40.9	57	30.4		30.7	
11	4	22.4	14	06.6	-5	36.0	298	57.4	+22	30.6	100	29.9	-22	40.9	72	32.8	-21	30.7	
12	19	24.8	29	06.2	-5	34.9	313	58.1	+22	30.9	115	32.4	-22	40.9	87	35.2	-21	30.7	
13	34	27.3	44	05.9		33.8	328	58.8		31.2	130	34.8		40.9	102	37.5		30.7	
14	49	29.8	59	05.5		32.7	343	59.5		31.5	145	37.3		40.9	117	39.9		30.7	
15	64	32.2	74	05.2		31.6	359	00.3		31.7	160	39.8		40.9	132	42.3		30.7	
16	79	34.7	89	04.8		30.4	14	01.0		32.0	175	42.3		40.9	147	44.7		30.7	
17	94	37.1	104	04.4	-5	29.3	29	01.7	+22	32.3	190	44.7	-22	40.9	162	47.1	-21	30.6	
18	109	39.6	119	04.1	-5	28.2	44	02.4	+22	32.6	205	47.2	-22	40.9	177	49.5	-21	30.6	
19	124	42.1	134	03.7		27.1	59	03.1		32.9	220	49.7		40.9	192	51.9		30.6	
20	139	44.5	149	03.4		26.0	74	03.8		33.2	235	52.2		40.9	207	54.2		30.6	
21	154	47.0	164	03.0		24.9	89	04.5		33.5	250	54.6		40.9	222	56.6		30.6	
22	169	49.5	179	02.7		23.7	104	05.2		33.7	265	57.1		40.9	237	59.0		30.6	
23	184	51.9	194	02.3		22.6	119	05.9		34.0	280	59.6		40.9	253	01.4		30.6	
24	199	54.4	209	02.0	-5	21.5	134	06.6	+22	34.3	296	02.0	-22	40.9	268	03.8	-21	30.6	
Dif.	—		-4		+11		+7		+3		+25		0		+24				

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'0			PHE { 4 ^h : 58'5 12 ^h : 58'7 20 ^h : 58'9																
	PMG: 12 ^h 00 ^m 9			Edad: 6 ^d 6																
	PMG: 18 ^h 13 ^m			Rº: 58 ^m																
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº					
h	°	'	°	°	'	°	'	°		h m	h m	h m	m	h m	m					
0	179	44.9	+8 29.8	97	22.4	64	+22 01.1	1	60 N	19 10	19 55	20 55	8 56	73	2 32	49				
1	194	45.0		111	47.8	63		01.0	2	58	05	47	42	9 13	71	15 50				
2	209	45.2		126	13.1	63		00.8	3	56	19 00	40	30	27	70	2 01 51				
3	224	45.4		140	38.4	63		00.5	5	54	18 56	33	20	40	68	1 49 51				
4	239	45.5		155	03.7	63	+22 00.0	7	52	52	28	12	9 51	67	38	52				
5	254	45.7	+8 34.4	169	29.0	62	+21 59.3	7	50	18 49	19 22	20 04	10 00	67	1 28	53				
6	269	45.8	+8 35.3	183	54.2	63	+21 58.6	9	45	18 41	19 12	19 48	10 21	65	1 08	53				
7	284	46.0		198	19.5	62		57.7	11	40	35	19 03	36	37	64	0 51 55				
8	299	46.2		212	44.7	61		56.6	12	35	30	18 56	26	10 51	63	37 55				
9	314	46.3		227	09.8	62		55.4	13	30	25	50	18	11 03	62	25 56				
10	329	46.5		241	35.0	62		54.1	15	20	17	40	19 06	24	61	0 04 57				
11	344	46.7	+8 39.9	256	00.2	61	+21 52.6	16	10 N	18 10	18 32	18 57	11 42	59	***	***				
12	359	46.8	+8 40.8	270	25.3	61	+21 51.0	17	0	18 04	18 25	18 49	11 59	58	***	***				
13	14	47.0		284	50.4	61		49.3	19	10 S	17 58	19	44	12 16	57	***	***			
14	29	47.1		299	15.5	61		47.4	21	20	52	14	39	34	55	23 53	61			
15	44	47.3		313	40.6	61		45.3	21	30	44	08	36	12 55	54	32	64			
16	59	47.5		328	05.7	61		43.2	24	35	40	06	35	13 07	53	20	65			
17	74	47.6	+8 45.3	342	30.8	61	+21 40.8	24	40	17 36	18 03	18 34	13 21	52	23 07	66				
18	89	47.8	+8 46.2	356	55.9	60	+21 38.4	26	45	17 30	18 00	18 34	13 37	51	22 50	69				
19	104	47.9		11	20.9	61		35.8	28	50	24	17 56	34	13 58	48	30	71			
20	119	48.1		25	46.0	61		33.0	28	52	21	55	34	14 08	47	21	72			
21	134	48.3		40	11.1	60		30.2	31	54	18	53	34	18	47	22 10	73			
22	149	48.4		54	36.1	61		27.1	31	56	14	52	35	31	44	21 58	75			
23	164	48.6		69	01.2	60		24.0	33	58	10	50	35	14 45	43	43	78			
24	179	48.7	+8 51.7	83	26.2		+21 20.7		60 S	17 06	17 48	18 36	15 02	41	21 27	79				

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 38 ^m 6		Mag: -3.9 PMG: 10 ^h 04 ^m			Mag: +1.5 PMG: 15 ^h 03 ^m			Mag: -2.3 PMG: 04 ^h 15 ^m			Mag: +0.5 PMG: 06 ^h 07 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	199	54.4	209	02.0	-5 21.5	134	06.6	+22 34.3	296	02.0	-22 -40.9	268	03.8	-21 30.6
1	214	56.9	224	01.6	20.4	149	07.3	34.6	311	04.5	-40.9	283	06.2	30.6
2	229	59.3	239	01.2	19.3	164	08.1	34.9	326	07.0	-40.9	298	08.6	30.6
3	245	01.8	254	00.9	18.2	179	08.8	35.1	341	09.5	-40.9	313	10.9	30.5
4	260	04.3	269	00.5	17.0	194	09.5	35.4	356	12.0	-40.9	328	13.3	30.5
5	275	06.7	284	00.2	-5 15.9	209	10.2	+22 35.7	11	14.4	-22 -40.9	343	15.7	-21 30.5
6	290	09.2	298	59.8	-5 14.8	224	10.9	+22 36.0	26	16.9	-22 -40.9	358	18.1	-21 30.5
7	305	11.6	313	59.5	13.7	239	11.6	36.3	41	19.4	-40.9	13	20.5	30.5
8	320	14.1	328	59.1	12.6	254	12.3	36.5	56	21.9	-40.9	28	22.9	30.5
9	335	16.6	343	58.8	11.4	269	13.0	36.8	71	24.3	-40.9	43	25.3	30.5
10	350	19.0	358	58.4	10.3	284	13.7	37.1	86	26.8	-40.9	58	27.6	30.5
11	5 21.5	13 58.1	-5 09.2	299	14.4	+22 37.4	101	29.3	-22 -40.9	73	30.0	-21 30.5		
12	20 24.0	28 57.7	-5 08.1	314	15.1	+22 37.7	116	31.8	-22 -40.9	88	32.4	-21 30.5		
13	35 26.4	43 57.3	07.0	329	15.9	37.9	131	34.3	-40.9	103	34.8	30.5		
14	50 28.9	58 57.0	05.8	344	16.6	38.2	146	36.7	-40.9	118	37.2	30.4		
15	65 31.4	73 56.6	04.7	359	17.3	38.5	161	39.2	-40.9	133	39.6	30.4		
16	80 33.8	88 56.3	03.6	14 18.0	38.8	176	41.7	-40.9	148	42.0	-40.9	148	42.0	30.4
17	95 36.3	103 55.9	-5 02.5	29 18.7	+22 39.0	191	44.2	-22 -40.9	163	44.4	-21 30.4			
18	110 38.8	118 55.6	-5 01.4	44 19.4	+22 39.3	206	46.7	-22 -40.9	178	46.8	-21 30.4			
19	125 41.2	133 55.2	-5 00.2	59 20.1	39.6	221	49.1	-40.9	193	49.1	-40.9	193	49.1	30.4
20	140 43.7	148 54.9	-4 59.1	74 20.8	39.9	236	51.6	-40.9	208	51.5	-40.9	208	51.5	30.4
21	155 46.1	163 54.5	58.0	89 21.5	40.1	251	54.1	-40.9	223	53.9	-40.9	223	53.9	30.4
22	170 48.6	178 54.2	56.9	104 22.2	40.4	266	56.6	-40.9	238	56.3	-40.9	238	56.3	30.4
23	185 51.1	193 53.8	55.7	119 22.9	40.7	281	59.1	-40.9	253	58.7	-40.9	253	58.7	30.4
24	200 53.5	208 53.5	-4 54.6	134 23.6	+22 41.0	297	01.6	-22 -40.9	269	01.1	-21 30.4			
Dif.	—		-4 +11			+7 +3			+25 0			+24 0		

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 00 ^m 6			SD: 16'1 Edad: 7 ^d 6 PHE { 4 ^h : 59'0 12 ^h : 59'2 20 ^h : 59'4 PMG: 19 ^h 11 ^m Rº: 57 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	° N	h m	h m	h m	h m m	h m m	h m m			
0	179	48.7	+8	51.7	83	26.2	61	+21	20.7	35	3 05	4 05	4 50	10 09	85	3 21	34	
1	194	48.9		52.6	97	51.3	60		17.2	36	19	13	4 56	24	82	3 05	37	
2	209	49.1		53.5	112	16.3	61		13.6	37	31	21	5 01	37	80	2 52	39	
3	224	49.2		54.4	126	41.4	60		09.9	39	41	27	05	48	78	40	41	
4	239	49.4		55.3	141	06.4	61		06.0	40	49	33	09	10 58	76	30	43	
5	254	49.5	+8	56.2	155	31.5	61	+21	02.0	41	3 57	4 38	5 12	11 07	74	2 21	44	
6	269	49.7	+8	57.2	169	56.6	61	+20	57.9	43	4 13	4 49	5 20	11 26	71	2 01	47	
7	284	49.9		58.1	184	21.7	61		53.6	44	25	4 58	26	41	69	1 46	48	
8	299	50.0		59.0	198	46.8	61		49.2	46	35	5 05	31	11 54	67	32	51	
9	314	50.2	+8	59.9	213	11.9	61		44.6	47	43	12	36	12 05	66	21	51	
10	329	50.3	+9	00.8	227	37.0	61		39.9	48	4 55	22	44	25	62	1 01	54	
11	344	50.5	+9	01.7	242	02.1	61	+20	35.1	50	5 05	5 30	5 51	12 41	60	0 43	56	
12	359	50.7	+9	02.6	256	27.2	62	+20	30.1	51	5 12	5 36	5 57	12 57	58	0 27	58	
13	14	50.8		03.5	270	52.4	62		25.0	53	18	42	6 04	13 13	55	0 10	60	
14	29	51.0		04.4	285	17.6	61		19.7	53	22	48	10	29	53	***	***	
15	44	51.1		05.3	299	42.7	62		14.4	56	26	54	18	13 49	49	***	***	
16	59	51.3		06.2	314	07.9	63		08.8	56	27	56	22	14 00	48	***	***	
17	74	51.5	+9	07.1	328	33.2	62	+20	03.2	58	5 28	5 59	6 27	14 13	45	***	***	
18	89	51.6	+9	08.0	342	58.4	63	+19	57.4	59	5 28	6 03	6 32	14 28	43	23 59	73	
19	104	51.8		08.9	357	23.7	62		51.5	61	29	06	39	46	40	41	77	
20	119	51.9		09.8	11	48.9	63		45.4	62	28	08	42	14 55	38	33	79	
21	134	52.1		10.8	26	14.2	64		39.2	63	28	09	45	15 05	36	23	81	
22	149	52.2		11.7	40	39.6	63		32.9	64	28	11	49	15	35	13	83	
23	164	52.4		12.6	55	04.9	64		26.5	66	27	13	53	15 28	32	23 01	86	
24	179	52.6	+9	13.5	69	30.3		+19	19.9		5 27	6 15	6 57	15 43	28	22 46	90	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 34 ^m 7		Mag: -3.9 PMG: 10 ^h 05 ^m			Mag: +1.5 PMG: 15 ^h 02 ^m			Mag: -2.3 PMG: 04 ^h 11 ^m			Mag: +0.5 PMG: 06 ^h 03 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	200	53.5	208	53.5	-4	54.6	134	23.6	+22	41.0	297	01.6	-22	40.9	269	01.1	-21	30.4
1	215	56.0	223	53.1		53.5	149	24.3		41.2	312	04.0		40.9	284	03.5		30.4
2	230	58.5	238	52.8		52.4	164	25.1		41.5	327	06.5		40.9	299	05.9		30.3
3	246	00.9	253	52.4		51.2	179	25.8		41.8	342	09.0		40.9	314	08.3		30.3
4	261	03.4	268	52.1		50.1	194	26.5		42.1	357	11.5		40.9	329	10.7		30.3
5	276	05.9	283	51.7	-4	49.0	209	27.2	+22	42.3	12	14.0	-22	40.9	344	13.0	-21	30.3
6	291	08.3	298	51.4	-4	47.9	224	27.9	+22	42.6	27	16.5	-22	40.9	359	15.4	-21	30.3
7	306	10.8	313	51.0		46.7	239	28.6		42.9	42	18.9		40.9	14	17.8		30.3
8	321	13.3	328	50.7		45.6	254	29.3		43.2	57	21.4		40.9	29	20.2		30.3
9	336	15.7	343	50.3		44.5	269	30.0		43.4	72	23.9		40.9	44	22.6		30.3
10	351	18.2	358	50.0		43.4	284	30.7		43.7	87	26.4		40.9	59	25.0		30.3
11	6	20.6	13	49.6	-4	42.2	299	31.4	+22	44.0	102	28.9	-22	40.9	74	27.4	-21	30.3
12	21	23.1	28	49.3	-4	41.1	314	32.1	+22	44.2	117	31.4	-22	40.9	89	29.8	-21	30.3
13	36	25.6	43	48.9		40.0	329	32.8		44.5	132	33.9		40.9	104	32.2		30.3
14	51	28.0	58	48.6		38.9	344	33.5		44.8	147	36.4		40.9	119	34.6		30.2
15	66	30.5	73	48.2		37.7	359	34.2		45.0	162	38.8		40.9	134	37.0		30.2
16	81	33.0	88	47.9		36.6	14	34.9		45.3	177	41.3		40.9	149	39.4		30.2
17	96	35.4	103	47.5	-4	35.5	29	35.7	+22	45.6	192	43.8	-22	40.9	164	41.8	-21	30.2
18	111	37.9	118	47.2	-4	34.3	44	36.4	+22	45.9	207	46.3	-22	40.9	179	44.2	-21	30.2
19	126	40.4	133	46.8		33.2	59	37.1		46.1	222	48.8		40.8	194	46.5		30.2
20	141	42.8	148	46.5		32.1	74	37.8		46.4	237	51.3		40.8	209	48.9		30.2
21	156	45.3	163	46.1		31.0	89	38.5		46.7	252	53.8		40.8	224	51.3		30.2
22	171	47.7	178	45.8		29.8	104	39.2		46.9	267	56.3		40.8	239	53.7		30.2
23	186	50.2	193	45.4		28.7	119	39.9		47.2	282	58.8		40.8	254	56.1		30.2
24	201	52.7	208	45.1	-4	27.6	134	40.6	+22	47.5	298	01.3	-22	40.8	269	58.5	-21	30.2
Dif.	—		-3		+11		+7		+3		+25		0		+24			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9				PHE { 4 ^h : 59'5 12 ^h : 59'7 20 ^h : 59'8													
	PMG: 12 ^h 00 ^m 4				SD: 16'2 Edad: 8 ^d 6													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	Rº: 56 ^m	Civil			Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m	
0	179	52.6	+9	13.5	69	30.3	64	+19	19.9	67	60 N	19 15	20 01	21 02	11 34	92	3 55	24
1	194	52.7		14.4	83	55.7	64		13.2	68	58	09	19 52	20 48	46	89	42	27
2	209	52.9		15.3	98	21.1	64	+19	06.4	70	56	04	44	35	11 57	85	31	30
3	224	53.0		16.2	112	46.5	65	+18	59.4	71	54	19 00	37	25	12 06	83	21	33
4	239	53.2		17.1	127	12.0	65		52.3	72	52	18 55	31	16	14	81	13	34
5	254	53.3	+9	18.0	141	37.5	65	+18	45.1	74	50	18 52	19 26	20 08	12 21	80	3 05	36
6	269	53.5	+9	18.9	156	03.0	66	+18	37.7	74	45	18 44	19 14	19 51	12 37	75	2 48	40
7	284	53.7		19.8	170	28.6	66		30.3	76	40	37	19 05	39	12 50	72	34	43
8	299	53.8		20.7	184	54.2	66		22.7	77	35	31	18 57	28	13 01	69	23	45
9	314	54.0		21.6	199	19.8	67		15.0	79	30	26	51	20	11	66	2 12	48
10	329	54.1		22.5	213	45.5	67	+18	07.1	79	20	18	40	19 07	27	63	1 55	51
11	344	54.3	+9	23.4	228	11.2	67	+17	59.2	81	10 N	18 11	18 32	18 57	13 41	60	1 39	54
12	359	54.4	+9	24.3	242	36.9	67	+17	51.1	82	0	18 04	18 25	18 49	13 55	56	1 25	56
13	14	54.6		25.2	257	02.6	68		42.9	83	10 S	17 57	18	43	14 08	53	1 10	60
14	29	54.7		26.1	271	28.4	68		34.6	85	20	50	12	38	22	49	0 54	63
15	44	54.9		27.0	285	54.2	69		26.1	85	30	42	06	34	38	46	36	66
16	59	55.1		27.9	300	20.1	69		17.6	87	35	38	03	33	48	43	25	69
17	74	55.2	+9	28.8	314	46.0	69	+17	08.9	88	40	17 33	18 00	18 31	14 58	41	0 13	71
18	89	55.4	+9	29.7	329	11.9	70	+17	00.1	89	45	17 27	17 56	18 30	15 11	37	***	***
19	104	55.5		30.6	343	37.9	70	+16	51.2	90	50	20	52	30	26	33	***	***
20	119	55.7		31.5	358	03.9	70		42.2	91	52	17	51	30	33	31	***	***
21	134	55.8		32.4	12	29.9	71		33.1	93	54	13	49	30	41	29	***	***
22	149	56.0		33.3	26	56.0	71		23.8	93	56	09	47	30	15 50	26	***	***
23	164	56.1		34.2	41	22.1	72		14.5	95	58	05	45	30	16 00	23	***	***
24	179	56.3	+9	35.1	55	48.3		+16	05.0		60 S	17 00	17 43	18 31	16 11	20	***	***
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 10 ^h 30 ^m 8		Mag: -3.9 PMG: 10 ^h 05 ^m				Mag: +1.5 PMG: 15 ^h 01 ^m				Mag: -2.3 PMG: 04 ^h 07 ^m				Mag: +0.5 PMG: 05 ^h 59 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	201	52.7	208	45.1	-4	27.6	134	40.6	+22	47.5	298	01.3	-22	-40.8	269	58.5	-21	30.2
1	216	55.1	223	44.7		26.4	149	41.3		47.7	313	03.8		-40.8	285	00.9		30.2
2	231	57.6	238	44.4		25.3	164	42.0		48.0	328	06.2		-40.8	300	03.3		30.1
3	247	00.1	253	44.1		24.2	179	42.7		48.3	343	08.7		-40.8	315	05.7		30.1
4	262	02.5	268	43.7		23.0	194	43.4		48.5	358	11.2		-40.8	330	08.1		30.1
5	277	05.0	283	43.4	-4	21.9	209	44.1	+22	48.8	13	13.7	-22	-40.8	345	10.5	-21	30.1
6	292	07.5	298	43.0	-4	20.8	224	44.8	+22	49.1	28	16.2	-22	-40.8	0	12.9	-21	30.1
7	307	09.9	313	42.7		19.7	239	45.5		49.3	43	18.7		-40.8	15	15.3		30.1
8	322	12.4	328	42.3		18.5	254	46.2		49.6	58	21.2		-40.8	30	17.7		30.1
9	337	14.9	343	42.0		17.4	269	46.9		49.8	73	23.7		-40.8	45	20.1		30.1
10	352	17.3	358	41.6		16.3	284	47.7		50.1	88	26.2		-40.8	60	22.5		30.1
11	7	19.8	13	41.3	-4	15.1	299	48.4	+22	50.4	103	28.7	-22	-40.8	75	24.9	-21	30.1
12	22	22.2	28	40.9	-4	14.0	314	49.1	+22	50.6	118	31.2	-22	-40.8	90	27.3	-21	30.1
13	37	24.7	43	40.6		12.9	329	49.8		50.9	133	33.7		-40.8	105	29.7		30.1
14	52	27.2	58	40.2		11.7	344	50.5		51.2	148	36.2		-40.8	120	32.1		30.0
15	67	29.6	73	39.9		10.6	359	51.2		51.4	163	38.7		-40.8	135	34.5		30.0
16	82	32.1	88	39.6		09.5	14	51.9		51.7	178	41.2		-40.8	150	36.9		30.0
17	97	34.6	103	39.2	-4	08.3	29	52.6	+22	51.9	193	43.7	-22	-40.8	165	39.2	-21	30.0
18	112	37.0	118	38.9	-4	07.2	44	53.3	+22	52.2	208	46.2	-22	-40.8	180	41.6	-21	30.0
19	127	39.5	133	38.5		06.1	59	54.0		52.5	223	48.7		-40.8	195	44.0		30.0
20	142	42.0	148	38.2		04.9	74	54.7		52.7	238	51.2		-40.8	210	46.4		30.0
21	157	44.4	163	37.8		03.8	89	55.4		53.0	253	53.7		-40.8	225	48.8		30.0
22	172	46.9	178	37.5		02.7	104	56.1		53.2	268	56.2		-40.8	240	51.2		30.0
23	187	49.4	193	37.1		01.5	119	56.8		53.5	283	58.7		-40.8	255	53.6		30.0
24	202	51.8	208	36.8	-4	00.4	134	57.5	+22	53.8	299	01.2	-22	-40.8	270	56.0	-21	30.0
Dif.	—		-3		+11		+7		+3		+25		0		+24		0	

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9			SD: 16'3 Edad: 9 ^d 6	PHE { 4 ^h : 59'9 12 ^h : 60'0 20 ^h : 60'1			Rº: 54 ^m			Náut.	Civil		Hora	Rº	Hora	Rº	
	PMG: 12 ^h 00 ^m 1				PMG: 21 ^h 04 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.											
h	°	'	°	°	'	°	'	°			h m	h m	h m	h m	m	h m	m	
0	179	56.3	+9 35.1	55	48.3	71	+16 05.0	95	60 N	2 57	3 59	4 45	13 06	95		4 19	18	
1	194	56.4		70	14.4	73	+15 55.5	97	58	3 12	4 08	50	15	91		09	22	
2	209	56.6		84	40.7	72	45.8	98	56	24	15	4 55	22	89		4 01	24	
3	224	56.7		99	06.9	73	36.0	98	54	35	22	5 00	29	86		3 54	26	
4	239	56.9		113	33.2	74	26.2	100	52	44	28	04	35	83		47	29	
5	254	57.1	+9 39.5	127	59.6	74	+15 16.2	101	50	3 52	4 34	5 08	13 41	81		3 41	31	
6	269	57.2	+9 40.4	142	26.0	74	+15 06.1	102	45	4 09	4 46	5 16	13 52	77		3 28	35	
7	284	57.4		156	52.4	74	+14 55.9	102	40	21	4 55	23	14 02	73		17	39	
8	299	57.5		171	18.8	75	45.7	104	35	32	5 03	29	10	70		08	41	
9	314	57.7		185	45.3	76	35.3	105	30	40	09	34	17	67		3 00	43	
10	329	57.8		200	11.9	76	24.8	106	20	4 54	20	42	30	62		2 46	48	
11	344	58.0	+9 44.9	214	38.5	76	+14 14.2	106	10 N	5 04	5 29	5 50	14 41	58		2 33	52	
12	359	58.1	+9 45.8	229	05.1	77	+14 03.6	108	0	5 11	5 36	5 57	14 51	54		2 21	56	
13	14	58.3		243	31.8	77	+13 52.8	108	10 S	18	42	6 04	15 01	50		2 10	58	
14	29	58.4		257	58.5	77	42.0	110	20	23	49	11	11	47		1 57	62	
15	44	58.6		272	25.2	78	31.0	110	30	27	55	19	24	42		42	67	
16	59	58.7		286	52.0	78	20.0	111	35	28	5 58	23	31	39		34	69	
17	74	58.9	+9 50.3	301	18.8	79	+13 08.9	112	40	5 30	6 01	6 29	15 39	36		1 24	72	
18	89	59.0	+9 51.2	315	45.7	79	+12 57.7	113	45	5 31	6 05	6 35	15 48	33		1 12	76	
19	104	59.2		330	12.6	79	46.4	114	50	31	09	42	15 59	29		0 58	81	
20	119	59.3		344	39.5	80	35.0	114	52	32	11	45	16 04	27		52	82	
21	134	59.5		359	06.5	80	23.6	116	54	32	13	49	10	24		44	85	
22	149	59.6		13	33.5	81	12.0	116	56	32	15	53	16	22		36	88	
23	164	59.8		28	00.6	81	+12 00.4	117	58	31	17	6 57	16 23	19		0 27	91	
24	179	59.9	+9 56.5	42	27.7		+11 48.7		60 S	5 31	6 19	7 02	16 31	16		0 16	95	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 26 ^m 8		Mag: -3.9 PMG: 10 ^h 06 ^m			Mag: +1.5 PMG: 14 ^h 59 ^m			Mag: -2.3 PMG: 04 ^h 03 ^m			Mag: +0.5 PMG: 05 ^h 55 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	202	51.8	208	36.8	-4 00.4	134	57.5	+22 53.8	299	01.2	-22 40.8	270	56.0	-21 30.0				
1	217	54.3	223	36.5	-3 59.2	149	58.2	54.0	314	03.7	40.8	285	58.4	30.0				
2	232	56.7	238	36.1	58.1	164	58.9	54.3	329	06.2	40.8	301	00.8	30.0				
3	247	59.2	253	35.8	57.0	179	59.6	54.5	344	08.7	40.8	316	03.2	30.0				
4	263	01.7	268	35.4	55.8	195	00.3	54.8	359	11.2	40.8	331	05.6	29.9				
5	278	04.1	283	35.1	-3 54.7	210	01.0	+22 55.0	14	13.7	-22 40.8	346	08.0	-21 29.9				
6	293	06.6	298	34.7	-3 53.6	225	01.7	+22 55.3	29	16.2	-22 40.8	1	10.4	-21 29.9				
7	308	09.1	313	34.4	52.4	240	02.4	55.6	44	18.7	40.8	16	12.8	29.9				
8	323	11.5	328	34.1	51.3	255	03.1	55.8	59	21.2	40.8	31	15.2	29.9				
9	338	14.0	343	33.7	50.2	270	03.9	56.1	74	23.7	40.8	46	17.6	29.9				
10	353	16.5	358	33.4	49.0	285	04.6	56.3	89	26.2	40.8	61	20.0	29.9				
11	8 18.9	13 33.0	-3 47.9	300	05.3	+22 56.6	104	28.7	-22 40.8	76	22.4	-21 29.9						
12	23 21.4	28 32.7	-3 46.7	315	06.0	+22 56.8	119	31.2	-22 40.8	91	24.8	-21 29.9						
13	38 23.8	43 32.3	45.6	330	06.7	57.1	134	33.7	40.8	106	27.2	29.9						
14	53 26.3	58 32.0	44.5	345	07.4	57.3	149	36.2	40.8	121	29.6	29.9						
15	68 28.8	73 31.7	43.3	0 08.1	57.6	164	38.7	40.8	164	38.7	40.8	136	32.0	29.9				
16	83 31.2	88 31.3	42.2	15 08.8	57.9	179	41.2	40.8	179	41.2	40.8	151	34.4	29.9				
17	98 33.7	103 31.0	-3 41.0	30 09.5	+22 58.1	194	43.7	-22 40.8	194	43.7	-22 40.8	166	36.8	-21 29.8				
18	113 36.2	118 30.6	-3 39.9	45 10.2	+22 58.4	209	46.2	-22 40.8	209	46.2	-22 40.8	181	39.2	-21 29.8				
19	128 38.6	133 30.3	38.8	60 10.9	58.6	224	48.7	40.8	224	48.7	40.8	196	41.6	29.8				
20	143 41.1	148 30.0	37.6	75 11.6	58.9	239	51.2	40.8	239	51.2	40.8	211	44.0	29.8				
21	158 43.6	163 29.6	36.5	90 12.3	59.1	254	53.8	40.8	254	53.8	40.8	226	46.4	29.8				
22	173 46.0	178 29.3	35.3	105 13.0	59.4	269	56.3	40.8	269	56.3	40.8	241	48.9	29.8				
23	188 48.5	193 28.9	34.2	120 13.7	59.6	284	58.8	40.8	284	58.8	40.8	256	51.3	29.8				
24	203 51.0	208 28.6	-3 33.1	135 14.4	+22 59.9	300	01.3	-22 40.8	300	01.3	-22 40.8	271	53.7	-21 29.8				
Dif.	—	-3	+11		+7	+3	+25	0		+24	0							

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 59 ^m 9			SD: 16'4 Edad: 10 ^d 6		PHE { 4 ^h : 60'1 12 ^h : 60'2 20 ^h : 60'2		R ^o : 52 ^m										
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	R ^o	Hora	R ^o	
h	°	'	°	'	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m		
0	179	59.9	+9	56.5	42	27.7	81	+11	48.7	117	60 N	19 20	20 07	21 09	14 41	95	4 37 14	
1	195	00.1		57.4	56	54.8	82		37.0	119	58	14	19 57	20 54	46	92	31 17	
2	210	00.2		58.3	71	22.0	82		25.1	119	56	08	49	41	51	88	25 20	
3	225	00.4	+9	59.2	85	49.2	82		13.2	120	54	19 03	41	30	55	85	20 23	
4	240	00.5	+10	00.1	100	16.4	83	+11	01.2	121	52	18 59	35	20	14 58	84	16 25	
5	255	00.7	+10	01.0	114	43.7	84	+10	49.1	121	50	18 55	19 29	20 12	15 02	81	4 12 27	
6	270	00.8	+10	01.8	129	11.1	83	+10	37.0	122	45	18 46	19 17	19 54	15 09	76	4 03 31	
7	285	01.0		02.7	143	38.4	84		24.8	123	40	39	19 07	41	15	72	3 56 34	
8	300	01.1		03.6	158	05.8	85		12.5	123	35	33	18 59	30	20	69	49 38	
9	315	01.3		04.5	172	33.3	85	+10	00.2	124	30	28	52	21	24	67	43 41	
10	330	01.4		05.4	187	00.8	85	+9	47.8	125	20	18	41	19 07	32	61	34 45	
11	345	01.6	+10	06.3	201	28.3	85	+9	35.3	125	10 N	18 11	18 32	18 57	15 39	57	3 25 50	
12	0	01.7	+10	07.2	215	55.8	86	+9	22.8	126	0	18 03	18 24	18 49	15 45	53	3 17 53	
13	15	01.9		08.1	230	23.4	86	+9	10.2	126	10 S	17 56	17	42	51	49	3 08 58	
14	30	02.0		08.9	244	51.0	87	+8	57.6	127	20	48	11	36	15 58	45	2 59 62	
15	45	02.2		09.8	259	18.7	87		44.9	128	30	40	04	32	16 06	39	49 67	
16	60	02.3		10.7	273	46.4	87		32.1	128	35	35	18 01	30	10	37	43 70	
17	75	02.5	+10	11.6	288	14.1	88	+8	19.3	128	40	17 30	17 57	18 28	16 15	34	2 36 73	
18	90	02.6	+10	12.5	302	41.9	87	+8	06.5	129	45	17 23	17 53	18 27	16 21	30	2 28 77	
19	105	02.8		13.4	317	09.6	89	+7	53.6	130	50	16	49	26	28	25	19 81	
20	120	02.9		14.3	331	37.5	88		40.6	130	52	12	47	26	31	23	14 84	
21	135	03.1		15.1	346	05.3	89		27.6	130	54	08	44	25	34	22	09 86	
22	150	03.2		16.0	0	33.2	89		14.6	131	56	04	42	25	38	19	2 04 88	
23	165	03.4		16.9	15	01.1	90	+7	01.5	132	58	17 00	40	25	42	17	1 58 91	
24	180	03.5	+10	17.8	29	29.1		+6	48.3		60 S	16 54	17 37	18 25	16 47	13	1 51 95	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 22 ^m 9		Mag: -3.9 PMG: 10 ^h 06 ^m			Mag: +1.5 PMG: 14 ^h 58 ^m			Mag: -2.4 PMG: 03 ^h 59 ^m			Mag: +0.5 PMG: 05 ^h 51 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	203	51.0	208	28.6	-3	33.1	135	14.4	+22	59.9	300	01.3	-22	-40.8	271	53.7	-21	29.8
1	218	53.4	223	28.2		31.9	150	15.1	+23	00.1	315	03.8		-40.8	286	56.1		29.8
2	233	55.9	238	27.9		30.8	165	15.8		00.4	330	06.3		-40.8	301	58.5		29.8
3	248	58.3	253	27.6		29.6	180	16.5		00.6	345	08.8		-40.8	317	00.9		29.8
4	264	00.8	268	27.2		28.5	195	17.2		00.9	0	11.3		-40.8	332	03.3		29.8
5	279	03.3	283	26.9	-3	27.4	210	17.9	+23	01.1	15	13.8	-22	-40.8	347	05.7	-21	29.8
6	294	05.7	298	26.5	-3	26.2	225	18.6	+23	01.4	30	16.3	-22	-40.8	2	08.1	-21	29.8
7	309	08.2	313	26.2		25.1	240	19.3		01.6	45	18.9		-40.8	17	10.5		29.8
8	324	10.7	328	25.9		23.9	255	20.0		01.9	60	21.4		-40.8	32	12.9		29.7
9	339	13.1	343	25.5		22.8	270	20.7		02.1	75	23.9		-40.8	47	15.3		29.7
10	354	15.6	358	25.2		21.6	285	21.4		02.4	90	26.4		-40.8	62	17.7		29.7
11	9	18.1	13	24.8	-3	20.5	300	22.1	+23	02.6	105	28.9	-22	-40.8	77	20.1	-21	29.7
12	24	20.5	28	24.5	-3	19.4	315	22.8	+23	02.9	120	31.4	-22	-40.8	92	22.5	-21	29.7
13	39	23.0	43	24.2		18.2	330	23.5		03.1	135	33.9		-40.8	107	24.9		29.7
14	54	25.4	58	23.8		17.1	345	24.2		03.4	150	36.4		-40.7	122	27.3		29.7
15	69	27.9	73	23.5		15.9	0	24.9		03.6	165	39.0		-40.7	137	29.7		29.7
16	84	30.4	88	23.1		14.8	15	25.6		03.8	180	41.5		-40.7	152	32.1		29.7
17	99	32.8	103	22.8	-3	13.6	30	26.3	+23	04.1	195	44.0	-22	-40.7	167	34.5	-21	29.7
18	114	35.3	118	22.5	-3	12.5	45	27.0	+23	04.3	210	46.5	-22	-40.7	182	36.9	-21	29.7
19	129	37.8	133	22.1		11.3	60	27.7		04.6	225	49.0		-40.7	197	39.3		29.7
20	144	40.2	148	21.8		10.2	75	28.4		04.8	240	51.5		-40.7	212	41.8		29.7
21	159	42.7	163	21.5		09.1	90	29.1		05.1	255	54.0		-40.7	227	44.2		29.7
22	174	45.2	178	21.1		07.9	105	29.8		05.3	270	56.6		-40.7	242	46.6		29.7
23	189	47.6	193	20.8		06.8	120	30.5		05.6	285	59.1		-40.7	257	49.0		29.6
24	204	50.1	208	20.4	-3	05.6	135	31.2	+23	05.8	301	01.6	-22	-40.7	272	51.4	-21	29.6
Dif.	—		-3		+11		+7		+2		+25		0		+24		0	

UT	SOL			☉ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9			SD: 16'4			PHE { 4^h: 60'2 12^h: 60'2 20^h: 60'1				Edad: 11 ^d 6			Rº: 52 ^m					
	PMG: 11 ^h 59 ^m 7			PMG: 22 ^h 50 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	03.5	+10	17.8	29	29.1	90	+6	48.3	132	60 N	2 49	3 52	4 39	16 16	94	4 51	13	
1	195	03.6		18.7	43	57.1	90		35.1	132	58	3 05	4 02	45	18	90	48	16	
2	210	03.8		19.6	58	25.1	90		21.9	132	56	18	10	50	19	88	45	19	
3	225	03.9		20.4	72	53.1	91	+6	08.7	133	54	29	17	4 55	20	86	43	21	
4	240	04.1		21.3	87	21.2	91	+5	55.4	134	52	39	24	5 00	22	82	41	23	
5	255	04.2	+10	22.2	101	49.3	91	+5	42.0	133	50	3 47	4 30	5 04	16 23	80	4 39	25	
6	270	04.4	+10	23.1	116	17.4	91	+5	28.7	134	45	4 05	4 42	5 13	16 25	76	4 34	29	
7	285	04.5		24.0	130	45.5	92		15.3	135	40	18	4 52	20	27	72	30	33	
8	300	04.7		24.8	145	13.7	92	+5	01.8	134	35	29	5 00	26	29	69	27	36	
9	315	04.8		25.7	159	41.9	92	+4	48.4	135	30	38	07	32	31	65	24	39	
10	330	05.0		26.6	174	10.1	93		34.9	135	20	4 52	18	41	33	61	19	44	
11	345	05.1	+10	27.5	188	38.4	93	+4	21.4	136	10 N	5 03	5 27	5 49	16 36	56	4 15	48	
12	0	05.2	+10	28.4	203	06.7	93	+4	07.8	135	0	5 11	5 35	5 56	16 38	52	4 10	53	
13	15	05.4		29.2	217	35.0	93	+3	54.3	136	10 S	18	42	6 04	40	48	06	57	
14	30	05.5		30.1	232	03.3	93		40.7	136	20	23	49	11	43	43	4 01	61	
15	45	05.7		31.0	246	31.6	94		27.1	136	30	28	56	20	45	39	3 56	66	
16	60	05.8		31.9	261	00.0	94	+3	13.5	137	35	30	5 59	25	47	36	53	69	
17	75	06.0	+10	32.8	275	28.4	94	+2	59.8	136	40	5 32	6 03	6 31	16 49	32	3 49	73	
18	90	06.1	+10	33.6	289	56.8	94	+2	46.2	137	45	5 33	6 07	6 37	16 51	29	3 45	76	
19	105	06.3		34.5	304	25.2	95		32.5	137	50	34	12	45	53	25	40	81	
20	120	06.4		35.4	318	53.7	95		18.8	137	52	35	14	48	54	23	38	83	
21	135	06.5		36.3	333	22.2	94	+2	05.1	137	54	35	16	52	56	20	35	86	
22	150	06.7		37.1	347	50.6	96	+1	51.4	137	56	35	18	6 57	57	18	32	89	
23	165	06.8		38.0	2	19.2	95		37.7	137	58	35	21	7 01	16 59	15	3 29	91	
24	180	07.0	+10	38.9	16	47.7		+1	24.0		60 S	5 35	6 24	7 07	17 00	13	3 26	94	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 10 ^h 19 ^m 0		Mag: -3.9 PMG: 10 ^h 07 ^m			Mag: +1.6 PMG: 14 ^h 57 ^m			Mag: -2.4 PMG: 03 ^h 55 ^m			Mag: +0.5 PMG: 05 ^h 48 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	204	50.1	208	20.4	-3	05.6	135	31.2	+23	05.8	301	01.6	-22	40.7	272	51.4	-21	29.6	
1	219	52.6	223	20.1		04.5	150	31.9		06.0	316	04.1		40.7	287	53.8		29.6	
2	234	55.0	238	19.8		03.3	165	32.6		06.3	331	06.6		40.7	302	56.2		29.6	
3	249	57.5	253	19.4		02.2	180	33.3		06.5	346	09.1		40.7	317	58.6		29.6	
4	264	59.9	268	19.1	-3	01.0	195	34.0		06.8	1	11.7		40.7	333	01.0		29.6	
5	280	02.4	283	18.8	-2	59.9	210	34.7	+23	07.0	16	14.2	-22	40.7	348	03.4	-21	29.6	
6	295	04.9	298	18.4	-2	58.7	225	35.4	+23	07.2	31	16.7	-22	40.7	3	05.8	-21	29.6	
7	310	07.3	313	18.1		57.6	240	36.1		07.5	46	19.2		40.7	18	08.2		29.6	
8	325	09.8	328	17.7		56.4	255	36.8		07.7	61	21.7		40.7	33	10.6		29.6	
9	340	12.3	343	17.4		55.3	270	37.5		08.0	76	24.3		40.7	48	13.1		29.6	
10	355	14.7	358	17.1		54.1	285	38.2		08.2	91	26.8		40.7	63	15.5		29.6	
11	10	17.2	13	16.7	-2	53.0	300	38.9	+23	08.4	106	29.3	-22	40.7	78	17.9	-21	29.6	
12	25	19.7	28	16.4	-2	51.9	315	39.7	+23	08.7	121	31.8	-22	40.7	93	20.3	-21	29.6	
13	40	22.1	43	16.1		50.7	330	40.4		08.9	136	34.3		40.7	108	22.7		29.6	
14	55	24.6	58	15.7		49.6	345	41.1		09.2	151	36.9		40.7	123	25.1		29.6	
15	70	27.1	73	15.4		48.4	0	41.8		09.4	166	39.4		40.7	138	27.5		29.5	
16	85	29.5	88	15.0		47.3	15	42.5		09.6	181	41.9		40.7	153	29.9		29.5	
17	100	32.0	103	14.7	-2	46.1	30	43.2	+23	09.9	196	44.4	-22	40.7	168	32.3	-21	29.5	
18	115	34.4	118	14.4	-2	45.0	45	43.9	+23	10.1	211	47.0	-22	40.7	183	34.7	-21	29.5	
19	130	36.9	133	14.0		43.8	60	44.6		10.4	226	49.5		40.7	198	37.2		29.5	
20	145	39.4	148	13.7		42.7	75	45.3		10.6	241	52.0		40.7	213	39.6		29.5	
21	160	41.8	163	13.4		41.5	90	46.0		10.8	256	54.5		40.7	228	42.0		29.5	
22	175	44.3	178	13.0		40.4	105	46.7		11.1	271	57.1		40.7	243	44.4		29.5	
23	190	46.8	193	12.7		39.2	120	47.4		11.3	286	59.6		40.7	258	46.8		29.5	
24	205	49.2	208	12.4	-2	38.1	135	48.1	+23	11.5	302	02.1	-22	40.7	273	49.2	-21	29.5	
Dif.	—		-3		+11		+7		+2		+25		0		+24		0		

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9			SD: 16'4		PHE { 4^h: 60'0 12^h: 59'9 20^h: 59'8						Edad: 12 ^d 6							
	PMG: 11 ^h 59 ^m 4			PMG: 23 ^h 42 ^m		Rº: 52 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº				
h	°	'	°	°	'	°	'	°		h m	h m	h m m		h m m					
0	180	07.0	+10 38.9	16	47.7	95	+1 24.0	137	60 N	19 25	20 12	21 17	17 50 93	5 04 12					
1	195	07.1	39.8	31	16.2	96	+1 10.3	137	58	18	20 02	21 00	48 90	04 15					
2	210	07.3	40.6	45	44.8	95	+0 56.6	137	56	12	19 53	20 46	47 87	04 18					
3	225	07.4	41.5	60	13.3	96	42.9	138	54	07	46	35	46 84	04 20					
4	240	07.5	42.4	74	41.9	96	29.1	137	52	19 02	39	24	44 82	04 22					
5	255	07.7	+10 43.3	89	10.5	96	+0 15.4	137	50	18 58	19 33	20 16	17 43 80	5 04 24					
6	270	07.8	+10 44.1	103	39.1	97	+0 01.7	137	45	18 49	19 20	19 57	17 41 75	5 03 29					
7	285	08.0	45.0	118	07.8	96	-0 12.0	137	40	41	09	43	39 72	03 33					
8	300	08.1	45.9	132	36.4	97	25.7	137	35	35	19 01	32	38 68	03 36					
9	315	08.2	46.8	147	05.1	96	39.4	137	30	29	18 54	23	36 65	03 39					
10	330	08.4	47.6	161	33.7	97	-0 53.1	137	20	19	42	19 08	34 60	03 44					
11	345	08.5	+10 48.5	176	02.4	97	-1 06.8	137	10 N	18 11	18 32	18 57	17 32 56	5 03 48					
12	0	08.7	+10 49.4	190	31.1	97	-1 20.5	136	0	18 03	18 24	18 48	17 30 52	5 03 52					
13	15	08.8	50.3	204	59.8	97	34.1	137	10 S	17 55	16	41	28 48	03 56					
14	30	09.0	51.1	219	28.5	97	-1 47.8	136	20	47	09	35	26 44	02 61					
15	45	09.1	52.0	233	57.2	97	-2 01.4	136	30	38	18 02	30	24 39	02 66					
16	60	09.2	52.9	248	25.9	97	15.0	136	35	33	17 58	28	23 36	02 68					
17	75	09.4	+10 53.7	262	54.6	97	-2 28.6	135	40	17 27	17 54	18 26	17 21 33	5 02 71					
18	90	09.5	+10 54.6	277	23.3	98	-2 42.1	136	45	17 20	17 50	18 24	17 20 29	5 01 76					
19	105	09.7	55.5	291	52.1	97	-2 55.7	135	50	12	45	22	18 25	01 80					
20	120	09.8	56.3	306	20.8	97	-3 09.2	135	52	08	42	22	17 23	01 82					
21	135	09.9	57.2	320	49.5	98	22.7	134	54	17 04	40	21	16 21	01 85					
22	150	10.1	58.1	335	18.3	97	36.1	135	56	16 59	38	21	15 18	01 87					
23	165	10.2	59.0	349	47.0	98	-3 49.6	134	58	54	35	20	14 16	00 91					
24	180	10.3	+10 59.8	4	15.8		-4 03.0		60 S	16 49	17 32	18 20	17 13 12	5 00 94					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 10 ^h 15 ^m 0		Mag: -3.9 PMG: 10 ^h 07 ^m			Mag: +1.6 PMG: 14 ^h 56 ^m			Mag: -2.4 PMG: 03 ^h 51 ^m			Mag: +0.5 PMG: 05 ^h 44 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°					
0	205	49.2	208	12.4	-2 38.1	135	48.1	+23 11.5	302	02.1	-22 -40.7	273	49.2	-21 29.5					
1	220	51.7	223	12.0	36.9	150	48.8	11.8	317	04.6	-40.7	288	51.6	29.5					
2	235	54.2	238	11.7	35.8	165	49.5	12.0	332	07.2	-40.7	303	54.0	29.5					
3	250	56.6	253	11.3	34.6	180	50.1	12.2	347	09.7	-40.7	318	56.4	29.5					
4	265	59.1	268	11.0	33.5	195	50.8	12.5	2	12.2	-40.7	333	58.9	29.5					
5	281	01.5	283	10.7	-2 32.3	210	51.5	+23 12.7	17	14.7	-22 -40.7	349	01.3	-21 29.5					
6	296	04.0	298	10.3	-2 31.2	225	52.2	+23 12.9	32	17.3	-22 -40.7	4	03.7	-21 29.5					
7	311	06.5	313	10.0	30.0	240	52.9	13.2	47	19.8	-40.7	19	06.1	29.5					
8	326	08.9	328	09.7	28.9	255	53.6	13.4	62	22.3	-40.7	34	08.5	29.5					
9	341	11.4	343	09.3	27.7	270	54.3	13.6	77	24.9	-40.7	49	10.9	29.4					
10	356	13.9	358	09.0	26.6	285	55.0	13.9	92	27.4	-40.7	64	13.3	29.4					
11	11	16.3	13	08.7	-2 25.4	300	55.7	+23 14.1	107	29.9	-22 -40.6	79	15.8	-21 29.4					
12	26	18.8	28	08.3	-2 24.2	315	56.4	+23 14.3	122	32.4	-22 -40.6	94	18.2	-21 29.4					
13	41	21.3	43	08.0	23.1	330	57.1	14.6	137	35.0	-40.6	109	20.6	29.4					
14	56	23.7	58	07.7	21.9	345	57.8	14.8	152	37.5	-40.6	124	23.0	29.4					
15	71	26.2	73	07.3	20.8	0	58.5	15.0	167	40.0	-40.6	139	25.4	29.4					
16	86	28.7	88	07.0	19.6	15	59.2	15.2	182	42.6	-40.6	154	27.8	29.4					
17	101	31.1	103	06.7	-2 18.5	30	59.9	+23 15.5	197	45.1	-22 -40.6	169	30.2	-21 29.4					
18	116	33.6	118	06.3	-2 17.3	46	00.6	+23 15.7	212	47.6	-22 -40.6	184	32.7	-21 29.4					
19	131	36.0	133	06.0	16.2	61	01.3	15.9	227	50.2	-40.6	199	35.1	29.4					
20	146	38.5	148	05.7	15.0	76	02.0	16.2	242	52.7	-40.6	214	37.5	29.4					
21	161	41.0	163	05.3	13.9	91	02.7	16.4	257	55.2	-40.6	229	39.9	29.4					
22	176	43.4	178	05.0	12.7	106	03.4	16.6	272	57.8	-40.6	244	42.3	29.4					
23	191	45.9	193	04.7	11.6	121	04.1	16.8	288	00.3	-40.6	259	44.7	29.4					
24	206	48.4	208	04.3	-2 10.4	136	04.8	+23 17.1	303	02.8	-22 -40.6	274	47.1	-21 29.4					
Dif.	—		-3	+12		+7	+2		+25		0		+24	0					

UT	SOL				○ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 59 ^m 2				SD: 16°3 Edad: 13 ^d 6 PHE { 4^h: 59°6 12^h: 59°5 20^h: 59°3													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	180	10.3	+10	59.8	4	15.8	98	-4	03.0	134	60 N	2 41	3 45	4 33	19 23	91	5 16	14
1	195	10.5	+11	00.7	18	44.6	97		16.4	133	58	2 58	3 56	40	18	88	19	17
2	210	10.6		01.6	33	13.3	98		29.7	133	56	3 12	4 04	45	14	84	22	19
3	225	10.8		02.4	47	42.1	97		43.0	133	54	23	12	51	10	82	24	22
4	240	10.9		03.3	62	10.8	98	-4	56.3	132	52	34	19	4 56	06	80	26	24
5	255	11.0	+11	04.2	76	39.6	98	-5	09.5	132	50	3 42	4 25	5 00	19 03	78	5 28	26
6	270	11.2	+11	05.0	91	08.4	97	-5	22.7	132	45	4 01	4 38	5 09	18 56	74	5 32	30
7	285	11.3		05.9	105	37.1	98		35.9	131	40	15	49	17	51	70	36	33
8	300	11.5		06.8	120	05.9	98	-5	49.0	131	35	26	4 57	24	46	67	39	37
9	315	11.6		07.6	134	34.7	97	-6	02.1	130	30	35	5 05	29	41	65	42	39
10	330	11.7		08.5	149	03.4	98		15.1	130	20	4 50	17	39	34	60	47	43
11	345	11.9	+11	09.4	163	32.2	97	-6	28.1	129	10 N	5 01	5 26	5 48	18 28	55	5 51	48
12	0	12.0	+11	10.2	178	00.9	98	-6	41.0	129	0	5 10	5 35	5 56	18 22	52	5 55	52
13	15	12.1		11.1	192	29.7	97	-6	53.9	129	10 S	18	42	6 04	16	48	5 59	55
14	30	12.3		11.9	206	58.4	98	-7	06.8	128	20	24	50	12	10	44	6 03	60
15	45	12.4		12.8	221	27.2	97		19.6	127	30	29	5 57	21	18 03	40	08	64
16	60	12.5		13.7	235	55.9	97		32.3	127	35	31	6 01	27	17 59	37	10	68
17	75	12.7	+11	14.5	250	24.6	98	-7	45.0	126	40	5 33	6 05	6 33	17 54	35	6 13	71
18	90	12.8	+11	15.4	264	53.4	97	-7	57.6	126	45	5 35	6 10	6 40	17 49	31	6 17	74
19	105	13.0		16.3	279	22.1	97	-8	10.2	125	50	37	15	48	43	27	21	79
20	120	13.1		17.1	293	50.8	97		22.7	125	52	38	17	52	40	25	23	81
21	135	13.2		18.0	308	19.5	97		35.2	124	54	38	20	6 56	37	22	26	83
22	150	13.4		18.8	322	48.2	97		47.6	123	56	39	22	7 01	33	21	28	86
23	165	13.5		19.7	337	16.9	97	-8	59.9	123	58	39	25	06	17 30	17	6 31	89
24	180	13.6	+11	20.6	351	45.6		-9	12.2		60 S	5 40	6 28	7 12	17 25	15	6 34	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 11 ^m 1		Mag: -3.9 PMG: 10 ^h 08 ^m		Mag: +1.6 PMG: 14 ^h 55 ^m		Mag: -2.4 PMG: 03 ^h 47 ^m		Mag: +0.5 PMG: 05 ^h 40 ^m									
	hG ♈	dec.	hG ♀	dec.	hG ♂	dec.	hG ♃	dec.	hG ♄	dec.								
h	°	'	°	'	°	'	°	'	°	'								
0	206	48.4	208	04.3	-2	10.4	136	04.8	+23	17.1	303	02.8	-22	40.6	274	47.1	-21	29.4
1	221	50.8	223	04.0		09.3	151	05.5		17.3	318	05.4		40.6	289	49.6		29.4
2	236	53.3	238	03.7		08.1	166	06.2		17.5	333	07.9		40.6	304	52.0		29.4
3	251	55.8	253	03.3		06.9	181	06.9		17.8	348	10.4		40.6	319	54.4		29.4
4	266	58.2	268	03.0		05.8	196	07.6		18.0	3	13.0		40.6	334	56.8		29.3
5	282	00.7	283	02.7	-2	04.6	211	08.3	+23	18.2	18	15.5	-22	40.6	349	59.2	-21	29.3
6	297	03.1	298	02.3	-2	03.5	226	09.0	+23	18.4	33	18.0	-22	40.6	5	01.6	-21	29.3
7	312	05.6	313	02.0		02.3	241	09.7		18.7	48	20.6		40.6	20	04.1		29.3
8	327	08.1	328	01.7		01.2	256	10.4		18.9	63	23.1		40.6	35	06.5		29.3
9	342	10.5	343	01.3	-2	00.0	271	11.1		19.1	78	25.6		40.6	50	08.9		29.3
10	357	13.0	358	01.0	-1	58.9	286	11.8		19.3	93	28.2		40.6	65	11.3		29.3
11	12	15.5	13	00.7	-1	57.7	301	12.5	+23	19.6	108	30.7	-22	40.6	80	13.7	-21	29.3
12	27	17.9	28	00.3	-1	56.6	316	13.2	+23	19.8	123	33.3	-22	40.6	95	16.1	-21	29.3
13	42	20.4	43	00.0		55.4	331	13.9		20.0	138	35.8		40.6	110	18.6		29.3
14	57	22.9	57	59.7		54.2	346	14.6		20.2	153	38.3		40.6	125	21.0		29.3
15	72	25.3	72	59.3		53.1	1	15.3		20.4	168	40.9		40.6	140	23.4		29.3
16	87	27.8	87	59.0		51.9	16	16.0		20.7	183	43.4		40.6	155	25.8		29.3
17	102	30.3	102	58.7	-1	50.8	31	16.7	+23	20.9	198	46.0	-22	40.6	170	28.2	-21	29.3
18	117	32.7	117	58.3	-1	49.6	46	17.4	+23	21.1	213	48.5	-22	40.6	185	30.7	-21	29.3
19	132	35.2	132	58.0		48.5	61	18.1		21.3	228	51.0		40.6	200	33.1		29.3
20	147	37.6	147	57.7		47.3	76	18.8		21.5	243	53.6		40.6	215	35.5		29.3
21	162	40.1	162	57.3		46.1	91	19.5		21.8	258	56.1		40.6	230	37.9		29.3
22	177	42.6	177	57.0		45.0	106	20.2		22.0	273	58.7		40.6	245	40.3		29.3
23	192	45.0	192	56.7		43.8	121	20.9		22.2	289	01.2		40.6	260	42.8		29.3
24	207	47.5	207	56.3	-1	42.7	136	21.6	+23	22.4	304	03.7	-22	40.5	275	45.2	-21	29.3
Dif.	—		-3		+12		+7		+2		+25		0		+24		0	

UT	SOL				○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 59 ^m 0				SD: 16'1 Edad: 14'6		PHE { 4^h: 59'1 12^h: 58'8 20^h: 58'6		PMG: 00 ^h 34 ^m									
	hG ☉	Dec			hG ☾	Dif.	Dec		Dif.	Civil			Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	180	13.6	+11	20.6	351	45.6	97	-9	12.2	122	60 N	19 30	20 18	21 25	20 54	88	5 30 16	
1	195	13.8		21.4	6	14.3	96		24.4	122	58	23	20 07	21 07	46	84	36 19	
2	210	13.9		22.3	20	42.9	97		36.6	121	56	16	19 58	20 52	38	82	41 22	
3	225	14.0		23.1	35	11.6	97	-9	48.7	120	54	11	50	39	32	79	46 24	
4	240	14.2		24.0	49	40.3	96	-10	00.7	119	52	06	42	29	26	77	50 26	
5	255	14.3	+11	24.9	64	08.9	96	-10	12.6	119	50	19 01	19 36	20 19	20 21	75	5 54 28	
6	270	14.4	+11	25.7	78	37.5	97	-10	24.5	118	45	18 51	19 22	20 01	20 10	71	6 02 33	
7	285	14.6		26.6	93	06.2	96		36.3	118	40	43	12	19 46	20 01	67	09 36	
8	300	14.7		27.4	107	34.8	96		48.1	116	35	36	19 03	34	19 53	65	16 38	
9	315	14.8		28.3	122	03.4	96	-10	59.7	116	30	30	18 55	24	46	63	21 41	
10	330	15.0		29.2	136	32.0	96	-11	11.3	115	20	20	42	19 09	34	59	30 46	
11	345	15.1	+11	30.0	151	00.6	96	-11	22.8	115	10 N	18 11	18 32	18 57	19 23	56	6 39 49	
12	0	15.2	+11	30.9	165	29.2	95	-11	34.3	114	0	18 02	18 23	18 48	19 14	52	6 47 52	
13	15	15.4		31.7	179	57.7	96		45.7	112	10 S	17 54	15	40	19 04	50	6 54 56	
14	30	15.5		32.6	194	26.3	95	-11	56.9	113	20	45	08	34	18 54	46	7 03 59	
15	45	15.6		33.4	208	54.8	96	-12	08.2	111	30	36	18 00	28	43	42	12 64	
16	60	15.8		34.3	223	23.4	95		19.3	110	35	30	17 56	25	36	40	18 66	
17	75	15.9	+11	35.2	237	51.9	95	-12	30.3	110	40	17 24	17 51	18 23	18 29	37	7 24 69	
18	90	16.0	+11	36.0	252	20.4	95	-12	41.3	109	45	17 17	17 46	18 21	18 20	34	7 31 73	
19	105	16.1		36.9	266	48.9	95	-12	52.2	108	50	08	41	19	10	30	40 77	
20	120	16.3		37.7	281	17.4	94	-13	03.0	107	52	17 04	38	18	18 05	28	44 79	
21	135	16.4		38.6	295	45.8	95		13.7	106	54	16 59	36	17	17 59	27	49 81	
22	150	16.5		39.4	310	14.3	95		24.3	105	56	55	33	16	54	24	7 54 83	
23	165	16.7		40.3	324	42.8	94		34.8	105	58	49	30	15	47	21	8 00 86	
24	180	16.8	+11	41.1	339	11.2		-13	45.3		60 S	16 43	17 26	18 15	17 40	18	8 06 90	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 10 ^h 07 ^m 2		Mag: -3.9 PMG: 10 ^h 08 ^m				Mag: +1.6 PMG: 14 ^h 54 ^m				Mag: -2.4 PMG: 03 ^h 43 ^m				Mag: +0.5 PMG: 05 ^h 36 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	207	47.5	207	56.3	-1	42.7	136	21.6	+23	22.4	304	03.7	-22	-40.5	275	45.2	-21	29.3
1	222	50.0	222	56.0		41.5	151	22.3		22.6	319	06.3		-40.5	290	47.6		29.2
2	237	52.4	237	55.7		40.4	166	23.0		22.9	334	08.8		-40.5	305	50.0		29.2
3	252	54.9	252	55.3		39.2	181	23.7		23.1	349	11.4		-40.5	320	52.4		29.2
4	267	57.4	267	55.0		38.0	196	24.4		23.3	4	13.9		-40.5	335	54.9		29.2
5	282	59.8	282	54.7	-1	36.9	211	25.1	+23	23.5	19	16.5	-22	-40.5	350	57.3	-21	29.2
6	298	02.3	297	54.3	-1	35.7	226	25.8	+23	23.7	34	19.0	-22	-40.5	5	59.7	-21	29.2
7	313	04.7	312	54.0		34.6	241	26.5		24.0	49	21.5		-40.5	21	02.1		29.2
8	328	07.2	327	53.7		33.4	256	27.1		24.2	64	24.1		-40.5	36	04.5		29.2
9	343	09.7	342	53.3		32.2	271	27.8		24.4	79	26.6		-40.5	51	07.0		29.2
10	358	12.1	357	53.0		31.1	286	28.5		24.6	94	29.2		-40.5	66	09.4		29.2
11	13	14.6	12	52.7	-1	29.9	301	29.2	+23	24.8	109	31.7	-22	-40.5	81	11.8	-21	29.2
12	28	17.1	27	52.4	-1	28.8	316	29.9	+23	25.0	124	34.3	-22	-40.5	96	14.2	-21	29.2
13	43	19.5	42	52.0		27.6	331	30.6		25.2	139	36.8		-40.5	111	16.7		29.2
14	58	22.0	57	51.7		26.4	346	31.3		25.5	154	39.4		-40.5	126	19.1		29.2
15	73	24.5	72	51.4		25.3	1	32.0		25.7	169	41.9		-40.5	141	21.5		29.2
16	88	26.9	87	51.0		24.1	16	32.7		25.9	184	44.5		-40.5	156	23.9		29.2
17	103	29.4	102	50.7	-1	23.0	31	33.4	+23	26.1	199	47.0	-22	-40.5	171	26.3	-21	29.2
18	118	31.9	117	50.4	-1	21.8	46	34.1	+23	26.3	214	49.6	-22	-40.5	186	28.8	-21	29.2
19	133	34.3	132	50.0		20.7	61	34.8		26.5	229	52.1		-40.5	201	31.2		29.2
20	148	36.8	147	49.7		19.5	76	35.5		26.7	244	54.7		-40.5	216	33.6		29.2
21	163	39.2	162	49.4		18.3	91	36.2		27.0	259	57.2		-40.5	231	36.0		29.2
22	178	41.7	177	49.0		17.2	106	36.9		27.2	274	59.8		-40.5	246	38.5		29.2
23	193	44.2	192	48.7		16.0	121	37.6		27.4	290	02.3		-40.5	261	40.9		29.2
24	208	46.6	207	48.4	-1	14.8	136	38.3	+23	27.6	305	04.9	-22	-40.5	276	43.3	-21	29.1
Dif.	—		-3 +12				+7 +2				+25 0				+24 0			

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 58 ^m 8				SD: 15°9 Edad: 15 ^d 6 PMG: 01 ^h 26 ^m PHE { 4^h: 58°3 12^h: 58°1 20^h: 57°8 R°: 53 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	R°		Hora	R°					
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	° 180 ° 195 ° 210 ° 225 ° 240 ° 255 ° 270 ° 285 ° 300 ° 315 ° 330 ° 345 ° 0 ° 15 ° 30 ° 45 ° 60 ° 75 ° 90 ° 105 ° 120 ° 135 ° 150 ° 165 ° 180	' 16.8 ' 16.9 ' 17.1 ' 17.2 ' 17.3 ' 17.4 ' 17.6 ' 17.7 ' 17.8 ' 18.0 ' 18.1 ' 18.2 ' 18.3 ' 18.5 ' 18.6 ' 18.7 ' 18.9 ' 19.0 ' 19.1 ' 19.2 ' 19.4 ' 19.5 ' 19.6 ' 19.7 ' 19.9	° +11 ° +11 ° +11 ° +11 ° +11 ° +11 ° +11 ° +11 ° +11 ° +11 ° +11 ° +11 ° +12 ° <															

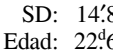
UT	SOL				☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°9				SD: 15°7		PHE { 4 ^h : 57°5 12 ^h : 57°3 20 ^h : 57°0													
	PMG: 11 ^h 58 ^m 6				Edad: 16 ^d 6															
					PMG: 02 ^h 19 ^m		R ^o : 53 ^m													
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.			Civil	Náut.	Hora	R ^o	Hora	R ^o	
h	°	'	°	'	°	'		°	'			°	'	h m	h m	h m	h m m	h m m	m	
0	180	19.9	+12	01.5	326	30.5	92	-17	27.4	79	60 N	19 35	20 24	21 33	23 43	71	6 06	28		
1	195	20.0		02.3	340	58.7	92		35.3	79	58	27	12	21 13	28 69		19	30		
2	210	20.1		03.2	355	26.9	92		43.2	78	56	20	20 02	20 58	16 66		29	33		
3	225	20.2		04.0	9	55.1	92		51.0	76	54	14	19 54	45	23 05	65	39	35		
4	240	20.4		04.9	24	23.3	91	-17	58.6	75	52	09	46	33	22 55	64	47	37		
5	255	20.5	+12	05.7	38	51.4	92	-18	06.1	75	50	19 04	19 39	20 23	22 46	63	6 55	38		
6	270	20.6	+12	06.6	53	19.6	91	-18	13.6	73	45	18 54	19 25	20 04	22 28	61	7 11	41		
7	285	20.7		07.4	67	47.7	92		20.9	72	40	45	14	19 48	13 60		24	43		
8	300	20.9		08.2	82	15.9	91		28.1	71	35	38	19 04	36	22 00	59	35	45		
9	315	21.0		09.1	96	44.0	92		35.2	70	30	31	18 56	26	21 49	58	7 45	47		
10	330	21.1		09.9	111	12.2	91		42.2	68	20	20	43	19 10	30 56		8 03	48		
11	345	21.2	+12	10.8	125	40.3	92	-18	49.0	68	10 N	18 11	18 32	18 58	21 14	54	8 17	51		
12	0	21.3	+12	11.6	140	08.5	91	-18	55.8	66	0	18 02	18 23	18 48	20 59	53	8 32	52		
13	15	21.5		12.4	154	36.6	91	-19	02.4	66	10 S	17 53	15	39	44 51		8 46	54		
14	30	21.6		13.3	169	04.7	92		09.0	64	20	44	18 06	32	28 49		9 01	56		
15	45	21.7		14.1	183	32.9	91		15.4	63	30	34	17 58	26	20 09	48	18	59		
16	60	21.8		15.0	198	01.0	91		21.7	62	35	28	54	23	19 59	46	28	61		
17	75	22.0	+12	15.8	212	29.1	91	-19	27.9	60	40	17 21	17 49	18 20	19 47	45	9 40	62		
18	90	22.1	+12	16.6	226	57.2	92	-19	33.9	60	45	17 13	17 43	18 18	19 32	44	9 53	65		
19	105	22.2		17.5	241	25.4	91		39.9	58	50	04	37	15	15 41		10 10	67		
20	120	22.3		18.3	255	53.5	91		45.7	58	52	17 00	35	14	19 07	40	18	68		
21	135	22.4		19.2	270	21.6	92		51.5	56	54	16 55	32	13	18 57	39	27	69		
22	150	22.6		20.0	284	49.8	91	-19	57.1	55	56	50	28	12	47 37		36	72		
23	165	22.7		20.8	299	17.9	92	-20	02.6	53	58	44	25	11	36 35		10 48	73		
24	180	22.8	+12	21.7	313	46.1		-20	07.9		60 S	16 37	17 21	18 10	18 22	33	11 01	76		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO							
	PMG		Mag: -3.9			Mag: +1.6			Mag: -2.4				Mag: +0.5							
	9 ^h 59 ^m 3		PMG: 10 ^h 10 ^m			PMG: 14 ^h 52 ^m			PMG: 03 ^h 35 ^m				PMG: 05 ^h 28 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	209	45.8	207	40.4	-0	47.0	136	55.0	+23	32.6	306	06.2	-22	-40.4	277	41.6	-21	29.1		
1	224	48.2	222	40.1		45.8	151	55.7		32.8	321	08.7		-40.4	292	44.0		29.1		
2	239	50.7	237	39.8		44.6	166	56.4		33.0	336	11.3		-40.4	307	46.4		29.1		
3	254	53.2	252	39.5		43.5	181	57.1		33.2	351	13.8		-40.4	322	48.8		29.1		
4	269	55.6	267	39.1		42.3	196	57.7		33.4	6	16.4		-40.4	337	51.3		29.0		
5	284	58.1	282	38.8	-0	41.1	211	58.4	+23	33.6	21	19.0	-22	-40.4	352	53.7	-21	29.0		
6	300	00.6	297	38.5	-0	40.0	226	59.1	+23	33.8	36	21.5	-22	-40.4	7	56.1	-21	29.0		
7	315	03.0	312	38.1		38.8	241	59.8		34.0	51	24.1		-40.4	22	58.6		29.0		
8	330	05.5	327	37.8		37.7	257	00.5		34.2	66	26.6		-40.4	38	01.0		29.0		
9	345	08.0	342	37.5		36.5	272	01.2		34.4	81	29.2		-40.4	53	03.4		29.0		
10	0	10.4	357	37.1		35.3	287	01.9		34.6	96	31.8		-40.4	68	05.9		29.0		
11	15	12.9	12	36.8	-0	34.2	302	02.6	+23	34.8	111	34.3	-22	-40.4	83	08.3	-21	29.0		
12	30	15.3	27	36.5	-0	33.0	317	03.3	+23	35.0	126	36.9	-22	-40.4	98	10.7	-21	29.0		
13	45	17.8	42	36.2		31.8	332	04.0		35.2	141	39.5		-40.3	113	13.1		29.0		
14	60	20.3	57	35.8		30.7	347	04.7		35.4	156	42.0		-40.3	128	15.6		29.0		
15	75	22.7	72	35.5		29.5	2	05.4		35.6	171	44.6		-40.3	143	18.0		29.0		
16	90	25.2	87	35.2		28.3	17	06.1		35.8	186	47.1		-40.3	158	20.4		29.0		
17	105	27.7	102	34.8	-0	27.2	32	06.8	+23	36.0	201	49.7	-22	-40.3	173	22.9	-21	29.0		
18	120	30.1	117	34.5	-0	26.0	47	07.5	+23	36.2	216	52.3	-22	-40.3	188	25.3	-21	29.0		
19	135	32.6	132	34.2		24.8	62	08.2		36.4	231	54.8		-40.3	203	27.7		29.0		
20	150	35.1	147	33.9		23.7	77	08.9		36.6	246	57.4		-40.3	218	30.2		29.0		
21	165	37.5	162	33.5		22.5	92	09.5		36.8	262	00.0		-40.3	233	32.6		29.0		
22	180	40.0	177	33.2		21.3	107	10.2		36.9	277	02.5		-40.3	248	35.0		29.0		
23	195	42.5	192	32.9		20.2	122	10.9		37.1	292	05.1		-40.3	263	37.5		29.0		
24	210	44.9	207	32.5	-0	19.0	137	11.6	+23	37.3	307	07.7	-22	-40.3	278	39.9	-21	29.0		
Dif.	—		-3		+12		+7		+2		+26		0		+24					

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 58 ^m 4				SD: 15'5 Edad: 17 ^d 6 PHE { 4 ^h : 56'7 12 ^h : 56'5 20 ^h : 56'2 PMG: 03 ^h 12 ^m Rº: 52 ^m															
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº							
h	°	'	°	'	°	'	°		h	m	h	m	h	m	m	h	m	m		
0	180	22.8	+12	21.7	313	46.1	91	-20	07.9	53	60 N	2 23	3 32	4 21	** ** *		6 34	39		
1	195	22.9		22.5	328	14.2	92		13.2	51	58	43	44	29	** ** *		6 49	41		
2	210	23.1		23.3	342	42.4	91		18.3	50	56	2 59	3 54	36	** ** *		7 02	42		
3	225	23.2		24.2	357	10.5	92		23.3	50	54	3 12	4 02	42	** ** *		14	43		
4	240	23.3		25.0	11	38.7	92		28.3	47	52	23	10	47	23 59	55	24	44		
5	255	23.4	+12	25.8	26	06.9	92	-20	33.0	47	50	3 33	4 17	4 52	23 49	55	7 33	44		
6	270	23.5	+12	26.7	40	35.1	92	-20	37.7	46	45	3 53	4 31	5 03	23 29	54	7 52	46		
7	285	23.6		27.5	55	03.3	92		42.3	44	40	4 08	43	11	23 13	53	8 07	48		
8	300	23.8		28.3	69	31.5	92		46.7	43	35	21	4 52	19	22 59	53	20	49		
9	315	23.9		29.2	83	59.7	92		51.0	42	30	31	5 00	25	47	53	32	49		
10	330	24.0		30.0	98	27.9	92		55.2	41	20	47	14	36	26	53	8 51	51		
11	345	24.1	+12	30.8	112	56.1	93	-20	59.3	39	10 N	4 59	5 24	5 46	22 08	53	9 08	52		
12	0	24.2	+12	31.7	127	24.4	92	-21	03.2	39	0	5 09	5 34	5 55	21 52	52	9 24	53		
13	15	24.4		32.5	141	52.6	93		07.1	37	10 S	18	42	6 04	35	52	40	54		
14	30	24.5		33.3	156	20.9	93		10.8	36	20	25	51	13	21 17	51	9 57	55		
15	45	24.6		34.2	170	49.2	93		14.4	35	30	31	5 59	24	20 57	50	10 17	56		
16	60	24.7		35.0	185	17.5	93		17.9	33	35	34	6 04	30	45	50	29	56		
17	75	24.8	+12	35.8	199	45.8	93	-21	21.2	33	40	5 37	6 09	6 37	20 32	49	10 42	57		
18	90	24.9	+12	36.7	214	14.1	93	-21	24.5	31	45	5 40	6 14	6 45	20 16	48	10 58	57		
19	105	25.1		37.5	228	42.4	94		27.6	30	50	43	21	54	19 56	48	11 17	59		
20	120	25.2		38.3	243	10.8	94		30.6	29	52	44	23	6 58	47	47	26	60		
21	135	25.3		39.2	257	39.2	94		33.5	28	54	45	26	7 03	36	47	36	61		
22	150	25.4		40.0	272	07.6	94		36.3	26	56	46	30	08	24	47	11 48	61		
23	165	25.5		40.8	286	36.0	94		38.9	26	58	47	33	14	19 11	45	12 01	63		
24	180	25.6	+12	41.6	301	04.4		-21	41.5		60 S	5 48	6 37	7 21	18 55	44	12 17	64		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO							
	PMG 9 ^h 55 ^m 4		Mag: -3.9 PMG: 10 ^h 10 ^m			Mag: +1.6 PMG: 14 ^h 51 ^m			Mag: -2.4 PMG: 03 ^h 31 ^m				Mag: +0.5 PMG: 05 ^h 24 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	210	44.9	207	32.5	-0	19.0	137	11.6	+23	37.3	307	07.7	-22	40.3	278	39.9	-21	29.0		
1	225	47.4	222	32.2		17.9	152	12.3		37.5	322	10.2		40.3	293	42.3		29.0		
2	240	49.8	237	31.9		16.7	167	13.0		37.7	337	12.8		40.3	308	44.8		29.0		
3	255	52.3	252	31.5		15.5	182	13.7		37.9	352	15.4		40.3	323	47.2		29.0		
4	270	54.8	267	31.2		14.4	197	14.4		38.1	7	17.9		40.3	338	49.6		29.0		
5	285	57.2	282	30.9	-0	13.2	212	15.1	+23	38.3	22	20.5	-22	40.3	353	52.1	-21	29.0		
6	300	59.7	297	30.6	-0	12.0	227	15.8	+23	38.5	37	23.1	-22	40.3	8	54.5	-21	29.0		
7	316	02.2	312	30.2		10.9	242	16.5		38.7	52	25.6		40.3	23	56.9		29.0		
8	331	04.6	327	29.9		09.7	257	17.2		38.9	67	28.2		40.3	38	59.4		29.0		
9	346	07.1	342	29.6		08.5	272	17.9		39.1	82	30.8		40.3	54	01.8		29.0		
10	1	09.6	357	29.2		07.4	287	18.6		39.3	97	33.4		40.3	69	04.2		29.0		
11	16	12.0	12	28.9	-0	06.2	302	19.2	+23	39.5	112	35.9	-22	40.3	84	06.7	-21	29.0		
12	31	14.5	27	28.6	-0	05.0	317	19.9	+23	39.7	127	38.5	-22	40.3	99	09.1	-21	29.0		
13	46	17.0	42	28.2		03.9	332	20.6		39.8	142	41.1		40.3	114	11.5		29.0		
14	61	19.4	57	27.9		02.7	347	21.3		40.0	157	43.6		40.3	129	14.0		29.0		
15	76	21.9	72	27.6		01.5	2	22.0		40.2	172	46.2		40.2	144	16.4		29.0		
16	91	24.3	87	27.3	-0	00.4	17	22.7		40.4	187	48.8		40.2	159	18.9		29.0		
17	106	26.8	102	26.9	+0	00.8	32	23.4	+23	40.6	202	51.4	-22	40.2	174	21.3	-21	28.9		
18	121	29.3	117	26.6	+0	02.0	47	24.1	+23	40.8	217	53.9	-22	40.2	189	23.7	-21	28.9		
19	136	31.7	132	26.3		03.1	62	24.8		41.0	232	56.5		40.2	204	26.2		28.9		
20	151	34.2	147	25.9		04.3	77	25.5		41.2	247	59.1		40.2	219	28.6		28.9		
21	166	36.7	162	25.6		05.5	92	26.2		41.4	263	01.6		40.2	234	31.0		28.9		
22	181	39.1	177	25.3		06.6	107	26.9		41.6	278	04.2		40.2	249	33.5		28.9		
23	196	41.6	192	25.0		07.8	122	27.6		41.7	293	06.8		40.2	264	35.9		28.9		
24	211	44.1	207	24.6	+0	09.0	137	28.3	+23	41.9	308	09.4	-22	40.2	279	38.3	-21	28.9		
Dif.	—		-3		+12		+7		+2		+26		0		+24					

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 58 ^m 2				SD: 15'3 Edad: 18 ^d 6		PHE { 4 ^h : 56'0 12 ^h : 55'7 20 ^h : 55'5		PMG:04 ^h 04 ^m				R ^o : 52 ^m		Civil	Náut.	Hora	R ^o	Hora	R ^o	
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	hG ☾	Dif.	Dec	Dif.											
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	25.6	+12	41.6	301	04.4	94	-21	41.5	24	60 N	19 40	20 30	21 41	0 54	56	7 13	50			
1	195	25.8		42.5	315	32.8	95		43.9	23	58	32	17	20	37	55	30	50			
2	210	25.9		43.3	330	01.3	95		46.2	22	56	24	20 07	21 03	22	56	44	51			
3	225	26.0		44.1	344	29.8	95		48.4	20	54	18	19 58	20 50	0 10	55	7 57	51			
4	240	26.1		44.9	358	58.3	96		50.4	20	52	12	50	38	** **	**	8 08	51			
5	255	26.2	+12	45.8	13	26.9	95	-21	52.4	18	50	19 07	19 43	20 28	** **	**	8 17	52			
6	270	26.3	+12	46.6	27	55.4	96	-21	54.2	17	45	18 56	19 28	20 07	** **	**	8 38	51			
7	285	26.4		47.4	42	24.0	96		55.9	16	40	47	16	19 51	** **	**	8 55	51			
8	300	26.6		48.2	56	52.6	97		57.5	15	35	39	19 06	38	23 52	48	9 09	51			
9	315	26.7		49.1	71	21.3	96	-21	59.0	13	30	33	18 58	27	40	48	21	51			
10	330	26.8		49.9	85	49.9	97	-22	00.3	13	20	21	44	19 11	19	49	9 42	51			
11	345	26.9	+12	50.7	100	18.6	97	-22	01.6	11	10 N	18 11	18 33	18 58	23 01	49	10 00	51			
12	0	27.0	+12	51.5	114	47.3	98	-22	02.7	10	0	18 02	18 23	18 47	22 44	50	10 17	51			
13	15	27.1		52.4	129	16.1	98		03.7	9	10 S	17 52	14	39	27	50	34	51			
14	30	27.2		53.2	143	44.9	98		04.6	8	20	43	18 05	31	22 08	52	10 52	51			
15	45	27.4		54.0	158	13.7	98		05.4	6	30	32	17 56	24	21 47	53	11 13	51			
16	60	27.5		54.8	172	42.5	99		06.0	6	35	25	51	21	35	53	25	51			
17	75	27.6	+12	55.7	187	11.4	99	-22	06.6	4	40	17 18	17 46	18 18	21 21	53	11 39	51			
18	90	27.7	+12	56.5	201	40.3	99	-22	07.0	3	45	17 10	17 40	18 15	21 04	54	11 55	51			
19	105	27.8		57.3	216	09.2	100		07.3	2	50	17 00	34	11	20 44	54	12 16	50			
20	120	27.9		58.1	230	38.2	100		07.5	1	52	16 56	31	10	34	54	26	50			
21	135	28.0		58.9	245	07.2	100		07.6	0	54	51	27	09	23	55	37	50			
22	150	28.1	+12	59.8	259	36.2	101		07.6	1	56	45	24	07	20 11	55	12 49	50			
23	165	28.2	+13	00.6	274	05.3	100		07.5	3	58	39	20	06	19 56	56	13 04	49			
24	180	28.4	+13	01.4	288	34.3		-22	07.2		60 S	16 32	17 16	18 05	19 39	56	13 21	49			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG 9 ^h 51 ^m 4		Mag: -3.9 PMG: 10 ^h 11 ^m				Mag: +1.6 PMG: 14 ^h 49 ^m				Mag: -2.4 PMG: 03 ^h 27 ^m				Mag: +0.5 PMG: 05 ^h 21 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	211	44.1	207	24.6	+0	09.0	137	28.3	+23	41.9	308	09.4	-22	-40.2	279	38.3	-21	28.9			
1	226	46.5	222	24.3		10.1	152	28.9		42.1	323	11.9		-40.2	294	40.8		28.9			
2	241	49.0	237	24.0		11.3	167	29.6		42.3	338	14.5		-40.2	309	43.2		28.9			
3	256	51.5	252	23.6		12.5	182	30.3		42.5	353	17.1		-40.2	324	45.7		28.9			
4	271	53.9	267	23.3		13.6	197	31.0		42.7	8	19.7		-40.2	339	48.1		28.9			
5	286	56.4	282	23.0	+0	14.8	212	31.7	+23	42.9	23	22.3	-22	-40.2	354	50.5	-21	28.9			
6	301	58.8	297	22.6	+0	16.0	227	32.4	+23	43.0	38	24.8	-22	-40.2	9	53.0	-21	28.9			
7	317	01.3	312	22.3		17.1	242	33.1		43.2	53	27.4		-40.2	24	55.4		28.9			
8	332	03.8	327	22.0		18.3	257	33.8		43.4	68	30.0		-40.2	39	57.9		28.9			
9	347	06.2	342	21.7		19.5	272	34.5		43.6	83	32.6		-40.2	55	00.3		28.9			
10	2	08.7	357	21.3		20.6	287	35.2		43.8	98	35.1		-40.2	70	02.7		28.9			
11	17	11.2	12	21.0	+0	21.8	302	35.9	+23	44.0	113	37.7	-22	-40.2	85	05.2	-21	28.9			
12	32	13.6	27	20.7	+0	23.0	317	36.6	+23	44.1	128	40.3	-22	-40.2	100	07.6	-21	28.9			
13	47	16.1	42	20.3		24.1	332	37.2		44.3	143	42.9		-40.2	115	10.1		28.9			
14	62	18.6	57	20.0		25.3	347	37.9		44.5	158	45.5		-40.2	130	12.5		28.9			
15	77	21.0	72	19.7		26.5	2	38.6		44.7	173	48.0		-40.2	145	14.9		28.9			
16	92	23.5	87	19.4		27.7	17	39.3		44.9	188	50.6		-40.1	160	17.4		28.9			
17	107	25.9	102	19.0	+0	28.8	32	40.0	+23	45.1	203	53.2	-22	-40.1	175	19.8	-21	28.9			
18	122	28.4	117	18.7	+0	30.0	47	40.7	+23	45.2	218	55.8	-22	-40.1	190	22.3	-21	28.9			
19	137	30.9	132	18.4		31.2	62	41.4		45.4	233	58.4		-40.1	205	24.7		28.9			
20	152	33.3	147	18.0		32.3	77	42.1		45.6	249	00.9		-40.1	220	27.1		28.9			
21	167	35.8	162	17.7		33.5	92	42.8		45.8	264	03.5		-40.1	235	29.6		28.9			
22	182	38.3	177	17.4		34.7	107	43.5		46.0	279	06.1		-40.1	250	32.0		28.9			
23	197	40.7	192	17.0		35.8	122	44.2		46.1	294	08.7		-40.1	265	34.5		28.9			
24	212	43.2	207	16.7	+0	37.0	137	44.9	+23	46.3	309	11.3	-22	-40.1	280	36.9	-21	28.9			
Dif.	—		-3		+12		+7		+2		+26		0		+24		0				

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'9				SD: 15'1		PHE {		Edad: 19 ^d 6											
	PMG: 11 ^h 58 ^m 0				PMG: 04 ^h 56 ^m		R ^o : 50 ^m													
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.			Náut.	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	m	h m m	m	
0	180	28.4	+13	01.4	288	34.3	102	-22	07.2	4	60 N	2 14	3 26	4 16	1 50	41	8 03	62		
1	195	28.5		02.2	303	03.5	102		06.8	4	58	35	38	24	32	43	20	61		
2	210	28.6		03.0	317	32.7	102		06.4	6	56	2 52	48	31	18	43	35	59		
3	225	28.7		03.9	332	01.9	102		05.8	7	54	3 06	3 57	37	1 05	44	48	58		
4	240	28.8		04.7	346	31.1	103		05.1	8	52	18	4 06	43	0 54	45	8 59	57		
5	255	28.9	+13	05.5	1	00.4	103	-22	04.3	9	50	3 28	4 13	4 48	0 44	45	9 09	56		
6	270	29.0	+13	06.3	15	29.7	103	-22	03.4	11	45	3 49	4 28	4 59	0 23	47	9 29	56		
7	285	29.1		07.1	29	59.0	104		02.3	11	40	4 05	40	5 08	0 06	48	9 46	54		
8	300	29.2		07.9	44	28.4	105		01.2	12	35	18	50	16	** ** *	**	10 00	54		
9	315	29.3		08.8	58	57.9	104	-22	00.0	14	30	29	4 58	23	** ** *	**	12	53		
10	330	29.4		09.6	73	27.3	106	-21	58.6	15	20	45	5 12	35	** ** *	**	33	52		
11	345	29.6	+13	10.4	87	56.9	105	-21	57.1	15	10 N	4 58	5 24	5 45	23 50	47	10 51	51		
12	0	29.7	+13	11.2	102	26.4	106	-21	55.6	17	0	5 09	5 33	5 55	23 34	48	11 08	50		
13	15	29.8		12.0	116	56.0	107		53.9	18	10 S	18	42	6 04	17	50	25	48		
14	30	29.9		12.8	131	25.7	106		52.1	19	20	25	5 51	14	23 00	51	11 43	47		
15	45	30.0		13.6	145	55.3	108		50.2	20	30	32	6 00	25	22 40	53	12 04	46		
16	60	30.1		14.5	160	25.1	107		48.2	21	35	36	05	31	28	54	16	45		
17	75	30.2	+13	15.3	174	54.8	108	-21	46.1	22	40	5 39	6 11	6 39	22 14	55	12 30	44		
18	90	30.3	+13	16.1	189	24.6	109	-21	43.9	23	45	5 42	6 17	6 47	21 58	57	12 46	43		
19	105	30.4		16.9	203	54.5	109		41.6	24	50	46	23	6 57	38	59	13 06	42		
20	120	30.5		17.7	218	24.4	109		39.2	26	52	47	27	7 02	28	60	16	40		
21	135	30.6		18.5	232	54.3	110		36.6	26	54	48	30	07	18	61	27	39		
22	150	30.7		19.3	247	24.3	110		34.0	27	56	50	33	12	21 06	62	39	38		
23	165	30.8		20.1	261	54.3	111		31.3	29	58	51	37	19	20 52	63	13 53	37		
24	180	30.9	+13	20.9	276	24.4		-21	28.4		60 S	5 53	6 42	7 26	20 35	66	14 10	35		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 9 ^h 47 ^m 5		Mag: -3.9 PMG: 10 ^h 11 ^m			Mag: +1.6 PMG: 14 ^h 48 ^m			Mag: -2.4 PMG: 03 ^h 23 ^m			Mag: +0.5 PMG: 05 ^h 17 ^m								
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	212	43.2	207	16.7	+0	37.0	137	44.9	+23	46.3	309	11.3	-22	40.1	280	36.9	-21	28.9		
1	227	45.7	222	16.4		38.2	152	45.5		46.5	324	13.9		40.1	295	39.3		28.9		
2	242	48.1	237	16.1		39.3	167	46.2		46.7	339	16.4		40.1	310	41.8		28.9		
3	257	50.6	252	15.7		40.5	182	46.9		46.9	354	19.0		40.1	325	44.2		28.9		
4	272	53.1	267	15.4		41.7	197	47.6		47.0	9	21.6		40.1	340	46.7		28.9		
5	287	55.5	282	15.1	+0	42.8	212	48.3	+23	47.2	24	24.2	-22	40.1	355	49.1	-21	28.9		
6	302	58.0	297	14.7	+0	44.0	227	49.0	+23	47.4	39	26.8	-22	40.1	10	51.6	-21	28.9		
7	318	00.4	312	14.4		45.2	242	49.7		47.6	54	29.4		40.1	25	54.0		28.9		
8	333	02.9	327	14.1		46.3	257	50.4		47.7	69	32.0		40.1	40	56.4		28.9		
9	348	05.4	342	13.7		47.5	272	51.1		47.9	84	34.5		40.1	55	58.9		28.9		
10	3	07.8	357	13.4		48.7	287	51.8		48.1	99	37.1		40.1	71	01.3		28.9		
11	18	10.3	12	13.1	+0	49.8	302	52.5	+23	48.3	114	39.7	-22	40.1	86	03.8	-21	28.9		
12	33	12.8	27	12.8	+0	51.0	317	53.1	+23	48.4	129	42.3	-22	40.1	101	06.2	-21	28.9		
13	48	15.2	42	12.4		52.2	332	53.8		48.6	144	44.9		40.1	116	08.7		28.9		
14	63	17.7	57	12.1		53.4	347	54.5		48.8	159	47.5		40.0	131	11.1		28.9		
15	78	20.2	72	11.8		54.5	2	55.2		49.0	174	50.1		40.0	146	13.5		28.9		
16	93	22.6	87	11.4		55.7	17	55.9		49.1	189	52.6		40.0	161	16.0		28.9		
17	108	25.1	102	11.1	+0	56.9	32	56.6	+23	49.3	204	55.2	-22	40.0	176	18.4	-21	28.9		
18	123	27.6	117	10.8	+0	58.0	47	57.3	+23	49.5	219	57.8	-22	40.0	191	20.9	-21	28.9		
19	138	30.0	132	10.4	+0	59.2	62	58.0		49.7	235	00.4		40.0	206	23.3		28.9		
20	153	32.5	147	10.1	+1	00.4	77	58.7		49.8	250	03.0		40.0	221	25.8		28.9		
21	168	34.9	162	09.8		01.5	92	59.4		50.0	265	05.6		40.0	236	28.2		28.9		
22	183	37.4	177	09.5		02.7	108	00.0		50.2	280	08.2		40.0	251	30.7		28.9		
23	198	39.9	192	09.1		03.9	123	00.7		50.4	295	10.8		40.0	266	33.1		28.9		
24	213	42.3	207	08.8	+1	05.0	138	01.4	+23	50.5	310	13.4	-22	40.0	281	35.6	-21	28.9		
Dif.	—		-3			+12	+7			+2	+26			0			+24			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 57 ^m 7				SD: 14°8 Edad: 21 ^d 6 PMG: 06 ^h 34 ^m Rº: 46 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
h	°	'	°	'	°	'	°	'	° N	h m	h m	h m	h m m	h m m	h m m			
0	180	33.4	+13	40.3	264	40.2	123	-19	51.3	52	2 05	3 19	4 10	3 00	21	10 14	74	
1	195	33.5		41.1	279	11.5	123		46.1	53	58	27	32	19	2 47	23	28	70
2	210	33.6		41.9	293	42.8	123		40.8	54	56	2 45	43	26	35	26	39	68
3	225	33.7		42.7	308	14.1	124		35.4	55	54	3 00	3 53	33	24	28	49	66
4	240	33.8		43.5	322	45.5	125		29.9	55	52	13	4 01	39	15	30	10 58	64
5	255	33.9	+13	44.3	337	17.0	125	-19	24.4	57	50	3 23	4 09	4 44	2 07	31	11 06	63
6	270	34.0	+13	45.1	351	48.5	125	-19	18.7	57	45	3 45	4 24	4 56	1 49	34	11 23	60
7	285	34.1		45.9	6	20.0	126		13.0	58	40	4 02	37	5 06	35	36	37	57
8	300	34.2		46.7	20	51.6	126		07.2	59	35	15	47	14	23	38	48	56
9	315	34.3		47.5	35	23.2	127	-19	01.3	60	30	26	4 56	21	1 12	39	11 58	54
10	330	34.4		48.3	49	54.9	128	-18	55.3	60	20	44	5 11	34	0 54	42	12 16	50
11	345	34.5	+13	49.1	64	26.7	127	-18	49.3	62	10 N	4 57	5 23	5 44	0 37	45	12 31	48
12	0	34.6	+13	49.9	78	58.4	129	-18	43.1	62	0	5 08	5 33	5 54	0 22	47	12 45	46
13	15	34.7		50.7	93	30.3	129		36.9	63	10 S	18	43	6 04	0 07	49	12 59	43
14	30	34.8		51.4	108	02.2	129		30.6	64	20	26	5 52	15	** ** *	**	13 14	41
15	45	34.9		52.2	122	34.1	129		24.2	64	30	33	6 02	26	** ** *	**	31	38
16	60	35.0		53.0	137	06.0	131		17.8	66	35	37	07	33	** ** *	**	41	36
17	75	35.1	+13	53.8	151	38.1	130	-18	11.2	66	40	5 41	6 13	6 41	** ** *	**	13 52	34
18	90	35.2	+13	54.6	166	10.1	131	-18	04.6	67	45	5 44	6 19	6 49	23 54	60	14 06	31
19	105	35.3		55.4	180	42.2	132	-17	57.9	67	50	48	26	7 00	39	63	22	28
20	120	35.4		56.2	195	14.4	132		51.2	69	52	50	30	05	31	65	29	27
21	135	35.5		57.0	209	46.6	132		44.3	69	54	51	33	10	23	67	38	25
22	150	35.5		57.8	224	18.8	133		37.4	70	56	53	37	16	14	69	47	23
23	165	35.6		58.6	238	51.1	133		30.4	71	58	55	41	23	23 04	72	14 58	20
24	180	35.7	+13	59.4	253	23.4		-17	23.3		60 S	5 57	6 46	7 31	22 53	74	15 10	18
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 39 ^m 6		Mag: -3.9 PMG: 10 ^h 12 ^m			Mag: +1.6 PMG: 14 ^h 46 ^m			Mag: -2.4 PMG: 03 ^h 14 ^m			Mag: +0.5 PMG: 05 ^h 09 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	214	41.5	207	00.9	+1	33.1	138	18.0	+23	54.5	311	15.7	-22	39.9	282	34.3	-21	28.9
1	229	43.9	222	00.5		34.3	153	18.7		54.7	326	18.3		39.9	297	36.8		28.9
2	244	46.4	237	00.2		35.4	168	19.4		54.9	341	20.9		39.9	312	39.2		28.9
3	259	48.9	251	59.9		36.6	183	20.1		55.0	356	23.5		39.9	327	41.7		28.9
4	274	51.3	266	59.5		37.8	198	20.7		55.2	11	26.1		39.9	342	44.1		28.9
5	289	53.8	281	59.2	+1	38.9	213	21.4	+23	55.3	26	28.7	-22	39.9	357	46.6	-21	28.9
6	304	56.3	296	58.9	+1	40.1	228	22.1	+23	55.5	41	31.3	-22	39.9	12	49.0	-21	28.9
7	319	58.7	311	58.5		41.3	243	22.8		55.7	56	33.9		39.9	27	51.5		28.9
8	335	01.2	326	58.2		42.5	258	23.5		55.8	71	36.5		39.8	42	53.9		28.9
9	350	03.7	341	57.9		43.6	273	24.2		56.0	86	39.1		39.8	57	56.4		28.9
10	5	06.1	356	57.5		44.8	288	24.9		56.1	101	41.7		39.8	72	58.8		28.9
11	20	08.6	11	57.2	+1	46.0	303	25.6	+23	56.3	116	44.3	-22	39.8	88	01.3	-21	28.9
12	35	11.0	26	56.9	+1	47.1	318	26.3	+23	56.5	131	46.9	-22	39.8	103	03.7	-21	28.9
13	50	13.5	41	56.5		48.3	333	26.9		56.6	146	49.5		39.8	118	06.2		28.9
14	65	16.0	56	56.2		49.5	348	27.6		56.8	161	52.1		39.8	133	08.6		28.9
15	80	18.4	71	55.9		50.6	3	28.3		56.9	176	54.7		39.8	148	11.1		28.9
16	95	20.9	86	55.5		51.8	18	29.0		57.1	191	57.3		39.8	163	13.5		28.9
17	110	23.4	101	55.2	+1	53.0	33	29.7	+23	57.2	206	59.9	-22	39.8	178	16.0	-21	28.9
18	125	25.8	116	54.9	+1	54.1	48	30.4	+23	57.4	222	02.5	-22	39.8	193	18.5	-21	28.9
19	140	28.3	131	54.5		55.3	63	31.1		57.6	237	05.1		39.8	208	20.9		28.9
20	155	30.8	146	54.2		56.5	78	31.8		57.7	252	07.7		39.8	223	23.4		28.9
21	170	33.2	161	53.9		57.7	93	32.4		57.9	267	10.3		39.8	238	25.8		28.9
22	185	35.7	176	53.6	+1	58.8	108	33.1		58.0	282	12.9		39.8	253	28.3		28.9
23	200	38.2	191	53.2	+2	00.0	123	33.8		58.2	297	15.5		39.8	268	30.7		28.9
24	215	40.6	206	52.9	+2	01.2	138	34.5	+23	58.3	312	18.1	-22	39.8	283	33.2	-21	28.9
Dif.	—		-3		+12		+7		+2		+26		0		+25		0	

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9			 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2														
	PMG: 11 ^h 57 ^m 5																	
	Edad: 22 ^d 6			PMG: 07 ^h 20 ^m			Rº: 44 ^m											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.				Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	180	35.7	+13	59.4	253	23.4	134	-17	23.3	71	60 N	19 50	20 41	21 59	3 21	16	11 28	75
1	195	35.8	+14	00.2	267	55.8	134		16.2	73	58	41	28	35	10	19	38	72
2	210	35.9		01.0	282	28.2	135		08.9	73	56	33	16	16	3 01	20	47	70
3	225	36.0		01.8	297	00.7	135	-17	01.6	73	54	26	20 06	21 00	2 52	23	11 55	68
4	240	36.1		02.5	311	33.2	135	-16	54.3	75	52	19	19 58	20 47	45	24	12 02	66
5	255	36.2	+14	03.3	326	05.7	136	-16	46.8	75	50	19 14	19 50	20 36	2 38	26	12 09	64
6	270	36.3	+14	04.1	340	38.3	137	-16	39.3	76	45	19 01	19 33	20 13	2 23	29	12 23	60
7	285	36.4		04.9	355	11.0	136		31.7	76	40	18 51	20	19 56	11	32	34	58
8	300	36.5		05.7	9	43.6	137		24.1	77	35	43	10	42	2 01	34	44	55
9	315	36.6		06.5	24	16.3	138		16.4	78	30	35	19 00	30	1 51	36	12 52	53
10	330	36.7		07.3	38	49.1	138		08.6	79	20	22	18 45	19 12	36	39	13 06	50
11	345	36.8	+14	08.1	53	21.9	138	-16	00.7	79	10 N	18 11	18 33	18 58	1 22	42	13 19	47
12	0	36.9	+14	08.9	67	54.7	139	-15	52.8	80	0	18 01	18 22	18 47	1 09	45	13 31	44
13	15	36.9		09.6	82	27.6	139		44.8	80	10 S	17 51	12	37	0 56	47	42	42
14	30	37.0		10.4	97	00.5	140		36.8	82	20	40	18 03	29	42	50	13 55	38
15	45	37.1		11.2	111	33.5	140		28.6	82	30	28	17 53	21	26	54	14 09	35
16	60	37.2		12.0	126	06.5	140		20.4	82	35	21	47	17	17	55	17	33
17	75	37.3	+14	12.8	140	39.5	141	-15	12.2	83	40	17 13	17 41	18 13	0 06	58	14 26	31
18	90	37.4	+14	13.6	155	12.6	141	-15	03.9	84	45	17 04	17 34	18 09	***	***	14 37	28
19	105	37.5		14.3	169	45.7	141	-14	55.5	85	50	16 53	27	05	***	***	50	24
20	120	37.6		15.1	184	18.8	142		47.0	85	52	48	23	03	***	***	14 56	23
21	135	37.7		15.9	198	52.0	142		38.5	85	54	42	19	18 01	***	***	15 03	21
22	150	37.8		16.7	213	25.2	142		30.0	87	56	36	15	17 59	***	***	10	19
23	165	37.9		17.5	227	58.4	143		21.3	87	58	29	11	57	***	***	18	17
24	180	37.9	+14	18.3	242	31.7		-14	12.6		60 S	16 21	17 06	17 55	***	***	15 28	14
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 35 ^m 7		Mag: -3.8 PMG: 10 ^h 13 ^m			Mag: +1.6 PMG: 14 ^h 45 ^m			Mag: -2.4 PMG: 03 ^h 10 ^m			Mag: +0.5 PMG: 05 ^h 05 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	215	40.6	206	52.9	+2	01.2	138	34.5	+23	58.3	312	18.1	-22	-39.8	283	33.2	-21	28.9
1	230	43.1	221	52.6		02.3	153	35.2		58.5	327	20.7		-39.8	298	35.6		28.9
2	245	45.5	236	52.2		03.5	168	35.9		58.7	342	23.4		-39.8	313	38.1		28.9
3	260	48.0	251	51.9		04.7	183	36.6		58.8	357	26.0		-39.7	328	40.5		28.9
4	275	50.5	266	51.6		05.8	198	37.3		59.0	12	28.6		-39.7	343	43.0		28.9
5	290	52.9	281	51.2	+2	07.0	213	38.0	+23	59.1	27	31.2	-22	-39.7	358	45.5	-21	28.9
6	305	55.4	296	50.9	+2	08.2	228	38.6	+23	59.3	42	33.8	-22	-39.7	13	47.9	-21	28.9
7	320	57.9	311	50.6		09.3	243	39.3		59.4	57	36.4		-39.7	28	50.4		28.9
8	336	00.3	326	50.2		10.5	258	40.0		59.6	72	39.0		-39.7	43	52.8		28.9
9	351	02.8	341	49.9		11.7	273	40.7		59.7	87	41.6		-39.7	58	55.3		28.9
10	6	05.3	356	49.6		12.8	288	41.4	+23	59.9	102	44.2		-39.7	73	57.7		28.9
11	21	07.7	11	49.2	+2	14.0	303	42.1	+24	00.0	117	46.8	-22	-39.7	89	00.2	-21	28.9
12	36	10.2	26	48.9	+2	15.2	318	42.8	+24	00.2	132	49.4	-22	-39.7	104	02.7	-21	28.9
13	51	12.6	41	48.6		16.4	333	43.5		00.3	147	52.1		-39.7	119	05.1		28.9
14	66	15.1	56	48.2		17.5	348	44.1		00.5	162	54.7		-39.7	134	07.6		28.9
15	81	17.6	71	47.9		18.7	3	44.8		00.6	177	57.3		-39.7	149	10.0		28.9
16	96	20.0	86	47.6		19.9	18	45.5		00.8	192	59.9		-39.7	164	12.5		28.9
17	111	22.5	101	47.2	+2	21.0	33	46.2	+24	00.9	208	02.5	-22	-39.7	179	14.9	-21	28.9
18	126	25.0	116	46.9	+2	22.2	48	46.9	+24	01.1	223	05.1	-22	-39.7	194	17.4	-21	28.9
19	141	27.4	131	46.6		23.4	63	47.6		01.2	238	07.7		-39.7	209	19.9		28.9
20	156	29.9	146	46.2		24.5	78	48.3		01.4	253	10.3		-39.7	224	22.3		28.9
21	171	32.4	161	45.9		25.7	93	49.0		01.5	268	13.0		-39.7	239	24.8		28.9
22	186	34.8	176	45.5		26.9	108	49.7		01.7	283	15.6		-39.6	254	27.2		28.9
23	201	37.3	191	45.2		28.0	123	50.3		01.8	298	18.2		-39.6	269	29.7		28.9
24	216	39.8	206	44.9	+2	29.2	138	51.0	+24	02.0	313	20.8	-22	-39.6	284	32.2	-21	28.9
Dif.	—		-3		+12		+7		+2		+26		0		+25			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'9			SD: 14'8			PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3				Edad: 23 ^d 6			Salida de Luna			Puesta de Luna		
	PMG: 11 ^h 57 ^m 4			PMG: 08 ^h 04 ^m			Rº: 43 ^m												
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	37.9	+14	242	31.7	143	-14	12.6	87	60 N	1 55	3 13	4 04	3 37	12	12 43	76		
1	195	38.0		257	05.0	144	-14	03.9	88	58	2 20	26	14	29	15	50	73		
2	210	38.1		271	38.4	144	-13	55.1	89	56	39	38	22	21	18	12 57	70		
3	225	38.2		286	11.8	144		46.2	89	54	2 54	48	29	15	19	13 03	68		
4	240	38.3		300	45.2	144		37.3	90	52	3 07	3 57	35	09	21	08	67		
5	255	38.4	+14	315	18.6	145	-13	28.3	91	50	3 19	4 05	4 41	3 04	23	13 13	65		
6	270	38.5	+14	329	52.1	145	-13	19.2	91	45	3 41	4 21	4 53	2 52	27	13 23	61		
7	285	38.6		344	25.6	145		10.1	91	40	3 59	34	5 03	43	29	32	58		
8	300	38.6		358	59.1	146	-13	01.0	92	35	4 13	45	12	35	31	39	55		
9	315	38.7		13	32.7	146	-12	51.8	93	30	24	4 54	19	27	34	45	53		
10	330	38.8		28	06.3	146		42.5	93	20	42	5 09	32	15	37	13 56	50		
11	345	38.9	+14	42	39.9	147	-12	33.2	94	10 N	4 56	5 22	5 44	2 04	40	14 06	46		
12	0	39.0	+14	57	13.6	147	-12	23.8	94	0	5 08	5 33	5 54	1 54	43	14 15	43		
13	15	39.1		71	47.3	147		14.4	95	10 S	18	43	6 04	43	47	24	39		
14	30	39.2		86	21.0	147	-12	04.9	95	20	26	5 53	15	32	50	33	36		
15	45	39.3		100	54.7	148	-11	55.4	96	30	35	6 03	27	20	53	44	32		
16	60	39.3		115	28.5	147		45.8	97	35	38	08	35	12	56	50	30		
17	75	39.4	+14	130	02.2	149	-11	36.1	96	40	5 43	6 14	6 43	1 04	58	14 57	28		
18	90	39.5	+14	144	36.1	148	-11	26.5	98	45	5 47	6 21	6 52	0 54	61	15 05	25		
19	105	39.6		159	09.9	148		16.7	98	50	51	29	7 03	42	64	14	22		
20	120	39.7		173	43.7	149	-11	06.9	98	52	53	33	08	36	67	19	20		
21	135	39.8		188	17.6	149	-10	57.1	99	54	55	36	14	30	68	24	18		
22	150	39.8		202	51.5	149		47.2	99	56	57	41	20	23	71	29	16		
23	165	39.9		217	25.4	150		37.3	100	58	5 59	45	27	0 16	72	15 35	14		
24	180	40.0	+14	231	59.4		-10	27.3		60 S	6 01	6 50	7 35	0 07	75	15 42	11		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 9 ^h 31 ^m 8		Mag: -3.8 PMG: 10 ^h 13 ^m			Mag: +1.6 PMG: 14 ^h 44 ^m			Mag: -2.4 PMG: 03 ^h 06 ^m			Mag: +0.5 PMG: 05 ^h 01 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	216	39.8	206	44.9	+2	29.2	138	51.0	+24	02.0	313	20.8	-22	39.6	284	32.2	-21	28.9	
1	231	42.2	221	44.5		30.4	153	51.7		02.1	328	23.4		39.6	299	34.6		28.9	
2	246	44.7	236	44.2		31.5	168	52.4		02.3	343	26.0		39.6	314	37.1		28.9	
3	261	47.1	251	43.9		32.7	183	53.1		02.4	358	28.7		39.6	329	39.5		28.9	
4	276	49.6	266	43.5		33.9	198	53.8		02.5	13	31.3		39.6	344	42.0		28.9	
5	291	52.1	281	43.2	+2	35.0	213	54.5	+24	02.7	28	33.9	-22	39.6	359	44.5	-21	28.9	
6	306	54.5	296	42.9	+2	36.2	228	55.2	+24	02.8	43	36.5	-22	39.6	14	46.9	-21	28.9	
7	321	57.0	311	42.5		37.4	243	55.8		03.0	58	39.1		39.6	29	49.4		28.9	
8	336	59.5	326	42.2		38.6	258	56.5		03.1	73	41.7		39.6	44	51.8		28.9	
9	352	01.9	341	41.9		39.7	273	57.2		03.3	88	44.4		39.6	59	54.3		28.9	
10	7	04.4	356	41.5		40.9	288	57.9		03.4	103	47.0		39.6	74	56.8		28.9	
11	22	06.9	11	41.2	+2	42.1	303	58.6	+24	03.6	118	49.6	-22	39.6	89	59.2	-21	28.9	
12	37	09.3	26	40.9	+2	43.2	318	59.3	+24	03.7	133	52.2	-22	39.6	105	01.7	-21	28.9	
13	52	11.8	41	40.5		44.4	334	00.0		03.8	148	54.8		39.6	120	04.1		28.9	
14	67	14.2	56	40.2		45.6	349	00.7		04.0	163	57.5		39.6	135	06.6		28.9	
15	82	16.7	71	39.9		46.7	4	01.3		04.1	179	00.1		39.5	150	09.1		28.9	
16	97	19.2	86	39.5		47.9	19	02.0		04.3	194	02.7		39.5	165	11.5		28.9	
17	112	21.6	101	39.2	+2	49.1	34	02.7	+24	04.4	209	05.3	-22	39.5	180	14.0	-21	28.9	
18	127	24.1	116	38.8	+2	50.2	49	03.4	+24	04.5	224	07.9	-22	39.5	195	16.4	-21	28.9	
19	142	26.6	131	38.5		51.4	64	04.1		04.7	239	10.6		39.5	210	18.9		28.9	
20	157	29.0	146	38.2		52.6	79	04.8		04.8	254	13.2		39.5	225	21.4		28.9	
21	172	31.5	161	37.8		53.7	94	05.5		05.0	269	15.8		39.5	240	23.8		28.9	
22	187	34.0	176	37.5		54.9	109	06.1		05.1	284	18.4		39.5	255	26.3		28.9	
23	202	36.4	191	37.2		56.1	124	06.8		05.2	299	21.0		39.5	270	28.8		28.9	
24	217	38.9	206	36.8	+2	57.2	139	07.5	+24	05.4	314	23.7	-22	39.5	285	31.2	-21	28.9	
Dif.	—		-3		+12		+7		+1		+26		0		+25				

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo				Salida de Luna				Puesta de Luna				
	SD: 15'9				SD: 14'8																				PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'5
	PMG: 11 ^h 57 ^m 3				Edad: 24 ^d 6																				
	PMG: 08 ^h 47 ^m				Rº: 43 ^m																				
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº					
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m			
0	180	40.0	+14	36.9	231	59.4	149	-10	27.3	100	60 N	19 55	20 48	22 09	3 49	11	13 59	76							
1	195	40.1		37.7	246	33.3	150		17.3	101	58	45	33	21 42	44	13	14 03	74							
2	210	40.2		38.4	261	07.3	150	-10	07.2	101	56	37	21	22	39	15	07	72							
3	225	40.3		39.2	275	41.3	150	-9	57.1	101	54	29	11	21 05	34	17	11	69							
4	240	40.3		40.0	290	15.3	151		47.0	102	52	23	20 01	20 52	30	19	15	67							
5	255	40.4	+14	40.8	304	49.4	150	-9	36.8	103	50	19 17	19 53	20 40	3 27	20	14 18	65							
6	270	40.5	+14	41.5	319	23.4	151	-9	26.5	103	45	19 04	19 36	20 16	3 19	24	14 24	62							
7	285	40.6		42.3	333	57.5	151		16.2	103	40	18 53	23	19 58	12	27	30	58							
8	300	40.7		43.1	348	31.6	151	-9	05.9	104	35	44	11	44	06	30	34	56							
9	315	40.8		43.8	3	05.7	151	-8	55.5	104	30	37	19 02	32	3 01	32	38	54							
10	330	40.8		44.6	17	39.8	151		45.1	104	20	23	18 46	19 13	2 52	36	46	49							
11	345	40.9	+14	45.4	32	13.9	152	-8	34.7	105	10 N	18 11	18 33	18 59	2 44	40	14 52	46							
12	0	41.0	+14	46.1	46	48.1	151	-8	24.2	105	0	18 01	18 22	18 47	2 37	43	14 58	42							
13	15	41.1		46.9	61	22.2	152		13.7	106	10 S	17 50	12	37	30	45	15 03	39							
14	30	41.2		47.7	75	56.4	151	-8	03.1	106	20	39	18 01	28	22	49	09	36							
15	45	41.2		48.4	90	30.5	152	-7	52.5	106	30	26	17 51	19	13	53	16	32							
16	60	41.3		49.2	105	04.7	152		41.9	107	35	19	45	15	08	55	20	29							
17	75	41.4	+14	50.0	119	38.9	152	-7	31.2	107	40	17 10	17 39	18 11	2 02	58	15 25	26							
18	90	41.5	+14	50.7	134	13.1	152	-7	20.5	108	45	17 01	17 32	18 06	1 55	61	15 30	23							
19	105	41.6		51.5	148	47.3	152	-7	09.7	108	50	16 49	23	02	46	65	36	20							
20	120	41.6		52.3	163	21.5	153	-6	58.9	108	52	44	20	18 00	43	66	39	18							
21	135	41.7		53.0	177	55.8	152		48.1	109	54	38	16	17 57	38	69	42	16							
22	150	41.8		53.8	192	30.0	152		37.2	108	56	31	11	55	34	70	45	15							
23	165	41.9		54.5	207	04.2	153		26.4	110	58	24	06	53	28	74	49	12							
24	180	41.9	+14	55.3	221	38.5		-6	15.4		60 S	16 16	17 01	17 51	1 22	76	15 53	10							
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO										
	PMG 9 ^h 27 ^m 9		Mag: -3.8 PMG: 10 ^h 14 ^m				Mag: +1.6 PMG: 14 ^h 43 ^m				Mag: -2.4 PMG: 03 ^h 02 ^m				Mag: +0.5 PMG: 04 ^h 57 ^m										
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	217	38.9	206	36.8	+2	57.2	139	07.5	+24	05.4	314	23.7	-22	-39.5	285	31.2	-21	28.9							
1	232	41.4	221	36.5		58.4	154	08.2		05.5	329	26.3		-39.5	300	33.7		28.9							
2	247	43.8	236	36.2	+2	59.6	169	08.9		05.7	344	28.9		-39.5	315	36.2		28.9							
3	262	46.3	251	35.8	+3	00.7	184	09.6		05.8	359	31.5		-39.5	330	38.6		28.9							
4	277	48.7	266	35.5		01.9	199	10.3		05.9	14	34.2		-39.5	345	41.1		28.9							
5	292	51.2	281	35.1	+3	03.1	214	11.0	+24	06.1	29	36.8	-22	-39.5	0	43.5	-21	28.9							
6	307	53.7	296	34.8	+3	04.2	229	11.6	+24	06.2	44	39.4	-22	-39.5	15	46.0	-21	28.9							
7	322	56.1	311	34.5		05.4	244	12.3		06.3	59	42.0		-39.5	30	48.5		28.9							
8	337	58.6	326	34.1		06.6	259	13.0		06.5	74	44.7		-39.4	45	50.9		28.9							
9	353	01.1	341	33.8		07.7	274	13.7		06.6	89	47.3		-39.4	60	53.4		28.9							
10	8	03.5	356	33.5		08.9	289	14.4		06.8	104	49.9		-39.4	75	55.9		28.9							
11	23	06.0	11	33.1	+3	10.1	304	15.1	+24	06.9	119	52.5	-22	-39.4	90	58.3	-21	28.9							
12	38	08.5	26	32.8	+3	11.2	319	15.8	+24	07.0	134	55.2	-22	-39.4	106	00.8	-21	28.9							
13	53	10.9	41	32.4		12.4	334	16.4		07.2	149	57.8		-39.4	121	03.3		28.9							
14	68	13.4	56	32.1		13.6	349	17.1		07.3	165	00.4		-39.4	136	05.7		28.9							
15	83	15.9	71	31.8		14.7	4	17.8		07.4	180	03.0		-39.4	151	08.2		28.9							
16	98	18.3	86	31.4		15.9	19	18.5		07.6	195	05.7		-39.4	166	10.7		28.9							
17	113	20.8	101	31.1	+3	17.1	34	19.2	+24	07.7	210	08.3	-22	-39.4	181	13.1	-21	28.9							
18	128	23.2	116	30.8	+3	18.2	49	19.9	+24	07.8	225	10.9	-22	-39.4	196	15.6	-21	28.9							
19	143	25.7	131	30.4		19.4	64	20.6		08.0	240	13.6		-39.4	211	18.1		28.9							
20	158	28.2	146	30.1		20.6	79	21.3		08.1	255	16.2		-39.4	226	20.5		29.0							
21	173	30.6	161	29.7		21.7	94	21.9		08.2	270	18.8		-39.4	241	23.0		29.0							
22	188	33.1	176	29.4		22.9	109	22.6		08.4	285	21.4		-39.4	256	25.5		29.0							
23	203	35.6	191	29.1		24.1	124	23.3		08.5	300	24.1		-39.4	271	27.9		29.0							
24	218	38.0	206	28.7	+3	25.2	139	24.0	+24	08.6	315	26.7	-22	-39.4	286	30.4	-21	29.0							
Dif.	—		-3 +12				+7 +1				+26 0				+25 0										

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 57 ^m 1				SD: 14'9 Edad: 25 ^d 6 PMG: 09 ^h 30 ^m					PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9			Rº: 42 ^m					
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	° N	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	41.9	+14	55.3	221	38.5	152	-6	15.4	109	1 44	3 06	3 59	4 00	9	15 15 78		
1	195	42.0		56.1	236	12.7	152	-6	04.5	110	2 11	20	4 09	3 57	12	17 75		
2	210	42.1		56.8	250	46.9	153	-5	53.5	110	32	33	17	54	14	19 72		
3	225	42.2		57.6	265	21.2	152		42.5	110	2 48	43	24	51	17	20 71		
4	240	42.3		58.3	279	55.4	153		31.5	111	3 02	3 52	31	49	18	22 68		
5	255	42.3	+14	59.1	294	29.7	152	-5	20.4	111	3 14	4 01	4 37	3 47	20	15 23 67		
6	270	42.4	+14	59.9	309	03.9	152	-5	09.3	111	3 38	4 18	4 50	3 43	23	15 26 62		
7	285	42.5	+15	00.6	323	38.1	153	-4	58.2	112	3 56	31	5 01	39	27	28 60		
8	300	42.6		01.4	338	12.4	152		47.0	112	4 10	43	10	36	29	30 57		
9	315	42.6		02.1	352	46.6	153		35.8	112	22	4 52	18	33	31	32 54		
10	330	42.7		02.9	7	20.9	152		24.6	112	41	5 08	31	28	36	35 50		
11	345	42.8	+15	03.7	21	55.1	152	-4	13.4	113	4 56	5 21	5 43	3 24	39	15 38 46		
12	0	42.9	+15	04.4	36	29.3	152	-4	02.1	113	5 07	5 32	5 54	3 20	42	15 40 43		
13	15	42.9		05.2	51	03.5	153	-3	50.8	113	18	43	6 04	15	46	42 40		
14	30	43.0		05.9	65	37.8	152		39.5	113	27	5 53	16	11	50	45 36		
15	45	43.1		06.7	80	12.0	152		28.2	113	36	6 04	29	06	54	48 31		
16	60	43.2		07.4	94	46.2	152		16.9	114	40	10	36	03	56	49 30		
17	75	43.2	+15	08.2	109	20.4	151	-3	05.5	114	5 44	6 16	6 45	3 00	59	15 51 27		
18	90	43.3	+15	08.9	123	54.5	152	-2	54.1	114	5 49	6 24	6 54	2 56	62	15 53 24		
19	105	43.4		09.7	138	28.7	152		42.7	115	54	32	7 06	51	66	56 20		
20	120	43.5		10.5	153	02.9	151		31.2	114	56	36	12	49	68	57 18		
21	135	43.5		11.2	167	37.0	152		19.8	115	5 58	40	18	47	70	15 58 17		
22	150	43.6		12.0	182	11.2	151	-2	08.3	115	6 00	44	24	44	72	16 00 14		
23	165	43.7		12.7	196	45.3	151	-1	56.8	115	02	49	32	2 42	74	16 01 12		
24	180	43.7	+15	13.5	211	19.4		-1	45.3		6 05	6 55	7 40	2 38	77	16 03 9		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 23 ^m 9		Mag: -3.8 PMG: 10 ^h 14 ^m			Mag: +1.6 PMG: 14 ^h 42 ^m			Mag: -2.5 PMG: 02 ^h 58 ^m			Mag: +0.5 PMG: 04 ^h 53 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	218	38.0	206	28.7	+3	25.2	139	24.0	+24	08.6	315	26.7	-22	39.4	286	30.4	-21	29.0
1	233	40.5	221	28.4		26.4	154	24.7		08.7	330	29.3		39.3	301	32.9		29.0
2	248	43.0	236	28.0		27.6	169	25.4		08.9	345	32.0		39.3	316	35.3		29.0
3	263	45.4	251	27.7		28.7	184	26.1		09.0	0	34.6		39.3	331	37.8		29.0
4	278	47.9	266	27.4		29.9	199	26.7		09.1	15	37.2		39.3	346	40.3		29.0
5	293	50.3	281	27.0	+3	31.0	214	27.4	+24	09.3	30	39.9	-22	39.3	1	42.7	-21	29.0
6	308	52.8	296	26.7	+3	32.2	229	28.1	+24	09.4	45	42.5	-22	39.3	16	45.2	-21	29.0
7	323	55.3	311	26.4		33.4	244	28.8		09.5	60	45.1		39.3	31	47.7		29.0
8	338	57.7	326	26.0		34.5	259	29.5		09.6	75	47.8		39.3	46	50.2		29.0
9	354	00.2	341	25.7		35.7	274	30.2		09.8	90	50.4		39.3	61	52.6		29.0
10	9	02.7	356	25.3		36.9	289	30.9		09.9	105	53.0		39.3	76	55.1		29.0
11	24	05.1	11	25.0	+3	38.0	304	31.5	+24	10.0	120	55.7	-22	39.3	91	57.6	-21	29.0
12	39	07.6	26	24.7	+3	39.2	319	32.2	+24	10.2	135	58.3	-22	39.3	107	00.0	-21	29.0
13	54	10.1	41	24.3		40.4	334	32.9		10.3	151	00.9		39.3	122	02.5		29.0
14	69	12.5	56	24.0		41.5	349	33.6		10.4	166	03.6		39.3	137	05.0		29.0
15	84	15.0	71	23.6		42.7	4	34.3		10.5	181	06.2		39.3	152	07.4		29.0
16	99	17.5	86	23.3		43.9	19	35.0		10.7	196	08.8		39.2	167	09.9		29.0
17	114	19.9	101	23.0	+3	45.0	34	35.7	+24	10.8	211	11.5	-22	39.2	182	12.4	-21	29.0
18	129	22.4	116	22.6	+3	46.2	49	36.3	+24	10.9	226	14.1	-22	39.2	197	14.9	-21	29.0
19	144	24.8	131	22.3		47.3	64	37.0		11.0	241	16.8		39.2	212	17.3		29.0
20	159	27.3	146	21.9		48.5	79	37.7		11.2	256	19.4		39.2	227	19.8		29.0
21	174	29.8	161	21.6		49.7	94	38.4		11.3	271	22.0		39.2	242	22.3		29.0
22	189	32.2	176	21.2		50.8	109	39.1		11.4	286	24.7		39.2	257	24.7		29.0
23	204	34.7	191	20.9		52.0	124	39.8		11.5	301	27.3		39.2	272	27.2		29.0
24	219	37.2	206	20.6	+3	53.2	139	40.5	+24	11.6	316	29.9	-22	39.2	287	29.7	-21	29.0
Dif.	—		-3		+12		+7		+1		+26		0		+25			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 57 ^m 0			SD: 15°0 Edad: 26 ^d 6 PMG: 10 ^h 12 ^m			PHE { 4 ^h : 55°0 12 ^h : 55°2 20 ^h : 55°3 Rº: 44 ^m											
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.										
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	
0	180	43.7	+15	13.5	211	19.4	151	-1	45.3	115	60 N	20 00	20 54	22 20	4 09	10	16 33	79
1	195	43.8		14.2	225	53.5	151		33.8	115	58	19 50	39	21 50	09 12		32	77
2	210	43.9		15.0	240	27.6	150		22.3	116	56	41	26	28	08 15		31	74
3	225	44.0		15.7	255	01.6	151	-1	10.7	115	54	33	15	21 11	08 16		31	72
4	240	44.0		16.5	269	35.7	150	-0	59.2	116	52	26	20 05	20 56	07 19		30	70
5	255	44.1	+15	17.2	284	09.7	150	-0	47.6	116	50	19 20	19 57	20 44	4 07	20	16 30	68
6	270	44.2	+15	18.0	298	43.7	150	-0	36.0	116	45	19 06	19 39	20 19	4 06	24	16 28	65
7	285	44.2		18.7	313	17.7	150		24.4	116	40	18 55	25	20 01	06 26		28	60
8	300	44.3		19.5	327	51.7	149		12.8	116	35	46	13	19 46	05 30		27	58
9	315	44.4		20.2	342	25.6	149	-0	01.2	116	30	38	19 03	34	04 32		26	56
10	330	44.5		21.0	356	59.5	149	+0	10.4	117	20	24	18 47	19 14	04 36		25	51
11	345	44.5	+15	21.7	11	33.4	149	+0	22.1	116	10 N	18 12	18 34	18 59	4 03	40	16 24	47
12	0	44.6	+15	22.4	26	07.3	149	+0	33.7	117	0	18 00	18 22	18 47	4 02	43	16 23	44
13	15	44.7		23.2	40	41.2	148		45.4	116	10 S	17 49	11	36	01 47		22	40
14	30	44.7		23.9	55	15.0	148	+0	57.0	117	20	38	18 00	27	01 50		21	36
15	45	44.8		24.7	69	48.8	148	+1	08.7	117	30	24	17 49	18	4 00	55	19	33
16	60	44.9		25.4	84	22.6	148		20.4	116	35	17	43	13	3 59	58	19	30
17	75	44.9	+15	26.2	98	56.4	147	+1	32.0	117	40	17 08	17 36	18 08	3 59	60	16 18	27
18	90	45.0	+15	26.9	113	30.1	147	+1	43.7	117	45	16 58	17 29	18 04	3 58	64	16 17	24
19	105	45.1		27.7	128	03.8	146	+1	55.4	117	50	46	20	17 58	57 68		16	20
20	120	45.1		28.4	142	37.4	147	+2	07.1	117	52	40	16	56	57 69		15	19
21	135	45.2		29.1	157	11.1	146		18.8	116	54	34	12	54	57 71		15	16
22	150	45.3		29.9	171	44.7	146		30.4	117	56	27	07	51	56 74		14	15
23	165	45.3		30.6	186	18.3	145		42.1	117	58	19	17 02	49	56 76		13	13
24	180	45.4	+15	31.4	200	51.8		+2	53.8		60 S	16 11	16 56	17 46	3 55	79	16 12	10
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 9 ^h 20 ^m 0		Mag: -3.8 PMG: 10 ^h 15 ^m			Mag: +1.6 PMG: 14 ^h 41 ^m			Mag: -2.5 PMG: 02 ^h 53 ^m			Mag: +0.5 PMG: 04 ^h 49 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	219	37.2	206	20.6	+3	53.2	139	40.5	+24	11.6	316	29.9	-22	-39.2	287	29.7	-21	29.0
1	234	39.6	221	20.2		54.3	154	41.1		11.8	331	32.6		-39.2	302	32.2		29.0
2	249	42.1	236	19.9		55.5	169	41.8		11.9	346	35.2		-39.2	317	34.6		29.0
3	264	44.6	251	19.5		56.7	184	42.5		12.0	1	37.9		-39.2	332	37.1		29.0
4	279	47.0	266	19.2		57.8	199	43.2		12.1	16	40.5		-39.2	347	39.6		29.0
5	294	49.5	281	18.9	+3	59.0	214	43.9	+24	12.3	31	43.1	-22	-39.2	2	42.1	-21	29.0
6	309	51.9	296	18.5	+4	00.1	229	44.6	+24	12.4	46	45.8	-22	-39.2	17	44.5	-21	29.0
7	324	54.4	311	18.2		01.3	244	45.3		12.5	61	48.4		-39.2	32	47.0		29.0
8	339	56.9	326	17.8		02.5	259	45.9		12.6	76	51.1		-39.1	47	49.5		29.0
9	354	59.3	341	17.5		03.6	274	46.6		12.7	91	53.7		-39.1	62	51.9		29.1
10	10	01.8	356	17.1		04.8	289	47.3		12.9	106	56.3		-39.1	77	54.4		29.1
11	25	04.3	11	16.8	+4	06.0	304	48.0	+24	13.0	121	59.0	-22	-39.1	92	56.9	-21	29.1
12	40	06.7	26	16.5	+4	07.1	319	48.7	+24	13.1	137	01.6	-22	-39.1	107	59.4	-21	29.1
13	55	09.2	41	16.1		08.3	334	49.4		13.2	152	04.3		-39.1	123	01.8		29.1
14	70	11.7	56	15.8		09.4	349	50.1		13.3	167	06.9		-39.1	138	04.3		29.1
15	85	14.1	71	15.4		10.6	4	50.7		13.4	182	09.5		-39.1	153	06.8		29.1
16	100	16.6	86	15.1		11.8	19	51.4		13.6	197	12.2		-39.1	168	09.3		29.1
17	115	19.1	101	14.7	+4	12.9	34	52.1	+24	13.7	212	14.8	-22	-39.1	183	11.7	-21	29.1
18	130	21.5	116	14.4	+4	14.1	49	52.8	+24	13.8	227	17.5	-22	-39.1	198	14.2	-21	29.1
19	145	24.0	131	14.0		15.3	64	53.5		13.9	242	20.1		-39.1	213	16.7		29.1
20	160	26.4	146	13.7		16.4	79	54.2		14.0	257	22.8		-39.1	228	19.2		29.1
21	175	28.9	161	13.4		17.6	94	54.9		14.1	272	25.4		-39.1	243	21.6		29.1
22	190	31.4	176	13.0		18.7	109	55.5		14.3	287	28.1		-39.0	258	24.1		29.1
23	205	33.8	191	12.7		19.9	124	56.2		14.4	302	30.7		-39.0	273	26.6		29.1
24	220	36.3	206	12.3	+4	21.1	139	56.9	+24	14.5	317	33.4	-22	-39.0	288	29.1	-21	29.1
Dif.	—		-3		+12		+7		+1		+26		0		+25		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15°9 PMG: 11 ^h 56 ^m 9				SD: 15°1 Edad: 27 ^d 6 PHE { 4 ^h : 55'5 12 ^h : 55'7 20 ^h : 55'9 PMG: 10 ^h 56 ^m Rº: 45 ^m															
	hG ☉		Dec		hG ☾		Dif.			Dec			Dif.							
	h	m	°	'	h	m	°	'		h	m		°	'	h	m	°	'	h	m
0	180	45.4	+15	31.4	200	51.8	145	+2	53.8	117	60 N	1 33	2 59	3 54	4 19	11	17 52	82		
1	195	45.5		32.1	215	25.3	145	+3	05.5	116	58	2 03	3 15	4 04	21	13	49 78			
2	210	45.5		32.9	229	58.8	144		17.1	117	56	25	27	12	23	15	45 77			
3	225	45.6		33.6	244	32.2	144		28.8	117	54	42	38	20	24	18	43 73			
4	240	45.7		34.3	259	05.6	144		40.5	116	52	2 57	48	27	26	20	40 72			
5	255	45.7	+15	35.1	273	39.0	143	+3	52.1	117	50	3 09	3 57	4 34	4 27	22	17 38	70		
6	270	45.8	+15	35.8	288	12.3	143	+4	03.8	116	45	3 34	4 15	4 47	4 30	25	17 33	65		
7	285	45.9		36.5	302	45.6	143		15.4	117	40	3 53	29	4 58	32	29	28 63			
8	300	45.9		37.3	317	18.9	142		27.1	116	35	4 08	40	5 08	35	31	25 60			
9	315	46.0		38.0	331	52.1	141		38.7	116	30	20	4 50	16	36	34	22 57			
10	330	46.1		38.8	346	25.2	142	+4	50.3	116	20	40	5 07	30	40	37	16 53			
11	345	46.1	+15	39.5	0	58.4	141	+5	01.9	116	10 N	4 55	5 20	5 42	4 43	41	17 11	50		
12	0	46.2	+15	40.2	15	31.5	140	+5	13.5	116	0	5 07	5 32	5 53	4 45	45	17 07	46		
13	15	46.2		41.0	30	04.5	140		25.1	116	10 S	18	43	6 05	48	49	17 02	43		
14	30	46.3		41.7	44	37.5	140		36.7	115	20	27	5 54	17	51	52	16 57	39		
15	45	46.4		42.4	59	10.5	139		48.2	116	30	37	6 05	30	55	56	52 34			
16	60	46.4		43.2	73	43.4	138	+5	59.8	115	35	41	11	38	57	59	49 32			
17	75	46.5	+15	43.9	88	16.2	139	+6	11.3	115	40	5 46	6 18	6 47	4 59	62	16 45	30		
18	90	46.6	+15	44.6	102	49.1	137	+6	22.8	115	45	5 51	6 26	6 57	5 02	65	16 41	26		
19	105	46.6		45.4	117	21.8	138		34.3	114	50	56	35	7 09	05	69	36 23			
20	120	46.7		46.1	131	54.6	137		45.7	115	52	5 58	39	15	06	71	34 21			
21	135	46.7		46.8	146	27.3	136	+6	57.2	114	54	6 01	43	21	08	73	31 19			
22	150	46.8		47.6	160	59.9	136	+7	08.6	114	56	03	48	28	10	75	29 16			
23	165	46.9		48.3	175	32.5	135		20.0	114	58	06	53	36	5 12	78	16 26	14		
24	180	46.9	+15	49.0	190	05.0		+7	31.4		60 S	6 09	6 59	7 45	5 14	81	16 22	12		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 9 ^h 16 ^m 1		Mag: -3.8 PMG: 10 ^h 15 ^m				Mag: +1.6 PMG: 14 ^h 40 ^m				Mag: -2.5 PMG: 02 ^h 49 ^m				Mag: +0.4 PMG: 04 ^h 45 ^m					
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	220	36.3	206	12.3	+4	21.1	139	56.9	+24	14.5	317	33.4	-22	39.0	288	29.1	-21	29.1		
1	235	38.8	221	12.0		22.2	154	57.6		14.6	332	36.0		39.0	303	31.6		29.1		
2	250	41.2	236	11.6		23.4	169	58.3		14.7	347	38.6		39.0	318	34.0		29.1		
3	265	43.7	251	11.3		24.5	184	59.0		14.8	2	41.3		39.0	333	36.5		29.1		
4	280	46.2	266	10.9		25.7	199	59.7		14.9	17	43.9		39.0	348	39.0		29.1		
5	295	48.6	281	10.6	+4	26.9	215	00.3	+24	15.0	32	46.6	-22	39.0	3	41.5	-21	29.1		
6	310	51.1	296	10.3	+4	28.0	230	01.0	+24	15.2	47	49.2	-22	39.0	18	43.9	-21	29.1		
7	325	53.6	311	09.9		29.2	245	01.7		15.3	62	51.9		39.0	33	46.4		29.1		
8	340	56.0	326	09.6		30.3	260	02.4		15.4	77	54.5		39.0	48	48.9		29.1		
9	355	58.5	341	09.2		31.5	275	03.1		15.5	92	57.2		39.0	63	51.4		29.1		
10	11	00.9	356	08.9		32.7	290	03.8		15.6	107	59.8		39.0	78	53.9		29.1		
11	26	03.4	11	08.5	+4	33.8	305	04.4	+24	15.7	123	02.5	-22	39.0	93	56.3	-21	29.1		
12	41	05.9	26	08.2	+4	35.0	320	05.1	+24	15.8	138	05.1	-22	38.9	108	58.8	-21	29.1		
13	56	08.3	41	07.8		36.1	335	05.8		15.9	153	07.8		38.9	124	01.3		29.2		
14	71	10.8	56	07.5		37.3	350	06.5		16.0	168	10.4		38.9	139	03.8		29.2		
15	86	13.3	71	07.1		38.5	5	07.2		16.2	183	13.1		38.9	154	06.2		29.2		
16	101	15.7	86	06.8		39.6	20	07.9		16.3	198	15.7		38.9	169	08.7		29.2		
17	116	18.2	101	06.4	+4	40.8	35	08.6	+24	16.4	213	18.4	-22	38.9	184	11.2	-21	29.2		
18	131	20.7	116	06.1	+4	41.9	50	09.2	+24	16.5	228	21.0	-22	38.9	199	13.7	-21	29.2		
19	146	23.1	131	05.7		43.1	65	09.9		16.6	243	23.7		38.9	214	16.2		29.2		
20	161	25.6	146	05.4		44.2	80	10.6		16.7	258	26.3		38.9	229	18.6		29.2		
21	176	28.0	161	05.1		45.4	95	11.3		16.8	273	29.0		38.9	244	21.1		29.2		
22	191	30.5	176	04.7		46.6	110	12.0		16.9	288	31.6		38.9	259	23.6		29.2		
23	206	33.0	191	04.4		47.7	125	12.7		17.0	303	34.3		38.9	274	26.1		29.2		
24	221	35.4	206	04.0	+4	48.9	140	13.4	+24	17.1	318	36.9	-22	38.9	289	28.6	-21	29.2		
Dif.	—		-3		+12		+7		+1		+26		0		+25					

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9			PHE { 4 ^h : 56'0 12 ^h : 56'2 20 ^h : 56'4														
	PMG: 11 ^h 56 ^m 8			Edad: 28 ^d 6														
	PMG: 11 ^h 41 ^m			R ^o : 48 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	R ^o	Hora	R ^o			
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m			
0	180	46.9	+15 49.0	190	05.0	135	+7 31.4	114	60 N	20 05	21 00	22 32	4 30	13	19 14	84		
1	195	47.0		204	37.5	134		42.8	113	58	19 54	20 44	34	16	07	81		
2	210	47.0		219	09.9	134	+7	54.1	113	56	45	30	38	19	19 02	77		
3	225	47.1		233	42.3	133	+8	05.4	113	54	37	19	42	21	18 56	76		
4	240	47.2		248	14.6	133		16.7	112	52	29	09	46	22	52	73		
5	255	47.2	+15 52.7	262	46.9	132	+8	27.9	112	50	19 23	20 00	4 49	24	18 48	71		
6	270	47.3	+15 53.4	277	19.1	131	+8	39.1	112	45	19 09	19 42	4 55	28	18 38	68		
7	285	47.3		291	51.2	131	+8	50.3	112	40	18 57	27	5 01	31	31	64		
8	300	47.4		306	23.3	131	+9	01.5	111	35	48	15	06	33	25	61		
9	315	47.5		320	55.4	130		12.6	111	30	39	19 05	10	36	19	59		
10	330	47.5		335	27.4	129		23.7	111	20	25	18 48	17	41	09	55		
11	345	47.6	+15 57.0	349	59.3	129	+9	34.8	110	10 N	18 12	18 34	5 24	44	18 01	51		
12	0	47.6	+15 57.7	4	31.2	128	+9	45.8	110	0	18 00	18 22	5 30	47	17 53	48		
13	15	47.7		19	03.0	128	+9	56.8	110	10 S	17 49	18 11	37	50	45	45		
14	30	47.8		33	34.8	126	+10	07.8	109	20	37	17 59	43	55	36	42		
15	45	47.8	+15 59.9	48	06.4	127		18.7	108	30	23	48	51	58	26	38		
16	60	47.9	+16 00.6	62	38.1	125		29.5	109	35	15	41	5 56	60	21	35		
17	75	47.9	+16 01.4	77	09.6	126	+10	40.4	108	40	17 06	17 34	6 01	63	17 15	33		
18	90	48.0	+16 02.1	91	41.2	124	+10	51.2	107	45	16 55	17 26	6 07	67	17 07	30		
19	105	48.0		106	12.6	124	+11	01.9	107	50	42	17	14	71	16 59	26		
20	120	48.1		120	44.0	123		12.6	107	52	37	13	17	73	55	24		
21	135	48.1		135	15.3	123		23.3	106	54	30	08	21	75	50	22		
22	150	48.2		149	46.6	122		33.9	106	56	23	17 03	25	77	45	20		
23	165	48.3		164	17.8	121		44.5	105	58	15	16 58	30	80	40	17		
24	180	48.3	+16 06.4	178	48.9		+11	55.0		60 S	16 06	16 52	6 35	83	16 34	14		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 9 ^h 12 ^m 1		Mag: -3.8 PMG: 10 ^h 16 ^m			Mag: +1.6 PMG: 14 ^h 38 ^m			Mag: -2.5 PMG: 02 ^h 45 ^m			Mag: +0.4 PMG: 04 ^h 41 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	221	35.4	206	04.0	+4 48.9	140	13.4	+24 17.1	318	36.9	-22 -38.9	289	28.6	-21 29.2
1	236	37.9	221	03.7	50.0	155	14.0	17.2	333	39.6	-38.9	304	31.0	29.2
2	251	40.4	236	03.3	51.2	170	14.7	17.3	348	42.2	-38.8	319	33.5	29.2
3	266	42.8	251	03.0	52.4	185	15.4	17.4	3 44.9	-38.8	-38.8	334	36.0	29.2
4	281	45.3	266	02.6	53.5	200	16.1	17.5	18 47.6	-38.8	-38.8	349	38.5	29.2
5	296	47.8	281	02.3	+4 54.7	215	16.8	+24 17.6	33 50.2	-22 -38.8	-38.8	4 41.0	-21 29.2	29.2
6	311	50.2	296	01.9	+4 55.8	230	17.5	+24 17.8	48 52.9	-22 -38.8	-38.8	19 43.5	-21 29.2	29.2
7	326	52.7	311	01.6	57.0	245	18.1	17.9	63 55.5	-38.8	-38.8	34 45.9	29.2	29.2
8	341	55.2	326	01.2	58.1	260	18.8	18.0	78 58.2	-38.8	-38.8	49 48.4	29.2	29.2
9	356	57.6	341	00.9	+4 59.3	275	19.5	18.1	94 00.8	-38.8	-38.8	64 50.9	29.2	29.2
10	12	00.1	356	00.5	+5 00.4	290	20.2	18.2	109 03.5	-38.8	-38.8	79 53.4	29.2	29.2
11	27	02.5	11	00.2	+5 01.6	305	20.9	+24 18.3	124 06.1	-22 -38.8	-38.8	94 55.9	-21 29.2	29.2
12	42	05.0	25	59.8	+5 02.8	320	21.6	+24 18.4	139 08.8	-22 -38.8	-38.8	109 58.4	-21 29.2	29.2
13	57	07.5	40	59.5	03.9	335	22.3	18.5	154 11.5	-38.8	-38.8	125 00.8	29.3	29.3
14	72	09.9	55	59.1	05.1	350	22.9	18.6	169 14.1	-38.8	-38.8	140 03.3	29.3	29.3
15	87	12.4	70	58.8	06.2	5 23.6	18.7	18.7	184 16.8	-38.8	-38.8	155 05.8	29.3	29.3
16	102	14.9	85	58.4	07.4	20 24.3	18.8	18.8	199 19.4	-38.7	-38.7	170 08.3	29.3	29.3
17	117	17.3	100	58.1	+5 08.5	35 25.0	+24 18.9	18.9	214 22.1	-22 -38.7	-38.7	185 10.8	-21 29.3	29.3
18	132	19.8	115	57.7	+5 09.7	50 25.7	+24 19.0	19.0	229 24.8	-22 -38.7	-38.7	200 13.3	-21 29.3	29.3
19	147	22.3	130	57.4	10.8	65 26.4	19.1	19.1	244 27.4	-38.7	-38.7	215 15.7	29.3	29.3
20	162	24.7	145	57.0	12.0	80 27.0	19.2	19.2	259 30.1	-38.7	-38.7	230 18.2	29.3	29.3
21	177	27.2	160	56.7	13.2	95 27.7	19.3	19.3	274 32.7	-38.7	-38.7	245 20.7	29.3	29.3
22	192	29.6	175	56.3	14.3	110 28.4	19.4	19.4	289 35.4	-38.7	-38.7	260 23.2	29.3	29.3
23	207	32.1	190	56.0	15.5	125 29.1	19.5	19.5	304 38.0	-38.7	-38.7	275 25.7	29.3	29.3
24	222	34.6	205	55.6	+5 16.6	140 29.8	+24 19.6	19.6	319 40.7	-22 -38.7	-38.7	290 28.2	-21 29.3	29.3
Dif.	—		-3 +12			+7 +1			+27 0			+25 0		

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 56 ^m 7				SD: 15°4 Edad: 0 ^d 1 PHE { 4^h: 56'6 12^h: 56'8 20^h: 57'0 PMG: 12 ^h 29 ^m R°: 51 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	R°		Hora	R°					
h	°	'	°	'	°	'			h m	h m	h m	h m m	h m m	h m m				
0	180	48.3	+16	06.4	178	48.9	120	+11	55.0	105	60 N	1 21	2 53	3 48	4 43	17	20 38	84
1	195	48.4		07.1	193	19.9	120	+12	05.5	104	58	1 54	3 09	3 59	50	20	28	81
2	210	48.4		07.8	207	50.9	120		15.9	104	56	2 18	22	4 08	4 57	22	19	78
3	225	48.5		08.6	222	21.9	118		26.3	103	54	37	34	16	5 03	24	12	75
4	240	48.5		09.3	236	52.7	118		36.6	103	52	2 52	44	24	08	27	20 05	74
5	255	48.6	+16	10.0	251	23.5	117	+12	46.9	102	50	3 05	3 53	4 30	5 13	28	19 59	72
6	270	48.6	+16	10.7	265	54.2	117	+12	57.1	102	45	3 31	4 11	4 44	5 23	32	19 46	68
7	285	48.7		11.4	280	24.9	116	+13	07.3	101	40	3 50	26	4 56	32	35	35	66
8	300	48.7		12.1	294	55.5	115		17.4	100	35	4 05	38	5 06	39	38	26	63
9	315	48.8		12.9	309	26.0	115		27.4	100	30	18	4 49	14	46	40	18	61
10	330	48.8		13.6	323	56.5	113		37.4	99	20	38	5 06	29	5 58	43	19 04	58
11	345	48.9	+16	14.3	338	26.8	113	+13	47.3	99	10 N	4 54	5 20	5 42	6 08	47	18 52	55
12	0	49.0	+16	15.0	352	57.1	113	+13	57.2	98	0	5 07	5 32	5 53	6 17	51	18 41	52
13	15	49.0		15.7	7	27.4	112	+14	07.0	97	10 S	18	43	6 05	27	53	30	49
14	30	49.1		16.4	21	57.6	110		16.7	97	20	28	5 54	17	38	56	18	46
15	45	49.1		17.1	36	27.6	111		26.4	96	30	38	6 06	31	49	61	18 04	43
16	60	49.2		17.9	50	57.7	109		36.0	95	35	43	13	39	6 56	63	17 56	41
17	75	49.2	+16	18.6	65	27.6	109	+14	45.5	95	40	5 48	6 20	6 48	7 04	65	17 48	37
18	90	49.3	+16	19.3	79	57.5	108	+14	55.0	94	45	5 53	6 28	6 59	7 14	68	17 37	35
19	105	49.3		20.0	94	27.3	107	+15	04.4	93	50	5 59	37	7 12	25	72	25	31
20	120	49.4		20.7	108	57.0	107		13.7	93	52	6 01	42	18	30	74	19	29
21	135	49.4		21.4	123	26.7	106		23.0	92	54	04	46	25	36	76	12	28
22	150	49.5		22.1	137	56.3	105		32.2	91	56	07	51	32	42	79	17 05	26
23	165	49.5		22.8	152	25.8	105		41.3	90	58	10	6 57	40	7 50	81	16 57	23
24	180	49.6	+16	23.5	166	55.3		+15	50.3		60 S	6 13	7 03	7 50	7 58	85	16 48	20
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 08 ^m 2		Mag: -3.8 PMG: 10 ^h 17 ^m			Mag: +1.7 PMG: 14 ^h 37 ^m			Mag: -2.5 PMG: 02 ^h 41 ^m			Mag: +0.4 PMG: 04 ^h 37 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	222	34.6	205	55.6	+5	16.6	140	29.8	+24	19.6	319	40.7	-22	38.7	290	28.2	-21	29.3
1	237	37.0	220	55.3		17.8	155	30.5		19.7	334	43.4		38.7	305	30.6		29.3
2	252	39.5	235	54.9		18.9	170	31.2		19.8	349	46.0		38.7	320	33.1		29.3
3	267	42.0	250	54.5		20.1	185	31.8		19.9	4	48.7		38.7	335	35.6		29.3
4	282	44.4	265	54.2		21.2	200	32.5		20.0	19	51.4		38.7	350	38.1		29.3
5	297	46.9	280	53.8	+5	22.4	215	33.2	+24	20.1	34	54.0	-22	38.6	5	40.6	-21	29.3
6	312	49.4	295	53.5	+5	23.5	230	33.9	+24	20.1	49	56.7	-22	38.6	20	43.1	-21	29.3
7	327	51.8	310	53.1		24.7	245	34.6		20.2	64	59.3		38.6	35	45.6		29.3
8	342	54.3	325	52.8		25.8	260	35.3		20.3	80	02.0		38.6	50	48.1		29.3
9	357	56.8	340	52.4		27.0	275	35.9		20.4	95	04.7		38.6	65	50.5		29.3
10	12	59.2	355	52.1		28.2	290	36.6		20.5	110	07.3		38.6	80	53.0		29.4
11	28	01.7	10	51.7	+5	29.3	305	37.3	+24	20.6	125	10.0	-22	38.6	95	55.5	-21	29.4
12	43	04.1	25	51.4	+5	30.5	320	38.0	+24	20.7	140	12.7	-22	38.6	110	58.0	-21	29.4
13	58	06.6	40	51.0		31.6	335	38.7		20.8	155	15.3		38.6	126	00.5		29.4
14	73	09.1	55	50.7		32.8	350	39.4		20.9	170	18.0		38.6	141	03.0		29.4
15	88	11.5	70	50.3		33.9	5	40.1		21.0	185	20.7		38.6	156	05.5		29.4
16	103	14.0	85	49.9		35.1	20	40.7		21.1	200	23.3		38.6	171	08.0		29.4
17	118	16.5	100	49.6	+5	36.2	35	41.4	+24	21.2	215	26.0	-22	38.6	186	10.4	-21	29.4
18	133	18.9	115	49.2	+5	37.4	50	42.1	+24	21.3	230	28.6	-22	38.5	201	12.9	-21	29.4
19	148	21.4	130	48.9		38.5	65	42.8		21.4	245	31.3		38.5	216	15.4		29.4
20	163	23.9	145	48.5		39.7	80	43.5		21.5	260	34.0		38.5	231	17.9		29.4
21	178	26.3	160	48.2		40.8	95	44.2		21.5	275	36.6		38.5	246	20.4		29.4
22	193	28.8	175	47.8		42.0	110	44.8		21.6	290	39.3		38.5	261	22.9		29.4
23	208	31.3	190	47.5		43.1	125	45.5		21.7	305	42.0		38.5	276	25.4		29.4
24	223	33.7	205	47.1	+5	44.3	140	46.2	+24	21.8	320	44.6	-22	38.5	291	27.9	-21	29.4
Dif.	—		-4		+12		+7		+1		+27		0		+25		0	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 56 ^m 7				SD: 15°5 Edad: 1 ^d 1 PHE 4^h: 57:1 12^h: 57:3 20^h: 57:5														
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Civil	Náut.	Hora	R°			Hora	R°					
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	180 195 210 225 240 255 270 285 300 315 330 345 0 15 30 45 60 75 90 105 120 135 150 165 180	49.6 49.6 49.7 49.7 49.8 49.8 49.8 49.9 49.9 50.0 50.0 50.1 50.1 50.2 50.2 50.3 50.3 50.4 50.4 50.4 50.5 50.5 50.6 50.6 50.7	+16 +16 +16 +16 +16 +16 +16 +16	23.5 24.2 24.9 25.7 26.4 27.1 27.8 28.5 29.2 29.9 30.6 31.3 32.0 32.7 33.4 34.1 34.8 35.5 36.2 36.9 37.6 38.3 39.0 39.7 40.4	166 181 195 210 224 239 253 268 282 297 311 326 340 355 9 24 38 53 67 82 96 110 125 139 154	55.3 24.6 53.9 23.1 52.3 21.4 50.4 19.3 48.2 16.9 45.6 14.3 42.8 11.3 39.7 08.1 36.3 04.5 32.7 00.7 28.7 56.6 24.4 52.2 19.9	103 103 102 102 101 100 99 99 97 97 97 95 95 94 94 92 92 92 90 90 89 88 88 87	+15 +15 +16 +16 +16 +16 +17 +17 +17 +18 +18 +18 33.5 40.6 47.7 54.7 01.6	90 89 88 87 86 86 85 84 83 82 81 81 79 79 77 77 76 75 74 73 71 71 70 69	60 N 58 56 54 52 50 45 40 35 30 20 10 N 0 10 S 20 30 35 40 45 50 52 54 56 58 60 S	h m 20 09 19 58 49 40 33 19 26 19 11 18 59 49 40 25 18 12 18 00 17 48 35 17 58 21 13 17 03 16 52 39 33 26 19 10 16 01	h m 21 06 20 49 35 23 13 20 03 19 44 29 17 19 06 18 49 18 34 18 22 18 10 17 58 46 39 32 24 14 10 05 17 00 16 54 16 47	h m 22 45 22 07 21 42 22 21 06 20 52 20 26 20 06 19 50 37 16 19 00 18 47 35 25 15 09 17 59 17 59 53 50 47 44 41 38	h m m 5 00 23 10 27 19 30 27 32 35 33 5 41 35 5 55 39 6 07 41 17 43 26 45 41 48 6 55 51 7 08 53 20 56 34 58 50 61 7 59 63 8 09 66 8 22 68 37 71 44 73 8 52 75 9 01 77 11 80 9 23 82	h m m 22 02 79 21 49 76 37 75 27 73 19 71 21 11 69 20 54 67 41 64 29 63 19 61 20 02 58 19 47 56 19 33 54 19 52 19 04 50 18 47 47 37 46 18 25 44 18 12 42 17 56 39 48 38 40 36 31 33 20 31 17 08 28				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 9 ^h 04 ^m 3		Mag: -3.8 PMG: 10 ^h 17 ^m			Mag: +1.7 PMG: 14 ^h 36 ^m			Mag: -2.5 PMG: 02 ^h 37 ^m			Mag: +0.4 PMG: 04 ^h 33 ^m							
	hG ☊	dec.	hG ♀	dec.	hG ♂	dec.	hG ♃	dec.	hG ♄	dec.									
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	223 238 253 268 283 298 313 328 343 358 13 29 44 59 74 89 104 119 134 149 164 179 194 209 224	33.7 36.2 38.6 41.1 43.6 46.0 48.5 51.0 53.4 55.9 58.4 00.8 03.3 05.8 08.2 10.7 13.1 15.6 18.1 20.5 23.0 25.5 27.9 30.4 32.9	205 220 235 250 265 280 295 310 325 340 355 10 25 40 55 70 85 100 115 130 145 160 175 190 205	47.1 46.7 46.4 46.0 45.7 45.3 45.0 44.6 44.2 43.9 43.5 43.2 42.8 42.5 42.1 41.7 41.4 41.0 40.7 40.3 39.9 39.6 39.2 38.9 38.5	+5 +5 +5 +5 +5 +6 +6 +6 +6	140 155 170 185 200 215 230 245 260 275 290 305 320 335 350 5 20 35 50 65 80 96 111 126 141	46.2 46.9 47.6 48.3 48.9 49.6 50.3 51.0 51.7 52.4 53.1 53.7 54.4 55.1 55.8 56.5 57.2 57.8 58.5 59.2 59.9 00.6 01.3 02.0 02.6	+24 +24 +24 +24 +24 23.0 23.0 23.1 23.2 +24 +24 23.5 23.5 23.6 23.7 23.8 +24	320 335 350 5 20 35 51 66 81 96 111 126 141 156 171 186 201 216 231 246 261 276 291 306 321	44.6 47.3 50.0 52.7 55.3 58.0 00.7 03.3 06.0 08.7 11.3 14.0 16.7 19.4 22.0 24.7 27.4 30.0 32.7 35.4 38.1 40.7 43.4 46.1 48.8	-22 -22 -22 -22 -22 -38.4 -38.4 -38.4 -38.4 -38.5 -38.4 -38.4 -38.4 -38.3 -38.3 -38.3 -38.3 -22	291 306 321 336 351 6 21 36 51 66 81 96 111 127 142 157 172 187 202 217 232 247 262 277 292	27.9 30.4 32.8 35.3 37.8 40.3 42.8 45.3 47.8 50.3 52.8 55.3 57.8 00.2 02.7 05.2 07.7 10.2 12.7 15.2 17.7 20.2 22.7 25.2 27.7	-21 -21 -21 -21 -21 -21 -21 -21	29.4 29.4 29.4 29.4 29.4 29.5 29.5 29.5 29.5 29.5 29.5 29.5 29.5 29.5 29.5 29.5 29.5 29.5 29.5 29.5 29.5 29.6 29.6 29.6				
Dif.	—	-4	+11		+7	+1		+27	0		+25								

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 56 ^m 6				SD: 15°7 Edad: 2 ^d 1		PHE { 4 ^h : 57°6 12 ^h : 57°8 20 ^h : 57°9		PMG: 14 ^h 14 ^m			Rº: 56 ^m			Hora		Rº		Hora		Rº	
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.				Náut.	Civil									
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m		
0	180	50.7	+16	40.4	154	19.9	86	+19	01.6	68	60 N	1 07	2 46	3 43	5 23	35	23 21	69				
1	195	50.7		41.1	168	47.5	86		08.4	67	58	1 45	3 03	3 54	37	37	23 05	68				
2	210	50.7		41.8	183	15.1	84		15.1	65	56	2 11	17	4 04	49	39	22 52	66				
3	225	50.8		42.5	197	42.5	85		21.6	65	54	31	29	12	5 59	41	40	66				
4	240	50.8		43.2	212	10.0	83		28.1	63	52	2 47	40	20	6 08	42	30	64				
5	255	50.9	+16	43.9	226	37.3	83	+19	34.4	63	50	3 00	3 49	4 27	6 16	44	22 20	65				
6	270	50.9	+16	44.5	241	04.6	82	+19	40.7	61	45	3 27	4 08	4 41	6 34	46	22 01	63				
7	285	51.0		45.2	255	31.8	81		46.8	60	40	3 47	24	4 53	6 48	48	21 45	62				
8	300	51.0		45.9	269	58.9	81		52.8	59	35	4 03	36	5 04	7 00	50	32	61				
9	315	51.0		46.6	284	26.0	80	+19	58.7	58	30	16	4 47	13	11	50	20	61				
10	330	51.1		47.3	298	53.0	80	+20	04.5	57	20	37	5 04	28	29	53	21 00	60				
11	345	51.1	+16	48.0	313	20.0	79	+20	10.2	56	10 N	4 53	5 19	5 41	7 46	54	20 43	58				
12	0	51.2	+16	48.7	327	46.9	78	+20	15.8	54	0	5 06	5 32	5 53	8 01	56	20 27	57				
13	15	51.2		49.4	342	13.7	78		21.2	54	10 S	18	43	6 05	16	57	20 11	56				
14	30	51.2		50.1	356	40.5	76		26.6	52	20	29	5 55	18	32	59	19 54	55				
15	45	51.3		50.8	11	07.1	77		31.8	51	30	39	6 08	33	8 51	61	34	53				
16	60	51.3		51.5	25	33.8	76		36.9	50	35	44	14	41	9 02	62	23	52				
17	75	51.4	+16	52.1	40	00.4	75	+20	41.9	48	40	5 49	6 22	6 50	9 15	63	19 09	52				
18	90	51.4	+16	52.8	54	26.9	74	+20	46.7	48	45	5 55	6 30	7 02	9 30	65	18 54	50				
19	105	51.4		53.5	68	53.3	74		51.5	46	50	6 01	40	15	48	68	35	48				
20	120	51.5		54.2	83	19.7	74	+20	56.1	45	52	04	45	21	9 57	68	26	47				
21	135	51.5		54.9	97	46.1	73	+21	00.6	43	54	07	49	28	10 07	70	16	46				
22	150	51.6		55.6	112	12.4	72		04.9	43	56	10	6 55	36	18	71	18 04	45				
23	165	51.6		56.3	126	38.6	72		09.2	41	58	13	7 01	44	10 31	73	17 51	44				
24	180	51.6	+16	56.9	141	04.8		+21	13.3		60 S	6 17	7 07	7 54	10 45	76	17 36	41				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 9 ^h 00 ^m 3		Mag: -3.8 PMG: 10 ^h 18 ^m			Mag: +1.7 PMG: 14 ^h 35 ^m			Mag: -2.5 PMG: 02 ^h 32 ^m			Mag: +0.4 PMG: 04 ^h 29 ^m										
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	224	32.9	205	38.5	+6	11.8	141	02.6	+24	23.9	321	48.8	-22	38.3	292	27.7	-21	29.6				
1	239	35.3	220	38.1		13.0	156	03.3		23.9	336	51.4		38.3	307	30.2		29.6				
2	254	37.8	235	37.8		14.1	171	04.0		24.0	351	54.1		38.3	322	32.7		29.6				
3	269	40.2	250	37.4		15.3	186	04.7		24.1	6	56.8		38.3	337	35.1		29.6				
4	284	42.7	265	37.1		16.4	201	05.4		24.2	21	59.5		38.3	352	37.6		29.6				
5	299	45.2	280	36.7	+6	17.5	216	06.1	+24	24.3	37	02.1	-22	38.3	7	40.1	-21	29.6				
6	314	47.6	295	36.3	+6	18.7	231	06.7	+24	24.3	52	04.8	-22	38.3	22	42.6	-21	29.6				
7	329	50.1	310	36.0		19.8	246	07.4		24.4	67	07.5		38.2	37	45.1		29.6				
8	344	52.6	325	35.6		21.0	261	08.1		24.5	82	10.2		38.2	52	47.6		29.6				
9	359	55.0	340	35.2		22.1	276	08.8		24.6	97	12.8		38.2	67	50.1		29.6				
10	14	57.5	355	34.9		23.3	291	09.5		24.7	112	15.5		38.2	82	52.6		29.6				
11	30	00.0	10	34.5	+6	24.4	306	10.2	+24	24.7	127	18.2	-22	38.2	97	55.1	-21	29.6				
12	45	02.4	25	34.2	+6	25.6	321	10.8	+24	24.8	142	20.9	-22	38.2	112	57.6	-21	29.6				
13	60	04.9	40	33.8		26.7	336	11.5		24.9	157	23.6		38.2	128	00.1		29.6				
14	75	07.4	55	33.4		27.8	351	12.2		25.0	172	26.2		38.2	143	02.6		29.7				
15	90	09.8	70	33.1		29.0	6	12.9		25.0	187	28.9		38.2	158	05.1		29.7				
16	105	12.3	85	32.7		30.1	21	13.6		25.1	202	31.6		38.2	173	07.6		29.7				
17	120	14.7	100	32.3	+6	31.3	36	14.3	+24	25.2	217	34.3	-22	38.2	188	10.1	-21	29.7				
18	135	17.2	115	32.0	+6	32.4	51	15.0	+24	25.3	232	37.0	-22	38.1	203	12.6	-21	29.7				
19	150	19.7	130	31.6		33.5	66	15.6		25.4	247	39.6		38.1	218	15.1		29.7				
20	165	22.1	145	31.2		34.7	81	16.3		25.4	262	42.3		38.1	233	17.6		29.7				
21	180	24.6	160	30.9		35.8	96	17.0		25.5	277	45.0		38.1	248	20.1		29.7				
22	195	27.1	175	30.5		37.0	111	17.7		25.6	292	47.7		38.1	263	22.6		29.7				
23	210	29.5	190	30.1		38.1	126	18.4		25.6	307	50.4		38.1	278	25.1		29.7				
24	225	32.0	205	29.8	+6	39.3	141	19.1	+24	25.7	322	53.0	-22	38.1	293	27.6	-21	29.7				
Dif.	—		-4		+11		+7		+1		+27		0		+25							

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8					PHE {		4 ^h : 58'1 12 ^h : 58'2 20 ^h : 58'4											
	PMG: 11 ^h 56 ^m 5																		
	Edad: 3 ^d 1				SD: 15'8		Rº: 58 ^m												
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m			
0	180	51.6	+16	56.9	141	04.8	71	+21 13.3	40	60 N	20 14	21 12	23 02	5 58	50	** ** *	** ** *		
1	195	51.7		57.6	155	30.9	71		17.3	38	58	20 03	20 55	22 16	6 14	51	** ** *	** ** *	
2	210	51.7		58.3	169	57.0	70		21.1	38	56	19 53		40	21 48	28	52	23 58	55
3	225	51.7		59.0	184	23.0	70		24.9	36	54		44	27	28	40	52	46	55
4	240	51.8	+16	59.7	198	49.0	69		28.5	34	52		36	16	21 11	6 50	54	34	56
5	255	51.8	+17	00.4	213	14.9	69	+21	31.9	34	50	19 29	20 07	20 57	7 00	53	23 25	55	
6	270	51.8	+17	01.0	227	40.8	68	+21	35.3	32	45	19 14	19 47	20 29	7 20	54	23 04	56	
7	285	51.9		01.7	242	06.6	68		38.5	30	40	19 01		31	20 08	36	55	22 47	57
8	300	51.9		02.4	256	32.4	67		41.5	30	35	18 51		18	19 52	7 50	55	33	57
9	315	52.0		03.1	270	58.1	67		44.5	28	30		42	19 07	38	8 01	57	21	57
10	330	52.0		03.8	285	23.8	67		47.3	27	20		26	18 49	17	22	57	22 00	57
11	345	52.0	+17	04.4	299	49.5	66	+21	50.0	25	10 N	18 13	18 35	19 00	8 40	57	21 41	58	
12	0	52.1	+17	05.1	314	15.1	65	+21	52.5	24	0	18 00	18 22	18 47	8 57	57	21 24	58	
13	15	52.1		05.8	328	40.6	66		54.9	23	10 S	17 48	18 10		35	9 13	59	21 07	58
14	30	52.1		06.5	343	06.2	65		57.2	21	20		34	17 57	24	31	59	20 49	58
15	45	52.2		07.2	357	31.7	64	+21	59.3	20	30		20	45	13	9 52	59	27	59
16	60	52.2		07.8	11	57.1	65	+22	01.3	19	35		11	38	08	10 04	60	15	59
17	75	52.2	+17	08.5	26	22.6	63	+22	03.2	17	40	17 01	17 30	18 02	10 18	60	20 01	59	
18	90	52.3	+17	09.2	40	47.9	64	+22	04.9	16	45	16 50	17 21	17 56	10 35	60	19 44	59	
19	105	52.3		09.9	55	13.3	63		06.5	14	50		36	11	50	10 56	60	23	59
20	120	52.3		10.5	69	38.6	63		07.9	13	52		30	06	47	11 05	61	13	59
21	135	52.4		11.2	84	03.9	63		09.2	12	54		23	17 01	44	17	60	19 02	59
22	150	52.4		11.9	98	29.2	62		10.4	10	56		15	16 56	41	29	61	18 49	59
23	165	52.4		12.6	112	54.4	63		11.4	9	58	16 06		50	37	11 44	61	35	58
24	180	52.5	+17	13.2	127	19.7		+22	12.3		60 S	15 56	16 43	17 34	12 01	62	18 17	59	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 8 ^h 56 ^m 4		Mag: -3.8 PMG: 10 ^h 18 ^m			Mag: +1.7 PMG: 14 ^h 34 ^m			Mag: -2.5 PMG: 02 ^h 28 ^m			Mag: +0.4 PMG: 04 ^h 25 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	225	32.0	205	29.8	+6	39.3	141	19.1	+24	25.7	322	53.0	-22	-38.1	293	27.6	-21	29.7	
1	240	34.5	220	29.4		40.4	156	19.7		25.8	337	55.7		-38.1	308	30.1		29.7	
2	255	36.9	235	29.1		41.5	171	20.4		25.9	352	58.4		-38.1	323	32.6		29.7	
3	270	39.4	250	28.7		42.7	186	21.1		25.9	8	01.1		-38.1	338	35.1		29.7	
4	285	41.9	265	28.3		43.8	201	21.8		26.0	23	03.8		-38.1	353	37.6		29.7	
5	300	44.3	280	28.0	+6	45.0	216	22.5	+24	26.1	38	06.5	-22	-38.1	8	40.1	-21	29.7	
6	315	46.8	295	27.6	+6	46.1	231	23.2	+24	26.2	53	09.1	-22	-38.0	23	42.6	-21	29.8	
7	330	49.2	310	27.2		47.2	246	23.8		26.2	68	11.8		-38.0	38	45.1		29.8	
8	345	51.7	325	26.9		48.4	261	24.5		26.3	83	14.5		-38.0	53	47.6		29.8	
9	0	54.2	340	26.5		49.5	276	25.2		26.4	98	17.2		-38.0	68	50.1		29.8	
10	15	56.6	355	26.1		50.6	291	25.9		26.4	113	19.9		-38.0	83	52.6		29.8	
11	30	59.1	10	25.7	+6	51.8	306	26.6	+24	26.5	128	22.6	-22	-38.0	98	55.1	-21	29.8	
12	46	01.6	25	25.4	+6	52.9	321	27.3	+24	26.6	143	25.2	-22	-38.0	113	57.6	-21	29.8	
13	61	04.0	40	25.0		54.1	336	28.0		26.6	158	27.9		-38.0	129	00.1		29.8	
14	76	06.5	55	24.6		55.2	351	28.6		26.7	173	30.6		-38.0	144	02.6		29.8	
15	91	09.0	70	24.3		56.3	6	29.3		26.8	188	33.3		-38.0	159	05.1		29.8	
16	106	11.4	85	23.9		57.5	21	30.0		26.8	203	36.0		-38.0	174	07.6		29.8	
17	121	13.9	100	23.5	+6	58.6	36	30.7	+24	26.9	218	38.7	-22	-37.9	189	10.1	-21	29.8	
18	136	16.4	115	23.2	+6	59.7	51	31.4	+24	27.0	233	41.4	-22	-37.9	204	12.6	-21	29.8	
19	151	18.8	130	22.8	+7	00.9	66	32.1		27.1	248	44.0		-37.9	219	15.1		29.8	
20	166	21.3	145	22.4		02.0	81	32.7		27.1	263	46.7		-37.9	234	17.6		29.9	
21	181	23.7	160	22.1		03.2	96	33.4		27.2	278	49.4		-37.9	249	20.1		29.9	
22	196	26.2	175	21.7		04.3	111	34.1		27.3	293	52.1		-37.9	264	22.6		29.9	
23	211	28.7	190	21.3		05.4	126	34.8		27.3	308	54.8		-37.9	279	25.1		29.9	
24	226	31.1	205	20.9	+7	06.6	141	35.5	+24	27.4	323	57.5	-22	-37.9	294	27.6	-21	29.9	
Dif.	—		-4		+11		+7		+1		+27		0		+25				

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 11 ^h 56 ^m 5				SD: 15°9 Edad: 4 ^d 1 PHE { 4 ^h : 58'5 12 ^h : 58'6 20 ^h : 58'7 PMG: 16 ^h 08 ^m Rº: 58 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº					
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	180	52.5	+17	13.2	127	19.7	62	+22	12.3	8	60 N	0 50	2 40	3 38	6 48	67	0 30	53
1	195	52.5		13.9	141	44.9	61		13.1	6	58	1 36	2 58	3 50	7 05	67	0 13	54
2	210	52.5		14.6	156	10.0	62		13.7	4	56	2 04	3 12	4 00	20	66	***	***
3	225	52.6		15.3	170	35.2	61		14.1	4	54	25	25	09	32	65	***	***
4	240	52.6		15.9	185	00.3	61		14.5	1	52	42	36	16	44	64	***	***
5	255	52.6	+17	16.6	199	25.4	61	+22	14.6	1	50	2 56	3 46	4 24	7 53	64	***	***
6	270	52.6	+17	17.3	213	50.5	61	+22	14.7	1	45	3 24	4 05	4 39	8 14	63	***	***
7	285	52.7		17.9	228	15.6	60		14.6	3	40	3 44	21	4 51	31	62	23 44	50
8	300	52.7		18.6	242	40.6	61		14.3	4	35	4 01	34	5 02	45	62	30	52
9	315	52.7		19.3	257	05.7	60		13.9	5	30	14	4 45	11	8 58	61	23 18	53
10	330	52.8		19.9	271	30.7	61		13.4	7	20	36	5 03	27	9 19	60	22 57	55
11	345	52.8	+17	20.6	285	55.8	60	+22	12.7	8	10 N	4 52	5 18	5 40	9 37	59	22 39	57
12	0	52.8	+17	21.3	300	20.8	60	+22	11.9	10	0	5 06	5 31	5 53	9 54	59	22 22	58
13	15	52.8		21.9	314	45.8	60		10.9	11	10 S	18	44	6 06	10 12	57	22 05	60
14	30	52.9		22.6	329	10.8	60		09.8	12	20	29	5 56	19	30	56	21 47	61
15	45	52.9		23.3	343	35.8	60		08.6	14	30	40	6 09	34	10 51	55	26	63
16	60	52.9		23.9	358	00.8	60		07.2	15	35	45	16	43	11 04	54	14	63
17	75	53.0	+17	24.6	12	25.8	60	+22	05.7	17	40	5 51	6 24	6 52	11 18	54	21 00	64
18	90	53.0	+17	25.3	26	50.8	59	+22	04.0	18	45	5 57	6 33	7 04	11 35	52	20 43	66
19	105	53.0		25.9	41	15.7	60		02.2	20	50	6 04	43	18	11 56	51	22	68
20	120	53.0		26.6	55	40.7	60	+22	00.2	21	52	07	48	24	12 06	50	12	69
21	135	53.1		27.3	70	05.7	60	+21	58.1	22	54	10	53	32	17	50	20 01	70
22	150	53.1		27.9	84	30.7	60		55.9	24	56	13	6 58	40	30	48	19 48	72
23	165	53.1		28.6	98	55.7	61		53.5	25	58	16	7 04	49	12 45	47	19 33	74
24	180	53.1	+17	29.2	113	20.8		+21	51.0		60 S	6 20	7 11	7 59	13 03	44	19 16	75
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 52 ^m 5		Mag: -3.8 PMG: 10 ^h 19 ^m				Mag: +1.7 PMG: 14 ^h 33 ^m				Mag: -2.5 PMG: 02 ^h 24 ^m				Mag: +0.4 PMG: 04 ^h 21 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	226	31.1	205	20.9	+7	06.6	141	35.5	+24	27.4	323	57.5	-22	37.9	294	27.6	-21	29.9
1	241	33.6	220	20.6		07.7	156	36.2		27.4	339	00.2		37.9	309	30.1		29.9
2	256	36.1	235	20.2		08.8	171	36.8		27.5	354	02.9		37.9	324	32.6		29.9
3	271	38.5	250	19.8		10.0	186	37.5		27.6	9	05.6		37.9	339	35.1		29.9
4	286	41.0	265	19.5		11.1	201	38.2		27.6	24	08.2		37.8	354	37.6		29.9
5	301	43.5	280	19.1	+7	12.2	216	38.9	+24	27.7	39	10.9	-22	37.8	9	40.1	-21	29.9
6	316	45.9	295	18.7	+7	13.4	231	39.6	+24	27.8	54	13.6	-22	37.8	24	42.6	-21	29.9
7	331	48.4	310	18.3		14.5	246	40.3		27.8	69	16.3		37.8	39	45.1		29.9
8	346	50.9	325	18.0		15.6	261	41.0		27.9	84	19.0		37.8	54	47.6		29.9
9	1	53.3	340	17.6		16.8	276	41.6		28.0	99	21.7		37.8	69	50.1		30.0
10	16	55.8	355	17.2		17.9	291	42.3		28.0	114	24.4		37.8	84	52.6		30.0
11	31	58.2	10	16.9	+7	19.0	306	43.0	+24	28.1	129	27.1	-22	37.8	99	55.1	-21	30.0
12	47	00.7	25	16.5	+7	20.2	321	43.7	+24	28.1	144	29.8	-22	37.8	114	57.6	-21	30.0
13	62	03.2	40	16.1		21.3	336	44.4		28.2	159	32.5		37.8	130	00.1		30.0
14	77	05.6	55	15.7		22.4	351	45.1		28.3	174	35.2		37.8	145	02.6		30.0
15	92	08.1	70	15.4		23.6	6	45.7		28.3	189	37.8		37.7	160	05.1		30.0
16	107	10.6	85	15.0		24.7	21	46.4		28.4	204	40.5		37.7	175	07.6		30.0
17	122	13.0	100	14.6	+7	25.8	36	47.1	+24	28.4	219	43.2	-22	37.7	190	10.1	-21	30.0
18	137	15.5	115	14.2	+7	27.0	51	47.8	+24	28.5	234	45.9	-22	37.7	205	12.6	-21	30.0
19	152	18.0	130	13.9		28.1	66	48.5		28.6	249	48.6		37.7	220	15.1		30.0
20	167	20.4	145	13.5		29.2	81	49.2		28.6	264	51.3		37.7	235	17.7		30.0
21	182	22.9	160	13.1		30.3	96	49.9		28.7	279	54.0		37.7	250	20.2		30.0
22	197	25.3	175	12.7		31.5	111	50.5		28.7	294	56.7		37.7	265	22.7		30.1
23	212	27.8	190	12.4		32.6	126	51.2		28.8	309	59.4		37.7	280	25.2		30.1
24	227	30.3	205	12.0	+7	33.7	141	51.9	+24	28.8	325	02.1	-22	37.7	295	27.7	-21	30.1
Dif.	—		-4		+11		+7		+1		+27		0		+25			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8			PHE { 4 ^h : 58'8 12 ^h : 58'9 20 ^h : 59'0													
	PMG: 11 ^h 56 ^m 4			Edad: 5 ^d 1													
	PMG: 17 ^h 06 ^m			Rº: 57 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m	h m	m		
0	180	53.1	+17 29.2	113	20.8	60	+21 51.0	27	60 N	20 19	21 19	23 24	7 55	82	1 23 38		
1	195	53.2	29.9	127	45.8	60	48.3	28	58	20 07	21 00	22 26	8 12	79	1 07 40		
2	210	53.2	30.6	142	10.8	61	45.5	30	56	19 57	20 45	21 56	26	76	0 53 42		
3	225	53.2	31.2	156	35.9	60	42.5	31	54	47	32	33	37	75	41 43		
4	240	53.2	31.9	171	00.9	61	39.4	32	52	39	20	16	48	73	30 45		
5	255	53.3	+17 32.5	185	26.0	61	+21 36.2	34	50	19 32	20 10	21 01	8 57	72	0 20 47		
6	270	53.3	+17 33.2	199	51.1	61	+21 32.8	35	45	19 16	19 50	20 32	9 17	69	0 00 49		
7	285	53.3	33.8	214	16.2	61	29.3	37	40	19 03	34	20 11	33	67	*** ** *		
8	300	53.3	34.5	228	41.3	61	25.6	37	35	18 52	20	19 54	47	65	*** ** *		
9	315	53.4	35.2	243	06.4	62	21.9	40	30	43	19 09	40	9 59	64	*** ** *		
10	330	53.4	35.8	257	31.6	61	17.9	40	20	27	18 50	18	10 19	61	23 52 51		
11	345	53.4	+17 36.5	271	56.7	62	+21 13.9	43	10 N	18 13	18 35	19 01	10 36	60	23 36 53		
12	0	53.4	+17 37.1	286	21.9	63	+21 09.6	43	0	18 00	18 22	18 47	10 53	57	23 20 57		
13	15	53.5	37.8	300	47.2	62	05.3	45	10 S	17 47	18 09	35	11 09	55	23 05 59		
14	30	53.5	38.4	315	12.4	63	+21 00.8	46	20	34	17 57	23	26	53	22 48 62		
15	45	53.5	39.1	329	37.7	63	+20 56.2	48	30	18	43	12	46	51	29 64		
16	60	53.5	39.7	344	03.0	63	51.4	48	35	17 09	36	06	11 58	49	17 67		
17	75	53.6	+17 40.4	358	28.3	63	+20 46.6	51	40	16 59	17 28	18 00	12 12	47	22 04 69		
18	90	53.6	+17 41.0	12	53.6	64	+20 41.5	51	45	16 47	17 19	17 54	12 27	45	21 49 72		
19	105	53.6	41.7	27	19.0	64	36.4	53	50	33	08	47	47	42	30 75		
20	120	53.6	42.3	41	44.4	65	31.1	54	52	26	17 03	44	12 56	41	21 77		
21	135	53.6	43.0	56	09.9	64	25.7	56	54	19	16 58	41	13 07	38	11 79		
22	150	53.7	43.6	70	35.3	66	20.1	57	56	11	52	38	18	37	21 00 81		
23	165	53.7	44.3	85	00.9	65	14.4	58	58	16 01	46	34	32	34	20 47 83		
24	180	53.7	+17 44.9	99	26.4		+20 08.6		60 S	15 51	16 39	17 30	13 47	31	20 31 87		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 8 ^h 48 ^m 5		Mag: -3.8 PMG: 10 ^h 19 ^m			Mag: +1.7 PMG: 14 ^h 32 ^m			Mag: -2.5 PMG: 02 ^h 19 ^m			Mag: +0.4 PMG: 04 ^h 17 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	227	30.3	205	12.0	+7 33.7	141	51.9	+24 28.8	325	02.1	-22 -37.7	295	27.7	-21 30.1			
1	242	32.7	220	11.6	34.9	156	52.6	28.9	340	04.8	-37.7	310	30.2	30.1			
2	257	35.2	235	11.2	36.0	171	53.3	29.0	355	07.5	-37.6	325	32.7	30.1			
3	272	37.7	250	10.8	37.1	186	54.0	29.0	10	10.2	-37.6	340	35.2	30.1			
4	287	40.1	265	10.5	38.2	201	54.6	29.1	25	12.9	-37.6	355	37.7	30.1			
5	302	42.6	280	10.1	+7 39.4	216	55.3	+24 29.1	40	15.6	-22 -37.6	10	40.2	-21 30.1			
6	317	45.1	295	09.7	+7 40.5	231	56.0	+24 29.2	55	18.3	-22 -37.6	25	42.7	-21 30.1			
7	332	47.5	310	09.3	41.6	246	56.7	29.2	70	21.0	-37.6	40	45.2	30.1			
8	347	50.0	325	09.0	42.8	261	57.4	29.3	85	23.7	-37.6	55	47.7	30.1			
9	2	52.5	340	08.6	43.9	276	58.1	29.3	100	26.4	-37.6	70	50.2	30.1			
10	17	54.9	355	08.2	45.0	291	58.8	29.4	115	29.1	-37.6	85	52.8	30.1			
11	32	57.4	10	07.8	+7 46.1	306	59.4	+24 29.4	130	31.8	-22 -37.6	100	55.3	-21 30.2			
12	47	59.8	25	07.4	+7 47.3	322	00.1	+24 29.5	145	34.5	-22 -37.6	115	57.8	-21 30.2			
13	63	02.3	40	07.1	48.4	337	00.8	29.6	160	37.2	-37.5	131	00.3	30.2			
14	78	04.8	55	06.7	49.5	352	01.5	29.6	175	39.8	-37.5	146	02.8	30.2			
15	93	07.2	70	06.3	50.6	7	02.2	29.7	190	42.5	-37.5	161	05.3	30.2			
16	108	09.7	85	05.9	51.8	22	02.9	29.7	205	45.2	-37.5	176	07.8	30.2			
17	123	12.2	100	05.5	+7 52.9	37	03.5	+24 29.8	220	47.9	-22 -37.5	191	10.3	-21 30.2			
18	138	14.6	115	05.2	+7 54.0	52	04.2	+24 29.8	235	50.6	-22 -37.5	206	12.8	-21 30.2			
19	153	17.1	130	04.8	55.1	67	04.9	29.9	250	53.3	-37.5	221	15.3	30.2			
20	168	19.6	145	04.4	56.3	82	05.6	29.9	265	56.0	-37.5	236	17.8	30.2			
21	183	22.0	160	04.0	57.4	97	06.3	30.0	280	58.7	-37.5	251	20.4	30.2			
22	198	24.5	175	03.6	58.5	112	07.0	30.0	296	01.4	-37.5	266	22.9	30.2			
23	213	27.0	190	03.3	+7 59.6	127	07.7	30.1	311	04.2	-37.4	281	25.4	30.3			
24	228	29.4	205	02.9	+8 00.8	142	08.3	+24 30.1	326	06.9	-22 -37.4	296	27.9	-21 30.3			
Dif.	—		-4		+11	+7		+1	+27		0		+25				

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 11 ^h 56 ^m 4				SD: 16°1 Edad: 6 ^d 1		PHE { 4 ^h : 59°1 12 ^h : 59°2 20 ^h : 59°2		PMG: 18 ^h 03 ^m			Rº: 55 ^m			Hora	Rº	Hora	Rº
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº					
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	h	m
0	180	53.7	+17	44.9	99	26.4	66	+20	08.6	59	60 N	0 26	2 33	3 33	9 17	90	2 01	26
1	195	53.7		45.6	113	52.0	66	+20	02.7	61	58	1 26	2 52	45	31	86	1 47	29
2	210	53.7		46.2	128	17.6	66	+19	56.6	62	56	1 57	3 08	3 56	42	83	35	32
3	225	53.8		46.9	142	43.2	67		50.4	64	54	2 19	21	4 05	9 52	81	24	35
4	240	53.8		47.5	157	08.9	67		44.0	64	52	37	32	13	10 01	79	15	36
5	255	53.8	+17	48.2	171	34.6	68	+19	37.6	66	50	2 52	3 42	4 21	10 09	77	1 07	38
6	270	53.8	+17	48.8	186	00.4	68	+19	31.0	67	45	3 20	4 03	4 36	10 26	73	0 49	41
7	285	53.8		49.5	200	26.2	68		24.3	69	40	42	19	4 49	40	70	34	44
8	300	53.8		50.1	214	52.0	69		17.4	69	35	3 59	32	5 00	10 52	68	22	46
9	315	53.9		50.8	229	17.9	69		10.5	71	30	4 13	4 44	10	11 03	65	0 11	48
10	330	53.9		51.4	243	43.8	70	+19	03.4	72	20	35	5 02	26	20	62	** ** *	**
11	345	53.9	+17	52.0	258	09.8	70	+18	56.2	73	10 N	4 52	5 18	5 40	11 36	58	** ** *	**
12	0	53.9	+17	52.7	272	35.8	71	+18	48.9	75	0	5 06	5 31	5 53	11 50	55	** ** *	**
13	15	53.9		53.3	287	01.9	71		41.4	75	10 S	18	44	6 06	12 04	53	** ** *	**
14	30	54.0		54.0	301	28.0	71		33.9	77	20	30	5 56	20	19	50	23 50	61
15	45	54.0		54.6	315	54.1	72		26.2	78	30	41	6 10	35	37	46	33	66
16	60	54.0		55.2	330	20.3	72		18.4	79	35	47	17	44	47	44	24	68
17	75	54.0	+17	55.9	344	46.5	73	+18	10.5	80	40	5 53	6 25	6 54	12 59	41	23 13	71
18	90	54.0	+17	56.5	359	12.8	73	+18	02.5	82	45	5 59	6 35	7 06	13 12	38	23 01	74
19	105	54.0		57.2	13	39.1	74	+17	54.3	82	50	6 06	45	21	29	34	22 45	78
20	120	54.0		57.8	28	05.5	74		46.1	84	52	09	50	27	37	32	38	80
21	135	54.1		58.4	42	31.9	74		37.7	85	54	13	6 56	35	45	30	30	82
22	150	54.1		59.1	56	58.3	76		29.2	86	56	16	7 02	43	13 55	28	21	85
23	165	54.1	+17	59.7	71	24.9	75		20.6	87	58	20	08	7 53	14 06	25	22 10	88
24	180	54.1	+18	00.3	85	51.4		+17	11.9		60 S	6 24	7 15	8 04	14 18	22	21 58	92
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 8 ^h 44 ^m 6		Mag: -3.8 PMG: 10 ^h 20 ^m			Mag: +1.7 PMG: 14 ^h 31 ^m			Mag: -2.5 PMG: 02 ^h 15 ^m			Mag: +0.4 PMG: 04 ^h 13 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	228	29.4	205	02.9	+8	00.8	142	08.3	+24	30.1	326	06.9	-22	37.4	296	27.9	-21	30.3
1	243	31.9	220	02.5		01.9	157	09.0		30.2	341	09.6		37.4	311	30.4		30.3
2	258	34.3	235	02.1		03.0	172	09.7		30.2	356	12.3		37.4	326	32.9		30.3
3	273	36.8	250	01.7		04.1	187	10.4		30.3	11	15.0		37.4	341	35.4		30.3
4	288	39.3	265	01.3		05.2	202	11.1		30.3	26	17.7		37.4	356	37.9		30.3
5	303	41.7	280	01.0	+8	06.4	217	11.8	+24	30.3	41	20.4	-22	37.4	11	40.4	-21	30.3
6	318	44.2	295	00.6	+8	07.5	232	12.5	+24	30.4	56	23.1	-22	37.4	26	43.0	-21	30.3
7	333	46.7	310	00.2		08.6	247	13.1		30.4	71	25.8		37.4	41	45.5		30.3
8	348	49.1	324	59.8		09.7	262	13.8		30.5	86	28.5		37.4	56	48.0		30.3
9	3	51.6	339	59.4		10.8	277	14.5		30.5	101	31.2		37.3	71	50.5		30.3
10	18	54.1	354	59.0		12.0	292	15.2		30.6	116	33.9		37.3	86	53.0		30.3
11	33	56.5	9	58.7	+8	13.1	307	15.9	+24	30.6	131	36.6	-22	37.3	101	55.5	-21	30.4
12	48	59.0	24	58.3	+8	14.2	322	16.6	+24	30.7	146	39.3	-22	37.3	116	58.0	-21	30.4
13	64	01.5	39	57.9		15.3	337	17.3		30.7	161	42.0		37.3	132	00.5		30.4
14	79	03.9	54	57.5		16.4	352	17.9		30.8	176	44.7		37.3	147	03.1		30.4
15	94	06.4	69	57.1		17.6	7	18.6		30.8	191	47.4		37.3	162	05.6		30.4
16	109	08.8	84	56.7		18.7	22	19.3		30.8	206	50.1		37.3	177	08.1		30.4
17	124	11.3	99	56.3	+8	19.8	37	20.0	+24	30.9	221	52.8	-22	37.3	192	10.6	-21	30.4
18	139	13.8	114	56.0	+8	20.9	52	20.7	+24	30.9	236	55.5	-22	37.3	207	13.1	-21	30.4
19	154	16.2	129	55.6		22.0	67	21.4		31.0	251	58.2		37.2	222	15.6		30.4
20	169	18.7	144	55.2		23.2	82	22.0		31.0	267	00.9		37.2	237	18.1		30.4
21	184	21.2	159	54.8		24.3	97	22.7		31.1	282	03.6		37.2	252	20.7		30.4
22	199	23.6	174	54.4		25.4	112	23.4		31.1	297	06.4		37.2	267	23.2		30.5
23	214	26.1	189	54.0		26.5	127	24.1		31.1	312	09.1		37.2	282	25.7		30.5
24	229	28.6	204	53.6	+8	27.6	142	24.8	+24	31.2	327	11.8	-22	37.2	297	28.2	-21	30.5
Dif.	—		-4		+11		+7		0		+27		0		+25			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8			SD: 16'1		PHE {		4 ^h : 59'3									
	PMG: 11 ^h 56 ^m 4			Edad: 7 ^d 1		12 ^h : 59'3		20 ^h : 59'4									
				PMG: 18 ^h 58 ^m		Rº: 53 ^m											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°		h m	h m	h m	m	h m	m	h m	m
0	180	54.1	+18 00.3	85	51.4	76	+17 11.9	88	60 N	20 24	21 25	10 47	92	2 27	19		
1	195	54.1	01.0	100	18.0	77	+17 03.1	89	58	11	21 05	10 57	88	16	22		
2	210	54.1	01.6	114	44.7	77	+16 54.2	90	56	20 00	20 49	11 05	86	2 07	25		
3	225	54.2	02.3	129	11.4	77	45.2	91	54	19 51	36	13	83	1 59	27		
4	240	54.2	02.9	143	38.1	78	36.1	93	52	42	24	20	81	51	30		
5	255	54.2	+18 03.5	158	04.9	79	+16 26.8	93	50	19 35	20 14	11 26	79	1 45	31		
6	270	54.2	+18 04.2	172	31.8	78	+16 17.5	94	45	19 18	19 52	11 39	75	1 30	35		
7	285	54.2	04.8	186	58.6	80	+16 08.1	95	40	19 05	36	11 50	71	18	39		
8	300	54.2	05.4	201	25.6	80	+15 58.6	97	35	18 54	22	12 00	67	1 08	41		
9	315	54.2	06.0	215	52.6	80	48.9	97	30	44	19 10	08	65	0 59	43		
10	330	54.2	06.7	230	19.6	81	39.2	98	20	28	18 51	22	61	43	48		
11	345	54.3	+18 07.3	244	46.7	82	+15 29.4	99	10 N	18 13	18 35	12 34	57	0 29	52		
12	0	54.3	+18 07.9	259	13.9	81	+15 19.5	101	0	18 00	18 22	12 45	54	0 17	54		
13	15	54.3	08.6	273	41.0	83	+15 09.4	101	10 S	17 47	18 09	12 57	50	0 04	57		
14	30	54.3	09.2	288	08.3	83	+14 59.3	102	20	33	17 56	13 09	46	***	***		
15	45	54.3	09.8	302	35.6	83	49.1	103	30	17	42	23	41	***	***		
16	60	54.3	10.4	317	02.9	84	38.8	103	35	17 08	34	31	39	***	***		
17	75	54.3	+18 11.1	331	30.3	84	+14 28.5	105	40	16 57	17 26	13 40	36	***	***		
18	90	54.3	+18 11.7	345	57.7	85	+14 18.0	106	45	16 45	17 17	13 50	33	***	***		
19	105	54.3	12.3	0	25.2	85	+14 07.4	106	50	30	05	14 03	29	***	***		
20	120	54.3	13.0	14	52.7	86	+13 56.8	107	52	23	17 00	09	27	23 58	81		
21	135	54.4	13.6	29	20.3	86	46.1	108	54	16	16 55	15	25	52	84		
22	150	54.4	14.2	43	47.9	87	35.3	109	56	16 07	49	23	22	46	86		
23	165	54.4	14.8	58	15.6	87	24.4	110	58	15 57	42	31	19	38	89		
24	180	54.4	+18 15.4	72	43.3		+13 13.4		60 S	15 46	16 35	14 40	16	23 30	92		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 8 ^h 40 ^m 7		Mag: -3.8 PMG: 10 ^h 21 ^m			Mag: +1.7 PMG: 14 ^h 30 ^m			Mag: -2.5 PMG: 02 ^h 11 ^m			Mag: +0.4 PMG: 04 ^h 09 ^m					
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄					
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	229	28.6	204	53.6	+8 27.6	142	24.8	+24 31.2	327	11.8	-22 -37.2	297	28.2	-21 30.5			
1	244	31.0	219	53.2	28.7	157	25.5	31.2	342	14.5	-37.2	312	30.7	30.5			
2	259	33.5	234	52.8	29.8	172	26.2	31.3	357	17.2	-37.2	327	33.2	30.5			
3	274	35.9	249	52.5	31.0	187	26.8	31.3	12	19.9	-37.2	342	35.7	30.5			
4	289	38.4	264	52.1	32.1	202	27.5	31.3	27	22.6	-37.2	357	38.3	30.5			
5	304	40.9	279	51.7	+8 33.2	217	28.2	+24 31.4	42	25.3	-22 -37.1	12	40.8	-21 30.5			
6	319	43.3	294	51.3	+8 34.3	232	28.9	+24 31.4	57	28.0	-22 -37.1	27	43.3	-21 30.5			
7	334	45.8	309	50.9	35.4	247	29.6	31.5	72	30.7	-37.1	42	45.8	30.5			
8	349	48.3	324	50.5	36.5	262	30.3	31.5	87	33.4	-37.1	57	48.3	30.5			
9	4	50.7	339	50.1	37.6	277	31.0	31.5	102	36.2	-37.1	72	50.8	30.6			
10	19	53.2	354	49.7	38.8	292	31.6	31.6	117	38.9	-37.1	87	53.4	30.6			
11	34	55.7	9	49.3	+8 39.9	307	32.3	+24 31.6	132	41.6	-22 -37.1	102	55.9	-21 30.6			
12	49	58.1	24	48.9	+8 41.0	322	33.0	+24 31.6	147	44.3	-22 -37.1	117	58.4	-21 30.6			
13	65	00.6	39	48.5	42.1	337	33.7	31.7	162	47.0	-37.1	133	00.9	30.6			
14	80	03.1	54	48.2	43.2	352	34.4	31.7	177	49.7	-37.1	148	03.4	30.6			
15	95	05.5	69	47.8	44.3	7	35.1	31.7	192	52.4	-37.0	163	05.9	30.6			
16	110	08.0	84	47.4	45.4	22	35.8	31.8	207	55.1	-37.0	178	08.5	30.6			
17	125	10.4	99	47.0	+8 46.5	37	36.4	+24 31.8	222	57.8	-22 -37.0	193	11.0	-21 30.6			
18	140	12.9	114	46.6	+8 47.7	52	37.1	+24 31.9	238	00.6	-22 -37.0	208	13.5	-21 30.6			
19	155	15.4	129	46.2	48.8	67	37.8	31.9	253	03.3	-37.0	223	16.0	30.7			
20	170	17.8	144	45.8	49.9	82	38.5	31.9	268	06.0	-37.0	238	18.5	30.7			
21	185	20.3	159	45.4	51.0	97	39.2	32.0	283	08.7	-37.0	253	21.0	30.7			
22	200	22.8	174	45.0	52.1	112	39.9	32.0	298	11.4	-37.0	268	23.6	30.7			
23	215	25.2	189	44.6	53.2	127	40.6	32.0	313	14.1	-37.0	283	26.1	30.7			
24	230	27.7	204	44.2	+8 54.3	142	41.2	+24 32.1	328	16.8	-22 -37.0	298	28.6	-21 30.7			
Dif.	—		-4		+11	+7		0	+27		0	+25		0			

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'8				SD: 16'2		PHE { 4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'4					Edad: 8 ^d 1								
	PMG: 11 ^h 56. ^m 4				PMG: 19 ^h 51 ^m		R ^o : 52 ^m													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.				Náut.	Civil			Hora	R ^o	Hora	R ^o	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	180	54.4	+18	15.4	72	43.3	88	+13	13.4	111	60 N	** **	2 27	3 28	12 19	92		2 46	14	
1	195	54.4		16.1	87	11.1	88	+13	02.3	111	58	1 15	2 47	41	25	89		38	18	
2	210	54.4		16.7	101	38.9	88	+12	51.2	112	56	1 49	3 03	3 52	31	86		32	20	
3	225	54.4		17.3	116	06.7	89		40.0	113	54	2 13	17	4 01	36	84		26	23	
4	240	54.4		17.9	130	34.6	90		28.7	114	52	32	28	10	41	81		21	25	
5	255	54.4	+18	18.6	145	02.6	90	+12	17.3	114	50	2 47	3 39	4 18	12 45	79		2 16	27	
6	270	54.4	+18	19.2	159	30.6	90	+12	05.9	115	45	3 17	4 00	4 34	12 54	74		2 05	31	
7	285	54.4		19.8	173	58.6	91	+11	54.4	116	40	39	17	47	13 01	71		1 57	34	
8	300	54.4		20.4	188	26.7	91		42.8	116	35	3 57	30	4 58	07	68		49	38	
9	315	54.5		21.0	202	54.8	92		31.2	117	30	4 11	4 42	5 08	13	65		42	41	
10	330	54.5		21.6	217	23.0	92		19.5	118	20	34	5 01	25	23	59		31	45	
11	345	54.5	+18	22.3	231	51.2	93	+11	07.7	119	10 N	4 51	5 17	5 39	13 31	56		1 21	48	
12	0	54.5	+18	22.9	246	19.5	93	+10	55.8	119	0	5 06	5 31	5 53	13 39	52		1 11	53	
13	15	54.5		23.5	260	47.8	93		43.9	120	10 S	19	44	6 06	47	47		1 01	57	
14	30	54.5		24.1	275	16.1	94		31.9	120	20	31	5 57	20	13 55	44		0 51	60	
15	45	54.5		24.7	289	44.5	94		19.9	121	30	42	6 11	36	14 04	39		39	65	
16	60	54.5		25.3	304	12.9	95	+10	07.8	122	35	48	19	46	10	36		32	68	
17	75	54.5	+18	26.0	318	41.4	95	+9	55.6	122	40	5 55	6 27	6 56	14 16	33		0 24	71	
18	90	54.5	+18	26.6	333	09.9	95	+9	43.4	123	45	6 01	6 37	7 09	14 23	30		0 15	74	
19	105	54.5		27.2	347	38.4	96		31.1	123	50	09	48	24	32	25		0 03	79	
20	120	54.5		27.8	2	07.0	96		18.8	124	52	12	53	31	36	23		***	***	***
21	135	54.5		28.4	16	35.6	96	+9	06.4	124	54	15	6 59	38	40	21		***	***	***
22	150	54.5		29.0	31	04.2	97	+8	54.0	125	56	19	7 05	47	45	18		***	***	***
23	165	54.5		29.6	45	32.9	98		41.5	125	58	23	12	7 57	14 50	16		***	***	***
24	180	54.5	+18	30.2	60	01.7		+8	29.0		60 S	6 28	7 19	8 08	14 56	13		***	***	***
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 8 ^h 36. ^m 7		Mag: -3.8 PMG: 10 ^h 21 ^m			Mag: +1.7 PMG: 14 ^h 29 ^m			Mag: -2.5 PMG: 02 ^h 06 ^m			Mag: +0.4 PMG: 04 ^h 05 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	230	27.7	204	44.2	+8	54.3	142	41.2	+24	32.1	328	16.8	-22	37.0	298	28.6	-21	30.7		
1	245	30.2	219	43.8		55.4	157	41.9		32.1	343	19.5		36.9	313	31.1		30.7		
2	260	32.6	234	43.4		56.5	172	42.6		32.1	358	22.3		36.9	328	33.6		30.7		
3	275	35.1	249	43.0		57.6	187	43.3		32.1	13	25.0		36.9	343	36.2		30.7		
4	290	37.6	264	42.6		58.7	202	44.0		32.2	28	27.7		36.9	358	38.7		30.7		
5	305	40.0	279	42.2	+8	59.8	217	44.7	+24	32.2	43	30.4	-22	36.9	13	41.2	-21	30.8		
6	320	42.5	294	41.8	+9	00.9	232	45.4	+24	32.2	58	33.1	-22	36.9	28	43.7	-21	30.8		
7	335	44.9	309	41.4		02.1	247	46.0		32.3	73	35.8		36.9	43	46.2		30.8		
8	350	47.4	324	41.0		03.2	262	46.7		32.3	88	38.6		36.9	58	48.8		30.8		
9	5	49.9	339	40.7		04.3	277	47.4		32.3	103	41.3		36.9	73	51.3		30.8		
10	20	52.3	354	40.3		05.4	292	48.1		32.4	118	44.0		36.8	88	53.8		30.8		
11	35	54.8	9	39.9	+9	06.5	307	48.8	+24	32.4	133	46.7	-22	36.8	103	56.3	-21	30.8		
12	50	57.3	24	39.5	+9	07.6	322	49.5	+24	32.4	148	49.4	-22	36.8	118	58.8	-21	30.8		
13	65	59.7	39	39.1		08.7	337	50.2		32.4	163	52.1		36.8	134	01.4		30.8		
14	81	02.2	54	38.7		09.8	352	50.9		32.5	178	54.9		36.8	149	03.9		30.8		
15	96	04.7	69	38.3		10.9	7	51.5		32.5	193	57.6		36.8	164	06.4		30.9		
16	111	07.1	84	37.9		12.0	22	52.2		32.5	209	00.3		36.8	179	08.9		30.9		
17	126	09.6	99	37.5	+9	13.1	37	52.9	+24	32.6	224	03.0	-22	36.8	194	11.5	-21	30.9		
18	141	12.0	114	37.1	+9	14.2	52	53.6	+24	32.6	239	05.7	-22	36.8	209	14.0	-21	30.9		
19	156	14.5	129	36.7		15.3	67	54.3		32.6	254	08.4		36.8	224	16.5		30.9		
20	171	17.0	144	36.3		16.4	82	55.0		32.6	269	11.2		36.7	239	19.0		30.9		
21	186	19.4	159	35.9		17.5	97	55.7		32.7	284	13.9		36.7	254	21.5		30.9		
22	201	21.9	174	35.5		18.6	112	56.3		32.7	299	16.6		36.7	269	24.1		30.9		
23	216	24.4	189	35.1		19.7	127	57.0		32.7	314	19.3		36.7	284	26.6		30.9		
24	231	26.8	204	34.7	+9	20.8	142	57.7	+24	32.7	329	22.0	-22	36.7	299	29.1	-21	30.9		
Dif.	—		-4		+11		+7		0		+27		0		+25					

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8				SD: 16'2												PHE {
	PMG: 11 ^h 56 ^m 4				Edad: 9 ^d 1												
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Rº: 50 ^m										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	54.5	+18	30.2	60	01.7	97	+8	29.0	126	60 N	20 29	21 32	13 51	92	3 00	12
1	195	54.5		30.8	74	30.4	98		16.4	127	58	16	21 11	54 89		2 56	15
2	210	54.5		31.5	88	59.2	98	+8	03.7	127	56	20 04	20 54	13 57	86	52	18
3	225	54.5		32.1	103	28.0	99	+7	51.0	127	54	19 54	40	14 00	83	49	20
4	240	54.5		32.7	117	56.9	99		38.3	128	52	45	28	02 80		46	22
5	255	54.5	+18	33.3	132	25.8	99	+7	25.5	128	50	19 38	20 17	14 04	78	2 43	24
6	270	54.5	+18	33.9	146	54.7	100	+7	12.7	128	45	19 21	19 55	14 08	74	2 36	29
7	285	54.5		34.5	161	23.7	100	+6	59.9	129	40	19 07	38	12 70		31	32
8	300	54.5		35.1	175	52.7	100		47.0	129	35	18 56	24	15 67		27	35
9	315	54.5		35.7	190	21.7	100		34.1	130	30	46	19 12	18 64		23	38
10	330	54.5		36.3	204	50.7	101		21.1	130	20	28	18 52	22 59		16	43
11	345	54.5	+18	36.9	219	19.8	101	+6	08.1	131	10 N	18 14	18 36	14 27	54	2 09	48
12	0	54.5	+18	37.5	233	48.9	102	+5	55.0	130	0	18 00	18 22	14 31	50	2 04	51
13	15	54.5		38.1	248	18.1	101		42.0	131	10 S	17 46	18 08	34 47		1 58	55
14	30	54.5		38.7	262	47.2	102		28.9	132	20	32	17 55	39 42		51	60
15	45	54.5		39.3	277	16.4	102		15.7	131	30	15	41	43 38		44	64
16	60	54.5		39.9	291	45.6	103	+5	02.6	132	35	17 06	33	46 35		40	67
17	75	54.5	+18	40.5	306	14.9	102	+4	49.4	132	40	16 55	17 24	14 49	32	1 35	70
18	90	54.5	+18	41.1	320	44.1	103	+4	36.2	133	45	16 43	17 14	14 53	28	1 29	74
19	105	54.5		41.7	335	13.4	103		22.9	133	50	27	17 03	57 24		22	79
20	120	54.5		42.3	349	42.7	103	+4	09.6	132	52	20	16 58	14 59	22	19	81
21	135	54.5		42.9	4	12.0	104	+3	56.4	134	54	12	52	15 01	20	16	83
22	150	54.5		43.5	18	41.4	103		43.0	133	56	16 03	46	03 18		12	86
23	165	54.5		44.1	33	10.7	104		29.7	133	58	15 53	39	06 15		07	89
24	180	54.5	+18	44.7	47	40.1		+3	16.4		60 S	15 42	16 31	15 09	12	1 02	93
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 8 ^h 32 ^m 8		Mag: -3.8 PMG: 10 ^h 22 ^m			Mag: +1.7 PMG: 14 ^h 27 ^m			Mag: -2.5 PMG: 02 ^h 02 ^m			Mag: +0.4 PMG: 04 ^h 01 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	231	26.8	204	34.7	+9 20.8	142	57.7	+24 32.7	329	22.0	-22 -36.7	299	29.1	-21 30.9			
1	246	29.3	219	34.2	21.9	157	58.4	32.8	344	24.8	-36.7	314	31.6	31.0			
2	261	31.8	234	33.8	23.0	172	59.1	32.8	359	27.5	-36.7	329	34.2	31.0			
3	276	34.2	249	33.4	24.1	187	59.8	32.8	14	30.2	-36.7	344	36.7	31.0			
4	291	36.7	264	33.0	25.2	203	00.5	32.8	29	32.9	-36.7	359	39.2	31.0			
5	306	39.2	279	32.6	+9 26.3	218	01.2	+24 32.8	44	35.6	-22 -36.6	14	41.7	-21 31.0			
6	321	41.6	294	32.2	+9 27.4	233	01.8	+24 32.9	59	38.4	-22 -36.6	29	44.3	-21 31.0			
7	336	44.1	309	31.8	28.5	248	02.5	32.9	74	41.1	-36.6	44	46.8	31.0			
8	351	46.5	324	31.4	29.6	263	03.2	32.9	89	43.8	-36.6	59	49.3	31.0			
9	6	49.0	339	31.0	30.7	278	03.9	32.9	104	46.5	-36.6	74	51.8	31.0			
10	21	51.5	354	30.6	31.8	293	04.6	33.0	119	49.3	-36.6	89	54.3	31.0			
11	36	53.9	9	30.2	+9 32.9	308	05.3	+24 33.0	134	52.0	-22 -36.6	104	56.9	-21 31.1			
12	51	56.4	24	29.8	+9 34.0	323	06.0	+24 33.0	149	54.7	-22 -36.6	119	59.4	-21 31.1			
13	66	58.9	39	29.4	35.1	338	06.6	33.0	164	57.4	-36.6	135	01.9	31.1			
14	82	01.3	54	29.0	36.2	353	07.3	33.0	180	00.2	-36.5	150	04.5	31.1			
15	97	03.8	69	28.6	37.3	8	08.0	33.1	195	02.9	-36.5	165	07.0	31.1			
16	112	06.3	84	28.2	38.4	23	08.7	33.1	210	05.6	-36.5	180	09.5	31.1			
17	127	08.7	99	27.8	+9 39.5	38	09.4	+24 33.1	225	08.3	-22 -36.5	195	12.0	-21 31.1			
18	142	11.2	114	27.4	+9 40.6	53	10.1	+24 33.1	240	11.0	-22 -36.5	210	14.6	-21 31.1			
19	157	13.7	129	27.0	41.7	68	10.8	33.1	255	13.8	-36.5	225	17.1	31.1			
20	172	16.1	144	26.5	42.7	83	11.5	33.1	270	16.5	-36.5	240	19.6	31.2			
21	187	18.6	159	26.1	43.8	98	12.1	33.2	285	19.2	-36.5	255	22.1	31.2			
22	202	21.0	174	25.7	44.9	113	12.8	33.2	300	21.9	-36.5	270	24.7	31.2			
23	217	23.5	189	25.3	46.0	128	13.5	33.2	315	24.7	-36.4	285	27.2	31.2			
24	232	26.0	204	24.9	+9 47.1	143	14.2	+24 33.2	330	27.4	-22 -36.4	300	29.7	-21 31.2			
Dif.	—		-4 +11			+7 0			+27 0			+25 0					

UT	SOL				☉ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 56 ^m 4				SD: 16'2 Edad: 10 ^d 1					PHE { 4 ^h : 59'3 12 ^h : 59'3 20 ^h : 59'2								
	PMG: 21 ^h 33 ^m				Rº: 50 ^m													
	hG ☉		Dec		hG ☾		Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'		°	'	°	h m	h m	h m	h m	m	h m	m	
0	180	54.5	+18	44.7	47	40.1	104	+3	16.4	134	60 N	2 20	3 23	15 23	91	3 12	12	
1	195	54.5		45.3	62	09.5	104	+3	03.0	134	58	1 03	41	23	88	11	15	
2	210	54.5		45.9	76	38.9	105	+2	49.6	134	56	1 42	2 58	23	85	10	17	
3	225	54.5		46.5	91	08.4	104		36.2	134	54	2 07	3 12	23	82	09	19	
4	240	54.5		47.1	105	37.8	105		22.8	134	52	27	25	4 07	22	81	08	21
5	255	54.5	+18	47.7	120	07.3	105	+2	09.4	134	50	2 43	3 35	4 15	15 22	78	3 07	23
6	270	54.5	+18	48.3	134	36.8	105	+1	56.0	135	45	3 14	3 57	4 31	15 22	74	3 05	28
7	285	54.5		48.9	149	06.3	105		42.5	134	40	37	4 15	45	22	70	03	32
8	300	54.5		49.5	163	35.8	105		29.1	134	35	3 55	29	4 57	22	66	02	34
9	315	54.5		50.1	178	05.3	106		15.7	135	30	4 09	4 41	5 07	22	63	3 01	37
10	330	54.5		50.7	192	34.9	105	+1	02.2	135	20	33	5 00	24	21	59	2 59	42
11	345	54.5	+18	51.2	207	04.4	106	+0	48.7	134	10 N	4 51	5 17	5 39	15 21	55	2 57	46
12	0	54.5	+18	51.8	221	34.0	105	+0	35.3	135	0	5 06	5 31	5 53	15 21	50	2 55	50
13	15	54.5		52.4	236	03.5	106		21.8	134	10 S	19	44	6 07	21	46	53	54
14	30	54.5		53.0	250	33.1	106	+0	08.4	135	20	31	5 58	21	21	42	51	58
15	45	54.5		53.6	265	02.7	106	-0	05.1	135	30	43	6 12	38	21	37	48	64
16	60	54.4		54.2	279	32.3	106		18.6	134	35	50	20	47	21	34	47	67
17	75	54.4	+18	54.8	294	01.9	106	-0	32.0	135	40	5 56	6 29	6 58	15 21	31	2 45	70
18	90	54.4	+18	55.4	308	31.5	106	-0	45.5	134	45	6 03	6 39	7 11	15 21	28	2 43	74
19	105	54.4		56.0	323	01.1	106	-0	58.9	134	50	11	51	26	21	23	41	78
20	120	54.4		56.5	337	30.7	106	-1	12.3	135	52	15	6 56	34	21	21	40	81
21	135	54.4		57.1	352	00.3	106		25.8	134	54	18	7 02	42	21	19	39	83
22	150	54.4		57.7	6	29.9	106		39.2	134	56	22	08	7 51	21	17	38	85
23	165	54.4		58.3	20	59.5	106	-1	52.6	133	58	26	15	8 01	15 21	14	2 36	88
24	180	54.4	+18	58.9	35	29.1		-2	05.9		60 S	6 31	7 23	8 13	15 21	11	2 35	91

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 8 ^h 28 ^m 9		Mag: -3.8 PMG: 10 ^h 23 ^m			Mag: +1.7 PMG: 14 ^h 26 ^m			Mag: -2.5 PMG: 01 ^h 58 ^m			Mag: +0.4 PMG: 03 ^h 57 ^m			
	hG ♈		hG ♀		dec.	hG ♂		dec.	hG ♃		dec.	hG ♄		dec.	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'
0	232	26.0	204	24.9	+9 47.1	143	14.2	+24 33.2	330	27.4	-22 36.4	300	29.7	-21 31.2	
1	247	28.4	219	24.5	48.2	158	14.9	33.2	345	30.1	36.4	315	32.2	31.2	
2	262	30.9	234	24.1	49.3	173	15.6	33.2	0	32.9	36.4	330	34.8	31.2	
3	277	33.4	249	23.7	50.4	188	16.3	33.3	15	35.6	36.4	345	37.3	31.2	
4	292	35.8	264	23.3	51.5	203	17.0	33.3	30	38.3	36.4	0	39.8	31.2	
5	307	38.3	279	22.9	+9 52.6	218	17.6	+24 33.3	45	41.0	-22 36.4	15	42.4	-21 31.3	
6	322	40.8	294	22.4	+9 53.7	233	18.3	+24 33.3	60	43.8	-22 36.4	30	44.9	-21 31.3	
7	337	43.2	309	22.0	54.8	248	19.0	33.3	75	46.5	36.4	45	47.4	31.3	
8	352	45.7	324	21.6	55.8	263	19.7	33.3	90	49.2	36.3	60	49.9	31.3	
9	7	48.1	339	21.2	56.9	278	20.4	33.3	105	51.9	36.3	75	52.5	31.3	
10	22	50.6	354	20.8	58.0	293	21.1	33.4	120	54.7	36.3	90	55.0	31.3	
11	37	53.1	9	20.4	+9 59.1	308	21.8	+24 33.4	135	57.4	-22 36.3	105	57.5	-21 31.3	
12	52	55.5	24	20.0	+10 00.2	323	22.5	+24 33.4	151	00.1	-22 36.3	121	00.1	-21 31.3	
13	67	58.0	39	19.6	01.3	338	23.1	33.4	166	02.9	36.3	136	02.6	31.3	
14	83	00.5	54	19.1	02.4	353	23.8	33.4	181	05.6	36.3	151	05.1	31.4	
15	98	02.9	69	18.7	03.5	8	24.5	33.4	196	08.3	36.3	166	07.6	31.4	
16	113	05.4	84	18.3	04.5	23	25.2	33.4	211	11.0	36.3	181	10.2	31.4	
17	128	07.9	99	17.9	+10 05.6	38	25.9	+24 33.4	226	13.8	-22 36.2	196	12.7	-21 31.4	
18	143	10.3	114	17.5	+10 06.7	53	26.6	+24 33.4	241	16.5	-22 36.2	211	15.2	-21 31.4	
19	158	12.8	129	17.1	07.8	68	27.3	33.5	256	19.2	36.2	226	17.8	31.4	
20	173	15.3	144	16.7	08.9	83	28.0	33.5	271	22.0	36.2	241	20.3	31.4	
21	188	17.7	159	16.2	10.0	98	28.6	33.5	286	24.7	36.2	256	22.8	31.4	
22	203	20.2	174	15.8	11.1	113	29.3	33.5	301	27.4	36.2	271	25.4	31.4	
23	218	22.6	189	15.4	12.1	128	30.0	33.5	316	30.2	36.2	286	27.9	31.5	
24	233	25.1	204	15.0	+10 13.2	143	30.7	+24 33.5	331	32.9	-22 36.2	301	30.4	-21 31.5	
Dif.	—	—	-4	+11		+7	0		+27	0		+25			

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°8 PMG: 11 ^h 56 ^m 4			SD: 16°1 Edad: 11°1 PHE { 4^h: 59°1 12^h: 59°0 20^h: 58°9 PMG: 22 ^h 23 ^m Rº: 51^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	Civil	Náut.			Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m	
0	180	54.4	+18	58.9	35	29.1	107	-2	05.9	134	60 N	20 34	21 38	16 54	91	3 24	12	
1	195	54.4	+18	59.5	49	58.8	106		19.3	134	58	20	21 16	51 87		26	14	
2	210	54.4	+19	00.0	64	28.4	106		32.7	133	56	20 08	20 59	48 84		27	18	
3	225	54.4		00.6	78	58.0	106		46.0	133	54	19 58	44	45 82		28	20	
4	240	54.3		01.2	93	27.6	106	-2	59.3	133	52	49	31	43 79		29	23	
5	255	54.3	+19	01.8	107	57.2	106	-3	12.6	133	50	19 40	20 20	16 40	78	3 30	25	
6	270	54.3	+19	02.4	122	26.8	106	-3	25.9	132	45	19 23	19 58	16 36	73	3 33	28	
7	285	54.3		02.9	136	56.4	106		39.1	132	40	19 09	40	32 69		35	32	
8	300	54.3		03.5	151	26.0	106	-3	52.3	132	35	18 57	25	28 66		36	35	
9	315	54.3		04.1	165	55.6	106	-4	05.5	132	30	47	19 13	25 64		38	38	
10	330	54.3		04.7	180	25.2	106		18.7	132	20	29	18 53	20 59		41	42	
11	345	54.3	+19	05.3	194	54.8	106	-4	31.9	131	10 N	18 14	18 36	16 16	54	3 43	46	
12	0	54.3	+19	05.8	209	24.4	106	-4	45.0	131	0	18 00	18 22	16 11	51	3 45	51	
13	15	54.2		06.4	223	54.0	105	-4	58.1	130	10 S	17 46	18 08	07 47		47	55	
14	30	54.2		07.0	238	23.5	106	-5	11.1	130	20	31	17 54	16 03	43	49	59	
15	45	54.2		07.6	252	53.1	105		24.1	130	30	14	40	15 58	38	52	64	
16	60	54.2		08.1	267	22.6	106		37.1	130	35	17 05	32	55 36		54	66	
17	75	54.2	+19	08.7	281	52.2	105	-5	50.1	129	40	16 53	17 23	15 52	33	3 55	70	
18	90	54.2	+19	09.3	296	21.7	105	-6	03.0	128	45	16 40	17 12	15 49	29	3 57	73	
19	105	54.2		09.9	310	51.2	105		15.8	129	50	25	17 00	44 25		3 59	78	
20	120	54.2		10.4	325	20.7	105		28.7	128	52	17	16 55	42 23		4 01	79	
21	135	54.1		11.0	339	50.2	105		41.5	127	54	09	49	40 21		02	82	
22	150	54.1		11.6	354	19.7	104	-6	54.2	127	56	16 00	43	38 18		03	85	
23	165	54.1		12.1	8	49.1	105	-7	06.9	127	58	15 49	35	35 16		04	88	
24	180	54.1	+19	12.7	23	18.6		-7	19.6		60 S	15 37	16 27	15 32	13	4 06	91	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 24 ^m 9		Mag: -3.8 PMG: 10 ^h 23 ^m				Mag: +1.7 PMG: 14 ^h 25 ^m				Mag: -2.5 PMG: 01 ^h 53 ^m				Mag: +0.4 PMG: 03 ^h 53 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	233	25.1	204	15.0	+10	13.2	143	30.7	+24	33.5	331	32.9	-22	-36.2	301	30.4	-21	31.5
1	248	27.6	219	14.6		14.3	158	31.4		33.5	346	35.6		-36.2	316	32.9		31.5
2	263	30.0	234	14.2		15.4	173	32.1		33.5	1	38.4		-36.1	331	35.5		31.5
3	278	32.5	249	13.7		16.5	188	32.8		33.5	16	41.1		-36.1	346	38.0		31.5
4	293	35.0	264	13.3		17.6	203	33.5		33.5	31	43.8		-36.1	1	40.5		31.5
5	308	37.4	279	12.9	+10	18.6	218	34.2	+24	33.5	46	46.6	-22	-36.1	16	43.1	-21	31.5
6	323	39.9	294	12.5	+10	19.7	233	34.8	+24	33.5	61	49.3	-22	-36.1	31	45.6	-21	31.5
7	338	42.4	309	12.1		20.8	248	35.5		33.5	76	52.0		-36.1	46	48.1		31.5
8	353	44.8	324	11.6		21.9	263	36.2		33.5	91	54.8		-36.1	61	50.7		31.6
9	8	47.3	339	11.2		23.0	278	36.9		33.6	106	57.5		-36.1	76	53.2		31.6
10	23	49.7	354	10.8		24.0	293	37.6		33.6	122	00.2		-36.0	91	55.7		31.6
11	38	52.2	9	10.4	+10	25.1	308	38.3	+24	33.6	137	03.0	-22	-36.0	106	58.3	-21	31.6
12	53	54.7	24	10.0	+10	26.2	323	39.0	+24	33.6	152	05.7	-22	-36.0	122	00.8	-21	31.6
13	68	57.1	39	09.5		27.3	338	39.7		33.6	167	08.4		-36.0	137	03.3		31.6
14	83	59.6	54	09.1		28.3	353	40.3		33.6	182	11.2		-36.0	152	05.9		31.6
15	99	02.1	69	08.7		29.4	8	41.0		33.6	197	13.9		-36.0	167	08.4		31.6
16	114	04.5	84	08.3		30.5	23	41.7		33.6	212	16.6		-36.0	182	10.9		31.7
17	129	07.0	99	07.9	+10	31.6	38	42.4	+24	33.6	227	19.4	-22	-36.0	197	13.5	-21	31.7
18	144	09.5	114	07.4	+10	32.7	53	43.1	+24	33.6	242	22.1	-22	-36.0	212	16.0	-21	31.7
19	159	11.9	129	07.0		33.7	68	43.8		33.6	257	24.8		-35.9	227	18.5		31.7
20	174	14.4	144	06.6		34.8	83	44.5		33.6	272	27.6		-35.9	242	21.1		31.7
21	189	16.9	159	06.2		35.9	98	45.2		33.6	287	30.3		-35.9	257	23.6		31.7
22	204	19.3	174	05.7		37.0	113	45.9		33.6	302	33.0		-35.9	272	26.1		31.7
23	219	21.8	189	05.3		38.0	128	46.5		33.6	317	35.8		-35.9	287	28.7		31.7
24	234	24.2	204	04.9	+10	39.1	143	47.2	+24	33.6	332	38.5	-22	-35.9	302	31.2	-21	31.7
Dif.	—		-4		+11		+7		0		+27		0		+25		0	

UT	SOL				○ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°8 PMG: 11 ^h 56 ^m 4				SD: 16°0 Edad: 12 ^d 1 PMG: 23 ^h 14 ^m PHE { 4 ^h : 58°8 12 ^h : 58°6 20 ^h : 58°5 Rº: 52 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m				
0	180	54.1	+19	12.7	23	18.6	104	-7	19.6	126	60 N	18 25	89	3 36	14			
1	195	54.1		13.3	37	48.0	104		32.2	125	58	0 49	36	40	17			
2	210	54.1		13.9	52	17.4	104		44.7	126	56	1 34	2 54	45	19			
3	225	54.1		14.4	66	46.8	104	-7	57.3	124	54	2 01	3 08	48	22			
4	240	54.0		15.0	81	16.2	104	-8	09.7	124	52	22	21	52	24			
5	255	54.0	+19	15.6	95	45.6	103	-8	22.1	124	50	2 39	3 32	3 55	26			
6	270	54.0	+19	16.1	110	14.9	104	-8	34.5	123	45	3 11	3 55	4 01	30			
7	285	54.0		16.7	124	44.3	103		46.8	123	40	34	4 13	41	33			
8	300	54.0		17.3	139	13.6	103	-8	59.1	122	35	3 53	27	34	37			
9	315	54.0		17.8	153	42.9	103	-9	11.3	121	30	4 08	4 39	29	39			
10	330	53.9		18.4	168	12.2	102		23.4	121	20	32	5 00	19	44			
11	345	53.9	+19	18.9	182	41.4	103	-9	35.5	120	10 N	4 50	5 16	17 10	48			
12	0	53.9	+19	19.5	197	10.7	102	-9	47.5	120	0	5 06	5 31	17 02	51			
13	15	53.9		20.1	211	39.9	102	-9	59.5	119	10 S	19	45	16 54	54			
14	30	53.9		20.6	226	09.1	102	-10	11.4	118	20	32	5 59	46	59			
15	45	53.9		21.2	240	38.3	101		23.2	118	30	44	6 13	36	63			
16	60	53.8		21.8	255	07.4	102		35.0	117	35	51	22	31	66			
17	75	53.8	+19	22.3	269	36.6	101	-10	46.7	116	40	5 58	6 31	16 25	69			
18	90	53.8	+19	22.9	284	05.7	101	-10	58.3	116	45	6 05	6 41	16 18	73			
19	105	53.8		23.4	298	34.8	101	-11	09.9	115	50	13	53	09	77			
20	120	53.8		24.0	313	03.9	100		21.4	115	52	17	6 59	05	79			
21	135	53.8		24.6	327	32.9	100		32.9	113	54	21	7 05	16 01	81			
22	150	53.7		25.1	342	01.9	101		44.2	113	56	25	11	15 56	84			
23	165	53.7		25.7	356	31.0	99	-11	55.5	112	58	29	19	15 51	87			
24	180	53.7	+19	26.2	10	59.9		-12	06.7		60 S	6 34	7 27	15 45	90			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 21 ^m 0		Mag: -3.8 PMG: 10 ^h 24 ^m				Mag: +1.7 PMG: 14 ^h 24 ^m				Mag: -2.5 PMG: 01 ^h 49 ^m				Mag: +0.4 PMG: 03 ^h 49 ^m			
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	234	24.2	204	04.9	+10	39.1	143	47.2	+24	33.6	332	38.5	-22	35.9	302	31.2		
1	249	26.7	219	04.5		40.2	158	47.9		33.6	347	41.3		35.9	317	33.7		
2	264	29.2	234	04.0		41.3	173	48.6		33.6	2	44.0		35.9	332	36.3		
3	279	31.6	249	03.6		42.3	188	49.3		33.6	17	46.7		35.8	347	38.8		
4	294	34.1	264	03.2		43.4	203	50.0		33.6	32	49.5		35.8	2	41.4		
5	309	36.6	279	02.8	+10	44.5	218	50.7	+24	33.6	47	52.2	-22	35.8	17	43.9		
6	324	39.0	294	02.3	+10	45.5	233	51.4	+24	33.6	62	54.9	-22	35.8	32	46.4		
7	339	41.5	309	01.9		46.6	248	52.1		33.6	77	57.7		35.8	47	49.0		
8	354	44.0	324	01.5		47.7	263	52.8		33.6	93	00.4		35.8	62	51.5		
9	9	46.4	339	01.0		48.8	278	53.4		33.6	108	03.2		35.8	77	54.0		
10	24	48.9	354	00.6		49.8	293	54.1		33.6	123	05.9		35.8	92	56.6		
11	39	51.4	9	00.2	+10	50.9	308	54.8	+24	33.6	138	08.6	-22	35.7	107	59.1		
12	54	53.8	23	59.8	+10	52.0	323	55.5	+24	33.6	153	11.4	-22	35.7	123	01.6		
13	69	56.3	38	59.3		53.0	338	56.2		33.5	168	14.1		35.7	138	04.2		
14	84	58.7	53	58.9		54.1	353	56.9		33.5	183	16.9		35.7	153	06.7		
15	100	01.2	68	58.5		55.2	8	57.6		33.5	198	19.6		35.7	168	09.3		
16	115	03.7	83	58.0		56.2	23	58.3		33.5	213	22.3		35.7	183	11.8		
17	130	06.1	98	57.6	+10	57.3	38	59.0	+24	33.5	228	25.1	-22	35.7	198	14.3		
18	145	08.6	113	57.2	+10	58.4	53	59.6	+24	33.5	243	27.8	-22	35.7	213	16.9		
19	160	11.1	128	56.7	+10	59.4	69	00.3		33.5	258	30.6		35.7	228	19.4		
20	175	13.5	143	56.3	+11	00.5	84	01.0		33.5	273	33.3		35.6	243	21.9		
21	190	16.0	158	55.9		01.6	99	01.7		33.5	288	36.0		35.6	258	24.5		
22	205	18.5	173	55.4		02.6	114	02.4		33.5	303	38.8		35.6	273	27.0		
23	220	20.9	188	55.0		03.7	129	03.1		33.5	318	41.5		35.6	288	29.6		
24	235	23.4	203	54.6	+11	04.8	144	03.8	+24	33.5	333	44.3	-22	35.6	303	32.1		
Dif.	—		-4				+11				+7				0			

UT	SOL				○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56. ^m 4				SD: 15'9 Edad: 13 ^d 1 PHE { 4^h: 58'3 12^h: 58'1 20^h: 57'9 PMG: ** ** Rº: **														
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.						
	h	°	'	°	'	h	°	'	°	'			h	°	'	°	'	h	°
0	180	53.7	+19	26.2	10	59.9	100	-12	06.7	112	60 N	20 38	21 45	** **	19 54	85	3 50	17	
1	195	53.7		26.8	25	28.9	99		17.9	110	58	24	22	23 20	44	82	3 57	21	
2	210	53.7		27.3	39	57.8	100		28.9	110	56	12	21 03	22 26	35	79	4 04	22	
3	225	53.6		27.9	54	26.8	98		39.9	109	54	20 01	20 48	21 57	27	77	10	26	
4	240	53.6		28.4	68	55.6	99	-12	50.8	109	52	19 52	35	35	20	75	16	28	
5	255	53.6	+19	29.0	83	24.5	99	-13	01.7	107	50	19 43	20 23	21 17	19 14	73	4 21	29	
6	270	53.6	+19	29.6	97	53.4	98	-13	12.4	107	45	19 25	20 00	20 44	19 00	70	4 31	34	
7	285	53.5		30.1	112	22.2	98		23.1	106	40	19 11	19 42	20	18 49	67	40	37	
8	300	53.5		30.7	126	51.0	98		33.7	105	35	18 59	27	20 02	40	64	48	40	
9	315	53.5		31.2	141	19.8	97		44.2	104	30	48	19 14	19 46	32	62	4 55	42	
10	330	53.5		31.8	155	48.5	97	-13	54.6	104	20	30	18 54	22	18	58	5 07	45	
11	345	53.5	+19	32.3	170	17.2	97	-14	05.0	102	10 N	18 14	18 37	19 03	18 05	56	5 17	49	
12	0	53.4	+19	32.9	184	45.9	97	-14	15.2	102	0	18 00	18 22	18 47	17 54	52	5 27	52	
13	15	53.4		33.4	199	14.6	97		25.4	101	10 S	17 46	18 08	34	42	50	36	56	
14	30	53.4		34.0	213	43.3	96		35.5	100	20	30	17 54	21	30	47	47	59	
15	45	53.4		34.5	228	11.9	96		45.5	99	30	13	39	08	17	43	5 59	62	
16	60	53.3		35.1	242	40.5	96	-14	55.4	98	35	17 03	30	18 01	09	41	6 06	65	
17	75	53.3	+19	35.6	257	09.1	95	-15	05.2	97	40	16 52	17 21	17 54	17 00	39	6 14	67	
18	90	53.3	+19	36.1	271	37.6	96	-15	14.9	96	45	16 38	17 11	17 46	16 49	36	6 23	71	
19	105	53.3		36.7	286	06.2	95		24.5	95	50	22	16 58	38	37	32	34	75	
20	120	53.2		37.2	300	34.7	95		34.0	95	52	14	53	34	31	31	39	77	
21	135	53.2		37.8	315	03.2	94		43.5	93	54	16 06	46	30	25	28	45	79	
22	150	53.2		38.3	329	31.6	95	-15	52.8	93	56	15 56	40	26	18	26	52	81	
23	165	53.2		38.9	344	00.1	94	-16	02.1	91	58	46	32	21	10	23	6 59	84	
24	180	53.1	+19	39.4	358	28.5		-16	11.2		60 S	15 33	16 24	17 16	16 01	20	7 07	88	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 8 ^h 17. ^m 1		Mag: -3.8 PMG: 10 ^h 25. ^m			Mag: +1.7 PMG: 14 ^h 23. ^m			Mag: -2.5 PMG: 01 ^h 45. ^m			Mag: +0.4 PMG: 03 ^h 45. ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	235	23.4	203	54.6	+11	04.8	144	03.8	+24	33.5	333	44.3	-22	-35.6	303	32.1	-21	32.0	
1	250	25.8	218	54.1		05.8	159	04.5		33.5	348	47.0		-35.6	318	34.6		32.1	
2	265	28.3	233	53.7		06.9	174	05.2		33.5	3	49.8		-35.6	333	37.2		32.1	
3	280	30.8	248	53.3		08.0	189	05.9		33.4	18	52.5		-35.6	348	39.7		32.1	
4	295	33.2	263	52.8		09.0	204	06.5		33.4	33	55.2		-35.5	3	42.3		32.1	
5	310	35.7	278	52.4	+11	10.1	219	07.2	+24	33.4	48	58.0	-22	-35.5	18	44.8	-21	32.1	
6	325	38.2	293	52.0	+11	11.1	234	07.9	+24	33.4	64	00.7	-22	-35.5	33	47.3	-21	32.1	
7	340	40.6	308	51.5		12.2	249	08.6		33.4	79	03.5		-35.5	48	49.9		32.1	
8	355	43.1	323	51.1		13.3	264	09.3		33.4	94	06.2		-35.5	63	52.4		32.1	
9	10	45.6	338	50.7		14.3	279	10.0		33.4	109	09.0		-35.5	78	55.0		32.2	
10	25	48.0	353	50.2		15.4	294	10.7		33.4	124	11.7		-35.5	93	57.5		32.2	
11	40	50.5	8	49.8	+11	16.4	309	11.4	+24	33.4	139	14.5	-22	-35.5	109	00.0	-21	32.2	
12	55	53.0	23	49.4	+11	17.5	324	12.1	+24	33.3	154	17.2	-22	-35.4	124	02.6	-21	32.2	
13	70	55.4	38	48.9		18.6	339	12.8		33.3	169	19.9		-35.4	139	05.1		32.2	
14	85	57.9	53	48.5		19.6	354	13.5		33.3	184	22.7		-35.4	154	07.7		32.2	
15	101	00.3	68	48.0		20.7	9	14.1		33.3	199	25.4		-35.4	169	10.2		32.2	
16	116	02.8	83	47.6		21.7	24	14.8		33.3	214	28.2		-35.4	184	12.8		32.2	
17	131	05.3	98	47.2	+11	22.8	39	15.5	+24	33.3	229	30.9	-22	-35.4	199	15.3	-21	32.3	
18	146	07.7	113	46.7	+11	23.8	54	16.2	+24	33.3	244	33.7	-22	-35.4	214	17.8	-21	32.3	
19	161	10.2	128	46.3		24.9	69	16.9		33.3	259	36.4		-35.4	229	20.4		32.3	
20	176	12.7	143	45.8		26.0	84	17.6		33.2	274	39.2		-35.3	244	22.9		32.3	
21	191	15.1	158	45.4		27.0	99	18.3		33.2	289	41.9		-35.3	259	25.5		32.3	
22	206	17.6	173	45.0		28.1	114	19.0		33.2	304	44.7		-35.3	274	28.0		32.3	
23	221	20.1	188	44.5		29.1	129	19.7		33.2	319	47.4		-35.3	289	30.5		32.3	
24	236	22.5	203	44.1	+11	30.2	144	20.4	+24	33.2	334	50.2	-22	-35.3	304	33.1	-21	32.3	
Dif.	—		-4			+11	+7			0	+27			0	+25				

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 56 ^m 5				SD: 15'8 Edad: 14 ^d 1 PHE { 4 ^h : 57'7 12 ^h : 57'5 20 ^h : 57'3 PMG: 00 ^h 06 ^m Rº: 53 ^m															
	hG ☉		Dec		hG ☾		Dif.		Dec			Dif.								
	h	°	'	°	'	°	'	°	'	°		'	Náut.		Civil	h	m	h	m	m
0	180	53.1	+19	39.4	358	28.5	94	-16	11.2	91	60 N	0 31	2 07	3 14	21 19	78	4 07	24		
1	195	53.1		39.9	12	56.9	94		20.3	89	58	0 31	31	28	21 06	74	18	27		
2	210	53.1		40.5	27	25.3	93		29.2	89	56	1 26	2 49	41	20 54	72	28	29		
3	225	53.1		41.0	41	53.6	94		38.1	87	54	1 56	3 05	3 51	44	70	36	32		
4	240	53.0		41.6	56	22.0	93		46.8	87	52	2 18	18	4 01	35	69	44	33		
5	255	53.0	+19	42.1	70	50.3	93	-16	55.5	85	50	2 35	3 29	4 09	20 27	67	4 50	36		
6	270	53.0	+19	42.6	85	18.6	92	-17	04.0	85	45	3 08	3 52	4 27	20 10	65	5 05	38		
7	285	53.0		43.2	99	46.8	93		12.5	83	40	32	4 11	42	19 56	63	17	41		
8	300	52.9		43.7	114	15.1	92		20.8	82	35	3 51	26	4 54	44	61	28	43		
9	315	52.9		44.3	128	43.3	92		29.0	82	30	4 06	38	5 05	34	59	37	45		
10	330	52.9		44.8	143	11.5	92		37.2	80	20	31	4 59	23	16	57	5 52	48		
11	345	52.8	+19	45.3	157	39.7	92	-17	45.2	79	10 N	4 50	5 16	5 38	19 01	55	6 06	51		
12	0	52.8	+19	45.9	172	07.9	91	-17	53.1	78	0	5 05	5 31	5 53	18 46	54	6 19	53		
13	15	52.8		46.4	186	36.0	92	-18	00.9	77	10 S	19	45	6 07	32	51	32	55		
14	30	52.8		46.9	201	04.2	91		08.6	76	20	32	5 59	23	17	49	6 46	58		
15	45	52.7		47.5	215	32.3	91		16.2	75	30	45	6 15	40	18 00	46	7 01	61		
16	60	52.7		48.0	230	00.4	91		23.7	74	35	52	23	6 50	17 50	45	11	63		
17	75	52.7	+19	48.5	244	28.5	91	-18	31.1	73	40	5 59	6 32	7 02	17 39	43	7 21	65		
18	90	52.6	+19	49.1	258	56.6	90	-18	38.4	71	45	6 07	6 43	7 15	17 25	41	7 34	67		
19	105	52.6		49.6	273	24.6	91		45.5	71	50	16	6 55	32	09	38	49	71		
20	120	52.6		50.1	287	52.7	90		52.6	69	52	19	7 01	39	17 02	36	7 56	72		
21	135	52.5		50.7	302	20.7	90	-18	59.5	68	54	23	07	48	16 53	35	8 04	74		
22	150	52.5		51.2	316	48.7	90	-19	06.3	67	56	28	14	7 58	44	33	13	76		
23	165	52.5		51.7	331	16.7	90		13.0	66	58	33	22	8 09	16 33	31	8 23	79		
24	180	52.4	+19	52.3	345	44.7		-19	19.6		60 S	6 38	7 31	8 21	16 21	28	8 35	81		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 8 ^h 13 ^m 1		Mag: -3.8 PMG: 10 ^h 25 ^m			Mag: +1.7 PMG: 14 ^h 22 ^m			Mag: -2.6 PMG: 01 ^h 40 ^m			Mag: +0.4 PMG: 03 ^h 41 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	236	22.5	203	44.1	+11	30.2	144	20.4	+24	33.2	334	50.2	-22	35.3	304	33.1	-21	32.3
1	251	25.0	218	43.6		31.2	159	21.0		33.2	349	52.9		35.3	319	35.6		32.4
2	266	27.5	233	43.2		32.3	174	21.7		33.1	4	55.6		35.3	334	38.2		32.4
3	281	29.9	248	42.7		33.3	189	22.4		33.1	19	58.4		35.3	349	40.7		32.4
4	296	32.4	263	42.3		34.4	204	23.1		33.1	35	01.1		35.2	4	43.3		32.4
5	311	34.8	278	41.9	+11	35.4	219	23.8	+24	33.1	50	03.9	-22	35.2	19	45.8	-21	32.4
6	326	37.3	293	41.4	+11	36.5	234	24.5	+24	33.1	65	06.6	-22	35.2	34	48.4	-21	32.4
7	341	39.8	308	41.0		37.5	249	25.2		33.0	80	09.4		35.2	49	50.9		32.4
8	356	42.2	323	40.5		38.6	264	25.9		33.0	95	12.1		35.2	64	53.4		32.5
9	11	44.7	338	40.1		39.6	279	26.6		33.0	110	14.9		35.2	79	56.0		32.5
10	26	47.2	353	39.6		40.7	294	27.3		33.0	125	17.6		35.2	94	58.5		32.5
11	41	49.6	8	39.2	+11	41.7	309	28.0	+24	33.0	140	20.4	-22	35.2	110	01.1	-21	32.5
12	56	52.1	23	38.7	+11	42.8	324	28.7	+24	32.9	155	23.1	-22	35.1	125	03.6	-21	32.5
13	71	54.6	38	38.3		43.8	339	29.3		32.9	170	25.9		35.1	140	06.2		32.5
14	86	57.0	53	37.8		44.9	354	30.0		32.9	185	28.6		35.1	155	08.7		32.5
15	101	59.5	68	37.4		45.9	9	30.7		32.9	200	31.4		35.1	170	11.3		32.5
16	117	02.0	83	37.0		47.0	24	31.4		32.9	215	34.1		35.1	185	13.8		32.6
17	132	04.4	98	36.5	+11	48.0	39	32.1	+24	32.8	230	36.9	-22	35.1	200	16.3	-21	32.6
18	147	06.9	113	36.1	+11	49.1	54	32.8	+24	32.8	245	39.6	-22	35.1	215	18.9	-21	32.6
19	162	09.3	128	35.6		50.1	69	33.5		32.8	260	42.4		35.0	230	21.4		32.6
20	177	11.8	143	35.2		51.2	84	34.2		32.8	275	45.1		35.0	245	24.0		32.6
21	192	14.3	158	34.7		52.2	99	34.9		32.7	290	47.9		35.0	260	26.5		32.6
22	207	16.7	173	34.3		53.3	114	35.6		32.7	305	50.6		35.0	275	29.1		32.6
23	222	19.2	188	33.8		54.3	129	36.3		32.7	320	53.4		35.0	290	31.6		32.7
24	237	21.7	203	33.4	+11	55.3	144	37.0	+24	32.7	335	56.2	-22	35.0	305	34.2	-21	32.7
Dif.	—		-4		+10		+7		0		+27		0		+25			

UT	SOL				○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8				SD: 15'6		PHE { 4 ^h : 57'1 12 ^h : 56'8 20 ^h : 56'6												
	PMG: 11 ^h 56 ^m 5				Edad: 15 ^d 1														
	PMG:00 ^h 59 ^m				Rº: 53 ^m														
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.			Civil	Náut.	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'		°	'			°	h	m	h	m	h	m	m
0	180	52.4	+19	52.3	345	44.7	90	-19	19.6	65	60 N	20 43	21 52	** **	** **	22 37	64	4 31	33
1	195	52.4		52.8	0	12.7	90		26.1	64	58	28	27	** **	** **	20 63		45	36
2	210	52.4		53.3	14	40.7	89		32.5	62	56	15	21 08	22 35		22 06	62	4 57	38
3	225	52.4		53.8	29	08.6	90		38.7	61	54	20 04	20 52	22 03		21 54	61	5 08	39
4	240	52.3		54.4	43	36.6	89		44.8	61	52	19 54	38	21 40		44	60	17	41
5	255	52.3	+19	54.9	58	04.5	89	-19	50.9	59	50	19 46	20 26	21 21		21 34	60	5 26	41
6	270	52.3	+19	55.4	72	32.4	90	-19	56.8	57	45	19 28	20 02	20 47		21 15	58	5 43	44
7	285	52.2		55.9	87	00.4	89	-20	02.5	57	40	13	19 44	23		20 59	57	5 58	46
8	300	52.2		56.5	101	28.3	89		08.2	56	35	19 00	29	20 03		45	57	6 11	47
9	315	52.2		57.0	115	56.2	89		13.8	54	30	18 49	19 16	19 48		33	56	22	48
10	330	52.1		57.5	130	24.1	89		19.2	53	20	31	18 55	23		20 13	55	40	50
11	345	52.1	+19	58.0	144	52.0	89	-20	24.5	52	10 N	18 15	18 37	19 04		19 56	54	6 57	51
12	0	52.1	+19	58.5	159	19.9	89	-20	29.7	51	0	18 00	18 22	18 48		19 40	53	7 12	53
13	15	52.0		59.1	173	47.8	89		34.8	49	10 S	17 45	18 08	33		23	52	27	55
14	30	52.0	+19	59.6	188	15.7	89		39.7	49	20	30	17 53	20		19 06	51	7 44	56
15	45	51.9	+20	00.1	202	43.6	89		44.6	47	30	12	38	07		18 46	50	8 02	59
16	60	51.9		00.6	217	11.5	88		49.3	46	35	17 02	29	18 00		35	49	14	59
17	75	51.9	+20	01.1	231	39.3	89	-20	53.9	45	40	16 50	17 20	17 53		18 22	48	8 26	61
18	90	51.8	+20	01.7	246	07.2	89	-20	58.4	43	45	16 36	17 09	17 45		18 06	47	8 41	62
19	105	51.8		02.2	260	35.1	89	-21	02.7	43	50	20	16 56	36		17 47	46	9 00	63
20	120	51.8		02.7	275	03.0	89		07.0	41	52	12	50	32		38	45	08	65
21	135	51.7		03.2	289	30.9	89		11.1	40	54	16 03	44	28		28	44	18	66
22	150	51.7		03.7	303	58.8	89		15.1	38	56	15 53	37	23		17	42	29	67
23	165	51.7		04.2	318	26.7	90		18.9	38	58	42	29	18		17 04	41	42	69
24	180	51.6	+20	04.8	332	54.7		-21	22.7		60 S	15 29	16 20	17 13		16 49	39	9 56	72

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 09 ^m 2		Mag: -3.8 PMG: 10 ^h 26 ^m				Mag: +1.7 PMG: 14 ^h 21 ^m				Mag: -2.6 PMG: 01 ^h 36 ^m				Mag: +0.4 PMG: 03 ^h 37 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	237	21.7	203	33.4	+11	55.3	144	37.0	+24	32.7	335	56.2	-22	-35.0	305	34.2	-21	32.7
1	252	24.1	218	32.9		56.4	159	37.6		32.7	350	58.9		-35.0	320	36.7		32.7
2	267	26.6	233	32.5		57.4	174	38.3		32.6	6	01.7		-35.0	335	39.3		32.7
3	282	29.1	248	32.0		58.5	189	39.0		32.6	21	04.4		-34.9	350	41.8		32.7
4	297	31.5	263	31.5	+11	59.5	204	39.7		32.6	36	07.2		-34.9	5	44.4		32.7
5	312	34.0	278	31.1	+12	00.5	219	40.4	+24	32.5	51	09.9	-22	-34.9	20	46.9	-21	32.7
6	327	36.4	293	30.6	+12	01.6	234	41.1	+24	32.5	66	12.7	-22	-34.9	35	49.5	-21	32.8
7	342	38.9	308	30.2		02.6	249	41.8		32.5	81	15.4		-34.9	50	52.0		32.8
8	357	41.4	323	29.7		03.7	264	42.5		32.5	96	18.2		-34.9	65	54.6		32.8
9	12	43.8	338	29.3		04.7	279	43.2		32.4	111	20.9		-34.9	80	57.1		32.8
10	27	46.3	353	28.8		05.7	294	43.9		32.4	126	23.7		-34.9	95	59.7		32.8
11	42	48.8	8	28.4	+12	06.8	309	44.6	+24	32.4	141	26.4	-22	-34.8	111	02.2	-21	32.8
12	57	51.2	23	27.9	+12	07.8	324	45.3	+24	32.4	156	29.2	-22	-34.8	126	04.7	-21	32.8
13	72	53.7	38	27.5		08.9	339	46.0		32.3	171	32.0		-34.8	141	07.3		32.8
14	87	56.2	53	27.0		09.9	354	46.6		32.3	186	34.7		-34.8	156	09.8		32.9
15	102	58.6	68	26.5		10.9	9	47.3		32.3	201	37.5		-34.8	171	12.4		32.9
16	118	01.1	83	26.1		12.0	24	48.0		32.2	216	40.2		-34.8	186	14.9		32.9
17	133	03.6	98	25.6	+12	13.0	39	48.7	+24	32.2	231	43.0	-22	-34.8	201	17.5	-21	32.9
18	148	06.0	113	25.2	+12	14.0	54	49.4	+24	32.2	246	45.7	-22	-34.7	216	20.0	-21	32.9
19	163	08.5	128	24.7		15.1	69	50.1		32.1	261	48.5		-34.7	231	22.6		32.9
20	178	10.9	143	24.3		16.1	84	50.8		32.1	276	51.2		-34.7	246	25.1		32.9
21	193	13.4	158	23.8		17.1	99	51.5		32.1	291	54.0		-34.7	261	27.7		33.0
22	208	15.9	173	23.3		18.2	114	52.2		32.1	306	56.8		-34.7	276	30.2		33.0
23	223	18.3	188	22.9		19.2	129	52.9		32.0	321	59.5		-34.7	291	32.8		33.0
24	238	20.8	203	22.4	+12	20.2	144	53.6	+24	32.0	337	02.3	-22	-34.7	306	35.3	-21	33.0
Dif.	—		-5		+10		+7		0		+28		0		+25			

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 56 ^m 6				SD: 15'4 Edad: 16 ^d 1		PHE { 4 ^h : 56'4 12 ^h : 56'2 20 ^h : 56'0		PMG: 01 ^h 52 ^m Rº: 53 ^m										
	hG ☉		Dec		hG ☾		Dif.		Dec			Dif.							
	h	°	'	°	h	°	'	°	h	°		'	°		Náut.	Civil	h	m	m
0	180	51.6	+20	04.8	332	54.7	89	-21	22.7	36	60 N	h m ** **	h m 2 01	h m 3 10	h m m 23 41 48	h m m 5 04 45			
1	195	51.6		05.3	347	22.6	89		26.3	35	58	** **	26	25	23 49	21 46			
2	210	51.5		05.8	1	50.5	89		29.8	34	56	1 17	2 45	37	23 08	35 47			
3	225	51.5		06.3	16	18.4	90		33.2	33	54	1 50	3 01	48	22 55	47 48			
4	240	51.5		06.8	30	46.4	90		36.5	31	52	2 13	15	3 58	44 50	5 58 48			
5	255	51.4	+20	07.3	45	14.4	89	-21	39.6	30	50	2 31	3 26	4 07	22 34	6 07 49			
6	270	51.4	+20	07.8	59	42.3	90	-21	42.6	29	45	3 05	3 50	4 25	22 13	6 27 50			
7	285	51.4		08.3	74	10.3	90		45.5	28	40	30	4 09	40	21 56	44 50			
8	300	51.3		08.9	88	38.3	90		48.3	27	35	3 49	24	4 53	42 51	6 58 50			
9	315	51.3		09.4	103	06.3	90		51.0	25	30	4 05	37	5 04	29 52	7 10 51			
10	330	51.2		09.9	117	34.3	91		53.5	24	20	30	4 58	22	21 08	30 52			
11	345	51.2	+20	10.4	132	02.4	90	-21	55.9	23	10 N	4 49	5 16	5 38	20 50	7 48 53			
12	0	51.2	+20	10.9	146	30.4	91	-21	58.2	22	0	5 05	5 31	5 53	20 33	8 05 53			
13	15	51.1		11.4	160	58.5	91	-22	00.4	20	10 S	20	5 45	6 08	20 15	22 53			
14	30	51.1		11.9	175	26.6	91		02.4	20	20	33	6 00	23	19 57	8 40 53			
15	45	51.0		12.4	189	54.7	92		04.4	18	30	46	16	41	36 52	9 01 53			
16	60	51.0		12.9	204	22.9	91		06.2	17	35	5 53	24	6 52	24 52	13 54			
17	75	51.0	+20	13.4	218	51.0	92	-22	07.9	15	40	6 01	6 34	7 03	19 10	9 27 54			
18	90	50.9	+20	13.9	233	19.2	92	-22	09.4	15	45	6 09	6 45	7 17	18 53	9 43 55			
19	105	50.9		14.4	247	47.4	92		10.9	13	50	18	6 58	34	33 52	10 03 56			
20	120	50.8		14.9	262	15.6	93		12.2	12	52	22	7 04	42	23 52	13 56			
21	135	50.8		15.4	276	43.9	92		13.4	11	54	26	10	7 51	18 12	24 56			
22	150	50.7		15.9	291	12.1	93		14.5	9	56	31	17	8 01	17 59	36 56			
23	165	50.7		16.4	305	40.4	94		15.4	9	58	35	25	12	17 45	10 51 56			
24	180	50.7	+20	16.9	320	08.8		-22	16.3		60 S	6 41	7 34	8 25	17 28	11 08 56			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 8 ^h 05 ^m 3		Mag: -3.8 PMG: 10 ^h 27 ^m				Mag: +1.7 PMG: 14 ^h 20 ^m				Mag: -2.6 PMG: 01 ^h 32 ^m				Mag: +0.3 PMG: 03 ^h 33 ^m				
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.		
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	
0	238	20.8	203	22.4	+12	20.2	144	53.6	+24	32.0	337	02.3	-22	34.7	306	35.3	-21	33.0	
1	253	23.3	218	22.0		21.3	159	54.3		32.0	352	05.0		34.7	321	37.9		33.0	
2	268	25.7	233	21.5		22.3	174	55.0		31.9	7	07.8		34.6	336	40.5		33.0	
3	283	28.2	248	21.0		23.3	189	55.7		31.9	22	10.5		34.6	351	43.0		33.0	
4	298	30.7	263	20.6		24.4	204	56.4		31.9	37	13.3		34.6	6	45.6		33.1	
5	313	33.1	278	20.1	+12	25.4	219	57.0	+24	31.8	52	16.1	-22	34.6	21	48.1	-21	33.1	
6	328	35.6	293	19.6	+12	26.4	234	57.7	+24	31.8	67	18.8	-22	34.6	36	50.7	-21	33.1	
7	343	38.1	308	19.2		27.4	249	58.4		31.7	82	21.6		34.6	51	53.2		33.1	
8	358	40.5	323	18.7		28.5	264	59.1		31.7	97	24.3		34.6	66	55.8		33.1	
9	13	43.0	338	18.3		29.5	279	59.8		31.7	112	27.1		34.5	81	58.3		33.1	
10	28	45.4	353	17.8		30.5	295	00.5		31.6	127	29.9		34.5	97	00.9		33.1	
11	43	47.9	8	17.3	+12	31.6	310	01.2	+24	31.6	142	32.6	-22	34.5	112	03.4	-21	33.2	
12	58	50.4	23	16.9	+12	32.6	325	01.9	+24	31.6	157	35.4	-22	34.5	127	06.0	-21	33.2	
13	73	52.8	38	16.4		33.6	340	02.6		31.5	172	38.1		34.5	142	08.5		33.2	
14	88	55.3	53	15.9		34.6	355	03.3		31.5	187	40.9		34.5	157	11.1		33.2	
15	103	57.8	68	15.5		35.7	10	04.0		31.5	202	43.7		34.5	172	13.6		33.2	
16	119	00.2	83	15.0		36.7	25	04.7		31.4	217	46.4		34.5	187	16.2		33.2	
17	134	02.7	98	14.5	+12	37.7	40	05.4	+24	31.4	232	49.2	-22	34.4	202	18.7	-21	33.2	
18	149	05.2	113	14.1	+12	38.7	55	06.1	+24	31.3	247	51.9	-22	34.4	217	21.3	-21	33.3	
19	164	07.6	128	13.6		39.8	70	06.8		31.3	262	54.7		34.4	232	23.8		33.3	
20	179	10.1	143	13.1		40.8	85	07.5		31.3	277	57.5		34.4	247	26.4		33.3	
21	194	12.6	158	12.7		41.8	100	08.1		31.2	293	00.2		34.4	262	29.0		33.3	
22	209	15.0	173	12.2		42.8	115	08.8		31.2	308	03.0		34.4	277	31.5		33.3	
23	224	17.5	188	11.7		43.8	130	09.5		31.1	323	05.7		34.4	292	34.1		33.3	
24	239	19.9	203	11.3	+12	44.9	145	10.2	+24	31.1	338	08.5	-22	34.3	307	36.6	-21	33.4	
Dif.	—		-5		+10		+7		0		+28		0		+26				

UT	SOL				☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 56 ^m 7				SD: 15'2 Edad: 17 ^d 1 PHE { 4^h: 55'8 12^h: 55'6 20^h: 55'4 PMG: 02 ^h 45 ^m Rº: 52^m															
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.														
h	°	'	°	'	°	'	°	'	°	'	°	m	h	m	h	m	m	h	m	m
0	180	50.7	+20	16.9	320	08.8	93	-22	16.3	7	60 N	20 47	21 58	** ** *	** ** *	**	5	49	58	
1	195	50.6		17.4	334	37.1	94		17.0	6	58	32	32	** ** *	** ** *	**	6	07	57	
2	210	50.6		17.9	349	05.5	94		17.6	5	56	19	21 12	22 44	23 58	38	22	56		
3	225	50.5		18.4	3	33.9	95		18.1	4	54	20 07	20 55	22 09	45	40	35	56		
4	240	50.5		18.9	18	02.4	94		18.5	2	52	19 57	41	21 44	34	41	46	56		
5	255	50.4	+20	19.4	32	30.8	95	-22	18.7	2	50	19 48	20 29	21 25	23 24	42	6	56	55	
6	270	50.4	+20	19.9	46	59.3	96	-22	18.9	0	45	19 30	20 05	20 50	23 04	43	7	17	55	
7	285	50.4		20.4	61	27.9	96		18.9	1	40	14	19 46	25	22 47	45	34	54		
8	300	50.3		20.9	75	56.5	96		18.8	2	35	19 02	30	20 05	33	46	7	48	54	
9	315	50.3		21.4	90	25.1	96		18.6	4	30	18 51	19 17	19 49	21	46	8	01	53	
10	330	50.2		21.9	104	53.7	97		18.2	4	20	32	18 56	24	22 00	48	22	53		
11	345	50.2	+20	22.4	119	22.4	97	-22	17.8	6	10 N	18 15	18 38	19 04	21 42	49	8	41	51	
12	0	50.1	+20	22.9	133	51.1	98	-22	17.2	7	0	18 00	18 22	18 48	21 25	50	8	58	51	
13	15	50.1		23.4	148	19.9	98		16.5	8	10 S	17 45	18 08	33	21 08	51	9	15	51	
14	30	50.0		23.9	162	48.7	98		15.7	9	20	29	17 53	20	20 49	53	33	50		
15	45	50.0		24.4	177	17.5	99		14.8	10	30	11	37	18 06	28	54	9	54	49	
16	60	49.9		24.8	191	46.4	99		13.8	11	35	17 01	28	17 59	16	55	10	07	48	
17	75	49.9	+20	25.3	206	15.3	99	-22	12.7	13	40	16 49	17 18	17 51	20 02	55	10	21	48	
18	90	49.8	+20	25.8	220	44.2	100	-22	11.4	14	45	16 35	17 07	17 43	19 45	57	10	38	47	
19	105	49.8		26.3	235	13.2	100		10.0	14	50	17	16 54	34	25	57	10	59	46	
20	120	49.8		26.8	249	42.2	101		08.6	16	52	09	48	30	15	58	11	09	45	
21	135	49.7		27.3	264	11.3	101		07.0	17	54	16 00	41	26	19 04	59	20	44		
22	150	49.7		27.8	278	40.4	102		05.3	18	56	15 50	34	21	18 51	60	32	44		
23	165	49.6		28.3	293	09.6	102		03.5	20	58	39	26	16	37	61	11	47	43	
24	180	49.6	+20	28.7	307	38.8		-22	01.5		60 S	15 25	16 17	17 10	18 19	63	12	04	42	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 8 ^h 01 ^m 4		Mag: -3.8 PMG: 10 ^h 28 ^m				Mag: +1.7 PMG: 14 ^h 19 ^m				Mag: -2.6 PMG: 01 ^h 27 ^m				Mag: +0.3 PMG: 03 ^h 29 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	239	19.9	203	11.3	+12	44.9	145	10.2	+24	31.1	338	08.5	-22	-34.3	307	36.6	-21	33.4		
1	254	22.4	218	10.8		45.9	160	10.9		31.1	353	11.3		-34.3	322	39.2		33.4		
2	269	24.9	233	10.3		46.9	175	11.6		31.0	8	14.0		-34.3	337	41.7		33.4		
3	284	27.3	248	09.8		47.9	190	12.3		31.0	23	16.8		-34.3	352	44.3		33.4		
4	299	29.8	263	09.4		48.9	205	13.0		30.9	38	19.6		-34.3	7	46.8		33.4		
5	314	32.3	278	08.9	+12	50.0	220	13.7	+24	30.9	53	22.3	-22	-34.3	22	49.4	-21	33.4		
6	329	34.7	293	08.4	+12	51.0	235	14.4	+24	30.8	68	25.1	-22	-34.3	37	51.9	-21	33.4		
7	344	37.2	308	08.0		52.0	250	15.1		30.8	83	27.8		-34.2	52	54.5		33.5		
8	359	39.7	323	07.5		53.0	265	15.8		30.8	98	30.6		-34.2	67	57.1		33.5		
9	14	42.1	338	07.0		54.0	280	16.5		30.7	113	33.4		-34.2	82	59.6		33.5		
10	29	44.6	353	06.5		55.0	295	17.2		30.7	128	36.1		-34.2	98	02.2		33.5		
11	44	47.1	8	06.1	+12	56.0	310	17.9	+24	30.6	143	38.9	-22	-34.2	113	04.7	-21	33.5		
12	59	49.5	23	05.6	+12	57.1	325	18.6	+24	30.6	158	41.7	-22	-34.2	128	07.3	-21	33.5		
13	74	52.0	38	05.1		58.1	340	19.3		30.5	173	44.4		-34.2	143	09.8		33.5		
14	89	54.4	53	04.6	+12	59.1	355	20.0		30.5	188	47.2		-34.1	158	12.4		33.6		
15	104	56.9	68	04.2	+13	00.1	10	20.6		30.5	203	50.0		-34.1	173	15.0		33.6		
16	119	59.4	83	03.7		01.1	25	21.3		30.4	218	52.7		-34.1	188	17.5		33.6		
17	135	01.8	98	03.2	+13	02.1	40	22.0	+24	30.4	233	55.5	-22	-34.1	203	20.1	-21	33.6		
18	150	04.3	113	02.7	+13	03.1	55	22.7	+24	30.3	248	58.3	-22	-34.1	218	22.6	-21	33.6		
19	165	06.8	128	02.3		04.1	70	23.4		30.3	264	01.0		-34.1	233	25.2		33.6		
20	180	09.2	143	01.8		05.2	85	24.1		30.2	279	03.8		-34.1	248	27.7		33.7		
21	195	11.7	158	01.3		06.2	100	24.8		30.2	294	06.6		-34.0	263	30.3		33.7		
22	210	14.2	173	00.8		07.2	115	25.5		30.1	309	09.3		-34.0	278	32.9		33.7		
23	225	16.6	188	00.3		08.2	130	26.2		30.1	324	12.1		-34.0	293	35.4		33.7		
24	240	19.1	202	59.9	+13	09.2	145	26.9	+24	30.0	339	14.9	-22	-34.0	308	38.0	-21	33.7		
Dif.	—		-5		+10		+7		0		+28		0		+26					

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°8			SD: 15°1			PHE { 4 ^h : 55°2 12 ^h : 55°0 20 ^h : 54°9											
	PMG: 11 ^h 56 ^m 7			Edad: 18 ^d 1														
	PMG: 03 ^h 37 ^m			Rº: 49 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	180	49.6	+20 28.7	307	38.8	103	-22 01.5	20	60 N	** **	1 55	3 06	0 29	35	6 47	68		
1	195	49.5		322	08.1	102	-21 59.5	21	58	** **	2 21	21	0 12	37	7 04	66		
2	210	49.5		336	37.3	104		57.4	56	1 09	41	34	** **	**	18	64		
3	225	49.4		351	06.7	104		55.1	54	1 44	2 58	46	** **	**	31	62		
4	240	49.4		5	36.1	104		52.8	52	2 09	3 12	3 56	** **	**	42	61		
5	255	49.3	+20 31.2	20	05.5	105	-21 50.3	26	50	2 28	3 24	4 05	** **	**	7 51	60		
6	270	49.3	+20 31.6	34	35.0	105	-21 47.7	27	45	3 03	3 48	4 23	23 47	36	8 12	58		
7	285	49.2		49	04.5	106		45.0	40	28	4 07	39	32	38	28	57		
8	300	49.2		63	34.1	107		42.3	35	3 48	23	4 51	19	40	42	55		
9	315	49.1		78	03.8	106		39.4	30	4 04	36	5 03	23 07	42	8 54	54		
10	330	49.1		92	33.4	108		36.4	31	20	29	4 58	22 48	44	9 15	52		
11	345	49.0	+20 34.0	107	03.2	107	-21 33.3	32	10 N	4 49	5 15	5 38	22 31	46	9 32	51		
12	0	49.0	+20 34.5	121	32.9	109	-21 30.1	33	0	5 05	5 31	5 53	22 15	48	9 49	49		
13	15	48.9		136	02.8	109		26.8	10 S	20	5 46	6 08	21 59	49	10 06	47		
14	30	48.9		150	32.7	109		23.4	20	34	6 01	24	42	51	23	46		
15	45	48.8		165	02.6	110		19.9	30	47	17	42	22	54	43	45		
16	60	48.8		179	32.6	110		16.3	35	5 55	26	6 53	21 11	55	10 55	43		
17	75	48.7	+20 36.9	194	02.6	111	-21 12.5	38	40	6 02	6 36	7 05	20 57	57	11 09	41		
18	90	48.6	+20 37.4	208	32.7	111	-21 08.7	39	45	6 11	6 47	7 19	20 42	59	11 25	40		
19	105	48.6		223	02.8	112		04.8	50	20	7 00	37	22	62	45	37		
20	120	48.5		237	33.0	113	-21 00.8	41	52	24	06	45	13	63	11 54	36		
21	135	48.5		252	03.3	113	-20 56.7	42	54	28	13	7 54	20 03	64	12 04	35		
22	150	48.4		266	33.6	113		52.5	56	33	20	8 04	19 51	66	16	34		
23	165	48.4		281	03.9	114		48.2	58	38	28	16	19 38	68	12 30	31		
24	180	48.3	+20 40.2	295	34.3		-20 43.8		60 S	6 44	7 38	8 29	19 22	71	12 46	29		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 57 ^m 4		Mag: -3.8 PMG: 10 ^h 28 ^m				Mag: +1.7 PMG: 14 ^h 18 ^m				Mag: -2.6 PMG: 01 ^h 23 ^m				Mag: +0.3 PMG: 03 ^h 25 ^m			
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	240	19.1	202	59.9	+13	09.2	145	26.9	+24	30.0	339	14.9	-22	34.0	308	38.0		
1	255	21.5	217	59.4		10.2	160	27.6		30.0	354	17.6		34.0	323	40.5		
2	270	24.0	232	58.9		11.2	175	28.3		29.9	9	20.4		34.0	338	43.1		
3	285	26.5	247	58.4		12.2	190	29.0		29.9	24	23.2		34.0	353	45.7		
4	300	28.9	262	57.9		13.2	205	29.7		29.8	39	25.9		34.0	8	48.2		
5	315	31.4	277	57.5	+13	14.2	220	30.4	+24	29.8	54	28.7	-22	33.9	23	50.8		
6	330	33.9	292	57.0	+13	15.2	235	31.1	+24	29.7	69	31.5	-22	33.9	38	53.3		
7	345	36.3	307	56.5		16.2	250	31.8		29.7	84	34.2		33.9	53	55.9		
8	0	38.8	322	56.0		17.2	265	32.5		29.6	99	37.0		33.9	68	58.4		
9	15	41.3	337	55.5		18.2	280	33.2		29.6	114	39.8		33.9	84	01.0		
10	30	43.7	352	55.0		19.2	295	33.9		29.5	129	42.5		33.9	99	03.6		
11	45	46.2	7	54.6	+13	20.2	310	34.6	+24	29.5	144	45.3	-22	33.9	114	06.1		
12	60	48.7	22	54.1	+13	21.3	325	35.3	+24	29.4	159	48.1	-22	33.8	129	08.7		
13	75	51.1	37	53.6		22.3	340	36.0		29.4	174	50.8		33.8	144	11.2		
14	90	53.6	52	53.1		23.3	355	36.7		29.3	189	53.6		33.8	159	13.8		
15	105	56.0	67	52.6		24.3	10	37.3		29.3	204	56.4		33.8	174	16.4		
16	120	58.5	82	52.1		25.3	25	38.0		29.2	219	59.1		33.8	189	18.9		
17	136	01.0	97	51.6	+13	26.3	40	38.7	+24	29.1	235	01.9	-22	33.8	204	21.5		
18	151	03.4	112	51.2	+13	27.3	55	39.4	+24	29.1	250	04.7	-22	33.8	219	24.1		
19	166	05.9	127	50.7		28.2	70	40.1		29.0	265	07.4		33.7	234	26.6		
20	181	08.4	142	50.2		29.2	85	40.8		29.0	280	10.2		33.7	249	29.2		
21	196	10.8	157	49.7		30.2	100	41.5		28.9	295	13.0		33.7	264	31.7		
22	211	13.3	172	49.2		31.2	115	42.2		28.9	310	15.8		33.7	279	34.3		
23	226	15.8	187	48.7		32.2	130	42.9		28.8	325	18.5		33.7	294	36.9		
24	241	18.2	202	48.2	+13	33.2	145	43.6	+24	28.8	340	21.3	-22	33.7	309	39.4		
Dif.	—		-5 +10				+7 -1				+28 0				+26 0			

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'8				SD: 14'9												PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5	
	PMG: 11 ^h 56 ^m 8				Edad: 19 ^d 1													
	PMG: 04 ^h 26 ^m				Rº: 48 ^m													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°		h m	h m	h m m	h m m	h m m	m		
0	180	48.3	+20	40.2	295	34.3	115	-20	43.8	45	60 N	20 51	22 05	** **	1 04	24	7 55	73
1	195	48.3		40.7	310	04.8	115		39.3	46	58	35	21 37	** **	0 49	27	8 10	70
2	210	48.2		41.2	324	35.3	116		34.7	47	56	22	21 16	22 54	36	29	22	68
3	225	48.2		41.6	339	05.9	116		30.0	47	54	10	20 59	22 15	25	31	33	66
4	240	48.1		42.1	353	36.5	117		25.3	49	52	20 00	45	21 49	15	32	43	64
5	255	48.1	+20	42.6	8	07.2	117	-20	20.4	50	50	19 51	20 32	21 29	0 06	34	8 51	63
6	270	48.0	+20	43.0	22	37.9	118	-20	15.4	50	45	19 32	20 07	20 53	** **	**	9 10	60
7	285	47.9		43.5	37	08.7	118		10.4	52	40	16	19 48	27	** **	**	25	57
8	300	47.9		44.0	51	39.5	119		05.2	52	35	19 03	32	20 07	23 59	35	37	56
9	315	47.8		44.4	66	10.4	120	-20	00.0	53	30	18 52	19 18	19 51	49	37	9 48	54
10	330	47.8		44.9	80	41.4	120	-19	54.7	54	20	32	18 57	25	32	40	10 07	51
11	345	47.7	+20	45.4	95	12.4	120	-19	49.3	55	10 N	18 16	18 38	19 05	23 17	43	10 23	49
12	0	47.7	+20	45.8	109	43.4	121	-19	43.8	56	0	18 00	18 23	18 48	23 03	45	10 38	47
13	15	47.6		46.3	124	14.5	122		38.2	57	10 S	17 45	18 08	33	22 48	49	10 53	45
14	30	47.5		46.7	138	45.7	122		32.5	58	20	29	17 52	19	33	51	11 09	42
15	45	47.5		47.2	153	16.9	123		26.7	58	30	10	36	18 05	16	54	28	39
16	60	47.4		47.7	167	48.2	123		20.9	59	35	17 00	27	17 58	22 06	56	38	38
17	75	47.4	+20	48.1	182	19.5	124	-19	15.0	60	40	16 47	17 17	17 50	21 54	58	11 50	36
18	90	47.3	+20	48.6	196	50.9	125	-19	09.0	61	45	16 33	17 06	17 42	21 41	60	12 05	33
19	105	47.3		49.0	211	22.4	125	-19	02.9	62	50	15	16 52	32	24	63	22	31
20	120	47.2		49.5	225	53.9	125	-18	56.7	63	52	16 07	46	28	16	65	30	30
21	135	47.1		50.0	240	25.4	126		50.4	63	54	15 58	39	24	21 07	67	39	28
22	150	47.1		50.4	254	57.0	126		44.1	65	56	47	32	19	20 57	69	12 50	25
23	165	47.0		50.9	269	28.6	128		37.6	65	58	36	23	13	46	71	13 01	24
24	180	47.0	+20	51.3	284	00.4		-18	31.1		60 S	15 22	16 14	17 08	20 33	74	13 15	20

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 53 ^m 5		Mag: -3.8 PMG: 10 ^h 29 ^m				Mag: +1.7 PMG: 14 ^h 16 ^m				Mag: -2.6 PMG: 01 ^h 18 ^m				Mag: +0.3 PMG: 03 ^h 21 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	241	18.2	202	48.2	+13	33.2	145	43.6	+24	28.8	340	21.3	-22	-33.7	309	39.4	-21	34.1
1	256	20.7	217	47.7		34.2	160	44.3		28.7	355	24.1		-33.6	324	42.0		34.1
2	271	23.2	232	47.2		35.2	175	45.0		28.6	10	26.8		-33.6	339	44.5		34.1
3	286	25.6	247	46.8		36.2	190	45.7		28.6	25	29.6		-33.6	354	47.1		34.1
4	301	28.1	262	46.3		37.2	205	46.4		28.5	40	32.4		-33.6	9	49.7		34.2
5	316	30.5	277	45.8	+13	38.2	220	47.1	+24	28.5	55	35.2	-22	-33.6	24	52.2	-21	34.2
6	331	33.0	292	45.3	+13	39.2	235	47.8	+24	28.4	70	37.9	-22	-33.6	39	54.8	-21	34.2
7	346	35.5	307	44.8		40.2	250	48.5		28.3	85	40.7		-33.6	54	57.4		34.2
8	1	37.9	322	44.3		41.2	265	49.2		28.3	100	43.5		-33.5	69	59.9		34.2
9	16	40.4	337	43.8		42.2	280	49.9		28.2	115	46.2		-33.5	85	02.5		34.2
10	31	42.9	352	43.3		43.2	295	50.6		28.2	130	49.0		-33.5	100	05.1		34.2
11	46	45.3	7	42.8	+13	44.1	310	51.3	+24	28.1	145	51.8	-22	-33.5	115	07.6	-21	34.3
12	61	47.8	22	42.3	+13	45.1	325	52.0	+24	28.0	160	54.6	-22	-33.5	130	10.2	-21	34.3
13	76	50.3	37	41.8		46.1	340	52.7		28.0	175	57.3		-33.5	145	12.7		34.3
14	91	52.7	52	41.3		47.1	355	53.4		27.9	191	00.1		-33.5	160	15.3		34.3
15	106	55.2	67	40.8		48.1	10	54.1		27.9	206	02.9		-33.4	175	17.9		34.3
16	121	57.7	82	40.3		49.1	25	54.8		27.8	221	05.7		-33.4	190	20.4		34.3
17	137	00.1	97	39.8	+13	50.1	40	55.5	+24	27.7	236	08.4	-22	-33.4	205	23.0	-21	34.4
18	152	02.6	112	39.3	+13	51.1	55	56.2	+24	27.7	251	11.2	-22	-33.4	220	25.6	-21	34.4
19	167	05.0	127	38.8		52.0	70	56.9		27.6	266	14.0		-33.4	235	28.1		34.4
20	182	07.5	142	38.3		53.0	85	57.6		27.5	281	16.7		-33.4	250	30.7		34.4
21	197	10.0	157	37.8		54.0	100	58.3		27.5	296	19.5		-33.4	265	33.3		34.4
22	212	12.4	172	37.3		55.0	115	59.0		27.4	311	22.3		-33.3	280	35.8		34.4
23	227	14.9	187	36.9		56.0	130	59.7		27.4	326	25.1		-33.3	295	38.4		34.5
24	242	17.4	202	36.4	+13	57.0	146	00.4	+24	27.3	341	27.8	-22	-33.3	310	41.0	-21	34.5
Dif.	—		-5		+10		+7		-1		+28		0		+26			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8				SD: 14'8												PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'3	
	PMG: 11 ^h 56 ^m 9				Edad: 20 ^d 1													
	PMG: 05 ^h 14 ^m				Rº: 45 ^m													
	hG ☉	Dec			hG ☾	Dif.		Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	m	h m m	m	
0	180	47.0	+20	51.3	284	00.4	127	-18	31.1	66	60 N	** ** *	1 48	3 02	1 28	17	9 08	75
1	195	46.9		51.8	298	32.1	128		24.5	66	58	** ** *	2 16		16	20	20	72
2	210	46.8		52.2	313	03.9	129		17.9	68	56	0 59	37	31	1 05	23	30	70
3	225	46.8		52.7	327	35.8	129		11.1	68	54	1 38	2 54	43	0 56	24	39	68
4	240	46.7		53.1	342	07.7	130	-18	04.3	69	52	2 04	3 09	3 53	47	26	47	66
5	255	46.7	+20	53.6	356	39.7	130	-17	57.4	70	50	2 24	3 21	4 02	0 40	27	9 54	64
6	270	46.6	+20	54.0	11	11.7	131	-17	50.4	70	45	3 00	3 46	4 22	0 23	31	10 10	60
7	285	46.5		54.5	25	43.8	131		43.4	72	40	26	4 06	37	0 10	34	22	58
8	300	46.5		55.0	40	15.9	132		36.2	72	35	3 46	22	4 50	** ** *	**	33	55
9	315	46.4		55.4	54	48.1	132		29.0	72	30	4 03	35	5 02	** ** *	**	42	54
10	330	46.4		55.9	69	20.3	133		21.8	74	20	29	4 57	21	** ** *	**	10 58	50
11	345	46.3	+20	56.3	83	52.6	133	-17	14.4	74	10 N	4 49	5 15	5 38	** ** *	**	11 12	47
12	0	46.2	+20	56.7	98	24.9	134	-17	07.0	75	0	5 05	5 31	5 53	23 48	44	11 25	45
13	15	46.2		57.2	112	57.3	134	-16	59.5	76	10 S	20	5 46	6 09	37	46	38	42
14	30	46.1		57.6	127	29.7	135		51.9	76	20	34	6 01	25	24	50	11 51	40
15	45	46.0		58.1	142	02.2	135		44.3	77	30	49	18	44	10	53	12 07	36
16	60	46.0		58.5	156	34.7	136		36.6	78	35	5 56	27	6 54	23 02	55	16	34
17	75	45.9	+20	59.0	171	07.3	136	-16	28.8	78	40	6 04	6 37	7 07	22 52	58	12 26	32
18	90	45.9	+20	59.4	185	39.9	137	-16	21.0	79	45	6 12	6 49	7 21	22 41	61	12 38	29
19	105	45.8	+20	59.9	200	12.6	137		13.1	80	50	22	7 02	39	27	65	12 53	26
20	120	45.7	+21	00.3	214	45.3	137	-16	05.1	80	52	26	08	47	21	66	13 00	24
21	135	45.7		00.8	229	18.0	139	-15	57.1	82	54	31	15	7 57	14	68	07	22
22	150	45.6		01.2	243	50.9	138		48.9	81	56	36	23	8 07	22 06	70	15	21
23	165	45.5		01.6	258	23.7	139		40.8	83	58	41	31	19	21 57	73	13 25	18
24	180	45.5	+21	02.1	272	56.6		-15	32.5		60 S	6 47	7 41	8 33	21 47	76	13 35	16
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 49 ^m 6		Mag: -3.8 PMG: 10 ^h 30 ^m				Mag: +1.7 PMG: 14 ^h 15 ^m				Mag: -2.6 PMG: 01 ^h 14 ^m				Mag: +0.3 PMG: 03 ^h 17 ^m			
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	242	17.4	202	36.4	+13	57.0	146	00.4	+24	27.3	341	27.8	-22	33.3	310	41.0	-21	34.5
1	257	19.8	217	35.9		57.9	161	01.1		27.2	356	30.6		33.3	325	43.5		34.5
2	272	22.3	232	35.3		58.9	176	01.8		27.2	11	33.4		33.3	340	46.1		34.5
3	287	24.8	247	34.8	+13	59.9	191	02.5		27.1	26	36.2		33.3	355	48.7		34.5
4	302	27.2	262	34.3	+14	00.9	206	03.2		27.0	41	38.9		33.3	10	51.2		34.5
5	317	29.7	277	33.8	+14	01.9	221	03.9	+24	27.0	56	41.7	-22	33.2	25	53.8	-21	34.6
6	332	32.1	292	33.3	+14	02.8	236	04.6	+24	26.9	71	44.5	-22	33.2	40	56.4	-21	34.6
7	347	34.6	307	32.8		03.8	251	05.3		26.8	86	47.3		33.2	55	58.9		34.6
8	2	37.1	322	32.3		04.8	266	06.0		26.8	101	50.0		33.2	71	01.5		34.6
9	17	39.5	337	31.8		05.8	281	06.7		26.7	116	52.8		33.2	86	04.1		34.6
10	32	42.0	352	31.3		06.7	296	07.3		26.6	131	55.6		33.2	101	06.6		34.6
11	47	44.5	7	30.8	+14	07.7	311	08.0	+24	26.6	146	58.4	-22	33.1	116	09.2	-21	34.7
12	62	46.9	22	30.3	+14	08.7	326	08.7	+24	26.5	162	01.2	-22	33.1	131	11.8	-21	34.7
13	77	49.4	37	29.8		09.7	341	09.4		26.4	177	03.9		33.1	146	14.3		34.7
14	92	51.9	52	29.3		10.6	356	10.1		26.4	192	06.7		33.1	161	16.9		34.7
15	107	54.3	67	28.8		11.6	11	10.8		26.3	207	09.5		33.1	176	19.5		34.7
16	122	56.8	82	28.3		12.6	26	11.5		26.2	222	12.3		33.1	191	22.0		34.7
17	137	59.3	97	27.8	+14	13.6	41	12.2	+24	26.1	237	15.0	-22	33.1	206	24.6	-21	34.8
18	153	01.7	112	27.3	+14	14.5	56	12.9	+24	26.1	252	17.8	-22	33.0	221	27.2	-21	34.8
19	168	04.2	127	26.8		15.5	71	13.6		26.0	267	20.6		33.0	236	29.7		34.8
20	183	06.6	142	26.3		16.5	86	14.3		25.9	282	23.4		33.0	251	32.3		34.8
21	198	09.1	157	25.8		17.5	101	15.0		25.9	297	26.2		33.0	266	34.9		34.8
22	213	11.6	172	25.2		18.4	116	15.7		25.8	312	28.9		33.0	281	37.5		34.8
23	228	14.0	187	24.7		19.4	131	16.4		25.7	327	31.7		33.0	296	40.0		34.9
24	243	16.5	202	24.2	+14	20.4	146	17.1	+24	25.6	342	34.5	-22	33.0	311	42.6	-21	34.9
Dif.	—		-5		+10		+7		-1		+28		0		+26			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8				SD: 14'8													PHE {
	PMG: 11 ^h 57 ^m 0				Edad: 21 ^d 1													
					PMG:05 ^h 59 ^m						Rº: 43 ^m							
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	180	45.5	+21	02.1	272	56.6	139	-15	32.5	83	60 N	20 56	22 11	** **	1 45	14		
1	195	45.4		02.5	287	29.5	140		24.2	83	58	39	21 42	** **	36	16		
2	210	45.3		03.0	302	02.5	141		15.9	85	56	25	20	23 04	28	18		
3	225	45.3		03.4	316	35.6	140	-15	07.4	85	54	13	21 03	22 21	20	20		
4	240	45.2		03.8	331	08.6	141	-14	58.9	85	52	20 03	20 48	21 54	13	23		
5	255	45.1	+21	04.3	345	41.7	142	-14	50.4	86	50	19 53	20 35	21 33	1 07	24		
6	270	45.1	+21	04.7	0	14.9	142	-14	41.8	87	45	19 34	20 09	20 56	0 54	28		
7	285	45.0		05.2	14	48.1	142		33.1	87	40	18	19 50	29	44	30		
8	300	44.9		05.6	29	21.3	143		24.4	88	35	19 05	33	20 09	34	33		
9	315	44.9		06.0	43	54.6	143		15.6	89	30	18 53	19 20	19 52	26	35		
10	330	44.8		06.5	58	27.9	144	-14	06.7	89	20	33	18 57	26	0 12	38		
11	345	44.7	+21	06.9	73	01.3	144	-13	57.8	90	10 N	18 16	18 39	19 06	** **	**		
12	0	44.7	+21	07.3	87	34.7	144	-13	48.8	90	0	18 01	18 23	18 49	** **	**		
13	15	44.6		07.8	102	08.1	145		39.8	91	10 S	17 45	18 07	33	** **	**		
14	30	44.5		08.2	116	41.6	145		30.7	91	20	28	17 52	19	** **	**		
15	45	44.5		08.6	131	15.1	146		21.6	92	30	17 10	35	18 05	** **	**		
16	60	44.4		09.1	145	48.7	145		12.4	92	35	16 59	26	17 57	23 57	55		
17	75	44.3	+21	09.5	160	22.2	147	-13	03.2	93	40	16 46	17 16	17 49	23 50	58		
18	90	44.3	+21	09.9	174	55.9	146	-12	53.9	94	45	16 31	17 04	17 41	23 42	61		
19	105	44.2		10.3	189	29.5	147		44.5	94	50	13	16 50	31	32	64		
20	120	44.1		10.8	204	03.2	147		35.1	95	52	16 05	44	26	27	66		
21	135	44.1		11.2	218	36.9	148		25.6	95	54	15 55	37	22	22	68		
22	150	44.0		11.6	233	10.7	147		16.1	95	56	45	29	17	16	71		
23	165	43.9		12.1	247	44.4	149	-12	06.6	96	58	33	21	11	10	73		
24	180	43.9	+21	12.5	262	18.3		-11	57.0		60 S	15 18	16 11	17 05	23 03	75		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 45 ^m 6		Mag: -3.8 PMG: 10 ^h 31 ^m				Mag: +1.7 PMG: 14 ^h 14 ^m				Mag: -2.6 PMG: 01 ^h 09 ^m				Mag: +0.3 PMG: 03 ^h 13 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	243	16.5	202	24.2	+14	20.4	146	17.1	+24	25.6	342	34.5	-22	-33.0	311	42.6	-21	
1	258	19.0	217	23.7		21.3	161	17.8		25.6	357	37.3		-32.9	326	45.2		
2	273	21.4	232	23.2		22.3	176	18.5		25.5	12	40.0		-32.9	341	47.7		
3	288	23.9	247	22.7		23.3	191	19.2		25.4	27	42.8		-32.9	356	50.3		
4	303	26.4	262	22.2		24.2	206	19.9		25.3	42	45.6		-32.9	11	52.9		
5	318	28.8	277	21.7	+14	25.2	221	20.6	+24	25.3	57	48.4	-22	-32.9	26	55.4	-21	
6	333	31.3	292	21.2	+14	26.2	236	21.3	+24	25.2	72	51.2	-22	-32.9	41	58.0	-21	
7	348	33.8	307	20.6		27.1	251	22.0		25.1	87	53.9		-32.8	57	00.6		
8	3	36.2	322	20.1		28.1	266	22.7		25.0	102	56.7		-32.8	72	03.2		
9	18	38.7	337	19.6		29.1	281	23.4		25.0	117	59.5		-32.8	87	05.7		
10	33	41.1	352	19.1		30.0	296	24.1		24.9	133	02.3		-32.8	102	08.3		
11	48	43.6	7	18.6	+14	31.0	311	24.8	+24	24.8	148	05.1	-22	-32.8	117	10.9	-21	
12	63	46.1	22	18.1	+14	31.9	326	25.5	+24	24.7	163	07.8	-22	-32.8	132	13.4	-21	
13	78	48.5	37	17.6		32.9	341	26.2		24.7	178	10.6		-32.8	147	16.0		
14	93	51.0	52	17.0		33.9	356	26.9		24.6	193	13.4		-32.7	162	18.6		
15	108	53.5	67	16.5		34.8	11	27.6		24.5	208	16.2		-32.7	177	21.2		
16	123	55.9	82	16.0		35.8	26	28.3		24.4	223	19.0		-32.7	192	23.7		
17	138	58.4	97	15.5	+14	36.7	41	29.0	+24	24.4	238	21.7	-22	-32.7	207	26.3	-21	
18	154	00.9	112	15.0	+14	37.7	56	29.7	+24	24.3	253	24.5	-22	-32.7	222	28.9	-21	
19	169	03.3	127	14.4		38.7	71	30.4		24.2	268	27.3		-32.7	237	31.4		
20	184	05.8	142	13.9		39.6	86	31.1		24.1	283	30.1		-32.6	252	34.0		
21	199	08.2	157	13.4		40.6	101	31.8		24.0	298	32.9		-32.6	267	36.6		
22	214	10.7	172	12.9		41.5	116	32.6		24.0	313	35.7		-32.6	282	39.2		
23	229	13.2	187	12.4		42.5	131	33.3		23.9	328	38.4		-32.6	297	41.7		
24	244	15.6	202	11.8	+14	43.4	146	34.0	+24	23.8	343	41.2	-22	-32.6	312	44.3	-21	
Dif.	—		-5		+10		+7		-1		+28		0		+26			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8				SD: 14'8												PHE {	
	PMG: 11 ^h 57 ^m 1				Edad: 22 ^d 1													
	PMG: 06 ^h 42 ^m				Rº: 43 ^m													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m		
0	180	43.9	+21	12.5	262	18.3	148	-11	57.0	97	60 N	** **	1 42	2 58	1 59	10	11 39	76
1	195	43.8		12.9	276	52.1	149		47.3	97	58	** **	2 11	3 15	52	13	45	73
2	210	43.7		13.3	291	26.0	149		37.6	97	56	0 49	33	28	46	15	50	71
3	225	43.6		13.8	305	59.9	149		27.9	98	54	1 33	2 51	40	40	18	55	68
4	240	43.6		14.2	320	33.8	150		18.1	99	52	2 00	3 06	3 51	36	19	11 59	67
5	255	43.5	+21	14.6	335	07.8	149	-11	08.2	99	50	2 21	3 19	4 00	1 31	21	12 03	65
6	270	43.4	+21	15.0	349	41.7	151	-10	58.3	99	45	2 58	3 44	4 20	1 22	24	12 11	61
7	285	43.4		15.4	4	15.8	150		48.4	100	40	3 25	4 04	36	14	27	18	58
8	300	43.3		15.9	18	49.8	150		38.4	101	35	3 45	21	4 49	07	30	24	55
9	315	43.2		16.3	33	23.8	151		28.3	100	30	4 02	34	5 01	1 01	32	29	53
10	330	43.1		16.7	47	57.9	151		18.3	102	20	28	4 57	21	0 50	36	38	49
11	345	43.1	+21	17.1	62	32.0	152	-10	08.1	101	10 N	4 48	5 15	5 38	0 41	39	12 46	45
12	0	43.0	+21	17.5	77	06.2	151	-9	58.0	102	0	5 06	5 31	5 54	0 32	43	12 53	42
13	15	42.9		18.0	91	40.3	152		47.8	103	10 S	21	5 47	6 09	23	46	13 00	39
14	30	42.9		18.4	106	14.5	152		37.5	103	20	35	6 02	26	14	49	08	35
15	45	42.8		18.8	120	48.7	152		27.2	103	30	50	19	45	0 03	53	16	32
16	60	42.7		19.2	135	22.9	152		16.9	104	35	5 57	28	6 56	** ** *	**	21	29
17	75	42.6	+21	19.6	149	57.1	153	-9	06.5	104	40	6 05	6 39	7 08	** ** *	**	13 27	26
18	90	42.6	+21	20.0	164	31.4	152	-8	56.1	104	45	6 14	6 50	7 23	** ** *	**	13 33	24
19	105	42.5		20.4	179	05.6	153		45.7	105	50	24	7 04	41	** ** *	**	41	20
20	120	42.4		20.9	193	39.9	153		35.2	106	52	28	11	7 50	** ** *	**	44	19
21	135	42.3		21.3	208	14.2	153		24.6	105	54	33	18	8 00	** ** *	**	48	17
22	150	42.3		21.7	222	48.5	154		14.1	106	56	38	26	10	** ** *	**	53	14
23	165	42.2		22.1	237	22.9	153	-8	03.5	107	58	44	34	23	** ** *	**	13 57	13
24	180	42.1	+21	22.5	251	57.2		-7	52.8		60 S	6 50	7 44	8 37	** ** *	**	14 03	10

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 41 ^m 7		Mag: -3.8 PMG: 10 ^h 32 ^m				Mag: +1.7 PMG: 14 ^h 13 ^m				Mag: -2.6 PMG: 01 ^h 05 ^m				Mag: +0.3 PMG: 03 ^h 09 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	244	15.6	202	11.8	+14	43.4	146	34.0	+24	23.8	343	41.2	-22	32.6	312	44.3	-21	35.3
1	259	18.1	217	11.3		44.4	161	34.7		23.7	358	44.0		32.6	327	46.9		35.3
2	274	20.6	232	10.8		45.3	176	35.4		23.6	13	46.8		32.6	342	49.5		35.3
3	289	23.0	247	10.3		46.3	191	36.1		23.6	28	49.6		32.5	357	52.0		35.3
4	304	25.5	262	09.8		47.2	206	36.8		23.5	43	52.4		32.5	12	54.6		35.4
5	319	28.0	277	09.2	+14	48.2	221	37.5	+24	23.4	58	55.1	-22	32.5	27	57.2	-21	35.4
6	334	30.4	292	08.7	+14	49.1	236	38.2	+24	23.3	73	57.9	-22	32.5	42	59.7	-21	35.4
7	349	32.9	307	08.2		50.1	251	38.9		23.2	89	00.7		32.5	58	02.3		35.4
8	4	35.4	322	07.7		51.0	266	39.6		23.1	104	03.5		32.5	73	04.9		35.4
9	19	37.8	337	07.1		52.0	281	40.3		23.1	119	06.3		32.4	88	07.5		35.4
10	34	40.3	352	06.6		52.9	296	41.0		23.0	134	09.1		32.4	103	10.0		35.5
11	49	42.7	7	06.1	+14	53.9	311	41.7	+24	22.9	149	11.8	-22	32.4	118	12.6	-21	35.5
12	64	45.2	22	05.6	+14	54.8	326	42.4	+24	22.8	164	14.6	-22	32.4	133	15.2	-21	35.5
13	79	47.7	37	05.0		55.8	341	43.1		22.7	179	17.4		32.4	148	17.8		35.5
14	94	50.1	52	04.5		56.7	356	43.8		22.6	194	20.2		32.4	163	20.3		35.5
15	109	52.6	67	04.0		57.7	11	44.5		22.5	209	23.0		32.3	178	22.9		35.5
16	124	55.1	82	03.5		58.6	26	45.2		22.5	224	25.8		32.3	193	25.5		35.6
17	139	57.5	97	02.9	+14	59.6	41	45.9	+24	22.4	239	28.5	-22	32.3	208	28.1	-21	35.6
18	155	00.0	112	02.4	+15	00.5	56	46.6	+24	22.3	254	31.3	-22	32.3	223	30.6	-21	35.6
19	170	02.5	127	01.9		01.4	71	47.3		22.2	269	34.1		32.3	238	33.2		35.6
20	185	04.9	142	01.3		02.4	86	48.0		22.1	284	36.9		32.3	253	35.8		35.6
21	200	07.4	157	00.8		03.3	101	48.7		22.0	299	39.7		32.3	268	38.4		35.7
22	215	09.9	172	00.3		04.3	116	49.4		21.9	314	42.5		32.2	283	41.0		35.7
23	230	12.3	186	59.7		05.2	131	50.1		21.9	329	45.3		32.2	298	43.5		35.7
24	245	14.8	201	59.2	+15	06.1	146	50.8	+24	21.8	344	48.0	-22	32.2	313	46.1	-21	35.7
Dif.	—		-5		+9		+7		-1		+28		0		+26		0	

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 57 ^m 3				SD: 14'8 Edad: 23 ^d 1 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 PMG: 07 ^h 25 ^m Rº: 42 ^m														
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Civil	Náut.	Hora	Rº			Hora	Rº					
	h	°	'	°	'	°	'	h	m	h			m	h	m	h	m	m	
0	180	42.1	+21	22.5	251	57.2	154	-7	52.8	106	60 N	21 00	22 18	***	***	2 09	10	12 55	76
1	195	42.0		22.9	266	31.6	153		42.2	107	58	20 43	21 47	***	***	05	12	12 58	74
2	210	42.0		23.3	281	05.9	154		31.5	108	56	28	24	23 17		2 01	15	13 01	71
3	225	41.9		23.7	295	40.3	154		20.7	108	54	16	21 06	22 27		1 58	16	03	70
4	240	41.8		24.1	310	14.7	154	-7	09.9	108	52	20 05	20 51	21 58		55	18	06	67
5	255	41.7	+21	24.5	324	49.1	154	-6	59.1	108	50	19 56	20 38	21 37		1 52	20	13 08	65
6	270	41.7	+21	25.0	339	23.5	154	-6	48.3	109	45	19 36	20 12	20 58		1 46	24	13 12	62
7	285	41.6		25.4	353	57.9	154		37.4	109	40	19	19 51	31		41	27	16	58
8	300	41.5		25.8	8	32.3	154		26.5	109	35	19 06	35	20 10		37	29	19	56
9	315	41.4		26.2	23	06.7	155		15.6	110	30	18 54	19 21	19 53		33	31	22	53
10	330	41.4		26.6	37	41.2	154	-6	04.6	110	20	34	18 58	27		26	35	27	49
11	345	41.3	+21	27.0	52	15.6	154	-5	53.6	110	10 N	18 17	18 40	19 06		1 20	39	13 31	46
12	0	41.2	+21	27.4	66	50.0	155	-5	42.6	111	0	18 01	18 23	18 49		1 15	42	13 35	42
13	15	41.1		27.8	81	24.5	154		31.5	111	10 S	17 45	18 08	34		09	46	39	39
14	30	41.0		28.2	95	58.9	155		20.4	111	20	28	17 52	19		1 03	49	43	35
15	45	41.0		28.6	110	33.4	154	-5	09.3	111	30	17 09	35	18 04		0 56	53	48	31
16	60	40.9		29.0	125	07.8	154	-4	58.2	112	35	16 58	25	17 57		52	56	50	29
17	75	40.8	+21	29.4	139	42.2	155	-4	47.0	112	40	16 45	17 15	17 48		0 48	58	13 53	27
18	90	40.7	+21	29.8	154	16.7	154	-4	35.8	112	45	16 30	17 03	17 39		0 43	61	13 57	23
19	105	40.6		30.2	168	51.1	154		24.6	113	50	12	16 49	29		36	66	14 01	19
20	120	40.6		30.6	183	25.5	155		13.3	112	52	16 03	42	25		33	67	03	18
21	135	40.5		31.0	198	00.0	154	-4	02.1	113	54	15 53	35	20		30	69	05	16
22	150	40.4		31.4	212	34.4	154	-3	50.8	113	56	42	27	15		27	71	07	14
23	165	40.3		31.8	227	08.8	154		39.5	114	58	30	18	09		23	73	10	12
24	180	40.3	+21	32.2	241	43.2		-3	28.1		60 S	15 15	16 08	17 03		0 18	77	14 13	9
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 7 ^h 37 ^m 8		Mag: -3.8 PMG: 10 ^h 32 ^m				Mag: +1.7 PMG: 14 ^h 12 ^m				Mag: -2.6 PMG: 01 ^h 01 ^m				Mag: +0.3 PMG: 03 ^h 04 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	245	14.8	201	59.2	+15	06.1	146	50.8	+24	21.8	344	48.0	-22	-32.2	313	46.1	-21	35.7	
1	260	17.2	216	58.7		07.1	161	51.5		21.7	359	50.8		-32.2	328	48.7		35.7	
2	275	19.7	231	58.1		08.0	176	52.2		21.6	14	53.6		-32.2	343	51.3		35.7	
3	290	22.2	246	57.6		09.0	191	52.9		21.5	29	56.4		-32.2	358	53.8		35.8	
4	305	24.6	261	57.1		09.9	206	53.6		21.4	44	59.2		-32.1	13	56.4		35.8	
5	320	27.1	276	56.5	+15	10.8	221	54.3	+24	21.3	60	02.0	-22	-32.1	28	59.0	-21	35.8	
6	335	29.6	291	56.0	+15	11.8	236	55.0	+24	21.2	75	04.8	-22	-32.1	44	01.6	-21	35.8	
7	350	32.0	306	55.5		12.7	251	55.7		21.1	90	07.5		-32.1	59	04.2		35.8	
8	5	34.5	321	54.9		13.6	266	56.4		21.0	105	10.3		-32.1	74	06.7		35.8	
9	20	37.0	336	54.4		14.6	281	57.1		21.0	120	13.1		-32.1	89	09.3		35.9	
10	35	39.4	351	53.9		15.5	296	57.8		20.9	135	15.9		-32.0	104	11.9		35.9	
11	50	41.9	6	53.3	+15	16.4	311	58.5	+24	20.8	150	18.7	-22	-32.0	119	14.5	-21	35.9	
12	65	44.3	21	52.8	+15	17.4	326	59.2	+24	20.7	165	21.5	-22	-32.0	134	17.0	-21	35.9	
13	80	46.8	36	52.3		18.3	341	59.9		20.6	180	24.3		-32.0	149	19.6		35.9	
14	95	49.3	51	51.7		19.2	357	00.6		20.5	195	27.1		-32.0	164	22.2		36.0	
15	110	51.7	66	51.2		20.2	12	01.4		20.4	210	29.8		-32.0	179	24.8		36.0	
16	125	54.2	81	50.6		21.1	27	02.1		20.3	225	32.6		-31.9	194	27.4		36.0	
17	140	56.7	96	50.1	+15	22.0	42	02.8	+24	20.2	240	35.4	-22	-31.9	209	29.9	-21	36.0	
18	155	59.1	111	49.6	+15	23.0	57	03.5	+24	20.1	255	38.2	-22	-31.9	224	32.5	-21	36.0	
19	171	01.6	126	49.0		23.9	72	04.2		20.0	270	41.0		-31.9	239	35.1		36.0	
20	186	04.1	141	48.5		24.8	87	04.9		19.9	285	43.8		-31.9	254	37.7		36.1	
21	201	06.5	156	47.9		25.7	102	05.6		19.8	300	46.6		-31.9	269	40.3		36.1	
22	216	09.0	171	47.4		26.7	117	06.3		19.7	315	49.4		-31.8	284	42.8		36.1	
23	231	11.5	186	46.9		27.6	132	07.0		19.6	330	52.1		-31.8	299	45.4		36.1	
24	246	13.9	201	46.3	+15	28.5	147	07.7	+24	19.5	345	54.9	-22	-31.8	314	48.0	-21	36.1	
Dif.	—		-5 +9				+7 -1				+28 0				+26				

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 57 ^m 4				SD: 14'9 Edad: 24 ^d 1 PMG: 08 ^h 07 ^m Rº: 43 ^m					PHE { 4 ^h : 54'8 12 ^h : 55'0 20 ^h : 55'1			Hora		Rº			
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	180	40.3	+21	32.2	241	43.2	154	-3	28.1	113	60 N	***	1 36	2 55	2 19	9	14 11	79
1	195	40.2		32.6	256	17.6	154		16.8	114	58	***	2 07	3 12	17	12	12	75
2	210	40.1		33.0	270	52.0	154	-3	05.4	114	56	0 37	30	26	16	14	12	73
3	225	40.0		33.3	285	26.4	154	-2	54.0	114	54	1 27	2 48	38	14	16	13	71
4	240	39.9		33.7	300	00.8	153		42.6	115	52	1 56	3 03	49	13	18	13	69
5	255	39.8	+21	34.1	314	35.1	154	-2	31.1	114	50	2 18	3 16	3 59	2 12	20	14 13	67
6	270	39.8	+21	34.5	329	09.5	153	-2	19.7	115	45	2 56	3 43	4 19	2 10	23	14 14	63
7	285	39.7		34.9	343	43.8	154	-2	08.2	115	40	3 23	4 03	35	08	26	14	60
8	300	39.6		35.3	358	18.2	153	-1	56.7	115	35	3 44	20	4 49	06	29	15	57
9	315	39.5		35.7	12	52.5	153		45.2	115	30	4 01	33	5 00	04	32	15	55
10	330	39.4		36.1	27	26.8	152		33.7	116	20	28	4 56	20	2 01	36	16	50
11	345	39.4	+21	36.5	42	01.0	153	-1	22.1	115	10 N	4 48	5 15	5 38	1 59	39	14 17	46
12	0	39.3	+21	36.9	56	35.3	153	-1	10.6	116	0	5 06	5 32	5 54	1 57	42	14 17	43
13	15	39.2		37.2	71	09.6	152	-0	59.0	116	10 S	21	5 47	6 10	55	46	18	39
14	30	39.1		37.6	85	43.8	152		47.4	116	20	36	6 03	27	52	50	18	36
15	45	39.0		38.0	100	18.0	152		35.8	116	30	50	20	46	49	54	19	32
16	60	38.9		38.4	114	52.2	151		24.2	116	35	5 58	29	6 57	48	56	19	29
17	75	38.9	+21	38.8	129	26.3	152	-0	12.6	116	40	6 06	6 40	7 10	1 46	59	14 20	26
18	90	38.8	+21	39.2	144	00.5	151	-0	01.0	116	45	6 16	6 52	7 25	1 44	63	14 20	23
19	105	38.7		39.5	158	34.6	151	+0	10.6	117	50	26	7 06	44	42	66	20	20
20	120	38.6		39.9	173	08.7	150		22.3	116	52	30	13	7 52	40	69	21	18
21	135	38.5		40.3	187	42.7	151		33.9	117	54	35	20	8 02	39	70	21	16
22	150	38.4		40.7	202	16.8	150		45.6	117	56	40	28	13	38	72	21	14
23	165	38.4		41.1	216	50.8	150	+0	57.3	117	58	46	37	26	1 36	75	14 22	11
24	180	38.3	+21	41.5	231	24.8		+1	09.0		60 S	6 52	7 47	8 41	1 35	77	14 22	9
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 33 ^m 8		Mag: -3.8 PMG: 10 ^h 33 ^m				Mag: +1.7 PMG: 14 ^h 11 ^m				Mag: -2.6 PMG: 00 ^h 56 ^m				Mag: +0.3 PMG: 03 ^h 00 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	246	13.9	201	46.3	+15	28.5	147	07.7	+24	19.5	345	54.9	-22	31.8	314	48.0	-21	36.1
1	261	16.4	216	45.8		29.4	162	08.4		19.4	0	57.7		31.8	329	50.6		36.2
2	276	18.8	231	45.2		30.4	177	09.1		19.3	16	00.5		31.8	344	53.2		36.2
3	291	21.3	246	44.7		31.3	192	09.8		19.2	31	03.3		31.8	359	55.7		36.2
4	306	23.8	261	44.1		32.2	207	10.5		19.1	46	06.1		31.8	14	58.3		36.2
5	321	26.2	276	43.6	+15	33.1	222	11.2	+24	19.1	61	08.9	-22	31.7	30	00.9	-21	36.2
6	336	28.7	291	43.0	+15	34.0	237	11.9	+24	19.0	76	11.7	-22	31.7	45	03.5	-21	36.3
7	351	31.2	306	42.5		35.0	252	12.6		18.9	91	14.5		31.7	60	06.1		36.3
8	6	33.6	321	42.0		35.9	267	13.3		18.8	106	17.2		31.7	75	08.6		36.3
9	21	36.1	336	41.4		36.8	282	14.0		18.7	121	20.0		31.7	90	11.2		36.3
10	36	38.6	351	40.9		37.7	297	14.7		18.6	136	22.8		31.7	105	13.8		36.3
11	51	41.0	6	40.3	+15	38.6	312	15.4	+24	18.5	151	25.6	-22	31.6	120	16.4	-21	36.3
12	66	43.5	21	39.8	+15	39.6	327	16.2	+24	18.4	166	28.4	-22	31.6	135	19.0	-21	36.4
13	81	46.0	36	39.2		40.5	342	16.9		18.3	181	31.2		31.6	150	21.6		36.4
14	96	48.4	51	38.7		41.4	357	17.6		18.2	196	34.0		31.6	165	24.1		36.4
15	111	50.9	66	38.1		42.3	12	18.3		18.1	211	36.8		31.6	180	26.7		36.4
16	126	53.3	81	37.6		43.2	27	19.0		18.0	226	39.6		31.6	195	29.3		36.4
17	141	55.8	96	37.0	+15	44.1	42	19.7	+24	17.8	241	42.4	-22	31.5	210	31.9	-21	36.5
18	156	58.3	111	36.5	+15	45.0	57	20.4	+24	17.7	256	45.2	-22	31.5	225	34.5	-21	36.5
19	172	00.7	126	35.9		46.0	72	21.1		17.6	271	47.9		31.5	240	37.1		36.5
20	187	03.2	141	35.4		46.9	87	21.8		17.5	286	50.7		31.5	255	39.6		36.5
21	202	05.7	156	34.8		47.8	102	22.5		17.4	301	53.5		31.5	270	42.2		36.5
22	217	08.1	171	34.3		48.7	117	23.2		17.3	316	56.3		31.5	285	44.8		36.5
23	232	10.6	186	33.7		49.6	132	23.9		17.2	331	59.1		31.4	300	47.4		36.6
24	247	13.1	201	33.2	+15	50.5	147	24.6	+24	17.1	347	01.9	-22	31.4	315	50.0	-21	36.6
Dif.	—		-5 +9				+7 -1				+28		0		+26			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna											
	SD: 15°8				SD: 15°0												PHE { 4 ^h : 55°3 12 ^h : 55°5 20 ^h : 55°7									
	PMG: 11 ^h 57 ^m 5				Edad: 25 ^d 1																					
				PMG: 08 ^h 50 ^m				Rº: 44 ^m																		
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº						
h	°	'	°	'	°	'			°	'			h	m	h	m	h	m	m	h	m	m				
0	180	38.3	+21	41.5	231	24.8	149	+1	09.0	116	60 N	21 03	22 25	** ** *			2 28	10	15 30	80						
1	195	38.2		41.8	245	58.7	149		20.6	117	58	20 46	21 52	** ** *			29	12	27	78						
2	210	38.1		42.2	260	32.6	149		32.3	117	56	31	28	23 33			30	14	25	76						
3	225	38.0		42.6	275	06.5	149		44.0	117	54	19	21 09	22 33			30	17	24	73						
4	240	37.9		43.0	289	40.4	148	+1	55.7	117	52	20 08	20 54	22 02			31	19	22	71						
5	255	37.8	+21	43.3	304	14.2	148	+2	07.4	117	50	19 58	20 40	21 40			2 32	20	15 20	69						
6	270	37.8	+21	43.7	318	48.0	148	+2	19.1	117	45	19 37	20 14	21 01			2 33	24	15 17	65						
7	285	37.7		44.1	333	21.8	147		30.8	117	40	21	19 53	20 33			34	27	14	62						
8	300	37.6		44.5	347	55.5	147		42.5	117	35	19 07	36	20 12			35	30	12	59						
9	315	37.5		44.8	2	29.2	147	+2	54.2	117	30	18 55	19 22	19 55			36	32	10	56						
10	330	37.4		45.2	17	02.9	146	+3	05.9	117	20	35	18 59	28			37	37	06	52						
11	345	37.3	+21	45.6	31	36.5	146	+3	17.6	117	10 N	18 17	18 40	19 07			2 38	41	15 03	48						
12	0	37.2	+21	46.0	46	10.1	145	+3	29.3	117	0	18 01	18 23	18 49			2 39	44	15 00	45						
13	15	37.2		46.3	60	43.6	145		41.0	117	10 S	17 45	18 08	34			41	47	14 57	42						
14	30	37.1		46.7	75	17.1	144	+3	52.7	117	20	28	17 52	19			42	51	54	38						
15	45	37.0		47.1	89	50.5	145	+4	04.4	117	30	17 08	34	18 04			43	56	51	33						
16	60	36.9		47.4	104	24.0	143		16.1	116	35	16 57	25	17 56			44	58	48	31						
17	75	36.8	+21	47.8	118	57.3	143	+4	27.7	117	40	16 44	17 14	17 48			2 45	61	14 46	28						
18	90	36.7	+21	48.2	133	30.6	143	+4	39.4	116	45	16 29	17 02	17 38			2 47	64	14 43	25						
19	105	36.6		48.5	148	03.9	143	+4	51.0	117	50	10	16 47	28			48	68	40	21						
20	120	36.5		48.9	162	37.2	142	+5	02.7	116	52	16 01	41	23			49	70	39	19						
21	135	36.4		49.3	177	10.4	141		14.3	117	54	15 51	33	19			49	72	37	18						
22	150	36.4		49.6	191	43.5	141		26.0	116	56	40	25	13			50	74	35	16						
23	165	36.3		50.0	206	16.6	140		37.6	116	58	27	16	07			51	77	33	13						
24	180	36.2	+21	50.4	220	49.6		+5	49.2		60 S	15 12	16 06	17 01			2 52	80	14 31	11						
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO											
	PMG 7 ^h 29 ^m 9		Mag: -3.8 PMG: 10 ^h 34 ^m				Mag: +1.8 PMG: 14 ^h 10 ^m				Mag: -2.6 PMG: 00 ^h 52 ^m				Mag: +0.3 PMG: 02 ^h 56 ^m											
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.											
h	°	'	°	'	°	'		°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	247	13.1	201	33.2	+15	50.5		147	24.6	+24	17.1		347	01.9	-22	-31.4		315	50.0	-21	36.6					
1	262	15.5	216	32.6		51.4		162	25.3		17.0		2	04.7		-31.4		330	52.6		36.6					
2	277	18.0	231	32.0		52.3		177	26.0		16.9		17	07.5		-31.4		345	55.1		36.6					
3	292	20.4	246	31.5		53.2		192	26.7		16.8		32	10.3		-31.4		0	57.7		36.6					
4	307	22.9	261	30.9		54.1		207	27.4		16.7		47	13.1		-31.4		16	00.3		36.7					
5	322	25.4	276	30.4	+15	55.0		222	28.2	+24	16.6		62	15.9	-22	-31.3		31	02.9	-21	36.7					
6	337	27.8	291	29.8	+15	55.9		237	28.9	+24	16.5		77	18.7	-22	-31.3		46	05.5	-21	36.7					
7	352	30.3	306	29.3		56.8		252	29.6		16.4		92	21.5		-31.3		61	08.1		36.7					
8	7	32.8	321	28.7		57.8		267	30.3		16.3		107	24.2		-31.3		76	10.6		36.7					
9	22	35.2	336	28.1		58.7		282	31.0		16.2		122	27.0		-31.3		91	13.2		36.8					
10	37	37.7	351	27.6	+15	59.6		297	31.7		16.1		137	29.8		-31.3		106	15.8		36.8					
11	52	40.2	6	27.0	+16	00.5		312	32.4	+24	16.0		152	32.6	-22	-31.2		121	18.4	-21	36.8					
12	67	42.6	21	26.5	+16	01.4		327	33.1	+24	15.8		167	35.4	-22	-31.2		136	21.0	-21	36.8					
13	82	45.1	36	25.9		02.3		342	33.8		15.7		182	38.2		-31.2		151	23.6		36.8					
14	97	47.6	51	25.4		03.2		357	34.5		15.6		197	41.0		-31.2		166	26.2		36.8					
15	112	50.0	66	24.8		04.1		12	35.2		15.5		212	43.8		-31.2		181	28.7		36.9					
16	127	52.5	81	24.2		05.0		27	35.9		15.4		227	46.6		-31.2		196	31.3		36.9					
17	142	54.9	96	23.7	+16	05.9		42	36.6	+24	15.3		242	49.4	-22	-31.1		211	33.9	-21	36.9					
18	157	57.4	111	23.1	+16	06.7		57	37.3	+24	15.2		257	52.2	-22	-31.1		226	36.5	-21	36.9					
19	172	59.9	126	22.5		07.6		72	38.1		15.1		272	55.0		-31.1		241	39.1		36.9					
20	188	02.3	141	22.0		08.5		87	38.8		15.0		287	57.8		-31.1		256	41.7		37.0					
21	203	04.8	156	21.4		09.4		102	39.5		14.9		303	00.6		-31.1		271	44.3		37.0					
22	218	07.3	171	20.9		10.3		117	40.2		14.7		318	03.4		-31.1		286	46.8		37.0					
23	233	09.7	186	20.3		11.2		132	40.9		14.6		333	06.1		-31.0		301	49.4		37.0					
24	248	12.2	201	19.7	+16	12.1		147	41.6	+24	14.5		348	08.9	-22	-31.0		316	52.0	-21	37.0					
Dif.	—		-6 +9				+7 -1				+28				0				+26				0			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°8'				SD: 15°2' PHE { 4 ^h : 55'9" 12 ^h : 56'1" 20 ^h : 56'4"													
	Edad: 26 ^d 1				Rº: 47 ^m													
	PMG: 09 ^h 34 ^m																	
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	36.2	+21	50.4	220	49.6	140	+5	49.2	116	60 N	2 51	2 38	12	16 50	84		
1	195	36.1		50.7	235	22.6	140	+6	00.8	115	58	2 03	3 09	41	45	81		
2	210	36.0		51.1	249	55.6	138		12.3	116	56	0 20	27	44	41	77		
3	225	35.9		51.5	264	28.4	139		23.9	115	54	1 22	2 45	47	37	75		
4	240	35.8		51.8	279	01.3	138		35.4	116	52	1 52	3 01	50	33	73		
5	255	35.7	+21	52.2	293	34.1	137	+6	47.0	115	50	2 15	3 14	2 52	16 29	72		
6	270	35.6	+21	52.5	308	06.8	137	+6	58.5	115	45	2 54	3 41	2 57	16 22	67		
7	285	35.5		52.9	322	39.5	136	+7	10.0	114	40	3 22	4 02	3 01	16	64		
8	300	35.5		53.3	337	12.1	135		21.4	115	35	3 43	19	05	11	61		
9	315	35.4		53.6	351	44.6	135		32.9	114	30	4 00	33	08	16	59		
10	330	35.3		54.0	6	17.1	135		44.3	114	20	27	4 56	14	15	58		
11	345	35.2	+21	54.3	20	49.6	134	+7	55.7	114	10 N	4 48	5 15	3 19	15	51		
12	0	35.1	+21	54.7	35	22.0	133	+8	07.1	113	0	5 06	5 32	3 23	15	45		
13	15	35.0		55.0	49	54.3	133		18.4	114	10 S	22	5 48	28	39	44		
14	30	34.9		55.4	64	26.6	132		29.8	113	20	36	6 04	33	32	40		
15	45	34.8		55.7	78	58.8	131		41.1	113	30	51	21	39	24	36		
16	60	34.7		56.1	93	30.9	131	+8	52.4	112	35	5 59	31	42	19	34		
17	75	34.6	+21	56.4	108	03.0	130	+9	03.6	112	40	6 08	6 41	3 46	15	14		
18	90	34.5	+21	56.8	122	35.0	129	+9	14.8	112	45	6 17	6 54	3 51	15	08		
19	105	34.4		57.2	137	06.9	129		26.0	112	50	27	7 08	56	15	01		
20	120	34.4		57.5	151	38.8	128		37.2	111	52	32	15	3 59	14	58		
21	135	34.3		57.9	166	10.6	128		48.3	111	54	37	22	4 01	55	20		
22	150	34.2		58.2	180	42.4	127	+9	59.4	110	56	43	30	04	51	18		
23	165	34.1		58.5	195	14.1	126	+10	10.4	110	58	48	40	4 08	14	46		
24	180	34.0	+21	58.9	209	45.7		+10	21.4		60 S	6 55	7 50	4 12	14	42		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 26 ^m 0		Mag: -3.8 PMG: 10 ^h 35 ^m				Mag: +1.8 PMG: 14 ^h 09 ^m				Mag: -2.6 PMG: 00 ^h 47 ^m				Mag: +0.3 PMG: 02 ^h 52 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	248	12.2	201	19.7	+16	12.1	147	41.6	+24	14.5	348	08.9	-22	31.0	316	52.0	-21	37.0
1	263	14.7	216	19.2		13.0	162	42.3		14.4	3	11.7		31.0	331	54.6		37.1
2	278	17.1	231	18.6		13.9	177	43.0		14.3	18	14.5		31.0	346	57.2		37.1
3	293	19.6	246	18.0		14.8	192	43.7		14.2	33	17.3		31.0	1	59.8		37.1
4	308	22.0	261	17.5		15.7	207	44.4		14.1	48	20.1		30.9	17	02.4		37.1
5	323	24.5	276	16.9	+16	16.6	222	45.1	+24	14.0	63	22.9	-22	30.9	32	05.0	-21	37.1
6	338	27.0	291	16.3	+16	17.5	237	45.8	+24	13.8	78	25.7	-22	30.9	47	07.6	-21	37.2
7	353	29.4	306	15.8		18.3	252	46.5		13.7	93	28.5		30.9	62	10.1		37.2
8	8	31.9	321	15.2		19.2	267	47.3		13.6	108	31.3		30.9	77	12.7		37.2
9	23	34.4	336	14.6		20.1	282	48.0		13.5	123	34.1		30.9	92	15.3		37.2
10	38	36.8	351	14.0		21.0	297	48.7		13.4	138	36.9		30.8	107	17.9		37.2
11	53	39.3	6	13.5	+16	21.9	312	49.4	+24	13.3	153	39.7	-22	30.8	122	20.5	-21	37.3
12	68	41.8	21	12.9	+16	22.8	327	50.1	+24	13.2	168	42.5	-22	30.8	137	23.1	-21	37.3
13	83	44.2	36	12.3		23.7	342	50.8		13.0	183	45.3		30.8	152	25.7		37.3
14	98	46.7	51	11.8		24.5	357	51.5		12.9	198	48.1		30.8	167	28.3		37.3
15	113	49.2	66	11.2		25.4	12	52.2		12.8	213	50.9		30.8	182	30.9		37.3
16	128	51.6	81	10.6		26.3	27	52.9		12.7	228	53.7		30.7	197	33.4		37.4
17	143	54.1	96	10.0	+16	27.2	42	53.6	+24	12.6	243	56.5	-22	30.7	212	36.0	-21	37.4
18	158	56.5	111	09.5	+16	28.1	57	54.3	+24	12.5	258	59.3	-22	30.7	227	38.6	-21	37.4
19	173	59.0	126	08.9		28.9	72	55.1		12.3	274	02.1		30.7	242	41.2		37.4
20	189	01.5	141	08.3		29.8	87	55.8		12.2	289	04.9		30.7	257	43.8		37.4
21	204	03.9	156	07.7		30.7	102	56.5		12.1	304	07.7		30.7	272	46.4		37.4
22	219	06.4	171	07.2		31.6	117	57.2		12.0	319	10.5		30.6	287	49.0		37.5
23	234	08.9	186	06.6		32.5	132	57.9		11.9	334	13.2		30.6	302	51.6		37.5
24	249	11.3	201	06.0	+16	33.3	147	58.6	+24	11.7	349	16.0	-22	30.6	317	54.2	-21	37.5
Dif.	—		-6 +9				+7 -1				+28 0				+26			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15'8			SD: 15'4 Edad: 27 ^d 1															PHE { 4 ^h : 56'6 12 ^h : 56'8 20 ^h : 57'0	
	PMG: 11 ^h 57 ^m 8			PMG: 10 ^h 21 ^m															Rº: 50 ^m	
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.						Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	h	m		
0	180	34.0	+21	58.9	209	45.7	125	+10	21.4	110	60 N	21 07	22 31	** ** *	2 50	14	18 14	86		
1	195	33.9		59.2	224	17.2	125		32.4	110	58	20 49	21 56	** ** *	2 56	18	18 06	82		
2	210	33.8		59.6	238	48.7	124		43.4	109	56	34	32	** ** *	3 01	21	17 58	80		
3	225	33.7	+21	59.9	253	20.1	123	+10	54.3	108	54	21	21 13	22 39	06	23	52	77		
4	240	33.6	+22	00.3	267	51.4	123	+11	05.1	109	52	10	20 57	22 07	11	24	46	75		
5	255	33.5	+22	00.6	282	22.7	122	+11	16.0	107	50	20 00	20 43	21 44	3 15	26	17 41	73		
6	270	33.4	+22	01.0	296	53.9	121	+11	26.7	108	45	19 39	20 16	21 03	3 23	31	17 29	69		
7	285	33.3		01.3	311	25.0	120		37.5	107	40	23	19 55	20 35	31	33	20	66		
8	300	33.2		01.7	325	56.0	120		48.2	106	35	19 08	38	20 14	37	36	12	63		
9	315	33.1		02.0	340	27.0	119	+11	58.8	106	30	18 56	23	19 56	43	38	17 05	61		
10	330	33.0		02.3	354	57.9	118	+12	09.4	106	20	36	19 00	29	3 53	42	16 53	57		
11	345	32.9	+22	02.7	9	28.7	117	+12	20.0	105	10 N	18 18	18 41	19 08	4 01	46	16 42	54		
12	0	32.8	+22	03.0	23	59.4	117	+12	30.5	104	0	18 01	18 24	18 50	4 09	49	16 32	51		
13	15	32.7		03.4	38	30.1	116		40.9	104	10 S	17 45	18 08	34	18	52	23	47		
14	30	32.6		03.7	53	00.7	115	+12	51.3	103	20	28	17 52	19	26	56	12	44		
15	45	32.6		04.0	67	31.2	114	+13	01.6	103	30	17 08	34	18 04	37	60	16 00	41		
16	60	32.5		04.4	82	01.6	113		11.9	103	35	16 56	24	17 56	42	63	15 53	39		
17	75	32.4	+22	04.7	96	31.9	113	+13	22.2	101	40	16 43	17 13	17 47	4 49	65	15 45	36		
18	90	32.3	+22	05.0	111	02.2	112	+13	32.3	102	45	16 28	17 01	17 38	4 57	68	15 36	33		
19	105	32.2		05.4	125	32.4	111		42.5	100	50	09	16 46	27	5 07	72	26	28		
20	120	32.1		05.7	140	02.5	110	+13	52.5	100	52	16 00	39	22	11	74	21	27		
21	135	32.0		06.0	154	32.5	110	+14	02.5	100	54	15 49	32	17	16	76	15	25		
22	150	31.9		06.4	169	02.5	108		12.5	99	56	38	24	12	21	79	09	23		
23	165	31.8		06.7	183	32.3	108		22.4	98	58	25	14	17 06	27	82	15 02	20		
24	180	31.7	+22	07.0	198	02.1		+14	32.2		60 S	15 09	16 04	16 59	5 34	85	14 54	17		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 7 ^h 22 ^m 0		Mag: -3.8 PMG: 10 ^h 36 ^m				Mag: +1.8 PMG: 14 ^h 07 ^m				Mag: -2.6 PMG: 00 ^h 43 ^m				Mag: +0.3 PMG: 02 ^h 48 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	249	11.3	201	06.0	+16	33.3	147	58.6	+24	11.7	349	16.0	-22	-30.6	317	54.2	-21	37.5		
1	264	13.8	216	05.4		34.2	162	59.3		11.6	4	18.8		-30.6	332	56.8		37.5		
2	279	16.3	231	04.9		35.1	178	00.0		11.5	19	21.6		-30.6	347	59.3		37.5		
3	294	18.7	246	04.3		36.0	193	00.7		11.4	34	24.4		-30.6	3	01.9		37.6		
4	309	21.2	261	03.7		36.8	208	01.4		11.3	49	27.2		-30.5	18	04.5		37.6		
5	324	23.7	276	03.1	+16	37.7	223	02.2	+24	11.1	64	30.0	-22	-30.5	33	07.1	-21	37.6		
6	339	26.1	291	02.6	+16	38.6	238	02.9	+24	11.0	79	32.8	-22	-30.5	48	09.7	-21	37.6		
7	354	28.6	306	02.0		39.4	253	03.6		10.9	94	35.6		-30.5	63	12.3		37.6		
8	9	31.0	321	01.4		40.3	268	04.3		10.8	109	38.4		-30.5	78	14.9		37.7		
9	24	33.5	336	00.8		41.2	283	05.0		10.6	124	41.2		-30.4	93	17.5		37.7		
10	39	36.0	351	00.2		42.1	298	05.7		10.5	139	44.0		-30.4	108	20.1		37.7		
11	54	38.4	5	59.6	+16	42.9	313	06.4	+24	10.4	154	46.8	-22	-30.4	123	22.7	-21	37.7		
12	69	40.9	20	59.1	+16	43.8	328	07.1	+24	10.3	169	49.6	-22	-30.4	138	25.3	-21	37.7		
13	84	43.4	35	58.5		44.7	343	07.8		10.1	184	52.4		-30.4	153	27.9		37.8		
14	99	45.8	50	57.9		45.5	358	08.6		10.0	199	55.2		-30.4	168	30.4		37.8		
15	114	48.3	65	57.3		46.4	13	09.3		09.9	214	58.0		-30.3	183	33.0		37.8		
16	129	50.8	80	56.7		47.2	28	10.0		09.8	230	00.8		-30.3	198	35.6		37.8		
17	144	53.2	95	56.2	+16	48.1	43	10.7	+24	09.6	245	03.6	-22	-30.3	213	38.2	-21	37.8		
18	159	55.7	110	55.6	+16	49.0	58	11.4	+24	09.5	260	06.4	-22	-30.3	228	40.8	-21	37.9		
19	174	58.1	125	55.0		49.8	73	12.1		09.4	275	09.2		-30.3	243	43.4		37.9		
20	190	00.6	140	54.4		50.7	88	12.8		09.3	290	12.0		-30.3	258	46.0		37.9		
21	205	03.1	155	53.8		51.6	103	13.5		09.1	305	14.8		-30.2	273	48.6		37.9		
22	220	05.5	170	53.2		52.4	118	14.2		09.0	320	17.6		-30.2	288	51.2		37.9		
23	235	08.0	185	52.6		53.3	133	15.0		08.9	335	20.4		-30.2	303	53.8		38.0		
24	250	10.5	200	52.0	+16	54.1	148	15.7	+24	08.8	350	23.2	-22	-30.2	318	56.4	-21	38.0		
Dif.	—		-6		+9		+7		-1		+28		0		+26					

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°8 PMG: 11 ^h 58 ^m 0				SD: 15°6 Edad: 28 ^d 1 PMG: 11 ^h 11 ^m					PHE { 4 ^h : 57°3 12 ^h : 57°5 20 ^h : 57°7			Hora R°		Hora R°			
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	180	31.7	+22	07.0	198	02.1	107	+14	32.2	97	60 N	** **	1 24	2 48	3 04	21	19 40 84	
1	195	31.6		07.4	212	31.8	106		41.9	97	58	** **	1 59	3 06	14	23	28 81	
2	210	31.5		07.7	227	01.4	106	+14	51.6	96	56	** **	2 24	21	22	26	18 78	
3	225	31.4		08.0	241	31.0	104	+15	01.2	96	54	1 17	43	34	29	28	09 76	
4	240	31.3		08.4	256	00.4	104		10.8	94	52	1 49	2 59	45	35	31	19 01 74	
5	255	31.2	+22	08.7	270	29.8	103	+15	20.2	94	50	2 12	3 13	3 55	3 41	32	18 54 72	
6	270	31.1	+22	09.0	284	59.1	102	+15	29.6	94	45	2 52	3 40	4 16	3 54	36	18 38 70	
7	285	31.0		09.4	299	28.3	101		39.0	92	40	3 20	4 01	33	4 04	39	26 67	
8	300	30.9		09.7	313	57.4	100		48.2	92	35	42	18	47	13	41	15 65	
9	315	30.8		10.0	328	26.4	100	+15	57.4	91	30	3 59	32	4 59	21	43	18 06 63	
10	330	30.7		10.3	342	55.4	98	+16	06.5	90	20	4 27	4 56	5 20	35	47	17 50 60	
11	345	30.6	+22	10.7	357	24.2	98	+16	15.5	90	10 N	4 48	5 15	5 38	4 47	50	17 36 57	
12	0	30.5	+22	11.0	11	53.0	97	+16	24.5	88	0	5 06	5 32	5 54	4 58	53	17 23 55	
13	15	30.4		11.3	26	21.7	96		33.3	88	10 S	22	5 48	6 11	5 10	55	17 10 52	
14	30	30.3		11.6	40	50.3	95		42.1	87	20	37	6 04	28	22	59	16 56 50	
15	45	30.2		11.9	55	18.8	95		50.8	86	30	5 52	22	6 48	37	62	41 46	
16	60	30.1		12.3	69	47.3	93	+16	59.4	86	35	6 00	32	7 00	45	64	32 44	
17	75	30.0	+22	12.6	84	15.6	93	+17	08.0	84	40	6 09	6 43	7 13	5 54	67	16 21 42	
18	90	29.9	+22	12.9	98	43.9	92	+17	16.4	84	45	6 18	6 55	7 29	6 05	70	16 09 39	
19	105	29.8		13.2	113	12.1	90		24.8	82	50	29	7 10	48	19	73	15 54 36	
20	120	29.7		13.5	127	40.1	91		33.0	82	52	34	17	7 57	25	75	48 34	
21	135	29.6		13.9	142	08.2	89		41.2	81	54	39	24	8 07	32	78	40 32	
22	150	29.5		14.2	156	36.1	88		49.3	80	56	45	33	19	40	80	32 29	
23	165	29.4		14.5	171	03.9	88	+17	57.3	79	58	51	42	32	6 49	83	15 22 27	
24	180	29.3	+22	14.8	185	31.7		+18	05.2		60 S	6 57	7 53	8 48	6 59	86	15 11 24	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 18 ^m 1		Mag: -3.8 PMG: 10 ^h 37 ^m				Mag: +1.8 PMG: 14 ^h 06 ^m				Mag: -2.6 PMG: 00 ^h 38 ^m				Mag: +0.3 PMG: 02 ^h 44 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	250	10.5	200	52.0	+16	54.1	148	15.7	+24	08.8	350	23.2	-22	30.2	318	56.4	-21	38.0
1	265	12.9	215	51.5		55.0	163	16.4		08.6	5	26.0		30.2	333	59.0		38.0
2	280	15.4	230	50.9		55.9	178	17.1		08.5	20	28.8		30.1	349	01.6		38.0
3	295	17.9	245	50.3		56.7	193	17.8		08.4	35	31.6		30.1	4	04.2		38.0
4	310	20.3	260	49.7		57.6	208	18.5		08.2	50	34.4		30.1	19	06.8		38.1
5	325	22.8	275	49.1	+16	58.4	223	19.2	+24	08.1	65	37.2	-22	30.1	34	09.3	-21	38.1
6	340	25.3	290	48.5	+16	59.3	238	19.9	+24	08.0	80	40.0	-22	30.1	49	11.9	-21	38.1
7	355	27.7	305	47.9	+17	00.1	253	20.7		07.9	95	42.8		30.1	64	14.5		38.1
8	10	30.2	320	47.3		01.0	268	21.4		07.7	110	45.6		30.0	79	17.1		38.1
9	25	32.6	335	46.7		01.8	283	22.1		07.6	125	48.4		30.0	94	19.7		38.2
10	40	35.1	350	46.1		02.7	298	22.8		07.5	140	51.2		30.0	109	22.3		38.2
11	55	37.6	5	45.6	+17	03.5	313	23.5	+24	07.3	155	54.0	-22	30.0	124	24.9	-21	38.2
12	70	40.0	20	45.0	+17	04.4	328	24.2	+24	07.2	170	56.8	-22	30.0	139	27.5	-21	38.2
13	85	42.5	35	44.4		05.2	343	24.9		07.1	185	59.6		30.0	154	30.1		38.2
14	100	45.0	50	43.8		06.1	358	25.6		06.9	201	02.4		29.9	169	32.7		38.3
15	115	47.4	65	43.2		06.9	13	26.4		06.8	216	05.2		29.9	184	35.3		38.3
16	130	49.9	80	42.6		07.8	28	27.1		06.7	231	08.0		29.9	199	37.9		38.3
17	145	52.4	95	42.0	+17	08.6	43	27.8	+24	06.5	246	10.8	-22	29.9	214	40.5	-21	38.3
18	160	54.8	110	41.4	+17	09.5	58	28.5	+24	06.4	261	13.6	-22	29.9	229	43.1	-21	38.3
19	175	57.3	125	40.8		10.3	73	29.2		06.3	276	16.4		29.8	244	45.7		38.4
20	190	59.8	140	40.2		11.2	88	29.9		06.1	291	19.2		29.8	259	48.3		38.4
21	206	02.2	155	39.6		12.0	103	30.6		06.0	306	22.0		29.8	274	50.9		38.4
22	221	04.7	170	39.0		12.8	118	31.3		05.9	321	24.8		29.8	289	53.5		38.4
23	236	07.1	185	38.4		13.7	133	32.1		05.7	336	27.6		29.8	304	56.1		38.4
24	251	09.6	200	37.8	+17	14.5	148	32.8	+24	05.6	351	30.4	-22	29.8	319	58.7	-21	38.5
Dif.	—		-6		+8		+7		-1		+28		0		+26			

UT	SOL				LUNA							Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8				PHE { 4^h: 57^m9 12^h: 58^m1 20^h: 58^m3															
	PMG: 11 ^h 58 ^m 1				Rº: 57 ^m															
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'			°	'			°		h m	h m	h m m		h m m	
0	180	29.3	+22	14.8	185	31.7	87	+18	05.2	78	60 N	21 10	22 37	** **			3 25	30	21 04	76
1	195	29.2		15.1	199	59.4	85		13.0	77	58	20 52	22 01	** **			37 33		20 49	74
2	210	29.1		15.4	214	26.9	85		20.7	76	56	37	21 35	** **			48 35		36 72	
3	225	29.0		15.8	228	54.4	85		28.3	75	54	24	21 15	22 44			3 57	38	25 71	
4	240	28.9		16.1	243	21.9	83		35.8	74	52	12	20 59	22 11			4 06	39	15 70	
5	255	28.8	+22	16.4	257	49.2	83	+18	43.2	73	50	20 02	20 45	21 47			4 13	41	20 06	69
6	270	28.7	+22	16.7	272	16.5	81	+18	50.5	72	45	19 41	20 17	21 05			4 30	43	19 48	66
7	285	28.6		17.0	286	43.6	81	+18	57.7	71	40	24	19 56	20 37			43 46		33 64	
8	300	28.5		17.3	301	10.7	80	+19	04.8	70	35	19 10	39	20 15			4 54	48	20 63	
9	315	28.3		17.6	315	37.7	80		11.8	68	30	18 57	25	19 57			5 04	50	19 09	62
10	330	28.2		17.9	330	04.7	78		18.6	68	20	36	19 01	30			22 52		18 50	60
11	345	28.1	+22	18.2	344	31.5	78	+19	25.4	67	10 N	18 18	18 41	19 08			5 37	54	18 33	59
12	0	28.0	+22	18.5	358	58.3	77	+19	32.1	65	0	18 02	18 24	18 50			5 51	56	18 18	57
13	15	27.9		18.9	13	25.0	76		38.6	64	10 S	17 45	18 08	34			6 05	59	18 02	56
14	30	27.8		19.2	27	51.6	75		45.0	64	20	28	17 51	19			21 60		17 46	54
15	45	27.7		19.5	42	18.1	75		51.4	62	30	17 08	34	18 03			39 63		27 52	
16	60	27.6		19.8	56	44.6	74	+19	57.6	61	35	16 56	24	17 55			6 49	64	16 51	
17	75	27.5	+22	20.1	71	11.0	73	+20	03.7	59	40	16 42	17 13	17 46			7 01	66	17 03	50
18	90	27.4	+22	20.4	85	37.3	72	+20	09.6	59	45	16 27	17 00	17 37			7 15	68	16 48	48
19	105	27.3		20.7	100	03.5	72		15.5	57	50	16 07	16 45	26			32 72		30 46	
20	120	27.2		21.0	114	29.7	71		21.2	56	52	15 58	38	21			40 73		22 44	
21	135	27.1		21.3	128	55.8	70		26.8	55	54	48	31	16			7 50	74	12 43	
22	150	27.0		21.6	143	21.8	69		32.3	54	56	36	22	10			8 00	76	16 01	41
23	165	26.9		21.9	157	47.7	69		37.7	52	58	23	13	17 04			12 78		15 49	39
24	180	26.8	+22	22.2	172	13.6		+20	42.9		60 S	15 07	16 02	16 57			8 25	82	15 35	36
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 7 ^h 14 ^m 2		Mag: -3.8 PMG: 10 ^h 38 ^m				Mag: +1.8 PMG: 14 ^h 05 ^m				Mag: -2.6 PMG: 00 ^h 34 ^m				Mag: +0.3 PMG: 02 ^h 40 ^m					
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	251	09.6	200	37.8	+17	14.5	148	32.8	+24	05.6	351	30.4	-22	-29.8	319	58.7	-21	38.5		
1	266	12.1	215	37.2		15.4	163	33.5		05.5	6	33.2		-29.7	335	01.3		38.5		
2	281	14.5	230	36.6		16.2	178	34.2		05.3	21	36.0		-29.7	350	03.9		38.5		
3	296	17.0	245	36.0		17.1	193	34.9		05.2	36	38.8		-29.7	5	06.5		38.5		
4	311	19.5	260	35.4		17.9	208	35.6		05.1	51	41.6		-29.7	20	09.1		38.6		
5	326	21.9	275	34.8	+17	18.7	223	36.3	+24	04.9	66	44.4	-22	-29.7	35	11.7	-21	38.6		
6	341	24.4	290	34.2	+17	19.6	238	37.1	+24	04.8	81	47.2	-22	-29.6	50	14.3	-21	38.6		
7	356	26.9	305	33.6		20.4	253	37.8		04.6	96	50.0		-29.6	65	16.9		38.6		
8	11	29.3	320	33.0		21.2	268	38.5		04.5	111	52.8		-29.6	80	19.5		38.6		
9	26	31.8	335	32.4		22.1	283	39.2		04.4	126	55.6		-29.6	95	22.1		38.7		
10	41	34.3	350	31.8		22.9	298	39.9		04.2	141	58.4		-29.6	110	24.7		38.7		
11	56	36.7	5	31.2	+17	23.7	313	40.6	+24	04.1	157	01.2	-22	-29.6	125	27.3	-21	38.7		
12	71	39.2	20	30.6	+17	24.6	328	41.3	+24	03.9	172	04.0	-22	-29.5	140	29.9	-21	38.7		
13	86	41.6	35	30.0		25.4	343	42.1		03.8	187	06.8		-29.5	155	32.4		38.7		
14	101	44.1	50	29.4		26.2	358	42.8		03.7	202	09.6		-29.5	170	35.0		38.8		
15	116	46.6	65	28.8		27.1	13	43.5		03.5	217	12.4		-29.5	185	37.6		38.8		
16	131	49.0	80	28.1		27.9	28	44.2		03.4	232	15.3		-29.5	200	40.2		38.8		
17	146	51.5	95	27.5	+17	28.7	43	44.9	+24	03.2	247	18.1	-22	-29.4	215	42.8	-21	38.8		
18	161	54.0	110	26.9	+17	29.5	58	45.6	+24	03.1	262	20.9	-22	-29.4	230	45.4	-21	38.8		
19	176	56.4	125	26.3		30.4	73	46.4		03.0	277	23.7		-29.4	245	48.0		38.9		
20	191	58.9	140	25.7		31.2	88	47.1		02.8	292	26.5		-29.4	260	50.6		38.9		
21	207	01.4	155	25.1		32.0	103	47.8		02.7	307	29.3		-29.4	275	53.2		38.9		
22	222	03.8	170	24.5		32.8	118	48.5		02.5	322	32.1		-29.4	290	55.8		38.9		
23	237	06.3	185	23.9		33.7	133	49.2		02.4	337	34.9		-29.3	305	58.4		38.9		
24	252	08.8	200	23.3	+17	34.5	148	49.9	+24	02.3	352	37.7	-22	-29.3	321	01.0	-21	39.0		
Dif.	—		-6		+8		+7		-1		+28		0		+26		0			

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15°8 PMG: 11 ^h 58 ^m 3				SD: 15°9 Edad: 0 ^d 6 PHE { 4^h: 58°5 12^h: 58°7 20^h: 58°8 PMG: 13^h 01^mRº: 59^m																	
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.		Náut.	Civil	Hora	Rº		Hora	Rº								
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m						
0	180	26.8	+22	22.2	172	13.6	68	+20	42.9	52	60 N	1 19	2 46	3 55	44	22 20	61					
1	195	26.7		22.5	186	39.4	67		48.1	50	58	1 55	3 04	4 10	46	22 03	61					
2	210	26.6		22.8	201	05.1	67		53.1	48	56	2 21	19	23	48	21 48	61					
3	225	26.5		23.1	215	30.8	66	+20	57.9	48	54	1 12	41	35	49	36	61					
4	240	26.4		23.4	229	56.4	65	+21	02.7	46	52	1 46	2 57	45	50	25	60					
5	255	26.2	+22	23.7	244	21.9	65	+21	07.3	45	50	2 09	3 11	4 54	51	21 15	61					
6	270	26.1	+22	24.0	258	47.4	64	+21	11.8	43	45	2 51	3 39	5 13	52	20 54	61					
7	285	26.0		24.3	273	12.8	63		16.1	42	40	3 19	4 00	29	53	37	61					
8	300	25.9		24.6	287	38.1	63		20.3	41	35	41	17	42	55	23	61					
9	315	25.8		24.9	302	03.4	62		24.4	40	30	3 59	32	5 54	55	20 11	60					
10	330	25.7		25.1	316	28.6	62		28.4	38	20	4 27	4 56	6 14	56	19 50	60					
11	345	25.6	+22	25.4	330	53.8	61	+21	32.2	37	10 N	4 48	5 15	6 31	58	19 32	60					
12	0	25.5	+22	25.7	345	18.9	61	+21	35.9	35	0	5 06	5 32	6 47	59	19 15	59					
13	15	25.4		26.0	359	44.0	60		39.4	34	10 S	22	5 49	7 04	59	18 58	59					
14	30	25.3		26.3	14	09.0	59		42.8	33	20	38	6 05	21	61	40	59					
15	45	25.2		26.6	28	33.9	59		46.1	31	30	5 53	23	42	61	19	58					
16	60	25.1		26.9	42	58.8	59		49.2	30	35	6 01	33	7 53	63	18 07	58					
17	75	25.0	+22	27.2	57	23.7	58	+21	52.2	29	40	6 10	6 44	8 07	63	17 53	57					
18	90	24.8	+22	27.5	71	48.5	57	+21	55.1	27	45	6 20	6 57	8 23	64	17 36	57					
19	105	24.7		27.7	86	13.2	57	+21	57.8	25	50	31	7 12	44	65	16	56					
20	120	24.6		28.0	100	37.9	57	+22	00.3	25	52	36	19	8 53	66	17 06	56					
21	135	24.5		28.3	115	02.6	56		02.8	22	54	41	26	9 04	66	16 55	55					
22	150	24.4		28.6	129	27.2	56		05.0	22	56	47	35	16	67	42	55					
23	165	24.3		28.9	143	51.8	55		07.2	20	58	6 53	44	9 30	68	16 28	54					
24	180	24.2	+22	29.2	158	16.3		+22	09.2		60 S	7 00	7 55	9 47	69	16 11	53					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 7 ^h 10 ^m 2		Mag: -3.8 PMG: 10 ^h 39 ^m				Mag: +1.8 PMG: 14 ^h 04 ^m				Mag: -2.6 PMG: 00 ^h 29 ^m				Mag: +0.3 PMG: 02 ^h 35 ^m							
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	252	08.8	200	23.3	+17	34.5	148	49.9	+24	02.3	352	37.7	-22	29.3	321	01.0	-21	39.0				
1	267	11.2	215	22.7		35.3	163	50.6		02.1	7	40.5		29.3	336	03.6		39.0				
2	282	13.7	230	22.1		36.1	178	51.4		02.0	22	43.3		29.3	351	06.2		39.0				
3	297	16.1	245	21.4		37.0	193	52.1		01.8	37	46.1		29.3	6	08.8		39.0				
4	312	18.6	260	20.8		37.8	208	52.8		01.7	52	48.9		29.2	21	11.4		39.1				
5	327	21.1	275	20.2	+17	38.6	223	53.5	+24	01.5	67	51.7	-22	29.2	36	14.1	-21	39.1				
6	342	23.5	290	19.6	+17	39.4	238	54.2	+24	01.4	82	54.5	-22	29.2	51	16.7	-21	39.1				
7	357	26.0	305	19.0		40.2	253	54.9		01.2	97	57.3		29.2	66	19.3		39.1				
8	12	28.5	320	18.4		41.1	268	55.7		01.1	113	00.1		29.2	81	21.9		39.1				
9	27	30.9	335	17.8		41.9	283	56.4		01.0	128	02.9		29.2	96	24.5		39.2				
10	42	33.4	350	17.1		42.7	298	57.1		00.8	143	05.7		29.1	111	27.1		39.2				
11	57	35.9	5	16.5	+17	43.5	313	57.8	+24	00.7	158	08.5	-22	29.1	126	29.7	-21	39.2				
12	72	38.3	20	15.9	+17	44.3	328	58.5	+24	00.5	173	11.3	-22	29.1	141	32.3	-21	39.2				
13	87	40.8	35	15.3		45.1	343	59.2		00.4	188	14.1		29.1	156	34.9		39.2				
14	102	43.2	50	14.7		45.9	359	00.0		00.2	203	16.9		29.1	171	37.5		39.3				
15	117	45.7	65	14.1		46.7	14	00.7	+24	00.1	218	19.7		29.0	186	40.1		39.3				
16	132	48.2	80	13.4		47.6	29	01.4	+23	59.9	233	22.5		29.0	201	42.7		39.3				
17	147	50.6	95	12.8	+17	48.4	44	02.1	+23	59.8	248	25.3	-22	29.0	216	45.3	-21	39.3				
18	162	53.1	110	12.2	+17	49.2	59	02.8	+23	59.6	263	28.1	-22	29.0	231	47.9	-21	39.3				
19	177	55.6	125	11.6		50.0	74	03.5		59.5	278	30.9		29.0	246	50.5		39.4				
20	192	58.0	140	11.0		50.8	89	04.3		59.3	293	33.8		29.0	261	53.1		39.4				
21	208	00.5	155	10.3		51.6	104	05.0		59.2	308	36.6		28.9	276	55.7		39.4				
22	223	03.0	170	09.7		52.4	119	05.7		59.0	323	39.4		28.9	291	58.3		39.4				
23	238	05.4	185	09.1		53.2	134	06.4		58.9	338	42.2		28.9	307	00.9		39.5				
24	253	07.9	200	08.5	+17	54.0	149	07.1	+23	58.7	353	45.0	-22	28.9	322	03.5	-21	39.5				
Dif.	—		-6				+7				-1				+28				0			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8			SD: 16°0 Edad: 1°6													
	PMG: 11 ^h 58 ^m 5			PMG: 14 ^h 00 ^m													
	hG ☉		Dec	hG ☾		Dif.	Dec		Dif.			Civil	Náut.	Hora	Rº	Hora	Rº
h	°	'	°	°	'		°	'				h	m	h	m	h	m
0	180	24.2	+22 29.2	158	16.3	55	+22 09.2	18	60 N	21 14	22 44	** **	4 39	63	23 21	44	
1	195	24.1	29.5	172	40.8	55	11.0	17	58	20 55	22 05	** **	4 56	63	23 04	46	
2	210	24.0	29.7	187	05.3	54	12.7	16	56	39	21 39	** **	5 11	62	22 49	48	
3	225	23.9	30.0	201	29.7	54	14.3	14	54	26	18	22 50	24	62	37	48	
4	240	23.8	30.3	215	54.1	54	15.7	12	52	14	21 02	22 14	35	62	25	50	
5	255	23.6	+22 30.6	230	18.5	53	+22 16.9	12	50	20 04	20 47	21 50	5 45	62	22 16	50	
6	270	23.5	+22 30.9	244	42.8	53	+22 18.1	9	45	19 42	20 19	21 08	6 05	62	21 55	52	
7	285	23.4	31.1	259	07.1	53	19.0	8	40	25	19 58	20 39	22	62	38	54	
8	300	23.3	31.4	273	31.4	53	19.8	7	35	19 11	40	20 16	37	61	24	55	
9	315	23.2	31.7	287	55.7	52	20.5	5	30	18 58	26	19 59	6 49	61	21 11	56	
10	330	23.1	32.0	302	19.9	52	21.0	4	20	37	19 02	31	7 10	61	20 50	58	
11	345	23.0	+22 32.2	316	44.1	52	+22 21.4	2	10 N	18 19	18 42	19 09	7 29	60	20 32	58	
12	0	22.9	+22 32.5	331	08.3	52	+22 21.6	1	0	18 02	18 25	18 51	7 46	60	20 14	60	
13	15	22.8	32.8	345	32.5	52	21.7	1	10 S	17 45	18 08	34	8 03	60	19 57	61	
14	30	22.6	33.1	359	56.7	51	21.6	2	20	28	17 51	19	22	59	39	61	
15	45	22.5	33.3	14	20.8	51	21.4	4	30	17 07	33	18 03	43	59	17	63	
16	60	22.4	33.6	28	44.9	52	21.0	5	35	16 55	23	17 55	8 56	58	19 05	63	
17	75	22.3	+22 33.9	43	09.1	51	+22 20.5	7	40	16 42	17 12	17 46	9 10	58	18 50	65	
18	90	22.2	+22 34.2	57	33.2	51	+22 19.8	8	45	16 26	16 59	17 36	9 27	57	18 33	66	
19	105	22.1	34.4	71	57.3	51	19.0	10	50	16 06	44	25	49	56	12	67	
20	120	22.0	34.7	86	21.4	51	18.0	11	52	15 57	37	20	9 59	55	18 02	67	
21	135	21.9	35.0	100	45.5	51	16.9	13	54	46	29	15	10 10	55	17 50	69	
22	150	21.8	35.2	115	09.6	51	15.6	14	56	35	21	09	23	55	37	70	
23	165	21.6	35.5	129	33.7	51	14.2	16	58	21	11	17 03	38	54	22	71	
24	180	21.5	+22 35.8	143	57.8		+22 12.6		60 S	15 05	16 00	16 56	10 56	53	17 04	72	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 7 ^h 06 ^m 3		Mag: -3.8 PMG: 10 ^h 40 ^m			Mag: +1.8 PMG: 14 ^h 03 ^m			Mag: -2.6 PMG: 00 ^h 25 ^m			Mag: +0.3 PMG: 02 ^h 31 ^m			
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°	'
0	253	07.9	200	08.5	+17 54.0	149	07.1	+23 58.7	353	45.0	-22 -28.9	322	03.5	-21 39.5	
1	268	10.4	215	07.9	54.8	164	07.9	58.6	8	47.8	-28.9	337	06.1	39.5	
2	283	12.8	230	07.2	55.6	179	08.6	58.4	23	50.6	-28.8	352	08.7	39.5	
3	298	15.3	245	06.6	56.4	194	09.3	58.3	38	53.4	-28.8	7	11.3	39.5	
4	313	17.7	260	06.0	57.2	209	10.0	58.1	53	56.2	-28.8	22	13.9	39.6	
5	328	20.2	275	05.4	+17 58.0	224	10.7	+23 58.0	68	59.0	-22 -28.8	37	16.5	-21 39.6	
6	343	22.7	290	04.7	+17 58.8	239	11.4	+23 57.8	84	01.8	-22 -28.8	52	19.1	-21 39.6	
7	358	25.1	305	04.1	+17 59.6	254	12.2	57.7	99	04.6	-28.7	67	21.7	39.6	
8	13	27.6	320	03.5	+18 00.4	269	12.9	57.5	114	07.4	-28.7	82	24.3	39.6	
9	28	30.1	335	02.9	01.2	284	13.6	57.4	129	10.2	-28.7	97	26.9	39.7	
10	43	32.5	350	02.2	02.0	299	14.3	57.2	144	13.0	-28.7	112	29.5	39.7	
11	58	35.0	5	01.6	+18 02.8	314	15.0	+23 57.0	159	15.8	-22 -28.7	127	32.1	-21 39.7	
12	73	37.5	20	01.0	+18 03.6	329	15.8	+23 56.9	174	18.6	-22 -28.7	142	34.7	-21 39.7	
13	88	39.9	35	00.3	04.4	344	16.5	56.7	189	21.4	-28.6	157	37.4	39.8	
14	103	42.4	49	59.7	05.2	359	17.2	56.6	204	24.2	-28.6	172	40.0	39.8	
15	118	44.9	64	59.1	06.0	14	17.9	56.4	219	27.0	-28.6	187	42.6	39.8	
16	133	47.3	79	58.5	06.8	29	18.6	56.3	234	29.9	-28.6	202	45.2	39.8	
17	148	49.8	94	57.8	+18 07.6	44	19.4	+23 56.1	249	32.7	-22 -28.6	217	47.8	-21 39.8	
18	163	52.2	109	57.2	+18 08.4	59	20.1	+23 56.0	264	35.5	-22 -28.5	232	50.4	-21 39.9	
19	178	54.7	124	56.6	09.2	74	20.8	55.8	279	38.3	-28.5	247	53.0	39.9	
20	193	57.2	139	55.9	09.9	89	21.5	55.6	294	41.1	-28.5	262	55.6	39.9	
21	208	59.6	154	55.3	10.7	104	22.2	55.5	309	43.9	-28.5	277	58.2	39.9	
22	224	02.1	169	54.7	11.5	119	23.0	55.3	324	46.7	-28.5	293	00.8	39.9	
23	239	04.6	184	54.0	12.3	134	23.7	55.2	339	49.5	-28.4	308	03.4	40.0	
24	254	07.0	199	53.4	+18 13.1	149	24.4	+23 55.0	354	52.3	-22 -28.4	323	06.0	-21 40.0	
Dif.	—		-6 +8			+7 -2			+28 0			+26 0			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 58 ^m 7				SD: 16'1 Edad: 2 ^d 6 PHE { 4 ^h : 59'3 12 ^h : 59'4 20 ^h : 59'4													
	PMG: 15 ^h 00 ^m				Rº: 59 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	h m s	h m s	h m s	h m s	h m s	h m s	h m s			
0	180 21.5	+22 35.8	143 57.8	51	+22 12.6	17	60 N	*** **	1 13	2 43	5 42	79	*** **	*** **	*** **			
1	195 21.4	36.0	158 21.9	51	10.9	19	58	*** **	1 52	3 02	5 59	77	23 50	32	35			
2	210 21.3	36.3	172 46.0	51	09.0	20	56	*** **	2 18	18	6 13	76	37 35	32				
3	225 21.2	36.6	187 10.1	51	07.0	22	54	1 07	39	31	26 73		25 38					
4	240 21.1	36.8	201 34.2	51	04.8	24	52	1 43	2 55	43	37 72		15 40					
5	255 21.0	+22 37.1	215 58.3	52	+22 02.4	24	50	2 07	3 10	3 53	6 47	71	23 06	42				
6	270 20.8	+22 37.3	230 22.5	51	+22 00.0	27	45	2 49	3 38	4 14	7 07	69	22 47	45				
7	285 20.7	37.6	244 46.6	52	+21 57.3	27	40	3 18	3 59	32	24 67		32 47					
8	300 20.6	37.9	259 10.8	52	54.6	30	35	41	4 17	46	38 66		19 49					
9	315 20.5	38.1	273 35.0	52	51.6	30	30	3 58	31	4 59	7 50	64	22 07	51				
10	330 20.4	38.4	287 59.2	52	48.6	32	20	4 26	4 55	5 20	8 11	62	21 48	53				
11	345 20.3	+22 38.7	302 23.4	52	+21 45.4	34	10 N	4 48	5 15	5 38	8 29	61	21 30	56				
12	0 20.2	+22 38.9	316 47.6	53	+21 42.0	35	0	5 07	5 33	5 55	8 46	59	21 14	58				
13	15 20.1	39.2	331 11.9	53	38.5	37	10 S	23	5 49	6 12	9 03	57	20 58	60				
14	30 19.9	39.4	345 36.2	53	34.8	38	20	38	6 06	30	21 55		40 63					
15	45 19.8	39.7	0 00.5	53	31.0	39	30	5 54	24	6 50	42 53		20 66					
16	60 19.7	39.9	14 24.8	54	27.1	41	35	6 02	34	7 02	9 54	52	20 08	68				
17	75 19.6	+22 40.2	28 49.2	54	+21 23.0	43	40	6 11	6 45	7 15	10 08	50	19 55	69				
18	90 19.5	+22 40.4	43 13.6	54	+21 18.7	43	45	6 21	6 58	7 32	10 24	49	19 39	71				
19	105 19.4	40.7	57 38.0	55	14.4	46	50	32	7 13	7 51	45 45		19 74					
20	120 19.2	41.0	72 02.5	55	09.8	46	52	37	20	8 01	10 54	45	19 09	76				
21	135 19.1	41.2	86 27.0	55	05.2	48	54	43	28	11	11 05	43	18 59	78				
22	150 19.0	41.5	100 51.5	56	+21 00.4	50	56	48	37	23	18 41		47 80					
23	165 18.9	41.7	115 16.1	56	+20 55.4	51	58	6 55	46	37	11 32	38	18 33	82				
24	180 18.8	+22 42.0	129 40.7		+20 50.3		60 S	7 02	7 57	8 53	11 49	35	18 16	86				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 02 ^m 4		Mag: -3.8 PMG: 10 ^h 41 ^m				Mag: +1.8 PMG: 14 ^h 02 ^m				Mag: -2.6 PMG: 00 ^h 20 ^m				Mag: +0.2 PMG: 02 ^h 27 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "		
0	254 07.0	199 53.4	+18 13.1		149 24.4	+23 55.0		354 52.3	-22 28.4		323 06.0	-21 40.0						
1	269 09.5	214 52.8	13.9		164 25.1	54.9		9 55.1	28.4		338 08.6	40.0						
2	284 12.0	229 52.1	14.7		179 25.8	54.7		24 57.9	28.4		353 11.2	40.0						
3	299 14.4	244 51.5	15.4		194 26.6	54.5		40 00.7	28.4		8 13.8	40.1						
4	314 16.9	259 50.9	16.2		209 27.3	54.4		55 03.5	28.4		23 16.4	40.1						
5	329 19.4	274 50.2	+18 17.0		224 28.0	+23 54.2		70 06.3	-22 28.3		38 19.1	-21 40.1						
6	344 21.8	289 49.6	+18 17.8		239 28.7	+23 54.1		85 09.1	-22 28.3		53 21.7	-21 40.1						
7	359 24.3	304 49.0	18.6		254 29.4	53.9		100 11.9	28.3		68 24.3	40.1						
8	14 26.7	319 48.3	19.3		269 30.2	53.7		115 14.8	28.3		83 26.9	40.2						
9	29 29.2	334 47.7	20.1		284 30.9	53.6		130 17.6	28.3		98 29.5	40.2						
10	44 31.7	349 47.0	20.9		299 31.6	53.4		145 20.4	28.2		113 32.1	40.2						
11	59 34.1	4 46.4	+18 21.7		314 32.3	+23 53.2		160 23.2	-22 28.2		128 34.7	-21 40.2						
12	74 36.6	19 45.8	+18 22.4		329 33.1	+23 53.1		175 26.0	-22 28.2		143 37.3	-21 40.3						
13	89 39.1	34 45.1	23.2		344 33.8	52.9		190 28.8	28.2		158 39.9	40.3						
14	104 41.5	49 44.5	24.0		359 34.5	52.8		205 31.6	28.2		173 42.5	40.3						
15	119 44.0	64 43.8	24.8		14 35.2	52.6		220 34.4	28.1		188 45.1	40.3						
16	134 46.5	79 43.2	25.5		29 35.9	52.4		235 37.2	28.1		203 47.7	40.3						
17	149 48.9	94 42.6	+18 26.3		44 36.7	+23 52.3		250 40.0	-22 28.1		218 50.3	-21 40.4						
18	164 51.4	109 41.9	+18 27.1		59 37.4	+23 52.1		265 42.8	-22 28.1		233 53.0	-21 40.4						
19	179 53.9	124 41.3	27.9		74 38.1	51.9		280 45.6	28.1		248 55.6	40.4						
20	194 56.3	139 40.6	28.6		89 38.8	51.8		295 48.4	28.0		263 58.2	40.4						
21	209 58.8	154 40.0	29.4		104 39.5	51.6		310 51.2	28.0		279 00.8	40.4						
22	225 01.2	169 39.3	30.2		119 40.3	51.4		325 54.0	28.0		294 03.4	40.5						
23	240 03.7	184 38.7	30.9		134 41.0	51.3		340 56.9	28.0		309 06.0	40.5						
24	255 06.2	199 38.1	+18 31.7		149 41.7	+23 51.1		355 59.7	-22 28.0		324 08.6	-21 40.5						
Dif.	—	-6	+8		+7	-2		+28	0		+26	0						

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 58 ^m 8				SD: 16'2 Edad: 3 ^d 6 PHE { 4 ^h : 59'5 12 ^h : 59'5 20 ^h : 59'5 PMG: 15 ^h 59 ^m Rº: 56 ^m													
	hG ☉		Dec		hG ☾		Dif. Dec Dif.				Civil	Náut.	Hora	Rº	Hora	Rº		
	°	'	°	'	°	'	°	'			h m	h m	h m	h m	h m	m		
h																		
0	180	18.8	+22	42.0	129	40.7	56	+20	50.3	52	60 N	21 16	22 49	** **	7 01	90	0 05	29
1	195	18.7		42.2	144	05.3	57		45.1	53	58	20 57	22 09	** **	16	86	** **	**
2	210	18.6		42.5	158	30.0	57		39.8	55	56	41	21 41	** **	29	82	** **	**
3	225	18.4		42.7	172	54.7	58		34.3	57	54	28	21	22 55	39	81	** **	*
4	240	18.3		43.0	187	19.5	58		28.6	58	52	16	21 04	22 18	49	79	23 55	31
5	255	18.2	+22	43.2	201	44.3	59	+20	22.8	59	50	20 06	20 49	21 52	7 58	77	23 48	33
6	270	18.1	+22	43.4	216	09.2	59	+20	16.9	60	45	19 44	20 21	21 09	8 16	73	23 32	37
7	285	18.0		43.7	230	34.1	59		10.9	62	40	26	19 59	20 40	31	70	19	40
8	300	17.9		43.9	244	59.0	60	+20	04.7	63	35	19 12	41	18	44	68	23 08	43
9	315	17.7		44.2	259	24.0	61	+19	58.4	64	30	18 59	27	20 00	8 54	66	22 58	45
10	330	17.6		44.4	273	49.1	61		52.0	66	20	38	19 02	19 31	9 13	63	41	49
11	345	17.5	+22	44.7	288	14.2	61	+19	45.4	67	10 N	18 20	18 42	19 09	9 30	59	22 26	53
12	0	17.4	+22	44.9	302	39.3	62	+19	38.7	68	0	18 03	18 25	18 51	9 45	57	22 12	56
13	15	17.3		45.1	317	04.5	63		31.9	69	10 S	17 46	18 08	35	10 00	54	21 58	59
14	30	17.2		45.4	331	29.8	63		25.0	71	20	28	17 52	19	16	52	43	62
15	45	17.0		45.6	345	55.1	63		17.9	72	30	17 07	33	18 03	35	48	26	66
16	60	16.9		45.9	0	20.4	64		10.7	73	35	16 55	23	17 55	46	45	16	68
17	75	16.8	+22	46.1	14	45.8	65	+19	03.4	75	40	16 41	17 12	17 46	10 58	43	21 04	71
18	90	16.7	+22	46.3	29	11.3	65	+18	55.9	76	45	16 25	16 59	17 36	11 13	40	20 50	74
19	105	16.6		46.6	43	36.8	66		48.3	76	50	16 05	43	24	30	37	33	79
20	120	16.4		46.8	58	02.4	67		40.7	79	52	15 56	36	19	39	35	25	81
21	135	16.3		47.1	72	28.1	67		32.8	79	54	45	28	14	48	33	17	82
22	150	16.2		47.3	86	53.8	67		24.9	80	56	33	20	08	11 59	30	20 07	85
23	165	16.1		47.5	101	19.5	68		16.9	82	58	19	16 10	17 02	12 10	28	19 55	88
24	180	16.0	+22	47.8	115	45.3		+18	08.7		60 S	15 03	15 59	16 55	12 24	24	19 42	92
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 58 ^m 4		Mag: -3.8 PMG: 10 ^h 42 ^m				Mag: +1.8 PMG: 14 ^h 01 ^m				Mag: -2.6 PMG: 00 ^h 16 ^m				Mag: +0.2 PMG: 02 ^h 23 ^m			
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	255	06.2	199	38.1	+18	31.7	149	41.7	+23	51.1	355	59.7	-22	-28.0	324	08.6	-21	40.5
1	270	08.6	214	37.4		32.5	164	42.4		51.0	11	02.5		-28.0	339	11.2		40.5
2	285	11.1	229	36.8		33.2	179	43.2		50.8	26	05.3		-27.9	354	13.8		40.6
3	300	13.6	244	36.1		34.0	194	43.9		50.6	41	08.1		-27.9	9	16.4		40.6
4	315	16.0	259	35.5		34.7	209	44.6		50.4	56	10.9		-27.9	24	19.1		40.6
5	330	18.5	274	34.8	+18	35.5	224	45.3	+23	50.3	71	13.7	-22	-27.9	39	21.7	-21	40.6
6	345	21.0	289	34.2	+18	36.3	239	46.1	+23	50.1	86	16.5	-22	-27.9	54	24.3	-21	40.6
7	0	23.4	304	33.5		37.0	254	46.8		49.9	101	19.3		-27.8	69	26.9		40.7
8	15	25.9	319	32.9		37.8	269	47.5		49.8	116	22.1		-27.8	84	29.5		40.7
9	30	28.4	334	32.2		38.5	284	48.2		49.6	131	24.9		-27.8	99	32.1		40.7
10	45	30.8	349	31.6		39.3	299	49.0		49.4	146	27.7		-27.8	114	34.7		40.7
11	60	33.3	4	30.9	+18	40.1	314	49.7	+23	49.3	161	30.5	-22	-27.8	129	37.3	-21	40.8
12	75	35.7	19	30.3	+18	40.8	329	50.4	+23	49.1	176	33.3	-22	-27.7	144	39.9	-21	40.8
13	90	38.2	34	29.6		41.6	344	51.1		48.9	191	36.2		-27.7	159	42.5		40.8
14	105	40.7	49	29.0		42.3	359	51.8		48.8	206	39.0		-27.7	174	45.2		40.8
15	120	43.1	64	28.3		43.1	14	52.6		48.6	221	41.8		-27.7	189	47.8		40.8
16	135	45.6	79	27.7		43.8	29	53.3		48.4	236	44.6		-27.7	204	50.4		40.9
17	150	48.1	94	27.0	+18	44.6	44	54.0	+23	48.2	251	47.4	-22	-27.6	219	53.0	-21	40.9
18	165	50.5	109	26.4	+18	45.3	59	54.7	+23	48.1	266	50.2	-22	-27.6	234	55.6	-21	40.9
19	180	53.0	124	25.7		46.1	74	55.5		47.9	281	53.0		-27.6	249	58.2		40.9
20	195	55.5	139	25.1		46.8	89	56.2		47.7	296	55.8		-27.6	265	00.8		41.0
21	210	57.9	154	24.4		47.6	104	56.9		47.6	311	58.6		-27.6	280	03.4		41.0
22	226	00.4	169	23.7		48.3	119	57.6		47.4	327	01.4		-27.6	295	06.1		41.0
23	241	02.8	184	23.1		49.1	134	58.4		47.2	342	04.2		-27.5	310	08.7		41.0
24	256	05.3	199	22.4	+18	49.8	149	59.1	+23	47.0	357	07.0	-22	-27.5	325	11.3	-21	41.1
Dif.	—		-7 +8				+7 -2				+28 0				+26			

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15'8 PMG: 11 ^h 59 ^m 0				SD: 16'2 Edad: 4 ^d 6 PHE { 4 ^h : 59'5 12 ^h : 59'5 20 ^h : 59'5 PMG: 16 ^h 55 ^m Rº: 54 ^m																	
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.																
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m							
0	180	16.0	+22	47.8	115	45.3	69	+18	08.7	83	60 N	** **	1 08	2 41	8 31	92	0 34	21				
1	195	15.9		48.0	130	11.2	69	+18	00.4	83	58	** **	1 49	3 00	42	89	22	24				
2	210	15.7		48.2	144	37.1	70	+17	52.1	85	56	** **	2 16	16	8 51	86	12	27				
3	225	15.6		48.5	159	03.1	71		43.6	87	54	1 02	37	30	9 00	83	0 03	29				
4	240	15.5		48.7	173	29.2	71		34.9	87	52	1 40	2 54	42	08	81	** **	**				
5	255	15.4	+22	48.9	187	55.3	72	+17	26.2	88	50	2 05	3 08	3 52	9 15	78	** **	**				
6	270	15.3	+22	49.1	202	21.5	73	+17	17.4	90	45	2 48	3 37	4 14	9 29	75	** **	**				
7	285	15.1		49.4	216	47.8	73	+17	08.4	90	40	3 18	3 59	31	41	71	23 59	36				
8	300	15.0		49.6	231	14.1	73	+16	59.4	91	35	40	4 16	46	9 52	68	51	38				
9	315	14.9		49.8	245	40.4	75		50.3	93	30	3 58	31	4 58	10 00	66	43	41				
10	330	14.8		50.1	260	06.9	75		41.0	94	20	4 26	4 55	5 20	16	61	30	46				
11	345	14.7	+22	50.3	274	33.4	75	+16	31.6	94	10 N	4 48	5 15	5 38	10 29	58	23 19	49				
12	0	14.5	+22	50.5	288	59.9	76	+16	22.2	96	0	5 07	5 33	5 55	10 42	54	23 08	53				
13	15	14.4		50.7	303	26.5	77		12.6	96	10 S	23	5 50	6 12	10 54	51	22 57	57				
14	30	14.3		51.0	317	53.2	78	+16	03.0	98	20	39	6 06	30	11 08	47	45	61				
15	45	14.2		51.2	332	20.0	78	+15	53.2	98	30	5 55	25	6 51	23	43	32	65				
16	60	14.1		51.4	346	46.8	79		43.4	100	35	6 03	35	7 03	31	41	24	68				
17	75	13.9	+22	51.6	1	13.7	79	+15	33.4	100	40	6 12	6 46	7 17	11 41	38	22 15	71				
18	90	13.8	+22	51.8	15	40.6	80	+15	23.4	101	45	6 22	6 59	7 33	11 53	34	22 04	75				
19	105	13.7		52.1	30	07.6	81		13.3	102	50	34	7 15	7 53	12 07	30	21 52	79				
20	120	13.6		52.3	44	34.7	81	+15	03.1	104	52	39	22	8 02	14	28	46	81				
21	135	13.5		52.5	59	01.8	82	+14	52.7	103	54	44	30	13	21	26	39	84				
22	150	13.3		52.7	73	29.0	82		42.4	105	56	50	39	25	29	24	32	86				
23	165	13.2		52.9	87	56.2	83		31.9	106	58	6 56	7 48	39	12 38	21	21 23	89				
24	180	13.1	+22	53.1	102	23.5		+14	21.3		60 S	7 03	8 00	8 56	12 48	18	21 14	92				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 6 ^h 54 ^m 5		Mag: -3.8 PMG: 10 ^h 43 ^m				Mag: +1.8 PMG: 13 ^h 59 ^m				Mag: -2.6 PMG: 00 ^h 11 ^m				Mag: +0.2 PMG: 02 ^h 19 ^m							
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	256	05.3	199	22.4	+18	49.8	149	59.1	+23	47.0	357	07.0	-22	27.5	325	11.3	-21	41.1				
1	271	07.8	214	21.8		50.6	164	59.8		46.9	12	09.8		27.5	340	13.9		41.1				
2	286	10.2	229	21.1		51.3	180	00.5		46.7	27	12.7		27.5	355	16.5		41.1				
3	301	12.7	244	20.5		52.1	195	01.3		46.5	42	15.5		27.5	10	19.1		41.1				
4	316	15.2	259	19.8		52.8	210	02.0		46.3	57	18.3		27.4	25	21.7		41.1				
5	331	17.6	274	19.1	+18	53.5	225	02.7	+23	46.2	72	21.1	-22	27.4	40	24.3	-21	41.2				
6	346	20.1	289	18.5	+18	54.3	240	03.4	+23	46.0	87	23.9	-22	27.4	55	27.0	-21	41.2				
7	1	22.6	304	17.8		55.0	255	04.2		45.8	102	26.7		27.4	70	29.6		41.2				
8	16	25.0	319	17.2		55.8	270	04.9		45.6	117	29.5		27.4	85	32.2		41.2				
9	31	27.5	334	16.5		56.5	285	05.6		45.5	132	32.3		27.3	100	34.8		41.3				
10	46	30.0	349	15.8		57.2	300	06.4		45.3	147	35.1		27.3	115	37.4		41.3				
11	61	32.4	4	15.2	+18	58.0	315	07.1	+23	45.1	162	37.9	-22	27.3	130	40.0	-21	41.3				
12	76	34.9	19	14.5	+18	58.7	330	07.8	+23	44.9	177	40.7	-22	27.3	145	42.6	-21	41.3				
13	91	37.3	34	13.9	+18	59.4	345	08.5		44.8	192	43.5		27.3	160	45.2		41.3				
14	106	39.8	49	13.2	+19	00.2	0	09.3		44.6	207	46.3		27.2	175	47.9		41.4				
15	121	42.3	64	12.5		00.9	15	10.0		44.4	222	49.2		27.2	190	50.5		41.4				
16	136	44.7	79	11.9		01.6	30	10.7		44.2	237	52.0		27.2	205	53.1		41.4				
17	151	47.2	94	11.2	+19	02.4	45	11.4	+23	44.0	252	54.8	-22	27.2	220	55.7	-21	41.4				
18	166	49.7	109	10.5	+19	03.1	60	12.2	+23	43.9	267	57.6	-22	27.2	235	58.3	-21	41.5				
19	181	52.1	124	09.9		03.8	75	12.9		43.7	283	00.4		27.1	251	00.9		41.5				
20	196	54.6	139	09.2		04.6	90	13.6		43.5	298	03.2		27.1	266	03.5		41.5				
21	211	57.1	154	08.5		05.3	105	14.3		43.3	313	06.0		27.1	281	06.2		41.5				
22	226	59.5	169	07.9		06.0	120	15.1		43.1	328	08.8		27.1	296	08.8		41.5				
23	242	02.0	184	07.2		06.7	135	15.8		43.0	343	11.6		27.1	311	11.4		41.6				
24	257	04.5	199	06.5	+19	07.5	150	16.5	+23	42.8	358	14.4	-22	27.0	326	14.0	-21	41.6				
Dif.	—		-7				+7				-2				+28				0			

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 59 ^m 2				SD: 16'2 Edad: 5 ^d 6 PHE { 4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'3 PMG: 17 ^h 49 ^m Rº: 51 ^m															
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.		Civil	Náut.	Hora	Rº	Hora	Rº
	°	'	°	'	°	'	°	'	°	'			°	'	h m	h m	h m	m	h m	m
h																				
0	180	13.1	+22	53.1	102	23.5	84	+14	21.3	106	60 N	21 19	22 55	** **	10 03	92	0 55	15		
1	195	13.0		53.4	116	50.9	85	+14	10.7	108	58	20 59	22 12	** **	11 88		46	19		
2	210	12.9		53.6	131	18.4	85	+13	59.9	108	56	43	21 44	** **	17 86		39	21		
3	225	12.7		53.8	145	45.9	85		49.1	109	54	30	23	23 01	23 83		32	24		
4	240	12.6		54.0	160	13.4	87		38.2	110	52	18	21 06	22 21	29 80		26	26		
5	255	12.5	+22	54.2	174	41.1	86	+13	27.2	110	50	20 07	20 51	21 55	10 33	79	0 21	28		
6	270	12.4	+22	54.4	189	08.7	88	+13	16.2	111	45	19 45	20 22	21 11	10 44	74	0 09	32		
7	285	12.2		54.6	203	36.5	88	+13	05.1	112	40	28	20 00	20 42	10 52	71	** **	**		
8	300	12.1		54.9	218	04.3	89	+12	53.9	113	35	13	19 42	19	11 00	67	** **	**		
9	315	12.0		55.1	232	32.2	89		42.6	114	30	19 00	28	20 01	06 65		** **	**		
10	330	11.9		55.3	247	00.1	90		31.2	114	20	18 39	19 03	19 32	17 60		** **	**		
11	345	11.8	+22	55.5	261	28.1	90	+12	19.8	115	10 N	18 20	18 43	19 10	11 27	56	** **	**		
12	0	11.6	+22	55.7	275	56.1	91	+12	08.3	115	0	18 03	18 25	18 51	11 36	52	** **	**		
13	15	11.5		55.9	290	24.2	92	+11	56.8	117	10 S	17 46	18 09	35	45 48		23 54	55		
14	30	11.4		56.1	304	52.4	92		45.1	116	20	28	17 52	19	11 55	44	46	59		
15	45	11.3		56.3	319	20.6	93		33.5	118	30	17 07	33	18 03	12 06	39	37	64		
16	60	11.1		56.5	333	48.9	93		21.7	118	35	16 55	23	17 54	12 37		32	67		
17	75	11.0	+22	56.7	348	17.2	94	+11	09.9	119	40	16 41	17 11	17 45	12 19	34	23 26	70		
18	90	10.9	+22	56.9	2	45.6	94	+10	58.0	119	45	16 25	16 58	17 35	12 27	31	23 19	74		
19	105	10.8		57.1	17	14.0	95		46.1	120	50	16 05	43	24	37 26		11	78		
20	120	10.7		57.3	31	42.5	96		34.1	120	52	15 55	35	19	42 24		07	80		
21	135	10.5		57.5	46	11.1	96		22.1	122	54	44	28	13	47 22		23 03	82		
22	150	10.4		57.7	60	39.7	96	+10	09.9	121	56	32	19	08	53 19		22 58	85		
23	165	10.3		57.9	75	08.3	97	+9	57.8	122	58	18	16 09	17 01	12 59	16	52	89		
24	180	10.2	+22	58.1	89	37.0		+9	45.6		60 S	15 01	15 58	16 54	13 06	13	22 46	92		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 6 ^h 50 ^m 6		Mag: -3.8 PMG: 10 ^h 44 ^m				Mag: +1.8 PMG: 13 ^h 58 ^m				Mag: -2.6 PMG: 00 ^h 07 ^m				Mag: +0.2 PMG: 02 ^h 15 ^m					
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	257	04.5	199	06.5	+19	07.5	150	16.5	+23	42.8	358	14.4	-22	-27.0	326	14.0	-21	41.6		
1	272	06.9	214	05.9		08.2	165	17.3		42.6	13	17.2		-27.0	341	16.6		41.6		
2	287	09.4	229	05.2		08.9	180	18.0		42.4	28	20.0		-27.0	356	19.2		41.6		
3	302	11.8	244	04.5		09.6	195	18.7		42.2	43	22.9		-27.0	11	21.9		41.7		
4	317	14.3	259	03.9		10.4	210	19.4		42.1	58	25.7		-27.0	26	24.5		41.7		
5	332	16.8	274	03.2	+19	11.1	225	20.2	+23	41.9	73	28.5	-22	-26.9	41	27.1	-21	41.7		
6	347	19.2	289	02.5	+19	11.8	240	20.9	+23	41.7	88	31.3	-22	-26.9	56	29.7	-21	41.7		
7	2	21.7	304	01.8		12.5	255	21.6		41.5	103	34.1		-26.9	71	32.3		41.8		
8	17	24.2	319	01.2		13.2	270	22.4		41.3	118	36.9		-26.9	86	34.9		41.8		
9	32	26.6	334	00.5		13.9	285	23.1		41.1	133	39.7		-26.9	101	37.6		41.8		
10	47	29.1	348	59.8		14.7	300	23.8		41.0	148	42.5		-26.9	116	40.2		41.8		
11	62	31.6	3	59.2	+19	15.4	315	24.5	+23	40.8	163	45.3	-22	-26.8	131	42.8	-21	41.8		
12	77	34.0	18	58.5	+19	16.1	330	25.3	+23	40.6	178	48.1	-22	-26.8	146	45.4	-21	41.9		
13	92	36.5	33	57.8		16.8	345	26.0		40.4	193	50.9		-26.8	161	48.0		41.9		
14	107	39.0	48	57.1		17.5	0	26.7		40.2	208	53.7		-26.8	176	50.6		41.9		
15	122	41.4	63	56.5		18.2	15	27.5		40.0	223	56.6		-26.8	191	53.3		41.9		
16	137	43.9	78	55.8		18.9	30	28.2		39.8	238	59.4		-26.7	206	55.9		42.0		
17	152	46.3	93	55.1	+19	19.7	45	28.9	+23	39.7	254	02.2	-22	-26.7	221	58.5	-21	42.0		
18	167	48.8	108	54.4	+19	20.4	60	29.6	+23	39.5	269	05.0	-22	-26.7	237	01.1	-21	42.0		
19	182	51.3	123	53.8		21.1	75	30.4		39.3	284	07.8		-26.7	252	03.7		42.0		
20	197	53.7	138	53.1		21.8	90	31.1		39.1	299	10.6		-26.7	267	06.3		42.1		
21	212	56.2	153	52.4		22.5	105	31.8		38.9	314	13.4		-26.6	282	09.0		42.1		
22	227	58.7	168	51.7		23.2	120	32.6		38.7	329	16.2		-26.6	297	11.6		42.1		
23	243	01.1	183	51.0		23.9	135	33.3		38.5	344	19.0		-26.6	312	14.2		42.1		
24	258	03.6	198	50.4	+19	24.6	150	34.0	+23	38.4	359	21.8	-22	-26.6	327	16.8	-21	42.1		
Dif.	—		-7 +7				+7 -2				+28 0				+26 0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 11 ^h 59 ^m 4			SD: 16'2 Edad: 6 ^d 6 PMG: 18 ^h 40 ^m				PHE { 4 ^h : 59'2 12 ^h : 59'2 20 ^h : 59'1 Rº: 50 ^m										
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.	Náut.		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m				
0	180	10.2	+22	58.1	89	37.0	98	+9	45.6	123	60 N	1 03	2 39	11 35	91	1 10	13	
1	195	10.0		58.3	104	05.8	98		33.3	123	58	** **	1 46	2 59	39	88	05	15
2	210	09.9		58.5	118	34.6	99		21.0	124	56	** **	2 14	3 15	43	85	1 00	18
3	225	09.8		58.7	133	03.5	99	+9	08.6	124	54	0 58	35	29	46	82	0 56	20
4	240	09.7		58.9	147	32.4	99	+8	56.2	124	52	1 38	2 53	41	49	80	52	23
5	255	09.5	+22	59.1	162	01.3	100	+8	43.8	125	50	2 04	3 07	3 51	11 52	78	0 49	24
6	270	09.4	+22	59.3	176	30.3	101	+8	31.3	126	45	2 47	3 36	4 13	11 58	73	0 41	29
7	285	09.3		59.5	190	59.4	101		18.7	126	40	3 17	3 58	31	12 03	69	35	32
8	300	09.2		59.7	205	28.5	101	+8	06.1	126	35	40	4 16	46	07	66	29	36
9	315	09.0	+22	59.9	219	57.6	102	+7	53.5	127	30	3 58	31	4 58	11	63	24	38
10	330	08.9	+23	00.1	234	26.8	102		40.8	127	20	4 26	4 55	5 20	17	58	16	43
11	345	08.8	+23	00.3	248	56.0	103	+7	28.1	127	10 N	4 49	5 16	5 39	12 23	54	0 08	47
12	0	08.7	+23	00.5	263	25.3	103	+7	15.4	128	0	5 07	5 33	5 56	12 28	50	0 01	51
13	15	08.6		00.7	277	54.6	104	+7	02.6	128	10 S	24	5 50	6 13	33	46	** **	**
14	30	08.4		00.9	292	24.0	104	+6	49.8	129	20	40	6 07	31	39	42	** **	**
15	45	08.3		01.1	306	53.4	104		36.9	128	30	5 56	26	6 52	45	37	** **	**
16	60	08.2		01.2	321	22.8	105		24.1	130	35	6 04	36	7 04	49	34	** **	**
17	75	08.1	+23	01.4	335	52.3	105	+6	11.1	129	40	6 13	6 47	7 18	12 53	31	** **	**
18	90	07.9	+23	01.6	350	21.8	106	+5	58.2	130	45	6 23	7 01	7 34	12 58	27	** **	**
19	105	07.8		01.8	4	51.4	105		45.2	130	50	35	16	7 54	13 03	24	** **	**
20	120	07.7		02.0	19	20.9	107		32.2	130	52	40	23	8 04	06	21	** **	**
21	135	07.6		02.2	33	50.6	106		19.2	130	54	45	31	15	09	19	** **	**
22	150	07.4		02.4	48	20.2	107	+5	06.2	131	56	51	40	27	12	17	** **	**
23	165	07.3		02.5	62	49.9	107	+4	53.1	131	58	6 58	7 50	41	13 15	15	** **	**
24	180	07.2	+23	02.7	77	19.6		+4	40.0		60 S	7 05	8 02	8 58	13 19	12	** **	**
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 46 ^m 6		Mag: -3.8 PMG: 10 ^h 45 ^m				Mag: +1.8 PMG: 13 ^h 57 ^m				Mag: -2.6 PMG: 00 ^h 03 ^m				Mag: +0.2 PMG: 02 ^h 10 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	258	03.6	198	50.4	+19	24.6	150	34.0	+23	38.4	359	21.8	-22	26.6	327	16.8	-21	42.1
1	273	06.1	213	49.7		25.3	165	34.8		38.2	14	24.6		26.6	342	19.4		42.2
2	288	08.5	228	49.0		26.0	180	35.5		38.0	29	27.5		26.5	357	22.0		42.2
3	303	11.0	243	48.3		26.7	195	36.2		37.8	44	30.3		26.5	12	24.7		42.2
4	318	13.4	258	47.6		27.4	210	36.9		37.6	59	33.1		26.5	27	27.3		42.2
5	333	15.9	273	47.0	+19	28.1	225	37.7	+23	37.4	74	35.9	-22	26.5	42	29.9	-21	42.3
6	348	18.4	288	46.3	+19	28.8	240	38.4	+23	37.2	89	38.7	-22	26.5	57	32.5	-21	42.3
7	3	20.8	303	45.6		29.5	255	39.1		37.0	104	41.5		26.4	72	35.1		42.3
8	18	23.3	318	44.9		30.2	270	39.9		36.8	119	44.3		26.4	87	37.8		42.3
9	33	25.8	333	44.2		30.9	285	40.6		36.6	134	47.1		26.4	102	40.4		42.4
10	48	28.2	348	43.6		31.6	300	41.3		36.5	149	49.9		26.4	117	43.0		42.4
11	63	30.7	3	42.9	+19	32.3	315	42.1	+23	36.3	164	52.7	-22	26.4	132	45.6	-21	42.4
12	78	33.2	18	42.2	+19	33.0	330	42.8	+23	36.1	179	55.5	-22	26.3	147	48.2	-21	42.4
13	93	35.6	33	41.5		33.7	345	43.5		35.9	194	58.3		26.3	162	50.9		42.4
14	108	38.1	48	40.8		34.4	0	44.3		35.7	210	01.2		26.3	177	53.5		42.5
15	123	40.6	63	40.1		35.1	15	45.0		35.5	225	04.0		26.3	192	56.1		42.5
16	138	43.0	78	39.4		35.8	30	45.7		35.3	240	06.8		26.3	207	58.7		42.5
17	153	45.5	93	38.8	+19	36.4	45	46.5	+23	35.1	255	09.6	-22	26.2	223	01.3	-21	42.5
18	168	47.9	108	38.1	+19	37.1	60	47.2	+23	34.9	270	12.4	-22	26.2	238	04.0	-21	42.6
19	183	50.4	123	37.4		37.8	75	47.9		34.7	285	15.2		26.2	253	06.6		42.6
20	198	52.9	138	36.7		38.5	90	48.7		34.5	300	18.0		26.2	268	09.2		42.6
21	213	55.3	153	36.0		39.2	105	49.4		34.3	315	20.8		26.2	283	11.8		42.6
22	228	57.8	168	35.3		39.9	120	50.1		34.1	330	23.6		26.1	298	14.4		42.7
23	244	00.3	183	34.6		40.6	135	50.9		33.9	345	26.4		26.1	313	17.1		42.7
24	259	02.7	198	33.9	+19	41.2	150	51.6	+23	33.7	0	29.2	-22	26.1	328	19.7	-21	42.7
Dif.	—		-7		+7		+7		-2		+28		0		+26		0	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 59 ^m 6			SD: 16'1 Edad: 7 ^d 6 PHE { 4 ^h : 59'0 12 ^h : 58'9 20 ^h : 58'8 PMG: 19 ^h 30 ^m Rº: 49 ^m								Civil		Náut.	Hora	Rº	Hora	Rº
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.											
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m	h m	m	h m	m	
0	180	07.2	+23	02.7	77	19.6	108	+4	40.0	131	60 N	21 21	23 00	** **		13 06	89	
1	195	07.0		02.9	91	49.4	108		26.9	131	58	21 02	22 15	** **		07 86	20 14	
2	210	06.9		03.1	106	19.2	108		13.8	132	56	20 45	21 47	** **		08 83	18 17	
3	225	06.8		03.3	120	49.0	109	+4	00.6	131	54	31	25	23 05		08 81	16 19	
4	240	06.7		03.5	135	18.9	108	+3	47.5	132	52	19	21 07	22 24		09 79	15 21	
5	255	06.5	+23	03.6	149	48.7	109	+3	34.3	132	50	20 09	20 53	21 57		13 10	76	
6	270	06.4	+23	03.8	164	18.6	110	+3	21.1	132	45	19 46	20 24	21 13		13 11	72	
7	285	06.3		04.0	178	48.6	109	+3	07.9	132	40	29	20 01	20 43		12 68	07 31	
8	300	06.2		04.2	193	18.5	110	+2	54.7	133	35	14	19 43	20		13 65	05 33	
9	315	06.0		04.3	207	48.5	110		41.4	132	30	19 01	28	20 02		14 62	1 02 37	
10	330	05.9		04.5	222	18.5	111		28.2	133	20	18 39	19 04	19 33		15 58	0 59 41	
11	345	05.8	+23	04.7	236	48.6	110	+2	14.9	132	10 N	18 21	18 44	19 11		13 17	53	
12	0	05.7	+23	04.9	251	18.6	111	+2	01.7	133	0	18 03	18 26	18 52		13 18	49	
13	15	05.5		05.0	265	48.7	111	+1	48.4	132	10 S	17 46	18 09	35		19 45	49 53	
14	30	05.4		05.2	280	18.8	111		35.2	133	20	28	17 52	19		21 41	45 58	
15	45	05.3		05.4	294	48.9	111		21.9	133	30	17 07	33	18 03		22 36	41 63	
16	60	05.2		05.6	309	19.0	112	+1	08.6	133	35	16 55	23	17 54		23 34	39 65	
17	75	05.0	+23	05.7	323	49.2	112	+0	55.3	132	40	16 41	17 11	17 45		13 24	31	
18	90	04.9	+23	05.9	338	19.4	112	+0	42.1	133	45	16 24	16 58	17 35		13 25	27	
19	105	04.8		06.1	352	49.6	112		28.8	133	50	16 04	42	24		27 22	29 77	
20	120	04.6		06.2	7	19.8	112		15.5	132	52	15 54	35	18		27 21	27 79	
21	135	04.5		06.4	21	50.0	112	+0	02.3	133	54	43	27	13		28 19	25 82	
22	150	04.4		06.6	36	20.2	112	-0	11.0	132	56	31	18	07		29 16	23 84	
23	165	04.3		06.7	50	50.4	113		24.2	133	58	17	16 08	17 00		30 14	21 87	
24	180	04.1	+23	06.9	65	20.7		-0	37.5		60 S	15 00	15 57	16 53		13 31	11	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 42 ^m 7		Mag: -3.8 PMG: 10 ^h 46 ^m				Mag: +1.8 PMG: 13 ^h 56 ^m				Mag: -2.6 PMG: 23 ^h 54 ^m				Mag: +0.2 PMG: 02 ^h 06 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	°	'	°	°	'	°		°	°	'	°	°	°	'	
0	259	02.7	198	33.9	+19	41.2	150	51.6	+23	33.7	0	29.2	-22	-26.1	328	19.7	-21	
1	274	05.2	213	33.2		41.9	165	52.3		33.5	15	32.0		-26.1	343	22.3		
2	289	07.7	228	32.6		42.6	180	53.1		33.3	30	34.9		-26.1	358	24.9		
3	304	10.1	243	31.9		43.3	195	53.8		33.1	45	37.7		-26.0	13	27.5		
4	319	12.6	258	31.2		44.0	210	54.5		33.0	60	40.5		-26.0	28	30.2		
5	334	15.0	273	30.5	+19	44.6	225	55.3	+23	32.8	75	43.3	-22	-26.0	43	32.8	-21	
6	349	17.5	288	29.8	+19	45.3	240	56.0	+23	32.6	90	46.1	-22	-26.0	58	35.4	-21	
7	4	20.0	303	29.1		46.0	255	56.7		32.4	105	48.9		-26.0	73	38.0		
8	19	22.4	318	28.4		46.7	270	57.5		32.2	120	51.7		-25.9	88	40.6		
9	34	24.9	333	27.7		47.3	285	58.2		32.0	135	54.5		-25.9	103	43.3		
10	49	27.4	348	27.0		48.0	300	58.9		31.8	150	57.3		-25.9	118	45.9		
11	64	29.8	3	26.3	+19	48.7	315	59.7	+23	31.6	166	00.1	-22	-25.9	133	48.5	-21	
12	79	32.3	18	25.6	+19	49.4	331	00.4	+23	31.4	181	02.9	-22	-25.9	148	51.1	-21	
13	94	34.8	33	24.9		50.0	346	01.1		31.2	196	05.8		-25.8	163	53.8		
14	109	37.2	48	24.2		50.7	1	01.9		31.0	211	08.6		-25.8	178	56.4		
15	124	39.7	63	23.5		51.4	16	02.6		30.8	226	11.4		-25.8	193	59.0		
16	139	42.2	78	22.8		52.0	31	03.3		30.6	241	14.2		-25.8	209	01.6		
17	154	44.6	93	22.1	+19	52.7	46	04.1	+23	30.4	256	17.0	-22	-25.8	224	04.2	-21	
18	169	47.1	108	21.4	+19	53.4	61	04.8	+23	30.2	271	19.8	-22	-25.7	239	06.9	-21	
19	184	49.5	123	20.7		54.0	76	05.5		30.0	286	22.6		-25.7	254	09.5		
20	199	52.0	138	20.0		54.7	91	06.3		29.8	301	25.4		-25.7	269	12.1		
21	214	54.5	153	19.3		55.4	106	07.0		29.6	316	28.2		-25.7	284	14.7		
22	229	56.9	168	18.6		56.0	121	07.7		29.4	331	31.0		-25.7	299	17.4		
23	244	59.4	183	17.9		56.7	136	08.5		29.1	346	33.8		-25.6	314	20.0		
24	260	01.9	198	17.2	+19	57.4	151	09.2	+23	28.9	1	36.6	-22	-25.6	329	22.6	-21	
Dif.	—		-7 +7				+7 -2				+28 0				+26			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8				SD: 16'0												PHE {	
	PMG: 11 ^h 59 ^m 8				Edad: 8 ^d 6													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Rº: 49 ^m											
h	°	'	°	'	°	'			°	h	m	h	m	h	m	h	m	
0	180	04.1	+23	06.9	65	20.7	113	-0	37.5	132	60 N	h m ** **	0 59	2 38	14 35	89	1 34 11	
1	195	04.0		07.1	79	51.0	112	-0	50.7	132	58	** **	1 44	2 58	33 86		34 14	
2	210	03.9		07.2	94	21.2	113	-1	03.9	132	56	** **	2 13	3 14	31 83		35 17	
3	225	03.8		07.4	108	51.5	113		17.1	133	54	0 54	34	28	29 80		35 19	
4	240	03.6		07.6	123	21.8	113		30.4	131	52	1 36	2 52	40	28 78		36 21	
5	255	03.5	+23	07.7	137	52.1	113	-1	43.5	132	50	2 02	3 07	3 51	14 26	76	1 36 23	
6	270	03.4	+23	07.9	152	22.4	113	-1	56.7	132	45	2 47	3 36	4 13	14 23	72	1 37 27	
7	285	03.2		08.0	166	52.7	114	-2	09.9	131	40	3 17	3 58	31	20 68		38 30	
8	300	03.1		08.2	181	23.1	113		23.0	131	35	39	4 16	45	18 65		38 34	
9	315	03.0		08.4	195	53.4	113		36.1	131	30	3 58	31	4 58	16 62		39 36	
10	330	02.9		08.5	210	23.7	113	-2	49.2	131	20	4 26	4 56	5 20	13 57		40 41	
11	345	02.7	+23	08.7	224	54.0	114	-3	02.3	131	10 N	4 49	5 16	5 39	14 10	53	1 41 45	
12	0	02.6	+23	08.8	239	24.4	113	-3	15.4	130	0	5 08	5 34	5 56	14 07	49	1 41 50	
13	15	02.5		09.0	253	54.7	113		28.4	130	10 S	24	5 51	6 13	04 46		42 53	
14	30	02.3		09.2	268	25.0	113		41.4	130	20	40	6 08	32	14 02	41	43 57	
15	45	02.2		09.3	282	55.3	114	-3	54.4	130	30	5 56	26	6 53	13 58	37	44 62	
16	60	02.1		09.5	297	25.7	113	-4	07.4	129	35	6 05	37	7 05	57 34		44 65	
17	75	02.0	+23	09.6	311	56.0	113	-4	20.3	129	40	6 14	6 48	7 19	13 55	31	1 45 68	
18	90	01.8	+23	09.8	326	26.3	113	-4	33.2	129	45	6 24	7 02	7 35	13 52	28	1 45 72	
19	105	01.7		09.9	340	56.6	113		46.1	128	50	36	17	7 56	49 24		46 76	
20	120	01.6		10.1	355	26.9	113	-4	58.9	128	52	41	25	8 05	48 22		46 79	
21	135	01.4		10.2	9	57.2	113	-5	11.7	128	54	47	33	16	47 19		47 80	
22	150	01.3		10.4	24	27.5	113		24.5	128	56	53	42	29	45 17		47 83	
23	165	01.2		10.5	38	57.8	113		37.3	127	58	6 59	7 52	8 43	13 44	14	1 48 86	
24	180	01.1	+23	10.7	53	28.1		-5	50.0		60 S	7 07	8 03	9 00	13 42	11	1 48 89	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 38 ^m 8		Mag: -3.8 PMG: 10 ^h 47 ^m				Mag: +1.8 PMG: 13 ^h 55 ^m				Mag: -2.6 PMG: 23 ^h 49 ^m				Mag: +0.2 PMG: 02 ^h 02 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	260	01.9	198	17.2	+19	57.4	151	09.2	+23	28.9	1	36.6	-22	25.6	329	22.6	-21	43.3
1	275	04.3	213	16.5		58.0	166	09.9		28.7	16	39.5		25.6	344	25.2		43.3
2	290	06.8	228	15.8		58.7	181	10.7		28.5	31	42.3		25.6	359	27.8		43.3
3	305	09.3	243	15.1	+19	59.3	196	11.4		28.3	46	45.1		25.6	14	30.5		43.3
4	320	11.7	258	14.4	+20	00.0	211	12.2		28.1	61	47.9		25.5	29	33.1		43.4
5	335	14.2	273	13.7	+20	00.6	226	12.9	+23	27.9	76	50.7	-22	25.5	44	35.7	-21	43.4
6	350	16.7	288	13.0	+20	01.3	241	13.6	+23	27.7	91	53.5	-22	25.5	59	38.3	-21	43.4
7	5	19.1	303	12.3		02.0	256	14.4		27.5	106	56.3		25.5	74	41.0		43.4
8	20	21.6	318	11.6		02.6	271	15.1		27.3	121	59.1		25.5	89	43.6		43.5
9	35	24.0	333	10.9		03.3	286	15.8		27.1	137	01.9		25.4	104	46.2		43.5
10	50	26.5	348	10.2		03.9	301	16.6		26.9	152	04.7		25.4	119	48.8		43.5
11	65	29.0	3	09.5	+20	04.6	316	17.3	+23	26.7	167	07.5	-22	25.4	134	51.5	-21	43.5
12	80	31.4	18	08.8	+20	05.2	331	18.0	+23	26.5	182	10.3	-22	25.4	149	54.1	-21	43.6
13	95	33.9	33	08.1		05.9	346	18.8		26.3	197	13.2		25.4	164	56.7		43.6
14	110	36.4	48	07.4		06.5	1	19.5		26.1	212	16.0		25.3	179	59.3		43.6
15	125	38.8	63	06.7		07.2	16	20.3		25.9	227	18.8		25.3	195	02.0		43.6
16	140	41.3	78	06.0		07.8	31	21.0		25.7	242	21.6		25.3	210	04.6		43.7
17	155	43.8	93	05.2	+20	08.5	46	21.7	+23	25.4	257	24.4	-22	25.3	225	07.2	-21	43.7
18	170	46.2	108	04.5	+20	09.1	61	22.5	+23	25.2	272	27.2	-22	25.3	240	09.8	-21	43.7
19	185	48.7	123	03.8		09.7	76	23.2		25.0	287	30.0		25.2	255	12.5		43.7
20	200	51.1	138	03.1		10.4	91	24.0		24.8	302	32.8		25.2	270	15.1		43.8
21	215	53.6	153	02.4		11.0	106	24.7		24.6	317	35.6		25.2	285	17.7		43.8
22	230	56.1	168	01.7		11.7	121	25.4		24.4	332	38.4		25.2	300	20.3		43.8
23	245	58.5	183	01.0		12.3	136	26.2		24.2	347	41.2		25.2	315	23.0		43.8
24	261	01.0	198	00.3	+20	12.9	151	26.9	+23	24.0	2	44.0	-22	25.1	330	25.6	-21	43.8
Dif.	—		-7		+6		+7		-2		+28		0		+26			

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 00 ^m 0				SD: 15'9 Edad: 9 ^d 6 PHE { 4 ^h : 58'3 12 ^h : 58'2 20 ^h : 58'0													
	PMG: 21 ^h 08 ^m				Rº: 50 ^m													
	hG ☉	Dec			hG ☾	Dif.	Dec			Dif.			Civil	Náut.	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	180	01.1	+23	10.7	53	28.1	113	-5	50.0	127	60 N	21 23	23 05	** **	16 04	88	1 45 13	
1	195	00.9		10.8	67	58.4	113	-6	02.7	126	58	21 03	22 18	** **	15 59	84	48 16	
2	210	00.8		11.0	82	28.7	112		15.3	126	56	20 47	21 49	** **	54	82	52 18	
3	225	00.7		11.1	96	58.9	113		27.9	125	54	33	27	23 09	49	80	54 21	
4	240	00.5		11.3	111	29.2	112		40.4	126	52	20	21 09	22 26	46	77	57 22	
5	255	00.4	+23	11.4	125	59.4	112	-6	53.0	124	50	20 10	20 54	21 59	15 42	75	1 59 25	
6	270	00.3	+23	11.6	140	29.6	112	-7	05.4	125	45	19 47	20 25	21 14	15 35	70	2 04 29	
7	285	00.2		11.7	154	59.8	112		17.9	124	40	30	20 02	20 44	28	67	08 32	
8	300	00.0		11.8	169	30.0	112		30.3	123	35	15	19 44	21	23	64	12 35	
9	314	59.9		12.0	184	00.2	112		42.6	123	30	19 02	29	20 02	18	62	15 38	
10	329	59.8		12.1	198	30.4	111	-7	54.9	122	20	18 40	19 04	19 34	10	57	21 42	
11	344	59.6	+23	12.3	213	00.5	112	-8	07.1	122	10 N	18 21	18 44	19 11	15 03	53	2 26 46	
12	359	59.5	+23	12.4	227	30.7	111	-8	19.3	122	0	18 04	18 26	18 52	14 56	50	2 31 49	
13	14	59.4		12.5	242	00.8	111		31.5	121	10 S	17 46	18 09	36	50	46	35 53	
14	29	59.2		12.7	256	30.9	111		43.6	120	20	28	17 52	19	43	43	40 57	
15	44	59.1		12.8	271	01.0	110	-8	55.6	120	30	17 07	33	18 03	35	39	46 62	
16	59	59.0		13.0	285	31.0	111	-9	07.6	120	35	16 55	23	17 55	31	36	49 65	
17	74	58.9	+23	13.1	300	01.1	110	-9	19.6	118	40	16 41	17 11	17 45	14 26	33	2 53 67	
18	89	58.7	+23	13.2	314	31.1	110	-9	31.4	119	45	16 24	16 58	17 35	14 20	30	2 57 71	
19	104	58.6		13.4	329	01.1	110		43.3	117	50	16 04	42	23	13	26	3 02 76	
20	119	58.5		13.5	343	31.1	109	-9	55.0	118	52	15 54	35	18	10	23	05 77	
21	134	58.3		13.6	358	01.0	110	-10	06.8	116	54	43	27	13	06	22	07 80	
22	149	58.2		13.8	12	31.0	109		18.4	116	56	30	18	07	14	02	10 83	
23	164	58.1		13.9	27	00.9	109		30.0	115	58	15 16	16 07	17 00	13 58	17	14 85	
24	179	57.9	+23	14.0	41	30.8		-10	41.5		60 S	14 59	15 56	16 53	13 53	14	3 17 89	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 34 ^m 9		Mag: -3.8 PMG: 10 ^h 48 ^m				Mag: +1.8 PMG: 13 ^h 54 ^m				Mag: -2.6 PMG: 23 ^h 45 ^m				Mag: +0.2 PMG: 01 ^h 58 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	261	01.0	198	00.3	+20	12.9	151	26.9	+23	24.0	2	44.0	-22	-25.1	330	25.6	-21	43.8
1	276	03.5	212	59.6		13.6	166	27.6		23.8	17	46.8		-25.1	345	28.2		43.9
2	291	05.9	227	58.8		14.2	181	28.4		23.6	32	49.7		-25.1	0	30.8		43.9
3	306	08.4	242	58.1		14.9	196	29.1		23.3	47	52.5		-25.1	15	33.5		43.9
4	321	10.9	257	57.4		15.5	211	29.9		23.1	62	55.3		-25.1	30	36.1		43.9
5	336	13.3	272	56.7	+20	16.1	226	30.6	+23	22.9	77	58.1	-22	-25.0	45	38.7	-21	44.0
6	351	15.8	287	56.0	+20	16.8	241	31.3	+23	22.7	93	00.9	-22	-25.0	60	41.3	-21	44.0
7	6	18.3	302	55.3		17.4	256	32.1		22.5	108	03.7		-25.0	75	44.0		44.0
8	21	20.7	317	54.6		18.0	271	32.8		22.3	123	06.5		-25.0	90	46.6		44.0
9	36	23.2	332	53.8		18.7	286	33.6		22.1	138	09.3		-24.9	105	49.2		44.1
10	51	25.6	347	53.1		19.3	301	34.3		21.9	153	12.1		-24.9	120	51.9		44.1
11	66	28.1	2	52.4	+20	19.9	316	35.0	+23	21.6	168	14.9	-22	-24.9	135	54.5	-21	44.1
12	81	30.6	17	51.7	+20	20.5	331	35.8	+23	21.4	183	17.7	-22	-24.9	150	57.1	-21	44.1
13	96	33.0	32	51.0		21.2	346	36.5		21.2	198	20.5		-24.9	165	59.7		44.2
14	111	35.5	47	50.2		21.8	1	37.3		21.0	213	23.3		-24.8	181	02.4		44.2
15	126	38.0	62	49.5		22.4	16	38.0		20.8	228	26.2		-24.8	196	05.0		44.2
16	141	40.4	77	48.8		23.0	31	38.7		20.6	243	29.0		-24.8	211	07.6		44.2
17	156	42.9	92	48.1	+20	23.7	46	39.5	+23	20.4	258	31.8	-22	-24.8	226	10.2	-21	44.3
18	171	45.4	107	47.4	+20	24.3	61	40.2	+23	20.1	273	34.6	-22	-24.8	241	12.9	-21	44.3
19	186	47.8	122	46.6		24.9	76	41.0		19.9	288	37.4		-24.7	256	15.5		44.3
20	201	50.3	137	45.9		25.5	91	41.7		19.7	303	40.2		-24.7	271	18.1		44.3
21	216	52.8	152	45.2		26.1	106	42.4		19.5	318	43.0		-24.7	286	20.8		44.4
22	231	55.2	167	44.5		26.8	121	43.2		19.3	333	45.8		-24.7	301	23.4		44.4
23	246	57.7	182	43.8		27.4	136	43.9		19.1	348	48.6		-24.7	316	26.0		44.4
24	262	00.1	197	43.0	+20	28.0	151	44.7	+23	18.8	3	51.4	-22	-24.6	331	28.6	-21	44.4
Dif.	—		-7		+6		+7		-2		+28		0		+26		0	

UT	SOL				☉ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'7				SD: 15'8 Edad: 10 ^d 6															
	PMG: 12 ^h 00 ^m 2				PMG: 21 ^h 58 ^m Rº: 52 ^m															
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.				Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m				
0	179	57.9	+23	14.0	41	30.8	109	-10	41.5	115	60 N	***	0 55	2 37	17 32	86	1 58	15		
1	194	57.8		14.2	56	00.7	108	-10	53.0	114	58	***	1 43	2 57	23	83	2 04	18		
2	209	57.7		14.3	70	30.5	109	-11	04.4	113	56	***	2 12	3 13	16	79	10	21		
3	224	57.6		14.4	85	00.4	108		15.7	113	54	0 51	33	27	09	77	15	23		
4	239	57.4		14.6	99	30.2	107		27.0	112	52	1 34	2 51	40	17 03	75	19	26		
5	254	57.3	+23	14.7	113	59.9	108	-11	38.2	112	50	2 01	3 06	3 50	16 57	73	2 24	27		
6	269	57.2	+23	14.8	128	29.7	107	-11	49.4	110	45	2 46	3 35	4 13	16 45	69	2 33	31		
7	284	57.0		14.9	142	59.4	107	-12	00.4	110	40	3 16	3 58	31	35	67	40	35		
8	299	56.9		15.1	157	29.1	107		11.4	110	35	39	4 16	46	27	64	47	37		
9	314	56.8		15.2	171	58.8	107		22.4	108	30	3 58	31	4 58	20	61	2 53	39		
10	329	56.6		15.3	186	28.5	106		33.2	108	20	4 27	4 56	5 20	16 07	58	3 03	44		
11	344	56.5	+23	15.4	200	58.1	106	-12	44.0	107	10 N	4 49	5 16	5 39	15 56	55	3 12	47		
12	359	56.4	+23	15.6	215	27.7	106	-12	54.7	107	0	5 08	5 34	5 57	15 46	52	3 20	51		
13	14	56.2		15.7	229	57.3	105	-13	05.4	105	10 S	25	5 51	6 14	36	48	28	54		
14	29	56.1		15.8	244	26.8	105		15.9	105	20	41	6 08	32	26	44	37	58		
15	44	56.0		15.9	258	56.3	105		26.4	104	30	5 57	27	6 53	14	41	48	61		
16	59	55.8		16.1	273	25.8	105		36.8	104	35	6 06	37	7 06	15 07	38	3 54	64		
17	74	55.7	+23	16.2	287	55.3	104	-13	47.2	102	40	6 15	6 49	7 20	14 59	36	4 00	67		
18	89	55.6	+23	16.3	302	24.7	104	-13	57.4	102	45	6 25	7 03	7 36	14 50	33	4 08	70		
19	104	55.5		16.4	316	54.1	104	-14	07.6	101	50	37	18	7 57	39	29	18	74		
20	119	55.3		16.5	331	23.5	103		17.7	100	52	42	26	8 07	33	28	22	76		
21	134	55.2		16.6	345	52.8	103		27.7	99	54	48	34	18	28	26	27	79		
22	149	55.1		16.8	0	22.1	103		37.6	98	56	6 54	43	30	22	23	33	80		
23	164	54.9		16.9	14	51.4	103		47.4	98	58	7 01	7 53	8 45	14 15	21	4 39	83		
24	179	54.8	+23	17.0	29	20.7		-14	57.2		60 S	7 08	8 05	9 02	14 07	18	4 46	87		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 30 ^m 9		Mag: -3.8 PMG: 10 ^h 50 ^m				Mag: +1.8 PMG: 13 ^h 52 ^m				Mag: -2.6 PMG: 23 ^h 40 ^m				Mag: +0.2 PMG: 01 ^h 54 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	262	00.1	197	43.0	+20	28.0	151	44.7	+23	18.8	3	51.4	-22	24.6	331	28.6	-21	44.4
1	277	02.6	212	42.3		28.6	166	45.4		18.6	18	54.2		24.6	346	31.3		44.5
2	292	05.1	227	41.6		29.2	181	46.1		18.4	33	57.0		24.6	1	33.9		44.5
3	307	07.5	242	40.9		29.8	196	46.9		18.2	48	59.8		24.6	16	36.5		44.5
4	322	10.0	257	40.1		30.4	211	47.6		18.0	64	02.6		24.6	31	39.1		44.5
5	337	12.5	272	39.4	+20	31.1	226	48.4	+23	17.7	79	05.5	-22	24.5	46	41.8	-21	44.6
6	352	14.9	287	38.7	+20	31.7	241	49.1	+23	17.5	94	08.3	-22	24.5	61	44.4	-21	44.6
7	7	17.4	302	38.0		32.3	256	49.9		17.3	109	11.1		24.5	76	47.0		44.6
8	22	19.9	317	37.2		32.9	271	50.6		17.1	124	13.9		24.5	91	49.7		44.6
9	37	22.3	332	36.5		33.5	286	51.3		16.9	139	16.7		24.5	106	52.3		44.6
10	52	24.8	347	35.8		34.1	301	52.1		16.6	154	19.5		24.4	121	54.9		44.7
11	67	27.2	2	35.1	+20	34.7	316	52.8	+23	16.4	169	22.3	-22	24.4	136	57.6	-21	44.7
12	82	29.7	17	34.3	+20	35.3	331	53.6	+23	16.2	184	25.1	-22	24.4	152	00.2	-21	44.7
13	97	32.2	32	33.6		35.9	346	54.3		16.0	199	27.9		24.4	167	02.8		44.7
14	112	34.6	47	32.9		36.5	1	55.1		15.8	214	30.7		24.4	182	05.4		44.8
15	127	37.1	62	32.1		37.1	16	55.8		15.5	229	33.5		24.3	197	08.1		44.8
16	142	39.6	77	31.4		37.7	31	56.5		15.3	244	36.3		24.3	212	10.7		44.8
17	157	42.0	92	30.7	+20	38.3	46	57.3	+23	15.1	259	39.1	-22	24.3	227	13.3	-21	44.8
18	172	44.5	107	30.0	+20	38.9	61	58.0	+23	14.9	274	41.9	-22	24.3	242	16.0	-21	44.9
19	187	47.0	122	29.2		39.5	76	58.8		14.6	289	44.8		24.3	257	18.6		44.9
20	202	49.4	137	28.5		40.1	91	59.5		14.4	304	47.6		24.2	272	21.2		44.9
21	217	51.9	152	27.8		40.7	107	00.3		14.2	319	50.4		24.2	287	23.8		44.9
22	232	54.4	167	27.0		41.3	122	01.0		14.0	334	53.2		24.2	302	26.5		45.0
23	247	56.8	182	26.3		41.9	137	01.7		13.7	349	56.0		24.2	317	29.1		45.0
24	262	59.3	197	25.6	+20	42.5	152	02.5	+23	13.5	4	58.8	-22	24.1	332	31.7	-21	45.0
Dif.	—		-7	+6			+7	-2			+28			0		+26		

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna						
	SD: 15'7 PMG: 12 ^h 00 ^m 5				SD: 15'7 Edad: 11 ^d 6 PMG: 22 ^h 50 ^m Rº: 52 ^m																	
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.									
	h	°	'	°	'	°	'	°			'	h	m	h	m	h	m	m	h	m	m	
0	179	54.8	+23	17.0	29	20.7	102	-14	57.2	97	60 N	21 25	23 09	** **	18 58	80	2 13	20				
1	194	54.7		17.1	43	49.9	102	-15	06.9	95	58	21 05	22 20	** **	46	77	22	24				
2	209	54.5		17.2	58	19.1	102		16.4	95	56	20 48	21 50	** **	35	75	31	26				
3	224	54.4		17.3	72	48.3	101		25.9	94	54	34	28	23 13	26	72	38	28				
4	239	54.3		17.4	87	17.4	101		35.3	93	52	22	21 10	22 28	18	70	45	30				
5	254	54.1	+23	17.6	101	46.5	101	-15	44.6	93	50	20 11	20 55	22 01	18 10	69	2 51	32				
6	269	54.0	+23	17.7	116	15.6	101	-15	53.9	91	45	19 48	20 26	21 15	17 54	67	3 04	36				
7	284	53.9		17.8	130	44.7	100	-16	03.0	90	40	30	20 03	20 45	42	63	15	38				
8	299	53.7		17.9	145	13.7	100		12.0	90	35	15	19 45	22	31	61	24	41				
9	314	53.6		18.0	159	42.7	100		21.0	88	30	19 02	30	20 03	21	60	32	43				
10	329	53.5		18.1	174	11.7	99		29.8	88	20	18 41	19 05	19 34	17 05	57	47	46				
11	344	53.3	+23	18.2	188	40.6	99	-16	38.6	87	10 N	18 22	18 45	19 12	16 51	54	3 59	49				
12	359	53.2	+23	18.3	203	09.5	99	-16	47.3	85	0	18 04	18 27	18 53	16 38	52	4 11	51				
13	14	53.1		18.4	217	38.4	99	-16	55.8	85	10 S	17 47	18 10	36	24	50	22	55				
14	29	52.9		18.5	232	07.3	98	-17	04.3	84	20	28	17 52	20	16 10	48	35	57				
15	44	52.8		18.6	246	36.1	98		12.7	82	30	17 07	34	18 03	15 55	44	49	61				
16	59	52.7		18.7	261	04.9	98		20.9	82	35	16 55	23	17 55	45	43	4 58	62				
17	74	52.5	+23	18.8	275	33.7	97	-17	29.1	81	40	16 41	17 11	17 45	15 35	41	5 07	65				
18	89	52.4	+23	18.9	290	02.4	98	-17	37.2	80	45	16 24	16 58	17 35	15 23	38	5 18	68				
19	104	52.3		19.0	304	31.2	97		45.2	78	50	16 03	42	23	08	35	32	72				
20	119	52.1		19.1	318	59.9	96	-17	53.0	78	52	15 54	34	18	15 01	33	38	74				
21	134	52.0		19.2	333	28.5	97	-18	00.8	77	54	43	26	12	14 54	31	46	75				
22	149	51.9		19.3	347	57.2	96		08.5	75	56	30	17	06	45	29	5 53	78				
23	164	51.8		19.4	2	25.8	96		16.0	75	58	15 15	16 07	17 00	36	26	6 02	81				
24	179	51.6	+23	19.5	16	54.4		-18	23.5		60 S	14 58	15 55	16 52	14 25	23	6 13	83				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 6 ^h 27 ^m 0		Mag: -3.8 PMG: 10 ^h 51 ^m				Mag: +1.8 PMG: 13 ^h 51 ^m				Mag: -2.6 PMG: 23 ^h 36 ^m				Mag: +0.2 PMG: 01 ^h 50 ^m							
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	262	59.3	197	25.6	+20	42.5	152	02.5	+23	13.5	4	58.8	-22	-24.1	332	31.7	-21	45.0				
1	278	01.7	212	24.8		43.1	167	03.2		13.3	20	01.6		-24.1	347	34.4		45.0				
2	293	04.2	227	24.1		43.7	182	04.0		13.1	35	04.4		-24.1	2	37.0		45.1				
3	308	06.7	242	23.4		44.3	197	04.7		12.8	50	07.2		-24.1	17	39.6		45.1				
4	323	09.1	257	22.6		44.9	212	05.5		12.6	65	10.0		-24.1	32	42.3		45.1				
5	338	11.6	272	21.9	+20	45.4	227	06.2	+23	12.4	80	12.8	-22	-24.0	47	44.9	-21	45.1				
6	353	14.1	287	21.1	+20	46.0	242	07.0	+23	12.2	95	15.6	-22	-24.0	62	47.5	-21	45.2				
7	8	16.5	302	20.4		46.6	257	07.7		11.9	110	18.4		-24.0	77	50.2		45.2				
8	23	19.0	317	19.7		47.2	272	08.4		11.7	125	21.2		-24.0	92	52.8		45.2				
9	38	21.5	332	18.9		47.8	287	09.2		11.5	140	24.0		-24.0	107	55.4		45.2				
10	53	23.9	347	18.2		48.4	302	09.9		11.3	155	26.8		-23.9	122	58.1		45.3				
11	68	26.4	2	17.5	+20	48.9	317	10.7	+23	11.0	170	29.6	-22	-23.9	138	00.7	-21	45.3				
12	83	28.9	17	16.7	+20	49.5	332	11.4	+23	10.8	185	32.5	-22	-23.9	153	03.3	-21	45.3				
13	98	31.3	32	16.0		50.1	347	12.2		10.6	200	35.3		-23.9	168	05.9		45.3				
14	113	33.8	47	15.2		50.7	2	12.9		10.3	215	38.1		-23.9	183	08.6		45.4				
15	128	36.2	62	14.5		51.3	17	13.7		10.1	230	40.9		-23.8	198	11.2		45.4				
16	143	38.7	77	13.8		51.8	32	14.4		09.9	245	43.7		-23.8	213	13.8		45.4				
17	158	41.2	92	13.0	+20	52.4	47	15.2	+23	09.7	260	46.5	-22	-23.8	228	16.5	-21	45.4				
18	173	43.6	107	12.3	+20	53.0	62	15.9	+23	09.4	275	49.3	-22	-23.8	243	19.1	-21	45.5				
19	188	46.1	122	11.5		53.6	77	16.7		09.2	290	52.1		-23.8	258	21.7		45.5				
20	203	48.6	137	10.8		54.1	92	17.4		09.0	305	54.9		-23.7	273	24.4		45.5				
21	218	51.0	152	10.0		54.7	107	18.1		08.7	320	57.7		-23.7	288	27.0		45.5				
22	233	53.5	167	09.3		55.3	122	18.9		08.5	336	00.5		-23.7	303	29.6		45.6				
23	248	56.0	182	08.6		55.9	137	19.6		08.3	351	03.3		-23.7	318	32.3		45.6				
24	263	58.4	197	07.8	+20	56.4	152	20.4	+23	08.0	6	06.1	-22	-23.7	333	34.9	-21	45.6				
Dif.	—		-7				+6				+7				-2				+28			

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 7				SD: 15 ^h 5 Edad: 12 ^d 6 PHE { 4^h: 56^m9 12^h: 56^m7 20^h: 56^m6													
	PMG: 23 ^h 42 ^m				Rº: 53 ^m							Náut.	Civil		Hora	Rº	Hora	Rº
	hG ☉	Dec			hG ☾	Dif.		Dec		Dif.								
h	°	'	°	'	°	'	°	'	°	'	° N	h m	h m	h m	h m	h m	h m	
0	179	51.6	+23	19.5	16	54.4	96	-18	23.5	73	60	** **	0 52	2 36	20 18	70	2 33	
1	194	51.5		19.6	31	23.0	95		30.8	73	58	** **	1 41	2 56	20 03	68	46	
2	209	51.4		19.7	45	51.5	95		38.1	71	56	** **	2 11	3 13	19 50	66	2 57	
3	224	51.2		19.8	60	20.0	95		45.2	71	54	0 48	33	27	38	65	3 06	
4	239	51.1		19.9	74	48.5	95		52.3	69	52	1 33	2 51	39	28	64	15	
5	254	51.0	+23	20.0	89	17.0	95	-18	59.2	68	50	2 00	3 06	3 50	19 19	63	3 23	
6	269	50.8	+23	20.1	103	45.5	94	-19	06.0	67	45	2 46	3 35	4 13	19 01	61	3 40	
7	284	50.7		20.2	118	13.9	94		12.7	66	40	3 16	3 58	31	18 45	60	3 53	
8	299	50.6		20.3	132	42.3	94		19.3	65	35	39	4 16	46	32	59	4 05	
9	314	50.4		20.4	147	10.7	94		25.8	64	30	3 58	31	4 59	21	58	15	
10	329	50.3		20.5	161	39.1	93		32.2	62	20	4 27	4 56	5 21	18 02	56	33	
11	344	50.2	+23	20.6	176	07.4	94	-19	38.4	62	10 N	4 49	5 16	5 39	17 45	54	4 48	
12	359	50.0	+23	20.6	190	35.8	93	-19	44.6	60	0	5 08	5 34	5 57	17 30	53	5 02	
13	14	49.9		20.7	205	04.1	93		50.6	60	10 S	25	5 52	6 14	17 14	52	17	
14	29	49.8		20.8	219	32.4	93	-19	56.6	58	20	41	6 09	33	16 58	50	32	
15	44	49.6		20.9	234	00.7	92	-20	02.4	57	30	5 58	28	6 54	39	48	5 50	
16	59	49.5		21.0	248	28.9	93		08.1	56	35	6 06	38	7 06	28	47	6 00	
17	74	49.4	+23	21.1	262	57.2	92	-20	13.7	55	40	6 16	6 50	7 20	16 16	45	6 12	
18	89	49.2	+23	21.2	277	25.4	93	-20	19.2	53	45	6 26	7 03	7 37	16 01	44	6 26	
19	104	49.1		21.2	291	53.7	92		24.5	53	50	38	19	7 58	15 43	42	44	
20	119	49.0		21.3	306	21.9	92		29.8	51	52	43	27	8 08	34	41	6 52	
21	134	48.8		21.4	320	50.1	92		34.9	50	54	49	35	19	25	39	7 01	
22	149	48.7		21.5	335	18.3	91		39.9	49	56	6 55	44	31	14	38	11	
23	164	48.5		21.6	349	46.4	92		44.8	48	58	7 02	7 54	8 46	15 02	36	7 23	
24	179	48.4	+23	21.7	4	14.6		-20	49.6		60 S	7 09	8 06	9 03	14 48	34	7 36	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 6 ^h 23 ^m 1		Mag: -3.8 PMG: 10 ^h 52 ^m			Mag: +1.8 PMG: 13 ^h 50 ^m			Mag: -2.6 PMG: 23 ^h 31 ^m			Mag: +0.2 PMG: 01 ^h 45 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'	
0	263	58.4	197	07.8	+20	56.4	152	20.4	+23	08.0	6	06.1	-22	23.7	333	34.9
1	279	00.9	212	07.1		57.0	167	21.1		07.8	21	08.9		23.6	348	37.5
2	294	03.4	227	06.3		57.6	182	21.9		07.6	36	11.7		23.6	3	40.2
3	309	05.8	242	05.6		58.1	197	22.6		07.3	51	14.5		23.6	18	42.8
4	324	08.3	257	04.8		58.7	212	23.4		07.1	66	17.3		23.6	33	45.4
5	339	10.7	272	04.1	+20	59.3	227	24.1	+23	06.9	81	20.1	-22	23.6	48	48.1
6	354	13.2	287	03.3	+20	59.8	242	24.9	+23	06.6	96	22.9	-22	23.5	63	50.7
7	9	15.7	302	02.6	+21	00.4	257	25.6		06.4	111	25.8		23.5	78	53.3
8	24	18.1	317	01.9		00.9	272	26.4		06.2	126	28.6		23.5	93	56.0
9	39	20.6	332	01.1		01.5	287	27.1		05.9	141	31.4		23.5	108	58.6
10	54	23.1	347	00.4		02.1	302	27.9		05.7	156	34.2		23.4	124	01.2
11	69	25.5	1	59.6	+21	02.6	317	28.6	+23	05.5	171	37.0	-22	23.4	139	03.9
12	84	28.0	16	58.9	+21	03.2	332	29.4	+23	05.2	186	39.8	-22	23.4	154	06.5
13	99	30.5	31	58.1		03.7	347	30.1		05.0	201	42.6		23.4	169	09.1
14	114	32.9	46	57.4		04.3	2	30.9		04.8	216	45.4		23.4	184	11.8
15	129	35.4	61	56.6		04.9	17	31.6		04.5	231	48.2		23.3	199	14.4
16	144	37.9	76	55.9		05.4	32	32.4		04.3	246	51.0		23.3	214	17.0
17	159	40.3	91	55.1	+21	06.0	47	33.1	+23	04.0	261	53.8	-22	23.3	229	19.7
18	174	42.8	106	54.4	+21	06.5	62	33.9	+23	03.8	276	56.6	-22	23.3	244	22.3
19	189	45.2	121	53.6		07.1	77	34.6		03.6	291	59.4		23.3	259	24.9
20	204	47.7	136	52.8		07.6	92	35.4		03.3	307	02.2		23.2	274	27.6
21	219	50.2	151	52.1		08.2	107	36.1		03.1	322	05.0		23.2	289	30.2
22	234	52.6	166	51.3		08.7	122	36.9		02.9	337	07.8		23.2	304	32.8
23	249	55.1	181	50.6		09.3	137	37.6		02.6	352	10.6		23.2	319	35.5
24	264	57.6	196	49.8	+21	09.8	152	38.4	+23	02.4	7	13.4	-22	23.2	334	38.1
Dif.	—		-7	+6			+7	-2			+28			0		+26

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 00 ^m 9			SD: 15'4 Edad: 13 ^d 6	PHE { 4 ^h : 56'4 12 ^h : 56'2 20 ^h : 56'0		R°: **					Civil	Náut.	Hora	R°	Hora	R°	
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.										
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	48.4	+23	21.7	4	14.6	92	-20	49.6	46	60 N	21 26	23 12	** **	21 28	56	3 01	39
1	194	48.3		21.7	18	42.8	91		54.2	46	58	21 06	22 21	** **	21 11	55	16	42
2	209	48.1		21.8	33	10.9	91	-20	58.8	44	56	20 49	21 52	** **	20 56	55	30	42
3	224	48.0		21.9	47	39.0	92	-21	03.2	43	54	35	29	23 16	43	55	42	43
4	239	47.9		22.0	62	07.2	91		07.5	42	52	23	21 11	22 30	32	55	3 52	44
5	254	47.7	+23	22.0	76	35.3	91	-21	11.7	41	50	20 12	20 56	22 02	20 22	55	4 01	45
6	269	47.6	+23	22.1	91	03.4	92	-21	15.8	39	45	19 49	20 27	21 16	20 02	54	4 20	47
7	284	47.5		22.2	105	31.6	91		19.7	39	40	31	20 04	20 46	19 45	54	36	48
8	299	47.3		22.3	119	59.7	91		23.6	37	35	16	19 46	23	31	54	4 50	49
9	314	47.2		22.3	134	27.8	91		27.3	36	30	19 03	31	20 04	19 19	53	5 01	50
10	329	47.1		22.4	148	55.9	91		30.9	35	20	18 41	19 06	19 35	18 58	53	21	51
11	344	46.9	+23	22.5	163	24.0	91	-21	34.4	33	10 N	18 22	18 45	19 12	18 39	53	5 39	52
12	359	46.8	+23	22.6	177	52.1	91	-21	37.7	33	0	18 05	18 27	18 53	18 23	52	5 55	53
13	14	46.7		22.6	192	20.2	91		41.0	31	10 S	17 47	18 10	36	18 06	52	6 11	54
14	29	46.5		22.7	206	48.3	92		44.1	30	20	29	17 53	20	17 48	51	29	55
15	44	46.4		22.8	221	16.5	91		47.1	28	30	17 07	34	18 04	27	51	6 49	56
16	59	46.3		22.8	235	44.6	91		49.9	28	35	16 55	23	17 55	15	51	7 01	56
17	74	46.1	+23	22.9	250	12.7	91	-21	52.7	26	40	16 41	17 11	17 46	17 01	51	7 14	57
18	89	46.0	+23	23.0	264	40.8	92	-21	55.3	25	45	16 24	16 58	17 35	16 45	50	7 30	58
19	104	45.9		23.0	279	09.0	91	-21	57.8	24	50	16 03	42	23	25	49	50	59
20	119	45.7		23.1	293	37.1	92	-22	00.2	23	52	15 54	34	18	15	49	7 59	60
21	134	45.6		23.2	308	05.3	92		02.5	22	54	42	26	12	16 04	49	8 10	60
22	149	45.5		23.2	322	33.5	91		04.7	20	56	30	17	06	15 52	48	22	61
23	164	45.3		23.3	337	01.6	92		06.7	19	58	15 15	16 07	17 00	38	47	36	62
24	179	45.2	+23	23.4	351	29.8		-22	08.6		60 S	14 58	15 55	16 52	15 22	45	8 52	63
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 19 ^m 1		Mag: -3.8 PMG: 10 ^h 53 ^m				Mag: +1.8 PMG: 13 ^h 49 ^m				Mag: -2.6 PMG: 23 ^h 27 ^m				Mag: +0.2 PMG: 01 ^h 41 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	264	57.6	196	49.8	+21	09.8	152	38.4	+23	02.4	7	13.4	-22	-23.2	334	38.1	-21	46.2
1	280	00.0	211	49.1		10.3	167	39.1		02.1	22	16.2		-23.1	349	40.7		46.2
2	295	02.5	226	48.3		10.9	182	39.9		01.9	37	19.0		-23.1	4	43.4		46.3
3	310	05.0	241	47.6		11.4	197	40.6		01.7	52	21.8		-23.1	19	46.0		46.3
4	325	07.4	256	46.8		12.0	212	41.4		01.4	67	24.6		-23.1	34	48.7		46.3
5	340	09.9	271	46.1	+21	12.5	227	42.1	+23	01.2	82	27.4	-22	-23.1	49	51.3	-21	46.3
6	355	12.3	286	45.3	+21	13.1	242	42.9	+23	00.9	97	30.2	-22	-23.0	64	53.9	-21	46.4
7	10	14.8	301	44.5		13.6	257	43.6		00.7	112	33.1		-23.0	79	56.6		46.4
8	25	17.3	316	43.8		14.1	272	44.4		00.4	127	35.9		-23.0	94	59.2		46.4
9	40	19.7	331	43.0		14.7	287	45.1		00.2	142	38.7		-23.0	110	01.8		46.4
10	55	22.2	346	42.3		15.2	302	45.9	+23	00.0	157	41.5		-22.9	125	04.5		46.5
11	70	24.7	1	41.5	+21	15.7	317	46.6	+22	59.7	172	44.3	-22	-22.9	140	07.1	-21	46.5
12	85	27.1	16	40.8	+21	16.3	332	47.4	+22	59.5	187	47.1	-22	-22.9	155	09.7	-21	46.5
13	100	29.6	31	40.0		16.8	347	48.1		59.2	202	49.9		-22.9	170	12.4		46.5
14	115	32.1	46	39.2		17.3	2	48.9		59.0	217	52.7		-22.9	185	15.0		46.6
15	130	34.5	61	38.5		17.9	17	49.6		58.7	232	55.5		-22.8	200	17.6		46.6
16	145	37.0	76	37.7		18.4	32	50.4		58.5	247	58.3		-22.8	215	20.3		46.6
17	160	39.5	91	36.9	+21	18.9	47	51.1	+22	58.3	263	01.1	-22	-22.8	230	22.9	-21	46.6
18	175	41.9	106	36.2	+21	19.4	62	51.9	+22	58.0	278	03.9	-22	-22.8	245	25.6	-21	46.7
19	190	44.4	121	35.4		20.0	77	52.6		57.8	293	06.7		-22.8	260	28.2		46.7
20	205	46.8	136	34.7		20.5	92	53.4		57.5	308	09.5		-22.7	275	30.8		46.7
21	220	49.3	151	33.9		21.0	107	54.1		57.3	323	12.3		-22.7	290	33.5		46.7
22	235	51.8	166	33.1		21.5	122	54.9		57.0	338	15.1		-22.7	305	36.1		46.8
23	250	54.2	181	32.4		22.1	137	55.6		56.8	353	17.9		-22.7	320	38.7		46.8
24	265	56.7	196	31.6	+21	22.6	152	56.4	+22	56.5	8	20.7	-22	-22.7	335	41.4	-21	46.8
Dif.	—		-8		+5		+8		-2		+28		0		+26			

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 01 ^m 1			SD: 15'2 Edad: 14 ^d 6 PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'5 PMG: 00 ^h 35 ^m Rº: 53 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		Rº	Hora	Rº	
h	°	'	°	°	'	°	'		h m	h m	h m	h m m	h m m	h m m			
0	179	45.2	+23 23.4	351	29.8	92	-22 08.6	18	60 N	** **	0 50	2 36	22 24	40	3 40	53	
1	194	45.1	23.4	5	58.0	92	10.4	16	58	** **	1 41	2 56	22 06	42	3 58	52	
2	209	44.9	23.5	20	26.2	93	12.0	16	56	** **	2 10	3 13	21 51	43	4 12	53	
3	224	44.8	23.6	34	54.5	92	13.6	14	54	0 46	33	27	38	44	25	53	
4	239	44.7	23.6	49	22.7	93	15.0	13	52	1 32	2 51	39	27	45	36	53	
5	254	44.5	+23 23.7	63	51.0	92	-22 16.3	12	50	2 00	3 06	3 50	21 17	45	4 46	53	
6	269	44.4	+23 23.7	78	19.2	93	-22 17.5	11	45	2 46	3 35	4 13	20 56	47	5 07	53	
7	284	44.3	23.8	92	47.5	94	18.6	9	40	3 16	3 58	31	39	47	24	53	
8	299	44.1	23.9	107	15.9	93	19.5	9	35	39	4 16	46	25	48	39	52	
9	314	44.0	23.9	121	44.2	93	20.4	7	30	3 58	31	4 59	20 12	49	5 51	53	
10	329	43.8	24.0	136	12.5	94	21.1	6	20	4 27	4 56	5 21	19 51	50	6 12	53	
11	344	43.7	+23 24.0	150	40.9	94	-22 21.7	4	10 N	4 50	5 17	5 40	19 32	51	6 31	52	
12	359	43.6	+23 24.1	165	09.3	94	-22 22.1	4	0	5 09	5 35	5 57	19 15	51	6 48	52	
13	14	43.4	24.1	179	37.7	95	22.5	2	10 S	26	5 52	6 15	18 58	52	7 05	52	
14	29	43.3	24.2	194	06.2	95	22.7	1	20	42	6 09	33	39	53	24	51	
15	44	43.2	24.2	208	34.7	95	22.8	0	30	5 58	28	6 55	18	54	45	51	
16	59	43.0	24.3	223	03.2	95	22.8	1	35	6 07	39	7 07	18 06	54	7 57	51	
17	74	42.9	+23 24.3	237	31.7	96	-22 22.7	2	40	6 16	6 51	7 21	17 52	54	8 11	51	
18	89	42.8	+23 24.4	252	00.3	96	-22 22.5	4	45	6 27	7 04	7 38	17 35	55	8 28	51	
19	104	42.6	24.4	266	28.9	96	22.1	5	50	39	20	7 59	14	55	49	50	
20	119	42.5	24.5	280	57.5	96	21.6	6	52	44	28	8 09	17 04	56	8 59	50	
21	134	42.4	24.5	295	26.1	97	21.0	7	54	50	36	20	16 53	56	9 10	50	
22	149	42.2	24.6	309	54.8	97	20.3	8	56	6 56	45	32	40	57	23	49	
23	164	42.1	24.6	324	23.5	98	19.5	9	58	7 02	7 55	8 47	16 25	58	9 38	48	
24	179	42.0	+23 24.7	338	52.3		-22 18.6		60 S	7 10	8 07	9 05	16 07	59	9 55	48	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 6 ^h 15 ^m 2		Mag: -3.8 PMG: 10 ^h 54 ^m			Mag: +1.8 PMG: 13 ^h 48 ^m			Mag: -2.6 PMG: 23 ^h 22 ^m			Mag: +0.2 PMG: 01 ^h 37 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	265	56.7	196 31.6	+21 22.6		152 56.4	+22 56.5		8 20.7	-22 22.7		335 41.4	-21 46.8				
1	280	59.2	211 30.8	23.1		167 57.1	56.3		23 23.5	22.6		350 44.0	46.8				
2	296	01.6	226 30.1	23.6		182 57.9	56.0		38 26.3	22.6		5 46.7	46.9				
3	311	04.1	241 29.3	24.1		197 58.6	55.8		53 29.1	22.6		20 49.3	46.9				
4	326	06.6	256 28.5	24.7		212 59.4	55.6		68 31.9	22.6		35 51.9	46.9				
5	341	09.0	271 27.8	+21 25.2		228 00.2	+22 55.3		83 34.7	-22 22.6		50 54.6	-21 46.9				
6	356	11.5	286 27.0	+21 25.7		243 00.9	+22 55.1		98 37.5	-22 22.5		65 57.2	-21 47.0				
7	11	14.0	301 26.2	26.2		258 01.7	54.8		113 40.3	22.5		80 59.8	47.0				
8	26	16.4	316 25.5	26.7		273 02.4	54.6		128 43.1	22.5		96 02.5	47.0				
9	41	18.9	331 24.7	27.2		288 03.2	54.3		143 45.9	22.5		111 05.1	47.0				
10	56	21.3	346 23.9	27.7		303 03.9	54.1		158 48.7	22.4		126 07.8	47.1				
11	71	23.8	1 23.2	+21 28.3		318 04.7	+22 53.8		173 51.5	-22 22.4		141 10.4	-21 47.1				
12	86	26.3	16 22.4	+21 28.8		333 05.4	+22 53.6		188 54.3	-22 22.4		156 13.0	-21 47.1				
13	101	28.7	31 21.6	29.3		348 06.2	53.3		203 57.1	22.4		171 15.7	47.1				
14	116	31.2	46 20.9	29.8		3 06.9	53.1		218 59.9	22.4		186 18.3	47.2				
15	131	33.7	61 20.1	30.3		18 07.7	52.8		234 02.7	22.3		201 20.9	47.2				
16	146	36.1	76 19.3	30.8		33 08.5	52.6		249 05.5	22.3		216 23.6	47.2				
17	161	38.6	91 18.6	+21 31.3		48 09.2	+22 52.3		264 08.3	-22 22.3		231 26.2	-21 47.2				
18	176	41.1	106 17.8	+21 31.8		63 10.0	+22 52.1		279 11.1	-22 22.3		246 28.9	-21 47.3				
19	191	43.5	121 17.0	32.3		78 10.7	51.8		294 13.9	22.3		261 31.5	47.3				
20	206	46.0	136 16.2	32.8		93 11.5	51.6		309 16.7	22.2		276 34.1	47.3				
21	221	48.5	151 15.5	33.3		108 12.2	51.3		324 19.5	22.2		291 36.8	47.3				
22	236	50.9	166 14.7	33.8		123 13.0	51.1		339 22.3	22.2		306 39.4	47.4				
23	251	53.4	181 13.9	34.3		138 13.7	50.8		354 25.1	22.2		321 42.1	47.4				
24	266	55.8	196 13.1	+21 34.8		153 14.5	+22 50.5		9 27.9	-22 22.2		336 44.7	-21 47.4				
Dif.	—		-8 +5		+8 -2				+28 0		+26 0						

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 01 ^m 3			SD: 15'1 Edad: 15 ^d 6		PHE { 4 ^h : 55'4 12 ^h : 55'2 20 ^h : 55'0		PMG: 01 ^h 28 ^m Rº: 50 ^m				Civil		Náut.	Hora	Rº	Hora	Rº				
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.															
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	179	42.0	+23	24.7	338	52.3	97	-22	18.6	11	60 N	21 27	23 14	** **	23 04	29	4 33	64				
1	194	41.8		24.7	353	21.0	99		17.5	12	58	21 07	22 22	** **	22 48	31	4 50	63				
2	209	41.7		24.8	7	49.9	98		16.3	12	56	20 50	21 53	** **	34	33	5 05	61				
3	224	41.6		24.8	22	18.7	99		15.1	14	54	36	30	23 18	22	35	18	60				
4	239	41.4		24.9	36	47.6	99		13.7	15	52	23	21 12	22 31	12	36	29	60				
5	254	41.3	+23	24.9	51	16.5	100	-22	12.2	17	50	20 12	20 57	22 03	22 02	38	5 39	59				
6	269	41.1	+23	24.9	65	45.5	100	-22	10.5	17	45	19 50	20 27	21 17	21 43	39	6 00	57				
7	284	41.0		25.0	80	14.5	101		08.8	18	40	32	20 05	20 46	26	42	17	56				
8	299	40.9		25.0	94	43.6	100		07.0	20	35	17	19 46	23	13	42	31	55				
9	314	40.7		25.1	109	12.6	102		05.0	21	30	19 04	31	20 05	21 01	44	6 44	54				
10	329	40.6		25.1	123	41.8	101		02.9	22	20	18 42	19 06	19 35	20 41	45	7 05	52				
11	344	40.5	+23	25.1	138	10.9	103	-22	00.7	22	10 N	18 23	18 46	19 13	20 23	47	7 23	51				
12	359	40.3	+23	25.2	152	40.2	102	-21	58.5	24	0	18 05	18 28	18 54	20 06	49	7 40	50				
13	14	40.2		25.2	167	09.4	103		56.1	26	10 S	17 48	18 10	37	19 50	50	7 57	49				
14	29	40.1		25.2	181	38.7	104		53.5	26	20	29	17 53	21	32	52	8 15	48				
15	44	39.9		25.3	196	08.1	103		50.9	27	30	17 08	34	18 04	12	54	36	46				
16	59	39.8		25.3	210	37.4	105		48.2	28	35	16 55	24	17 55	19 00	55	8 48	46				
17	74	39.7	+23	25.4	225	06.9	105	-21	45.4	30	40	16 41	17 12	17 46	18 46	57	9 02	45				
18	89	39.5	+23	25.4	239	36.4	105	-21	42.4	30	45	16 24	16 58	17 35	18 30	58	9 19	43				
19	104	39.4		25.4	254	05.9	106		39.4	32	50	16 04	42	24	09	61	39	41				
20	119	39.3		25.4	268	35.5	106		36.2	32	52	15 54	35	18	18 00	62	9 49	40				
21	134	39.1		25.5	283	05.1	107		33.0	34	54	43	26	13	17 49	63	10 00	39				
22	149	39.0		25.5	297	34.8	107		29.6	34	56	30	17	07	37	64	12	38				
23	164	38.9		25.5	312	04.5	108		26.2	36	58	15 15	16 07	17 00	23	66	26	37				
24	179	38.7	+23	25.6	326	34.3		-21	22.6		60 S	14 58	15 55	16 52	17 06	69	10 43	34				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 6 ^h 11 ^m 3		Mag: -3.8 PMG: 10 ^h 56 ^m				Mag: +1.8 PMG: 13 ^h 46 ^m				Mag: -2.6 PMG: 23 ^h 18 ^m				Mag: +0.2 PMG: 01 ^h 33 ^m							
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	266	55.8	196	13.1	+21	34.8	153	14.5	+22	50.5	9	27.9	-22	-22.2	336	44.7	-21	47.4				
1	281	58.3	211	12.4		35.3	168	15.3		50.3	24	30.7		-22.1	351	47.3		47.5				
2	297	00.8	226	11.6		35.8	183	16.0		50.0	39	33.5		-22.1	6	50.0		47.5				
3	312	03.2	241	10.8		36.3	198	16.8		49.8	54	36.3		-22.1	21	52.6		47.5				
4	327	05.7	256	10.0		36.8	213	17.5		49.5	69	39.1		-22.1	36	55.3		47.5				
5	342	08.2	271	09.3	+21	37.3	228	18.3	+22	49.3	84	41.9	-22	-22.1	51	57.9	-21	47.6				
6	357	10.6	286	08.5	+21	37.8	243	19.0	+22	49.0	99	44.7	-22	-22.0	67	00.5	-21	47.6				
7	12	13.1	301	07.7		38.2	258	19.8		48.8	114	47.5		-22.0	82	03.2		47.6				
8	27	15.6	316	06.9		38.7	273	20.5		48.5	129	50.3		-22.0	97	05.8		47.6				
9	42	18.0	331	06.2		39.2	288	21.3		48.3	144	53.1		-22.0	112	08.5		47.7				
10	57	20.5	346	05.4		39.7	303	22.1		48.0	159	55.9		-21.9	127	11.1		47.7				
11	72	23.0	1	04.6	+21	40.2	318	22.8	+22	47.7	174	58.7	-22	-21.9	142	13.7	-21	47.7				
12	87	25.4	16	03.8	+21	40.7	333	23.6	+22	47.5	190	01.5	-22	-21.9	157	16.4	-21	47.7				
13	102	27.9	31	03.0		41.2	348	24.3		47.2	205	04.3		-21.9	172	19.0		47.8				
14	117	30.3	46	02.3		41.6	3	25.1		47.0	220	07.1		-21.9	187	21.7		47.8				
15	132	32.8	61	01.5		42.1	18	25.8		46.7	235	09.9		-21.8	202	24.3		47.8				
16	147	35.3	76	00.7		42.6	33	26.6		46.5	250	12.7		-21.8	217	26.9		47.8				
17	162	37.7	90	59.9	+21	43.1	48	27.4	+22	46.2	265	15.5	-22	-21.8	232	29.6	-21	47.9				
18	177	40.2	105	59.1	+21	43.6	63	28.1	+22	45.9	280	18.3	-22	-21.8	247	32.2	-21	47.9				
19	192	42.7	120	58.4		44.0	78	28.9		45.7	295	21.1		-21.8	262	34.9		47.9				
20	207	45.1	135	57.6		44.5	93	29.6		45.4	310	23.9		-21.7	277	37.5		47.9				
21	222	47.6	150	56.8		45.0	108	30.4		45.2	325	26.7		-21.7	292	40.1		48.0				
22	237	50.1	165	56.0		45.5	123	31.2		44.9	340	29.5		-21.7	307	42.8		48.0				
23	252	52.5	180	55.2		45.9	138	31.9		44.6	355	32.3		-21.7	322	45.4		48.0				
24	267	55.0	195	54.5	+21	46.4	153	32.7	+22	44.4	10	35.1	-22	-21.7	337	48.1	-21	48.0				
Dif.	—		-8				+8				-3				+28				0			

UT	SOL			☉ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°7'			SD: 15°0'		PHE { 4^h: 54'9" 12^h: 54'8" 20^h: 54'7"					Edad: 16 ^d 6			PMG: 02 ^h 18 ^m		R ^o : 49 ^m					
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.				Náut.	Civil			Hora	R ^o	Hora	R ^o			
h	°	'	°	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	179	38.7	+23	326	34.3	108	-21	22.6	37	60 N	***	0 49	2 36	23 33	19	5 37	72				
1	194	38.6		341	04.1	109		18.9	38	58	***	1 40	2 56	19 23		5 53	69				
2	209	38.4		355	34.0	109		15.1	38	56	***	2 10	3 13	23 07	25	6 06	67				
3	224	38.3		10	03.9	110		11.3	40	54		0 45	33	22 57	27	18	65				
4	239	38.2		24	33.9	110		07.3	41	52		1 32	2 51	48 29		29	63				
5	254	38.0	+23	39	03.9	111	-21	03.2	42	50		2 00	3 06	22 40	30	6 38	62				
6	269	37.9	+23	53	34.0	111	-20	59.0	42	45		2 46	3 36	22 22	33	6 57	60				
7	284	37.8		68	04.1	112		54.8	44	40		3 16	3 58	22 08	35	7 13	57				
8	299	37.6		82	34.3	112		50.4	45	35		40	4 16	21 55	38	26	56				
9	314	37.5		97	04.5	113		45.9	45	30		3 58	32	45 39		38	54				
10	329	37.4		111	34.8	114		41.4	47	20		4 27	4 57	26 43		7 57	52				
11	344	37.2	+23	126	05.2	114	-20	36.7	48	10 N		4 50	5 17	21 10	45	8 14	50				
12	359	37.1	+23	140	35.6	114	-20	31.9	48	0		5 09	5 35	20 55	47	8 30	48				
13	14	37.0		155	06.0	115		27.1	50	10 S		26	5 52	40 50		8 46	46				
14	29	36.8		169	36.5	116		22.1	50	20		42	6 10	24 52		9 03	44				
15	44	36.7		184	07.1	116		17.1	51	30		5 59	29	20 06	54	22	42				
16	59	36.6		198	37.7	117		12.0	52	35		6 08	39	19 55	56	34	40				
17	74	36.4	+23	213	08.4	117	-20	06.8	54	40		6 17	6 51	19 43	58	9 47	38				
18	89	36.3	+23	227	39.1	118	-20	01.4	54	45		6 27	7 05	19 28	60	10 02	36				
19	104	36.1		242	09.9	118	-19	56.0	55	50		39	21	10 63		20	34				
20	119	36.0		256	40.7	119		50.5	56	52		44	28	19 02	64	29	32				
21	134	35.9		271	11.6	120		44.9	56	54		50	36	18 52	66	39	31				
22	149	35.7		285	42.6	120		39.3	58	56		6 56	46	41 69		10 50	29				
23	164	35.6		300	13.6	121		33.5	58	58		7 03	7 56	18 29	71	11 03	26				
24	179	35.5	+23	314	44.7		-19	27.7		60 S		7 11	8 08	18 15	73	11 17	24				

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 07 ^m 3		Mag: -3.8 PMG: 10 ^h 57 ^m				Mag: +1.8 PMG: 13 ^h 45 ^m				Mag: -2.6 PMG: 23 ^h 13 ^m				Mag: +0.2 PMG: 01 ^h 29 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	267	55.0	195	54.5	+21	153	32.7	+22	10	35.1	-22	337	48.1	-21				
1	282	57.4	210	53.7		168	33.4		25	37.9		352	50.7					
2	297	59.9	225	52.9		183	34.2		40	40.7		7	53.3					
3	313	02.4	240	52.1		198	35.0		55	43.5		22	56.0					
4	328	04.8	255	51.3		213	35.7		70	46.3		37	58.6					
5	343	07.3	270	50.5	+21	228	36.5	+22	85	49.1	-22	53	01.3	-21				
6	358	09.8	285	49.7	+21	243	37.2	+22	100	51.9	-22	68	03.9	-21				
7	13	12.2	300	49.0		258	38.0		115	54.7		83	06.5					
8	28	14.7	315	48.2		273	38.8		130	57.5		98	09.2					
9	43	17.2	330	47.4		288	39.5		146	00.3		113	11.8					
10	58	19.6	345	46.6		303	40.3		161	03.1		128	14.5					
11	73	22.1	0	45.8	+21	318	41.0	+22	176	05.9	-22	143	17.1	-21				
12	88	24.6	15	45.0	+21	333	41.8	+22	191	08.7	-22	158	19.8	-21				
13	103	27.0	30	44.2		348	42.6		206	11.5		173	22.4					
14	118	29.5	45	43.4		3	43.3		221	14.3		188	25.0					
15	133	31.9	60	42.7		18	44.1		236	17.1		203	27.7					
16	148	34.4	75	41.9		33	44.8		251	19.9		218	30.3					
17	163	36.9	90	41.1	+21	48	45.6	+22	266	22.7	-22	233	33.0	-21				
18	178	39.3	105	40.3	+21	63	46.4	+22	281	25.5	-22	248	35.6	-21				
19	193	41.8	120	39.5		78	47.1		296	28.3		263	38.3					
20	208	44.3	135	38.7		93	47.9		311	31.1		278	40.9					
21	223	46.7	150	37.9		108	48.6		326	33.9		293	43.5					
22	238	49.2	165	37.1		123	49.4		341	36.7		308	46.2					
23	253	51.7	180	36.3		138	50.2		356	39.5		323	48.8					
24	268	54.1	195	35.5	+21	153	50.9	+22	11	42.2	-22	338	51.5	-21				
Dif.	—		-8		+5	+8		-3	+28		0	+26		0				

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna					
	SD: 15°7'			SD: 14°9'			PHE { 4^h: 54'5" 12^h: 54'5" 20^h: 54'4"					Edad: 17 ^d 6			R ^o : 46 ^m			PMG: 03 ^h 07 ^m			PMG: 03 ^h 07 ^m		
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		hG ☾			Dif.	Dec	Dif.	Civil	Náut.	Hora	R ^o	Hora	R ^o			
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m				
0	179	35.5	+23	26.0	314	44.7	121	-19	27.7	60	60 N	21 28	23 14	** **	23 52	15	6 49	75					
1	194	35.3		26.1	329	15.8	122		21.7	60	58	21 07	22 23	** **	42 17		7 02	72					
2	209	35.2		26.1	343	47.0	122		15.7	61	56	20 50	21 53	** **	32 20		13 70						
3	224	35.1		26.1	358	18.2	123		09.6	62	54	36	31	23 18	24 22		23 68						
4	239	34.9		26.1	12	49.5	123	-19	03.4	63	52	24	21 13	22 31	17 23		32 66						
5	254	34.8	+23	26.1	27	20.8	124	-18	57.1	63	50	20 13	20 58	22 03	23 10	25	7 40	64					
6	269	34.7	+23	26.1	41	52.2	125	-18	50.8	65	45	19 50	20 28	21 18	22 55	29	7 57	61					
7	284	34.5		26.1	56	23.7	125		44.3	65	40	32	20 05	20 47	43 32		8 10	59					
8	299	34.4		26.1	70	55.2	126		37.8	66	35	17	19 47	24	33 34		22 56						
9	314	34.2		26.1	85	26.8	126		31.2	67	30	19 04	32	20 05	24 36		32 54						
10	329	34.1		26.1	99	58.4	127		24.5	67	20	18 42	19 07	19 36	22 09	39	8 49	51					
11	344	34.0	+23	26.1	114	30.1	127	-18	17.8	69	10 N	18 23	18 46	19 13	21 55	42	9 04	49					
12	359	33.8	+23	26.1	129	01.8	128	-18	10.9	69	0	18 05	18 28	18 54	21 42	45	9 18	46					
13	14	33.7		26.1	143	33.6	128	-18	04.0	70	10 S	17 48	18 11	37	30 47		32 44						
14	29	33.6		26.1	158	05.4	129	-17	57.0	70	20	29	17 53	21	16 50		9 47	41					
15	44	33.4		26.1	172	37.3	130		50.0	72	30	17 08	35	18 04	21 00	54	10 04	38					
16	59	33.3		26.1	187	09.3	130		42.8	72	35	16 56	24	17 56	20 51	56	14 35						
17	74	33.2	+23	26.1	201	41.3	131	-17	35.6	73	40	16 42	17 12	17 46	20 41	58	10 25	34					
18	89	33.0	+23	26.1	216	13.4	131	-17	28.3	74	45	16 25	16 59	17 36	20 28	61	10 38	31					
19	104	32.9		26.1	230	45.5	132		20.9	74	50	16 04	42	24	13 65		10 54	28					
20	119	32.8		26.1	245	17.7	132		13.5	75	52	15 54	35	19	20 06	66	11 01	27					
21	134	32.6		26.1	259	49.9	133	-17	06.0	76	54	43	27	13	19 58	68	10 24						
22	149	32.5		26.1	274	22.2	133	-16	58.4	77	56	30	18	07	50 70		19 22						
23	164	32.4		26.1	288	54.5	134		50.7	77	58	15 15	16 07	17 00	40 72		29 20						
24	179	32.2	+23	26.1	303	26.9		-16	43.0		60 S	14 58	15 56	16 53	19 28	76	11 41	17					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO								
	PMG 6 ^h 03 ^m 4		Mag: -3.8 PMG: 10 ^h 58 ^m				Mag: +1.8 PMG: 13 ^h 44 ^m				Mag: -2.6 PMG: 23 ^h 09 ^m				Mag: +0.2 PMG: 01 ^h 24 ^m								
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	268	54.1	195	35.5	+21	57.4	153	50.9	+22	38.0	11	42.2	-22	-21.2	338	51.5	-21	48.7					
1	283	56.6	210	34.7		57.9	168	51.7		37.8	26	45.0		-21.1	353	54.1		48.7					
2	298	59.1	225	34.0		58.3	183	52.4		37.5	41	47.8		-21.1	8	56.8		48.7					
3	314	01.5	240	33.2		58.8	198	53.2		37.2	56	50.6		-21.1	23	59.4		48.7					
4	329	04.0	255	32.4		59.2	213	54.0		37.0	71	53.4		-21.1	39	02.0		48.8					
5	344	06.4	270	31.6	+21	59.6	228	54.7	+22	36.7	86	56.2	-22	-21.0	54	04.7	-21	48.8					
6	359	08.9	285	30.8	+22	00.1	243	55.5	+22	36.4	101	59.0	-22	-21.0	69	07.3	-21	48.8					
7	14	11.4	300	30.0		00.5	258	56.3		36.2	117	01.8		-21.0	84	10.0		48.8					
8	29	13.8	315	29.2		01.0	273	57.0		35.9	132	04.6		-21.0	99	12.6		48.9					
9	44	16.3	330	28.4		01.4	288	57.8		35.6	147	07.4		-21.0	114	15.3		48.9					
10	59	18.8	345	27.6		01.8	303	58.6		35.4	162	10.2		-20.9	129	17.9		48.9					
11	74	21.2	0	26.8	+22	02.3	318	59.3	+22	35.1	177	13.0	-22	-20.9	144	20.5	-21	48.9					
12	89	23.7	15	26.0	+22	02.7	334	00.1	+22	34.8	192	15.8	-22	-20.9	159	23.2	-21	49.0					
13	104	26.2	30	25.2		03.1	349	00.8		34.5	207	18.6		-20.9	174	25.8		49.0					
14	119	28.6	45	24.4		03.6	4	01.6		34.3	222	21.4		-20.9	189	28.5		49.0					
15	134	31.1	60	23.6		04.0	19	02.4		34.0	237	24.2		-20.8	204	31.1		49.1					
16	149	33.6	75	22.8		04.4	34	03.1		33.7	252	27.0		-20.8	219	33.8		49.1					
17	164	36.0	90	22.0	+22	04.8	49	03.9	+22	33.5	267	29.8	-22	-20.8	234	36.4	-21	49.1					
18	179	38.5	105	21.2	+22	05.3	64	04.7	+22	33.2	282	32.6	-22	-20.8	249	39.1	-21	49.1					
19	194	40.9	120	20.4		05.7	79	05.4		32.9	297	35.4		-20.8	264	41.7		49.2					
20	209	43.4	135	19.6		06.1	94	06.2		32.6	312	38.1		-20.7	279	44.3		49.2					
21	224	45.9	150	18.8		06.5	109	07.0		32.4	327	40.9		-20.7	294	47.0		49.2					
22	239	48.3	165	18.0		07.0	124	07.7		32.1	342	43.7		-20.7	309	49.6		49.2					
23	254	50.8	180	17.2		07.4	139	08.5		31.8	357	46.5		-20.7	324	52.3		49.3					
24	269	53.3	195	16.4	+22	07.8	154	09.2	+22	31.5	12	49.3	-22	-20.7	339	54.9	-21	49.3					
Dif.	—		-8		+4		+8		-3		+28		0		+26		0						

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7				SD: 14'8 Edad: 18 ^d 6	PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2	Rº: 45 ^m	Náut.		Civil	Hora		Rº	Hora	Rº	
	PMG: 12 ^h 02 ^m 0															
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.								
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m
0	179	32.2	+23	26.1	303	26.9	134	-16	43.0	78	60 N	0 49	2 36	23 59	14	8 04
1	194	32.1		26.1	317	59.3	135		35.2	79	58	1 41	2 56	23 59	14	14 73
2	209	31.9		26.1	332	31.8	136		27.3	79	56	2 11	3 13	52	17	23 70
3	224	31.8		26.1	347	04.4	136		19.4	80	54	0 45	33	46	18	31 68
4	239	31.7		26.1	1	37.0	136		11.4	81	52	1 32	2 51	40	21	38 66
5	254	31.5	+23	26.1	16	09.6	137	-16	03.3	81	50	2 00	3 06	23 35	22	8 44
6	269	31.4	+23	26.1	30	42.3	137	-15	55.2	82	45	2 46	3 36	23 24	25	8 58
7	284	31.3		26.1	45	15.0	138		47.0	82	40	3 17	3 59	15	28	9 09
8	299	31.1		26.0	59	47.8	139		38.8	84	35	40	4 17	07	31	18 56
9	314	31.0		26.0	74	20.7	139		30.4	84	30	3 59	32	23 00	33	26 54
10	329	30.9		26.0	88	53.6	139		22.0	84	20	4 28	4 57	22 48	36	40 50
11	344	30.7	+23	26.0	103	26.5	140	-15	13.6	85	10 N	4 50	5 18	22 37	40	9 53
12	359	30.6	+23	26.0	117	59.5	140	-15	05.1	86	0	5 10	5 36	22 27	43	10 04
13	14	30.5		26.0	132	32.5	141	-14	56.5	86	10 S	27	5 53	17	46	16 40
14	29	30.3		26.0	147	05.6	142		47.9	87	20	43	6 10	22 06	50	28 37
15	44	30.2		25.9	161	38.8	141		39.2	88	30	5 59	29	21 54	53	42 34
16	59	30.1		25.9	176	11.9	142		30.4	88	35	6 08	40	47	55	49 33
17	74	29.9	+23	25.9	190	45.1	143	-14	21.6	88	40	6 17	6 52	21 39	57	10 59
18	89	29.8	+23	25.9	205	18.4	143	-14	12.8	90	45	6 28	7 05	21 29	61	11 09
19	104	29.7		25.9	219	51.7	144	-14	03.8	89	50	40	21	18	64	22 23
20	119	29.5		25.9	234	25.1	144	-13	54.9	91	52	45	29	12	66	28 21
21	134	29.4		25.8	248	58.5	144		45.8	91	54	51	37	06	68	34 20
22	149	29.2		25.8	263	31.9	145		36.7	91	56	6 57	46	21 00	70	41 18
23	164	29.1		25.8	278	05.4	145		27.6	92	58	7 04	7 56	20 52	73	11 49
24	179	29.0	+23	25.8	292	38.9		-13	18.4		60 S	7 11	8 08	20 44	75	11 58

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 59 ^m 5		Mag: -3.8 PMG: 10 ^h 59 ^m				Mag: +1.8 PMG: 13 ^h 43 ^m				Mag: -2.6 PMG: 23 ^h 04 ^m				Mag: +0.1 PMG: 01 ^h 20 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	269	53.3	195	16.4	+22	07.8	154	09.2	+22	31.5	12	49.3	-22	20.7	339	54.9	-21	49.3
1	284	55.7	210	15.6		08.2	169	10.0		31.3	27	52.1		20.6	354	57.6		49.3
2	299	58.2	225	14.8		08.7	184	10.8		31.0	42	54.9		20.6	10	00.2		49.3
3	315	00.7	240	14.0		09.1	199	11.5		30.7	57	57.7		20.6	25	02.9		49.4
4	330	03.1	255	13.2		09.5	214	12.3		30.4	73	00.5		20.6	40	05.5		49.4
5	345	05.6	270	12.4	+22	09.9	229	13.1	+22	30.2	88	03.3	-22	20.5	55	08.1	-21	49.4
6	0	08.0	285	11.6	+22	10.3	244	13.8	+22	29.9	103	06.1	-22	20.5	70	10.8	-21	49.4
7	15	10.5	300	10.8		10.7	259	14.6		29.6	118	08.9		20.5	85	13.4		49.5
8	30	13.0	315	10.0		11.1	274	15.4		29.3	133	11.7		20.5	100	16.1		49.5
9	45	15.4	330	09.2		11.6	289	16.1		29.1	148	14.5		20.5	115	18.7		49.5
10	60	17.9	345	08.4		12.0	304	16.9		28.8	163	17.3		20.4	130	21.4		49.6
11	75	20.4	0	07.6	+22	12.4	319	17.7	+22	28.5	178	20.0	-22	20.4	145	24.0	-21	49.6
12	90	22.8	15	06.8	+22	12.8	334	18.4	+22	28.2	193	22.8	-22	20.4	160	26.7	-21	49.6
13	105	25.3	30	06.0		13.2	349	19.2		28.0	208	25.6		20.4	175	29.3		49.6
14	120	27.8	45	05.2		13.6	4	20.0		27.7	223	28.4		20.4	190	32.0		49.7
15	135	30.2	60	04.4		14.0	19	20.7		27.4	238	31.2		20.3	205	34.6		49.7
16	150	32.7	75	03.5		14.4	34	21.5		27.1	253	34.0		20.3	220	37.2		49.7
17	165	35.2	90	02.7	+22	14.8	49	22.3	+22	26.8	268	36.8	-22	20.3	235	39.9	-21	49.7
18	180	37.6	105	01.9	+22	15.2	64	23.0	+22	26.6	283	39.6	-22	20.3	250	42.5	-21	49.8
19	195	40.1	120	01.1		15.6	79	23.8		26.3	298	42.4		20.3	265	45.2		49.8
20	210	42.5	135	00.3		16.0	94	24.6		26.0	313	45.2		20.2	280	47.8		49.8
21	225	45.0	149	59.5		16.4	109	25.3		25.7	328	48.0		20.2	295	50.5		49.8
22	240	47.5	164	58.7		16.8	124	26.1		25.4	343	50.8		20.2	310	53.1		49.9
23	255	49.9	179	57.9		17.2	139	26.9		25.2	358	53.5		20.2	325	55.8		49.9
24	270	52.4	194	57.1	+22	17.6	154	27.6	+22	24.9	13	56.3	-22	20.2	340	58.4	-21	49.9
Dif.	—		-8		+4		+8		-3		+28		0		+26			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 02 ^m 2				SD: 14'8 Edad: 19 ^d 6													PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	PMG: 04 ^h 38 ^m	Rº: 42 ^m			Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m	
0	179	29.0	+23	25.8	292	38.9	146	-13	18.4	93	60 N	21 28	23 14	** **	0 07	11	9 20	75
1	194	28.8		25.7	307	12.5	146	-13	09.1	93	58	21 07	22 23	** **	** **	**	27	73
2	209	28.7		25.7	321	46.1	146	-12	59.8	93	56	20 51	21 53	** **	** **	**	33	71
3	224	28.6		25.7	336	19.7	147		50.5	94	54	36	31	23 18	** **	**	39	68
4	239	28.4		25.7	350	53.4	147		41.1	95	52	24	21 13	22 31	** **	**	44	66
5	254	28.3	+23	25.6	5	27.1	148	-12	31.6	95	50	20 13	20 58	22 03	23 57	20	9 49	64
6	269	28.2	+23	25.6	20	00.9	148	-12	22.1	96	45	19 51	20 28	21 18	23 49	24	9 58	61
7	284	28.0		25.6	34	34.7	148		12.5	96	40	33	20 05	20 47	43	27	10 07	57
8	299	27.9		25.6	49	08.5	149	-12	02.9	96	35	18	19 47	24	38	29	14	55
9	314	27.8		25.5	63	42.4	149	-11	53.3	97	30	19 05	32	20 05	33	31	20	52
10	329	27.6		25.5	78	16.3	149		43.6	98	20	18 42	19 07	19 36	24	36	30	49
11	344	27.5	+23	25.5	92	50.2	150	-11	33.8	98	10 N	18 23	18 47	19 14	23 17	39	10 39	46
12	359	27.4	+23	25.4	107	24.2	150	-11	24.0	98	0	18 06	18 28	18 55	23 10	42	10 48	42
13	14	27.2		25.4	121	58.2	151		14.2	99	10 S	17 48	18 11	38	23 03	45	10 56	40
14	29	27.1		25.4	136	32.3	150	-11	04.3	99	20	30	17 54	21	22 56	48	11 05	36
15	44	27.0		25.3	151	06.3	151	-10	54.4	100	30	17 09	35	18 05	47	53	16	32
16	59	26.8		25.3	165	40.4	152		44.4	100	35	16 56	24	17 56	42	55	22	29
17	74	26.7	+23	25.3	180	14.6	151	-10	34.4	101	40	16 42	17 13	17 47	22 36	58	11 28	28
18	89	26.6	+23	25.2	194	48.7	152	-10	24.3	101	45	16 25	16 59	17 36	22 30	61	11 36	24
19	104	26.4		25.2	209	22.9	152		14.2	101	50	16 04	43	25	22	65	45	21
20	119	26.3		25.2	223	57.1	153	-10	04.1	102	52	15 55	35	19	18	67	49	20
21	134	26.2		25.1	238	31.4	153	-9	53.9	102	54	43	27	14	14	69	54	17
22	149	26.0		25.1	253	05.7	153		43.7	103	56	31	18	07	10	70	11 59	16
23	164	25.9		25.0	267	40.0	153		33.4	103	58	15 16	16 08	17 01	22 05	73	12 05	13
24	179	25.8	+23	25.0	282	14.3		-9	23.1		60 S	14 58	15 56	16 53	21 59	76	12 11	11
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 55 ^m 5		Mag: -3.8 PMG: 11 ^h 01 ^m				Mag: +1.8 PMG: 13 ^h 41 ^m				Mag: -2.6 PMG: 23 ^h 00 ^m				Mag: +0.1 PMG: 01 ^h 16 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	270	52.4	194	57.1	+22	17.6	154	27.6	+22	24.9	13	56.3	-22	-20.2	340	58.4	-21	49.9
1	285	54.9	209	56.3		18.0	169	28.4		24.6	28	59.1		-20.1	356	01.1		49.9
2	300	57.3	224	55.5		18.4	184	29.2		24.3	44	01.9		-20.1	11	03.7		50.0
3	315	59.8	239	54.7		18.8	199	30.0		24.0	59	04.7		-20.1	26	06.4		50.0
4	331	02.3	254	53.8		19.2	214	30.7		23.8	74	07.5		-20.1	41	09.0		50.0
5	346	04.7	269	53.0	+22	19.5	229	31.5	+22	23.5	89	10.3	-22	-20.0	56	11.6	-21	50.1
6	1	07.2	284	52.2	+22	19.9	244	32.3	+22	23.2	104	13.1	-22	-20.0	71	14.3	-21	50.1
7	16	09.7	299	51.4		20.3	259	33.0		22.9	119	15.9		-20.0	86	16.9		50.1
8	31	12.1	314	50.6		20.7	274	33.8		22.6	134	18.7		-20.0	101	19.6		50.1
9	46	14.6	329	49.8		21.1	289	34.6		22.3	149	21.5		-20.0	116	22.2		50.2
10	61	17.0	344	49.0		21.5	304	35.3		22.1	164	24.2		-19.9	131	24.9		50.2
11	76	19.5	359	48.2	+22	21.9	319	36.1	+22	21.8	179	27.0	-22	-19.9	146	27.5	-21	50.2
12	91	22.0	14	47.3	+22	22.2	334	36.9	+22	21.5	194	29.8	-22	-19.9	161	30.2	-21	50.2
13	106	24.4	29	46.5		22.6	349	37.6		21.2	209	32.6		-19.9	176	32.8		50.3
14	121	26.9	44	45.7		23.0	4	38.4		20.9	224	35.4		-19.9	191	35.5		50.3
15	136	29.4	59	44.9		23.4	19	39.2		20.6	239	38.2		-19.8	206	38.1		50.3
16	151	31.8	74	44.1		23.8	34	40.0		20.4	254	41.0		-19.8	221	40.8		50.3
17	166	34.3	89	43.3	+22	24.1	49	40.7	+22	20.1	269	43.8	-22	-19.8	236	43.4	-21	50.4
18	181	36.8	104	42.5	+22	24.5	64	41.5	+22	19.8	284	46.6	-22	-19.8	251	46.1	-21	50.4
19	196	39.2	119	41.6		24.9	79	42.3		19.5	299	49.3		-19.8	266	48.7		50.4
20	211	41.7	134	40.8		25.3	94	43.0		19.2	314	52.1		-19.7	281	51.4		50.4
21	226	44.1	149	40.0		25.6	109	43.8		18.9	329	54.9		-19.7	296	54.0		50.5
22	241	46.6	164	39.2		26.0	124	44.6		18.6	344	57.7		-19.7	311	56.7		50.5
23	256	49.1	179	38.4		26.4	139	45.3		18.3	0	00.5		-19.7	326	59.3		50.5
24	271	51.5	194	37.6	+22	26.7	154	46.1	+22	18.1	15	03.3	-22	-19.7	342	02.0	-21	50.6
Dif.	—		-8		+4		+8		-3		+28		0		+26			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7				SD: 14'8 Edad: 20 ^d 6												
	PMG: 12 ^h 02 ^m 4				PMG: 05 ^h 20 ^m												
					Rº: 42 ^m												
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m	h m m		
0	179	25.8	+23	25.0		282	14.3	153	-9	23.1	103	60 N	** **	0 51	2 37	0 18 10	10 35 76
1	194	25.6		25.0		296	48.6	154		12.8	104	58	** **	1 41	2 57	13 12	40 73
2	209	25.5		24.9		311	23.0	154	-9	02.4	104	56	** **	2 11	3 14	09 14	44 70
3	224	25.3		24.9		325	57.4	154	-8	52.0	105	54	0 46	34	28	04 17	47 68
4	239	25.2		24.8		340	31.8	155		41.5	105	52	1 33	2 52	41	0 01 18	50 67
5	254	25.1	+23	24.8		355	06.3	154	-8	31.0	105	50	2 01	3 07	3 51	** **	** 10 53 65
6	269	24.9	+23	24.8		9	40.7	155	-8	20.5	105	45	2 47	3 37	4 14	** **	** 10 59 61
7	284	24.8		24.7		24	15.2	155	-8	10.0	106	40	3 17	3 59	32	** **	** 11 04 58
8	299	24.7		24.7		38	49.7	155	-7	59.4	107	35	41	4 17	4 47	** **	** 09 55
9	314	24.5		24.6		53	24.2	155		48.7	106	30	3 59	33	5 00	** **	** 12 53
10	329	24.4		24.6		67	58.7	156		38.1	107	20	4 28	4 58	22	** **	** 19 49
11	344	24.3	+23	24.5		82	33.3	155	-7	27.4	107	10 N	4 51	5 18	5 41	23 56	38 11 25 45
12	359	24.1	+23	24.5		97	07.8	156	-7	16.7	108	0	5 10	5 36	5 59	23 52	42 11 30 42
13	14	24.0		24.4		111	42.4	156	-7	05.9	108	10 S	27	5 53	6 16	48 45	36 38
14	29	23.9		24.4		126	17.0	156	-6	55.1	108	20	5 43	6 11	35	44 49	41 35
15	44	23.7		24.3		140	51.6	156		44.3	108	30	6 00	30	6 56	40 53	48 31
16	59	23.6		24.3		155	26.2	157		33.5	109	35	08	40	7 08	37 55	51 29
17	74	23.5	+23	24.2		170	00.9	156	-6	22.6	109	40	6 18	6 52	7 22	23 34	58 11 56 25
18	89	23.3	+23	24.2		184	35.5	156	-6	11.7	109	45	6 28	7 05	7 39	23 31	61 12 00 23
19	104	23.2		24.1		199	10.1	157	-6	00.8	110	50	40	22	8 00	27 65	06 19
20	119	23.1		24.1		213	44.8	157	-5	49.8	110	52	45	29	10	25 66	09 17
21	134	22.9		24.0		228	19.5	156		38.8	110	54	51	37	21	23 68	11 16
22	149	22.8		23.9		242	54.1	157		27.8	110	56	6 57	46	34	20 71	15 14
23	164	22.7		23.9		257	28.8	157		16.8	111	58	7 04	7 57	8 48	23 18	73 12 18 12
24	179	22.5	+23	23.8		272	03.5		-5	05.7		60 S	7 11	8 08	9 06	23 15	76 12 22 9

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 51 ^m 6		Mag: -3.8 PMG: 11 ^h 02 ^m				Mag: +1.8 PMG: 13 ^h 40 ^m				Mag: -2.6 PMG: 22 ^h 56 ^m				Mag: +0.1 PMG: 01 ^h 12 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	271	51.5	194	37.6	+22	26.7	154	46.1	+22	18.1	15	03.3	-22	19.7	342	02.0	-21	50.6
1	286	54.0	209	36.7		27.1	169	46.9		17.8	30	06.1		19.6	357	04.6		50.6
2	301	56.5	224	35.9		27.5	184	47.7		17.5	45	08.9		19.6	12	07.2		50.6
3	316	58.9	239	35.1		27.8	199	48.4		17.2	60	11.6		19.6	27	09.9		50.6
4	332	01.4	254	34.3		28.2	214	49.2		16.9	75	14.4		19.6	42	12.5		50.7
5	347	03.9	269	33.5	+22	28.6	229	50.0	+22	16.6	90	17.2	-22	19.5	57	15.2	-21	50.7
6	2	06.3	284	32.6	+22	28.9	244	50.7	+22	16.3	105	20.0	-22	19.5	72	17.8	-21	50.7
7	17	08.8	299	31.8		29.3	259	51.5		16.0	120	22.8		19.5	87	20.5		50.7
8	32	11.3	314	31.0		29.6	274	52.3		15.7	135	25.6		19.5	102	23.1		50.8
9	47	13.7	329	30.2		30.0	289	53.1		15.5	150	28.4		19.5	117	25.8		50.8
10	62	16.2	344	29.4		30.4	304	53.8		15.2	165	31.2		19.4	132	28.4		50.8
11	77	18.6	359	28.5	+22	30.7	319	54.6	+22	14.9	180	33.9	-22	19.4	147	31.1	-21	50.8
12	92	21.1	14	27.7	+22	31.1	334	55.4	+22	14.6	195	36.7	-22	19.4	162	33.7	-21	50.9
13	107	23.6	29	26.9		31.4	349	56.2		14.3	210	39.5		19.4	177	36.4		50.9
14	122	26.0	44	26.1		31.8	4	56.9		14.0	225	42.3		19.4	192	39.0		50.9
15	137	28.5	59	25.3		32.1	19	57.7		13.7	240	45.1		19.3	207	41.7		50.9
16	152	31.0	74	24.4		32.5	34	58.5		13.4	255	47.9		19.3	222	44.3		51.0
17	167	33.4	89	23.6	+22	32.8	49	59.2	+22	13.1	270	50.7	-22	19.3	237	47.0	-21	51.0
18	182	35.9	104	22.8	+22	33.2	65	00.0	+22	12.8	285	53.4	-22	19.3	252	49.6	-21	51.0
19	197	38.4	119	22.0		33.5	80	00.8		12.5	300	56.2		19.3	267	52.3		51.1
20	212	40.8	134	21.1		33.9	95	01.6		12.2	315	59.0		19.2	282	54.9		51.1
21	227	43.3	149	20.3		34.2	110	02.3		12.0	331	01.8		19.2	297	57.6		51.1
22	242	45.8	164	19.5		34.6	125	03.1		11.7	346	04.6		19.2	313	00.2		51.1
23	257	48.2	179	18.7		34.9	140	03.9		11.4	1	07.4		19.2	328	02.9		51.2
24	272	50.7	194	17.8	+22	35.3	155	04.7	+22	11.1	16	10.2	-22	19.2	343	05.5	-21	51.2
Dif.	—		-8		+4		+8		-3		+28		0		+26		0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 15'7				SD: 14'8												PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7							
	PMG: 12 ^h 02 ^m 6				Edad: 21 ^d 6																			
	PMG: 06 ^h 02 ^m				Rº: 42 ^m																			
	hG ☉	Dec			hG ☾	Dif.	Dec			Dif.		Civil	Náut.	Hora	Rº	Hora	Rº							
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m							
0	179	22.5	+23	23.8	272	03.5	157	-5	05.7	111	60 N	21 28	23 13	** **	0 28	9	11 51 76							
1	194	22.4		23.8	286	38.2	157	-4	54.6	111	58	21 07	22 23	** **	25	12	53 73							
2	209	22.3		23.7	301	12.9	157		43.5	111	56	20 51	21 53	** **	23	14	54 72							
3	224	22.1		23.7	315	47.6	157		32.4	111	54	36	31	23 17	21	16	55 70							
4	239	22.0		23.6	330	22.3	157		21.3	112	52	24	21 13	22 31	19	17	57 67							
5	254	21.9	+23	23.5	344	57.0	157	-4	10.1	112	50	20 13	20 58	22 03	0 17	19	11 58 65							
6	269	21.7	+23	23.5	359	31.7	157	-3	58.9	112	45	19 51	20 28	21 18	0 13	23	12 00 62							
7	284	21.6		23.4	14	06.4	157		47.7	113	40	33	20 06	20 47	10	25	02 58							
8	299	21.5		23.4	28	41.1	156		36.4	112	35	18	19 48	24	07	28	04 55							
9	314	21.3		23.3	43	15.7	157		25.2	113	30	19 05	32	20 06	0 04	31	05 53							
10	329	21.2		23.2	57	50.4	157		13.9	113	20	18 43	19 07	19 37	** **	**	08 49							
11	344	21.1	+23	23.2	72	25.1	157	-3	02.6	113	10 N	18 24	18 47	19 14	** **	**	12 10 45							
12	359	20.9	+23	23.1	86	59.8	157	-2	51.3	114	0	18 06	18 29	18 55	** **	**	12 12 42							
13	14	20.8		23.0	101	34.5	156		39.9	113	10 S	17 49	18 12	38	** **	**	14 39							
14	29	20.7		23.0	116	09.1	157		28.6	114	20	30	17 54	22	** **	**	16 35							
15	44	20.5		22.9	130	43.8	156		17.2	114	30	17 09	36	18 05	** **	**	19 30							
16	59	20.4		22.8	145	18.4	157	-2	05.8	114	35	16 57	25	17 57	** **	**	20 28							
17	74	20.3	+23	22.8	159	53.1	156	-1	54.4	114	40	16 43	17 13	17 47	** **	**	12 21 26							
18	89	20.1	+23	22.7	174	27.7	156	-1	43.0	114	45	16 26	17 00	17 37	** **	**	12 23 23							
19	104	20.0		22.6	189	02.3	156		31.6	114	50	16 05	16 44	25	** **	**	25 19							
20	119	19.9		22.5	203	36.9	156		20.2	115	52	15 55	36	20	** **	**	26 18							
21	134	19.7		22.5	218	11.5	156	-1	08.7	115	54	44	28	14	** **	**	27 16							
22	149	19.6		22.4	232	46.1	155	-0	57.2	114	56	32	19	08	** **	**	29 13							
23	164	19.5		22.3	247	20.6	156		45.8	115	58	15 17	16 09	17 01	** **	**	30 11							
24	179	19.4	+23	22.3	261	55.2		-0	34.3		60 S	14 59	15 57	16 54	** **	**	12 31 9							
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO									
	PMG: 5 ^h 47 ^m 7		Mag: -3.8 PMG: 11 ^h 03 ^m				Mag: +1.8 PMG: 13 ^h 39 ^m				Mag: -2.6 PMG: 22 ^h 51 ^m				Mag: +0.1 PMG: 01 ^h 07 ^m									
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	272	50.7	194	17.8	+22	35.3	155	04.7	+22	11.1	16	10.2	-22	-19.2	343	05.5	-21	51.2						
1	287	53.1	209	17.0		35.6	170	05.4		10.8	31	12.9		-19.1	358	08.2		51.2						
2	302	55.6	224	16.2		35.9	185	06.2		10.5	46	15.7		-19.1	13	10.8		51.2						
3	317	58.1	239	15.4		36.3	200	07.0		10.2	61	18.5		-19.1	28	13.5		51.3						
4	333	00.5	254	14.5		36.6	215	07.8		09.9	76	21.3		-19.1	43	16.1		51.3						
5	348	03.0	269	13.7	+22	36.9	230	08.5	+22	09.6	91	24.1	-22	-19.1	58	18.8	-21	51.3						
6	3	05.5	284	12.9	+22	37.3	245	09.3	+22	09.3	106	26.9	-22	-19.0	73	21.4	-21	51.3						
7	18	07.9	299	12.1		37.6	260	10.1		09.0	121	29.6		-19.0	88	24.1		51.4						
8	33	10.4	314	11.2		37.9	275	10.9		08.7	136	32.4		-19.0	103	26.7		51.4						
9	48	12.9	329	10.4		38.3	290	11.6		08.4	151	35.2		-19.0	118	29.4		51.4						
10	63	15.3	344	09.6		38.6	305	12.4		08.1	166	38.0		-18.9	133	32.0		51.5						
11	78	17.8	359	08.7	+22	38.9	320	13.2	+22	07.8	181	40.8	-22	-18.9	148	34.7	-21	51.5						
12	93	20.2	14	07.9	+22	39.3	335	14.0	+22	07.5	196	43.6	-22	-18.9	163	37.3	-21	51.5						
13	108	22.7	29	07.1		39.6	350	14.7		07.2	211	46.3		-18.9	178	40.0		51.5						
14	123	25.2	44	06.3		39.9	5	15.5		06.9	226	49.1		-18.9	193	42.6		51.6						
15	138	27.6	59	05.4		40.2	20	16.3		06.6	241	51.9		-18.8	208	45.3		51.6						
16	153	30.1	74	04.6		40.6	35	17.1		06.3	256	54.7		-18.8	223	47.9		51.6						
17	168	32.6	89	03.8	+22	40.9	50	17.8	+22	06.0	271	57.5	-22	-18.8	238	50.6	-21	51.6						
18	183	35.0	104	02.9	+22	41.2	65	18.6	+22	05.7	287	00.3	-22	-18.8	253	53.2	-21	51.7						
19	198	37.5	119	02.1		41.5	80	19.4		05.4	302	03.0		-18.8	268	55.9		51.7						
20	213	40.0	134	01.3		41.9	95	20.2		05.1	317	05.8		-18.7	283	58.5		51.7						
21	228	42.4	149	00.4		42.2	110	21.0		04.8	332	08.6		-18.7	299	01.2		51.7						
22	243	44.9	163	59.6		42.5	125	21.7		04.5	347	11.4		-18.7	314	03.8		51.8						
23	258	47.4	178	58.8		42.8	140	22.5		04.2	2	14.2		-18.7	329	06.5		51.8						
24	273	49.8	193	58.0	+22	43.1	155	23.3	+22	03.9	17	17.0	-22	-18.7	344	09.1	-21	51.8						
Dif.	—		-8				+3	+8				-3				+28				0	+26			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7				SD: 14'9 PHE { 4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'2													
	PMG: 12 ^h 02 ^m 8				Edad: 22 ^d 6													
	PMG: 06 ^h 44 ^m				Rº: 43 ^m													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	19.4	+23	22.3	261	55.2	155	-0 34.3	115	60 N	** **	0 53	2 38	0 37	10	13 07	79	
1	194	19.2		22.2	276	29.7	155		22.8	115	58	** **	1 43	2 58	37 12	06 76		
2	209	19.1		22.1	291	04.2	155	-0 11.3	115	56	** **	2 12	3 15	37 14	06 73			
3	224	19.0		22.0	305	38.7	154	+0 00.2	116	54		0 49	35	29	37 15	05 71		
4	239	18.8		21.9	320	13.1	155		11.8	115	52	1 34	2 53	41	36 18	04 69		
5	254	18.7	+23	21.9	334	47.6	154	+0 23.3	115	50		2 02	3 08	3 52	0 36 20	13 03	67	
6	269	18.6	+23	21.8	349	22.0	154	+0 34.8	116	45		2 48	3 37	4 15	0 36 23	13 02	63	
7	284	18.4		21.7	3	56.4	153		46.4	115	40	3 18	4 00	33	35 27	13 00	60	
8	299	18.3		21.6	18	30.7	154	+0 57.9	116	35		3 41	18	4 48	35 29	12 59	58	
9	314	18.2		21.6	33	05.1	153	+1 09.5	115	30		4 00	33	5 01	35 31	58 55		
10	329	18.0		21.5	47	39.4	153		21.0	116	20	29	4 58	23	34 36	57 50		
11	344	17.9	+23	21.4	62	13.7	153	+1 32.6	116	10 N		4 51	5 19	5 42	0 34 39	12 55	47	
12	359	17.8	+23	21.3	76	48.0	152	+1 44.2	116	0		5 10	5 37	5 59	0 34 42	12 54	43	
13	14	17.6		21.2	91	22.2	152	+1 55.8	115	10 S		27	5 54	6 17	33 46	53 39		
14	29	17.5		21.1	105	56.4	152	+2 07.3	116	20		5 44	6 11	35	33 50	51 36		
15	44	17.4		21.1	120	30.6	151		18.9	116	30	6 00	30	6 56	33 54	49 32		
16	59	17.2		21.0	135	04.7	151		30.5	116	35	09	40	7 09	32 57	48 30		
17	74	17.1	+23	20.9	149	38.8	151	+2 42.1	115	40		6 18	6 52	7 23	0 32 59	12 47	27	
18	89	17.0	+23	20.8	164	12.9	150	+2 53.6	116	45		6 28	7 06	7 39	0 32 62	12 46	24	
19	104	16.8		20.7	178	46.9	150	+3 05.2	116	50		40	22	8 00	32 66	44 20		
20	119	16.7		20.6	193	20.9	150		16.8	115	52	45	29	10	31 69	44 18		
21	134	16.6		20.5	207	54.9	149		28.3	116	54	51	37	21	31 70	43 16		
22	149	16.5		20.4	222	28.8	149		39.9	116	56	6 57	46	34	31 72	42 15		
23	164	16.3		20.3	237	02.7	149	+3 51.5	115	58		7 04	7 57	8 48	0 31 75	12 41	12	
24	179	16.2	+23	20.3	251	36.6		+4 03.0		60 S		7 11	8 08	9 06	0 31 77	12 40	10	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 43 ^m 7		Mag: -3.8 PMG: 11 ^h 05 ^m				Mag: +1.8 PMG: 13 ^h 38 ^m				Mag: -2.6 PMG: 22 ^h 47 ^m				Mag: +0.1 PMG: 01 ^h 03 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	273	49.8	193	58.0	+22	43.1	155	23.3	+22	03.9	17	17.0	-22	18.7	344	09.1	-21	51.8
1	288	52.3	208	57.1		43.4	170	24.1		03.6	32	19.7		18.6	359	11.8		51.9
2	303	54.7	223	56.3		43.8	185	24.8		03.3	47	22.5		18.6	14	14.4		51.9
3	318	57.2	238	55.5		44.1	200	25.6		03.0	62	25.3		18.6	29	17.1		51.9
4	333	59.7	253	54.6		44.4	215	26.4		02.7	77	28.1		18.6	44	19.7		51.9
5	349	02.1	268	53.8	+22	44.7	230	27.2	+22	02.4	92	30.9	-22	18.6	59	22.4	-21	52.0
6	4	04.6	283	53.0	+22	45.0	245	28.0	+22	02.1	107	33.6	-22	18.5	74	25.0	-21	52.0
7	19	07.1	298	52.1		45.3	260	28.7		01.8	122	36.4		18.5	89	27.7		52.0
8	34	09.5	313	51.3		45.6	275	29.5		01.5	137	39.2		18.5	104	30.3		52.0
9	49	12.0	328	50.5		45.9	290	30.3		01.2	152	42.0		18.5	119	33.0		52.1
10	64	14.5	343	49.6		46.2	305	31.1		00.9	167	44.8		18.5	134	35.6		52.1
11	79	16.9	358	48.8	+22	46.5	320	31.8	+22	00.6	182	47.5	-22	18.4	149	38.3	-21	52.1
12	94	19.4	13	47.9	+22	46.8	335	32.6	+22	00.3	197	50.3	-22	18.4	164	41.0	-21	52.1
13	109	21.9	28	47.1		47.1	350	33.4	+22	00.0	212	53.1		18.4	179	43.6		52.2
14	124	24.3	43	46.3		47.4	5	34.2	+21	59.7	227	55.9		18.4	194	46.3		52.2
15	139	26.8	58	45.4		47.7	20	35.0		59.4	242	58.7		18.3	209	48.9		52.2
16	154	29.2	73	44.6		48.0	35	35.7		59.1	258	01.4		18.3	224	51.6		52.3
17	169	31.7	88	43.8	+22	48.3	50	36.5	+21	58.8	273	04.2	-22	18.3	239	54.2	-21	52.3
18	184	34.2	103	42.9	+22	48.6	65	37.3	+21	58.5	288	07.0	-22	18.3	254	56.9	-21	52.3
19	199	36.6	118	42.1		48.9	80	38.1		58.2	303	09.8		18.3	269	59.5		52.3
20	214	39.1	133	41.3		49.2	95	38.9		57.9	318	12.6		18.2	285	02.2		52.4
21	229	41.6	148	40.4		49.5	110	39.6		57.5	333	15.3		18.2	300	04.8		52.4
22	244	44.0	163	39.6		49.8	125	40.4		57.2	348	18.1		18.2	315	07.5		52.4
23	259	46.5	178	38.7		50.1	140	41.2		56.9	3	20.9		18.2	330	10.1		52.4
24	274	49.0	193	37.9	+22	50.3	155	42.0	+21	56.6	18	23.7	-22	18.2	345	12.8	-21	52.5
Dif.	—		-8		+3		+8		-3		+28		0		+27			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15'7				SD: 15'1 Edad: 23 ^d 6												PHE { 4 ^h : 55'4 12 ^h : 55'6 20 ^h : 55'9		
	PMG: 12 ^h 03 ^m 0				PMG: 07 ^h 27 ^m												Rº: 44 ^m		
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	16.2	+23	20.3	251	36.6	148	+4	03.0	116	60 N	21 27	23 10	** **	0 47	10	14 26	81	
1	194	16.1		20.2	266	10.4	147		14.6	115	58	21 07	22 22	** **	49	13	22	78	
2	209	15.9		20.1	280	44.1	148		26.1	115	56	20 50	21 53	** **	51	15	19	75	
3	224	15.8		20.0	295	17.9	146		37.6	116	54	36	31	23 15	52	18	16	73	
4	239	15.7		19.9	309	51.5	147	+4	49.2	115	52	24	21 13	22 30	54	19	13	71	
5	254	15.5	+23	19.8	324	25.2	146	+5	00.7	115	50	20 13	20 58	22 03	0 56	21	14 10	70	
6	269	15.4	+23	19.7	338	58.8	145	+5	12.2	115	45	19 51	20 28	21 18	0 59	25	14 05	65	
7	284	15.3		19.6	353	32.3	145		23.7	115	40	33	20 06	20 47	1 02	28	14 00	63	
8	299	15.1		19.5	8	05.8	145		35.2	115	35	18	19 48	24	04	31	13 57	59	
9	314	15.0		19.4	22	39.3	144		46.7	114	30	19 05	32	20 06	06	33	53	57	
10	329	14.9		19.3	37	12.7	143	+5	58.1	115	20	18 43	19 08	19 37	10	37	47	53	
11	344	14.8	+23	19.2	51	46.0	143	+6	09.6	114	10 N	18 24	18 47	19 14	1 13	41	13 42	49	
12	359	14.6	+23	19.1	66	19.3	142	+6	21.0	114	0	18 07	18 29	18 55	1 16	45	13 37	46	
13	14	14.5		19.0	80	52.5	142		32.4	114	10 S	17 49	18 12	38	19	48	32	42	
14	29	14.4		18.9	95	25.7	142		43.8	114	20	31	17 55	22	23	51	27	39	
15	44	14.2		18.8	109	58.9	140	+6	55.2	114	30	17 10	36	18 06	27	55	21	35	
16	59	14.1		18.7	124	31.9	141	+7	06.6	113	35	16 57	26	17 57	29	58	18	32	
17	74	14.0	+23	18.6	139	05.0	139	+7	17.9	114	40	16 43	17 14	17 48	1 31	61	13 14	29	
18	89	13.8	+23	18.5	153	37.9	139	+7	29.3	113	45	16 27	17 00	17 38	1 34	65	13 10	26	
19	104	13.7		18.4	168	10.8	139		40.6	113	50	16 06	16 44	26	38	68	04	23	
20	119	13.6		18.3	182	43.7	138	+7	51.9	112	52	15 56	37	21	40	70	13 02	20	
21	134	13.5		18.2	197	16.5	137	+8	03.1	113	54	45	29	15	41	73	12 59	19	
22	149	13.3		18.1	211	49.2	137		14.4	112	56	33	20	09	43	75	57	16	
23	164	13.2		18.0	226	21.9	136		25.6	112	58	18	16 10	17 02	46	77	53	14	
24	179	13.1	+23	17.9	240	54.5		+8	36.8		60 S	15 01	15 58	16 55	1 48	80	12 50	11	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 5 ^h 39 ^m 8		Mag: -3.8 PMG: 11 ^h 06 ^m				Mag: +1.8 PMG: 13 ^h 36 ^m				Mag: -2.6 PMG: 22 ^h 42 ^m				Mag: +0.1 PMG: 00 ^h 59 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	274	49.0	193	37.9	+22	50.3	155	42.0	+21	56.6	18	23.7	-22	-18.2	345	12.8	-21	52.5	
1	289	51.4	208	37.1		50.6	170	42.8		56.3	33	26.4		-18.1	0	15.4		52.5	
2	304	53.9	223	36.2		50.9	185	43.5		56.0	48	29.2		-18.1	15	18.1		52.5	
3	319	56.3	238	35.4		51.2	200	44.3		55.7	63	32.0		-18.1	30	20.7		52.6	
4	334	58.8	253	34.5		51.5	215	45.1		55.4	78	34.8		-18.1	45	23.4		52.6	
5	350	01.3	268	33.7	+22	51.8	230	45.9	+21	55.1	93	37.6	-22	-18.1	60	26.0	-21	52.6	
6	5	03.7	283	32.9	+22	52.1	245	46.7	+21	54.8	108	40.3	-22	-18.0	75	28.7	-21	52.6	
7	20	06.2	298	32.0		52.3	260	47.4		54.5	123	43.1		-18.0	90	31.3		52.7	
8	35	08.7	313	31.2		52.6	275	48.2		54.2	138	45.9		-18.0	105	34.0		52.7	
9	50	11.1	328	30.3		52.9	290	49.0		53.8	153	48.7		-18.0	120	36.7		52.7	
10	65	13.6	343	29.5		53.2	305	49.8		53.5	168	51.4		-18.0	135	39.3		52.7	
11	80	16.1	358	28.7	+22	53.4	320	50.6	+21	53.2	183	54.2	-22	-17.9	150	42.0	-21	52.8	
12	95	18.5	13	27.8	+22	53.7	335	51.4	+21	52.9	198	57.0	-22	-17.9	165	44.6	-21	52.8	
13	110	21.0	28	27.0		54.0	350	52.1		52.6	213	59.8		-17.9	180	47.3		52.8	
14	125	23.5	43	26.1		54.3	5	52.9		52.3	229	02.5		-17.9	195	49.9		52.8	
15	140	25.9	58	25.3		54.5	20	53.7		52.0	244	05.3		-17.9	210	52.6		52.9	
16	155	28.4	73	24.4		54.8	35	54.5		51.7	259	08.1		-17.8	225	55.2		52.9	
17	170	30.8	88	23.6	+22	55.1	50	55.3	+21	51.4	274	10.9	-22	-17.8	240	57.9	-21	52.9	
18	185	33.3	103	22.8	+22	55.3	65	56.1	+21	51.0	289	13.6	-22	-17.8	256	00.5	-21	53.0	
19	200	35.8	118	21.9		55.6	80	56.8		50.7	304	16.4		-17.8	271	03.2		53.0	
20	215	38.2	133	21.1		55.9	95	57.6		50.4	319	19.2		-17.8	286	05.8		53.0	
21	230	40.7	148	20.2		56.1	110	58.4		50.1	334	22.0		-17.7	301	08.5		53.0	
22	245	43.2	163	19.4		56.4	125	59.2		49.8	349	24.7		-17.7	316	11.1		53.1	
23	260	45.6	178	18.5		56.7	141	00.0		49.5	4	27.5		-17.7	331	13.8		53.1	
24	275	48.1	193	17.7	+22	56.9	156	00.8	+21	49.2	19	30.3	-22	-17.7	346	16.5	-21	53.1	
Dif.	—		-8		+3		+8		-3		+28		0		+27				

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 03 ^m 2				SD: 15'3 Edad: 24 ^d 6 PMG:08 ^h 11 ^m												PHE { 4 ^h : 56'1 12 ^h : 56'4 20 ^h : 56'6		Rº: 48 ^m
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº					
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m			
0	179	13.1	+23	17.9	240	54.5	135	+8	36.8	112	60 N	** **	0 56	2 39	0 57	13	15 47	85	
1	194	12.9		17.7	255	27.0	135		48.0	111	58	** **	1 45	2 59	1 02	15	40	81	
2	209	12.8		17.6	269	59.5	134	+8	59.1	111	56	** **	2 14	3 16	06	18	34	79	
3	224	12.7		17.5	284	31.9	133	+9	10.2	111	54	0 52	36	30	10	20	29	76	
4	239	12.6		17.4	299	04.2	133		21.3	111	52	1 36	2 54	42	13	23	24	74	
5	254	12.4	+23	17.3	313	36.5	132	+9	32.4	110	50	2 04	3 09	3 53	1 17	24	15	20	72
6	269	12.3	+23	17.2	328	08.7	131	+9	43.4	110	45	2 49	3 38	4 15	1 24	28	15	10	68
7	284	12.2		17.1	342	40.8	131	+9	54.4	110	40	3 19	4 01	33	30	31	15	03	64
8	299	12.0		17.0	357	12.9	130	+10	05.4	109	35	3 42	19	4 48	35	33	14	56	62
9	314	11.9		16.8	11	44.9	129		16.3	109	30	4 01	34	5 01	39	36	50	59	
10	329	11.8		16.7	26	16.8	129		27.2	109	20	29	4 59	23	47	40	40	55	
11	344	11.6	+23	16.6	40	48.7	128	+10	38.1	108	10 N	4 52	5 19	5 42	1 54	44	14	31	52
12	359	11.5	+23	16.5	55	20.5	127	+10	48.9	108	0	5 11	5 37	6 00	2 01	47	14	23	48
13	14	11.4		16.4	69	52.2	126	+10	59.7	107	10 S	28	5 54	17	07	51	14	46	
14	29	11.3		16.3	84	23.8	125	+11	10.4	107	20	5 44	6 11	35	14	54	14	06	42
15	44	11.1		16.1	98	55.3	125		21.1	107	30	6 00	30	6 56	22	59	13	56	38
16	59	11.0		16.0	113	26.8	124		31.8	106	35	09	41	7 09	27	61	50	35	
17	74	10.9	+23	15.9	127	58.2	123	+11	42.4	106	40	6 18	6 52	7 23	2 32	64	13	43	33
18	89	10.8	+23	15.8	142	29.5	123	+11	53.0	106	45	6 29	7 06	7 39	2 39	67	13	36	30
19	104	10.6		15.7	157	00.8	121	+12	03.6	105	50	40	22	8 00	46	71	27	26	
20	119	10.5		15.5	171	31.9	121		14.1	104	52	45	29	10	50	73	22	25	
21	134	10.4		15.4	186	03.0	120		24.5	104	54	51	37	21	54	75	18	22	
22	149	10.2		15.3	200	34.0	119		34.9	104	56	6 57	46	33	2 58	77	13	20	
23	164	10.1		15.2	215	04.9	119		45.3	103	58	7 04	7 56	8 48	3 03	80	13	07	18
24	179	10.0	+23	15.0	229	35.8		+12	55.6		60 S	7 11	8 08	9 05	3 08	83	13	01	14
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 5 ^h 35 ^m 9		Mag: -3.8 PMG: 11 ^h 07 ^m				Mag: +1.8 PMG: 13 ^h 35 ^m				Mag: -2.6 PMG: 22 ^h 38 ^m				Mag: +0.1 PMG: 00 ^h 55 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	275	48.1	193	17.7	+22	56.9	156	00.8	+21	49.2	19	30.3	-22	17.7	346	16.5	-21	53.1	
1	290	50.6	208	16.8		57.2	171	01.5		48.8	34	33.1		17.7	1	19.1		53.1	
2	305	53.0	223	16.0		57.4	186	02.3		48.5	49	35.8		17.6	16	21.8		53.2	
3	320	55.5	238	15.2		57.7	201	03.1		48.2	64	38.6		17.6	31	24.4		53.2	
4	335	58.0	253	14.3		58.0	216	03.9		47.9	79	41.4		17.6	46	27.1		53.2	
5	351	00.4	268	13.5	+22	58.2	231	04.7	+21	47.6	94	44.2	-22	17.6	61	29.7	-21	53.3	
6	6	02.9	283	12.6	+22	58.5	246	05.5	+21	47.3	109	46.9	-22	17.6	76	32.4	-21	53.3	
7	21	05.3	298	11.8		58.7	261	06.2		47.0	124	49.7		17.5	91	35.0		53.3	
8	36	07.8	313	10.9		59.0	276	07.0		46.6	139	52.5		17.5	106	37.7		53.3	
9	51	10.3	328	10.1		59.2	291	07.8		46.3	154	55.3		17.5	121	40.3		53.4	
10	66	12.7	343	09.2		59.5	306	08.6		46.0	169	58.0		17.5	136	43.0		53.4	
11	81	15.2	358	08.4	+22	59.7	321	09.4	+21	45.7	185	00.8	-22	17.5	151	45.6	-21	53.4	
12	96	17.7	13	07.5	+23	00.0	336	10.2	+21	45.4	200	03.6	-22	17.4	166	48.3	-21	53.4	
13	111	20.1	28	06.7		00.2	351	11.0		45.0	215	06.3		17.4	181	51.0		53.5	
14	126	22.6	43	05.8		00.4	6	11.7		44.7	230	09.1		17.4	196	53.6		53.5	
15	141	25.1	58	05.0		00.7	21	12.5		44.4	245	11.9		17.4	211	56.3		53.5	
16	156	27.5	73	04.1		00.9	36	13.3		44.1	260	14.7		17.3	226	58.9		53.5	
17	171	30.0	88	03.3	+23	01.2	51	14.1	+21	43.8	275	17.4	-22	17.3	242	01.6	-21	53.6	
18	186	32.4	103	02.4	+23	01.4	66	14.9	+21	43.5	290	20.2	-22	17.3	257	04.2	-21	53.6	
19	201	34.9	118	01.6		01.7	81	15.7		43.1	305	23.0		17.3	272	06.9		53.6	
20	216	37.4	133	00.7		01.9	96	16.5		42.8	320	25.7		17.3	287	09.5		53.7	
21	231	39.8	147	59.9		02.1	111	17.2		42.5	335	28.5		17.2	302	12.2		53.7	
22	246	42.3	162	59.0		02.4	126	18.0		42.2	350	31.3		17.2	317	14.8		53.7	
23	261	44.8	177	58.2		02.6	141	18.8		41.9	5	34.1		17.2	332	17.5		53.7	
24	276	47.2	192	57.3	+23	02.8	156	19.6	+21	41.5	20	36.8	-22	17.2	347	20.2	-21	53.8	
Dif.	—		-8		+2		+8		-3		+28		0		+27				

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15'7				SD: 15'5 PHE { 4 ^h : 56'9 12 ^h : 57'2 20 ^h : 57'4								Edad: 25 ^d 6			R ^o : 52 ^m					
	PMG: 12 ^h 03 ^m 4				PMG: 08 ^h 59 ^m																
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.							Civil	Náut.	Hora	R ^o	Hora	R ^o	
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	m	h	m	m	
0	179	10.0	+23	15.0	229	35.8	117	+12	55.6	102	60 N	21 26	23 07	** **	1 10	17	17 12	85			
1	194	09.9		14.9	244	06.5	117	+13	05.8	102	58	21 06	22 20	** **	17	21	17 01	82			
2	209	09.7		14.8	258	37.2	116		16.0	102	56	20 50	21 52	** **	24	23	16 53	79			
3	224	09.6		14.7	273	07.8	115		26.2	101	54	36	30	23 12	30	25	45	77			
4	239	09.5		14.5	287	38.3	114		36.3	100	52	24	21 12	22 29	36	27	38	75			
5	254	09.3	+23	14.4	302	08.7	113	+13	46.3	100	50	20 13	20 57	22 02	1 41	29	16 32	73			
6	269	09.2	+23	14.3	316	39.0	112	+13	56.3	99	45	19 51	20 28	21 17	1 52	32	16 18	69			
7	284	09.1		14.1	331	09.2	112	+14	06.2	99	40	33	20 06	20 47	2 01	35	16 07	67			
8	299	09.0		14.0	345	39.4	111		16.1	98	35	18	19 48	24	08	39	15 58	64			
9	314	08.8		13.9	0	09.5	109		25.9	98	30	19 05	33	20 06	15	41	49	62			
10	329	08.7		13.7	14	39.4	109		35.7	97	20	18 43	19 08	19 37	27	44	35	59			
11	344	08.6	+23	13.6	29	09.3	108	+14	45.4	96	10 N	18 25	18 48	19 15	2 38	47	15 23	55			
12	359	08.5	+23	13.5	43	39.1	107	+14	55.0	95	0	18 07	18 30	18 56	2 48	50	15 11	53			
13	14	08.3		13.3	58	08.8	106	+15	04.5	95	10 S	17 50	18 13	39	2 58	53	15 00	50			
14	29	08.2		13.2	72	38.4	105		14.0	94	20	31	17 55	23	3 08	57	14 48	46			
15	44	08.1		13.1	87	07.9	105		23.4	94	30	17 10	37	18 07	21	60	34	43			
16	59	08.0		12.9	101	37.4	103		32.8	93	35	16 58	26	17 58	28	63	25	42			
17	74	07.8	+23	12.8	116	06.7	102	+15	42.1	92	40	16 44	17 15	17 49	3 36	66	14 16	39			
18	89	07.7	+23	12.7	130	35.9	102	+15	51.3	91	45	16 28	17 01	17 38	3 46	68	14 06	35			
19	104	07.6		12.5	145	05.1	100	+16	00.4	91	50	16 07	16 45	27	3 57	73	13 53	32			
20	119	07.4		12.4	159	34.1	100		09.5	90	52	15 57	38	22	4 03	74	47	30			
21	134	07.3		12.2	174	03.1	99		18.5	89	54	46	30	16	09	77	40	28			
22	149	07.2		12.1	188	32.0	97		27.4	88	56	34	21	10	15	80	33	26			
23	164	07.1		12.0	203	00.7	97		36.2	88	58	19	16 11	17 03	23	82	25	23			
24	179	06.9	+23	11.8	217	29.4		+16	45.0		60 S	15 02	15 59	16 56	4 31	86	13 15	20			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 31 ^m 9		Mag: -3.9 PMG: 11 ^h 09 ^m				Mag: +1.8 PMG: 13 ^h 34 ^m				Mag: -2.6 PMG: 22 ^h 33 ^m				Mag: +0.1 PMG: 00 ^h 51 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	276	47.2	192	57.3	+23	02.8	156	19.6	+21	41.5	20	36.8	-22	-17.2	347	20.2	-21	53.8
1	291	49.7	207	56.5		03.1	171	20.4		41.2	35	39.6		-17.2	2	22.8		53.8
2	306	52.2	222	55.6		03.3	186	21.2		40.9	50	42.4		-17.1	17	25.5		53.8
3	321	54.6	237	54.8		03.5	201	22.0		40.6	65	45.1		-17.1	32	28.1		53.8
4	336	57.1	252	53.9		03.8	216	22.7		40.3	80	47.9		-17.1	47	30.8		53.9
5	351	59.6	267	53.1	+23	04.0	231	23.5	+21	39.9	95	50.7	-22	-17.1	62	33.4	-21	53.9
6	7	02.0	282	52.2	+23	04.2	246	24.3	+21	39.6	110	53.4	-22	-17.1	77	36.1	-21	53.9
7	22	04.5	297	51.4		04.4	261	25.1		39.3	125	56.2		-17.0	92	38.7		54.0
8	37	06.9	312	50.5		04.7	276	25.9		39.0	140	59.0		-17.0	107	41.4		54.0
9	52	09.4	327	49.7		04.9	291	26.7		38.6	156	01.7		-17.0	122	44.1		54.0
10	67	11.9	342	48.8		05.1	306	27.5		38.3	171	04.5		-17.0	137	46.7		54.0
11	82	14.3	357	48.0	+23	05.3	321	28.3	+21	38.0	186	07.3	-22	-17.0	152	49.4	-21	54.1
12	97	16.8	12	47.1	+23	05.5	336	29.1	+21	37.7	201	10.0	-22	-16.9	167	52.0	-21	54.1
13	112	19.3	27	46.3		05.8	351	29.8		37.3	216	12.8		-16.9	182	54.7		54.1
14	127	21.7	42	45.4		06.0	6	30.6		37.0	231	15.6		-16.9	197	57.3		54.1
15	142	24.2	57	44.6		06.2	21	31.4		36.7	246	18.4		-16.9	213	00.0		54.2
16	157	26.7	72	43.7		06.4	36	32.2		36.4	261	21.1		-16.9	228	02.6		54.2
17	172	29.1	87	42.9	+23	06.6	51	33.0	+21	36.0	276	23.9	-22	-16.8	243	05.3	-21	54.2
18	187	31.6	102	42.0	+23	06.8	66	33.8	+21	35.7	291	26.7	-22	-16.8	258	07.9	-21	54.2
19	202	34.1	117	41.1		07.0	81	34.6		35.4	306	29.4		-16.8	273	10.6		54.3
20	217	36.5	132	40.3		07.2	96	35.4		35.1	321	32.2		-16.8	288	13.3		54.3
21	232	39.0	147	39.4		07.5	111	36.2		34.7	336	35.0		-16.8	303	15.9		54.3
22	247	41.4	162	38.6		07.7	126	36.9		34.4	351	37.7		-16.7	318	18.6		54.4
23	262	43.9	177	37.7		07.9	141	37.7		34.1	6	40.5		-16.7	333	21.2		54.4
24	277	46.4	192	36.9	+23	08.1	156	38.5	+21	33.8	21	43.3	-22	-16.7	348	23.9	-21	54.4
Dif.	—		-9		+2		+8		-3		+28		0		+27			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 15°7'					PHE {		Edad: 26 ^d 6									R°: 56 ^m					
	PMG: 12 ^h 03 ^m 6					4 ^h : 57°7' 12 ^h : 58°0' 20 ^h : 58°3'																
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m						
0	179	06.9	+23	11.8	217	29.4	96	+16	45.0	87	60 N ** **	1 00	2 41	1 27	25	18 37 82						
1	194	06.8		11.7	231	58.0	95	+16	53.7	85	58 ** **	1 47	3 01	38	28	23 79						
2	209	06.7		11.5	246	26.5	94	+17	02.2	86	56 ** **	2 16	17	47	31	12 76						
3	224	06.6		11.4	260	54.9	93		10.8	84	54 0 55	37	31	1 55	33	18 02 74						
4	239	06.4		11.2	275	23.2	92		19.2	83	52 1 38	2 55	43	2 03	35	17 53 73						
5	254	06.3	+23	11.1	289	51.4	91	+17	27.5	83	50 2 05	3 10	3 54	2 10	36	17 45 71						
6	269	06.2	+23	10.9	304	19.5	90	+17	35.8	81	45 2 50	3 39	4 16	2 24	40	17 27 69						
7	284	06.1		10.8	318	47.5	89		43.9	81	40 3 20	4 01	34	36	43	14 66						
8	299	05.9		10.7	333	15.4	89	+17	52.0	80	35 3 43	19	4 49	47	44	17 02 64						
9	314	05.8		10.5	347	43.3	87	+18	00.0	79	30 4 01	35	5 02	2 56	46	16 51 64						
10	329	05.7		10.4	2	11.0	86		07.9	78	20 30	4 59	24	3 11	50	34 60						
11	344	05.6	+23	10.2	16	38.6	86	+18	15.7	76	10 N 4 52	5 20	5 43	3 25	52	16 18 59						
12	359	05.4	+23	10.1	31	06.2	84	+18	23.3	76	0 5 11	5 37	6 00	3 38	55	16 04 56						
13	14	05.3		09.9	45	33.6	83		30.9	75	10 S 28	5 54	17	3 51	57	15 50 54						
14	29	05.2		09.8	60	00.9	83		38.4	75	20 5 44	6 12	36	4 05	60	34 52						
15	44	05.1		09.6	74	28.2	81		45.9	73	30 6 00	30	6 57	21	63	17 49						
16	59	05.0		09.4	88	55.3	81	+18	53.2	72	35 09	41	7 09	31	65	15 07 47						
17	74	04.8	+23	09.3	103	22.4	80	+19	00.4	70	40 6 18	6 52	7 23	4 42	67	14 55 46						
18	89	04.7	+23	09.1	117	49.4	79	+19	07.4	70	45 6 28	7 06	7 39	4 54	70	14 41 44						
19	104	04.6		09.0	132	16.3	77		14.4	69	50 40	21	8 00	5 10	73	25 40						
20	119	04.5		08.8	146	43.0	77		21.3	68	52 45	29	10	17	75	17 39						
21	134	04.3		08.7	161	09.7	76		28.1	67	54 51	37	20	26	76	14 08 38						
22	149	04.2		08.5	175	36.3	75		34.8	65	56 6 57	46	33	35	78	13 59 35						
23	164	04.1		08.3	190	02.8	74		41.3	65	58 7 04	7 56	8 47	5 45	82	13 48 33						
24	179	04.0	+23	08.2	204	29.2		+19	47.8		60 S 7 11	8 07	9 04	5 57	85	13 35 30						
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 5 ^h 28 ^m 0		Mag: -3.9 PMG: 11 ^h 10 ^m				Mag: +1.8 PMG: 13 ^h 33 ^m				Mag: -2.6 PMG: 22 ^h 29 ^m				Mag: +0.1 PMG: 00 ^h 46 ^m							
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	277	46.4	192	36.9	+23	08.1	156	38.5	+21	33.8	21	43.3	-22	16.7	348	23.9	-21	54.4				
1	292	48.8	207	36.0		08.3	171	39.3		33.4	36	46.0		16.7	3	26.5		54.4				
2	307	51.3	222	35.2		08.5	186	40.1		33.1	51	48.8		16.7	18	29.2		54.5				
3	322	53.8	237	34.3		08.7	201	40.9		32.8	66	51.5		16.6	33	31.9		54.5				
4	337	56.2	252	33.4		08.9	216	41.7		32.5	81	54.3		16.6	48	34.5		54.5				
5	352	58.7	267	32.6	+23	09.1	231	42.5	+21	32.1	96	57.1	-22	16.6	63	37.2	-21	54.5				
6	8	01.2	282	31.7	+23	09.3	246	43.3	+21	31.8	111	59.8	-22	16.6	78	39.8	-21	54.6				
7	23	03.6	297	30.9		09.5	261	44.1		31.5	127	02.6		16.6	93	42.5		54.6				
8	38	06.1	312	30.0		09.7	276	44.8		31.1	142	05.4		16.5	108	45.1		54.6				
9	53	08.6	327	29.2		09.9	291	45.6		30.8	157	08.1		16.5	123	47.8		54.7				
10	68	11.0	342	28.3		10.1	306	46.4		30.5	172	10.9		16.5	138	50.4		54.7				
11	83	13.5	357	27.4	+23	10.3	321	47.2	+21	30.1	187	13.7	-22	16.5	153	53.1	-21	54.7				
12	98	15.9	12	26.6	+23	10.4	336	48.0	+21	29.8	202	16.4	-22	16.5	168	55.8	-21	54.7				
13	113	18.4	27	25.7		10.6	351	48.8		29.5	217	19.2		16.4	183	58.4		54.8				
14	128	20.9	42	24.9		10.8	6	49.6		29.2	232	22.0		16.4	199	01.1		54.8				
15	143	23.3	57	24.0		11.0	21	50.4		28.8	247	24.7		16.4	214	03.7		54.8				
16	158	25.8	72	23.1		11.2	36	51.2		28.5	262	27.5		16.4	229	06.4		54.8				
17	173	28.3	87	22.3	+23	11.4	51	52.0	+21	28.2	277	30.2	-22	16.4	244	09.0	-21	54.9				
18	188	30.7	102	21.4	+23	11.6	66	52.8	+21	27.8	292	33.0	-22	16.3	259	11.7	-21	54.9				
19	203	33.2	117	20.6		11.8	81	53.6		27.5	307	35.8		16.3	274	14.4		54.9				
20	218	35.7	132	19.7		11.9	96	54.4		27.2	322	38.5		16.3	289	17.0		55.0				
21	233	38.1	147	18.9		12.1	111	55.1		26.8	337	41.3		16.3	304	19.7		55.0				
22	248	40.6	162	18.0		12.3	126	55.9		26.5	352	44.1		16.3	319	22.3		55.0				
23	263	43.0	177	17.1		12.5	141	56.7		26.2	7	46.8		16.2	334	25.0		55.0				
24	278	45.5	192	16.3	+23	12.7	156	57.5	+21	25.8	22	49.6	-22	16.2	349	27.6	-21	55.1				
Dif.	—		-9				+8				+28				0				+27			

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 04 ^m 0				SD: 16'1 Edad: 28 ^d 6		PHE { 4 ^h : 59'2 12 ^h : 59'5 20 ^h : 59'6		PMG: 11 ^h 46 ^m Rº: 61 ^m			Náut.	Civil		Hora	Rº	Hora	Rº
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.												
h	°	'	°	'	°	'	°	'	°	'	° N	h m	h m	h m	h m m	h m m	h m m	
0	179	01.0	+23	04.2	190	37.7	54	+21	45.5	33	60 N	** **	1 05	2 43	2 29	55	21 08	53
1	194	00.9		04.0	205	02.1	54		48.8	31	58	** **	1 50	3 03	2 45	57	20 51	54
2	209	00.8		03.8	219	26.5	53		51.9	29	56	** **	2 18	19	3 00	57		36 55
3	224	00.7		03.6	233	50.8	52		54.8	28	54	1 00	39	33	12	57		23 56
4	239	00.6		03.4	248	15.0	51	+21	57.6	27	52	1 41	2 57	45	23	57		12 56
5	254	00.4	+23	03.3	262	39.1	51	+22	00.3	25	50	2 07	3 11	3 55	3 32	58	20 02	57
6	269	00.3	+23	03.1	277	03.2	51	+22	02.8	24	45	2 51	3 40	4 18	3 53	58	19 41	58
7	284	00.2		02.9	291	27.3	50		05.2	22	40	3 21	4 03	35	4 09	59		24 59
8	299	00.1		02.7	305	51.3	49		07.4	21	35	3 44	20	4 50	23	60	19 10	59
9	314	00.0		02.5	320	15.2	49		09.5	19	30	4 02	4 35	5 03	35	60	18 57	60
10	328	59.8		02.4	334	39.1	48		11.4	18	20	31	5 00	24	4 56	60		36 60
11	343	59.7	+23	02.2	349	02.9	48	+22	13.2	17	10 N	4 53	5 20	5 43	5 14	61	18 17	61
12	358	59.6	+23	02.0	3	26.7	47	+22	14.9	14	0	5 12	5 38	6 00	5 31	61	18 00	61
13	13	59.5		01.8	17	50.4	47		16.3	14	10 S	28	5 55	18	5 48	61	17 43	61
14	28	59.4		01.6	32	14.1	46		17.7	11	20	5 44	6 12	36	6 07	61		24 62
15	43	59.2		01.4	46	37.7	46		18.8	10	30	6 00	30	6 57	28	61	17 03	62
16	58	59.1		01.2	61	01.3	46		19.8	9	35	09	41	7 09	40	62	16 50	63
17	73	59.0	+23	01.1	75	24.9	45	+22	20.7	7	40	6 18	6 52	7 23	6 54	62	16 36	63
18	88	58.9	+23	00.9	89	48.4	45	+22	21.4	6	45	6 28	7 05	7 39	7 11	62	16 19	63
19	103	58.8		00.7	104	11.9	45		22.0	4	50	40	21	7 59	32	62	15 57	64
20	118	58.6		00.5	118	35.4	44		22.4	2	52	45	28	8 09	42	62		47 64
21	133	58.5		00.3	132	58.8	44		22.6	1	54	50	36	20	7 54	62		36 64
22	148	58.4	+23	00.1	147	22.2	44		22.7	0	56	6 56	45	32	8 07	61		23 65
23	163	58.3	+22	59.9	161	45.6	43		22.7	3	58	7 03	7 55	8 46	8 22	61	15 08	65
24	178	58.2	+22	59.7	176	08.9		+22	22.4		60 S	7 10	8 07	9 03	8 39	62	14 50	65
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 20 ^m 1		Mag: -3.9 PMG: 11 ^h 13 ^m				Mag: +1.8 PMG: 13 ^h 30 ^m				Mag: -2.6 PMG: 22 ^h 20 ^m				Mag: +0.1 PMG: 00 ^h 38 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	279	44.7	191	55.6	+23	16.6	157	16.6	+21	17.8	23	55.8	-22	15.8	350	31.4	-21	55.7
1	294	47.1	206	54.7		16.7	172	17.4		17.4	38	58.6		15.7	5	34.1		55.7
2	309	49.6	221	53.8		16.9	187	18.2		17.1	54	01.3		15.7	20	36.7		55.8
3	324	52.0	236	53.0		17.0	202	19.0		16.7	69	04.1		15.7	35	39.4		55.8
4	339	54.5	251	52.1		17.1	217	19.8		16.4	84	06.8		15.7	50	42.0		55.8
5	354	57.0	266	51.3	+23	17.3	232	20.6	+21	16.0	99	09.6	-22	15.7	65	44.7	-21	55.8
6	9	59.4	281	50.4	+23	17.4	247	21.4	+21	15.7	114	12.3	-22	15.6	80	47.4	-21	55.9
7	25	01.9	296	49.5		17.6	262	22.2		15.4	129	15.1		15.6	95	50.0		55.9
8	40	04.4	311	48.7		17.7	277	23.0		15.0	144	17.8		15.6	110	52.7		55.9
9	55	06.8	326	47.8		17.8	292	23.8		14.7	159	20.6		15.6	125	55.3		56.0
10	70	09.3	341	46.9		18.0	307	24.6		14.3	174	23.4		15.6	140	58.0		56.0
11	85	11.8	356	46.1	+23	18.1	322	25.4	+21	14.0	189	26.1	-22	15.5	156	00.7	-21	56.0
12	100	14.2	11	45.2	+23	18.3	337	26.2	+21	13.7	204	28.9	-22	15.5	171	03.3	-21	56.0
13	115	16.7	26	44.3		18.4	352	27.0		13.3	219	31.6		15.5	186	06.0		56.1
14	130	19.2	41	43.5		18.5	7	27.8		13.0	234	34.4		15.5	201	08.6		56.1
15	145	21.6	56	42.6		18.7	22	28.6		12.6	249	37.1		15.5	216	11.3		56.1
16	160	24.1	71	41.7		18.8	37	29.4		12.3	264	39.9		15.4	231	13.9		56.1
17	175	26.5	86	40.9	+23	18.9	52	30.2	+21	11.9	279	42.6	-22	15.4	246	16.6	-21	56.2
18	190	29.0	101	40.0	+23	19.0	67	31.0	+21	11.6	294	45.4	-22	15.4	261	19.3	-21	56.2
19	205	31.5	116	39.1		19.2	82	31.8		11.2	309	48.1		15.4	276	21.9		56.2
20	220	33.9	131	38.3		19.3	97	32.6		10.9	324	50.9		15.4	291	24.6		56.3
21	235	36.4	146	37.4		19.4	112	33.4		10.6	339	53.6		15.4	306	27.2		56.3
22	250	38.9	161	36.5		19.5	127	34.2		10.2	354	56.4		15.3	321	29.9		56.3
23	265	41.3	176	35.7		19.7	142	35.0		09.9	9	59.2		15.3	336	32.5		56.3
24	280	43.8	191	34.8	+23	19.8	157	35.8	+21	09.5	25	01.9	-22	15.3	351	35.2	-21	56.4
Dif.	—		-9		+1		+8		-3		+28		0		+27		0	

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°7'			SD: 16°3'	Edad: 0 ^d 2	PHE {	4 ^h : 59°8'					Civil	Náut.	Hora	R°	Hora	R°	
	PMG: 12 ^h 04 ^m 2						12 ^h : 60°0'											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.											
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m	h m	m	h m	m	
0	178	58.2	+22	59.7		176	08.9	43	+22	22.4	4	60 N	21 24	22 59	** **	3 24	75	
1	193	58.1		59.5		190	32.2	43		22.0	5	58	21 04	22 16	** **	42	73	
2	208	57.9		59.3		204	55.5	43		21.5	7	56	20 48	21 49	** **	3 57	72	
3	223	57.8		59.1		219	18.8	43		20.8	8	54	34	28	23 04	4 09	71	
4	238	57.7		58.9		233	42.1	42		20.0	10	52	22	21 10	22 25	20	71	
5	253	57.6	+22	58.7		248	05.3	42	+22	19.0	12	50	20 12	20 56	21 59	4 30	70	
6	268	57.5	+22	58.6		262	28.5	42	+22	17.8	13	45	19 50	20 27	21 16	4 51	68	
7	283	57.4		58.4		276	51.7	42		16.5	15	40	33	20 05	20 46	5 08	67	
8	298	57.2		58.2		291	14.9	42		15.0	17	35	18	19 47	20 24	23	66	
9	313	57.1		58.0		305	38.1	42		13.3	18	30	19 05	32	20 06	35	65	
10	328	57.0		57.8		320	01.3	42		11.5	19	20	18 44	19 08	19 37	5 56	64	
11	343	56.9	+22	57.6		334	24.5	42	+22	09.6	21	10 N	18 25	18 48	19 15	6 15	62	
12	358	56.8	+22	57.4		348	47.7	42	+22	07.5	23	0	18 08	18 30	18 56	6 32	61	
13	13	56.7		57.2		3	10.9	42		05.2	24	10 S	17 51	18 14	40	6 49	60	
14	28	56.5		56.9		17	34.1	42		02.8	26	20	33	17 57	24	7 08	59	
15	43	56.4		56.7		31	57.3	42	+22	00.2	28	30	12	38	08	29	57	
16	58	56.3		56.5		46	20.5	42	+21	57.4	29	35	17 00	28	18 00	42	56	
17	73	56.2	+22	56.3		60	43.7	42	+21	54.5	30	40	16 46	17 16	17 50	7 56	55	
18	88	56.1	+22	56.1		75	06.9	42	+21	51.5	33	45	16 30	17 03	17 40	8 13	54	
19	103	56.0		55.9		89	30.1	42		48.2	33	50	10	16 48	29	34	52	
20	118	55.9		55.7		103	53.3	43		44.9	36	52	16 00	40	24	44	51	
21	133	55.7		55.5		118	16.6	43		41.3	36	54	15 49	33	18	8 56	49	
22	148	55.6		55.3		132	39.9	43		37.7	39	56	37	24	13	9 08	48	
23	163	55.5		55.1		147	03.2	43		33.8	40	58	23	14	17 06	23	46	
24	178	55.4	+22	54.9		161	26.5		+21	29.8		60 S	15 06	16 03	16 59	9 41	43	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 16 ^m 2		Mag: -3.9 PMG: 11 ^h 14 ^m				Mag: +1.8 PMG: 13 ^h 29 ^m				Mag: -2.6 PMG: 22 ^h 16 ^m				Mag: +0.1 PMG: 00 ^h 34 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	280	43.8	191	34.8	+23	19.8		157	35.8	+21	09.5	25	01.9	-22	-15.3	351	35.2	
1	295	46.3	206	33.9		19.9		172	36.6		09.2	40	04.7		-15.3	6	37.9	
2	310	48.7	221	33.1		20.0		187	37.4		08.8	55	07.4		-15.3	21	40.5	
3	325	51.2	236	32.2		20.1		202	38.2		08.5	70	10.2		-15.2	36	43.2	
4	340	53.7	251	31.3		20.3		217	39.0		08.1	85	12.9		-15.2	51	45.8	
5	355	56.1	266	30.5	+23	20.4		232	39.8	+21	07.8	100	15.7	-22	-15.2	66	48.5	
6	10	58.6	281	29.6	+23	20.5		247	40.6	+21	07.4	115	18.4	-22	-15.2	81	51.2	
7	26	01.0	296	28.7		20.6		262	41.4		07.1	130	21.2		-15.2	96	53.8	
8	41	03.5	311	27.8		20.7		277	42.2		06.7	145	23.9		-15.1	111	56.5	
9	56	06.0	326	27.0		20.8		292	43.0		06.4	160	26.7		-15.1	126	59.1	
10	71	08.4	341	26.1		20.9		307	43.8		06.0	175	29.4		-15.1	142	01.8	
11	86	10.9	356	25.2	+23	21.0		322	44.6	+21	05.7	190	32.2	-22	-15.1	157	04.5	
12	101	13.4	11	24.4	+23	21.1		337	45.4	+21	05.3	205	34.9	-22	-15.1	172	07.1	
13	116	15.8	26	23.5		21.2		352	46.2		05.0	220	37.7		-15.0	187	09.8	
14	131	18.3	41	22.6		21.4		7	47.0		04.6	235	40.4		-15.0	202	12.4	
15	146	20.8	56	21.8		21.5		22	47.8		04.3	250	43.2		-15.0	217	15.1	
16	161	23.2	71	20.9		21.6		37	48.6		03.9	265	45.9		-15.0	232	17.7	
17	176	25.7	86	20.0	+23	21.7		52	49.4	+21	03.6	280	48.7	-22	-15.0	247	20.4	
18	191	28.2	101	19.2	+23	21.8		67	50.2	+21	03.2	295	51.4	-22	-15.0	262	23.1	
19	206	30.6	116	18.3		21.9		82	51.0		02.9	310	54.2		-14.9	277	25.7	
20	221	33.1	131	17.4		22.0		97	51.8		02.5	325	56.9		-14.9	292	28.4	
21	236	35.5	146	16.5		22.1		112	52.6		02.2	340	59.6		-14.9	307	31.0	
22	251	38.0	161	15.7		22.1		127	53.4		01.8	356	02.4		-14.9	322	33.7	
23	266	40.5	176	14.8		22.2		142	54.2		01.5	11	05.1		-14.9	337	36.4	
24	281	42.9	191	13.9	+23	22.3		157	55.0	+21	01.1	26	07.9	-22	-14.8	352	39.0	
Dif.	—		-9		+1		+8		-3		+27		0		+27		0	

No usar para navegación

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ⁷ PMG: 12 ^h 04 ^m 6			SD: 16 ⁴ Edad: 2 ^d 2			PHE { 4 ^h : 60 ³ 12 ^h : 60 ³ 20 ^h : 60 ²										
	PMG: 14 ^h 47 ^m			Rº: 56 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	'		h m	h m	h m m	h m m	h m m		
0	178	52.7	+22	49.6		146	56.6	53	+19	09.8	75	60 N	21 22	22 54	** **	6 08	95
1	193	52.6		49.4		161	20.9	54	+19	02.3	77	58	21 03	22 14	** **	21	91
2	208	52.5		49.2		175	45.3	55	+18	54.6	79	56	20 47	21 47	** **	32	87
3	223	52.4		49.0		190	09.8	55		46.7	79	54		33	26	23 00	41 85
4	238	52.2		48.7		204	34.3	56		38.8	81	52	21	21 09	22 23	50	83
5	253	52.1	+22	48.5		218	58.9	57	+18	30.7	83	50	20 11	20 55	21 58	6 57	81
6	268	52.0	+22	48.3		233	23.6	57	+18	22.4	83	45	19 49	20 26	21 15	7 14	76
7	283	51.9		48.0		247	48.3	58		14.1	84	40	32	20 05	20 46	27	73
8	298	51.8		47.8		262	13.1	58	+18	05.7	86	35	18	19 47	23	38	70
9	313	51.7		47.6		276	37.9	60	+17	57.1	87	30	19 05	32	20 05	7 48	68
10	328	51.6		47.4		291	02.9	59		48.4	88	20	18 44	19 08	19 37	8 05	64
11	343	51.5	+22	47.1		305	27.8	61	+17	39.6	90	10 N	18 25	18 48	19 15	8 19	61
12	358	51.4	+22	46.9		319	52.9	61	+17	30.6	90	0	18 08	18 31	18 57	8 33	57
13	13	51.3		46.6		334	18.0	62		21.6	92	10 S	17 51	18 14	40	8 47	53
14	28	51.1		46.4		348	43.2	62		12.4	93	20	33	17 57	25	9 01	50
15	43	51.0		46.2		3	08.4	64	+17	03.1	94	30	13	39	09	18	46
16	58	50.9		45.9		17	33.8	64	+16	53.7	95	35	17 01	29	18 00	28	43
17	73	50.8	+22	45.7		31	59.2	64	+16	44.2	96	40	16 47	17 18	17 51	9 39	40
18	88	50.7	+22	45.5		46	24.6	66	+16	34.6	97	45	16 31	17 05	17 42	9 52	37
19	103	50.6		45.2		60	50.2	66		24.9	98	50	11	16 49	30	10 07	34
20	118	50.5		45.0		75	15.8	66		15.1	99	52	16 02	42	25	14	32
21	133	50.4		44.7		89	41.4	68	+16	05.2	100	54	15 51	34	20	23	29
22	148	50.3		44.5		104	07.2	68	+15	55.2	102	56	39	25	14	32	26
23	163	50.2		44.3		118	33.0	69		45.0	102	58	25	16	08	42	23
24	178	50.1	+22	44.0		132	58.9		+15	34.8		60 S	15 08	16 05	17 01	10 54	20

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 5 ^h 08 ^m 4		Mag: -3.9 PMG: 11 ^h 17 ^m			Mag: +1.8 PMG: 13 ^h 26 ^m			Mag: -2.6 PMG: 22 ^h 07 ^m			Mag: +0.1 PMG: 00 ^h 25 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'						
0	282	42.1	190	53.0	+23	24.2		158	14.3	+20	52.6		27	13.8	-22	-14.4	353	42.8	-21	57.7
1	297	44.5	205	52.1		24.3		173	15.1		52.3		42	16.5		-14.4	8	45.5		57.7
2	312	47.0	220	51.3		24.3		188	15.9		51.9		57	19.2		-14.4	23	48.2		57.7
3	327	49.5	235	50.4		24.4		203	16.7		51.5		72	22.0		-14.3	38	50.8		57.7
4	342	51.9	250	49.5		24.4		218	17.6		51.2		87	24.7		-14.3	53	53.5		57.8
5	357	54.4	265	48.6	+23	24.5		233	18.4	+20	50.8		102	27.5	-22	-14.3	68	56.1	-21	57.8
6	12	56.9	280	47.8	+23	24.6		248	19.2	+20	50.5		117	30.2	-22	-14.3	83	58.8	-21	57.8
7	27	59.3	295	46.9		24.6		263	20.0		50.1		132	32.9		-14.3	99	01.5		57.9
8	43	01.8	310	46.0		24.7		278	20.8		49.7		147	35.7		-14.2	114	04.1		57.9
9	58	04.3	325	45.2		24.7		293	21.6		49.4		162	38.4		-14.2	129	06.8		57.9
10	73	06.7	340	44.3		24.8		308	22.4		49.0		177	41.2		-14.2	144	09.4		57.9
11	88	09.2	355	43.4	+23	24.8		323	23.2	+20	48.7		192	43.9	-22	-14.2	159	12.1	-21	58.0
12	103	11.6	10	42.5	+23	24.9		338	24.0	+20	48.3		207	46.6	-22	-14.2	174	14.8	-21	58.0
13	118	14.1	25	41.7		24.9		353	24.8		47.9		222	49.4		-14.2	189	17.4		58.0
14	133	16.6	40	40.8		25.0		8	25.6		47.6		237	52.1		-14.1	204	20.1		58.0
15	148	19.0	55	39.9		25.0		23	26.4		47.2		252	54.9		-14.1	219	22.7		58.1
16	163	21.5	70	39.0		25.1		38	27.2		46.8		267	57.6		-14.1	234	25.4		58.1
17	178	24.0	85	38.2	+23	25.1		53	28.1	+20	46.5		283	00.3	-22	-14.1	249	28.1	-21	58.1
18	193	26.4	100	37.3	+23	25.1		68	28.9	+20	46.1		298	03.1	-22	-14.1	264	30.7	-21	58.2
19	208	28.9	115	36.4		25.2		83	29.7		45.8		313	05.8		-14.0	279	33.4		58.2
20	223	31.4	130	35.5		25.2		98	30.5		45.4		328	08.5		-14.0	294	36.0		58.2
21	238	33.8	145	34.7		25.3		113	31.3		45.0		343	11.3		-14.0	309	38.7		58.2
22	253	36.3	160	33.8		25.3		128	32.1		44.7		358	14.0		-14.0	324	41.4		58.3
23	268	38.8	175	32.9		25.3		143	32.9		44.3		13	16.8		-14.0	339	44.0		58.3
24	283	41.2	190	32.0	+23	25.4		158	33.7	+20	43.9		28	19.5	-22	-14.0	354	46.7	-21	58.3
Dif.	—		-9		0			+8		-4			+27		0		+27			0

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'7				SD: 16'4		PHE {		4 ^h : 60'2													
	PMG: 12 ^h 04 ^m 7				Edad: 3 ^d 2		{		12 ^h : 60'1													
									20 ^h : 60'0													
				PMG: 15 ^h 43 ^m		Rº: 53 ^m																
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'		°	'			° N	h m	h m	h m	h m m		h m m				
0	178	50.1	+22	44.0	132	58.9	69	+15	34.8	103		60 N	** **	1 16	2 48	7 43	95	23 19	13			
1	193	50.0		43.8	147	24.8	71		24.5	104		58	** **	1 56	3 07	52	91	12	17			
2	208	49.8		43.5	161	50.9	71		14.1	105		56	** **	2 23	23	7 59	89	07	19			
3	223	49.7		43.3	176	17.0	71	+15	03.6	106		54	1 10	2 44	36	8 06	86	23 02	21			
4	238	49.6		43.0	190	43.1	73	+14	53.0	107		52	1 47	3 00	48	13	83	22 57	24			
5	253	49.5	+22	42.8	205	09.4	73	+14	42.3	108		50	2 12	3 15	3 58	8 18	81	22 53	26			
6	268	49.4	+22	42.5	219	35.7	74	+14	31.5	109		45	2 55	3 43	4 20	8 30	76	22 44	30			
7	283	49.3		42.3	234	02.1	75		20.6	109		40	3 24	4 05	37	40	73	36	34			
8	298	49.2		42.1	248	28.6	75	+14	09.7	111		35	3 46	22	4 52	48	70	30	37			
9	313	49.1		41.8	262	55.1	76	+13	58.6	111		30	4 04	4 37	5 04	8 56	66	24	40			
10	328	49.0		41.6	277	21.7	77		47.5	112		20	32	5 01	26	9 09	61	14	44			
11	343	48.9	+22	41.3	291	48.4	77	+13	36.3	113		10 N	4 54	5 21	5 44	9 20	58	22 05	48			
12	358	48.8	+22	41.1	306	15.1	79	+13	25.0	113		0	5 13	5 39	6 01	9 30	54	21 56	53			
13	13	48.7		40.8	320	42.0	79		13.7	115		10 S	29	5 55	18	40	51	48	56			
14	28	48.6		40.5	335	08.9	79	+13	02.2	115		20	5 45	6 12	36	9 51	47	38	61			
15	43	48.5		40.3	349	35.8	81	+12	50.7	116		30	6 00	30	6 56	10 04	42	28	66			
16	58	48.4		40.0	4	02.9	81		39.1	117		35	09	40	7 08	11	39	22	68			
17	73	48.3	+22	39.8	18	30.0	81	+12	27.4	117		40	6 18	6 52	7 22	10 19	36	21 15	71			
18	88	48.2	+22	39.5	32	57.1	83	+12	15.7	118		45	6 28	7 05	7 38	10 29	32	21 06	76			
19	103	48.1		39.3	47	24.4	83	+12	03.9	119		50	39	20	7 58	41	27	20 56	81			
20	118	47.9		39.0	61	51.7	84	+11	52.0	119		52	44	27	8 07	46	26	52	82			
21	133	47.8		38.8	76	19.1	84		40.1	120		54	49	35	18	52	23	47	85			
22	148	47.7		38.5	90	46.5	86		28.1	121		56	6 55	43	30	10 58	21	41	88			
23	163	47.6		38.2	105	14.1	86		16.0	121		58	7 01	7 53	8 44	11 05	18	20 35	90			
24	178	47.5	+22	38.0	119	41.7		+11	03.9			60 S	7 08	8 04	9 00	11 14	14	20 27	95			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG		Mag: -3.9				Mag: +1.8				Mag: -2.6				Mag: +0.1							
	5 ^h 04 ^m 4		PMG: 11 ^h 19 ^m				PMG: 13 ^h 25 ^m				PMG: 22 ^h 03 ^m				PMG: 00 ^h 21 ^m							
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	283	41.2	190	32.0	+23	25.4	158	33.7	+20	43.9	28	19.5	-22	14.0	354	46.7	-21	58.3				
1	298	43.7	205	31.2		25.4	173	34.5		43.6	43	22.2		13.9	9	49.3		58.3				
2	313	46.1	220	30.3		25.4	188	35.3		43.2	58	25.0		13.9	24	52.0		58.4				
3	328	48.6	235	29.4		25.5	203	36.2		42.8	73	27.7		13.9	39	54.7		58.4				
4	343	51.1	250	28.5		25.5	218	37.0		42.5	88	30.4		13.9	54	57.3		58.4				
5	358	53.5	265	27.7	+23	25.5	233	37.8	+20	42.1	103	33.2	-22	13.9	70	00.0	-21	58.5				
6	13	56.0	280	26.8	+23	25.6	248	38.6	+20	41.7	118	35.9	-22	13.8	85	02.6	-21	58.5				
7	28	58.5	295	25.9		25.6	263	39.4		41.4	133	38.6		13.8	100	05.3		58.5				
8	44	00.9	310	25.1		25.6	278	40.2		41.0	148	41.4		13.8	115	08.0		58.5				
9	59	03.4	325	24.2		25.6	293	41.0		40.6	163	44.1		13.8	130	10.6		58.6				
10	74	05.9	340	23.3		25.7	308	41.8		40.3	178	46.8		13.8	145	13.3		58.6				
11	89	08.3	355	22.4	+23	25.7	323	42.6	+20	39.9	193	49.6	-22	13.8	160	15.9	-21	58.6				
12	104	10.8	10	21.6	+23	25.7	338	43.5	+20	39.5	208	52.3	-22	13.7	175	18.6	-21	58.6				
13	119	13.2	25	20.7		25.7	353	44.3		39.2	223	55.0		13.7	190	21.3		58.7				
14	134	15.7	40	19.8		25.7	8	45.1		38.8	238	57.8		13.7	205	23.9		58.7				
15	149	18.2	55	18.9		25.8	23	45.9		38.4	254	00.5		13.7	220	26.6		58.7				
16	164	20.6	70	18.1		25.8	38	46.7		38.1	269	03.2		13.7	235	29.2		58.8				
17	179	23.1	85	17.2	+23	25.8	53	47.5	+20	37.7	284	06.0	-22	13.7	250	31.9	-21	58.8				
18	194	25.6	100	16.3	+23	25.8	68	48.3	+20	37.3	299	08.7	-22	13.6	265	34.6	-21	58.8				
19	209	28.0	115	15.4		25.8	83	49.1		37.0	314	11.4		13.6	280	37.2		58.8				
20	224	30.5	130	14.6		25.8	98	50.0		36.6	329	14.2		13.6	295	39.9		58.9				
21	239	33.0	145	13.7		25.8	113	50.8		36.2	344	16.9		13.6	310	42.5		58.9				
22	254	35.4	160	12.8		25.8	128	51.6		35.9	359	19.6		13.6	325	45.2		58.9				
23	269	37.9	175	11.9		25.9	143	52.4		35.5	14	22.4		13.5	340	47.9		58.9				
24	284	40.4	190	11.1	+23	25.9	158	53.2	+20	35.1	29	25.1	-22	13.5	355	50.5	-21	59.0				
Dif.	—		-9				0	+8				-4	+27				0	+27				

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 04 ^m 9				SD: 16'3 Edad: 4 ^d 2 PMG: 16 ^h 36 ^m														
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.						
	h	°	'	°	'	°	'	°			'	°	'	h	m	h	m	h	m
0	178	47.5	+22	38.0	119	41.7	86	+11	03.9	122	60 N	21 19	22 49	** **	9 18	92	23 32	12	
1	193	47.4		37.7	134	09.3	87	+10	51.7	122	58	21 01	22 10	** **	23 89		29 14		
2	208	47.3		37.5	148	37.0	88		39.5	123	56	20 45	21 44	** **	28 86		26 17		
3	223	47.2		37.2	163	04.8	89		27.2	124	54	32	24	22 55	32 84		23 20		
4	238	47.1		36.9	177	32.7	89		14.8	124	52	20	21 08	22 20	36 81		21 22		
5	253	47.0	+22	36.7	192	00.6	90	+10	02.4	125	50	20 10	20 53	21 56	9 39	79	23 19	23	
6	268	46.9	+22	36.4	206	28.6	90	+9	49.9	125	45	19 49	20 25	21 14	9 46	75	23 14	28	
7	283	46.8		36.2	220	56.6	91		37.4	126	40	32	20 04	20 45	53 70		10 32		
8	298	46.7		35.9	235	24.7	92		24.8	126	35	17	19 47	23	9 58	67	07 34		
9	313	46.6		35.6	249	52.9	92	+9	12.2	126	30	19 05	32	20 05	10 02	65	23 04	37	
10	328	46.5		35.4	264	21.1	93	+8	59.6	127	20	18 44	19 08	19 37	10 60		22 58	42	
11	343	46.4	+22	35.1	278	49.4	94	+8	46.9	128	10 N	18 25	18 48	19 15	10 18	55	22 53	47	
12	358	46.3	+22	34.8	293	17.8	94	+8	34.1	128	0	18 09	18 31	18 57	10 24	51	22 49	50	
13	13	46.2		34.6	307	46.2	94		21.3	128	10 S	17 52	18 15	41	31 47		44 55		
14	28	46.1		34.3	322	14.6	96	+8	08.5	129	20	34	17 58	25	38 43		39 59		
15	43	46.0		34.0	336	43.2	96	+7	55.6	129	30	14	40	10	46 38		34 63		
16	58	45.9		33.8	351	11.8	96		42.7	129	35	17 02	30	18 01	50 36		30 67		
17	73	45.8	+22	33.5	5	40.4	97	+7	29.8	130	40	16 48	17 19	17 52	10 55	33	22 26	71	
18	88	45.7	+22	33.2	20	09.1	98	+7	16.8	130	45	16 32	17 06	17 43	11 01	29	22 22	74	
19	103	45.6		32.9	34	37.9	98	+7	03.8	130	50	13	16 51	32	08 25		17 78		
20	118	45.5		32.7	49	06.7	98	+6	50.8	131	52	16 03	44	27	12 22		14 81		
21	133	45.4		32.4	63	35.5	99		37.7	131	54	15 53	36	21	15 20		12 83		
22	148	45.3		32.1	78	04.4	100		24.6	131	56	41	27	16	19 18		09 85		
23	163	45.2		31.8	92	33.4	100	+6	11.5	132	58	27	18	09	23 16		05 89		
24	178	45.1	+22	31.6	107	02.4		+5	58.3		60 S	15 11	16 07	17 02	11 28	12	22 02	91	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 5 ^h 00 ^m 5		Mag: -3.9 PMG: 11 ^h 20 ^m				Mag: +1.8 PMG: 13 ^h 24 ^m				Mag: -2.6 PMG: 21 ^h 58 ^m				Mag: +0.1 PMG: 00 ^h 17 ^m				
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	284	40.4	190	11.1	+23	25.9	158	53.2	+20	35.1	29	25.1	-22	-13.5	355	50.5	-21	59.0	
1	299	42.8	205	10.2		25.9	173	54.0		34.7	44	27.8		-13.5	10	53.2		59.0	
2	314	45.3	220	09.3		25.9	188	54.8		34.4	59	30.6		-13.5	25	55.9		59.0	
3	329	47.7	235	08.4		25.9	203	55.6		34.0	74	33.3		-13.5	40	58.5		59.1	
4	344	50.2	250	07.5		25.9	218	56.5		33.6	89	36.0		-13.5	56	01.2		59.1	
5	359	52.7	265	06.7	+23	25.9	233	57.3	+20	33.3	104	38.7	-22	-13.4	71	03.8	-21	59.1	
6	14	55.1	280	05.8	+23	25.9	248	58.1	+20	32.9	119	41.5	-22	-13.4	86	06.5	-21	59.1	
7	29	57.6	295	04.9		25.9	263	58.9		32.5	134	44.2		-13.4	101	09.2		59.2	
8	45	00.1	310	04.0		25.9	278	59.7		32.1	149	46.9		-13.4	116	11.8		59.2	
9	60	02.5	325	03.2		25.9	294	00.5		31.8	164	49.7		-13.4	131	14.5		59.2	
10	75	05.0	340	02.3		25.9	309	01.4		31.4	179	52.4		-13.4	146	17.1		59.2	
11	90	07.5	355	01.4	+23	25.9	324	02.2	+20	31.0	194	55.1	-22	-13.3	161	19.8	-21	59.3	
12	105	09.9	10	00.5	+23	25.8	339	03.0	+20	30.7	209	57.8	-22	-13.3	176	22.5	-21	59.3	
13	120	12.4	24	59.7		25.8	354	03.8		30.3	225	00.6		-13.3	191	25.1		59.3	
14	135	14.9	39	58.8		25.8	9	04.6		29.9	240	03.3		-13.3	206	27.8		59.4	
15	150	17.3	54	57.9		25.8	24	05.4		29.5	255	06.0		-13.3	221	30.4		59.4	
16	165	19.8	69	57.0		25.8	39	06.2		29.2	270	08.8		-13.2	236	33.1		59.4	
17	180	22.2	84	56.2	+23	25.8	54	07.1	+20	28.8	285	11.5	-22	-13.2	251	35.8	-21	59.4	
18	195	24.7	99	55.3	+23	25.8	69	07.9	+20	28.4	300	14.2	-22	-13.2	266	38.4	-21	59.5	
19	210	27.2	114	54.4		25.8	84	08.7		28.0	315	16.9		-13.2	281	41.1		59.5	
20	225	29.6	129	53.5		25.7	99	09.5		27.7	330	19.7		-13.2	296	43.7		59.5	
21	240	32.1	144	52.7		25.7	114	10.3		27.3	345	22.4		-13.2	311	46.4		59.5	
22	255	34.6	159	51.8		25.7	129	11.1		26.9	0	25.1		-13.1	326	49.1		59.6	
23	270	37.0	174	50.9		25.7	144	12.0		26.5	15	27.8		-13.1	341	51.7		59.6	
24	285	39.5	189	50.0	+23	25.7	159	12.8	+20	26.2	30	30.6	-22	-13.1	356	54.4	-21	59.6	
Dif.	—		-9 0				+8 -4				+27 0				+27				

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 05 ^m 1				SD: 16'2 Edad: 5 ^d 2 PMG: 17 ^h 27 ^m					PHE { 4 ^h : 59'5 12 ^h : 59'3 20 ^h : 59'1			Rº: 50 ^m							
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	° N	h m	h m	h m	h m m	h m m	h m m	h m m				
0	178	45.1	+22	31.6	107	02.4	101	+5 58.3	132	60 N	** **	1 22	2 51	10 50	91	23 44	11			
1	193	45.0		31.3	121	31.5	101	45.1	132	58	** **	2 00	3 10	52	88	43	14			
2	208	44.9		31.0	136	00.6	102	31.9	132	56	** **	26	25	54	84	43	17			
3	223	44.8		30.7	150	29.8	102	18.7	132	54	1 15	2 46	38	56	81	43	19			
4	238	44.7		30.5	164	59.0	102	+5 05.5	133	52	1 50	3 03	3 50	57	80	43	21			
5	253	44.6	+22	30.2	179	28.2	103	+4 52.2	133	50	2 15	3 17	4 00	10 58	78	23 42	23			
6	268	44.5	+22	29.9	193	57.5	104	+4 38.9	132	45	2 57	3 45	4 21	11 01	73	23 42	27			
7	283	44.4		29.6	208	26.9	104	25.7	134	40	3 25	4 06	39	03	70	42	30			
8	298	44.3		29.3	222	56.3	104	+4 12.3	133	35	3 47	24	4 53	05	66	41	34			
9	313	44.2		29.1	237	25.7	105	+3 59.0	133	30	4 05	4 38	5 05	07	63	41	36			
10	328	44.1		28.8	251	55.2	105	45.7	134	20	33	5 02	26	10	58	40	41			
11	343	44.0	+22	28.5	266	24.7	106	+3 32.3	133	10 N	4 55	5 22	5 45	11 13	54	23 40	45			
12	358	43.9	+22	28.2	280	54.3	106	+3 19.0	134	0	5 13	5 39	6 01	11 15	50	23 39	50			
13	13	43.8		27.9	295	23.9	106	+3 05.6	133	10 S	29	5 55	18	18	46	39	53			
14	28	43.7		27.6	309	53.5	107	+2 52.3	134	20	5 45	6 12	36	21	41	38	58			
15	43	43.6		27.4	324	23.2	107	38.9	134	30	6 00	30	6 56	24	36	37	63			
16	58	43.5		27.1	338	52.9	107	25.5	134	35	09	40	7 08	26	33	37	65			
17	73	43.4	+22	26.8	353	22.6	108	+2 12.1	134	40	6 17	6 51	7 21	11 28	30	23 37	68			
18	88	43.3	+22	26.5	7	52.4	108	+1 58.7	133	45	6 27	7 04	7 37	11 30	27	23 36	72			
19	103	43.2		26.2	22	22.2	109	45.4	134	50	38	19	7 57	33	23	35	77			
20	118	43.2		25.9	36	52.1	109	32.0	134	52	43	26	8 06	34	21	35	79			
21	133	43.1		25.6	51	22.0	109	18.6	134	54	48	34	17	35	19	35	81			
22	148	43.0		25.3	65	51.9	109	+1 05.2	134	56	6 54	42	28	37	16	34	84			
23	163	42.9		25.1	80	21.8	110	+0 51.8	133	58	7 00	7 52	42	11 39	14	23 34	86			
24	178	42.8	+22	24.8	94	51.8		+0 38.5		60 S	7 07	8 03	8 58	11 40	12	23 33	90			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 4 ^h 56 ^m 6		Mag: -3.9 PMG: 11 ^h 21 ^m				Mag: +1.8 PMG: 13 ^h 22 ^m				Mag: -2.5 PMG: 21 ^h 54 ^m				Mag: +0.1 PMG: 00 ^h 12 ^m					
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	285	39.5	189	50.0	+23	25.7	159	12.8	+20	26.2	30	30.6	-22	13.1	356	54.4	-21	59.6		
1	300	42.0	204	49.2		25.6	174	13.6		25.8	45	33.3		13.1	11	57.0		59.7		
2	315	44.4	219	48.3		25.6	189	14.4		25.4	60	36.0		13.1	26	59.7		59.7		
3	330	46.9	234	47.4		25.6	204	15.2		25.0	75	38.7		13.1	42	02.4		59.7		
4	345	49.3	249	46.5		25.6	219	16.0		24.7	90	41.5		13.0	57	05.0		59.7		
5	0	51.8	264	45.7	+23	25.5	234	16.9	+20	24.3	105	44.2	-22	13.0	72	07.7	-21	59.8		
6	15	54.3	279	44.8	+23	25.5	249	17.7	+20	23.9	120	46.9	-22	13.0	87	10.3	-21	59.8		
7	30	56.7	294	43.9		25.5	264	18.5		23.5	135	49.6		13.0	102	13.0		59.8		
8	45	59.2	309	43.0		25.4	279	19.3		23.1	150	52.4		13.0	117	15.7		59.8		
9	61	01.7	324	42.2		25.4	294	20.1		22.8	165	55.1		13.0	132	18.3		59.9		
10	76	04.1	339	41.3		25.4	309	21.0		22.4	180	57.8		12.9	147	21.0		59.9		
11	91	06.6	354	40.4	+23	25.3	324	21.8	+20	22.0	196	00.5	-22	12.9	162	23.7	-21	59.9		
12	106	09.1	9	39.5	+23	25.3	339	22.6	+20	21.6	211	03.2	-22	12.9	177	26.3	-21	59.9		
13	121	11.5	24	38.6		25.3	354	23.4		21.2	226	06.0		12.9	192	29.0	-22	00.0		
14	136	14.0	39	37.8		25.2	9	24.2		20.9	241	08.7		12.9	207	31.6		00.0		
15	151	16.5	54	36.9		25.2	24	25.0		20.5	256	11.4		12.8	222	34.3		00.0		
16	166	18.9	69	36.0		25.1	39	25.9		20.1	271	14.1		12.8	237	37.0		00.1		
17	181	21.4	84	35.1	+23	25.1	54	26.7	+20	19.7	286	16.9	-22	12.8	252	39.6	-22	00.1		
18	196	23.8	99	34.3	+23	25.1	69	27.5	+20	19.3	301	19.6	-22	12.8	267	42.3	-22	00.1		
19	211	26.3	114	33.4		25.0	84	28.3		19.0	316	22.3		12.8	282	44.9		00.1		
20	226	28.8	129	32.5		25.0	99	29.1		18.6	331	25.0		12.8	297	47.6		00.2		
21	241	31.2	144	31.6		24.9	114	30.0		18.2	346	27.7		12.7	312	50.3		00.2		
22	256	33.7	159	30.8		24.9	129	30.8		17.8	1	30.5		12.7	327	52.9		00.2		
23	271	36.2	174	29.9		24.8	144	31.6		17.4	16	33.2		12.7	342	55.6		00.2		
24	286	38.6	189	29.0	+23	24.8	159	32.4	+20	17.1	31	35.9	-22	12.7	357	58.2	-22	00.3		
Dif.	—		-9				0	+8				-4				+27				0

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'7				PHE { 4 ^h : 59'0 12 ^h : 58'8 20 ^h : 58'6											
	PMG: 12 ^h 05 ^m 2				Edad: 6 ^d 2											
				PMG: 18 ^h 17 ^m			Rº: 49 ^m									
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m	h m	h m	
0	178	42.8	+22 24.8	94	51.8	110 +0 38.5	134	60 N	21 17	22 43	** **	12 21	89	23 55	12	
1	193	42.7	24.5	109	21.8	110 25.1	133	58	20 59	22 07	** **	20 85		23 57	15	
2	208	42.6	24.2	123	51.8	111 +0 11.8	134	56	43	21 42	** **	18 83		** **	**	
3	223	42.5	23.9	138	21.9	110 -0 01.6	133	54	30	22 22 50		17 81		** **	**	
4	238	42.4	23.6	152	51.9	111 14.9	133	52	19	21 06	22 17	17 78		** **	**	
5	253	42.3	+22 23.3	167	22.0	112 -0 28.2	134	50	20 09	20 52	21 53	12 16	76	** **	**	
6	268	42.2	+22 23.0	181	52.2	111 -0 41.6	132	45	19 48	20 24	21 12	12 14	72	** **	**	
7	283	42.1	22.7	196	22.3	112 -0 54.8	133	40	31	20 03	20 44	13 67		** **	**	
8	298	42.0	22.4	210	52.5	112 -1 08.1	133	35	17	19 46	22	11 65		** **	**	
9	313	41.9	22.1	225	22.7	112 21.4	132	30	19 04	31 20 04		10 62		** **	**	
10	328	41.8	21.8	239	52.9	112 34.6	133	20	18 44	19 08	19 37	08 57		** **	**	
11	343	41.7	+22 21.5	254	23.1	113 -1 47.9	132	10 N	18 26	18 48	19 15	12 07	53	** **	**	
12	358	41.6	+22 21.2	268	53.4	112 -2 01.1	132	0	18 09	18 31	18 57	12 05	49	** **	**	
13	13	41.6	20.9	283	23.6	113 14.3	131	10 S	17 52	18 15	41	04 45		** **	**	
14	28	41.5	20.6	297	53.9	113 27.4	132	20	35	17 59	26	02 41		** **	**	
15	43	41.4	20.3	312	24.2	113 40.6	131	30	15	41 10		12 00	37	** **	**	
16	58	41.3	20.0	326	54.5	113 -2 53.7	131	35	17 03	31 18 02		11 59	34	** **	**	
17	73	41.2	+22 19.7	341	24.8	113 -3 06.8	130	40	16 50	17 20	17 54	11 58	31	** **	**	
18	88	41.1	+22 19.4	355	55.1	114 -3 19.8	131	45	16 34	17 07	17 44	11 57	27	** **	**	
19	103	41.0	19.1	10	25.5	113 32.9	130	50	14	16 52	33	56 23		** **	**	
20	118	40.9	18.8	24	55.8	114 45.9	129	52	16 05	45 28		55 21		** **	**	
21	133	40.8	18.5	39	26.2	114 -3 58.8	130	54	15 55	38 23		54 19		** **	**	
22	148	40.7	18.2	53	56.6	114 -4 11.8	129	56	43	29 17		53 17		** **	**	
23	163	40.6	17.9	68	27.0	113 24.7	129	58	30	20 11		53 14		** **	**	
24	178	40.6	+22 17.6	82	57.3	-4 37.6		60 S	15 14	16 09	17 05	11 52	11	** **	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 4 ^h 52 ^m 6		Mag: -3.9 PMG: 11 ^h 23 ^m			Mag: +1.8 PMG: 13 ^h 21 ^m			Mag: -2.5 PMG: 21 ^h 50 ^m			Mag: +0.1 PMG: 00 ^h 08 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	286	38.6	189	29.0	+23 24.8	159	32.4	+20 17.1	31	35.9	-22 -12.7	357	58.2	-22 00.3		
1	301	41.1	204	28.1	24.7	174	33.2	16.7	46	38.6	-12.7	13	00.9	00.3		
2	316	43.6	219	27.3	24.7	189	34.1	16.3	61	41.3	-12.7	28	03.6	00.3		
3	331	46.0	234	26.4	24.6	204	34.9	15.9	76	44.0	-12.6	43	06.2	00.4		
4	346	48.5	249	25.5	24.6	219	35.7	15.5	91	46.8	-12.6	58	08.9	00.4		
5	1	51.0	264	24.6	+23 24.5	234	36.5	+20 15.1	106	49.5	-22 -12.6	73	11.5	-22 00.4		
6	16	53.4	279	23.8	+23 24.4	249	37.4	+20 14.8	121	52.2	-22 -12.6	88	14.2	-22 00.4		
7	31	55.9	294	22.9	24.4	264	38.2	14.4	136	54.9	-12.6	103	16.9	00.5		
8	46	58.3	309	22.0	24.3	279	39.0	14.0	151	57.6	-12.6	118	19.5	00.5		
9	62	00.8	324	21.1	24.3	294	39.8	13.6	167	00.4	-12.5	133	22.2	00.5		
10	77	03.3	339	20.3	24.2	309	40.6	13.2	182	03.1	-12.5	148	24.9	00.5		
11	92	05.7	354	19.4	+23 24.1	324	41.5	+20 12.8	197	05.8	-22 -12.5	163	27.5	-22 00.6		
12	107	08.2	9	18.5	+23 24.1	339	42.3	+20 12.5	212	08.5	-22 -12.5	178	30.2	-22 00.6		
13	122	10.7	24	17.6	24.0	354	43.1	12.1	227	11.2	-12.5	193	32.8	00.6		
14	137	13.1	39	16.8	23.9	9	43.9	11.7	242	13.9	-12.5	208	35.5	00.7		
15	152	15.6	54	15.9	23.9	24	44.8	11.3	257	16.7	-12.4	223	38.2	00.7		
16	167	18.1	69	15.0	23.8	39	45.6	10.9	272	19.4	-12.4	238	40.8	00.7		
17	182	20.5	84	14.1	+23 23.7	54	46.4	+20 10.5	287	22.1	-22 -12.4	253	43.5	-22 00.7		
18	197	23.0	99	13.3	+23 23.6	69	47.2	+20 10.1	302	24.8	-22 -12.4	268	46.1	-22 00.8		
19	212	25.4	114	12.4	23.6	84	48.0	09.8	317	27.5	-12.4	283	48.8	00.8		
20	227	27.9	129	11.5	23.5	99	48.9	09.4	332	30.2	-12.4	298	51.5	00.8		
21	242	30.4	144	10.6	23.4	114	49.7	09.0	347	32.9	-12.3	313	54.1	00.8		
22	257	32.8	159	09.8	23.3	129	50.5	08.6	2	35.7	-12.3	328	56.8	00.9		
23	272	35.3	174	08.9	23.3	144	51.3	08.2	17	38.4	-12.3	343	59.4	00.9		
24	287	37.8	189	08.0	+23 23.2	159	52.2	+20 07.8	32	41.1	-22 -12.3	359	02.1	-22 00.9		
Dif.	—		-9 -1			+8 -4			+27 0			+27				

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 05 ^m 4				SD: 15'9 Edad: 7 ^d 2 PMG: 19 ^h 06 ^m PHE { 4 ^h : 58'4 12 ^h : 58'2 20 ^h : 58'0 Rº: 49 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	178	40.6	+22	17.6	82	57.3	114	-4	37.6	128	60 N	** **	1 28	2 54	13 50	87	** **	**
1	193	40.5			97	27.7	114	-4	50.4	128	58	** **	2 04	3 12	45	84	** **	**
2	208	40.4			111	58.1	114	-5	03.2	128	56	** **	29	28	41	81	** **	**
3	223	40.3			126	28.5	115		16.0	127	54	1 21	2 49	41	38	79	0 02	19
4	238	40.2			140	59.0	114		28.7	127	52	1 54	3 05	3 52	35	76	04	21
5	253	40.1	+22	16.0	155	29.4	114	-5	41.4	127	50	2 18	3 19	4 02	13 32	74	0 05	24
6	268	40.0	+22	15.7	169	59.8	114	-5	54.1	126	45	2 59	3 47	4 23	13 26	70	0 09	28
7	283	39.9		15.4	184	30.2	114	-6	06.7	126	40	3 27	4 08	40	20	67	12	31
8	298	39.8		15.1	199	00.6	114		19.3	125	35	3 49	25	4 54	16	64	15	34
9	313	39.7		14.8	213	31.0	114		31.8	125	30	4 06	4 39	5 06	12	61	17	37
10	328	39.7		14.4	228	01.4	114		44.3	124	20	34	5 03	27	05	57	21	42
11	343	39.6	+22	14.1	242	31.8	114	-6	56.7	124	10 N	4 55	5 22	5 45	13 00	52	0 25	45
12	358	39.5	+22	13.8	257	02.2	115	-7	09.1	124	0	5 13	5 39	6 02	12 54	49	0 29	49
13	13	39.4		13.5	271	32.7	114		21.5	123	10 S	29	5 56	18	49	45	32	53
14	28	39.3		13.2	286	03.1	113		33.8	123	20	5 45	6 12	36	43	42	36	57
15	43	39.2		12.9	300	33.4	114		46.1	122	30	6 00	30	6 56	37	37	40	61
16	58	39.1		12.6	315	03.8	114	-7	58.3	121	35	08	40	7 07	33	35	42	65
17	73	39.0	+22	12.2	329	34.2	114	-8	10.4	121	40	6 17	6 51	7 21	12 29	32	0 45	67
18	88	39.0	+22	11.9	344	04.6	114	-8	22.5	121	45	6 26	7 03	7 36	12 24	29	0 48	71
19	103	38.9		11.6	358	35.0	113		34.6	120	50	37	18	7 56	19	24	52	75
20	118	38.8		11.3	13	05.3	114		46.6	119	52	42	25	8 05	16	23	54	77
21	133	38.7		10.9	27	35.7	113	-8	58.5	119	54	47	32	15	13	21	56	79
22	148	38.6		10.6	42	06.0	113	-9	10.4	118	56	53	41	27	10	18	0 58	82
23	163	38.5		10.3	56	36.3	114		22.2	118	58	6 59	7 50	40	12 07	15	1 00	85
24	178	38.4	+22	10.0	71	06.7		-9	34.0		60 S	7 06	8 01	8 56	12 03	13	1 03	88

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 48 ^m 7		Mag: -3.9 PMG: 11 ^h 24 ^m				Mag: +1.8 PMG: 13 ^h 20 ^m				Mag: -2.5 PMG: 21 ^h 45 ^m				Mag: 0.0 PMG: 00 ^h 04 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	287	37.8	189	08.0	+23	23.2	159	52.2	+20	07.8	32	41.1	-22	12.3	359	02.1	-22	00.9
1	302	40.2	204	07.1		23.1	174	53.0		07.4	47	43.8		12.3	14	04.8		00.9
2	317	42.7	219	06.3		23.0	189	53.8		07.0	62	46.5		12.3	29	07.4		01.0
3	332	45.2	234	05.4		22.9	204	54.6		06.6	77	49.2		12.2	44	10.1		01.0
4	347	47.6	249	04.5		22.9	219	55.5		06.3	92	51.9		12.2	59	12.7		01.0
5	2	50.1	264	03.6	+23	22.8	234	56.3	+20	05.9	107	54.6	-22	12.2	74	15.4	-22	01.1
6	17	52.6	279	02.8	+23	22.7	249	57.1	+20	05.5	122	57.4	-22	12.2	89	18.1	-22	01.1
7	32	55.0	294	01.9		22.6	264	57.9		05.1	138	00.1		12.2	104	20.7		01.1
8	47	57.5	309	01.0		22.5	279	58.8		04.7	153	02.8		12.2	119	23.4		01.1
9	62	59.9	324	00.1		22.4	294	59.6		04.3	168	05.5		12.2	134	26.1		01.2
10	78	02.4	338	59.3		22.3	310	00.4		03.9	183	08.2		12.1	149	28.7		01.2
11	93	04.9	353	58.4	+23	22.2	325	01.2	+20	03.5	198	10.9	-22	12.1	164	31.4	-22	01.2
12	108	07.3	8	57.5	+23	22.1	340	02.1	+20	03.1	213	13.6	-22	12.1	179	34.0	-22	01.2
13	123	09.8	23	56.6		22.0	355	02.9		02.7	228	16.3		12.1	194	36.7		01.3
14	138	12.3	38	55.8		21.9	10	03.7		02.4	243	19.0		12.1	209	39.4		01.3
15	153	14.7	53	54.9		21.8	25	04.5		02.0	258	21.7		12.1	224	42.0		01.3
16	168	17.2	68	54.0		21.7	40	05.4		01.6	273	24.5		12.0	239	44.7		01.4
17	183	19.7	83	53.1	+23	21.6	55	06.2	+20	01.2	288	27.2	-22	12.0	254	47.3	-22	01.4
18	198	22.1	98	52.3	+23	21.5	70	07.0	+20	00.8	303	29.9	-22	12.0	269	50.0	-22	01.4
19	213	24.6	113	51.4		21.4	85	07.8		00.4	318	32.6		12.0	284	52.7		01.4
20	228	27.1	128	50.5		21.3	100	08.7	+20	00.0	333	35.3		12.0	299	55.3		01.5
21	243	29.5	143	49.6		21.2	115	09.5	+19	59.6	348	38.0		12.0	314	58.0		01.5
22	258	32.0	158	48.8		21.1	130	10.3		59.2	3	40.7		11.9	330	00.6		01.5
23	273	34.4	173	47.9		21.0	145	11.2		58.8	18	43.4		11.9	345	03.3		01.5
24	288	36.9	188	47.0	+23	20.9	160	12.0	+19	58.4	33	46.1	-22	11.9	0	06.0	-22	01.6
Dif.	—		-9		-1		+8		-4		+27		0		+27			

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'7			PHE { 4 ^h : 57'8 12 ^h : 57'6 20 ^h : 57'4												
	PMG: 12 ^h 05 ^m 5			Edad: 8 ^d 2												
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°		h m	h m	h m m	h m m	h m m	h m m	
0	178	38.4	+22 10.0	71	06.7	113	-9 34.0	117	60 N	21 14	22 37	** ** *	15 17	85	0 07 14	
1	193	38.4	09.7	85	37.0	113	45.7	117	58	20 56	22 03	** ** *	09 82	12	17	
2	208	38.3	09.3	100	07.3	112	-9 57.4	116	56	41	21 39	** ** *	15 02	80	17 19	
3	223	38.2	09.0	114	37.5	113	-10 09.0	115	54	29	20	22 45	14 57	76	21 22	
4	238	38.1	08.7	129	07.8	113	20.5	115	52	17	21 04	22 13	51 75	25	24	
5	253	38.0	+22 08.4	143	38.1	112	-10 32.0	114	50	20 07	20 50	21 51	14 46	73	0 29 26	
6	268	37.9	+22 08.0	158	08.3	112	-10 43.4	113	45	19 47	20 23	21 11	14 36	69	0 37 29	
7	283	37.8	07.7	172	38.5	112	-10 54.7	113	40	30	20 02	20 43	27 66	43	33	
8	298	37.8	07.4	187	08.7	112	-11 06.0	112	35	16	19 45	21	20 63	49	36	
9	313	37.7	07.0	201	38.9	112	17.2	111	30	19 04	31	20 04	13 61	0 54	38	
10	328	37.6	06.7	216	09.1	111	28.3	111	20	18 43	19 08	19 36	14 02	57	1 03 42	
11	343	37.5	+22 06.4	230	39.2	112	-11 39.4	110	10 N	18 26	18 48	19 15	13 52	54	1 10 46	
12	358	37.4	+22 06.0	245	09.4	111	-11 50.4	110	0	18 09	18 31	18 57	13 43	50	1 18 49	
13	13	37.3	05.7	259	39.5	111	-12 01.4	108	10 S	17 53	18 15	42	34 47	25	53	
14	28	37.3	05.4	274	09.6	111	12.2	108	20	35	17 59	26	25 43	33	56	
15	43	37.2	05.0	288	39.7	110	23.0	108	30	16	42	11	14 40	41	61	
16	58	37.1	04.7	303	09.7	111	33.8	106	35	17 04	32	18 03	08 37	47	63	
17	73	37.0	+22 04.4	317	39.8	110	-12 44.4	106	40	16 51	17 21	17 55	13 01	34	1 52 67	
18	88	36.9	+22 04.0	332	09.8	110	-12 55.0	105	45	16 35	17 09	17 45	12 53	31	1 59 70	
19	103	36.8	03.7	346	39.8	110	-13 05.5	104	50	16	16 54	35	43 28	2 07	74	
20	118	36.8	03.4	1	09.8	109	15.9	104	52	16 07	47	30	39 25	11	76	
21	133	36.7	03.0	15	39.7	109	26.3	103	54	15 57	40	25	34 23	15	78	
22	148	36.6	02.7	30	09.6	110	36.6	102	56	46	31	19	28 22	20	80	
23	163	36.5	02.4	44	39.6	108	46.8	101	58	32	22	13	22 19	25	83	
24	178	36.4	+22 02.0	59	09.4		-13 56.9		60 S	15 17	16 12	17 07	12 16	15	2 31 86	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 4 ^h 44 ^m 8		Mag: -3.9 PMG: 11 ^h 26 ^m			Mag: +1.8 PMG: 13 ^h 18 ^m			Mag: -2.5 PMG: 21 ^h 41 ^m			Mag: +0.1 PMG: 23 ^h 55 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	288	36.9	188	47.0	+23 20.9	160	12.0	+19 58.4	33	46.1	-22 -11.9	0 06.0	-22 01.6			
1	303	39.4	203	46.2	20.8	175	12.8	58.0	48	48.8	-11.9	15 08.6	01.6			
2	318	41.8	218	45.3	20.7	190	13.6	57.6	63	51.5	-11.9	30 11.3	01.6			
3	333	44.3	233	44.4	20.6	205	14.5	57.2	78	54.2	-11.9	45 13.9	01.6			
4	348	46.8	248	43.5	20.5	220	15.3	56.9	93	56.9	-11.8	60 16.6	01.7			
5	3	49.2	263	42.7	+23 20.4	235	16.1	+19 56.5	108	59.6	-22 -11.8	75 19.3	-22 01.7			
6	18	51.7	278	41.8	+23 20.2	250	17.0	+19 56.1	124	02.4	-22 -11.8	90 21.9	-22 01.7			
7	33	54.2	293	40.9	20.1	265	17.8	55.7	139	05.1	-11.8	105 24.6	01.8			
8	48	56.6	308	40.0	20.0	280	18.6	55.3	154	07.8	-11.8	120 27.2	01.8			
9	63	59.1	323	39.2	19.9	295	19.4	54.9	169	10.5	-11.8	135 29.9	01.8			
10	79	01.5	338	38.3	19.8	310	20.3	54.5	184	13.2	-11.8	150 32.6	01.8			
11	94	04.0	353	37.4	+23 19.6	325	21.1	+19 54.1	199	15.9	-22 -11.7	165 35.2	-22 01.9			
12	109	06.5	8	36.5	+23 19.5	340	21.9	+19 53.7	214	18.6	-22 -11.7	180 37.9	-22 01.9			
13	124	08.9	23	35.7	19.4	355	22.8	53.3	229	21.3	-11.7	195 40.6	01.9			
14	139	11.4	38	34.8	19.3	10	23.6	52.9	244	24.0	-11.7	210 43.2	01.9			
15	154	13.9	53	33.9	19.1	25	24.4	52.5	259	26.7	-11.7	225 45.9	02.0			
16	169	16.3	68	33.1	19.0	40	25.2	52.1	274	29.4	-11.7	240 48.5	02.0			
17	184	18.8	83	32.2	+23 18.9	55	26.1	+19 51.7	289	32.1	-22 -11.6	255 51.2	-22 02.0			
18	199	21.3	98	31.3	+23 18.8	70	26.9	+19 51.3	304	34.8	-22 -11.6	270 53.9	-22 02.1			
19	214	23.7	113	30.4	18.6	85	27.7	50.9	319	37.5	-11.6	285 56.5	02.1			
20	229	26.2	128	29.6	18.5	100	28.6	50.5	334	40.2	-11.6	300 59.2	02.1			
21	244	28.7	143	28.7	18.4	115	29.4	50.1	349	42.9	-11.6	316 01.8	02.1			
22	259	31.1	158	27.8	18.2	130	30.2	49.7	4	45.6	-11.6	331 04.5	02.2			
23	274	33.6	173	27.0	18.1	145	31.1	49.3	19	48.3	-11.6	346 07.2	02.2			
24	289	36.0	188	26.1	+23 18.0	160	31.9	+19 48.9	34	51.0	-22 -11.5	1 09.8	-22 02.2			
Dif.	—		-9	-1		+8	-4		+27	0		+27	0			

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 05 ^m 6				SD: 15'6 Edad: 9 ^d 2 PHE { 4 ^h : 57'2 12 ^h : 57'1 20 ^h : 56'9 PMG: 20 ^h 45 ^m Rº: 52 ^m													
	hG ☉		Dec		hG ☾	Dif.		Dec		Dif.		Náut.	Civil		Hora	Rº	Hora	Rº
h	°	'	°	'	°	'		°	'			h m	h m	h m	h m m	h m m	h m m	
0	178	36.4	+22	02.0	59	09.4	109	-13	56.9	100	60 N	h m ** **	1 34	2 57	16 42	82	0 21	17
1	193	36.4		01.7	73	39.3	108	-14	06.9	100	58	** **	2 08	3 15	31 78		29 21	
2	208	36.3		01.3	88	09.1	109		16.9	98	56	** **	33	30	22 75		36 24	
3	223	36.2		01.0	102	39.0	108		26.7	98	54	1 27	2 52	43	13 74		43 26	
4	238	36.1		00.7	117	08.8	107		36.5	97	52	1 58	3 08	3 54	16 06	71	49 28	
5	253	36.0	+22	00.3	131	38.5	108	-14	46.2	97	50	2 21	3 21	4 04	15 59	70	0 55	29
6	268	36.0	+22	00.0	146	08.3	107	-14	55.9	95	45	3 01	3 48	4 25	15 45	66	1 06	34
7	283	35.9	+21	59.6	160	38.0	107	-15	05.4	95	40	29	4 09	41	33 63		16 37	
8	298	35.8		59.3	175	07.7	106		14.9	93	35	3 50	26	4 55	23 61		25 39	
9	313	35.7		58.9	189	37.3	107		24.2	93	30	4 08	4 40	5 07	15 14	59	32 41	
10	328	35.6		58.6	204	07.0	106		33.5	92	20	35	5 04	28	14 59	56	45 45	
11	343	35.6	+21	58.2	218	36.6	106	-15	42.7	91	10 N	4 56	5 23	5 46	14 46	53	1 56	48
12	358	35.5	+21	57.9	233	06.2	106	-15	51.8	90	0	5 14	5 40	6 02	14 33	51	2 07	51
13	13	35.4		57.5	247	35.8	105	-16	00.8	90	10 S	30	5 56	18	21 49		18 53	
14	28	35.3		57.2	262	05.3	105		09.8	88	20	5 45	6 12	36	14 08	46	29 57	
15	43	35.3		56.8	276	34.8	105		18.6	88	30	6 00	29	6 55	13 54	42	42 60	
16	58	35.2		56.5	291	04.3	105		27.4	86	35	08	39	7 07	45 41		50 62	
17	73	35.1	+21	56.1	305	33.8	104	-16	36.0	86	40	6 16	6 50	7 20	13 35	39	2 59	64
18	88	35.0	+21	55.8	320	03.2	104	-16	44.6	84	45	6 26	7 02	7 35	13 24	36	3 09	67
19	103	34.9		55.4	334	32.6	104	-16	53.0	84	50	36	17	7 54	11 32		21 71	
20	118	34.9		55.1	349	02.0	104	-17	01.4	83	52	41	24	8 03	13 04	31	27 73	
21	133	34.8		54.7	3	31.4	103		09.7	82	54	46	31	13	12 57	29	33 75	
22	148	34.7		54.4	18	00.7	103		17.9	81	56	51	39	25	50 26		40 78	
23	163	34.6		54.0	32	30.0	103		26.0	79	58	6 57	48	38	12 41	24	3 48	81
24	178	34.6	+21	53.7	46	59.3		-17	33.9		60 S	7 04	7 59	8 53	12 31	21	3 57	84
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 40 ^m 8		Mag: -3.9 PMG: 11 ^h 27 ^m				Mag: +1.8 PMG: 13 ^h 17 ^m				Mag: -2.5 PMG: 21 ^h 37 ^m				Mag: +0.1 PMG: 23 ^h 51 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	289	36.0	188	26.1	+23	18.0	160	31.9	+19	48.9	34	51.0	-22	11.5	1	09.8	-22	02.2
1	304	38.5	203	25.2		17.8	175	32.7		48.5	49	53.7		11.5	16	12.5		02.2
2	319	41.0	218	24.3		17.7	190	33.5		48.1	64	56.4		11.5	31	15.1		02.3
3	334	43.4	233	23.5		17.5	205	34.4		47.7	79	59.1		11.5	46	17.8		02.3
4	349	45.9	248	22.6		17.4	220	35.2		47.3	95	01.8		11.5	61	20.5		02.3
5	4	48.4	263	21.7	+23	17.2	235	36.0	+19	46.9	110	04.5	-22	11.5	76	23.1	-22	02.3
6	19	50.8	278	20.8	+23	17.1	250	36.9	+19	46.5	125	07.2	-22	11.4	91	25.8	-22	02.4
7	34	53.3	293	20.0		17.0	265	37.7		46.1	140	09.9		11.4	106	28.4		02.4
8	49	55.8	308	19.1		16.8	280	38.5		45.7	155	12.6		11.4	121	31.1		02.4
9	64	58.2	323	18.2		16.7	295	39.4		45.3	170	15.3		11.4	136	33.8		02.5
10	80	00.7	338	17.4		16.5	310	40.2		44.9	185	18.0		11.4	151	36.4		02.5
11	95	03.2	353	16.5	+23	16.4	325	41.0	+19	44.5	200	20.7	-22	11.4	166	39.1	-22	02.5
12	110	05.6	8	15.6	+23	16.2	340	41.9	+19	44.1	215	23.4	-22	11.4	181	41.7	-22	02.5
13	125	08.1	23	14.8		16.1	355	42.7		43.7	230	26.1		11.3	196	44.4		02.6
14	140	10.5	38	13.9		15.9	10	43.5		43.3	245	28.8		11.3	211	47.1		02.6
15	155	13.0	53	13.0		15.8	25	44.4		42.9	260	31.5		11.3	226	49.7		02.6
16	170	15.5	68	12.1		15.6	40	45.2		42.5	275	34.2		11.3	241	52.4		02.6
17	185	17.9	83	11.3	+23	15.4	55	46.0	+19	42.1	290	36.9	-22	11.3	256	55.0	-22	02.7
18	200	20.4	98	10.4	+23	15.3	70	46.9	+19	41.7	305	39.6	-22	11.3	271	57.7	-22	02.7
19	215	22.9	113	09.5		15.1	85	47.7		41.3	320	42.3		11.2	287	00.4		02.7
20	230	25.3	128	08.7		15.0	100	48.5		40.9	335	45.0		11.2	302	03.0		02.7
21	245	27.8	143	07.8		14.8	115	49.4		40.5	350	47.7		11.2	317	05.7		02.8
22	260	30.3	158	06.9		14.6	130	50.2		40.1	5	50.3		11.2	332	08.3		02.8
23	275	32.7	173	06.1		14.5	145	51.0		39.7	20	53.0		11.2	347	11.0		02.8
24	290	35.2	188	05.2	+23	14.3	160	51.9	+19	39.3	35	55.7	-22	11.2	2	13.7	-22	02.9
Dif.	—		-9		-2		+8		-4		+27		0		+27			

UT	SOL				☉ LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'7				SD: 15'5		PHE { 4 ^h : 56'7 12 ^h : 56'5 20 ^h : 56'4											
	PMG: 12 ^h 05 ^m 8				Edad: 10 ^d 2													
					PMG: 21 ^h 37 ^m		R ^o : 52 ^m											
	hG ☉		Dec		hG ☾		Dif.	Dec		Dif.		Civil	Náut.	Hora	R ^o	Hora	R ^o	
h	°	'	°	'	°	'		°	'		°	h m	h m	h m	h m	m	h m	m
0	178	34.6	+21	53.7	46	59.3	103	-17	33.9	79	60 N	21 11	22 32	** **	18 04	73	0 38	25
1	193	34.5		53.3	61	28.6	102		41.8	78	58	20 54	21 59	** **	17 49	71	0 50	27
2	208	34.4		53.0	75	57.8	103		49.6	77	56	39	36	23 37	37	69	1 00	30
3	223	34.3		52.6	90	27.1	101	-17	57.3	76	54	27	17	22 40	27	67	09	32
4	238	34.3		52.3	104	56.2	102	-18	04.9	75	52	16	21 02	22 10	17	66	17	34
5	253	34.2	+21	51.9	119	25.4	101	-18	12.4	74	50	20 06	20 48	21 48	17 09	64	1 24	36
6	268	34.1	+21	51.5	133	54.5	102	-18	19.8	73	45	19 46	20 22	21 09	16 51	62	1 40	38
7	283	34.0		51.2	148	23.7	101		27.1	72	40	29	20 01	20 41	36	61	1 53	40
8	298	34.0		50.8	162	52.8	100		34.3	71	35	15	19 44	20	24	59	2 04	42
9	313	33.9		50.5	177	21.8	101		41.4	69	30	19 03	30	20 03	16 13	58	13	44
10	328	33.8		50.1	191	50.9	100		48.3	69	20	18 43	19 07	19 36	15 55	55	30	47
11	343	33.7	+21	49.7	206	19.9	100	-18	55.2	68	10 N	18 26	18 48	19 15	15 39	54	2 44	49
12	358	33.7	+21	49.4	220	48.9	100	-19	02.0	67	0	18 09	18 32	18 58	15 24	52	2 58	51
13	13	33.6		49.0	235	17.9	99		08.7	65	10 S	17 53	16	42	15 10	50	3 11	54
14	28	33.5		48.6	249	46.8	100		15.2	65	20	36	18 00	27	14 54	48	26	56
15	43	33.4		48.3	264	15.8	99		21.7	63	30	17	17 43	12	36	46	42	59
16	58	33.4		47.9	278	44.7	99		28.0	63	35	17 05	33	18 04	26	44	3 52	60
17	73	33.3	+21	47.5	293	13.6	99	-19	34.3	61	40	16 52	17 22	17 56	14 14	43	4 03	62
18	88	33.2	+21	47.2	307	42.5	98	-19	40.4	60	45	16 37	17 10	17 47	14 00	41	4 16	65
19	103	33.2		46.8	322	11.3	98		46.4	59	50	18	16 56	36	13 43	38	32	68
20	118	33.1		46.4	336	40.1	99		52.3	58	52	16 09	49	32	35	37	40	69
21	133	33.0		46.1	351	09.0	98	-19	58.1	57	54	15 59	42	27	26	36	48	71
22	148	32.9		45.7	5	37.8	97	-20	03.8	56	56	48	34	21	16	34	4 58	72
23	163	32.9		45.3	20	06.5	98		09.4	55	58	35	25	16	13 05	32	5 09	74
24	178	32.8	+21	45.0	34	35.3		-20	14.9		60 S	15 20	16 14	17 09	12 52	29	5 21	78
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: +1.8				Mag: -2.5				Mag: +0.1			
	4 ^h 36 ^m 9		PMG: 11 ^h 28 ^m				PMG: 13 ^h 16 ^m				PMG: 21 ^h 32 ^m				PMG: 23 ^h 47 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	290	35.2	188	05.2	+23	14.3	160	51.9	+19	39.3	35	55.7	-22	-11.2	2	13.7	-22	02.9
1	305	37.6	203	04.3		14.1	175	52.7		38.9	50	58.4		-11.2	17	16.3		02.9
2	320	40.1	218	03.4		14.0	190	53.5		38.4	66	01.1		-11.1	32	19.0		02.9
3	335	42.6	233	02.6		13.8	205	54.4		38.0	81	03.8		-11.1	47	21.7		02.9
4	350	45.0	248	01.7		13.6	220	55.2		37.6	96	06.5		-11.1	62	24.3		03.0
5	5	47.5	263	00.8	+23	13.5	235	56.0	+19	37.2	111	09.2	-22	-11.1	77	27.0	-22	03.0
6	20	50.0	278	00.0	+23	13.3	250	56.9	+19	36.8	126	11.9	-22	-11.1	92	29.6	-22	03.0
7	35	52.4	292	59.1		13.1	265	57.7		36.4	141	14.6		-11.1	107	32.3		03.0
8	50	54.9	307	58.2		12.9	280	58.6		36.0	156	17.3		-11.1	122	35.0		03.1
9	65	57.4	322	57.4		12.8	295	59.4		35.6	171	20.0		-11.0	137	37.6		03.1
10	80	59.8	337	56.5		12.6	311	00.2		35.2	186	22.7		-11.0	152	40.3		03.1
11	96	02.3	352	55.6	+23	12.4	326	01.1	+19	34.8	201	25.4	-22	-11.0	167	42.9	-22	03.1
12	111	04.8	7	54.8	+23	12.2	341	01.9	+19	34.4	216	28.0	-22	-11.0	182	45.6	-22	03.2
13	126	07.2	22	53.9		12.0	356	02.7		34.0	231	30.7		-11.0	197	48.3		03.2
14	141	09.7	37	53.0		11.9	11	03.6		33.6	246	33.4		-11.0	212	50.9		03.2
15	156	12.1	52	52.2		11.7	26	04.4		33.2	261	36.1		-11.0	227	53.6		03.3
16	171	14.6	67	51.3		11.5	41	05.2		32.7	276	38.8		-10.9	242	56.2		03.3
17	186	17.1	82	50.4	+23	11.3	56	06.1	+19	32.3	291	41.5	-22	-10.9	257	58.9	-22	03.3
18	201	19.5	97	49.6	+23	11.1	71	06.9	+19	31.9	306	44.2	-22	-10.9	273	01.6	-22	03.3
19	216	22.0	112	48.7		10.9	86	07.8		31.5	321	46.9		-10.9	288	04.2		03.4
20	231	24.5	127	47.8		10.7	101	08.6		31.1	336	49.6		-10.9	303	06.9		03.4
21	246	26.9	142	47.0		10.5	116	09.4		30.7	351	52.3		-10.9	318	09.5		03.4
22	261	29.4	157	46.1		10.4	131	10.3		30.3	6	54.9		-10.9	333	12.2		03.4
23	276	31.9	172	45.2		10.2	146	11.1		29.9	21	57.6		-10.8	348	14.9		03.5
24	291	34.3	187	44.4	+23	10.0	161	11.9	+19	29.5	37	00.3	-22	-10.8	3	17.5	-22	03.5
Dif.	—		-9		-2		+8		-4		+27		0		+27			

UT	SOL				☉ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 05 ^m 9				SD: 15'3 Edad: 11 ^d 2 PMG: 22 ^h 29 ^m PHE { 4^h: 56'2 12^h: 56'0 20^h: 55'9												Rº: 52 ^m	
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	178	32.8	+21	45.0	34	35.3	98	-20	14.9	54	60 N	3 01	19 17	60	1 03	34		
1	193	32.7		44.6	49	04.1	97		20.3	52	58	2 13	18	19 00	60	17 37		
2	208	32.7		44.2	63	32.8	97		25.5	52	56	0 36	33	18 46	59	30 38		
3	223	32.6		43.8	78	01.5	97		30.7	50	54	1 32	45	34	58	41 40		
4	238	32.5		43.5	92	30.2	97		35.7	49	52	2 02	3 10	23	57	1 51 41		
5	253	32.5	+21	43.1	106	58.9	97	-20	40.6	48	50	2 24	3 24	18 13	57	2 00 42		
6	268	32.4	+21	42.7	121	27.6	96	-20	45.4	47	45	3 03	3 50	17 53	56	2 18 44		
7	283	32.3		42.4	135	56.2	97		50.1	46	40	31	4 11	37	55	33 46		
8	298	32.2		42.0	150	24.9	96		54.7	45	35	3 52	27	23	55	46 47		
9	313	32.2		41.6	164	53.5	97	-20	59.2	43	30	4 09	4 41	17 11	54	2 57 48		
10	328	32.1		41.2	179	22.2	96	-21	03.5	42	20	36	5 04	16 50	54	3 17 49		
11	343	32.0	+21	40.8	193	50.8	96	-21	07.7	42	10 N	4 57	5 23	16 33	52	3 33 51		
12	358	32.0	+21	40.5	208	19.4	96	-21	11.9	40	0	5 14	5 40	16 16	52	3 49 52		
13	13	31.9		40.1	222	48.0	96		15.9	39	10 S	30	5 56	16 00	51	4 05 53		
14	28	31.8		39.7	237	16.6	95		19.8	37	20	44	6 12	15 42	51	22 54		
15	43	31.8		39.3	251	45.1	96		23.5	37	30	5 59	29	22	49	41 56		
16	58	31.7		38.9	266	13.7	96		27.2	35	35	6 07	38	7 06	15 10	4 52 58		
17	73	31.6	+21	38.6	280	42.3	96	-21	30.7	35	40	6 15	6 49	14 57	48	5 05 59		
18	88	31.6	+21	38.2	295	10.9	95	-21	34.2	33	45	6 25	7 01	14 41	47	5 21 59		
19	103	31.5		37.8	309	39.4	96		37.5	32	50	35	16	21	46	40 61		
20	118	31.4		37.4	324	08.0	95		40.7	30	52	39	22	12	45	49 62		
21	133	31.4		37.0	338	36.5	96		43.7	30	54	44	29	14 02	44	5 59 63		
22	148	31.3		36.6	353	05.1	96		46.7	28	56	50	37	13 50	43	6 10 64		
23	163	31.2		36.3	7	33.7	95		49.5	28	58	6 55	46	13 37	42	6 23 66		
24	178	31.2	+21	35.9	22	02.2		-21	52.3		60 S	7 02	7 56	13 21	40	6 39 67		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 33 ^m 0		Mag: -3.9 PMG: 11 ^h 30 ^m				Mag: +1.8 PMG: 13 ^h 14 ^m				Mag: -2.5 PMG: 21 ^h 28 ^m				Mag: +0.1 PMG: 23 ^h 43 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	291	34.3	187	44.4	+23	10.0	161	11.9	+19	29.5	37	00.3	-22	10.8	3	17.5	-22	03.5
1	306	36.8	202	43.5		09.8	176	12.8		29.1	52	03.0		10.8	18	20.2		03.5
2	321	39.3	217	42.6		09.6	191	13.6		28.6	67	05.7		10.8	33	22.8		03.5
3	336	41.7	232	41.8		09.4	206	14.5		28.2	82	08.4		10.8	48	25.5		03.6
4	351	44.2	247	40.9		09.2	221	15.3		27.8	97	11.1		10.8	63	28.2		03.6
5	6	46.6	262	40.0	+23	09.0	236	16.1	+19	27.4	112	13.7	-22	10.8	78	30.8	-22	03.6
6	21	49.1	277	39.2	+23	08.8	251	17.0	+19	27.0	127	16.4	-22	10.7	93	33.5	-22	03.7
7	36	51.6	292	38.3		08.6	266	17.8		26.6	142	19.1		10.7	108	36.1		03.7
8	51	54.0	307	37.4		08.4	281	18.7		26.2	157	21.8		10.7	123	38.8		03.7
9	66	56.5	322	36.6		08.2	296	19.5		25.8	172	24.5		10.7	138	41.5		03.7
10	81	59.0	337	35.7		08.0	311	20.3		25.4	187	27.2		10.7	153	44.1		03.8
11	97	01.4	352	34.8	+23	07.7	326	21.2	+19	24.9	202	29.9	-22	10.7	168	46.8	-22	03.8
12	112	03.9	7	34.0	+23	07.5	341	22.0	+19	24.5	217	32.5	-22	10.7	183	49.4	-22	03.8
13	127	06.4	22	33.1		07.3	356	22.9		24.1	232	35.2		10.6	198	52.1		03.8
14	142	08.8	37	32.2		07.1	11	23.7		23.7	247	37.9		10.6	213	54.8		03.9
15	157	11.3	52	31.4		06.9	26	24.5		23.3	262	40.6		10.6	228	57.4		03.9
16	172	13.8	67	30.5		06.7	41	25.4		22.9	277	43.3		10.6	244	00.1		03.9
17	187	16.2	82	29.6	+23	06.5	56	26.2	+19	22.5	292	46.0	-22	10.6	259	02.7	-22	03.9
18	202	18.7	97	28.8	+23	06.3	71	27.1	+19	22.0	307	48.6	-22	10.6	274	05.4	-22	04.0
19	217	21.1	112	27.9		06.0	86	27.9		21.6	322	51.3		10.6	289	08.0		04.0
20	232	23.6	127	27.1		05.8	101	28.7		21.2	337	54.0		10.5	304	10.7		04.0
21	247	26.1	142	26.2		05.6	116	29.6		20.8	352	56.7		10.5	319	13.4		04.1
22	262	28.5	157	25.3		05.4	131	30.4		20.4	7	59.4		10.5	334	16.0		04.1
23	277	31.0	172	24.5		05.2	146	31.3		20.0	23	02.1		10.5	349	18.7		04.1
24	292	33.5	187	23.6	+23	04.9	161	32.1	+19	19.5	38	04.7	-22	10.5	4	21.3	-22	04.1
Dif.	—		-9		-2		+8		-4		+27		0		+27		0	

UT	SOL				○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 06 ^m 0				SD: 15'2 Edad: 12 ^d 2 PHE { 4^h: 55'7 12^h: 55'6 20^h: 55'4																	
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.		Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	178	31.2	+21	35.9	22	02.2	96	-21	52.3	26	60 N	21 08	22 25	** **	20 17	46	1 37	47				
1	193	31.1		35.5	36	30.8	95		54.9	25	58	20 51	21 55	** **	20 00	46	1 54	48				
2	208	31.0		35.1	50	59.3	96		57.4	23	56	37	32	23 22	19 45	47	2 08	49				
3	223	31.0		34.7	65	27.9	95	-21	59.7	23	54	24	21 14	22 34	32	47	21	49				
4	238	30.9		34.3	79	56.4	96	-22	02.0	21	52	14	20 59	22 06	20	48	32	49				
5	253	30.8	+21	33.9	94	25.0	96	-22	04.1	20	50	20 04	20 46	21 45	19 10	49	2 42	49				
6	268	30.8	+21	33.5	108	53.6	96	-22	06.1	19	45	19 44	20 20	21 07	18 49	49	3 02	50				
7	283	30.7		33.2	123	22.2	95		08.0	18	40	28	20 00	20 40	32	50	19	50				
8	298	30.7		32.8	137	50.7	96		09.8	17	35	15	19 43	19	18	50	33	51				
9	313	30.6		32.4	152	19.3	96		11.5	15	30	19 03	30	20 02	18 05	50	3 45	51				
10	328	30.5		32.0	166	47.9	96		13.0	15	20	18 43	19 07	19 36	17 44	51	4 06	51				
11	343	30.5	+21	31.6	181	16.5	97	-22	14.5	13	10 N	18 26	18 48	19 15	17 25	51	4 24	52				
12	358	30.4	+21	31.2	195	45.2	96	-22	15.8	12	0	18 10	18 32	18 58	17 08	52	4 41	52				
13	13	30.3		30.8	210	13.8	96		17.0	11	10 S	17 54	16	42	16 51	52	4 58	52				
14	28	30.3		30.4	224	42.4	97		18.1	9	20	37	18 01	28	33	51	5 16	53				
15	43	30.2		30.0	239	11.1	97		19.0	9	30	18	17 44	13	16 11	53	37	53				
16	58	30.1		29.6	253	39.8	96		19.9	7	35	17 07	34	18 05	15 59	52	5 50	52				
17	73	30.1	+21	29.2	268	08.4	97	-22	20.6	6	40	16 54	17 24	17 57	15 45	52	6 04	52				
18	88	30.0	+21	28.8	282	37.1	98	-22	21.2	5	45	16 39	17 12	17 48	15 28	53	6 20	53				
19	103	30.0		28.4	297	05.9	97		21.7	4	50	20	16 58	38	15 07	53	41	53				
20	118	29.9		28.0	311	34.6	98		22.1	2	52	12	51	34	14 57	53	6 51	53				
21	133	29.8		27.6	326	03.4	97		22.3	2	54	16 02	44	29	46	53	7 02	53				
22	148	29.8		27.2	340	32.1	98		22.5	0	56	15 51	36	24	33	54	14	54				
23	163	29.7		26.8	355	00.9	98		22.5	1	58	38	27	18	19	53	29	53				
24	178	29.7	+21	26.4	9	29.7		-22	22.4		60 S	15 24	16 17	17 12	14 01	54	7 46	54				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG 4 ^h 29 ^m 0		Mag: -3.9 PMG: 11 ^h 31 ^m				Mag: +1.8 PMG: 13 ^h 13 ^m				Mag: -2.5 PMG: 21 ^h 24 ^m				Mag: +0.1 PMG: 23 ^h 38 ^m							
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	292	33.5	187	23.6	+23	04.9	161	32.1	+19	19.5	38	04.7	-22	-10.5	4	21.3	-22	04.1				
1	307	35.9	202	22.7		04.7	176	32.9		19.1	53	07.4		-10.5	19	24.0		04.2				
2	322	38.4	217	21.9		04.5	191	33.8		18.7	68	10.1		-10.5	34	26.7		04.2				
3	337	40.9	232	21.0		04.3	206	34.6		18.3	83	12.8		-10.4	49	29.3		04.2				
4	352	43.3	247	20.1		04.0	221	35.5		17.9	98	15.5		-10.4	64	32.0		04.2				
5	7	45.8	262	19.3	+23	03.8	236	36.3	+19	17.5	113	18.1	-22	-10.4	79	34.6	-22	04.3				
6	22	48.3	277	18.4	+23	03.6	251	37.2	+19	17.0	128	20.8	-22	-10.4	94	37.3	-22	04.3				
7	37	50.7	292	17.6		03.4	266	38.0		16.6	143	23.5		-10.4	109	40.0		04.3				
8	52	53.2	307	16.7		03.1	281	38.8		16.2	158	26.2		-10.4	124	42.6		04.3				
9	67	55.6	322	15.8		02.9	296	39.7		15.8	173	28.8		-10.4	139	45.3		04.4				
10	82	58.1	337	15.0		02.7	311	40.5		15.4	188	31.5		-10.4	154	47.9		04.4				
11	98	00.6	352	14.1	+23	02.4	326	41.4	+19	15.0	203	34.2	-22	-10.3	169	50.6	-22	04.4				
12	113	03.0	7	13.3	+23	02.2	341	42.2	+19	14.5	218	36.9	-22	-10.3	184	53.3	-22	04.4				
13	128	05.5	22	12.4		01.9	356	43.1		14.1	233	39.6		-10.3	199	55.9		04.5				
14	143	08.0	37	11.5		01.7	11	43.9		13.7	248	42.2		-10.3	214	58.6		04.5				
15	158	10.4	52	10.7		01.5	26	44.7		13.3	263	44.9		-10.3	230	01.2		04.5				
16	173	12.9	67	09.8		01.2	41	45.6		12.9	278	47.6		-10.3	245	03.9		04.6				
17	188	15.4	82	08.9	+23	01.0	56	46.4	+19	12.4	293	50.3	-22	-10.3	260	06.6	-22	04.6				
18	203	17.8	97	08.1	+23	00.7	71	47.3	+19	12.0	308	52.9	-22	-10.2	275	09.2	-22	04.6				
19	218	20.3	112	07.2		00.5	86	48.1		11.6	323	55.6		-10.2	290	11.9		04.6				
20	233	22.8	127	06.4		00.2	101	49.0		11.2	338	58.3		-10.2	305	14.5		04.7				
21	248	25.2	142	05.5	+23	00.0	116	49.8		10.8	354	01.0		-10.2	320	17.2		04.7				
22	263	27.7	157	04.7	+22	59.7	131	50.6		10.3	9	03.6		-10.2	335	19.9		04.7				
23	278	30.1	172	03.8		59.5	146	51.5		09.9	24	06.3		-10.2	350	22.5		04.7				
24	293	32.6	187	02.9	+22	59.2	161	52.3	+19	09.5	39	09.0	-22	-10.2	5	25.2	-22	04.8				
Dif.	—		-9				+8				-4				+27				0			

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 06 ^m 1				SD: 15'1 Edad: 13 ^d 2 PHE { 4^h: 55'3 12^h: 55'1 20^h: 55'0													
	PMG: ** **				R ^o : **													
	hG ☉	Dec			hG ☾	Dif.	Dec			Dif.		Náut.	Civil		Hora	R ^o	Hora	R ^o
h	°	'	°	'	°	'		°	'		°	h m	h m	h m	h m m	h m m	h m m	
0	178	29.7	+21	26.4	9	29.7	99	-22	22.4	2	60 N	h m ** **	1 47	3 05	21 03	32	2 24 60	
1	193	29.6		26.0	23	58.6	98		22.2	3	58	** **	2 18	22	20 46	35	42 59	
2	208	29.5		25.6	38	27.4	99		21.9	5	56	0 50	40	36	32 36		2 57 58	
3	223	29.5		25.2	52	56.3	99		21.4	5	54	1 38	2 58	48	19 38		3 10 57	
4	238	29.4		24.8	67	25.2	100		20.9	7	52	2 06	3 13	3 59	20 08	39	21 57	
5	253	29.4	+21	24.4	81	54.2	99	-22	20.2	8	50	2 28	3 26	4 08	19 59	40	3 31 56	
6	268	29.3	+21	24.0	96	23.1	100	-22	19.4	9	45	3 06	3 52	4 28	19 38	42	3 52 55	
7	283	29.2		23.6	110	52.1	100		18.5	10	40	33	4 12	44	22 43		4 09 55	
8	298	29.2		23.2	125	21.1	101		17.5	11	35	3 53	29	4 58	19 08	44	24 53	
9	313	29.1		22.8	139	50.2	100		16.4	12	30	4 10	4 43	5 09	18 55	46	36 53	
10	328	29.1		22.4	154	19.2	101		15.2	14	20	37	5 05	29	35 47		4 57 53	
11	343	29.0	+21	22.0	168	48.3	102	-22	13.8	15	10 N	4 57	5 24	5 47	18 16	49	5 16 51	
12	358	29.0	+21	21.6	183	17.5	101	-22	12.3	15	0	5 14	5 40	6 02	18 00	49	5 33 51	
13	13	28.9		21.2	197	46.6	102		10.8	17	10 S	30	5 56	18	17 43	51	5 50 50	
14	28	28.8		20.7	212	15.8	103		09.1	18	20	44	6 11	35	24 53		6 09 49	
15	43	28.8		20.3	226	45.1	102		07.3	19	30	5 59	28	6 54	17 04	54	30 48	
16	58	28.7		19.9	241	14.3	103		05.4	20	35	6 06	38	7 05	16 51	55	42 48	
17	73	28.7	+21	19.5	255	43.6	104	-22	03.4	22	40	6 15	6 48	7 18	16 37	56	6 56 47	
18	88	28.6	+21	19.1	270	13.0	103	-22	01.2	22	45	6 23	7 00	7 33	16 21	57	7 13 46	
19	103	28.6		18.7	284	42.3	104	-21	59.0	24	50	34	14	7 51	16 00	59	34 44	
20	118	28.5		18.3	299	11.7	105		56.6	24	52	38	20	8 00	15 50	60	44 43	
21	133	28.4		17.9	313	41.2	105		54.2	26	54	43	28	09	39 61		7 55 43	
22	148	28.4		17.4	328	10.7	105		51.6	27	56	48	35	20	27 61		8 08 41	
23	163	28.3		17.0	342	40.2	106		48.9	27	58	6 54	44	33	15 12	63	8 22 41	
24	178	28.3	+21	16.6	357	09.8		-21	46.2		60 S	7 00	7 54	8 47	14 55	65	8 40 38	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 25 ^m 1		Mag: -3.9 PMG: 11 ^h 32 ^m				Mag: +1.8 PMG: 13 ^h 12 ^m				Mag: -2.5 PMG: 21 ^h 20 ^m				Mag: +0.1 PMG: 23 ^h 34 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	293	32.6	187	02.9	+22	59.2	161	52.3	+19	09.5	39	09.0	-22	10.2	5	25.2	-22	04.8
1	308	35.1	202	02.1		59.0	176	53.2		09.1	54	11.7		10.2	20	27.8		04.8
2	323	37.5	217	01.2		58.7	191	54.0		08.7	69	14.3		10.1	35	30.5		04.8
3	338	40.0	232	00.4		58.5	206	54.9		08.2	84	17.0		10.1	50	33.1		04.8
4	353	42.5	246	59.5		58.2	221	55.7		07.8	99	19.7		10.1	65	35.8		04.9
5	8	44.9	261	58.6	+22	58.0	236	56.6	+19	07.4	114	22.4	-22	10.1	80	38.5	-22	04.9
6	23	47.4	276	57.8	+22	57.7	251	57.4	+19	07.0	129	25.0	-22	10.1	95	41.1	-22	04.9
7	38	49.9	291	56.9		57.5	266	58.3		06.5	144	27.7		10.1	110	43.8		04.9
8	53	52.3	306	56.1		57.2	281	59.1		06.1	159	30.4		10.1	125	46.4		05.0
9	68	54.8	321	55.2		56.9	296	59.9		05.7	174	33.0		10.1	140	49.1		05.0
10	83	57.2	336	54.4		56.7	312	00.8		05.3	189	35.7		10.0	155	51.8		05.0
11	98	59.7	351	53.5	+22	56.4	327	01.6	+19	04.8	204	38.4	-22	10.0	170	54.4	-22	05.1
12	114	02.2	6	52.6	+22	56.1	342	02.5	+19	04.4	219	41.1	-22	10.0	185	57.1	-22	05.1
13	129	04.6	21	51.8		55.9	357	03.3		04.0	234	43.7		10.0	200	59.7		05.1
14	144	07.1	36	50.9		55.6	12	04.2		03.6	249	46.4		10.0	216	02.4		05.1
15	159	09.6	51	50.1		55.3	27	05.0		03.1	264	49.1		10.0	231	05.0		05.2
16	174	12.0	66	49.2		55.1	42	05.9		02.7	279	51.7		10.0	246	07.7		05.2
17	189	14.5	81	48.4	+22	54.8	57	06.7	+19	02.3	294	54.4	-22	09.9	261	10.4	-22	05.2
18	204	17.0	96	47.5	+22	54.5	72	07.6	+19	01.9	309	57.1	-22	09.9	276	13.0	-22	05.2
19	219	19.4	111	46.6		54.2	87	08.4		01.4	324	59.7		09.9	291	15.7		05.3
20	234	21.9	126	45.8		54.0	102	09.3		01.0	340	02.4		09.9	306	18.3		05.3
21	249	24.4	141	44.9		53.7	117	10.1		00.6	355	05.1		09.9	321	21.0		05.3
22	264	26.8	156	44.1		53.4	132	11.0	+19	00.2	10	07.7		09.9	336	23.7		05.3
23	279	29.3	171	43.2		53.1	147	11.8	+18	59.7	25	10.4		09.9	351	26.3		05.4
24	294	31.7	186	42.4	+22	52.9	162	12.7	+18	59.3	40	13.1	-22	09.9	6	29.0	-22	05.4
Dif.	—		-9 -3				+8 -4				+27 0				+27 0			

UT	SOL				○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 06 ^m 2				SD: 15'0 Edad: 14 ^d 2															
	PMG: 00 ^h 12 ^m				Rº: 49 ^m															
	hG ☉	Dec			hG ☾	Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'		°	'			°	h	m	h	m	h	m	m	
0	178	28.3	+21	16.6	357	09.8	106	-21	46.2	29	60 N	21 04	22 19	** **		21 35	23	3 24	69	
1	193	28.2		16.2	11	39.4	106		43.3	30	58	20 48	21 50	** **		21 25		41	67	
2	208	28.2		15.8	26	09.0	107		40.3	31	56	34	29	23 11		21 08	28	3 55	65	
3	223	28.1		15.4	40	38.7	107		37.2	32	54	22	21 11	22 29		20 57	30	4 07	63	
4	238	28.1		14.9	55	08.4	108		34.0	33	52	12	20 57	22 02		47	32	18	62	
5	253	28.0	+21	14.5	69	38.2	108	-21	30.7	34	50	20 02	20 44	21 41		20 39	32	4 27	61	
6	268	28.0	+21	14.1	84	08.0	109	-21	27.3	35	45	19 43	20 18	21 04		20 20	36	4 47	59	
7	283	27.9		13.7	98	37.9	109		23.8	37	40	27	19 58	20 38		20 05	38	5 04	57	
8	298	27.8		13.3	113	07.8	109		20.1	37	35	14	42	18		19 52	40	17	56	
9	313	27.8		12.8	127	37.7	110		16.4	38	30	19 02	29	20 01		41	41	29	55	
10	328	27.7		12.4	142	07.7	111		12.6	39	20	18 42	19 06	19 35		22	43	5 50	52	
11	343	27.7	+21	12.0	156	37.8	111	-21	08.7	41	10 N	18 25	18 48	19 15		19 05	46	6 07	51	
12	358	27.6	+21	11.6	171	07.9	111	-21	04.6	41	0	18 10	18 32	18 58		18 49	48	6 24	49	
13	13	27.6		11.1	185	38.0	112	-21	00.5	42	10 S	17 54	17	43		34	49	40	47	
14	28	27.5		10.7	200	08.2	112	-20	56.3	43	20	38	18 01	28		18 17	52	6 58	45	
15	43	27.5		10.3	214	38.4	113		52.0	44	30	19	17 45	14		17 58	54	7 18	43	
16	58	27.4		09.9	229	08.7	113		47.6	46	35	17 08	35	18 06		46	56	30	42	
17	73	27.4	+21	09.4	243	39.0	114	-20	43.0	46	40	16 55	17 25	17 58		17 33	58	7 43	40	
18	88	27.3	+21	09.0	258	09.4	114	-20	38.4	47	45	16 41	17 13	17 50		17 18	60	7 59	38	
19	103	27.3		08.6	272	39.8	115		33.7	48	50	23	16 59	40		16 59	62	8 18	36	
20	118	27.2		08.2	287	10.3	115		28.9	49	52	14	53	36		50	64	27	35	
21	133	27.2		07.7	301	40.8	116		24.0	50	54	16 04	46	31		40	65	38	33	
22	148	27.1		07.3	316	11.4	117		19.0	51	56	15 54	38	26		28	68	8 49	32	
23	163	27.1		06.9	330	42.1	116		13.9	52	58	41	30	20		15	70	9 03	30	
24	178	27.0	+21	06.4	345	12.7		-20	08.7		60 S	15 27	16 20	17 14		16 00	72	9 18	28	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 4 ^h 21 ^m 2		Mag: -3.9 PMG: 11 ^h 34 ^m				Mag: +1.8 PMG: 13 ^h 10 ^m				Mag: -2.5 PMG: 21 ^h 15 ^m				Mag: +0.1 PMG: 23 ^h 30 ^m					
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	294	31.7	186	42.4	+22	52.9	162	12.7	+18	59.3	40	13.1	-22	-09.9	6	29.0	-22	05.4		
1	309	34.2	201	41.5		52.6	177	13.5		58.9	55	15.7		-09.8	21	31.6		05.4		
2	324	36.7	216	40.7		52.3	192	14.4		58.5	70	18.4		-09.8	36	34.3		05.4		
3	339	39.1	231	39.8		52.0	207	15.2		58.0	85	21.1		-09.8	51	37.0		05.5		
4	354	41.6	246	39.0		51.7	222	16.0		57.6	100	23.7		-09.8	66	39.6		05.5		
5	9	44.1	261	38.1	+22	51.4	237	16.9	+18	57.2	115	26.4	-22	-09.8	81	42.3	-22	05.5		
6	24	46.5	276	37.2	+22	51.2	252	17.7	+18	56.7	130	29.1	-22	-09.8	96	44.9	-22	05.6		
7	39	49.0	291	36.4		50.9	267	18.6		56.3	145	31.7		-09.8	111	47.6		05.6		
8	54	51.5	306	35.5		50.6	282	19.4		55.9	160	34.4		-09.8	126	50.2		05.6		
9	69	53.9	321	34.7		50.3	297	20.3		55.5	175	37.1		-09.8	141	52.9		05.6		
10	84	56.4	336	33.8		50.0	312	21.1		55.0	190	39.7		-09.7	156	55.6		05.7		
11	99	58.9	351	33.0	+22	49.7	327	22.0	+18	54.6	205	42.4	-22	-09.7	171	58.2	-22	05.7		
12	115	01.3	6	32.1	+22	49.4	342	22.8	+18	54.2	220	45.1	-22	-09.7	187	00.9	-22	05.7		
13	130	03.8	21	31.3		49.1	357	23.7		53.7	235	47.7		-09.7	202	03.5		05.7		
14	145	06.2	36	30.4		48.8	12	24.5		53.3	250	50.4		-09.7	217	06.2		05.8		
15	160	08.7	51	29.6		48.5	27	25.4		52.9	265	53.1		-09.7	232	08.8		05.8		
16	175	11.2	66	28.7		48.2	42	26.2		52.5	280	55.7		-09.7	247	11.5		05.8		
17	190	13.6	81	27.9	+22	47.9	57	27.1	+18	52.0	295	58.4	-22	-09.7	262	14.2	-22	05.8		
18	205	16.1	96	27.0	+22	47.6	72	27.9	+18	51.6	311	01.0	-22	-09.6	277	16.8	-22	05.9		
19	220	18.6	111	26.2		47.3	87	28.8		51.2	326	03.7		-09.6	292	19.5		05.9		
20	235	21.0	126	25.3		47.0	102	29.7		50.7	341	06.4		-09.6	307	22.1		05.9		
21	250	23.5	141	24.5		46.7	117	30.5		50.3	356	09.0		-09.6	322	24.8		05.9		
22	265	26.0	156	23.6		46.4	132	31.4		49.9	11	11.7		-09.6	337	27.5		06.0		
23	280	28.4	171	22.8		46.1	147	32.2		49.4	26	14.3		-09.6	352	30.1		06.0		
24	295	30.9	186	21.9	+22	45.8	162	33.1	+18	49.0	41	17.0	-22	-09.6	7	32.8	-22	06.0		
Dif.	—		-9				-3		+9		-4		+27		0		+27			

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 06 ^m 2			SD: 14'9 Edad: 15 ^d 2			PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'4										
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	27.0	+21 06.4	345	12.7	118	-20 08.7	52	60 N	** **	1 54	3 09	21 58	16	4 33	75	
1	193	27.0	06.0	359	43.5	118	-20 03.5	54	58	** **	2 22	25	46	19	4 48	71	
2	208	26.9	05.6	14	14.3	118	-19 58.1	55	56	1 02	2 44	39	36	22	5 00	69	
3	223	26.9	05.1	28	45.1	119	52.6	55	54	1 44	3 02	3 51	27	23	10	67	
4	238	26.8	04.7	43	16.0	119	47.1	57	52	2 11	16	4 01	19	25	20	65	
5	253	26.8	+21 04.3	57	46.9	120	-19 41.4	57	50	2 31	3 29	4 11	21 11	27	5 28	64	
6	268	26.7	+21 03.8	72	17.9	121	-19 35.7	58	45	3 08	3 54	4 30	20 56	30	5 46	61	
7	283	26.7	03.4	86	49.0	121	29.9	59	40	35	4 14	46	43	33	6 01	58	
8	298	26.6	03.0	101	20.1	121	24.0	60	35	3 55	30	4 59	32	35	13	56	
9	313	26.6	02.5	115	51.2	122	18.0	61	30	4 12	4 44	5 11	22	37	24	54	
10	328	26.5	02.1	130	22.4	123	11.9	61	20	38	5 06	30	20 05	41	42	52	
11	343	26.5	+21 01.6	144	53.7	123	-19 05.8	63	10 N	4 58	5 24	5 47	19 51	43	6 58	49	
12	358	26.5	+21 01.2	159	25.0	124	-18 59.5	63	0	5 15	5 40	6 03	19 37	46	7 13	46	
13	13	26.4	00.8	173	56.4	124	53.2	64	10 S	30	5 56	18	23	49	27	45	
14	28	26.4	+21 00.3	188	27.8	125	46.8	65	20	44	6 11	35	19 09	51	7 43	42	
15	43	26.3	+20 59.9	202	59.3	125	40.3	66	30	5 58	28	6 53	18 52	54	8 01	39	
16	58	26.3	59.4	217	30.8	126	33.7	66	35	6 06	37	7 04	42	56	12	37	
17	73	26.2	+20 59.0	232	02.4	126	-18 27.1	68	40	6 14	6 47	7 17	18 31	58	8 23	36	
18	88	26.2	+20 58.6	246	34.0	127	-18 20.3	68	45	6 22	6 59	7 31	18 18	60	8 37	33	
19	103	26.1	58.1	261	05.7	128	13.5	69	50	32	7 12	49	18 01	64	8 54	30	
20	118	26.1	57.7	275	37.5	128	-18 06.6	69	52	36	19	7 58	17 54	65	9 02	29	
21	133	26.0	57.2	290	09.3	128	-17 59.7	71	54	41	26	8 07	45	68	11	27	
22	148	26.0	56.8	304	41.1	129	52.6	71	56	46	33	18	36	69	21	25	
23	163	26.0	56.3	319	13.0	130	45.5	72	58	51	42	30	17 25	72	9 33	22	
24	178	25.9	+20 55.9	333	45.0		-17 38.3		60 S	6 57	7 51	8 44	17 12	75	9 46	19	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 17 ^m 2		Mag: -3.9 PMG: 11 ^h 35 ^m			Mag: +1.8 PMG: 13 ^h 09 ^m			Mag: -2.5 PMG: 21 ^h 11 ^m			Mag: +0.1 PMG: 23 ^h 26 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	295	30.9	186	21.9	+22 45.8	162	33.1	+18 49.0	41	17.0	-22 09.6	7	32.8	-22 06.0
1	310	33.4	201	21.1	45.5	177	33.9	48.6	56	19.7	09.6	22	35.4	06.0
2	325	35.8	216	20.2	45.2	192	34.8	48.1	71	22.3	09.5	37	38.1	06.1
3	340	38.3	231	19.4	44.9	207	35.6	47.7	86	25.0	09.5	52	40.7	06.1
4	355	40.7	246	18.5	44.6	222	36.5	47.3	101	27.6	09.5	67	43.4	06.1
5	10	43.2	261	17.7	+22 44.3	237	37.3	+18 46.8	116	30.3	-22 09.5	82	46.1	-22 06.2
6	25	45.7	276	16.8	+22 43.9	252	38.2	+18 46.4	131	33.0	-22 09.5	97	48.7	-22 06.2
7	40	48.1	291	16.0	43.6	267	39.0	46.0	146	35.6	09.5	112	51.4	06.2
8	55	50.6	306	15.1	43.3	282	39.9	45.5	161	38.3	09.5	127	54.0	06.2
9	70	53.1	321	14.3	43.0	297	40.7	45.1	176	40.9	09.5	142	56.7	06.3
10	85	55.5	336	13.4	42.7	312	41.6	44.7	191	43.6	09.5	157	59.3	06.3
11	100	58.0	351	12.6	+22 42.4	327	42.4	+18 44.2	206	46.3	-22 09.4	173	02.0	-22 06.3
12	116	00.5	6	11.7	+22 42.0	342	43.3	+18 43.8	221	48.9	-22 09.4	188	04.7	-22 06.3
13	131	02.9	21	10.9	41.7	357	44.1	43.4	236	51.6	09.4	203	07.3	06.4
14	146	05.4	36	10.0	41.4	12	45.0	42.9	251	54.2	09.4	218	10.0	06.4
15	161	07.8	51	09.2	41.1	27	45.8	42.5	266	56.9	09.4	233	12.6	06.4
16	176	10.3	66	08.4	40.7	42	46.7	42.1	281	59.5	09.4	248	15.3	06.4
17	191	12.8	81	07.5	+22 40.4	57	47.6	+18 41.6	297	02.2	-22 09.4	263	17.9	-22 06.5
18	206	15.2	96	06.7	+22 40.1	72	48.4	+18 41.2	312	04.8	-22 09.4	278	20.6	-22 06.5
19	221	17.7	111	05.8	39.7	87	49.3	40.8	327	07.5	09.4	293	23.3	06.5
20	236	20.2	126	05.0	39.4	102	50.1	40.3	342	10.1	09.3	308	25.9	06.5
21	251	22.6	141	04.1	39.1	117	51.0	39.9	357	12.8	09.3	323	28.6	06.6
22	266	25.1	156	03.3	38.8	132	51.8	39.4	12	15.5	09.3	338	31.2	06.6
23	281	27.6	171	02.4	38.4	147	52.7	39.0	27	18.1	09.3	353	33.9	06.6
24	296	30.0	186	01.6	+22 38.1	162	53.5	+18 38.6	42	20.8	-22 09.3	8	36.5	-22 06.6
Dif.	—		-8	-3		+9	-4		+27		0	+27		

UT	SOL			☉ LUNA							Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna					
	SD: 15 ^h 7			SD: 14 ^h 8			PHE { 4^h: 54^h3 12^h: 54^h2 20^h: 54^h2						Rº: 45 ^m			Edad: 16 ^d 2								
	PMG: 12 ^h 06 ^m 3			PMG: 01 ^h 48 ^m																				
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº						
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m						
0	178	25.9	+20	55.9	333	45.0	130	-17	38.3	73	60 N	21 00	22 13	** ** *	22 14	13	5 48	76						
1	193	25.9		55.4	348	17.0	131		31.0	73	58	20 44	21 46	** ** *	22 05	16	5 59	73						
2	208	25.8		55.0	2	49.1	131		23.7	75	56	31	25	23 01	21 58	17	6 09	70						
3	223	25.8		54.6	17	21.2	131		16.2	75	54	19	21 08	22 23	50	20	17	68						
4	238	25.7		54.1	31	53.3	133		08.7	75	52	09	20 54	21 58	44	22	25	66						
5	253	25.7	+20	53.7	46	25.6	132	-17	01.2	77	50	20 00	20 41	21 38	21 38	23	6 32	64						
6	268	25.7	+20	53.2	60	57.8	134	-16	53.5	77	45	19 41	20 16	21 02	21 26	27	6 47	61						
7	283	25.6		52.8	75	30.2	134		45.8	78	40	26	19 57	20 36	16	29	6 59	58						
8	298	25.6		52.3	90	02.6	134		38.0	78	35	13	41	16	21 07	32	7 09	56						
9	313	25.5		51.9	104	35.0	135		30.2	80	30	19 01	28	20 00	20 59	34	18	54						
10	328	25.5		51.4	119	07.5	135		22.2	79	20	18 42	19 06	19 34	46	37	34	50						
11	343	25.4	+20	51.0	133	40.0	136	-16	14.3	81	10 N	18 25	18 48	19 14	20 34	40	7 47	47						
12	358	25.4	+20	50.5	148	12.6	136	-16	06.2	81	0	18 10	18 32	18 58	20 23	43	7 59	45						
13	13	25.4		50.0	162	45.2	137	-15	58.1	82	10 S	17 55	17	43	12	46	8 12	42						
14	28	25.3		49.6	177	17.9	138		49.9	83	20	38	18 02	29	20 00	49	25	39						
15	43	25.3		49.1	191	50.7	137		41.6	83	30	20	17 46	15	19 46	53	40	35						
16	58	25.2		48.7	206	23.4	139		33.3	84	35	17 09	37	08	38	56	49	33						
17	73	25.2	+20	48.2	220	56.3	139	-15	24.9	84	40	16 57	17 27	18 00	19 29	58	8 59	31						
18	88	25.2	+20	47.8	235	29.2	139	-15	16.5	85	45	16 42	17 15	17 51	19 18	61	9 10	29						
19	103	25.1		47.3	250	02.1	140	-15	08.0	86	50	25	17 02	42	19 05	65	24	25						
20	118	25.1		46.8	264	35.1	140	-14	59.4	86	52	16	16 55	38	18 59	67	31	23						
21	133	25.0		46.4	279	08.1	141		50.8	87	54	16 07	49	33	53	68	38	21						
22	148	25.0		45.9	293	41.2	141		42.1	87	56	15 57	41	28	45	71	46	19						
23	163	25.0		45.5	308	14.3	142		33.4	88	58	45	33	23	37	73	9 55	17						
24	178	24.9	+20	45.0	322	47.5		-14	24.6		60 S	15 31	16 23	17 17	18 27	76	10 05	14						
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO									
	PMG 4 ^h 13 ^m 3		Mag: -3.9 PMG: 11 ^h 37 ^m				Mag: +1.8 PMG: 13 ^h 08 ^m				Mag: -2.5 PMG: 21 ^h 07 ^m				Mag: +0.1 PMG: 23 ^h 21 ^m									
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.											
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	296	30.0	186	01.6	+22	38.1	162	53.5	+18	38.6	42	20.8	-22	-09.3	8	36.5	-22	06.6						
1	311	32.5	201	00.8		37.7	177	54.4		38.1	57	23.4		-09.3	23	39.2		06.7						
2	326	35.0	215	59.9		37.4	192	55.2		37.7	72	26.1		-09.3	38	41.9		06.7						
3	341	37.4	230	59.1		37.1	207	56.1		37.3	87	28.7		-09.3	53	44.5		06.7						
4	356	39.9	245	58.2		36.7	222	57.0		36.8	102	31.4		-09.2	68	47.2		06.7						
5	11	42.3	260	57.4	+22	36.4	237	57.8	+18	36.4	117	34.0	-22	-09.2	83	49.8	-22	06.8						
6	26	44.8	275	56.5	+22	36.0	252	58.7	+18	35.9	132	36.7	-22	-09.2	98	52.5	-22	06.8						
7	41	47.3	290	55.7		35.7	267	59.5		35.5	147	39.3		-09.2	113	55.1		06.8						
8	56	49.7	305	54.9		35.4	283	00.4		35.1	162	42.0		-09.2	128	57.8		06.9						
9	71	52.2	320	54.0		35.0	298	01.2		34.6	177	44.6		-09.2	144	00.4		06.9						
10	86	54.7	335	53.2		34.7	313	02.1		34.2	192	47.3		-09.2	159	03.1		06.9						
11	101	57.1	350	52.3	+22	34.3	328	03.0	+18	33.7	207	49.9	-22	-09.2	174	05.8	-22	06.9						
12	116	59.6	5	51.5	+22	34.0	343	03.8	+18	33.3	222	52.6	-22	-09.2	189	08.4	-22	07.0						
13	132	02.1	20	50.6		33.6	358	04.7		32.9	237	55.2		-09.2	204	11.1		07.0						
14	147	04.5	35	49.8		33.3	13	05.5		32.4	252	57.9		-09.1	219	13.7		07.0						
15	162	07.0	50	49.0		32.9	28	06.4		32.0	268	00.5		-09.1	234	16.4		07.0						
16	177	09.5	65	48.1		32.6	43	07.2		31.5	283	03.2		-09.1	249	19.0		07.1						
17	192	11.9	80	47.3	+22	32.2	58	08.1	+18	31.1	298	05.8	-22	-09.1	264	21.7	-22	07.1						
18	207	14.4	95	46.4	+22	31.9	73	09.0	+18	30.7	313	08.5	-22	-09.1	279	24.4	-22	07.1						
19	222	16.8	110	45.6		31.5	88	09.8		30.2	328	11.1		-09.1	294	27.0		07.1						
20	237	19.3	125	44.8		31.1	103	10.7		29.8	343	13.8		-09.1	309	29.7		07.2						
21	252	21.8	140	43.9		30.8	118	11.5		29.3	358	16.4		-09.1	324	32.3		07.2						
22	267	24.2	155	43.1		30.4	133	12.4		28.9	13	19.1		-09.1	339	35.0		07.2						
23	282	26.7	170	42.3		30.1	148	13.2		28.5	28	21.7		-09.0	354	37.6		07.2						
24	297	29.2	185	41.4	+22	29.7	163	14.1	+18	28.0	43	24.3	-22	-09.0	9	40.3	-22	07.3						
Dif.	—		-8		-3		+9		-4		+26		0		+27		0							

UT	SOL			☉ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7			SD: 14'8		PHE { 4^h: 54'1 12^h: 54'1 20^h: 54'1					Edad: 17 ^d 2			Rº: 44 ^m					
	PMG: 12 ^h 06 ^m 4			PMG: 02 ^h 33 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	°	'	°	'	°	h	m	h	m	m	h	m	m			
0	178	24.9	+20	322	47.5	142	-14	24.6	89	60 N	2 00	3 13	22 27	10	7 04	75			
1	193	24.9		337	20.7	143		15.7	89	58	27	29	21 12		12 73				
2	208	24.9		351	54.0	143	-14	06.8	90	56	1 12	2 48	15 15		19 70				
3	223	24.8		6	27.3	144	-13	57.8	90	54	1 50	3 05	3 54	10 17	25 69				
4	238	24.8		21	00.7	144		48.8	91	52	2 15	19	4 04	06 18	31 66				
5	253	24.7	+20	35	34.1	144	-13	39.7	91	50	2 35	3 32	4 13	22 01	21	7 36			
6	268	24.7	+20	50	07.5	145	-13	30.6	92	45	3 11	3 57	4 32	21 53	24	7 48			
7	283	24.7		64	41.0	145		21.4	93	40	37	4 16	4 47	45 27	7 57	58			
8	298	24.6		79	14.5	146		12.1	93	35	3 57	32	5 00	39 29	8 05	55			
9	313	24.6		93	48.1	146	-13	02.8	93	30	4 13	4 45	12	33 32	12 53				
10	328	24.6		108	21.7	147	-12	53.5	94	20	38	5 07	31	23 36	24 49				
11	343	24.5	+20	122	55.4	147	-12	44.1	95	10 N	4 58	5 25	5 47	21 14	39	8 34			
12	358	24.5	+20	137	29.1	147	-12	34.6	95	0	5 15	5 41	6 03	21 06	42	8 44			
13	13	24.5		152	02.8	148		25.1	95	10 S	30	5 56	18	20 58	45	8 54			
14	28	24.4		166	36.6	148		15.6	96	20	44	6 11	34	49 49	9 04	36			
15	43	24.4		181	10.4	149	-12	06.0	97	30	5 58	27	6 53	39 53	15 33				
16	58	24.3		195	44.3	149	-11	56.3	97	35	6 05	36	7 03	34 54	22 31				
17	73	24.3	+20	210	18.2	149	-11	46.6	97	40	6 13	6 46	7 15	20 27	57	9 30			
18	88	24.3	+20	224	52.1	150	-11	36.9	98	45	6 21	6 57	7 30	20 19	61	9 39			
19	103	24.2		239	26.1	150		27.1	98	50	30	7 11	47	10 64	49 22				
20	118	24.2		254	00.1	151		17.3	99	52	35	17	7 55	06 66	54 20				
21	133	24.2		268	34.2	151	-11	07.4	99	54	39	23	8 05	20 01	68	9 59			
22	148	24.1		283	08.3	151	-10	57.5	100	56	44	31	15	19 56	70	10 05			
23	163	24.1		297	42.4	151		47.5	100	58	49	39	27	19 50	72	10 12			
24	178	24.1	+20	312	16.5		-10	37.5		60 S	6 55	7 48	8 40	19 43	75	10 19			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 09 ^m 4		Mag: -3.9 PMG: 11 ^h 38 ^m		Mag: +1.8 PMG: 13 ^h 06 ^m		Mag: -2.5 PMG: 21 ^h 03 ^m		Mag: +0.1 PMG: 23 ^h 17 ^m	
	hG ♈	dec.	hG ♀	dec.	hG ♂	dec.	hG ♃	dec.	hG ♄	dec.
h	°	'	°	'	°	'	°	'	°	'
0	297	29.2	185	41.4	+22	29.7	43	24.3	-22	09.0
1	312	31.6	200	40.6		29.3	58	27.0		09.0
2	327	34.1	215	39.7		29.0	73	29.6		09.0
3	342	36.6	230	38.9		28.6	88	32.3		09.0
4	357	39.0	245	38.1		28.2	103	34.9		09.0
5	12	41.5	260	37.2	+22	27.9	118	37.6	-22	09.0
6	27	43.9	275	36.4	+22	27.5	133	40.2	-22	09.0
7	42	46.4	290	35.6		27.1	148	42.9		09.0
8	57	48.9	305	34.7		26.7	163	45.5		09.0
9	72	51.3	320	33.9		26.4	178	48.1		08.9
10	87	53.8	335	33.0		26.0	193	50.8		08.9
11	102	56.3	350	32.2	+22	25.6	208	53.4	-22	08.9
12	117	58.7	5	31.4	+22	25.2	223	56.1	-22	08.9
13	133	01.2	20	30.5		24.9	238	58.7		08.9
14	148	03.7	35	29.7		24.5	254	01.4		08.9
15	163	06.1	50	28.9		24.1	269	04.0		08.9
16	178	08.6	65	28.0		23.7	284	06.6		08.9
17	193	11.1	80	27.2	+22	23.3	299	09.3	-22	08.9
18	208	13.5	95	26.4	+22	23.0	314	11.9	-22	08.8
19	223	16.0	110	25.5		22.6	329	14.6		08.8
20	238	18.4	125	24.7		22.2	344	17.2		08.8
21	253	20.9	140	23.9		21.8	359	19.8		08.8
22	268	23.4	155	23.0		21.4	14	22.5		08.8
23	283	25.8	170	22.2		21.0	29	25.1		08.8
24	298	28.3	185	21.4	+22	20.6	44	27.8	-22	08.8
Dif.	—		-8	-4		+9	-4	+26	0	+27

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			SD: 14 ^h 7			PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1											
	PMG: 12 ^h 06 ^m 4			Edad: 18 ^d 2			R ^o : 41 ^m											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.				Civil	Náut.	Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	178	24.1	+20	312	16.5	152	-10	37.5	100	60 N	20 56	22 07	** **	22 37	9	8 19	75	
1	193	24.0		326	50.7	152		27.5	101	58	41	21 41	** **	33 12		25 72		
2	208	24.0		341	24.9	153		17.4	101	56	28	21	22 52	30 14		29 70		
3	223	24.0		355	59.2	153	-10	07.3	102	54	17	21 05	22 17	27 16		34 67		
4	238	24.0		10	33.5	153	-9	57.1	102	52	20 07	20 51	21 53	24 18		37 66		
5	253	23.9	+20	25	07.8	153	-9	46.9	102	50	19 58	20 39	21 34	22 22	19	8 41	64	
6	268	23.9	+20	39	42.1	154	-9	36.7	103	45	19 39	20 14	21 00	22 17	22	8 48	61	
7	283	23.9		54	16.5	154		26.4	103	40	24	19 55	20 34	12 26		8 55	57	
8	298	23.8		68	50.9	154		16.1	103	35	11	40	20 15	08 28		9 00	55	
9	313	23.8		83	25.3	155	-9	05.8	104	30	19 00	27 19	59	22 05	30	05 52		
10	328	23.8		97	59.8	154	-8	55.4	104	20	18 41	19 05	34	21 59	34	13 48		
11	343	23.7	+20	112	34.2	155	-8	45.0	105	10 N	18 25	18 48	19 14	21 53	38	9 20	45	
12	358	23.7	+20	127	08.7	156	-8	34.5	105	0	18 10	18 32	18 58	21 48	42	9 27	41	
13	13	23.7		141	43.3	155		24.0	105	10 S	17 55	17	43	43 45		33 39		
14	28	23.7		156	17.8	156		13.5	106	20	39	18 03	30	38 48		40 35		
15	43	23.6		170	52.4	156	-8	02.9	105	30	21	17 47	16	32 52		48 31		
16	58	23.6		185	27.0	156	-7	52.4	107	35	17 10	38	09	28 55		53 28		
17	73	23.6	+20	200	01.6	157	-7	41.7	106	40	16 58	17 28	18 01	21 24	58	9 58	26	
18	88	23.5	+20	214	36.3	156	-7	31.1	107	45	16 44	17 17	17 53	21 20	60	10 04	23	
19	103	23.5		229	10.9	157		20.4	107	50	27	17 04	44	14 65		11 19		
20	118	23.5		243	45.6	157	-7	09.7	107	52	19	16 58	40	12 66		14 18		
21	133	23.5		258	20.3	158	-6	59.0	108	54	10	51	35	09 68		18 16		
22	148	23.4		272	55.1	157		48.2	108	56	16 00	44	31	06 70		21 15		
23	163	23.4		287	29.8	158		37.4	108	58	15 48	36	26	21 02	73	26 12		
24	178	23.4	+20	302	04.6		-6	26.6		60 S	15 35	16 27	17 20	20 58	75	10 31	9	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 4 ^h 05 ^m 4		Mag: -3.9 PMG: 11 ^h 39 ^m			Mag: +1.8 PMG: 13 ^h 05 ^m			Mag: -2.5 PMG: 20 ^h 58 ^m			Mag: +0.1 PMG: 23 ^h 13 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	298	28.3	185	21.4	+22	20.6	163	34.7	+18	17.3	44	27.8	-22	-08.8	10	44.0	-22	07.9
1	313	30.8	200	20.5		20.2	178	35.6		16.9	59	30.4		-08.8	25	46.7		07.9
2	328	33.2	215	19.7		19.9	193	36.5		16.4	74	33.0		-08.8	40	49.3		07.9
3	343	35.7	230	18.9		19.5	208	37.3		16.0	89	35.7		-08.8	55	52.0		08.0
4	358	38.2	245	18.1		19.1	223	38.2		15.5	104	38.3		-08.8	70	54.6		08.0
5	13	40.6	260	17.2	+22	18.7	238	39.1	+18	15.1	119	40.9	-22	-08.7	85	57.3	-22	08.0
6	28	43.1	275	16.4	+22	18.3	253	39.9	+18	14.6	134	43.6	-22	-08.7	100	59.9	-22	08.0
7	43	45.6	290	15.6		17.9	268	40.8		14.2	149	46.2		-08.7	116	02.6		08.1
8	58	48.0	305	14.7		17.5	283	41.6		13.7	164	48.9		-08.7	131	05.3		08.1
9	73	50.5	320	13.9		17.1	298	42.5		13.3	179	51.5		-08.7	146	07.9		08.1
10	88	52.9	335	13.1		16.7	313	43.4		12.8	194	54.1		-08.7	161	10.6		08.1
11	103	55.4	350	12.2	+22	16.3	328	44.2	+18	12.4	209	56.8	-22	-08.7	176	13.2	-22	08.2
12	118	57.9	5	11.4	+22	15.9	343	45.1	+18	11.9	224	59.4	-22	-08.7	191	15.9	-22	08.2
13	134	00.3	20	10.6		15.5	358	46.0		11.5	240	02.0		-08.7	206	18.5		08.2
14	149	02.8	35	09.8		15.1	13	46.8		11.0	255	04.7		-08.7	221	21.2		08.2
15	164	05.3	50	08.9		14.6	28	47.7		10.6	270	07.3		-08.6	236	23.8		08.3
16	179	07.7	65	08.1		14.2	43	48.5		10.1	285	09.9		-08.6	251	26.5		08.3
17	194	10.2	80	07.3	+22	13.8	58	49.4	+18	09.7	300	12.6	-22	-08.6	266	29.1	-22	08.3
18	209	12.7	95	06.5	+22	13.4	73	50.3	+18	09.2	315	15.2	-22	-08.6	281	31.8	-22	08.3
19	224	15.1	110	05.6		13.0	88	51.1		08.8	330	17.8		-08.6	296	34.4		08.4
20	239	17.6	125	04.8		12.6	103	52.0		08.3	345	20.5		-08.6	311	37.1		08.4
21	254	20.0	140	04.0		12.2	118	52.9		07.9	0	23.1		-08.6	326	39.8		08.4
22	269	22.5	155	03.1		11.8	133	53.7		07.4	15	25.7		-08.6	341	42.4		08.4
23	284	25.0	170	02.3		11.3	148	54.6		07.0	30	28.4		-08.6	356	45.1		08.5
24	299	27.4	185	01.5	+22	10.9	163	55.5	+18	06.5	45	31.0	-22	-08.6	11	47.7	-22	08.5
Dif.	—		-8		-4		+9		-5		+26		0		+27		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 15'7 PMG: 12 ^h 06 ^m 5				SD: 14'8 Edad: 19 ^d 2 PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 PMG: 03 ^h 58 ^m Rº: 42 ^m																	
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº								
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m							
0	178	23.4	+20	22.2	302	04.6	157	-6	26.6	108	60 N	2 07	3 17	22 46	9	9 34	76					
1	193	23.3		21.7	316	39.3	158		15.8	109	58	32	32	45	11	37	73					
2	208	23.3		21.2	331	14.1	158	-6	04.9	109	56	1 22	2 52	44	13	39	71					
3	223	23.3		20.7	345	48.9	158	-5	54.0	109	54	1 56	3 09	43	15	41	69					
4	238	23.3		20.2	0	23.7	159		43.1	110	52	2 20	23	42	17	43	67					
5	253	23.2	+20	19.7	14	58.6	158	-5	32.1	109	50	2 39	3 35	4 15	22 41	19	9 45	65				
6	268	23.2	+20	19.2	29	33.4	159	-5	21.2	110	45	3 14	3 59	4 34	22 39	23	9 49	61				
7	283	23.2		18.8	44	08.3	158	-5	10.2	111	40	39	4 18	4 49	38	25	52	58				
8	298	23.2		18.3	58	43.1	159	-4	59.1	110	35	3 58	33	5 02	36	29	55	55				
9	313	23.1		17.8	73	18.0	159		48.1	110	30	4 14	4 46	13	35	31	9 57	53				
10	328	23.1		17.3	87	52.9	159		37.1	111	20	39	5 08	32	33	35	10 01	49				
11	343	23.1	+20	16.8	102	27.8	159	-4	26.0	111	10 N	4 59	5 25	5 48	22 31	39	10 05	45				
12	358	23.1	+20	16.3	117	02.7	159	-4	14.9	111	0	5 15	5 41	6 03	22 30	41	10 08	42				
13	13	23.0		15.8	131	37.6	159	-4	03.8	112	10 S	30	5 55	18	28	45	12	38				
14	28	23.0		15.3	146	12.5	159	-3	52.6	111	20	43	6 10	34	26	49	15	35				
15	43	23.0		14.8	160	47.4	159		41.5	112	30	5 57	26	6 52	24	53	19	31				
16	58	23.0		14.3	175	22.3	159		30.3	112	35	6 04	35	7 02	23	55	21	28				
17	73	23.0	+20	13.8	189	57.2	159	-3	19.1	112	40	6 11	6 44	7 14	22 22	58	10 24	25				
18	88	22.9	+20	13.3	204	32.1	159	-3	07.9	112	45	6 19	6 56	7 28	22 20	61	10 27	22				
19	103	22.9		12.8	219	07.0	159	-2	56.7	112	50	29	7 09	45	19	64	30	19				
20	118	22.9		12.3	233	41.9	160		45.5	113	52	33	15	7 53	18	66	32	17				
21	133	22.9		11.8	248	16.9	159		34.2	112	54	37	21	8 02	17	68	34	15				
22	148	22.8		11.3	262	51.8	159		23.0	113	56	42	28	12	16	71	36	13				
23	163	22.8		10.8	277	26.7	159		11.7	113	58	47	36	23	22 15	73	10 38	11				
24	178	22.8	+20	10.3	292	01.6		-2	00.4		60 S	6 52	7 45	8 37	22 13	76	10 40	9				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 4 ^h 01 ^m 5		Mag: -3.9 PMG: 11 ^h 41 ^m				Mag: +1.8 PMG: 13 ^h 04 ^m				Mag: -2.5 PMG: 20 ^h 54 ^m				Mag: +0.1 PMG: 23 ^h 09 ^m							
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	299	27.4	185	01.5	+22	10.9	163	55.5	+18	06.5	45	31.0	-22	08.6	11	47.7	-22	08.5				
1	314	29.9	200	00.7		10.5	178	56.3		06.1	60	33.6		08.6	26	50.4		08.5				
2	329	32.4	214	59.8		10.1	193	57.2		05.6	75	36.3		08.5	41	53.0		08.5				
3	344	34.8	229	59.0		09.7	208	58.1		05.2	90	38.9		08.5	56	55.7		08.6				
4	359	37.3	244	58.2		09.2	223	58.9		04.7	105	41.5		08.5	71	58.3		08.6				
5	14	39.8	259	57.4	+22	08.8	238	59.8	+18	04.3	120	44.1	-22	08.5	87	01.0	-22	08.6				
6	29	42.2	274	56.6	+22	08.4	254	00.7	+18	03.8	135	46.8	-22	08.5	102	03.6	-22	08.6				
7	44	44.7	289	55.7		08.0	269	01.5		03.3	150	49.4		08.5	117	06.3		08.7				
8	59	47.2	304	54.9		07.5	284	02.4		02.9	165	52.0		08.5	132	08.9		08.7				
9	74	49.6	319	54.1		07.1	299	03.3		02.4	180	54.7		08.5	147	11.6		08.7				
10	89	52.1	334	53.3		06.7	314	04.1		02.0	195	57.3		08.5	162	14.3		08.7				
11	104	54.5	349	52.4	+22	06.3	329	05.0	+18	01.5	210	59.9	-22	08.5	177	16.9	-22	08.8				
12	119	57.0	4	51.6	+22	05.8	344	05.9	+18	01.1	226	02.5	-22	08.5	192	19.6	-22	08.8				
13	134	59.5	19	50.8		05.4	359	06.7		00.6	241	05.2		08.4	207	22.2		08.8				
14	150	01.9	34	50.0		05.0	14	07.6	+18	00.2	256	07.8		08.4	222	24.9		08.8				
15	165	04.4	49	49.2		04.5	29	08.5	+17	59.7	271	10.4		08.4	237	27.5		08.9				
16	180	06.9	64	48.3		04.1	44	09.3		59.2	286	13.0		08.4	252	30.2		08.9				
17	195	09.3	79	47.5	+22	03.7	59	10.2	+17	58.8	301	15.7	-22	08.4	267	32.8	-22	08.9				
18	210	11.8	94	46.7	+22	03.2	74	11.1	+17	58.3	316	18.3	-22	08.4	282	35.5	-22	08.9				
19	225	14.3	109	45.9		02.8	89	11.9		57.9	331	20.9		08.4	297	38.1		09.0				
20	240	16.7	124	45.1		02.3	104	12.8		57.4	346	23.6		08.4	312	40.8		09.0				
21	255	19.2	139	44.2		01.9	119	13.7		57.0	1	26.2		08.4	327	43.4		09.0				
22	270	21.7	154	43.4		01.5	134	14.5		56.5	16	28.8		08.4	342	46.1		09.0				
23	285	24.1	169	42.6		01.0	149	15.4		56.1	31	31.4		08.4	357	48.7		09.1				
24	300	26.6	184	41.8	+22	00.6	164	16.3	+17	55.6	46	34.0	-22	08.4	12	51.4	-22	09.1				
Dif.	—		-8				-4				+26				0				+27			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 5			SD: 14'8 Edad: 20 ^d 2			PHE { 4^h: 54'4 12^h: 54'5 20^h: 54'7											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	R ^o : 41 ^m										
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	178	22.8	+20	10.3	292	01.6	159	-2	00.4	113	60 N	20 52	22 00	** **	22 55 9	10 50 76		
1	193	22.8		09.8	306	36.5	159	-1	49.1	113	58	37	21 36	23 58	56 12	50 73		
2	208	22.8		09.3	321	11.4	159		37.8	113	56	25	17	22 43	57 15	50 71		
3	223	22.7		08.8	335	46.3	159		26.5	114	54	14	21 01	22 12	58 17	50 69		
4	238	22.7		08.3	350	21.2	159		15.1	113	52	20 04	20 48	21 49	22 59 18	50 67		
5	253	22.7	+20	07.7	4	56.1	158	-1	03.8	114	50	19 56	20 36	21 31	23 00 20	10 50 65		
6	268	22.7	+20	07.2	19	30.9	159	-0	52.4	113	45	19 37	20 12	20 57	23 02 23	10 50 61		
7	283	22.7		06.7	34	05.8	158		41.1	114	40	23	19 54	32	03 27	50 58		
8	298	22.6		06.2	48	40.6	159		29.7	114	35	19 10	38	20 13	05 29	50 55		
9	313	22.6		05.7	63	15.5	158		18.3	114	30	18 59	26	19 58	06 31	50 53		
10	328	22.6		05.2	77	50.3	158	-0	06.9	114	20	41	19 05	33	08 35	50 49		
11	343	22.6	+20	04.7	92	25.1	158	+0	04.5	114	10 N	18 25	18 47	19 14	23 10 39	10 50 45		
12	358	22.6	+20	04.2	106	59.9	158	+0	15.9	114	0	18 10	18 32	18 58	23 11 43	10 50 42		
13	13	22.5		03.7	121	34.7	158		27.3	114	10 S	17 55	18	43	13 46	50 38		
14	28	22.5		03.2	136	09.5	157		38.7	114	20	40	18 03	30	15 50	50 34		
15	43	22.5		02.6	150	44.2	157	+0	50.1	114	30	22	17 48	17	17 54	50 30		
16	58	22.5		02.1	165	18.9	157	+1	01.5	114	35	12	39	10	18 57	49 29		
17	73	22.5	+20	01.6	179	53.6	157	+1	12.9	114	40	17 00	17 30	18 03	23 20 59	10 49 26		
18	88	22.5	+20	01.1	194	28.3	157	+1	24.3	114	45	16 46	17 19	17 55	23 21 63	10 49 23		
19	103	22.4		00.6	209	03.0	156		35.7	115	50	30	06	46	23 67	49 19		
20	118	22.4	+20	00.1	223	37.6	157		47.2	114	52	22	17 00	42	24 68	49 18		
21	133	22.4	+19	59.6	238	12.3	156	+1	58.6	114	54	13	16 54	38	25 70	49 16		
22	148	22.4		59.0	252	46.9	155	+2	10.0	114	56	16 03	47	33	27 72	49 14		
23	163	22.4		58.5	267	21.4	156		21.4	114	58	15 52	39	28	28 74	49 11		
24	178	22.4	+19	58.0	281	56.0		+2	32.8		60 S	15 39	16 30	17 23	23 29 78	10 49 9		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 3 ^h 57 ^m 6		Mag: -3.9 PMG: 11 ^h 42 ^m			Mag: +1.8 PMG: 13 ^h 02 ^m			Mag: -2.5 PMG: 20 ^h 50 ^m			Mag: +0.1 PMG: 23 ^h 04 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	300	26.6	184	41.8	+22	00.6	164	16.3	+17	55.6	46	34.0	-22	-08.4	12	51.4	-22	09.1
1	315	29.0	199	41.0	+22	00.1	179	17.1		55.1	61	36.7		-08.3	27	54.0		09.1
2	330	31.5	214	40.2	+21	59.7	194	18.0		54.7	76	39.3		-08.3	42	56.7		09.1
3	345	34.0	229	39.3		59.2	209	18.9		54.2	91	41.9		-08.3	57	59.4		09.2
4	0	36.4	244	38.5		58.8	224	19.7		53.8	106	44.5		-08.3	73	02.0		09.2
5	15	38.9	259	37.7	+21	58.3	239	20.6	+17	53.3	121	47.2	-22	-08.3	88	04.7	-22	09.2
6	30	41.4	274	36.9	+21	57.9	254	21.5	+17	52.8	136	49.8	-22	-08.3	103	07.3	-22	09.2
7	45	43.8	289	36.1		57.4	269	22.3		52.4	151	52.4		-08.3	118	10.0		09.3
8	60	46.3	304	35.3		57.0	284	23.2		51.9	166	55.0		-08.3	133	12.6		09.3
9	75	48.8	319	34.4		56.5	299	24.1		51.5	181	57.6		-08.3	148	15.3		09.3
10	90	51.2	334	33.6		56.1	314	25.0		51.0	197	00.3		-08.3	163	17.9		09.3
11	105	53.7	349	32.8	+21	55.6	329	25.8	+17	50.5	212	02.9	-22	-08.3	178	20.6	-22	09.4
12	120	56.1	4	32.0	+21	55.1	344	26.7	+17	50.1	227	05.5	-22	-08.3	193	23.2	-22	09.4
13	135	58.6	19	31.2		54.7	359	27.6		49.6	242	08.1		-08.2	208	25.9		09.4
14	151	01.1	34	30.4		54.2	14	28.4		49.2	257	10.7		-08.2	223	28.5		09.4
15	166	03.5	49	29.6		53.8	29	29.3		48.7	272	13.4		-08.2	238	31.2		09.5
16	181	06.0	64	28.8		53.3	44	30.2		48.2	287	16.0		-08.2	253	33.8		09.5
17	196	08.5	79	27.9	+21	52.8	59	31.0	+17	47.8	302	18.6	-22	-08.2	268	36.5	-22	09.5
18	211	10.9	94	27.1	+21	52.4	74	31.9	+17	47.3	317	21.2	-22	-08.2	283	39.1	-22	09.5
19	226	13.4	109	26.3		51.9	89	32.8		46.9	332	23.8		-08.2	298	41.8		09.6
20	241	15.9	124	25.5		51.4	104	33.7		46.4	347	26.5		-08.2	313	44.4		09.6
21	256	18.3	139	24.7		51.0	119	34.5		45.9	2	29.1		-08.2	328	47.1		09.6
22	271	20.8	154	23.9		50.5	134	35.4		45.5	17	31.7		-08.2	343	49.7		09.6
23	286	23.3	169	23.1		50.0	149	36.3		45.0	32	34.3		-08.2	358	52.4		09.7
24	301	25.7	184	22.3	+21	49.6	164	37.1	+17	44.5	47	36.9	-22	-08.2	13	55.0	-22	09.7
Dif.	—		-8		-5		+9		-5		+26		0		+27		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 06 ^m 5				SD: 14'9 Edad: 21 ^d 2 PMG: 05 ^h 21 ^m Rº: 43 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	m	m	m		
0	178	22.4	+19	58.0	281	56.0	155	+2	32.8	114	60 N	0 20	2 13	3 22	23 04	12	12 06	78
1	193	22.4		57.5	296	30.5	155		44.2	114	58	1 30	2 38	3 36	08 14		03 76	
2	208	22.3		57.0	311	05.0	155	+2	55.6	115	56	2 02	2 57	3 49	12 16		12 01	73
3	223	22.3		56.5	325	39.5	154	+3	07.1	114	54	25	3 12	4 00	15 18		11 59	71
4	238	22.3		55.9	340	13.9	154		18.5	114	52	2 43	3 26	09	17 21		57 69	
5	253	22.3	+19	55.4	354	48.3	154	+3	29.9	113	50	3 17	4 01	4 18	23 20	22	11 55	67
6	268	22.3	+19	54.9	9	22.7	153	+3	41.2	114	45	3 41	4 01	4 36	23 25	26	11 51	63
7	283	22.3		54.4	23	57.0	153	+3	52.6	114	40	4 00	20	4 51	30 29		48 60	
8	298	22.3		53.8	38	31.3	153	+4	04.0	114	35	16	35	5 03	34 31		45 57	
9	313	22.2		53.3	53	05.6	152		15.4	113	30	40	4 48	14	37 34		43 55	
10	328	22.2		52.8	67	39.8	152		26.7	114	20	5 15	5 09	32	43 38		39 50	
11	343	22.2	+19	52.3	82	14.0	152	+4	38.1	113	10 N	30	5 26	5 48	23 49	41	11 35	47
12	358	22.2	+19	51.8	96	48.2	151	+4	49.4	114	0	43	5 41	6 03	23 54	45	11 32	43
13	13	22.2		51.2	111	22.3	151	+5	00.8	113	10 S	5 56	5 55	18	23 59	48	28 40	
14	28	22.2		50.7	125	56.4	151		12.1	113	20	6 03	6 10	33	** ** *	**	24 37	
15	43	22.2		50.2	140	30.5	150		23.4	113	30	6 10	25	6 51	** ** *	**	20 33	
16	58	22.2		49.7	155	04.5	149		34.7	113	35	6 18	34	7 01	** ** *	**	18 30	
17	73	22.1	+19	49.1	169	38.4	150	+5	46.0	112	40	27	6 43	7 12	** ** *	**	11 15	28
18	88	22.1	+19	48.6	184	12.4	148	+5	57.2	113	45	31	6 54	7 26	** ** *	**	11 12	24
19	103	22.1		48.1	198	46.2	149	+6	08.5	112	50	35	7 06	43	** ** *	**	08 21	
20	118	22.1		47.5	213	20.1	147		19.7	113	52	39	12	50	** ** *	**	07 19	
21	133	22.1		47.0	227	53.8	148		31.0	112	54	26	19	7 59	** ** *	**	05 17	
22	148	22.1		46.5	242	27.6	147		42.2	111	56	44	26	8 09	** ** *	**	03 15	
23	163	22.1		45.9	257	01.3	146	+6	53.3	112	58	6 49	33	20	** ** *	**	11 00	13
24	178	22.1	+19	45.4	271	34.9		+7	04.5		60 S	7 42	7 42	8 33	** ** *	**	10 58	10

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 3 ^h 53 ^m 6		Mag: -3.9 PMG: 11 ^h 43 ^m			Mag: +1.8 PMG: 13 ^h 01 ^m			Mag: -2.5 PMG: 20 ^h 46 ^m			Mag: +0.1 PMG: 23 ^h 00 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	301	25.7	184	22.3	+21	49.6	164	37.1	+17	44.5	47	36.9	-22	08.2	13	55.0	-22	09.7
1	316	28.2	199	21.5		49.1	179	38.0		44.1	62	39.5		08.1	28	57.7		09.7
2	331	30.6	214	20.6		48.6	194	38.9		43.6	77	42.2		08.1	44	00.3		09.7
3	346	33.1	229	19.8		48.1	209	39.8		43.2	92	44.8		08.1	59	03.0		09.8
4	1	35.6	244	19.0		47.7	224	40.6		42.7	107	47.4		08.1	74	05.6		09.8
5	16	38.0	259	18.2	+21	47.2	239	41.5	+17	42.2	122	50.0	-22	08.1	89	08.3	-22	09.8
6	31	40.5	274	17.4	+21	46.7	254	42.4	+17	41.8	137	52.6	-22	08.1	104	10.9	-22	09.8
7	46	43.0	289	16.6		46.2	269	43.2		41.3	152	55.2		08.1	119	13.6		09.9
8	61	45.4	304	15.8		45.7	284	44.1		40.8	167	57.8		08.1	134	16.2		09.9
9	76	47.9	319	15.0		45.3	299	45.0		40.4	183	00.5		08.1	149	18.9		09.9
10	91	50.4	334	14.2		44.8	314	45.9		39.9	198	03.1		08.1	164	21.5		09.9
11	106	52.8	349	13.4	+21	44.3	329	46.7	+17	39.4	213	05.7	-22	08.1	179	24.2	-22	10.0
12	121	55.3	4	12.6	+21	43.8	344	47.6	+17	39.0	228	08.3	-22	08.1	194	26.8	-22	10.0
13	136	57.7	19	11.8		43.3	359	48.5		38.5	243	10.9		08.1	209	29.5		10.0
14	152	00.2	34	11.0		42.8	14	49.4		38.0	258	13.5		08.1	224	32.1		10.0
15	167	02.7	49	10.2		42.4	29	50.2		37.6	273	16.1		08.0	239	34.8		10.1
16	182	05.1	64	09.4		41.9	44	51.1		37.1	288	18.7		08.0	254	37.4		10.1
17	197	07.6	79	08.5	+21	41.4	59	52.0	+17	36.7	303	21.3	-22	08.0	269	40.1	-22	10.1
18	212	10.1	94	07.7	+21	40.9	74	52.8	+17	36.2	318	24.0	-22	08.0	284	42.7	-22	10.1
19	227	12.5	109	06.9		40.4	89	53.7		35.7	333	26.6		08.0	299	45.4		10.2
20	242	15.0	124	06.1		39.9	104	54.6		35.3	348	29.2		08.0	314	48.1		10.2
21	257	17.5	139	05.3		39.4	119	55.5		34.8	3	31.8		08.0	329	50.7		10.2
22	272	19.9	154	04.5		38.9	134	56.3		34.3	18	34.4		08.0	344	53.4		10.2
23	287	22.4	169	03.7		38.4	149	57.2		33.9	33	37.0		08.0	359	56.0		10.3
24	302	24.9	184	02.9	+21	37.9	164	58.1	+17	33.4	48	39.6	-22	08.0	14	58.6	-22	10.3
Dif.	—		-8		-5		+9		-5		+26		0		+26			

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 06 ^m 5			SD: 15'1 Edad: 22 ^d 2 PHE { 4 ^h : 55'4 12 ^h : 55'6 20 ^h : 55'8 PMG: 06 ^h 04 ^m Rº: 46 ^m												
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	Civil			Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	178	22.1	+19	45.4	271	34.9	146	+7	04.5	112	60 N	20 48	21 54	** **	23 16	14
1	193	22.1		44.9	286	08.5	145		15.7	111	58	33	31	23 27	22 17	19 78
2	208	22.1		44.4	300	42.0	145		26.8	111	56	21	21 13	22 35	28 20	14 75
3	223	22.1		43.8	315	15.5	145		37.9	111	54	11	20 57	22 06	33 22	10 73
4	238	22.0		43.3	329	49.0	143	+7	49.0	111	52	20 01	44	21 44	38 24	06 71
5	253	22.0	+19	42.8	344	22.3	144	+8	00.1	110	50	19 53	20 33	21 27	23 42	26 13 02 69
6	268	22.0	+19	42.2	358	55.7	142	+8	11.1	110	45	19 35	20 10	20 54	23 51	29 12 54 66
7	283	22.0		41.7	13	28.9	143		22.1	110	40	21	19 52	30	23 59	32 48 62
8	298	22.0		41.1	28	02.2	141		33.1	110	35	19 09	37	20 11	** **	** 42 60
9	313	22.0		40.6	42	35.3	141		44.1	109	30	18 58	24	19 56	** **	** 38 57
10	328	22.0		40.1	57	08.4	140	+8	55.0	109	20	40	19 04	32	** **	** 29 53
11	343	22.0	+19	39.5	71	41.4	140	+9	05.9	109	10 N	18 25	18 47	19 13	** **	** 12 22 49
12	358	22.0	+19	39.0	86	14.4	139	+9	16.8	109	0	18 10	18 32	18 58	** **	** 12 15 46
13	13	22.0		38.5	100	47.3	139		27.7	108	10 S	17 56	18	44	** **	** 08 43
14	28	22.0		37.9	115	20.2	138		38.5	108	20	41	18 04	31	0 05	51 12 01 39
15	43	22.0		37.4	129	53.0	137	+9	49.3	108	30	23	17 49	18	11 56	11 53 35
16	58	22.0		36.8	144	25.7	137	+10	00.1	107	35	13	40	11	15 58	48 33
17	73	22.0	+19	36.3	158	58.4	136	+10	10.8	107	40	17 02	17 31	18 04	0 19	61 11 43 30
18	88	22.0	+19	35.8	173	31.0	135	+10	21.5	107	45	16 48	17 21	17 56	0 24	64 11 36 28
19	103	22.0		35.2	188	03.5	134		32.2	106	50	32	08	48	30 68	29 23
20	118	21.9		34.7	202	35.9	134		42.8	106	52	24	17 03	44	32 71	26 21
21	133	21.9		34.1	217	08.3	134	+10	53.4	105	54	16	16 56	40	35 73	22 20
22	148	21.9		33.6	231	40.7	132	+11	03.9	106	56	16 06	50	36	39 74	18 17
23	163	21.9		33.0	246	12.9	132		14.5	104	58	15 55	42	31	42 77	13 15
24	178	21.9	+19	32.5	260	45.1		+11	24.9		60 S	15 43	16 33	17 26	0 47	80 11 08 12
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 3 ^h 49 ^m 7		Mag: -3.9 PMG: 11 ^h 44 ^m			Mag: +1.8 PMG: 12 ^h 59 ^m			Mag: -2.5 PMG: 20 ^h 42 ^m			Mag: +0.1 PMG: 22 ^h 56 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	302	24.9	184	02.9	+21	37.9	164	58.1	+17	33.4	48	39.6	-22	-08.0	14	58.6
1	317	27.3	199	02.1		37.4	179	59.0		32.9	63	42.2		-08.0	30	01.3
2	332	29.8	214	01.3		36.9	194	59.8		32.4	78	44.8		-08.0	45	03.9
3	347	32.2	229	00.5		36.4	210	00.7		32.0	93	47.4		-08.0	60	06.6
4	2	34.7	243	59.7		35.9	225	01.6		31.5	108	50.0		-08.0	75	09.2
5	17	37.2	258	58.9	+21	35.4	240	02.5	+17	31.0	123	52.7	-22	-07.9	90	11.9
6	32	39.6	273	58.1	+21	34.9	255	03.3	+17	30.6	138	55.3	-22	-07.9	105	14.5
7	47	42.1	288	57.3		34.4	270	04.2		30.1	153	57.9		-07.9	120	17.2
8	62	44.6	303	56.5		33.9	285	05.1		29.6	169	00.5		-07.9	135	19.8
9	77	47.0	318	55.7		33.4	300	06.0		29.2	184	03.1		-07.9	150	22.5
10	92	49.5	333	54.9		32.9	315	06.8		28.7	199	05.7		-07.9	165	25.1
11	107	52.0	348	54.1	+21	32.4	330	07.7	+17	28.2	214	08.3	-22	-07.9	180	27.8
12	122	54.4	3	53.3	+21	31.9	345	08.6	+17	27.8	229	10.9	-22	-07.9	195	30.4
13	137	56.9	18	52.5		31.3	0	09.5		27.3	244	13.5		-07.9	210	33.1
14	152	59.4	33	51.7		30.8	15	10.4		26.8	259	16.1		-07.9	225	35.7
15	168	01.8	48	50.9		30.3	30	11.2		26.3	274	18.7		-07.9	240	38.4
16	183	04.3	63	50.1		29.8	45	12.1		25.9	289	21.3		-07.9	255	41.0
17	198	06.7	78	49.3	+21	29.3	60	13.0	+17	25.4	304	23.9	-22	-07.9	270	43.7
18	213	09.2	93	48.6	+21	28.8	75	13.9	+17	24.9	319	26.5	-22	-07.9	285	46.3
19	228	11.7	108	47.8		28.2	90	14.7		24.5	334	29.1		-07.9	300	49.0
20	243	14.1	123	47.0		27.7	105	15.6		24.0	349	31.7		-07.8	315	51.6
21	258	16.6	138	46.2		27.2	120	16.5		23.5	4	34.3		-07.8	330	54.3
22	273	19.1	153	45.4		26.7	135	17.4		23.0	19	36.9		-07.8	345	56.9
23	288	21.5	168	44.6		26.2	150	18.2		22.6	34	39.5		-07.8	0	59.6
24	303	24.0	183	43.8	+21	25.6	165	19.1	+17	22.1	49	42.1	-22	-07.8	16	02.2
Dif.	—		-8		-5		+9		-5		+26		0		+26	
															0	

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 15'7				SD: 15'2 Edad: 23 ^d 2							PHE { 4 ^h : 56'1 12 ^h : 56'4 20 ^h : 56'6			PMG: 06 ^h 50 ^m		Rº: 48 ^m							
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.				Náut.	Civil			Hora	Rº		Hora	Rº				
h	°	'	°	'	°	'	°	'	°		h m	h m	h m	h m m		h m m	h m m							
0	178	21.9	+19	32.5	260	45.1	131	+11	24.9	105	60 N	2 20	3 26	23 30	20	14 45	84							
1	193	21.9		31.9	275	17.2	130		35.4	104	58	0 48	2 43	39 24		37 80								
2	208	21.9		31.4	289	49.2	130		45.8	103	56	1 39	3 01	48 26		29 78								
3	223	21.9		30.9	304	21.2	129	+11	56.1	103	54	2 08	16	23 55	28	23 75								
4	238	21.9		30.3	318	53.1	128	+12	06.4	103	52	29	29	***	***	17 73								
5	253	21.9	+19	29.8	333	24.9	127	+12	16.7	102	50	2 47	3 41	***	***	14 11	71							
6	268	21.9	+19	29.2	347	56.6	126	+12	26.9	102	45	3 19	4 04	***	***	14 00	67							
7	283	21.9		28.7	2	28.2	126		37.1	102	40	3 43	22	***	***	13 50	64							
8	298	21.9		28.1	16	59.8	125		47.3	100	35	4 02	36	0 05	35	42 61								
9	313	21.9		27.6	31	31.3	124	+12	57.3	101	30	17	4 49	11 37		35 59								
10	328	21.9		27.0	46	02.7	124	+13	07.4	100	20	4 41	5 09	21 41		22 56								
11	343	21.9	+19	26.5	60	34.1	122	+13	17.4	99	10 N	5 00	5 26	0 30	45	13 11	53							
12	358	21.9	+19	25.9	75	05.3	122	+13	27.3	99	0	5 16	5 41	0 39	47	13 01	50							
13	13	21.9		25.4	89	36.5	121		37.2	98	10 S	29	5 55	47 51		12 51	47							
14	28	21.9		24.8	104	07.6	120		47.0	98	20	42	6 09	0 56	55	40 44								
15	43	21.9		24.3	118	38.6	119	+13	56.8	97	30	5 55	24	1 07	58	28 40								
16	58	21.9		23.7	133	09.5	118	+14	06.5	97	35	6 02	32	13 61		21 37								
17	73	21.9	+19	23.1	147	40.3	118	+14	16.2	96	40	6 09	6 42	1 20	63	12 13	35							
18	88	21.9	+19	22.6	162	11.1	116	+14	25.8	96	45	6 16	6 52	1 28	67	12 04	32							
19	103	21.9		22.0	176	41.7	116		35.4	94	50	25	7 04	38 70		11 52	29							
20	118	21.9		21.5	191	12.3	115		44.8	95	52	28	10	43 72		47 27								
21	133	21.9		20.9	205	42.8	114	+14	54.3	93	54	32	16	48 74		42 24								
22	148	21.9		20.4	220	13.2	113	+15	03.6	94	56	36	23	53 77		35 23								
23	163	21.9		19.8	234	43.5	112		13.0	92	58	41	30	1 59	80	11 28	20							
24	178	21.9	+19	19.2	249	13.7		+15	22.2		60 S	6 46	7 39	2 07	83	11 20	17							

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 45 ^m 8		Mag: -3.9 PMG: 11 ^h 46 ^m				Mag: +1.8 PMG: 12 ^h 58 ^m				Mag: -2.5 PMG: 20 ^h 38 ^m				Mag: +0.1 PMG: 22 ^h 52 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	303	24.0	183	43.8	+21	25.6	165	19.1	+17	22.1	49	42.1	-22	07.8	16	02.2	-22	10.9
1	318	26.5	198	43.0		25.1	180	20.0		21.6	64	44.7		07.8	31	04.9		10.9
2	333	28.9	213	42.2		24.6	195	20.9		21.2	79	47.3		07.8	46	07.5		10.9
3	348	31.4	228	41.4		24.1	210	21.8		20.7	94	49.9		07.8	61	10.2		10.9
4	3	33.8	243	40.6		23.5	225	22.6		20.2	109	52.5		07.8	76	12.8		11.0
5	18	36.3	258	39.8	+21	23.0	240	23.5	+17	19.7	124	55.1	-22	07.8	91	15.5	-22	11.0
6	33	38.8	273	39.0	+21	22.5	255	24.4	+17	19.3	139	57.7	-22	07.8	106	18.1	-22	11.0
7	48	41.2	288	38.2		21.9	270	25.3		18.8	155	00.3		07.8	121	20.8		11.0
8	63	43.7	303	37.5		21.4	285	26.1		18.3	170	02.9		07.8	136	23.4		11.1
9	78	46.2	318	36.7		20.9	300	27.0		17.8	185	05.5		07.8	151	26.1		11.1
10	93	48.6	333	35.9		20.3	315	27.9		17.4	200	08.1		07.8	166	28.7		11.1
11	108	51.1	348	35.1	+21	19.8	330	28.8	+17	16.9	215	10.7	-22	07.8	181	31.4	-22	11.1
12	123	53.6	3	34.3	+21	19.3	345	29.7	+17	16.4	230	13.3	-22	07.8	196	34.0	-22	11.2
13	138	56.0	18	33.5		18.7	0	30.5		15.9	245	15.9		07.7	211	36.6		11.2
14	153	58.5	33	32.7		18.2	15	31.4		15.5	260	18.5		07.7	226	39.3		11.2
15	169	01.0	48	31.9		17.6	30	32.3		15.0	275	21.1		07.7	241	41.9		11.2
16	184	03.4	63	31.1		17.1	45	33.2		14.5	290	23.7		07.7	256	44.6		11.3
17	199	05.9	78	30.4	+21	16.6	60	34.1	+17	14.0	305	26.3	-22	07.7	271	47.2	-22	11.3
18	214	08.3	93	29.6	+21	16.0	75	34.9	+17	13.6	320	28.9	-22	07.7	286	49.9	-22	11.3
19	229	10.8	108	28.8		15.5	90	35.8		13.1	335	31.5		07.7	301	52.5		11.3
20	244	13.3	123	28.0		14.9	105	36.7		12.6	350	34.1		07.7	316	55.2		11.4
21	259	15.7	138	27.2		14.4	120	37.6		12.1	5	36.7		07.7	331	57.8		11.4
22	274	18.2	153	26.4		13.8	135	38.5		11.7	20	39.3		07.7	347	00.5		11.4
23	289	20.7	168	25.6		13.3	150	39.3		11.2	35	41.8		07.7	2	03.1		11.4
24	304	23.1	183	24.9	+21	12.7	165	40.2	+17	10.7	50	44.4	-22	07.7	17	05.8	-22	11.5
Dif.	—		-8		-5		+9		-5		+26		0		+26			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 06 ^m 5			SD: 15'7 Edad: 25 ^d 2 PHE { 4 ^h : 57'8 12 ^h : 58'2 20 ^h : 58'5 PMG: 08 ^h 31 ^m Rº: 57 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	178	22.1	+19	05.7	236	50.7	88	+18	41.6	73	60 N	2 26	3 31	0 03	17 32	76	
1	193	22.1		05.1	251	18.5	87		48.9	71	58	1 04	2 48	0 03	17 73		
2	208	22.1		04.5	265	46.2	86	+18	56.0	70	56	1 47	3 06	14 35	17 04	72	
3	223	22.1		04.0	280	13.8	86	+19	03.0	70	54	2 14	20	23 38	16 52	71	
4	238	22.1		03.4	294	41.4	84		10.0	68	52	34	33	32 39	42 70		
5	253	22.1	+19	02.8	309	08.8	83	+19	16.8	68	50	2 51	3 44	0 39 41	16 34 68		
6	268	22.1	+19	02.2	323	36.1	83	+19	23.6	66	45	3 22	4 06	0 56 43	16 15 66		
7	283	22.1		01.7	338	03.4	81		30.2	66	40	3 46	24	1 09 46	16 00 65		
8	298	22.2		01.1	352	30.5	81		36.8	64	35	4 04	38	21 47	15 47 64		
9	313	22.2	+19	00.5	6	57.6	79		43.2	63	30	19	4 50	31 49	36 62		
10	328	22.2	+18	59.9	21	24.5	78		49.5	62	20	4 42	5 10	1 48 52	16 61		
11	343	22.2	+18	59.4	35	51.3	78	+19	55.7	61	10 N	5 00	5 27	2 04 54	15 00 59		
12	358	22.2	+18	58.8	50	18.1	76	+20	01.8	60	0	5 16	5 41	2 18 56	14 44 58		
13	13	22.2		58.2	64	44.7	76		07.8	59	10 S	29	5 55	33 57	29 56		
14	28	22.2		57.6	79	11.3	75		13.7	58	20	42	6 08	2 48 60	14 12 55		
15	43	22.2		57.0	93	37.8	73		19.5	56	30	5 54	23	3 06 62	13 53 53		
16	58	22.2		56.5	108	04.1	73		25.1	55	35	6 00	31	16 64	42 51		
17	73	22.3	+18	55.9	122	30.4	72	+20	30.6	55	40	6 07	6 40	3 28 66	13 29 50		
18	88	22.3	+18	55.3	136	56.6	71	+20	36.1	53	45	6 14	6 50	3 43 68	13 15 48		
19	103	22.3		54.7	151	22.7	69		41.4	51	50	22	7 02	4 00 71	12 56 46		
20	118	22.3		54.1	165	48.6	69		46.5	51	52	26	07	08 72	48 44		
21	133	22.3		53.5	180	14.5	69		51.6	49	54	30	13	18 73	38 43		
22	148	22.3		53.0	194	40.4	67	+20	56.5	48	56	34	20	28 75	27 42		
23	163	22.3		52.4	209	06.1	66	+21	01.3	47	58	38	27	4 40 78	12 15 39		
24	178	22.4	+18	51.8	223	31.7		+21	06.0		60 S	6 43	7 35	4 54 81	12 01 36		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 3 ^h 37 ^m 9		Mag: -3.9 PMG: 11 ^h 48 ^m			Mag: +1.8 PMG: 12 ^h 55 ^m			Mag: -2.4 PMG: 20 ^h 29 ^m			Mag: +0.1 PMG: 22 ^h 43 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'		
0	305	22.3	183	06.1	+20	59.2	166	01.4	+16	59.2	51	46.6	-22	07.6	18	09.3	
1	320	24.7	198	05.4		58.6	181	02.3		58.7	66	49.2		07.6	33	11.9	
2	335	27.2	213	04.6		58.1	196	03.2		58.2	81	51.7		07.6	48	14.6	
3	350	29.7	228	03.8		57.5	211	04.1		57.8	96	54.3		07.5	63	17.2	
4	5	32.1	243	03.0		56.9	226	04.9		57.3	111	56.9		07.5	78	19.8	
5	20	34.6	258	02.3	+20	56.3	241	05.8	+16	56.8	126	59.5	-22	07.5	93	22.5	
6	35	37.1	273	01.5	+20	55.7	256	06.7	+16	56.3	142	02.1	-22	07.5	108	25.1	
7	50	39.5	288	00.7		55.2	271	07.6		55.8	157	04.7		07.5	123	27.8	
8	65	42.0	303	00.0		54.6	286	08.5		55.3	172	07.2		07.5	138	30.4	
9	80	44.4	317	59.2		54.0	301	09.4		54.9	187	09.8		07.5	153	33.1	
10	95	46.9	332	58.4		53.4	316	10.3		54.4	202	12.4		07.5	168	35.7	
11	110	49.4	347	57.6	+20	52.8	331	11.1	+16	53.9	217	15.0	-22	07.5	183	38.4	
12	125	51.8	2	56.9	+20	52.2	346	12.0	+16	53.4	232	17.6	-22	07.5	198	41.0	
13	140	54.3	17	56.1		51.6	1	12.9		52.9	247	20.1		07.5	213	43.6	
14	155	56.8	32	55.3		51.1	16	13.8		52.4	262	22.7		07.5	228	46.3	
15	170	59.2	47	54.6		50.5	31	14.7		51.9	277	25.3		07.5	243	48.9	
16	186	01.7	62	53.8		49.9	46	15.6		51.5	292	27.9		07.5	258	51.6	
17	201	04.2	77	53.0	+20	49.3	61	16.5	+16	51.0	307	30.5	-22	07.5	273	54.2	
18	216	06.6	92	52.3	+20	48.7	76	17.3	+16	50.5	322	33.0	-22	07.5	288	56.9	
19	231	09.1	107	51.5		48.1	91	18.2		50.0	337	35.6		07.5	303	59.5	
20	246	11.6	122	50.7		47.5	106	19.1		49.5	352	38.2		07.5	319	02.2	
21	261	14.0	137	49.9		46.9	121	20.0		49.0	7	40.8		07.5	334	04.8	
22	276	16.5	152	49.2		46.3	136	20.9		48.6	22	43.4		07.5	349	07.4	
23	291	18.9	167	48.4		45.7	151	21.8		48.1	37	45.9		07.5	4	10.1	
24	306	21.4	182	47.6	+20	45.1	166	22.7	+16	47.6	52	48.5	-22	07.5	19	12.7	
Dif.	—		-8		-6		+9		-5		+26		0		+26		

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 06 ^m 5				SD: 16'0 Edad: 26 ^d 2		PHE { 4 ^h : 58'8 12 ^h : 59'1 20 ^h : 59'4		Rº: 60 ^m										
	PMG: 09 ^h 28 ^m																		
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	
0	178	22.4	+18	51.8	223	31.7	65	+21	06.0	46	60 N	20 38	21 41	** **	0 20	46	18 48	61	
1	193	22.4		51.2	237	57.2	65		10.6	44	58	25	20	22 57	36	47	30	62	
2	208	22.4		50.6	252	22.7	63		15.0	43	56	14	21 04	22 19	0 49	49	16	61	
3	223	22.4		50.0	266	48.0	63		19.3	42	54	20 04	20 49	21 54	1 01	50	18 03	62	
4	238	22.4		49.5	281	13.3	62		23.5	40	52	19 55	37	35	11	51	17 52	62	
5	253	22.4	+18	48.9	295	38.5	61	+21	27.5	39	50	19 47	20 27	21 19	1 20	52	17 42	62	
6	268	22.5	+18	48.3	310	03.6	60	+21	31.4	38	45	19 31	20 05	20 48	1 39	54	17 21	62	
7	283	22.5		47.7	324	28.6	60		35.2	36	40	17	19 48	25	1 55	55	17 05	61	
8	298	22.5		47.1	338	53.6	58		38.8	35	35	19 06	34	20 08	2 08	56	16 51	61	
9	313	22.5		46.5	353	18.4	58		42.3	34	30	18 56	22	19 53	20	56	38	62	
10	328	22.5		45.9	7	43.2	57		45.7	32	20	39	19 02	30	40	58	16 17	61	
11	343	22.5	+18	45.3	22	07.9	56	+21	48.9	31	10 N	18 24	18 46	19 12	2 58	58	15 59	61	
12	358	22.6	+18	44.7	36	32.5	56	+21	52.0	29	0	18 10	18 32	18 57	3 14	59	15 42	61	
13	13	22.6		44.1	50	57.1	55		54.9	28	10 S	17 56	19	44	30	61	25	60	
14	28	22.6		43.6	65	21.6	53	+21	57.7	27	20	42	18 05	32	3 48	61	15 07	60	
15	43	22.6		43.0	79	45.9	54	+22	00.4	25	30	26	17 51	20	4 08	63	14 46	59	
16	58	22.6		42.4	94	10.3	52		02.9	24	35	16	43	14	20	63	33	60	
17	73	22.7	+18	41.8	108	34.5	52	+22	05.3	22	40	17 05	17 34	18 07	4 34	64	14 19	59	
18	88	22.7	+18	41.2	122	58.7	51	+22	07.5	21	45	16 53	17 24	18 00	4 51	64	14 03	58	
19	103	22.7		40.6	137	22.8	51		09.6	19	50	37	13	17 52	5 11	65	13 42	58	
20	118	22.7		40.0	151	46.9	50		11.5	18	52	30	08	49	20	67	32	58	
21	133	22.7		39.4	166	10.9	49		13.3	16	54	22	17 02	45	31	67	21	57	
22	148	22.8		38.8	180	34.8	48		14.9	15	56	13	16 56	41	43	68	13 09	56	
23	163	22.8		38.2	194	58.6	48		16.4	13	58	16 03	49	37	5 58	68	12 54	56	
24	178	22.8	+18	37.6	209	22.4		+22	17.7		60 S	15 51	16 41	17 33	6 15	69	12 37	55	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 3 ^h 34 ^m 0		Mag: -3.9 PMG: 11 ^h 49 ^m				Mag: +1.8 PMG: 12 ^h 54 ^m				Mag: -2.4 PMG: 20 ^h 25 ^m				Mag: +0.1 PMG: 22 ^h 39 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	306	21.4	182	47.6	+20	45.1	166	22.7	+16	47.6	52	48.5	-22	-07.5	19	12.7	-22	12.6	
1	321	23.9	197	46.9		44.5	181	23.6		47.1	67	51.1		-07.5	34	15.4		12.6	
2	336	26.3	212	46.1		43.9	196	24.4		46.6	82	53.7		-07.5	49	18.0		12.7	
3	351	28.8	227	45.4		43.3	211	25.3		46.1	97	56.2		-07.4	64	20.7		12.7	
4	6	31.3	242	44.6		42.7	226	26.2		45.6	112	58.8		-07.4	79	23.3		12.7	
5	21	33.7	257	43.8	+20	42.1	241	27.1	+16	45.1	128	01.4	-22	-07.4	94	25.9	-22	12.7	
6	36	36.2	272	43.1	+20	41.5	256	28.0	+16	44.7	143	04.0	-22	-07.4	109	28.6	-22	12.7	
7	51	38.7	287	42.3		40.9	271	28.9		44.2	158	06.5		-07.4	124	31.2		12.8	
8	66	41.1	302	41.5		40.3	286	29.8		43.7	173	09.1		-07.4	139	33.9		12.8	
9	81	43.6	317	40.8		39.6	301	30.7		43.2	188	11.7		-07.4	154	36.5		12.8	
10	96	46.1	332	40.0		39.0	316	31.5		42.7	203	14.3		-07.4	169	39.2		12.8	
11	111	48.5	347	39.3	+20	38.4	331	32.4	+16	42.2	218	16.8	-22	-07.4	184	41.8	-22	12.9	
12	126	51.0	2	38.5	+20	37.8	346	33.3	+16	41.7	233	19.4	-22	-07.4	199	44.4	-22	12.9	
13	141	53.4	17	37.7		37.2	1	34.2		41.2	248	22.0		-07.4	214	47.1		12.9	
14	156	55.9	32	37.0		36.6	16	35.1		40.7	263	24.6		-07.4	229	49.7		12.9	
15	171	58.4	47	36.2		36.0	31	36.0		40.3	278	27.1		-07.4	244	52.4		13.0	
16	187	00.8	62	35.5		35.3	46	36.9		39.8	293	29.7		-07.4	259	55.0		13.0	
17	202	03.3	77	34.7	+20	34.7	61	37.8	+16	39.3	308	32.3	-22	-07.4	274	57.7	-22	13.0	
18	217	05.8	92	33.9	+20	34.1	76	38.7	+16	38.8	323	34.8	-22	-07.4	290	00.3	-22	13.0	
19	232	08.2	107	33.2		33.5	91	39.5		38.3	338	37.4		-07.4	305	02.9		13.1	
20	247	10.7	122	32.4		32.9	106	40.4		37.8	353	40.0		-07.4	320	05.6		13.1	
21	262	13.2	137	31.7		32.2	121	41.3		37.3	8	42.6		-07.4	335	08.2		13.1	
22	277	15.6	152	30.9		31.6	136	42.2		36.8	23	45.1		-07.4	350	10.9		13.1	
23	292	18.1	167	30.1		31.0	151	43.1		36.3	38	47.7		-07.4	5	13.5		13.1	
24	307	20.6	182	29.4	+20	30.4	166	44.0	+16	35.8	53	50.3	-22	-07.4	20	16.1	-22	13.2	
Dif.	—		-8		-6		+9		-5		+26		0		+26				

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna						
	SD: 15'8 PMG: 12 ^h 06 ^m 5				SD: 16'2 Edad: 27 ^d 2 PMG: 10 ^h 28 ^m PHE { 4 ^h : 59'6 12 ^h : 59'9 20 ^h : 60'1 Rº: 62 ^m																	
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº								
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m							
0	178	22.8	+18	37.6	209	22.4	48	+22	17.7	12	60 N	1 17	2 33	3 35	1 06	66	19 49	44				
1	193	22.8		37.0	223	46.2	47		18.9	11	58	1 17	2 53	3 48	23	66	32	46				
2	208	22.8		36.4	238	09.9	46		20.0	8	56	1 54	3 10	4 00	38	65	17	48				
3	223	22.9		35.8	252	33.5	46		20.8	8	54	2 19	24	09	1 51	65	19 05	49				
4	238	22.9		35.2	266	57.1	45		21.6	5	52	39	36	18	2 02	64	18 54	50				
5	253	22.9	+18	34.6	281	20.6	45	+22	22.1	5	50	2 55	3 47	4 26	2 12	64	18 44	52				
6	268	22.9	+18	34.0	295	44.1	44	+22	22.6	2	45	3 25	4 09	4 43	2 33	64	18 23	54				
7	283	23.0		33.4	310	07.5	44		22.8	1	40	3 48	26	4 56	2 50	63	18 06	56				
8	298	23.0		32.8	324	30.9	43		22.9	0	35	4 06	40	5 08	3 04	63	17 52	57				
9	313	23.0		32.2	338	54.2	43		22.9	2	30	20	4 51	18	16	63	40	57				
10	328	23.0		31.6	353	17.5	42		22.7	4	20	4 43	5 11	35	38	62	18	60				
11	343	23.0	+18	31.0	7	40.7	43	+22	22.3	5	10 N	5 01	5 27	5 49	3 56	62	17 00	61				
12	358	23.1	+18	30.4	22	04.0	41	+22	21.8	7	0	5 16	5 41	6 03	4 13	62	16 43	61				
13	13	23.1		29.8	36	27.1	42		21.1	9	10 S	29	5 54	16	31	61	25	63				
14	28	23.1		29.2	50	50.3	41		20.2	10	20	41	6 08	31	4 49	61	16 07	64				
15	43	23.1		28.6	65	13.4	41		19.2	11	30	53	22	47	5 11	60	15 45	66				
16	58	23.2		28.0	79	36.5	40		18.1	14	35	5 59	30	6 56	23	60	33	66				
17	73	23.2	+18	27.4	93	59.5	40	+22	16.7	14	40	6 05	6 38	7 07	5 38	59	15 18	68				
18	88	23.2	+18	26.8	108	22.5	40	+22	15.3	17	45	6 12	6 48	7 20	5 55	58	15 01	69				
19	103	23.3		26.1	122	45.5	40		13.6	18	50	20	6 59	35	6 16	58	14 40	70				
20	118	23.3		25.5	137	08.5	39		11.8	20	52	23	7 05	42	27	56	30	71				
21	133	23.3		24.9	151	31.4	40		09.8	21	54	27	10	50	38	56	18	72				
22	148	23.3		24.3	165	54.4	39		07.7	23	56	31	16	7 59	6 51	55	14 05	73				
23	163	23.4		23.7	180	17.3	39		05.4	24	58	35	23	8 09	7 06	54	13 50	74				
24	178	23.4	+18	23.1	194	40.2		+22	03.0		60 S	6 39	7 31	8 20	7 24	53	13 32	76				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 3 ^h 30 ^m 1		Mag: -3.9 PMG: 11 ^h 51 ^m				Mag: +1.8 PMG: 12 ^h 52 ^m				Mag: -2.4 PMG: 20 ^h 21 ^m				Mag: +0.1 PMG: 22 ^h 35 ^m							
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	307	20.6	182	29.4	+20	30.4	166	44.0	+16	35.8	53	50.3	-22	07.4	20	16.1	-22	13.2				
1	322	23.0	197	28.6		29.7	181	44.9		35.4	68	52.8		07.4	35	18.8		13.2				
2	337	25.5	212	27.9		29.1	196	45.8		34.9	83	55.4		07.4	50	21.4		13.2				
3	352	27.9	227	27.1		28.5	211	46.7		34.4	98	58.0		07.4	65	24.1		13.2				
4	7	30.4	242	26.4		27.9	226	47.6		33.9	114	00.5		07.4	80	26.7		13.3				
5	22	32.9	257	25.6	+20	27.2	241	48.4	+16	33.4	129	03.1	-22	07.4	95	29.4	-22	13.3				
6	37	35.3	272	24.9	+20	26.6	256	49.3	+16	32.9	144	05.7	-22	07.4	110	32.0	-22	13.3				
7	52	37.8	287	24.1		26.0	271	50.2		32.4	159	08.2		07.4	125	34.6		13.3				
8	67	40.3	302	23.4		25.3	286	51.1		31.9	174	10.8		07.4	140	37.3		13.4				
9	82	42.7	317	22.6		24.7	301	52.0		31.4	189	13.4		07.4	155	39.9		13.4				
10	97	45.2	332	21.9		24.1	316	52.9		30.9	204	15.9		07.4	170	42.6		13.4				
11	112	47.7	347	21.1	+20	23.4	331	53.8	+16	30.4	219	18.5	-22	07.3	185	45.2	-22	13.4				
12	127	50.1	2	20.3	+20	22.8	346	54.7	+16	29.9	234	21.1	-22	07.3	200	47.8	-22	13.4				
13	142	52.6	17	19.6		22.1	1	55.6		29.4	249	23.6		07.3	215	50.5		13.5				
14	157	55.1	32	18.8		21.5	16	56.5		29.0	264	26.2		07.3	230	53.1		13.5				
15	172	57.5	47	18.1		20.9	31	57.4		28.5	279	28.8		07.3	245	55.8		13.5				
16	188	00.0	62	17.3		20.2	46	58.3		28.0	294	31.3		07.3	260	58.4		13.5				
17	203	02.4	77	16.6	+20	19.6	61	59.1	+16	27.5	309	33.9	-22	07.3	276	01.0	-22	13.6				
18	218	04.9	92	15.8	+20	18.9	77	00.0	+16	27.0	324	36.5	-22	07.3	291	03.7	-22	13.6				
19	233	07.4	107	15.1		18.3	92	00.9		26.5	339	39.0		07.3	306	06.3		13.6				
20	248	09.8	122	14.4		17.6	107	01.8		26.0	354	41.6		07.3	321	09.0		13.6				
21	263	12.3	137	13.6		17.0	122	02.7		25.5	9	44.1		07.3	336	11.6		13.7				
22	278	14.8	152	12.9		16.4	137	03.6		25.0	24	46.7		07.3	351	14.2		13.7				
23	293	17.2	167	12.1		15.7	152	04.5		24.5	39	49.3		07.3	6	16.9		13.7				
24	308	19.7	182	11.4	+20	15.1	167	05.4	+16	24.0	54	51.8	-22	07.3	21	19.5	-22	13.7				
Dif.	—		-8				-6				+26				0				+26			

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8				PHE { 4 ^h : 60'3 12 ^h : 60'5 20 ^h : 60'7														
	Edad: 28 ^d 2				R ^o : 61 ^m														
	PMG: 11 ^h 30 ^m																		
	hG ☉	Dec			hG ☾	Dif.		Dec		Dif.				Civil	Náut.	Hora	R ^o	Hora	R ^o
h	°	'	°	'	°	'		°	'	°	'	°	h	m	h	m	h	m	m
0	178	23.4	+18	23.1	194	40.2	39	+22	03.0	26	60 N	20 34	21 35			2 12	84	20 33	30
1	193	23.4		22.5	209	03.1	39	+22	00.4	28	58	21	21 15	22 45		29	82	18	33
2	208	23.4		21.9	223	26.0	38	+21	57.6	29	56	10	20 59	22 12		43	80	20 05	37
3	223	23.5		21.3	237	48.8	39		54.7	31	54	20 01	45	21 48		2 56	78	19 54	39
4	238	23.5		20.7	252	11.7	38		51.6	33	52	19 52	34	30		3 06	77	44	41
5	253	23.5	+18	20.0	266	34.5	39	+21	48.3	34	50	19 45	20 23	21 14		3 16	75	19 36	42
6	268	23.6	+18	19.4	280	57.4	38	+21	44.9	36	45	19 28	20 02	20 45		3 37	72	19 17	46
7	283	23.6		18.8	295	20.2	39		41.3	37	40	15	19 46	23		3 53	71	19 02	48
8	298	23.6		18.2	309	43.1	39		37.6	39	35	19 04	32	20 06		4 07	69	18 49	50
9	313	23.6		17.6	324	06.0	38		33.7	40	30	18 54	20	19 51		19	68	37	53
10	328	23.7		17.0	338	28.8	39		29.7	42	20	38	19 01	29		40	66	18	55
11	343	23.7	+18	16.4	352	51.7	39	+21	25.5	44	10 N	18 23	18 45	19 11		4 58	64	18 01	58
12	358	23.7	+18	15.7	7	14.6	39	+21	21.1	45	0	18 10	18 32	18 57		5 15	62	17 44	62
13	13	23.8		15.1	21	37.5	39		16.6	47	10 S	17 57	19	44		32	60	28	64
14	28	23.8		14.5	36	00.4	39		11.9	49	20	43	18 06	32		5 50	58	17 11	66
15	43	23.8		13.9	50	23.3	39		07.0	50	30	27	17 52	21		6 11	55	16 51	69
16	58	23.9		13.3	64	46.2	40	+21	02.0	51	35	18	44	15		23	54	39	71
17	73	23.9	+18	12.6	79	09.2	39	+20	56.9	53	40	17 07	17 36	18 09		6 37	52	16 26	73
18	88	23.9	+18	12.0	93	32.1	40	+20	51.6	55	45	16 55	17 26	18 02		6 53	50	16 10	76
19	103	24.0		11.4	107	55.1	40		46.1	56	50	40	15	17 55		7 14	46	15 50	79
20	118	24.0		10.8	122	18.1	41		40.5	58	52	33	10	51		23	46	41	81
21	133	24.0		10.2	136	41.2	40		34.7	59	54	25	17 05	48		34	44	30	83
22	148	24.1		09.5	151	04.2	41		28.8	61	56	17	16 59	44		7 46	42	18	85
23	163	24.1		08.9	165	27.3	42		22.7	62	58	16 07	52	40		8 00	40	15 04	88
24	178	24.1	+18	08.3	179	50.5		+20	16.5		60 S	15 56	16 44	17 36		8 17	36	14 48	91

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 26 ^m 1		Mag: -3.9 PMG: 11 ^h 52 ^m				Mag: +1.8 PMG: 12 ^h 51 ^m				Mag: -2.4 PMG: 20 ^h 17 ^m				Mag: +0.1 PMG: 22 ^h 31 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	308	19.7	182	11.4	+20	15.1	167	05.4	+16	24.0	54	51.8	-22	-07.3	21	19.5	-22	13.7
1	323	22.2	197	10.6		14.4	182	06.3		23.5	69	54.4		-07.3	36	22.2		13.8
2	338	24.6	212	09.9		13.8	197	07.2		23.0	84	56.9		-07.3	51	24.8		13.8
3	353	27.1	227	09.1		13.1	212	08.1		22.5	99	59.5		-07.3	66	27.4		13.8
4	8	29.5	242	08.4		12.4	227	09.0		22.0	115	02.1		-07.3	81	30.1		13.8
5	23	32.0	257	07.6	+20	11.8	242	09.9	+16	21.5	130	04.6	-22	-07.3	96	32.7	-22	13.8
6	38	34.5	272	06.9	+20	11.1	257	10.8	+16	21.0	145	07.2	-22	-07.3	111	35.3	-22	13.9
7	53	36.9	287	06.2		10.5	272	11.7		20.5	160	09.7		-07.3	126	38.0		13.9
8	68	39.4	302	05.4		09.8	287	12.5		20.0	175	12.3		-07.3	141	40.6		13.9
9	83	41.9	317	04.7		09.2	302	13.4		19.5	190	14.9		-07.3	156	43.3		13.9
10	98	44.3	332	03.9		08.5	317	14.3		19.0	205	17.4		-07.3	171	45.9		14.0
11	113	46.8	347	03.2	+20	07.8	332	15.2	+16	18.5	220	20.0	-22	-07.3	186	48.5	-22	14.0
12	128	49.3	2	02.4	+20	07.2	347	16.1	+16	18.1	235	22.5	-22	-07.3	201	51.2	-22	14.0
13	143	51.7	17	01.7		06.5	2	17.0		17.6	250	25.1		-07.3	216	53.8		14.0
14	158	54.2	32	01.0		05.9	17	17.9		17.1	265	27.6		-07.3	231	56.5		14.0
15	173	56.7	47	00.2		05.2	32	18.8		16.6	280	30.2		-07.3	246	59.1		14.1
16	188	59.1	61	59.5		04.5	47	19.7		16.1	295	32.8		-07.3	262	01.7		14.1
17	204	01.6	76	58.7	+20	03.9	62	20.6	+16	15.6	310	35.3	-22	-07.3	277	04.4	-22	14.1
18	219	04.0	91	58.0	+20	03.2	77	21.5	+16	15.1	325	37.9	-22	-07.3	292	07.0	-22	14.1
19	234	06.5	106	57.3		02.5	92	22.4		14.6	340	40.4		-07.3	307	09.6		14.2
20	249	09.0	121	56.5		01.8	107	23.3		14.1	355	43.0		-07.3	322	12.3		14.2
21	264	11.4	136	55.8		01.2	122	24.2		13.6	10	45.5		-07.3	337	14.9		14.2
22	279	13.9	151	55.1	+20	00.5	137	25.1		13.1	25	48.1		-07.3	352	17.6		14.2
23	294	16.4	166	54.3	+19	59.8	152	26.0		12.6	40	50.6		-07.3	7	20.2		14.3
24	309	18.8	181	53.6	+19	59.2	167	26.9	+16	12.1	55	53.2	-22	-07.3	22	22.8	-22	14.3
Dif.	—		-7		-7		+9		-5		+26		0		+26			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 12 ^h 06 ^m 4				SD: 16'6 Edad: 29 ^d 2 PMG: 12 ^h 31 ^m					PHE { 4 ^h : 60'8 12 ^h : 60'9 20 ^h : 61'0 Rº: 60 ^m			Hora Rº		Hora Rº			
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	178	24.1	+18	08.3	179	50.5	41	+20	16.5	64	60 N	** **	2 39	3 40	3 36	96	21 03	20
1	193	24.2		07.7	194	13.6	42		10.1	65	58	1 29	2 59	3 52	3 51	91	20 51	25
2	208	24.2		07.1	208	36.8	43	+20	03.6	67	56	2 02	3 15	4 03	4 03	88	42	27
3	223	24.2		06.4	223	00.1	42	+19	56.9	68	54	25	28	13	14	86	33	30
4	238	24.3		05.8	237	23.3	43		50.1	69	52	44	40	21	23	84	25	32
5	253	24.3	+18	05.2	251	46.6	44	+19	43.2	71	50	2 59	3 50	4 29	4 31	82	20 18	34
6	268	24.3	+18	04.6	266	10.0	44	+19	36.1	73	45	3 28	4 11	4 45	4 49	78	20 03	38
7	283	24.4		03.9	280	33.4	44		28.8	74	40	3 50	28	4 58	5 04	75	19 50	42
8	298	24.4		03.3	294	56.8	45		21.4	75	35	4 07	41	5 09	16	73	39	45
9	313	24.4		02.7	309	20.3	45		13.9	77	30	22	4 53	19	27	70	30	47
10	328	24.5		02.0	323	43.8	46	+19	06.2	78	20	4 44	5 12	35	5 46	66	19 13	52
11	343	24.5	+18	01.4	338	07.4	46	+18	58.4	80	10 N	5 01	5 27	5 50	6 02	63	18 59	55
12	358	24.5	+18	00.8	352	31.0	47	+18	50.4	81	0	5 16	5 41	6 03	6 17	60	18 46	58
13	13	24.6	+18	00.2	6	54.7	47		42.3	82	10 S	29	5 54	16	32	57	32	62
14	28	24.6	+17	59.5	21	18.4	47		34.1	83	20	40	6 07	30	6 48	53	17	66
15	43	24.7		58.9	35	42.1	49		25.8	85	30	52	20	46	7 06	50	18 00	70
16	58	24.7		58.3	50	06.0	48		17.3	87	35	5 58	28	6 55	17	47	17 50	73
17	73	24.7	+17	57.6	64	29.8	50	+18	08.6	87	40	6 04	6 36	7 05	7 29	45	17 39	76
18	88	24.8	+17	57.0	78	53.8	50	+17	59.9	89	45	6 10	6 46	7 17	7 43	42	17 26	79
19	103	24.8		56.4	93	17.8	50		51.0	90	50	18	6 57	32	8 00	38	09	84
20	118	24.9		55.7	107	41.8	51		42.0	91	52	21	7 02	39	09	35	17 02	85
21	133	24.9		55.1	122	05.9	52		32.9	93	54	24	07	46	18	33	16 53	88
22	148	24.9		54.5	136	30.1	52		23.6	94	56	28	13	7 55	28	31	43	91
23	163	25.0		53.8	150	54.3	53		14.2	95	58	32	20	8 04	8 40	28	16 32	94
24	178	25.0	+17	53.2	165	18.6		+17	04.7		60 S	6 36	7 27	8 15	8 53	24	16 19	99

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 3 ^h 22 ^m 2		Mag: -3.9 PMG: 11 ^h 53 ^m			Mag: +1.8 PMG: 12 ^h 49 ^m			Mag: -2.4 PMG: 20 ^h 13 ^m			Mag: +0.2 PMG: 22 ^h 27 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	309	18.8	181	53.6	+19 59.2	167	26.9	+16 12.1	55	53.2	-22 07.3	22	22.8	-22 14.3			
1	324	21.3	196	52.9	58.5	182	27.8	11.6	70	55.7	07.3	37	25.5	14.3			
2	339	23.8	211	52.1	57.8	197	28.7	11.1	85	58.3	07.3	52	28.1	14.3			
3	354	26.2	226	51.4	57.1	212	29.6	10.6	101	00.8	07.3	67	30.7	14.3			
4	9	28.7	241	50.7	56.5	227	30.5	10.1	116	03.4	07.3	82	33.4	14.4			
5	24	31.2	256	49.9	+19 55.8	242	31.4	+16 09.6	131	05.9	-22 07.3	97	36.0	-22 14.4			
6	39	33.6	271	49.2	+19 55.1	257	32.3	+16 09.1	146	08.5	-22 07.3	112	38.7	-22 14.4			
7	54	36.1	286	48.5	54.4	272	33.1	08.6	161	11.0	07.3	127	41.3	14.4			
8	69	38.5	301	47.7	53.7	287	34.0	08.1	176	13.6	07.3	142	43.9	14.5			
9	84	41.0	316	47.0	53.0	302	34.9	07.6	191	16.1	07.3	157	46.6	14.5			
10	99	43.5	331	46.3	52.4	317	35.8	07.1	206	18.7	07.3	172	49.2	14.5			
11	114	45.9	346	45.5	+19 51.7	332	36.7	+16 06.6	221	21.2	-22 07.3	187	51.8	-22 14.5			
12	129	48.4	1	44.8	+19 51.0	347	37.6	+16 06.1	236	23.8	-22 07.3	202	54.5	-22 14.6			
13	144	50.9	16	44.1	50.3	2	38.5	05.6	251	26.3	07.3	217	57.1	14.6			
14	159	53.3	31	43.3	49.6	17	39.4	05.0	266	28.9	07.3	232	59.7	14.6			
15	174	55.8	46	42.6	48.9	32	40.3	04.5	281	31.4	07.3	248	02.4	14.6			
16	189	58.3	61	41.9	48.2	47	41.2	04.0	296	34.0	07.3	263	05.0	14.6			
17	205	00.7	76	41.1	+19 47.5	62	42.1	+16 03.5	311	36.5	-22 07.3	278	07.7	-22 14.7			
18	220	03.2	91	40.4	+19 46.9	77	43.0	+16 03.0	326	39.1	-22 07.3	293	10.3	-22 14.7			
19	235	05.7	106	39.7	46.2	92	43.9	02.5	341	41.6	07.3	308	12.9	14.7			
20	250	08.1	121	39.0	45.5	107	44.8	02.0	356	44.2	07.3	323	15.6	14.7			
21	265	10.6	136	38.2	44.8	122	45.7	01.5	11	46.7	07.3	338	18.2	14.8			
22	280	13.0	151	37.5	44.1	137	46.6	01.0	26	49.3	07.3	353	20.8	14.8			
23	295	15.5	166	36.8	43.4	152	47.5	00.5	41	51.8	07.3	8	23.5	14.8			
24	310	18.0	181	36.1	+19 42.7	167	48.4	+16 00.0	56	54.4	-22 07.3	23	26.1	-22 14.8			
Dif.	—		-7			-7			+25			0			+26		

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 12 ^h 06 ^m 3				SD: 16'6 Edad: 0 ^d 9												PHE { 4 ^h : 61'0 12 ^h : 61'0 20 ^h : 61'0	
	PMG: 13 ^h 31 ^m				Rº: 56 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.												
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	178	25.0	+17	53.2	165	18.6	53	+17	04.7	96	60 N	20 29	21 28	23 30	5 12	98	21 23	16
1	193	25.0		52.6	179	42.9	54	+16	55.1	97	58	17	21 09	22 35	22	95	16	18
2	208	25.1		51.9	194	07.3	55		45.4	99	56	20 06	20 54	22 04	31	92	09	21
3	223	25.1		51.3	208	31.8	55		35.5	100	54	19 57	41	21 42	40	88	21 03	24
4	238	25.2		50.7	222	56.3	56		25.5	101	52	49	30	25	47	86	20 57	27
5	253	25.2	+17	50.0	237	20.9	57	+16	15.4	102	50	19 41	20 20	21 10	5 53	84	20 52	29
6	268	25.3	+17	49.4	251	45.6	57	+16	05.2	103	45	19 26	19 59	20 42	6 07	80	20 41	33
7	283	25.3		48.7	266	10.3	58	+15	54.9	104	40	13	43	20	19	75	32	37
8	298	25.3		48.1	280	35.1	59		44.5	105	35	19 02	30	20 03	29	72	24	40
9	313	25.4		47.5	295	00.0	59		34.0	107	30	18 53	19	19 50	37	70	17	43
10	328	25.4		46.8	309	24.9	60		23.3	107	20	37	19 00	28	6 52	65	20 05	48
11	343	25.5	+17	46.2	323	49.9	61	+15	12.6	108	10 N	18 23	18 45	19 11	7 05	61	19 54	52
12	358	25.5	+17	45.5	338	15.0	61	+15	01.8	110	0	18 10	18 31	18 57	7 17	57	19 44	56
13	13	25.6		44.9	352	40.1	62	+14	50.8	110	10 S	17 57	19	44	29	53	34	60
14	28	25.6		44.3	7	05.3	63		39.8	112	20	43	18 06	33	41	50	23	64
15	43	25.6		43.6	21	30.6	63		28.6	112	30	28	17 53	22	7 56	45	10	69
16	58	25.7		43.0	35	55.9	64		17.4	113	35	19	46	16	8 04	42	19 03	72
17	73	25.7	+17	42.3	50	21.3	65	+14	06.1	114	40	17 09	17 38	18 10	8 14	39	18 55	75
18	88	25.8	+17	41.7	64	46.8	65	+13	54.7	115	45	16 57	17 29	18 04	8 25	35	18 45	79
19	103	25.8		41.0	79	12.3	67		43.2	116	50	43	18	17 57	38	31	33	84
20	118	25.9		40.4	93	38.0	66		31.6	117	52	36	13	54	44	29	27	86
21	133	25.9		39.8	108	03.6	68		19.9	118	54	29	08	51	51	27	21	89
22	148	26.0		39.1	122	29.4	68	+13	08.1	118	56	20	17 02	47	8 59	24	14	92
23	163	26.0		38.5	136	55.2	69	+12	56.3	120	58	11	16 56	44	9 08	20	18 06	95
24	178	26.1	+17	37.8	151	21.1		+12	44.3		60 S	16 00	16 48	17 40	9 17	18	17 58	98

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 18 ^m 3		Mag: -3.9 PMG: 11 ^h 54 ^m				Mag: +1.8 PMG: 12 ^h 48 ^m				Mag: -2.4 PMG: 20 ^h 09 ^m				Mag: +0.2 PMG: 22 ^h 22 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	310	18.0	181	36.1	+19	42.7	167	48.4	+16	00.0	56	54.4	-22	-07.3	23	26.1	-22	14.8
1	325	20.4	196	35.3		42.0	182	49.3	+15	59.5	71	56.9		-07.3	38	28.7		14.8
2	340	22.9	211	34.6		41.3	197	50.2		59.0	86	59.4		-07.3	53	31.4		14.9
3	355	25.4	226	33.9		40.6	212	51.1		58.5	102	02.0		-07.3	68	34.0		14.9
4	10	27.8	241	33.2		39.9	227	52.0		58.0	117	04.5		-07.3	83	36.6		14.9
5	25	30.3	256	32.4	+19	39.2	242	52.9	+15	57.5	132	07.1	-22	-07.3	98	39.3	-22	14.9
6	40	32.8	271	31.7	+19	38.5	257	53.8	+15	57.0	147	09.6	-22	-07.3	113	41.9	-22	15.0
7	55	35.2	286	31.0		37.8	272	54.7		56.5	162	12.2		-07.3	128	44.6		15.0
8	70	37.7	301	30.3		37.1	287	55.6		56.0	177	14.7		-07.3	143	47.2		15.0
9	85	40.1	316	29.6		36.4	302	56.5		55.5	192	17.2		-07.3	158	49.8		15.0
10	100	42.6	331	28.8		35.7	317	57.4		55.0	207	19.8		-07.3	173	52.5		15.0
11	115	45.1	346	28.1	+19	34.9	332	58.3	+15	54.5	222	22.3	-22	-07.3	188	55.1	-22	15.1
12	130	47.5	1	27.4	+19	34.2	347	59.2	+15	54.0	237	24.9	-22	-07.3	203	57.7	-22	15.1
13	145	50.0	16	26.7		33.5	3	00.1		53.4	252	27.4		-07.3	219	00.4		15.1
14	160	52.5	31	26.0		32.8	18	01.0		52.9	267	29.9		-07.3	234	03.0		15.1
15	175	54.9	46	25.2		32.1	33	01.9		52.4	282	32.5		-07.3	249	05.6		15.2
16	190	57.4	61	24.5		31.4	48	02.8		51.9	297	35.0		-07.3	264	08.3		15.2
17	205	59.9	76	23.8	+19	30.7	63	03.7	+15	51.4	312	37.6	-22	-07.3	279	10.9	-22	15.2
18	221	02.3	91	23.1	+19	30.0	78	04.6	+15	50.9	327	40.1	-22	-07.3	294	13.5	-22	15.2
19	236	04.8	106	22.4		29.2	93	05.5		50.4	342	42.6		-07.3	309	16.2		15.3
20	251	07.3	121	21.7		28.5	108	06.4		49.9	357	45.2		-07.3	324	18.8		15.3
21	266	09.7	136	20.9		27.8	123	07.3		49.4	12	47.7		-07.3	339	21.4		15.3
22	281	12.2	151	20.2		27.1	138	08.2		48.9	27	50.2		-07.3	354	24.1		15.3
23	296	14.6	166	19.5		26.4	153	09.1		48.4	42	52.8		-07.3	9	26.7		15.3
24	311	17.1	181	18.8	+19	25.7	168	10.0	+15	47.9	57	55.3	-22	-07.3	24	29.3	-22	15.4
Dif.	—		-7		-7		+9		-5		+25		0		+26			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 15'8 PMG: 12 ^h 06 ^m 2				SD: 16'6 Edad: 1 ^d 9 PMG: 14 ^h 27 ^m PHE { 4 ^h : 60'9 12 ^h : 60'8 20 ^h : 60'7 Rº: 54 ^m					Náut.	Civil		Hora	Rº	Hora	Rº										
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.																				
h	°	'	°	'	°	'			° N	h m	h m	h m	h m m	h m m	h m m											
0	178	26.1	+17	37.8	151	21.1	70	+12	44.3	120	0 45	2 45	3 45	6 50	97	21 39	12									
1	193	26.1		37.2	165	47.1	70		32.3	121	1 39	3 04	3 57	6 57	93	34	16									
2	208	26.1		36.5	180	13.1	71		20.2	121	2 09	19	4 07	7 03	90	30	19									
3	223	26.2		35.9	194	39.2	72	+12	08.1	123	31	32	16	08	88	27	21									
4	238	26.2		35.2	209	05.4	72	+11	55.8	123	2 48	43	24	13	85	24	23									
5	253	26.3	+17	34.6	223	31.6	74	+11	43.5	124	3 03	3 53	4 32	7 17	83	21 21	25									
6	268	26.3	+17	33.9	237	58.0	73	+11	31.1	124	3 31	4 14	4 47	7 27	78	21 14	30									
7	283	26.4		33.3	252	24.3	75		18.7	125	3 53	30	5 00	34	75	09	33									
8	298	26.4		32.6	266	50.8	75	+11	06.2	126	4 09	43	11	41	71	04	37									
9	313	26.5		32.0	281	17.3	76	+10	53.6	127	23	4 54	20	47	68	21 00	39									
10	328	26.5		31.3	295	43.9	76		40.9	127	4 45	5 13	36	7 57	63	20 53	44									
11	343	26.6	+17	30.7	310	10.5	78	+10	28.2	127	5 02	5 28	5 50	8 06	58	20 46	49									
12	358	26.6	+17	30.0	324	37.3	78	+10	15.5	129	5 16	5 41	6 03	8 14	54	20 40	53									
13	13	26.7		29.4	339	04.1	78	+10	02.6	128	28	5 54	15	22	50	34	57									
14	28	26.7		28.7	353	30.9	79	+9	49.8	130	39	6 06	29	31	46	27	62									
15	43	26.8		28.0	7	57.8	80		36.8	130	50	19	44	41	40	19	67									
16	58	26.8		27.4	22	24.8	81		23.8	130	5 56	26	6 53	46	38	15	70									
17	73	26.9	+17	26.7	36	51.9	81	+9	10.8	131	6 02	6 34	7 03	8 53	35	20 10	73									
18	88	26.9	+17	26.1	51	19.0	82	+8	57.7	132	6 08	6 43	7 15	9 00	31	20 04	77									
19	103	27.0		25.4	65	46.2	82		44.5	132	15	54	29	09	27	19 57	82									
20	118	27.0		24.8	80	13.4	83		31.3	132	18	6 59	36	13	25	53	85									
21	133	27.1		24.1	94	40.7	84		18.1	133	21	7 04	43	18	22	50	86									
22	148	27.1		23.5	109	08.1	84	+8	04.8	133	24	10	7 51	23	19	46	89									
23	163	27.2		22.8	123	35.5	85	+7	51.5	133	28	16	8 00	9 28	17	19 41	93									
24	178	27.2	+17	22.1	138	03.0		+7	38.2		6 32	7 23	8 11	9 35	13	19 36	96									
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO											
	PMG: 3 ^h 14 ^m 3		Mag: -3.9 PMG: 11 ^h 55 ^m				Mag: +1.8 PMG: 12 ^h 47 ^m				Mag: -2.4 PMG: 20 ^h 05 ^m				Mag: +0.2 PMG: 22 ^h 18 ^m											
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	311	17.1	181	18.8	+19	25.7	168	10.0	+15	47.9	57	55.3	-22	07.3	24	29.3	-22	15.4								
1	326	19.6	196	18.1		24.9	183	10.9		47.4	72	57.9		07.3	39	32.0		15.4								
2	341	22.0	211	17.4		24.2	198	11.8		46.8	88	00.4		07.3	54	34.6		15.4								
3	356	24.5	226	16.7		23.5	213	12.8		46.3	103	02.9		07.3	69	37.2		15.4								
4	11	27.0	241	15.9		22.8	228	13.7		45.8	118	05.5		07.3	84	39.9		15.5								
5	26	29.4	256	15.2	+19	22.0	243	14.6	+15	45.3	133	08.0	-22	07.3	99	42.5	-22	15.5								
6	41	31.9	271	14.5	+19	21.3	258	15.5	+15	44.8	148	10.5	-22	07.3	114	45.1	-22	15.5								
7	56	34.4	286	13.8		20.6	273	16.4		44.3	163	13.1		07.3	129	47.8		15.5								
8	71	36.8	301	13.1		19.9	288	17.3		43.8	178	15.6		07.3	144	50.4		15.5								
9	86	39.3	316	12.4		19.1	303	18.2		43.3	193	18.1		07.3	159	53.0		15.6								
10	101	41.8	331	11.7		18.4	318	19.1		42.8	208	20.7		07.3	174	55.6		15.6								
11	116	44.2	346	11.0	+19	17.7	333	20.0	+15	42.3	223	23.2	-22	07.3	189	58.3	-22	15.6								
12	131	46.7	1	10.3	+19	16.9	348	20.9	+15	41.7	238	25.7	-22	07.3	205	00.9	-22	15.6								
13	146	49.1	16	09.5		16.2	3	21.8		41.2	253	28.3		07.3	220	03.5		15.7								
14	161	51.6	31	08.8		15.5	18	22.7		40.7	268	30.8		07.3	235	06.2		15.7								
15	176	54.1	46	08.1		14.7	33	23.6		40.2	283	33.3		07.3	250	08.8		15.7								
16	191	56.5	61	07.4		14.0	48	24.5		39.7	298	35.9		07.3	265	11.4		15.7								
17	206	59.0	76	06.7	+19	13.3	63	25.4	+15	39.2	313	38.4	-22	07.3	280	14.1	-22	15.7								
18	222	01.5	91	06.0	+19	12.5	78	26.3	+15	38.7	328	40.9	-22	07.3	295	16.7	-22	15.8								
19	237	03.9	106	05.3		11.8	93	27.2		38.2	343	43.4		07.3	310	19.3		15.8								
20	252	06.4	121	04.6		11.0	108	28.1		37.7	358	46.0		07.3	325	22.0		15.8								
21	267	08.9	136	03.9		10.3	123	29.0		37.1	13	48.5		07.3	340	24.6		15.8								
22	282	11.3	151	03.2		09.6	138	29.9		36.6	28	51.0		07.3	355	27.2		15.8								
23	297	13.8	166	02.5		08.8	153	30.8		36.1	43	53.6		07.3	10	29.9		15.9								
24	312	16.2	181	01.8	+19	08.1	168	31.7	+15	35.6	58	56.1	-22	07.3	25	32.5	-22	15.9								
Dif.	—		-7				+9				-5				+25				0				+26			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 06 ^m 1				SD: 16'5 Edad: 2 ^d 9													PHE { 4 ^h : 60'5 12 ^h : 60'3 20 ^h : 60'2
	PMG: 15 ^h 21 ^m				Rº: 51 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	°	h m			h m	h m	h m	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	178	27.2	+17	22.1	138	03.0	86	+7	38.2	134	60 N	20 24	21 21	23 09	8 27	95	21 51	12
1	193	27.3		21.5	152	30.6	86		24.8	135	58	12	21 04	22 25	30 91		50	15
2	208	27.4		20.8	166	58.2	87	+7	11.3	134	56	20 02	20 49	21 57	33 88		49	17
3	223	27.4		20.2	181	25.9	87	+6	57.9	135	54	19 53	37	36	36 85		48	19
4	238	27.5		19.5	195	53.6	88		44.4	135	52	45	26	20	38 83		47	21
5	253	27.5	+17	18.8	210	21.4	88	+6	30.9	136	50	19 38	20 16	21 06	8 40	81	21 46	23
6	268	27.6	+17	18.2	224	49.2	90	+6	17.3	136	45	19 23	19 57	20 38	8 45	76	21 44	28
7	283	27.6		17.5	239	17.2	89	+6	03.7	136	40	11	41	18	49 72		42	32
8	298	27.7		16.8	253	45.1	90	+5	50.1	136	35	19 00	28	20 01	52 69		41	35
9	313	27.7		16.2	268	13.1	91		36.5	137	30	18 51	19 17	19 48	8 55	65	39	38
10	328	27.8		15.5	282	41.2	91		22.8	137	20	36	18 59	27	9 00	60	37	43
11	343	27.8	+17	14.9	297	09.3	92	+5	09.1	137	10 N	18 22	18 44	19 10	9 04	56	21 35	47
12	358	27.9	+17	14.2	311	37.5	92	+4	55.4	137	0	18 10	18 31	18 56	9 08	52	21 33	51
13	13	28.0		13.5	326	05.7	93		41.7	137	10 S	17 57	19	44	12 48		31	55
14	28	28.0		12.9	340	34.0	94		28.0	137	20	44	18 07	33	17 43		29	60
15	43	28.1		12.2	355	02.4	93		14.3	138	30	29	17 54	23	21 39		26	65
16	58	28.1		11.5	9	30.7	95	+4	00.5	138	35	20	47	17	24 36		25	68
17	73	28.2	+17	10.9	23	59.2	95	+3	46.7	138	40	17 11	17 39	18 12	9 28	32	21 23	71
18	88	28.2	+17	10.2	38	27.7	95	+3	32.9	137	45	16 59	17 31	18 06	9 31	29	21 21	75
19	103	28.3		09.5	52	56.2	96		19.2	138	50	45	20	17 59	36 24		19	80
20	118	28.4		08.9	67	24.8	96	+3	05.4	138	52	39	16	56	38 22		18	82
21	133	28.4		08.2	81	53.4	97	+2	51.6	138	54	32	11	54	40 20		16	85
22	148	28.5		07.5	96	22.1	97		37.8	138	56	24	17 05	50	42 18		15	87
23	163	28.5		06.9	110	50.8	97		24.0	139	58	15	16 59	47	45 15		14	90
24	178	28.6	+17	06.2	125	19.5		+2	10.1		60 S	16 05	16 52	17 43	9 48	12	21 12	93
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 10 ^m 4		Mag: -4.0 PMG: 11 ^h 56 ^m				Mag: +1.8 PMG: 12 ^h 45 ^m				Mag: -2.4 PMG: 20 ^h 01 ^m				Mag: +0.2 PMG: 22 ^h 14 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	312	16.2	181	01.8	+19	08.1	168	31.7	+15	35.6	58	56.1	-22	-07.3	25	32.5	-22	15.9
1	327	18.7	196	01.1		07.3	183	32.6		35.1	73	58.6		-07.3	40	35.1		15.9
2	342	21.2	211	00.4		06.6	198	33.5		34.6	89	01.1		-07.3	55	37.7		15.9
3	357	23.6	225	59.7		05.8	213	34.5		34.1	104	03.7		-07.3	70	40.4		16.0
4	12	26.1	240	59.0		05.1	228	35.4		33.6	119	06.2		-07.3	85	43.0		16.0
5	27	28.6	255	58.3	+19	04.3	243	36.3	+15	33.0	134	08.7	-22	-07.3	100	45.6	-22	16.0
6	42	31.0	270	57.6	+19	03.6	258	37.2	+15	32.5	149	11.3	-22	-07.3	115	48.3	-22	16.0
7	57	33.5	285	56.9		02.8	273	38.1		32.0	164	13.8		-07.3	130	50.9		16.0
8	72	36.0	300	56.2		02.1	288	39.0		31.5	179	16.3		-07.3	145	53.5		16.1
9	87	38.4	315	55.5		01.3	303	39.9		31.0	194	18.8		-07.3	160	56.2		16.1
10	102	40.9	330	54.8	+19	00.6	318	40.8		30.5	209	21.4		-07.3	175	58.8		16.1
11	117	43.4	345	54.1	+18	59.8	333	41.7	+15	30.0	224	23.9	-22	-07.3	191	01.4	-22	16.1
12	132	45.8	0	53.4	+18	59.1	348	42.6	+15	29.4	239	26.4	-22	-07.3	206	04.0	-22	16.2
13	147	48.3	15	52.7		58.3	3	43.5		28.9	254	28.9		-07.3	221	06.7		16.2
14	162	50.7	30	52.0		57.6	18	44.4		28.4	269	31.4		-07.3	236	09.3		16.2
15	177	53.2	45	51.3		56.8	33	45.3		27.9	284	34.0		-07.3	251	11.9		16.2
16	192	55.7	60	50.6		56.0	48	46.2		27.4	299	36.5		-07.3	266	14.6		16.2
17	207	58.1	75	49.9	+18	55.3	63	47.1	+15	26.9	314	39.0	-22	-07.3	281	17.2	-22	16.3
18	223	00.6	90	49.2	+18	54.5	78	48.1	+15	26.3	329	41.5	-22	-07.3	296	19.8	-22	16.3
19	238	03.1	105	48.5		53.8	93	49.0		25.8	344	44.1		-07.3	311	22.5		16.3
20	253	05.5	120	47.8		53.0	108	49.9		25.3	359	46.6		-07.3	326	25.1		16.3
21	268	08.0	135	47.1		52.2	123	50.8		24.8	14	49.1		-07.3	341	27.7		16.4
22	283	10.5	150	46.4		51.5	138	51.7		24.3	29	51.6		-07.3	356	30.3		16.4
23	298	12.9	165	45.7		50.7	153	52.6		23.8	44	54.1		-07.3	11	33.0		16.4
24	313	15.4	180	45.0	+18	49.9	168	53.5	+15	23.3	59	56.7	-22	-07.3	26	35.6	-22	16.4
Dif.	—		-7 -8				+9 -5				+25 0				+26 0			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 12 ^h 06 ^m 0				SD: 16'4 Edad: 3 ^d 9 PMG: 16 ^h 12 ^m												PHE { 4 ^h : 59'9 12 ^h : 59'7 20 ^h : 59'5	
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	28.6	+17	06.2	125	19.5	98	+2	10.1	138	60 N	1 05	2 52	3 49	10 02	91	22 03	12
1	193	28.7		05.5	139	48.3	99	+1	56.3	138	58	1 48	3 09	4 01	01 89	05 14	06 17	
2	208	28.7		04.8	154	17.2	98		42.5	138	56	2 16	24	11	01 86	06 17		
3	223	28.8		04.2	168	46.0	100		28.7	138	54	36	36	20	01 83	07 20		
4	238	28.8		03.5	183	15.0	99		14.9	138	52	2 53	47	27	01 81	08 22		
5	253	28.9	+17	02.8	197	43.9	100	+1	01.1	137	50	3 07	3 56	4 34	10 01	79	22 09	24
6	268	29.0	+17	02.1	212	12.9	101	+0	47.4	138	45	3 34	4 16	4 49	10 01	74	22 12	28
7	283	29.0		01.5	226	42.0	100		33.6	138	40	3 55	32	5 02	01 70	14 31		
8	298	29.1		00.8	241	11.0	101		19.8	137	35	4 11	45	12	01 66	16 34		
9	313	29.1	+17	00.1	255	40.1	102	+0	06.1	138	30	25	4 55	21	00 64	17 37		
10	328	29.2	+16	59.4	270	09.3	102	-0	07.7	137	20	4 46	5 13	37	00 59	20 42		
11	343	29.3	+16	58.8	284	38.5	102	-0	21.4	137	10 N	5 02	5 28	5 50	10 00	55	22 22	46
12	358	29.3	+16	58.1	299	07.7	102	-0	35.1	137	0	5 16	5 41	6 03	10 00	51	22 24	50
13	13	29.4		57.4	313	36.9	103	-0	48.8	136	10 S	28	5 53	15	00 46	26 54		
14	28	29.5		56.7	328	06.2	103	-1	02.4	137	20	39	6 05	28	00 42	29 58		
15	43	29.5		56.1	342	35.5	103		16.1	136	30	49	18	43	00 37	31 63		
16	58	29.6		55.4	357	04.8	104		29.7	136	35	5 54	25	6 51	00 34	33 66		
17	73	29.6	+16	54.7	11	34.2	104	-1	43.3	136	40	6 00	6 32	7 01	10 00	31	22 34	70
18	88	29.7	+16	54.0	26	03.6	104	-1	56.9	136	45	6 06	6 41	7 12	10 00	27	22 36	73
19	103	29.8		53.4	40	33.0	104	-2	10.5	135	50	12	51	26	00 23	39 77		
20	118	29.8		52.7	55	02.4	105		24.0	135	52	15	6 56	32	00 21	40 79		
21	133	29.9		52.0	69	31.9	105		37.5	135	54	18	7 01	39	00 19	41 82		
22	148	30.0		51.3	84	01.4	105	-2	51.0	134	56	21	06	47	00 17	42 85		
23	163	30.0		50.6	98	30.9	105	-3	04.4	134	58	24	12	7 56	10 00	14	22 44	87
24	178	30.1	+16	49.9	113	00.4		-3	17.8		60 S	6 28	7 19	8 06	10 00	11	22 45	91

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 06 ^m 5		Mag: -4.0 PMG: 11 ^h 58 ^m				Mag: +1.8 PMG: 12 ^h 44 ^m				Mag: -2.4 PMG: 19 ^h 57 ^m				Mag: +0.2 PMG: 22 ^h 10 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	313	15.4	180	45.0	+18	49.9	168	53.5	+15	23.3	59	56.7	-22	07.3	26	35.6	-22	16.4
1	328	17.9	195	44.3		49.2	183	54.4		22.7	74	59.2		07.3	41	38.2		16.4
2	343	20.3	210	43.7		48.4	198	55.3		22.2	90	01.7		07.3	56	40.8		16.5
3	358	22.8	225	43.0		47.6	213	56.2		21.7	105	04.2		07.3	71	43.5		16.5
4	13	25.2	240	42.3		46.9	228	57.1		21.2	120	06.7		07.3	86	46.1		16.5
5	28	27.7	255	41.6	+18	46.1	243	58.0	+15	20.7	135	09.3	-22	07.3	101	48.7	-22	16.5
6	43	30.2	270	40.9	+18	45.3	258	59.0	+15	20.1	150	11.8	-22	07.3	116	51.4	-22	16.5
7	58	32.6	285	40.2		44.5	273	59.9		19.6	165	14.3		07.3	131	54.0		16.6
8	73	35.1	300	39.5		43.8	289	00.8		19.1	180	16.8		07.3	146	56.6		16.6
9	88	37.6	315	38.8		43.0	304	01.7		18.6	195	19.3		07.3	161	59.2		16.6
10	103	40.0	330	38.1		42.2	319	02.6		18.1	210	21.8		07.3	177	01.9		16.6
11	118	42.5	345	37.5	+18	41.4	334	03.5	+15	17.6	225	24.4	-22	07.3	192	04.5	-22	16.7
12	133	45.0	0	36.8	+18	40.7	349	04.4	+15	17.0	240	26.9	-22	07.3	207	07.1	-22	16.7
13	148	47.4	15	36.1		39.9	4	05.3		16.5	255	29.4		07.3	222	09.8		16.7
14	163	49.9	30	35.4		39.1	19	06.2		16.0	270	31.9		07.3	237	12.4		16.7
15	178	52.3	45	34.7		38.3	34	07.1		15.5	285	34.4		07.3	252	15.0		16.7
16	193	54.8	60	34.0		37.6	49	08.1		15.0	300	36.9		07.4	267	17.6		16.8
17	208	57.3	75	33.3	+18	36.8	64	09.0	+15	14.4	315	39.4	-22	07.4	282	20.3	-22	16.8
18	223	59.7	90	32.7	+18	36.0	79	09.9	+15	13.9	330	42.0	-22	07.4	297	22.9	-22	16.8
19	239	02.2	105	32.0		35.2	94	10.8		13.4	345	44.5		07.4	312	25.5		16.8
20	254	04.7	120	31.3		34.4	109	11.7		12.9	0	47.0		07.4	327	28.1		16.8
21	269	07.1	135	30.6		33.6	124	12.6		12.4	15	49.5		07.4	342	30.8		16.9
22	284	09.6	150	29.9		32.8	139	13.5		11.8	30	52.0		07.4	357	33.4		16.9
23	299	12.1	165	29.2		32.1	154	14.4		11.3	45	54.5		07.4	12	36.0		16.9
24	314	14.5	180	28.6	+18	31.3	169	15.3	+15	10.8	60	57.0	-22	07.4	27	38.6	-22	16.9
Dif.	—		-7	-8			+9	-5			+25		0			+26		0

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna									
	SD: 15'8				SD: 16'2															PHE { 4 ^h : 59'2						
	PMG: 12 ^h 05 ^m 9				Edad: 4 ^d 9															{ 12 ^h : 59'0						
											{ 20 ^h : 58'7															
	PMG: 17 ^h 02 ^m				Rº: 50 ^m																					
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº						
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m				
0	178	30.1	+16	49.9	113	00.4	106	-3	17.8	134	60 N	20	18	21	15	22	53	11	33	90	22	15	13			
1	193	30.2		49.3	127	30.0	106		31.2	133	58	20	07	20	58	22	15		30	86		19	17			
2	208	30.2		48.6	141	59.6	106		44.5	133	56	19	58		44	21	50		27	83		23	19			
3	223	30.3		47.9	156	29.2	106	-3	57.8	133	54		49		32	31			24	81		27	21			
4	238	30.4		47.2	170	58.8	106	-4	11.1	132	52		42		22	15			22	78		30	24			
5	253	30.4	+16	46.5	185	28.4	107	-4	24.3	132	50		19	35	20	13	21	01		11	20	76	22	33	26	
6	268	30.5	+16	45.8	199	58.1	106	-4	37.5	132	45		19	21	19	54	20	35		11	15	72	22	40	29	
7	283	30.6		45.2	214	27.7	107	-4	50.7	131	40		19	09		38	20	15			11	68		45	33	
8	298	30.6		44.5	228	57.4	107	-5	03.8	131	35		18	59		26	19	59			07	66		50	36	
9	313	30.7		43.8	243	27.1	107		16.9	130	30			50	19	15	46			11	04	63	22	54	39	
10	328	30.8		43.1	257	56.8	108		29.9	130	20			35	18	58	25			10	59	58	23	02	42	
11	343	30.8	+16	42.4	272	26.6	107	-5	42.9	129	10 N	18	22	18	44	19	09			10	55	53	23	08	47	
12	358	30.9	+16	41.7	286	56.3	108	-5	55.8	129	0	18	09	18	31	18	56			10	51	49	23	14	50	
13	13	31.0		41.0	301	26.1	107	-6	08.7	129	10 S	17	57		19	45				46	47		20	54		
14	28	31.1		40.4	315	55.8	108		21.6	128	20		45	18	08	34				42	42		27	57		
15	43	31.1		39.7	330	25.6	108		34.4	127	30		30	17	55	24				37	38		34	62		
16	58	31.2		39.0	344	55.4	108		47.1	127	35		22		48	19				34	35		39	64		
17	73	31.3	+16	38.3	359	25.2	108	-6	59.8	126	40		17	13	17	41	18	13		10	31	32	23	44	67	
18	88	31.3	+16	37.6	13	55.0	108	-7	12.4	126	45		17	02	17	33	18	08		10	27	29	23	49	71	
19	103	31.4		36.9	28	24.8	108		25.0	126	50		16	48		23	18	02			23	24		56	75	
20	118	31.5		36.2	42	54.6	108		37.6	124	52		42		19	17	59			21	23		23	59	78	
21	133	31.5		35.5	57	24.4	108	-7	50.0	125	54		35		14	56				19	20		** ** *	**		
22	148	31.6		34.8	71	54.2	108	-8	02.5	123	56		28		09	53				17	18		** ** *	**		
23	163	31.7		34.1	86	24.0	109		14.8	123	58		19	17	03	50				14	15		** ** *	**		
24	178	31.8	+16	33.4	100	53.9		-8	27.1		60 S	16	09	16	56	17	47			10	11	12		** ** *	**	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO											
	PMG 3 ^h 02 ^m 5		Mag: -4.0 PMG: 11 ^h 59 ^m				Mag: +1.8 PMG: 12 ^h 42 ^m				Mag: -2.4 PMG: 19 ^h 53 ^m				Mag: +0.2 PMG: 22 ^h 06 ^m											
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.											
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	314	14.5	180	28.6	+18	31.3	169	15.3	+15	10.8	60	57.0	-22	-07.4	27	38.6	-22	16.9								
1	329	17.0	195	27.9		30.5	184	16.3		10.3	75	59.5		-07.4	42	41.3		17.0								
2	344	19.5	210	27.2		29.7	199	17.2		09.8	91	02.1		-07.4	57	43.9		17.0								
3	359	21.9	225	26.5		28.9	214	18.1		09.2	106	04.6		-07.4	72	46.5		17.0								
4	14	24.4	240	25.8		28.1	229	19.0		08.7	121	07.1		-07.4	87	49.1		17.0								
5	29	26.8	255	25.2	+18	27.3	244	19.9	+15	08.2	136	09.6	-22	-07.4	102	51.8	-22	17.0								
6	44	29.3	270	24.5	+18	26.5	259	20.8	+15	07.7	151	12.1	-22	-07.4	117	54.4	-22	17.1								
7	59	31.8	285	23.8		25.7	274	21.7		07.1	166	14.6		-07.4	132	57.0		17.1								
8	74	34.2	300	23.1		24.9	289	22.6		06.6	181	17.1		-07.4	147	59.6		17.1								
9	89	36.7	315	22.5		24.1	304	23.6		06.1	196	19.6		-07.4	163	02.3		17.1								
10	104	39.2	330	21.8		23.3	319	24.5		05.6	211	22.1		-07.4	178	04.9		17.1								
11	119	41.6	345	21.1	+18	22.5	334	25.4	+15	05.1	226	24.6	-22	-07.4	193	07.5	-22	17.2								
12	134	44.1	0	20.4	+18	21.7	349	26.3	+15	04.5	241	27.2	-22	-07.4	208	10.1	-22	17.2								
13	149	46.6	15	19.8		20.9	4	27.2		04.0	256	29.7		-07.4	223	12.8		17.2								
14	164	49.0	30	19.1		20.1	19	28.1		03.5	271	32.2		-07.4	238	15.4		17.2								
15	179	51.5	45	18.4		19.3	34	29.0		03.0	286	34.7		-07.4	253	18.0		17.2								
16	194	53.9	60	17.7		18.5	49	29.9		02.4	301	37.2		-07.4	268	20.6		17.3								
17	209	56.4	75	17.1	+18	17.7	64	30.9	+15	01.9	316	39.7	-22	-07.4	283	23.3	-22	17.3								
18	224	58.9	90	16.4	+18	16.9	79	31.8	+15	01.4	331	42.2	-22	-07.4	298	25.9	-22	17.3								
19	240	01.3	105	15.7		16.1	94	32.7		00.9	346	44.7		-07.4	313	28.5		17.3								
20	255	03.8	120	15.0		15.3	109	33.6	+15	00.3	1	47.2		-07.4	328	31.1		17.4								
21	270	06.3	135	14.4		14.5	124	34.5	+14	59.8	16	49.7		-07.4	343	33.8		17.4								
22	285	08.7	150	13.7		13.7	139	35.4		59.3	31	52.2		-07.4	358	36.4		17.4								
23	300	11.2	165	13.0		12.9	154	36.3		58.8	46	54.7		-07.5	13	39.0		17.4								
24	315	13.7	180	12.4	+18	12.1	169	37.3	+14	58.2	61	57.2	-22	-07.5	28	41.6	-22	17.4								
Dif.	—		-7				-8				+9				-5				+25				0			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 12 ^h 05 ^m 8			SD: 16'0 Edad: 5 ^d 9 PHE { 4 ^h : 58'4 12 ^h : 58'2 20 ^h : 57'9 PMG: 17 ^h 52 ^m Rº: 51 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.	Náut.		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	178	31.8	+16	33.4	100	53.9	108	-8	27.1	123	60 N	1 20	2 58	3 54	13 03	87	22 28	16
1	193	31.8		32.7	115	23.7	108		39.4	122	58	1 57	3 14	4 05	12 56	84	36	19
2	208	31.9		32.1	129	53.5	109	-8	51.6	121	56	2 22	28	15	50	81	42	23
3	223	32.0		31.4	144	23.4	108	-9	03.7	121	54	42	40	23	45	78	48	25
4	238	32.1		30.7	158	53.2	109		15.8	120	52	2 58	3 51	31	40	76	54	26
5	253	32.1	+16	30.0	173	23.1	108	-9	27.8	119	50	3 11	4 00	4 37	12 36	74	22 59	28
6	268	32.2	+16	29.3	187	52.9	108	-9	39.7	119	45	3 37	4 19	4 52	12 27	70	23 09	33
7	283	32.3		28.6	202	22.7	109	-9	51.6	118	40	3 57	34	5 04	19	67	18	36
8	298	32.4		27.9	216	52.6	108	-10	03.4	117	35	4 13	46	14	13	63	26	38
9	313	32.4		27.2	231	22.4	108		15.1	117	30	26	4 57	22	12 07	61	33	40
10	328	32.5		26.5	245	52.2	108		26.8	116	20	4 47	5 14	37	11 57	57	44	44
11	343	32.6	+16	25.8	260	22.0	109	-10	38.4	116	10 N	5 03	5 28	5 50	11 48	54	23 55	47
12	358	32.7	+16	25.1	274	51.9	108	-10	50.0	114	0	5 16	5 41	6 02	11 40	51	***	***
13	13	32.7		24.4	289	21.7	108	-11	01.4	114	10 S	27	5 52	14	33	46	***	***
14	28	32.8		23.7	303	51.5	108		12.8	114	20	38	6 04	27	24	43	***	***
15	43	32.9		23.0	318	21.3	108		24.2	112	30	48	16	41	15	39	***	***
16	58	33.0		22.3	332	51.1	108		35.4	112	35	53	23	49	09	37	***	***
17	73	33.0	+16	21.6	347	20.9	107	-11	46.6	111	40	5 58	6 30	6 59	11 03	34	***	***
18	88	33.1	+16	20.9	1	50.6	108	-11	57.7	110	45	6 03	6 38	7 10	10 56	31	***	***
19	103	33.2		20.2	16	20.4	108	-12	08.7	110	50	09	48	23	47	27	***	***
20	118	33.3		19.5	30	50.2	107		19.7	108	52	12	52	29	44	24	***	***
21	133	33.3		18.8	45	19.9	108		30.5	108	54	15	6 57	35	39	23	0 03	79
22	148	33.4		18.1	59	49.7	107		41.3	108	56	18	7 02	43	35	20	07	82
23	163	33.5		17.4	74	19.4	107	-12	52.1	106	58	21	08	7 51	10 29	18	0 11	85
24	178	33.6	+16	16.7	88	49.1		-13	02.7		60 S	6 24	7 14	8 01	10 23	15	0 16	88

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 58 ^m 6		Mag: -4.0 PMG: 12 ^h 00 ^m			Mag: +1.8 PMG: 12 ^h 41 ^m			Mag: -2.4 PMG: 19 ^h 49 ^m			Mag: +0.2 PMG: 22 ^h 01 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	315	13.7	180	12.4	+18	12.1	169	37.3	+14	58.2	61	57.2	-22	07.5	28	41.6	-22	17.4
1	330	16.1	195	11.7		11.3	184	38.2		57.7	76	59.7		07.5	43	44.2		17.5
2	345	18.6	210	11.0		10.5	199	39.1		57.2	92	02.2		07.5	58	46.9		17.5
3	0	21.1	225	10.4		09.7	214	40.0		56.7	107	04.7		07.5	73	49.5		17.5
4	15	23.5	240	09.7		08.8	229	40.9		56.1	122	07.2		07.5	88	52.1		17.5
5	30	26.0	255	09.0	+18	08.0	244	41.8	+14	55.6	137	09.7	-22	07.5	103	54.7	-22	17.5
6	45	28.4	270	08.4	+18	07.2	259	42.7	+14	55.1	152	12.2	-22	07.5	118	57.4	-22	17.6
7	60	30.9	285	07.7		06.4	274	43.7		54.6	167	14.7		07.5	134	00.0		17.6
8	75	33.4	300	07.0		05.6	289	44.6		54.0	182	17.2		07.5	149	02.6		17.6
9	90	35.8	315	06.4		04.8	304	45.5		53.5	197	19.7		07.5	164	05.2		17.6
10	105	38.3	330	05.7		03.9	319	46.4		53.0	212	22.2		07.5	179	07.9		17.6
11	120	40.8	345	05.0	+18	03.1	334	47.3	+14	52.5	227	24.7	-22	07.5	194	10.5	-22	17.7
12	135	43.2	0	04.4	+18	02.3	349	48.2	+14	51.9	242	27.2	-22	07.5	209	13.1	-22	17.7
13	150	45.7	15	03.7		01.5	4	49.2		51.4	257	29.7		07.5	224	15.7		17.7
14	165	48.2	30	03.0	+18	00.7	19	50.1		50.9	272	32.2		07.5	239	18.3		17.7
15	180	50.6	45	02.4	+17	59.8	34	51.0		50.4	287	34.7		07.5	254	21.0		17.8
16	195	53.1	60	01.7		59.0	49	51.9		49.8	302	37.2		07.5	269	23.6		17.8
17	210	55.6	75	01.0	+17	58.2	64	52.8	+14	49.3	317	39.7	-22	07.5	284	26.2	-22	17.8
18	225	58.0	90	00.4	+17	57.4	79	53.7	+14	48.8	332	42.2	-22	07.5	299	28.8	-22	17.8
19	241	00.5	104	59.7		56.5	94	54.7		48.2	347	44.7		07.5	314	31.4		17.8
20	256	02.9	119	59.1		55.7	109	55.6		47.7	2	47.2		07.5	329	34.1		17.9
21	271	05.4	134	58.4		54.9	124	56.5		47.2	17	49.7		07.5	344	36.7		17.9
22	286	07.9	149	57.7		54.0	139	57.4		46.7	32	52.2		07.5	359	39.3		17.9
23	301	10.3	164	57.1		53.2	154	58.3		46.1	47	54.7		07.6	14	41.9		17.9
24	316	12.8	179	56.4	+17	52.4	169	59.2	+14	45.6	62	57.2	-22	07.6	29	44.5	-22	17.9
Dif.	—		-7		-8		+9		-5		+25		0		+26			0

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8			PHE { 4 ^h : 57'7 12 ^h : 57'4 20 ^h : 57'2														
	PMG: 12 ^h 05 ^m 7			Edad: 6 ^d 9														
	PMG: 18 ^h 43 ^m			Rº: 51 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m	m	h m	m		
0	178	33.6	+16	16.7		88	49.1	108	-13	02.7	106	60 N	20 13	21 08	22 39	14 30	83	
1	193	33.7		16.0		103	18.9	107		13.3	104	58	20 03	20 52	22 06	20 79	22 55	
2	208	33.7		15.3		117	48.6	107		23.7	104	56	19 54	39	21 43	11 77	23 05	
3	223	33.8		14.6		132	18.3	106		34.1	103	54	45	28	25	14 03	75	
4	238	33.9		13.9		146	47.9	107		44.4	103	52	38	18	21 10	13 56	73	
5	253	34.0	+16	13.1		161	17.6	107	-13	54.7	101	50	19 32	20 09	20 57	13 50	71	
6	268	34.1	+16	12.4		175	47.3	106	-14	04.8	101	45	19 18	19 50	20 31	13 37	67	
7	283	34.1		11.7		190	16.9	106		14.9	100	40	19 06	36	20 12	26 64	23 54	
8	298	34.2		11.0		204	46.5	106		24.9	98	35	18 56	24	19 57	16 62	*** **	
9	313	34.3		10.3		219	16.1	106		34.7	98	30	48	19 13	44	13 08	60	
10	328	34.4		09.6		233	45.7	106		44.5	98	20	33	18 57	24	12 54	57	
11	343	34.5	+16	08.9		248	15.3	106	-14	54.3	96	10 N	18 21	18 43	19 08	12 42	53	
12	358	34.5	+16	08.2		262	44.9	106	-15	03.9	95	0	18 09	18 31	18 56	12 31	50	
13	13	34.6		07.5		277	14.5	105		13.4	95	10 S	17 58	19	45	19 48	14 54	
14	28	34.7		06.8		291	44.0	105		22.9	93	20	45	18 08	34	12 07	45	
15	43	34.8		06.1		306	13.5	106		32.2	93	30	31	17 56	25	11 54	41	
16	58	34.9		05.3		320	43.1	105		41.5	92	35	23	50	20	46 39	43 63	
17	73	35.0	+16	04.6		335	12.6	104	-15	50.7	90	40	17 14	17 43	18 15	11 37	37	
18	88	35.0	+16	03.9		349	42.0	105	-15	59.7	90	45	17 04	17 35	18 10	11 27	34	
19	103	35.1		03.2		4	11.5	105	-16	08.7	89	50	16 51	26	04	14 31	11 73	
20	118	35.2		02.5		18	41.0	104		17.6	88	52	45	21	18 02	08 29	17 74	
21	133	35.3		01.8		33	10.4	104		26.4	87	54	39	17	17 59	11 02	27	
22	148	35.4		01.1		47	39.8	104		35.1	86	56	31	12	57	10 55	25	
23	163	35.5	+16	00.4		62	09.2	104		43.7	86	58	23	06	54	47 22	36 82	
24	178	35.5	+15	59.6		76	38.6		-16	52.3		60 S	16 14	17 00	17 51	10 38	19	
																1 44	85	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 54 ^m 7		Mag: -4.0 PMG: 12 ^h 01 ^m				Mag: +1.8 PMG: 12 ^h 39 ^m				Mag: -2.4 PMG: 19 ^h 45 ^m				Mag: +0.2 PMG: 21 ^h 57 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	316	12.8	179	56.4	+17	52.4	169	59.2	+14	45.6	62	57.2	-22	-07.6	29	44.5		
1	331	15.3	194	55.8		51.6	185	00.2		45.1	77	59.7		-07.6	44	47.2		
2	346	17.7	209	55.1		50.7	200	01.1		44.5	93	02.2		-07.6	59	49.8		
3	1	20.2	224	54.5		49.9	215	02.0		44.0	108	04.7		-07.6	74	52.4		
4	16	22.7	239	53.8		49.1	230	02.9		43.5	123	07.2		-07.6	89	55.0		
5	31	25.1	254	53.1	+17	48.2	245	03.8	+14	43.0	138	09.7	-22	-07.6	104	57.6		
6	46	27.6	269	52.5	+17	47.4	260	04.7	+14	42.4	153	12.2	-22	-07.6	120	00.3		
7	61	30.0	284	51.8		46.5	275	05.7		41.9	168	14.6		-07.6	135	02.9		
8	76	32.5	299	51.2		45.7	290	06.6		41.4	183	17.1		-07.6	150	05.5		
9	91	35.0	314	50.5		44.9	305	07.5		40.8	198	19.6		-07.6	165	08.1		
10	106	37.4	329	49.9		44.0	320	08.4		40.3	213	22.1		-07.6	180	10.7		
11	121	39.9	344	49.2	+17	43.2	335	09.3	+14	39.8	228	24.6	-22	-07.6	195	13.4		
12	136	42.4	359	48.6	+17	42.4	350	10.3	+14	39.2	243	27.1	-22	-07.6	210	16.0		
13	151	44.8	14	47.9		41.5	5	11.2		38.7	258	29.6		-07.6	225	18.6		
14	166	47.3	29	47.3		40.7	20	12.1		38.2	273	32.1		-07.6	240	21.2		
15	181	49.8	44	46.6		39.8	35	13.0		37.6	288	34.6		-07.6	255	23.8		
16	196	52.2	59	46.0		39.0	50	13.9		37.1	303	37.1		-07.6	270	26.5		
17	211	54.7	74	45.3	+17	38.1	65	14.8	+14	36.6	318	39.5	-22	-07.6	285	29.1		
18	226	57.2	89	44.7	+17	37.3	80	15.8	+14	36.1	333	42.0	-22	-07.6	300	31.7		
19	241	59.6	104	44.0		36.4	95	16.7		35.5	348	44.5		-07.7	315	34.3		
20	257	02.1	119	43.4		35.6	110	17.6		35.0	3	47.0		-07.7	330	36.9		
21	272	04.5	134	42.7		34.7	125	18.5		34.5	18	49.5		-07.7	345	39.6		
22	287	07.0	149	42.1		33.9	140	19.4		33.9	33	52.0		-07.7	0	42.2		
23	302	09.5	164	41.4		33.0	155	20.4		33.4	48	54.5		-07.7	15	44.8		
24	317	11.9	179	40.8	+17	32.2	170	21.3	+14	32.9	63	57.0	-22	-07.7	30	47.4		
Dif.	—		-7		-8		+9		-5		+25		0		+26			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8				SD: 15'5												PHE {	
	PMG: 12 ^h 05 ^m 6				Edad: 7 ^d 9													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Rº: 51 ^m											
h	°	'	°	'	°	'		°	h	m	h	m	h	m	m	h	m	m
0	178	35.5	+15	59.6	76	38.6	104	-16	52.3	84	60 N	1 33	3 04	3 59	15 53	75	23 07	30
1	193	35.6		58.9	91	08.0	103	-17	00.7	83	58	2 06	20	4 09	39	73	20	34
2	208	35.7		58.2	105	37.3	104		09.0	82	56	29	33	18	28	70	32	36
3	223	35.8		57.5	120	06.7	103		17.2	81	54	2 47	44	27	18	69	43	37
4	238	35.9		56.8	134	36.0	103		25.3	80	52	3 02	3 54	34	09	67	23 52	38
5	253	36.0	+15	56.1	149	05.3	103	-17	33.3	80	50	3 15	4 03	4 40	15 01	66	***	***
6	268	36.1	+15	55.3	163	34.6	102	-17	41.3	78	45	3 41	4 21	4 54	14 44	63	***	***
7	283	36.1		54.6	178	03.8	103		49.1	77	40	4 00	36	5 05	30	61	***	***
8	298	36.2		53.9	192	33.1	102	-17	56.8	76	35	15	48	15	18	60	0 04	41
9	313	36.3		53.2	207	02.3	103	-18	04.4	75	30	28	4 58	24	14 08	58	13	43
10	328	36.4		52.5	221	31.6	102		11.9	75	20	4 48	5 15	38	13 51	55	28	46
11	343	36.5	+15	51.7	236	00.8	102	-18	19.4	73	10 N	5 03	5 29	5 51	13 35	54	0 42	49
12	358	36.6	+15	51.0	250	30.0	101	-18	26.7	72	0	5 16	5 41	6 02	13 21	52	0 55	51
13	13	36.7		50.3	264	59.1	102		33.9	71	10 S	27	5 52	14	13 07	50	1 08	53
14	28	36.8		49.6	279	28.3	101		41.0	70	20	37	6 03	26	12 52	47	21	56
15	43	36.9		48.9	293	57.4	102		48.0	69	30	46	15	39	35	45	37	59
16	58	36.9		48.1	308	26.6	101	-18	54.9	68	35	51	21	47	25	43	46	61
17	73	37.0	+15	47.4	322	55.7	101	-19	01.7	66	40	5 56	6 28	6 56	12 14	41	1 57	63
18	88	37.1	+15	46.7	337	24.8	101	-19	08.3	66	45	6 01	6 36	7 07	12 01	39	2 09	65
19	103	37.2		46.0	351	53.9	100		14.9	65	50	06	45	19	11 45	36	24	69
20	118	37.3		45.3	6	22.9	101		21.4	63	52	09	49	25	37	35	31	70
21	133	37.4		44.5	20	52.0	100		27.7	63	54	11	53	32	29	33	39	72
22	148	37.5		43.8	35	21.0	101		34.0	61	56	14	6 58	39	20	31	48	74
23	163	37.6		43.1	49	50.1	100		40.1	61	58	17	7 04	47	11 09	29	2 58	76
24	178	37.7	+15	42.4	64	19.1		-19	46.2		60 S	6 20	7 10	7 56	10 57	26	3 09	80
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 50 ^m 7		Mag: -4.0 PMG: 12 ^h 02 ^m				Mag: +1.8 PMG: 12 ^h 38 ^m				Mag: -2.4 PMG: 19 ^h 41 ^m				Mag: +0.2 PMG: 21 ^h 53 ^m			
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	317	11.9	179	40.8	+17	32.2	170	21.3	+14	32.9	63	57.0	-22	07.7	30	47.4	-22	18.4
1	332	14.4	194	40.1		31.3	185	22.2		32.3	78	59.4		07.7	45	50.0		18.4
2	347	16.9	209	39.5		30.5	200	23.1		31.8	94	01.9		07.7	60	52.6		18.5
3	2	19.3	224	38.8		29.6	215	24.0		31.3	109	04.4		07.7	75	55.3		18.5
4	17	21.8	239	38.2		28.8	230	25.0		30.7	124	06.9		07.7	90	57.9		18.5
5	32	24.3	254	37.5	+17	27.9	245	25.9	+14	30.2	139	09.4	-22	07.7	106	00.5	-22	18.5
6	47	26.7	269	36.9	+17	27.1	260	26.8	+14	29.7	154	11.9	-22	07.7	121	03.1	-22	18.6
7	62	29.2	284	36.3		26.2	275	27.7		29.1	169	14.4		07.7	136	05.7		18.6
8	77	31.7	299	35.6		25.3	290	28.7		28.6	184	16.8		07.7	151	08.3		18.6
9	92	34.1	314	35.0		24.5	305	29.6		28.1	199	19.3		07.7	166	11.0		18.6
10	107	36.6	329	34.3		23.6	320	30.5		27.5	214	21.8		07.7	181	13.6		18.6
11	122	39.0	344	33.7	+17	22.8	335	31.4	+14	27.0	229	24.3	-22	07.7	196	16.2	-22	18.7
12	137	41.5	359	33.0	+17	21.9	350	32.3	+14	26.5	244	26.8	-22	07.7	211	18.8	-22	18.7
13	152	44.0	14	32.4		21.0	5	33.3		25.9	259	29.3		07.8	226	21.4		18.7
14	167	46.4	29	31.8		20.2	20	34.2		25.4	274	31.7		07.8	241	24.0		18.7
15	182	48.9	44	31.1		19.3	35	35.1		24.8	289	34.2		07.8	256	26.7		18.7
16	197	51.4	59	30.5		18.4	50	36.0		24.3	304	36.7		07.8	271	29.3		18.8
17	212	53.8	74	29.8	+17	17.6	65	36.9	+14	23.8	319	39.2	-22	07.8	286	31.9	-22	18.8
18	227	56.3	89	29.2	+17	16.7	80	37.9	+14	23.2	334	41.7	-22	07.8	301	34.5	-22	18.8
19	242	58.8	104	28.6		15.8	95	38.8		22.7	349	44.1		07.8	316	37.1		18.8
20	258	01.2	119	27.9		15.0	110	39.7		22.2	4	46.6		07.8	331	39.7		18.8
21	273	03.7	134	27.3		14.1	125	40.6		21.6	19	49.1		07.8	346	42.4		18.9
22	288	06.1	149	26.7		13.2	140	41.6		21.1	34	51.6		07.8	1	45.0		18.9
23	303	08.6	164	26.0		12.4	155	42.5		20.6	49	54.1		07.8	16	47.6		18.9
24	318	11.1	179	25.4	+17	11.5	170	43.4	+14	20.0	64	56.5	-22	07.8	31	50.2	-22	18.9
Dif.	—		-6 -9				+9 -5				+25 0				+26 0			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8			SD: 15'4		PHE { 4 ^h : 56'3 12 ^h : 56'1 20 ^h : 55'9														
	PMG: 12 ^h 05 ^m 4			Edad: 8 ^d 9																
	PMG: 20 ^h 25 ^m			Rº: 52 ^m																
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	178	37.7	+15	42.4	64	19.1	100	-19	46.2	59	60 N	20 08	21 02	22 27	17 08	65	23 37	43		
1	193	37.8		41.6	78	48.1	100		52.1	58	58	19 58	20 47	21 58	16 52	63	23 54	43		
2	208	37.8		40.9	93	17.1	100	-19	57.9	57	56	49	34	36	38	62	***	***		
3	223	37.9		40.2	107	46.1	99	-20	03.6	56	54	41	23	19	27	60	***	***		
4	238	38.0		39.4	122	15.0	100		09.2	55	52	34	13	21 04	16	60	***	***		
5	253	38.1	+15	38.7	136	44.0	100	-20	14.7	54	50	19 28	20 05	20 52	16 07	59	0 00	40		
6	268	38.2	+15	38.0	151	13.0	99	-20	20.1	53	45	19 15	19 47	20 28	15 47	58	0 18	42		
7	283	38.3		37.3	165	41.9	99		25.4	51	40	19 04	33	20 09	31	57	33	43		
8	298	38.4		36.5	180	10.8	99		30.5	51	35	18 54	22	19 54	18	55	45	45		
9	313	38.5		35.8	194	39.7	100		35.6	49	30	46	19 12	42	15 06	55	0 56	46		
10	328	38.6		35.1	209	08.7	99		40.5	48	20	32	18 55	23	14 46	54	1 14	49		
11	343	38.7	+15	34.3	223	37.6	98	-20	45.3	47	10 N	18 20	18 42	19 08	14 29	52	1 31	50		
12	358	38.8	+15	33.6	238	06.4	99	-20	50.0	46	0	18 09	18 30	18 55	14 13	51	1 46	51		
13	13	38.9		32.9	252	35.3	99		54.6	45	10 S	17 58	19	45	13 57	50	2 01	53		
14	28	39.0		32.2	267	04.2	99	-20	59.1	44	20	46	18 09	35	39	50	17	55		
15	43	39.1		31.4	281	33.1	99	-21	03.5	42	30	33	17 57	26	20	48	36	57		
16	58	39.2		30.7	296	02.0	98		07.7	41	35	25	51	21	13 08	48	2 47	58		
17	73	39.3	+15	30.0	310	30.8	99	-21	11.8	41	40	17 16	17 45	18 17	12 55	46	3 00	59		
18	88	39.3	+15	29.2	324	59.7	98	-21	15.9	39	45	17 06	17 37	18 12	12 40	45	3 14	61		
19	103	39.4		28.5	339	28.5	99		19.8	38	50	16 54	28	07	21	43	33	62		
20	118	39.5		27.8	353	57.4	98		23.6	37	52	48	24	04	12	42	41	64		
21	133	39.6		27.0	8	26.2	99		27.3	35	54	42	20	02	12 02	41	3 51	65		
22	148	39.7		26.3	22	55.1	98		30.8	35	56	35	15	18 00	11 51	40	4 02	66		
23	163	39.8		25.6	37	23.9	98		34.3	33	58	27	10	17 57	38	38	14	69		
24	178	39.9	+15	24.8	51	52.7		-21	37.6		60 S	16 18	17 04	17 54	11 23	36	4 29	71		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 46 ^m 8		Mag: -4.0 PMG: 12 ^h 03 ^m				Mag: +1.8 PMG: 12 ^h 36 ^m				Mag: -2.4 PMG: 19 ^h 37 ^m				Mag: +0.2 PMG: 21 ^h 49 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	318	11.1	179	25.4	+17	11.5	170	43.4	+14	20.0	64	56.5	-22	-07.8	31	50.2	-22	18.9
1	333	13.5	194	24.8		10.6	185	44.3		19.5	79	59.0		-07.8	46	52.8		18.9
2	348	16.0	209	24.1		09.8	200	45.3		19.0	95	01.5		-07.8	61	55.4		19.0
3	3	18.5	224	23.5		08.9	215	46.2		18.4	110	04.0		-07.8	76	58.0		19.0
4	18	20.9	239	22.8		08.0	230	47.1		17.9	125	06.4		-07.9	92	00.7		19.0
5	33	23.4	254	22.2	+17	07.1	245	48.0	+14	17.3	140	08.9	-22	-07.9	107	03.3	-22	19.0
6	48	25.9	269	21.6	+17	06.3	260	48.9	+14	16.8	155	11.4	-22	-07.9	122	05.9	-22	19.0
7	63	28.3	284	21.0		05.4	275	49.9		16.3	170	13.9		-07.9	137	08.5		19.1
8	78	30.8	299	20.3		04.5	290	50.8		15.7	185	16.4		-07.9	152	11.1		19.1
9	93	33.3	314	19.7		03.6	305	51.7		15.2	200	18.8		-07.9	167	13.7		19.1
10	108	35.7	329	19.1		02.7	320	52.6		14.7	215	21.3		-07.9	182	16.3		19.1
11	123	38.2	344	18.4	+17	01.9	335	53.6	+14	14.1	230	23.8	-22	-07.9	197	19.0	-22	19.1
12	138	40.6	359	17.8	+17	01.0	350	54.5	+14	13.6	245	26.3	-22	-07.9	212	21.6	-22	19.2
13	153	43.1	14	17.2	+17	00.1	5	55.4		13.0	260	28.7		-07.9	227	24.2		19.2
14	168	45.6	29	16.5	+16	59.2	20	56.3		12.5	275	31.2		-07.9	242	26.8		19.2
15	183	48.0	44	15.9		58.3	35	57.3		12.0	290	33.7		-07.9	257	29.4		19.2
16	198	50.5	59	15.3		57.4	50	58.2		11.4	305	36.1		-07.9	272	32.0		19.2
17	213	53.0	74	14.7	+16	56.6	65	59.1	+14	10.9	320	38.6	-22	-07.9	287	34.6	-22	19.2
18	228	55.4	89	14.0	+16	55.7	81	00.0	+14	10.3	335	41.1	-22	-07.9	302	37.2	-22	19.3
19	243	57.9	104	13.4		54.8	96	01.0		09.8	350	43.6		-08.0	317	39.9		19.3
20	259	00.4	119	12.8		53.9	111	01.9		09.3	5	46.0		-08.0	332	42.5		19.3
21	274	02.8	134	12.2		53.0	126	02.8		08.7	20	48.5		-08.0	347	45.1		19.3
22	289	05.3	149	11.5		52.1	141	03.7		08.2	35	51.0		-08.0	2	47.7		19.3
23	304	07.8	164	10.9		51.2	156	04.7		07.6	50	53.4		-08.0	17	50.3		19.4
24	319	10.2	179	10.3	+16	50.3	171	05.6	+14	07.1	65	55.9	-22	-08.0	32	52.9	-22	19.4
Dif.	—		-6		-9		+9		-5		+25		0		+26		0	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 05 ^m 3				SD: 15'2 Edad: 9 ^d 9 PHE 4^h: 55'7 12^h: 55'5 20^h: 55'3 PMG: 21 ^h 17 ^m Rº: 51^m															
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	178	39.9	+15	24.8	51	52.7	99	-21	37.6	32	60 N	1 44	3 10	4 04	18 13	49	** ** *	**		
1	193	40.0		24.1	66	21.6	98		40.8	31	58	2 14	25	14	17 55	50	** ** *	**		
2	208	40.1		23.3	80	50.4	99		43.9	30	56	35	37	22	40	50	0 08	44		
3	223	40.2		22.6	95	19.3	98		46.9	29	54	2 53	48	30	27	50	20	45		
4	238	40.3		21.9	109	48.1	99		49.8	28	52	3 07	3 58	37	16	50	30	47		
5	253	40.4	+15	21.1	124	17.0	98	-21	52.6	26	50	3 19	4 06	4 43	17 06	50	0 40	47		
6	268	40.5	+15	20.4	138	45.8	99	-21	55.2	25	45	3 44	4 24	4 56	16 45	51	1 00	48		
7	283	40.6		19.7	153	14.7	98	-21	57.7	25	40	4 02	38	5 07	28	51	16	49		
8	298	40.7		18.9	167	43.5	99	-22	00.2	22	35	17	50	17	13	51	30	49		
9	313	40.8		18.2	182	12.4	98		02.4	22	30	29	4 59	25	16 01	51	1 42	50		
10	328	40.9		17.4	196	41.2	99		04.6	21	20	4 48	5 16	39	15 40	51	2 03	50		
11	343	41.0	+15	16.7	211	10.1	99	-22	06.7	19	10 N	5 03	5 29	5 51	15 21	52	2 21	51		
12	358	41.1	+15	16.0	225	39.0	99	-22	08.6	19	0	5 16	5 40	6 02	15 04	51	2 37	52		
13	13	41.2		15.2	240	07.9	99		10.5	17	10 S	26	5 51	13	14 47	51	2 54	52		
14	28	41.3		14.5	254	36.8	99		12.2	16	20	36	6 02	25	29	51	3 12	53		
15	43	41.4		13.7	269	05.7	99		13.8	15	30	45	13	38	14 08	51	33	53		
16	58	41.5		13.0	283	34.6	99		15.3	13	35	49	19	45	13 56	50	45	53		
17	73	41.6	+15	12.2	298	03.5	99	-22	16.6	13	40	5 54	6 26	6 54	13 41	51	3 59	54		
18	88	41.7	+15	11.5	312	32.4	100	-22	17.9	11	45	5 58	6 33	7 04	13 25	50	4 15	55		
19	103	41.8		10.8	327	01.4	100		19.0	11	50	6 03	42	16	13 04	50	35	55		
20	118	41.9		10.0	341	30.4	99		20.1	9	52	06	46	21	12 54	51	45	55		
21	133	42.0		09.3	355	59.3	100		21.0	8	54	08	50	28	43	50	4 56	56		
22	148	42.1		08.5	10	28.3	100		21.8	6	56	10	54	34	31	50	5 08	56		
23	163	42.2		07.8	24	57.3	100		22.4	6	58	13	6 59	42	12 16	50	5 23	56		
24	178	42.3	+15	07.0	39	26.3		-22	23.0		60 S	6 15	7 05	7 51	11 59	49	5 40	57		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 42 ^m 9		Mag: -4.0 PMG: 12 ^h 04 ^m				Mag: +1.8 PMG: 12 ^h 35 ^m				Mag: -2.4 PMG: 19 ^h 33 ^m				Mag: +0.2 PMG: 21 ^h 45 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	319	10.2	179	10.3	+16	50.3	171	05.6	+14	07.1	65	55.9	-22	08.0	32	52.9	-22	19.4
1	334	12.7	194	09.7		49.4	186	06.5		06.6	80	58.4		08.0	47	55.5		19.4
2	349	15.1	209	09.0		48.5	201	07.4		06.0	96	00.9		08.0	62	58.1		19.4
3	4	17.6	224	08.4		47.7	216	08.4		05.5	111	03.3		08.0	78	00.8		19.4
4	19	20.1	239	07.8		46.8	231	09.3		04.9	126	05.8		08.0	93	03.4		19.5
5	34	22.5	254	07.2	+16	45.9	246	10.2	+14	04.4	141	08.3	-22	08.0	108	06.0	-22	19.5
6	49	25.0	269	06.5	+16	45.0	261	11.2	+14	03.9	156	10.7	-22	08.0	123	08.6	-22	19.5
7	64	27.5	284	05.9		44.1	276	12.1		03.3	171	13.2		08.0	138	11.2		19.5
8	79	29.9	299	05.3		43.2	291	13.0		02.8	186	15.7		08.1	153	13.8		19.5
9	94	32.4	314	04.7		42.3	306	13.9		02.2	201	18.1		08.1	168	16.4		19.6
10	109	34.9	329	04.1		41.4	321	14.9		01.7	216	20.6		08.1	183	19.0		19.6
11	124	37.3	344	03.4	+16	40.5	336	15.8	+14	01.1	231	23.1	-22	08.1	198	21.6	-22	19.6
12	139	39.8	359	02.8	+16	39.6	351	16.7	+14	00.6	246	25.5	-22	08.1	213	24.3	-22	19.6
13	154	42.3	14	02.2		38.7	6	17.6	+14	00.1	261	28.0		08.1	228	26.9		19.6
14	169	44.7	29	01.6		37.8	21	18.6	+13	59.5	276	30.5		08.1	243	29.5		19.7
15	184	47.2	44	01.0		36.9	36	19.5		59.0	291	32.9		08.1	258	32.1		19.7
16	199	49.6	59	00.4		36.0	51	20.4		58.4	306	35.4		08.1	273	34.7		19.7
17	214	52.1	73	59.7	+16	35.1	66	21.4	+13	57.9	321	37.9	-22	08.1	288	37.3	-22	19.7
18	229	54.6	88	59.1	+16	34.1	81	22.3	+13	57.4	336	40.3	-22	08.1	303	39.9	-22	19.7
19	244	57.0	103	58.5		33.2	96	23.2		56.8	351	42.8		08.1	318	42.5		19.8
20	259	59.5	118	57.9		32.3	111	24.1		56.3	6	45.2		08.1	333	45.1		19.8
21	275	02.0	133	57.3		31.4	126	25.1		55.7	21	47.7		08.2	348	47.7		19.8
22	290	04.4	148	56.7		30.5	141	26.0		55.2	36	50.2		08.2	3	50.4		19.8
23	305	06.9	163	56.1		29.6	156	26.9		54.6	51	52.6		08.2	18	53.0		19.8
24	320	09.4	178	55.4	+16	28.7	171	27.8	+13	54.1	66	55.1	-22	08.2	33	55.6	-22	19.9
Dif.	—		-6		-9		+9		-5		+25		0		+26			

UT	SOL				☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 05 ^m 1				SD: 15'1 Edad: 10 ^d 9 PHE { 4^h: 55'2 12^h: 55'0 20^h: 54'9													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Civil	Náut.	Hora	Rº			Hora	Rº				
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	178	42.3	+15	07.0	39	26.3	101	-22	23.0	4	60 N	20 02	20 55	22 16	19 02	36	0 20 55	
1	193	42.4		06.3	53	55.4	100		23.4	4	58	19 53	41	21 49	18 45	38	37 55	
2	208	42.5		05.5	68	24.4	101		23.8	2	56	45	29	29	30	39	0 52 55	
3	223	42.7		04.8	82	53.5	101		24.0	1	54	37	18	21 13	17	41	1 05 55	
4	238	42.8		04.0	97	22.6	101		24.1	0	52	31	09	20 59	18 06	42	17 54	
5	253	42.9	+15	03.3	111	51.7	101	-22	24.1	2	50	19 25	20 01	20 47	17 56	43	1 27 54	
6	268	43.0	+15	02.6	126	20.8	102	-22	23.9	2	45	19 12	19 44	20 24	17 36	43	1 48 53	
7	283	43.1		01.8	140	50.0	102		23.7	4	40	19 01	30	20 06	19	45	2 05 53	
8	298	43.2		01.1	155	19.2	102		23.3	4	35	18 52	19	19 52	17 04	46	19 53	
9	313	43.3	+15	00.3	169	48.4	102		22.9	6	30	44	19 10	40	16 52	47	32 52	
10	328	43.4	+14	59.6	184	17.6	102		22.3	7	20	31	18 54	21	31	48	2 53 52	
11	343	43.5	+14	58.8	198	46.8	103	-22	21.6	8	10 N	18 19	18 41	19 07	16 13	49	3 12 51	
12	358	43.6	+14	58.1	213	16.1	103	-22	20.8	9	0	18 08	18 30	18 55	15 55	50	3 29 51	
13	13	43.7		57.3	227	45.4	103		19.9	11	10 S	17 58	19	45	38	51	3 46 50	
14	28	43.8		56.6	242	14.7	104		18.8	11	20	47	18 09	35	15 20	52	4 05 49	
15	43	43.9		55.8	256	44.1	103		17.7	13	30	34	17 58	27	14 59	53	26 49	
16	58	44.0		55.0	271	13.4	104		16.4	13	35	26	53	23	46	54	38 49	
17	73	44.1	+14	54.3	285	42.8	105	-22	15.1	15	40	17 18	17 46	18 18	14 32	55	4 53 48	
18	88	44.2	+14	53.5	300	12.3	104	-22	13.6	16	45	17 08	17 39	18 14	14 15	56	5 10 47	
19	103	44.4		52.8	314	41.7	105		12.0	17	50	16 57	31	09	13 54	57	30 47	
20	118	44.5		52.0	329	11.2	106		10.3	18	52	51	27	07	45	57	40 47	
21	133	44.6		51.3	343	40.8	105		08.5	19	54	45	23	05	33	58	5 52 45	
22	148	44.7		50.5	358	10.3	106		06.6	20	56	39	19	03	21	58	6 04 45	
23	163	44.8		49.8	12	39.9	106		04.6	22	58	31	14	18 01	13 06	60	19 44	
24	178	44.9	+14	49.0	27	09.5		-22	02.4		60 S	16 23	17 08	17 58	12 48	62	6 37 43	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 38 ^m 9		Mag: -4.0 PMG: 12 ^h 05 ^m				Mag: +1.8 PMG: 12 ^h 33 ^m				Mag: -2.3 PMG: 19 ^h 29 ^m				Mag: +0.2 PMG: 21 ^h 41 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	320	09.4	178	55.4	+16	28.7	171	27.8	+13	54.1	66	55.1	-22	-08.2	33	55.6	-22	19.9
1	335	11.8	193	54.8		27.8	186	28.8		53.5	81	57.6		-08.2	48	58.2		19.9
2	350	14.3	208	54.2		26.9	201	29.7		53.0	97	00.0		-08.2	64	00.8		19.9
3	5	16.8	223	53.6		26.0	216	30.6		52.5	112	02.5		-08.2	79	03.4		19.9
4	20	19.2	238	53.0		25.0	231	31.6		51.9	127	04.9		-08.2	94	06.0		19.9
5	35	21.7	253	52.4	+16	24.1	246	32.5	+13	51.4	142	07.4	-22	-08.2	109	08.6	-22	19.9
6	50	24.1	268	51.8	+16	23.2	261	33.4	+13	50.8	157	09.9	-22	-08.2	124	11.2	-22	20.0
7	65	26.6	283	51.2		22.3	276	34.4		50.3	172	12.3		-08.2	139	13.8		20.0
8	80	29.1	298	50.6		21.4	291	35.3		49.7	187	14.8		-08.2	154	16.4		20.0
9	95	31.5	313	49.9		20.5	306	36.2		49.2	202	17.2		-08.3	169	19.0		20.0
10	110	34.0	328	49.3		19.5	321	37.1		48.6	217	19.7		-08.3	184	21.7		20.0
11	125	36.5	343	48.7	+16	18.6	336	38.1	+13	48.1	232	22.1	-22	-08.3	199	24.3	-22	20.1
12	140	38.9	358	48.1	+16	17.7	351	39.0	+13	47.6	247	24.6	-22	-08.3	214	26.9	-22	20.1
13	155	41.4	13	47.5		16.8	6	39.9		47.0	262	27.1		-08.3	229	29.5		20.1
14	170	43.9	28	46.9		15.9	21	40.9		46.5	277	29.5		-08.3	244	32.1		20.1
15	185	46.3	43	46.3		14.9	36	41.8		45.9	292	32.0		-08.3	259	34.7		20.1
16	200	48.8	58	45.7		14.0	51	42.7		45.4	307	34.4		-08.3	274	37.3		20.2
17	215	51.2	73	45.1	+16	13.1	66	43.6	+13	44.8	322	36.9	-22	-08.3	289	39.9	-22	20.2
18	230	53.7	88	44.5	+16	12.2	81	44.6	+13	44.3	337	39.3	-22	-08.3	304	42.5	-22	20.2
19	245	56.2	103	43.9		11.2	96	45.5		43.7	352	41.8		-08.3	319	45.1		20.2
20	260	58.6	118	43.3		10.3	111	46.4		43.2	7	44.3		-08.3	334	47.7		20.2
21	276	01.1	133	42.7		09.4	126	47.4		42.6	22	46.7		-08.4	349	50.3		20.3
22	291	03.6	148	42.1		08.5	141	48.3		42.1	37	49.2		-08.4	4	52.9		20.3
23	306	06.0	163	41.5		07.5	156	49.2		41.5	52	51.6		-08.4	19	55.5		20.3
24	321	08.5	178	40.9	+16	06.6	171	50.2	+13	41.0	67	54.1	-22	-08.4	34	58.2	-22	20.3
Dif.	—		-6		-9		+9		-5		+25		0		+26			

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna												
	SD: 15'8 PMG: 12 ^h 04 ^m 9				SD: 14'9 Edad: 11 ^d 9		PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6		PMG: 22 ^h 57 ^m Rº: 48 ^m																					
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº		Hora	Rº											
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	m	h	m	m										
0	178	44.9	+14	49.0	27	09.5	107	-22	02.4	22	60 N	1 55	3 16	4 09	19 38	25		1 15	67											
1	193	45.0		48.3	41	39.2	107	-22	00.2	24	58	2 21	30	18	23	28		32	65											
2	208	45.1		47.5	56	08.9	107	-21	57.8	24	56	41	42	26	19 09	31		1 47	63											
3	223	45.2		46.7	70	38.6	107		55.4	26	54	2 58	3 52	34	18 58	32		2 00	61											
4	238	45.3		46.0	85	08.3	108		52.8	26	52	3 11	4 02	40	48	33		11	60											
5	253	45.4	+14	45.2	99	38.1	109	-21	50.2	28	50	3 23	4 10	4 46	18 39	34		2 21	59											
6	268	45.6	+14	44.5	114	08.0	108	-21	47.4	29	45	3 47	4 27	4 59	18 19	38		2 41	58											
7	283	45.7		43.7	128	37.8	109		44.5	30	40	4 04	40	5 09	18 04	39		2 58	56											
8	298	45.8		43.0	143	07.7	110		41.5	31	35	19	4 51	18	17 50	41		3 12	55											
9	313	45.9		42.2	157	37.7	110		38.4	32	30	31	5 01	26	39	42		24	54											
10	328	46.0		41.4	172	07.7	110		35.2	33	20	4 49	16	39	19	44		3 45	52											
11	343	46.1	+14	40.7	186	37.7	110	-21	31.9	34	10 N	5 04	5 29	5 51	17 02	46		4 03	50											
12	358	46.2	+14	39.9	201	07.7	111	-21	28.5	35	0	5 15	5 40	6 02	16 45	49		4 20	49											
13	13	46.3		39.2	215	37.8	112		25.0	36	10 S	25	5 50	12	29	50		36	48											
14	28	46.4		38.4	230	08.0	112		21.4	37	20	34	6 01	23	16 12	52		4 54	47											
15	43	46.6		37.6	244	38.2	112		17.7	38	30	43	11	36	15 52	54		5 15	44											
16	58	46.7		36.9	259	08.4	113		13.9	39	35	47	17	43	40	55		27	43											
17	73	46.8	+14	36.1	273	38.7	113	-21	10.0	40	40	5 51	6 23	6 51	15 27	57		5 41	42											
18	88	46.9	+14	35.3	288	09.0	113	-21	06.0	41	45	5 56	6 30	7 01	15 11	58		5 57	40											
19	103	47.0		34.6	302	39.3	114	-21	01.9	42	50	6 00	38	12	14 51	61		6 17	38											
20	118	47.1		33.8	317	09.7	115	-20	57.7	43	52	02	42	18	42	62		27	37											
21	133	47.2		33.1	331	40.2	115		53.4	44	54	04	46	24	31	64		37	36											
22	148	47.4		32.3	346	10.7	115		49.0	45	56	06	50	30	19	66		6 49	35											
23	163	47.5		31.5	0	41.2	116		44.5	46	58	09	6 55	37	14 06	67		7 03	33											
24	178	47.6	+14	30.8	15	11.8		-20	39.9		60 S	6 11	7 00	7 46	13 50	70		7 20	30											
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG: 2 ^h 35 ^m 0		Mag: -4.0 PMG: 12 ^h 06 ^m				Mag: +1.8 PMG: 12 ^h 32 ^m				Mag: -2.3 PMG: 19 ^h 25 ^m				Mag: +0.2 PMG: 21 ^h 36 ^m															
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.														
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'										
0	321	08.5	178	40.9	+16	06.6	171	50.2	+13	41.0	67	54.1	-22	08.4	34	58.2	-22	20.3												
1	336	11.0	193	40.3		05.7	186	51.1		40.4	82	56.5		08.4	50	00.8		20.3												
2	351	13.4	208	39.7		04.7	201	52.0		39.9	97	59.0		08.4	65	03.4		20.3												
3	6	15.9	223	39.1		03.8	216	53.0		39.3	113	01.4		08.4	80	06.0		20.4												
4	21	18.4	238	38.5		02.9	231	53.9		38.8	128	03.9		08.4	95	08.6		20.4												
5	36	20.8	253	37.9	+16	01.9	246	54.8	+13	38.2	143	06.3	-22	08.4	110	11.2	-22	20.4												
6	51	23.3	268	37.3	+16	01.0	261	55.8	+13	37.7	158	08.8	-22	08.4	125	13.8	-22	20.4												
7	66	25.7	283	36.7	+16	00.1	276	56.7		37.2	173	11.2		08.4	140	16.4		20.4												
8	81	28.2	298	36.1	+15	59.1	291	57.6		36.6	188	13.7		08.5	155	19.0		20.5												
9	96	30.7	313	35.5		58.2	306	58.6		36.1	203	16.1		08.5	170	21.6		20.5												
10	111	33.1	328	34.9		57.3	321	59.5		35.5	218	18.6		08.5	185	24.2		20.5												
11	126	35.6	343	34.3	+15	56.3	337	00.4	+13	35.0	233	21.0	-22	08.5	200	26.8	-22	20.5												
12	141	38.1	358	33.7	+15	55.4	352	01.3	+13	34.4	248	23.5	-22	08.5	215	29.4	-22	20.5												
13	156	40.5	13	33.1		54.4	7	02.3		33.9	263	25.9		08.5	230	32.0		20.6												
14	171	43.0	28	32.5		53.5	22	03.2		33.3	278	28.4		08.5	245	34.6		20.6												
15	186	45.5	43	31.9		52.6	37	04.1		32.8	293	30.8		08.5	260	37.2		20.6												
16	201	47.9	58	31.3		51.6	52	05.1		32.2	308	33.3		08.5	275	39.8		20.6												
17	216	50.4	73	30.7	+15	50.7	67	06.0	+13	31.7	323	35.7	-22	08.5	290	42.4	-22	20.6												
18	231	52.9	88	30.1	+15	49.7	82	06.9	+13	31.1	338	38.2	-22	08.6	305	45.0	-22	20.7												
19	246	55.3	103	29.5		48.8	97	07.9		30.6	353	40.6		08.6	320	47.6		20.7												
20	261	57.8	118	28.9		47.8	112	08.8		30.0	8	43.1		08.6	335	50.2		20.7												
21	277	00.2	133	28.4		46.9	127	09.7		29.5	23	45.5		08.6	350	52.9		20.7												
22	292	02.7	148	27.8		46.0	142	10.7		28.9	38	48.0		08.6	5	55.5		20.7												
23	307	05.2	163	27.2		45.0	157	11.6		28.4	53	50.4		08.6	20	58.1		20.7												
24	322	07.6	178	26.6	+15	44.1	172	12.5	+13	27.8	68	52.8	-22	08.6	36	00.7	-22	20.8												
Dif.	—		-6				-9				+9				-5				+24				0				+26			

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 12 ^h 04 ^m 7			SD: 14'9 Edad: 12 ^d 9 PHE { 4^h: 54'5 12^h: 54'4 20^h: 54'3															
	PMG: 23 ^h 45 ^m			Rº: 45 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	178	47.6	+14	30.8	15	11.8	116	-20	39.9	47	60 N	19 57	20 49	22 06	20 03	18	2 22	72	
1	193	47.7		30.0	29	42.4	117		35.2	48	58	48	35	21 41	19 51	20	37	70	
2	208	47.8		29.2	44	13.1	117		30.4	49	56	40	24	22	40	23	2 50	67	
3	223	47.9		28.5	58	43.8	117		25.5	50	54	33	14	21 07	30	25	3 01	66	
4	238	48.1		27.7	73	14.5	119		20.5	50	52	27	20 05	20 54	21	27	11	64	
5	253	48.2	+14	26.9	87	45.4	118	-20	15.5	52	50	19 21	19 57	20 43	19 13	29	3 20	63	
6	268	48.3	+14	26.2	102	16.2	119	-20	10.3	53	45	19 09	19 41	20 20	18 57	31	3 39	59	
7	283	48.4		25.4	116	47.1	120	-20	05.0	53	40	18 59	28	20 03	43	34	3 54	57	
8	298	48.5		24.6	131	18.1	120	-19	59.7	55	35	50	17	19 49	31	36	4 07	55	
9	313	48.6		23.9	145	49.1	120		54.2	55	30	42	19 08	38	21	38	18	54	
10	328	48.8		23.1	160	20.1	121		48.7	56	20	30	18 53	20	18 03	41	37	51	
11	343	48.9	+14	22.3	174	51.2	121	-19	43.1	57	10 N	18 18	18 40	19 06	17 48	44	4 53	50	
12	358	49.0	+14	21.5	189	22.3	122	-19	37.4	58	0	18 08	18 29	18 54	17 34	46	5 09	47	
13	13	49.1		20.8	203	53.5	123		31.6	59	10 S	17 58	20	45	19	49	24	45	
14	28	49.2		20.0	218	24.8	123		25.7	59	20	47	10	36	17 04	51	41	42	
15	43	49.3		19.2	232	56.1	123		19.8	61	30	35	18 00	28	16 46	54	5 59	41	
16	58	49.5		18.5	247	27.4	124		13.7	61	35	28	17 54	24	35	56	6 10	39	
17	73	49.6	+14	17.7	261	58.8	124	-19	07.6	63	40	17 20	17 48	18 20	16 24	57	6 23	36	
18	88	49.7	+14	16.9	276	30.2	125	-19	01.3	63	45	17 11	17 41	18 16	16 09	61	6 37	35	
19	103	49.8		16.1	291	01.7	126	-18	55.0	64	50	17 00	34	12	15 52	64	6 55	32	
20	118	49.9		15.4	305	33.3	126		48.6	64	52	16 54	30	10	44	65	7 04	30	
21	133	50.1		14.6	320	04.9	126		42.2	66	54	49	26	08	35	67	13	29	
22	148	50.2		13.8	334	36.5	127		35.6	66	56	43	22	06	25	69	24	26	
23	163	50.3		13.0	349	08.2	127		29.0	68	58	35	18	04	13	72	36	24	
24	178	50.4	+14	12.3	3	39.9		-18	22.2		60 S	16 27	17 13	18 02	15 00	74	7 50	21	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 31 ^m 1		Mag: -4.0 PMG: 12 ^h 07 ^m				Mag: +1.8 PMG: 12 ^h 30 ^m				Mag: -2.3 PMG: 19 ^h 21 ^m				Mag: +0.2 PMG: 21 ^h 32 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	322	07.6	178	26.6	+15	44.1	172	12.5	+13	27.8	68	52.8	-22	-08.6	36	00.7	-22	20.8
1	337	10.1	193	26.0		43.1	187	13.5		27.3	83	55.3		-08.6	51	03.3		20.8
2	352	12.6	208	25.4		42.2	202	14.4		26.7	98	57.7		-08.6	66	05.9		20.8
3	7	15.0	223	24.8		41.2	217	15.3		26.1	114	00.2		-08.6	81	08.5		20.8
4	22	17.5	238	24.2		40.3	232	16.3		25.6	129	02.6		-08.7	96	11.1		20.8
5	37	20.0	253	23.6	+15	39.3	247	17.2	+13	25.0	144	05.1	-22	-08.7	111	13.7	-22	20.9
6	52	22.4	268	23.0	+15	38.4	262	18.2	+13	24.5	159	07.5	-22	-08.7	126	16.3	-22	20.9
7	67	24.9	283	22.5		37.4	277	19.1		23.9	174	10.0		-08.7	141	18.9		20.9
8	82	27.4	298	21.9		36.5	292	20.0		23.4	189	12.4		-08.7	156	21.5		20.9
9	97	29.8	313	21.3		35.5	307	21.0		22.8	204	14.8		-08.7	171	24.1		20.9
10	112	32.3	328	20.7		34.5	322	21.9		22.3	219	17.3		-08.7	186	26.7		20.9
11	127	34.7	343	20.1	+15	33.6	337	22.8	+13	21.7	234	19.7	-22	-08.7	201	29.3	-22	21.0
12	142	37.2	358	19.5	+15	32.6	352	23.8	+13	21.2	249	22.2	-22	-08.7	216	31.9	-22	21.0
13	157	39.7	13	18.9		31.7	7	24.7		20.6	264	24.6		-08.7	231	34.5		21.0
14	172	42.1	28	18.4		30.7	22	25.6		20.1	279	27.0		-08.8	246	37.1		21.0
15	187	44.6	43	17.8		29.8	37	26.6		19.5	294	29.5		-08.8	261	39.7		21.0
16	202	47.1	58	17.2		28.8	52	27.5		19.0	309	31.9		-08.8	276	42.3		21.1
17	217	49.5	73	16.6	+15	27.8	67	28.4	+13	18.4	324	34.4	-22	-08.8	291	44.9	-22	21.1
18	232	52.0	88	16.0	+15	26.9	82	29.4	+13	17.9	339	36.8	-22	-08.8	306	47.5	-22	21.1
19	247	54.5	103	15.5		25.9	97	30.3		17.3	354	39.2		-08.8	321	50.1		21.1
20	262	56.9	118	14.9		24.9	112	31.2		16.8	9	41.7		-08.8	336	52.7		21.1
21	277	59.4	133	14.3		24.0	127	32.2		16.2	24	44.1		-08.8	351	55.3		21.1
22	293	01.8	148	13.7		23.0	142	33.1		15.6	39	46.6		-08.8	6	57.9		21.2
23	308	04.3	163	13.1		22.1	157	34.1		15.1	54	49.0		-08.9	22	00.5		21.2
24	323	06.8	178	12.6	+15	21.1	172	35.0	+13	14.5	69	51.4	-22	-08.9	37	03.1	-22	21.2
Dif.	—		-6		-10		+9		-6		+24		0		+26			

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 04 ^m 5				SD: 14'8 Edad: 13 ^d 9 PHE { 4^h: 54'2 12^h: 54'2 20^h: 54'1													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº					
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	178	50.4	+14	12.3	3	39.9	128	-18	22.2	68	60 N	2 04	3 22	4 13	20 21	14	3 34 76	
1	193	50.5		11.5	18	11.7	128		15.4	68	58	29	35	22	11 17		47 72	
2	208	50.7		10.7	32	43.5	129		08.6	70	56	2 48	47	30	20 03	18	3 57 70	
3	223	50.8		09.9	47	15.4	130	-18	01.6	70	54	3 03	3 56	37	19 55	21	4 07 68	
4	238	50.9		09.2	61	47.4	130	-17	54.6	72	52	16	4 05	43	48 23		15 66	
5	253	51.0	+14	08.4	76	19.4	130	-17	47.4	71	50	3 27	4 13	4 49	19 42	24	4 23 64	
6	268	51.2	+14	07.6	90	51.4	131	-17	40.3	73	45	3 50	4 29	5 01	19 28	28	4 38 61	
7	283	51.3		06.8	105	23.5	131		33.0	74	40	4 07	42	11	17 30		4 51 59	
8	298	51.4		06.1	119	55.6	132		25.6	74	35	21	4 53	20	19 07	33	5 02 56	
9	313	51.5		05.3	134	27.8	132		18.2	75	30	32	5 02	27	18 59	35	12 54	
10	328	51.6		04.5	149	00.0	133		10.7	75	20	4 50	17	40	44 39		28 51	
11	343	51.8	+14	03.7	163	32.3	134	-17	03.2	77	10 N	5 04	5 29	5 51	18 32	41	5 43 48	
12	358	51.9	+14	02.9	178	04.7	133	-16	55.5	77	0	5 15	5 40	6 01	18 20	44	5 56 45	
13	13	52.0		02.2	192	37.0	135		47.8	77	10 S	25	50	11	18 08	47	6 09 43	
14	28	52.1		01.4	207	09.5	135		40.1	79	20	33	5 59	22	17 55	50	23 40	
15	43	52.3	+14	00.6	221	42.0	135		32.2	79	30	41	6 09	34	40 54		40 36	
16	58	52.4	+13	59.8	236	14.5	136		24.3	80	35	45	15	41	31 56		49 34	
17	73	52.5	+13	59.0	250	47.1	136	-16	16.3	81	40	5 49	6 21	6 49	17 21	59	6 59 33	
18	88	52.6	+13	58.3	265	19.7	137	-16	08.2	81	45	5 53	6 27	6 58	17 10	61	7 12 29	
19	103	52.8		57.5	279	52.4	137	-16	00.1	82	50	57	35	7 09	16 56	64	27 26	
20	118	52.9		56.7	294	25.1	138	-15	51.9	82	52	5 59	38	14	49 66		34 25	
21	133	53.0		55.9	308	57.9	138		43.7	83	54	6 00	42	19	42 68		42 22	
22	148	53.1		55.1	323	30.7	138		35.4	84	56	02	46	26	34 70		7 50 21	
23	163	53.3		54.3	338	03.5	140		27.0	85	58	04	51	32	16 25	72	8 00 18	
24	178	53.4	+13	53.6	352	36.5		-15	18.5		60 S	6 06	6 55	7 40	16 14	76	8 11 16	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 27 ^m 1		Mag: -4.0 PMG: 12 ^h 08 ^m				Mag: +1.8 PMG: 12 ^h 29 ^m				Mag: -2.3 PMG: 19 ^h 17 ^m				Mag: +0.2 PMG: 21 ^h 28 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	323	06.8	178	12.6	+15	21.1	172	35.0	+13	14.5	69	51.4	-22	08.9	37	03.1	-22	21.2
1	338	09.2	193	12.0		20.1	187	35.9		14.0	84	53.9		08.9	52	05.7		21.2
2	353	11.7	208	11.4		19.2	202	36.9		13.4	99	56.3		08.9	67	08.3		21.2
3	8	14.2	223	10.8		18.2	217	37.8		12.9	114	58.7		08.9	82	10.9		21.3
4	23	16.6	238	10.2		17.2	232	38.7		12.3	130	01.2		08.9	97	13.5		21.3
5	38	19.1	253	09.7	+15	16.2	247	39.7	+13	11.8	145	03.6	-22	08.9	112	16.1	-22	21.3
6	53	21.6	268	09.1	+15	15.3	262	40.6	+13	11.2	160	06.0	-22	08.9	127	18.7	-22	21.3
7	68	24.0	283	08.5		14.3	277	41.5		10.6	175	08.5		08.9	142	21.3		21.3
8	83	26.5	298	07.9		13.3	292	42.5		10.1	190	10.9		09.0	157	23.9		21.3
9	98	29.0	313	07.4		12.4	307	43.4		09.5	205	13.3		09.0	172	26.5		21.4
10	113	31.4	328	06.8		11.4	322	44.4		09.0	220	15.8		09.0	187	29.1		21.4
11	128	33.9	343	06.2	+15	10.4	337	45.3	+13	08.4	235	18.2	-22	09.0	202	31.7	-22	21.4
12	143	36.3	358	05.6	+15	09.4	352	46.2	+13	07.9	250	20.6	-22	09.0	217	34.3	-22	21.4
13	158	38.8	13	05.1		08.5	7	47.2		07.3	265	23.1		09.0	232	36.9		21.4
14	173	41.3	28	04.5		07.5	22	48.1		06.8	280	25.5		09.0	247	39.5		21.5
15	188	43.7	43	03.9		06.5	37	49.1		06.2	295	27.9		09.0	262	42.1		21.5
16	203	46.2	58	03.3		05.5	52	50.0		05.6	310	30.4		09.0	277	44.7		21.5
17	218	48.7	73	02.8	+15	04.6	67	50.9	+13	05.1	325	32.8	-22	09.1	292	47.3	-22	21.5
18	233	51.1	88	02.2	+15	03.6	82	51.9	+13	04.5	340	35.2	-22	09.1	307	49.9	-22	21.5
19	248	53.6	103	01.6		02.6	97	52.8		04.0	355	37.7		09.1	322	52.5		21.5
20	263	56.1	118	01.1		01.6	112	53.7		03.4	10	40.1		09.1	337	55.1		21.6
21	278	58.5	133	00.5	+15	00.6	127	54.7		02.9	25	42.5		09.1	352	57.7		21.6
22	294	01.0	147	59.9	+14	59.7	142	55.6		02.3	40	45.0		09.1	8	00.3		21.6
23	309	03.5	162	59.4		58.7	157	56.6		01.7	55	47.4		09.1	23	02.9		21.6
24	324	05.9	177	58.8	+14	57.7	172	57.5	+13	01.2	70	49.8	-22	09.1	38	05.5	-22	21.6
Dif.	—		-6		-10		+9		-6		+24		0		+26			

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna								
	SD: 15°8			SD: 14°7		PHE { 4^h: 54°1 12^h: 54°0 20^h: 54°0						Edad: 14°9		Rº: 44 ^m										
	PMG: 12 ^h 04 ^m 3			PMG: 00 ^h 30 ^m																				
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.			Civil	Náut.	Hora	Rº	Hora	Rº								
h	°	'	°	°	'	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m								
0	178	53.4	+13	53.6	352	36.5	139	-15	18.5	85	60 N	19 51	20 42	21 56	20 35	11	4 50	76						
1	193	53.5		52.8	7	09.4	140		10.0	85	58	43	29	33	28	13	4 59	73						
2	208	53.6		52.0	21	42.4	141	-15	01.5	87	56	35	18	16	21	16	5 07	71						
3	223	53.8		51.2	36	15.5	141	-14	52.8	87	54	29	09	21 01	16	17	15	68						
4	238	53.9		50.4	50	48.6	141		44.1	87	52	23	20 00	20 49	11	19	21	66						
5	253	54.0	+13	49.6	65	21.7	142	-14	35.4	88	50	19 17	19 53	20 38	20 06	21	5 27	64						
6	268	54.2	+13	48.8	79	54.9	142	-14	26.6	89	45	19 05	19 37	20 16	19 56	24	5 39	61						
7	283	54.3		48.1	94	28.1	143		17.7	89	40	18 56	25	20 00	47	28	50	57						
8	298	54.4		47.3	109	01.4	143	-14	08.8	90	35	48	14	19 46	40	30	5 58	56						
9	313	54.5		46.5	123	34.7	144	-13	59.8	91	30	41	19 06	35	34	32	6 06	53						
10	328	54.7		45.7	138	08.1	144		50.7	91	20	28	18 51	18	23	36	19	50						
11	343	54.8	+13	44.9	152	41.5	144	-13	41.6	91	10 N	18 18	18 39	19 05	19 13	39	6 31	46						
12	358	54.9	+13	44.1	167	14.9	145	-13	32.5	92	0	18 08	18 29	18 54	19 04	42	6 41	43						
13	13	55.1		43.3	181	48.4	146		23.3	93	10 S	17 58	20	44	18 55	45	6 52	40						
14	28	55.2		42.5	196	22.0	145		14.0	93	20	48	10	36	45	49	7 03	37						
15	43	55.3		41.8	210	55.5	146	-13	04.7	94	30	36	18 01	29	34	52	16	33						
16	58	55.4		41.0	225	29.1	147	-12	55.3	94	35	29	17 55	25	27	55	23	32						
17	73	55.6	+13	40.2	240	02.8	147	-12	45.9	95	40	17 22	17 50	18 22	18 20	57	7 32	29						
18	88	55.7	+13	39.4	254	36.5	147	-12	36.4	95	45	17 13	17 43	18 18	18 11	61	7 41	26						
19	103	55.8		38.6	269	10.2	148		26.9	96	50	17 02	36	14	18 00	65	53	23						
20	118	56.0		37.8	283	44.0	148		17.3	96	52	16 58	33	13	17 55	67	7 59	20						
21	133	56.1		37.0	298	17.8	149	-12	07.7	97	54	52	29	11	50	68	8 04	20						
22	148	56.2		36.2	312	51.7	149	-11	58.0	97	56	46	26	09	44	70	11	17						
23	163	56.4		35.4	327	25.6	149		48.3	97	58	40	21	08	37	73	18	15						
24	178	56.5	+13	34.6	341	59.5		-11	38.6		60 S	16 32	17 17	18 06	17 30	75	8 27	12						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO												
	PMG 2 ^h 23 ^m 2		Mag: -4.0 PMG: 12 ^h 09 ^m			Mag: +1.8 PMG: 12 ^h 27 ^m			Mag: -2.3 PMG: 19 ^h 14 ^m			Mag: +0.2 PMG: 21 ^h 24 ^m												
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.											
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'						
0	324	05.9	177	58.8	+14	57.7		172	57.5	+13	01.2	70	49.8	-22	-09.1	38	05.5	-22	21.6					
1	339	08.4	192	58.2		56.7		187	58.4		00.6	85	52.2		-09.1	53	08.0		21.7					
2	354	10.8	207	57.7		55.7		202	59.4	+13	00.1	100	54.7		-09.2	68	10.6		21.7					
3	9	13.3	222	57.1		54.7		218	00.3	+12	59.5	115	57.1		-09.2	83	13.2		21.7					
4	24	15.8	237	56.5		53.8		233	01.3		58.9	130	59.5		-09.2	98	15.8		21.7					
5	39	18.2	252	56.0	+14	52.8		248	02.2	+12	58.4	146	02.0	-22	-09.2	113	18.4	-22	21.7					
6	54	20.7	267	55.4	+14	51.8		263	03.1	+12	57.8	161	04.4	-22	-09.2	128	21.0	-22	21.7					
7	69	23.2	282	54.8		50.8		278	04.1		57.3	176	06.8		-09.2	143	23.6		21.8					
8	84	25.6	297	54.3		49.8		293	05.0		56.7	191	09.2		-09.2	158	26.2		21.8					
9	99	28.1	312	53.7		48.8		308	06.0		56.2	206	11.7		-09.2	173	28.8		21.8					
10	114	30.6	327	53.1		47.8		323	06.9		55.6	221	14.1		-09.3	188	31.4		21.8					
11	129	33.0	342	52.6	+14	46.8		338	07.8	+12	55.0	236	16.5	-22	-09.3	203	34.0	-22	21.8					
12	144	35.5	357	52.0	+14	45.8		353	08.8	+12	54.5	251	18.9	-22	-09.3	218	36.6	-22	21.9					
13	159	37.9	12	51.4		44.8		8	09.7		53.9	266	21.4		-09.3	233	39.2		21.9					
14	174	40.4	27	50.9		43.9		23	10.7		53.4	281	23.8		-09.3	248	41.8		21.9					
15	189	42.9	42	50.3		42.9		38	11.6		52.8	296	26.2		-09.3	263	44.4		21.9					
16	204	45.3	57	49.8		41.9		53	12.5		52.2	311	28.6		-09.3	278	47.0		21.9					
17	219	47.8	72	49.2	+14	40.9		68	13.5	+12	51.7	326	31.0	-22	-09.3	293	49.6	-22	21.9					
18	234	50.3	87	48.6	+14	39.9		83	14.4	+12	51.1	341	33.5	-22	-09.3	308	52.2	-22	22.0					
19	249	52.7	102	48.1		38.9		98	15.4		50.6	356	35.9		-09.4	323	54.8		22.0					
20	264	55.2	117	47.5		37.9		113	16.3		50.0	11	38.3		-09.4	338	57.4		22.0					
21	279	57.7	132	47.0		36.9		128	17.2		49.4	26	40.7		-09.4	354	00.0		22.0					
22	295	00.1	147	46.4		35.9		143	18.2		48.9	41	43.2		-09.4	9	02.5		22.0					
23	310	02.6	162	45.8		34.9		158	19.1		48.3	56	45.6		-09.4	24	05.1		22.0					
24	325	05.1	177	45.3	+14	33.9		173	20.1	+12	47.7	71	48.0	-22	-09.4	39	07.7	-22	22.1					
Dif.	—		-6			-10			+9			-6			+24			0			+26		0	

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 1				SD: 14 ^h 7 Edad: 15 ^d 9		PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰		Rº: 42 ^m											
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.				Náut.	Civil			Hora	Rº		Hora	Rº
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	m	h	m	m
0	178	56.5	+13	34.6	341	59.5	150	-11	38.6	98	60 N	2 14	3 27	4 18		20 46	9	6 06	75	
1	193	56.6		33.8	356	33.5	150		28.8	99	58		36	40	27	41	12	12	73	
2	208	56.8		33.0	11	07.5	150		18.9	99	56	2 53	3 51	34		37	14	18	70	
3	223	56.9		32.2	25	41.5	151	-11	09.0	99	54	3 08	4 00	41		33	16	23	68	
4	238	57.0		31.5	40	15.6	151	-10	59.1	100	52		20	09	47	30	18	27	66	
5	253	57.2	+13	30.7	54	49.7	151	-10	49.1	100	50	3 31	4 16	4 52	20 27	19	6 31	65		
6	268	57.3	+13	29.9	69	23.8	152	-10	39.1	101	45	3 53	4 32	5 04	20 20	23	6 40	61		
7	283	57.4		29.1	83	58.0	152		29.0	101	40	4 09	44	13		15	26	47	58	
8	298	57.6		28.3	98	32.2	152		18.9	102	35		22	4 54	21		10	29	54	
9	313	57.7		27.5	113	06.4	153	-10	08.7	101	30		33	5 03	28	20 06	31	6 59	53	
10	328	57.8		26.7	127	40.7	153	-9	58.6	103	20	4 51	18	40	19 59	34	7 09	48		
11	343	58.0	+13	25.9	142	15.0	153	-9	48.3	102	10 N	5 04	5 29	5 51	19 52	39	7 17	45		
12	358	58.1	+13	25.1	156	49.3	154	-9	38.1	103	0	5 15	5 40	6 01	19 46	42	7 24	42		
13	13	58.2		24.3	171	23.7	154		27.8	104	10 S	24	49	10	40	45	32	39		
14	28	58.4		23.5	185	58.1	154		17.4	104	20	32	5 58	21	34	48	40	35		
15	43	58.5		22.7	200	32.5	155	-9	07.0	104	30	39	6 07	32	26	53	49	32		
16	58	58.6		21.9	215	07.0	154	-8	56.6	104	35	43	13	39	22	55	7 55	29		
17	73	58.8	+13	21.1	229	41.4	156	-8	46.2	105	40	5 46	6 18	6 46	19 17	58	8 01	26		
18	88	58.9	+13	20.3	244	16.0	155	-8	35.7	105	45	5 50	6 24	6 55	19 12	60	8 07	24		
19	103	59.0		19.5	258	50.5	155		25.2	106	50	54	31	7 05		05	64	16	20	
20	118	59.2		18.7	273	25.0	156		14.6	105	52	55	35	10	19 02	66	19	19		
21	133	59.3		17.9	287	59.6	156	-8	04.1	107	54	57	38	15	18 58	68	24	16		
22	148	59.4		17.1	302	34.2	157	-7	53.4	106	56	5 58	42	21		54	70	28	15	
23	163	59.6		16.3	317	08.9	156		42.8	107	58	6 00	46	27	18 50	72	8 33	13		
24	178	59.7	+13	15.5	331	43.5		-7	32.1		60 S	6 01	6 50	7 35	18 45	75	8 39	10		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 19 ^m 3		Mag: -4.0 PMG: 12 ^h 09 ^m				Mag: +1.8 PMG: 12 ^h 26 ^m				Mag: -2.3 PMG: 19 ^h 10 ^m				Mag: +0.2 PMG: 21 ^h 20 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	325	05.1	177	45.3	+14	33.9	173	20.1	+12	47.7	71	48.0	-22	09.4	39	07.7	-22	22.1
1	340	07.5	192	44.7		32.9	188	21.0		47.2	86	50.4		09.4	54	10.3		22.1
2	355	10.0	207	44.2		31.9	203	21.9		46.6	101	52.8		09.4	69	12.9		22.1
3	10	12.4	222	43.6		30.9	218	22.9		46.1	116	55.3		09.5	84	15.5		22.1
4	25	14.9	237	43.1		29.9	233	23.8		45.5	131	57.7		09.5	99	18.1		22.1
5	40	17.4	252	42.5	+14	28.9	248	24.8	+12	44.9	147	00.1	-22	09.5	114	20.7	-22	22.1
6	55	19.8	267	41.9	+14	27.9	263	25.7	+12	44.4	162	02.5	-22	09.5	129	23.3	-22	22.2
7	70	22.3	282	41.4		26.9	278	26.7		43.8	177	04.9		09.5	144	25.9		22.2
8	85	24.8	297	40.8		25.9	293	27.6		43.2	192	07.4		09.5	159	28.5		22.2
9	100	27.2	312	40.3		24.9	308	28.5		42.7	207	09.8		09.5	174	31.1		22.2
10	115	29.7	327	39.7		23.9	323	29.5		42.1	222	12.2		09.6	189	33.7		22.2
11	130	32.2	342	39.2	+14	22.8	338	30.4	+12	41.6	237	14.6	-22	09.6	204	36.3	-22	22.3
12	145	34.6	357	38.6	+14	21.8	353	31.4	+12	41.0	252	17.0	-22	09.6	219	38.8	-22	22.3
13	160	37.1	12	38.1		20.8	8	32.3		40.4	267	19.4		09.6	234	41.4		22.3
14	175	39.5	27	37.5		19.8	23	33.3		39.9	282	21.9		09.6	249	44.0		22.3
15	190	42.0	42	37.0		18.8	38	34.2		39.3	297	24.3		09.6	264	46.6		22.3
16	205	44.5	57	36.4		17.8	53	35.1		38.7	312	26.7		09.6	279	49.2		22.3
17	220	46.9	72	35.9	+14	16.8	68	36.1	+12	38.2	327	29.1	-22	09.6	294	51.8	-22	22.4
18	235	49.4	87	35.3	+14	15.8	83	37.0	+12	37.6	342	31.5	-22	09.7	309	54.4	-22	22.4
19	250	51.9	102	34.8		14.8	98	38.0		37.1	357	33.9		09.7	324	57.0		22.4
20	265	54.3	117	34.2		13.7	113	38.9		36.5	12	36.3		09.7	339	59.6		22.4
21	280	56.8	132	33.7		12.7	128	39.9		35.9	27	38.8		09.7	355	02.2		22.4
22	295	59.3	147	33.1		11.7	143	40.8		35.4	42	41.2		09.7	10	04.8		22.4
23	311	01.7	162	32.6		10.7	158	41.7		34.8	57	43.6		09.7	25	07.3		22.5
24	326	04.2	177	32.0	+14	09.7	173	42.7	+12	34.2	72	46.0	-22	09.7	40	09.9	-22	22.5
Dif.	—		-6	-10			+9	-6			+24			0		+26		

UT	SOL				○ LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 15'8 PMG: 12 ^h 03 ^m 9				SD: 14'7 Edad: 16 ^d 9 PMG:01 ^h 56 ^m															PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1 Rº: 42 ^m
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.							
	h	°	'	°	'	°	'	°			'	°	'	h	m	h	m	h	m	m
0	178	59.7	+13	15.5	331	43.5	157	-7	32.1	107	60 N	19 46	20 35	21 46	20 55	8	7 21	75		
1	193	59.9		14.7	346	18.2	157		21.4	107	58	38	23	26	53	11	25	72		
2	209	00.0		13.9	0	52.9	157	-7	10.7	108	56	30	13	21 09	51	13	28	70		
3	224	00.1		13.1	15	27.6	157	-6	59.9	108	54	24	20 04	20 55	49	15	31	68		
4	239	00.3		12.3	30	02.3	158		49.1	108	52	18	19 56	43	48	17	33	66		
5	254	00.4	+13	11.5	44	37.1	158	-6	38.3	108	50	19 13	19 49	20 33	20 46	19	7 36	64		
6	269	00.5	+13	10.7	59	11.9	158	-6	27.5	109	45	19 02	19 34	20 12	20 43	23	7 41	60		
7	284	00.7		09.9	73	46.7	158		16.6	109	40	18 53	22	19 57	41	25	45	57		
8	299	00.8		09.1	88	21.5	158	-6	05.7	109	35	45	12	44	39	28	49	54		
9	314	01.0		08.2	102	56.3	159	-5	54.8	109	30	39	19 03	33	37	30	52	52		
10	329	01.1		07.4	117	31.2	158		43.9	110	20	27	18 50	16	33	35	7 57	48		
11	344	01.2	+13	06.6	132	06.0	159	-5	32.9	110	10 N	18 17	18 38	19 04	20 31	37	8 02	45		
12	359	01.4	+13	05.8	146	40.9	159	-5	21.9	110	0	18 07	18 28	18 53	20 28	41	8 06	42		
13	14	01.5		05.0	161	15.8	159	-5	10.9	110	10 S	17 58	19	44	25	45	11	38		
14	29	01.7		04.2	175	50.7	159	-4	59.9	111	20	48	11	37	22	48	15	35		
15	44	01.8		03.4	190	25.6	159		48.8	110	30	37	18 02	30	19	52	21	30		
16	59	01.9		02.6	205	00.5	160		37.8	111	35	31	17 57	27	17	54	24	28		
17	74	02.1	+13	01.8	219	35.5	159	-4	26.7	111	40	17 24	17 51	18 23	20 15	57	8 27	26		
18	89	02.2	+13	01.0	234	10.4	160	-4	15.6	112	45	17 15	17 46	18 20	20 12	61	8 31	23		
19	104	02.4	+13	00.2	248	45.4	160	-4	04.4	111	50	05	39	17	09	64	36	19		
20	119	02.5	+12	59.4	263	20.4	159	-3	53.3	112	52	17 01	36	16	08	66	38	17		
21	134	02.6		58.6	277	55.3	160		42.1	111	54	16 56	33	14	06	68	40	16		
22	149	02.8		57.7	292	30.3	160		31.0	112	56	50	29	13	04	71	43	13		
23	164	02.9		56.9	307	05.3	160		19.8	112	58	44	25	11	02	73	46	11		
24	179	03.1	+12	56.1	321	40.3		-3	08.6		60 S	16 37	17 21	18 10	20 00	76	8 49	9		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 15 ^m 4		Mag: -4.0 PMG: 12 ^h 10 ^m				Mag: +1.8 PMG: 12 ^h 24 ^m				Mag: -2.3 PMG: 19 ^h 06 ^m				Mag: +0.2 PMG: 21 ^h 16 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	326	04.2	177	32.0	+14	09.7	173	42.7	+12	34.2	72	46.0	-22	-09.7	40	09.9	-22	22.5
1	341	06.7	192	31.5		08.7	188	43.6		33.7	87	48.4		-09.7	55	12.5		22.5
2	356	09.1	207	30.9		07.7	203	44.6		33.1	102	50.8		-09.8	70	15.1		22.5
3	11	11.6	222	30.4		06.6	218	45.5		32.5	117	53.2		-09.8	85	17.7		22.5
4	26	14.0	237	29.9		05.6	233	46.5		32.0	132	55.6		-09.8	100	20.3		22.5
5	41	16.5	252	29.3	+14	04.6	248	47.4	+12	31.4	147	58.0	-22	-09.8	115	22.9	-22	22.6
6	56	19.0	267	28.8	+14	03.6	263	48.3	+12	30.8	163	00.5	-22	-09.8	130	25.5	-22	22.6
7	71	21.4	282	28.2		02.6	278	49.3		30.3	178	02.9		-09.8	145	28.1		22.6
8	86	23.9	297	27.7		01.5	293	50.2		29.7	193	05.3		-09.8	160	30.7		22.6
9	101	26.4	312	27.1	+14	00.5	308	51.2		29.1	208	07.7		-09.9	175	33.2		22.6
10	116	28.8	327	26.6	+13	59.5	323	52.1		28.6	223	10.1		-09.9	190	35.8		22.6
11	131	31.3	342	26.1	+13	58.5	338	53.1	+12	28.0	238	12.5	-22	-09.9	205	38.4	-22	22.7
12	146	33.8	357	25.5	+13	57.4	353	54.0	+12	27.4	253	14.9	-22	-09.9	220	41.0	-22	22.7
13	161	36.2	12	25.0		56.4	8	55.0		26.9	268	17.3		-09.9	235	43.6		22.7
14	176	38.7	27	24.4		55.4	23	55.9		26.3	283	19.7		-09.9	250	46.2		22.7
15	191	41.1	42	23.9		54.4	38	56.9		25.7	298	22.1		-09.9	265	48.8		22.7
16	206	43.6	57	23.3		53.3	53	57.8		25.2	313	24.5		-10.0	280	51.4		22.7
17	221	46.1	72	22.8	+13	52.3	68	58.7	+12	24.6	328	26.9	-22	-10.0	295	53.9	-22	22.8
18	236	48.5	87	22.3	+13	51.3	83	59.7	+12	24.0	343	29.4	-22	-10.0	310	56.5	-22	22.8
19	251	51.0	102	21.7		50.2	99	00.6		23.5	358	31.8		-10.0	325	59.1		22.8
20	266	53.5	117	21.2		49.2	114	01.6		22.9	13	34.2		-10.0	341	01.7		22.8
21	281	55.9	132	20.7		48.2	129	02.5		22.3	28	36.6		-10.0	356	04.3		22.8
22	296	58.4	147	20.1		47.2	144	03.5		21.8	43	39.0		-10.0	11	06.9		22.8
23	312	00.9	162	19.6		46.1	159	04.4		21.2	58	41.4		-10.0	26	09.5		22.9
24	327	03.3	177	19.0	+13	45.1	174	05.4	+12	20.6	73	43.8	-22	-10.1	41	12.1	-22	22.9
Dif.	—		-5	-10			+9	-6			+24	0			+26			

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 03 ^m 7				SD: 14'7 Edad: 17 ^d 9		PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'3		Rº: 41 ^m										
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.				Náut.	Civil				Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	m	
0	179	03.1	+12	56.1	321	40.3	160	-3	08.6	113	60 N	2 22	3 33	4 23		21 03	9	8 36	76
1	194	03.2		55.3	336	15.3	160	-2	57.3	112	58	43	45	31		04 11		37	73
2	209	03.4		54.5	350	50.3	160		46.1	112	56	2 59	3 56	38		04 14		38	70
3	224	03.5		53.7	5	25.3	160		34.9	113	54	3 13	4 05	44		04 16		39	68
4	239	03.6		52.9	20	00.3	160		23.6	113	52	25	12	50		05 17		39	67
5	254	03.8	+12	52.1	34	35.3	161	-2	12.3	113	50	3 35	4 20	4 55		21 05	19	8 40	65
6	269	03.9	+12	51.3	49	10.4	160	-2	01.0	112	45	3 56	4 34	5 06		21 06	22	8 41	61
7	284	04.1		50.4	63	45.4	160	-1	49.8	114	40	4 12	46	15		06 26		42	58
8	299	04.2		49.6	78	20.4	160		38.4	113	35	24	4 56	23		07 28		43	55
9	314	04.4		48.8	92	55.4	160		27.1	113	30	35	5 04	29		07 31		44	52
10	329	04.5		48.0	107	30.4	160		15.8	113	20	4 51	18	41		08 34		45	49
11	344	04.6	+12	47.2	122	05.4	160	-1	04.5	113	10 N	5 04	5 29	5 51		21 08	39	8 47	44
12	359	04.8	+12	46.4	136	40.4	160	-0	53.2	114	0	5 14	5 39	6 00		21 09	42	8 48	41
13	14	04.9		45.6	151	15.4	160		41.8	113	10 S	23	48	09		10 45		49	38
14	29	05.1		44.7	165	50.4	160		30.5	114	20	31	5 57	19		10 49		50	34
15	44	05.2		43.9	180	25.4	160		19.1	114	30	37	6 06	30		11 53		51	30
16	59	05.4		43.1	195	00.4	159	-0	07.7	113	35	41	10	36		11 56		52	28
17	74	05.5	+12	42.3	209	35.3	160	+0	03.6	114	40	5 44	6 16	6 43		21 12	58	8 53	25
18	89	05.7	+12	41.5	224	10.3	160	+0	15.0	114	45	5 47	6 21	6 51		21 13	61	8 54	22
19	104	05.8		40.7	238	45.3	159		26.4	113	50	50	28	7 01		13 65		55	18
20	119	06.0		39.8	253	20.2	159		37.7	114	52	51	31	06		14 67		55	17
21	134	06.1		39.0	267	55.1	160	+0	49.1	114	54	53	34	11		14 69		56	15
22	149	06.2		38.2	282	30.1	159	+1	00.5	113	56	54	37	16		15 70		56	14
23	164	06.4		37.4	297	05.0	159		11.8	114	58	55	41	22		21 15	73	8 57	11
24	179	06.5	+12	36.6	311	39.9		+1	23.2		60 S	5 57	6 45	7 29		21 16	76	8 58	8
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 2 ^h 11 ^m 4		Mag: -4.0 PMG: 12 ^h 11 ^m				Mag: +1.8 PMG: 12 ^h 23 ^m				Mag: -2.3 PMG: 19 ^h 02 ^m				Mag: +0.3 PMG: 21 ^h 12 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	327	03.3	177	19.0	+13	45.1	174	05.4	+12	20.6	73	43.8	-22	10.1	41	12.1	-22	22.9	
1	342	05.8	192	18.5		44.1	189	06.3		20.1	88	46.2		10.1	56	14.6		22.9	
2	357	08.3	207	18.0		43.0	204	07.3		19.5	103	48.6		10.1	71	17.2		22.9	
3	12	10.7	222	17.4		42.0	219	08.2		18.9	118	51.0		10.1	86	19.8		22.9	
4	27	13.2	237	16.9		41.0	234	09.1		18.4	133	53.4		10.1	101	22.4		22.9	
5	42	15.6	252	16.4	+13	39.9	249	10.1	+12	17.8	148	55.8	-22	10.1	116	25.0	-22	23.0	
6	57	18.1	267	15.8	+13	38.9	264	11.0	+12	17.2	163	58.2	-22	10.1	131	27.6	-22	23.0	
7	72	20.6	282	15.3		37.8	279	12.0		16.7	179	00.6		10.2	146	30.2		23.0	
8	87	23.0	297	14.8		36.8	294	12.9		16.1	194	03.0		10.2	161	32.7		23.0	
9	102	25.5	312	14.2		35.8	309	13.9		15.5	209	05.4		10.2	176	35.3		23.0	
10	117	28.0	327	13.7		34.7	324	14.8		15.0	224	07.8		10.2	191	37.9		23.0	
11	132	30.4	342	13.2	+13	33.7	339	15.8	+12	14.4	239	10.2	-22	10.2	206	40.5	-22	23.1	
12	147	32.9	357	12.6	+13	32.7	354	16.7	+12	13.8	254	12.6	-22	10.2	221	43.1	-22	23.1	
13	162	35.4	12	12.1		31.6	9	17.7		13.2	269	15.0		10.3	236	45.7		23.1	
14	177	37.8	27	11.6		30.6	24	18.6		12.7	284	17.4		10.3	251	48.3		23.1	
15	192	40.3	42	11.0		29.5	39	19.6		12.1	299	19.8		10.3	266	50.8		23.1	
16	207	42.8	57	10.5		28.5	54	20.5		11.5	314	22.2		10.3	281	53.4		23.1	
17	222	45.2	72	10.0	+13	27.4	69	21.5	+12	11.0	329	24.6	-22	10.3	296	56.0	-22	23.2	
18	237	47.7	87	09.5	+13	26.4	84	22.4	+12	10.4	344	27.0	-22	10.3	311	58.6	-22	23.2	
19	252	50.1	102	08.9		25.4	99	23.4		09.8	359	29.4		10.3	327	01.2		23.2	
20	267	52.6	117	08.4		24.3	114	24.3		09.2	14	31.8		10.4	342	03.8		23.2	
21	282	55.1	132	07.9		23.3	129	25.3		08.7	29	34.2		10.4	357	06.3		23.2	
22	297	57.5	147	07.4		22.2	144	26.2		08.1	44	36.6		10.4	12	08.9		23.2	
23	313	00.0	162	06.8		21.2	159	27.1		07.5	59	39.0		10.4	27	11.5		23.3	
24	328	02.5	177	06.3	+13	20.1	174	28.1	+12	07.0	74	41.4	-22	10.4	42	14.1	-22	23.3	
Dif.	—		-5		-10		+9		-6		+24		0		+26		0		

UT	SOL			☉ LUNA					Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15°8			SD: 14°8 Edad: 18°9														
	PMG: 12 ^h 03 ^m 4			PMG: 03 ^h 19 ^m							PHE { 4 ^h : 54°4 12 ^h : 54°5 20 ^h : 54°6					R°: 42 ^m		
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.				Civil	Náut.	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	06.5	+12	36.6	311	39.9	158	+1	23.2	114	60 N	19 40	20 29	21 37	21 12	10	9 52	76
1	194	06.7		35.7	326	14.7	159		34.6	114	58	32	17	18	15	13	50	74
2	209	06.8		34.9	340	49.6	158		46.0	113	56	26	20 07	21 02	18	15	48	72
3	224	07.0		34.1	355	24.4	159	+1	57.3	114	54	20	19 59	20 49	20	17	47	69
4	239	07.1		33.3	9	59.3	158	+2	08.7	114	52	14	51	38	22	19	46	67
5	254	07.3	+12	32.5	24	34.1	158	+2	20.1	113	50	19 09	19 45	20 28	21 24	21	9 45	65
6	269	07.4	+12	31.6	39	08.9	157	+2	31.4	114	45	18 59	19 30	20 09	21 28	25	9 42	62
7	284	07.6		30.8	53	43.6	158		42.8	113	40	50	19	19 53	32	27	40	58
8	299	07.7		30.0	68	18.4	157	+2	54.1	114	35	43	09	41	35	30	38	56
9	314	07.9		29.2	82	53.1	157	+3	05.5	113	30	36	19 01	31	38	32	36	54
10	329	08.0		28.4	97	27.8	157		16.8	113	20	25	18 48	15	42	37	34	49
11	344	08.2	+12	27.5	112	02.5	157	+3	28.1	114	10 N	18 16	18 37	19 02	21 47	39	9 31	46
12	359	08.3	+12	26.7	126	37.2	156	+3	39.5	113	0	18 07	18 28	18 53	21 51	43	9 29	42
13	14	08.5		25.9	141	11.8	156	+3	50.8	113	10 S	17 58	19	44	55	46	27	38
14	29	08.6		25.1	155	46.4	156	+4	02.1	113	20	49	11	37	21 59	50	24	35
15	44	08.8		24.2	170	21.0	155		13.4	113	30	38	18 03	31	22 04	54	21	32
16	59	08.9		23.4	184	55.5	156		24.7	112	35	32	17 58	28	07	56	20	29
17	74	09.1	+12	22.6	199	30.1	155	+4	35.9	113	40	17 25	17 53	18 25	22 10	59	9 18	26
18	89	09.2	+12	21.8	214	04.6	154	+4	47.2	112	45	17 18	17 48	18 22	22 14	62	9 16	23
19	104	09.4		20.9	228	39.0	155	+4	58.4	113	50	08	42	19	18	67	13	20
20	119	09.5		20.1	243	13.5	154	+5	09.7	112	52	17 04	39	18	21	68	12	18
21	134	09.7		19.3	257	47.9	153		20.9	112	54	16 59	36	17	23	70	11	16
22	149	09.8		18.5	272	22.2	154		32.1	112	56	54	33	16	25	73	10	14
23	164	10.0		17.6	286	56.6	153		43.3	111	58	48	29	15	28	75	08	12
24	179	10.1	+12	16.8	301	30.9		+5	54.4		60 S	16 41	17 25	18 14	22 32	77	9 06	10
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 2 ^h 07 ^m 5		Mag: -4.0 PMG: 12 ^h 12 ^m				Mag: +1.8 PMG: 12 ^h 21 ^m				Mag: -2.3 PMG: 18 ^h 58 ^m				Mag: +0.3 PMG: 21 ^h 07 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	328	02.5	177	06.3	+13	20.1	174	28.1	+12	07.0	74	41.4	-22	-10.4	42	14.1	-22	23.3
1	343	04.9	192	05.8		19.1	189	29.0		06.4	89	43.8		-10.4	57	16.7		23.3
2	358	07.4	207	05.2		18.0	204	30.0		05.8	104	46.2		-10.4	72	19.3		23.3
3	13	09.9	222	04.7		17.0	219	30.9		05.3	119	48.6		-10.5	87	21.8		23.3
4	28	12.3	237	04.2		15.9	234	31.9		04.7	134	51.0		-10.5	102	24.4		23.3
5	43	14.8	252	03.7	+13	14.9	249	32.8	+12	04.1	149	53.4	-22	-10.5	117	27.0	-22	23.4
6	58	17.2	267	03.2	+13	13.8	264	33.8	+12	03.5	164	55.7	-22	-10.5	132	29.6	-22	23.4
7	73	19.7	282	02.6		12.8	279	34.7		03.0	179	58.1		-10.5	147	32.2		23.4
8	88	22.2	297	02.1		11.7	294	35.7		02.4	195	00.5		-10.5	162	34.8		23.4
9	103	24.6	312	01.6		10.7	309	36.6		01.8	210	02.9		-10.5	177	37.3		23.4
10	118	27.1	327	01.1		09.6	324	37.6		01.2	225	05.3		-10.6	192	39.9		23.4
11	133	29.6	342	00.5	+13	08.6	339	38.5	+12	00.7	240	07.7	-22	-10.6	207	42.5	-22	23.5
12	148	32.0	357	00.0	+13	07.5	354	39.5	+12	00.1	255	10.1	-22	-10.6	222	45.1	-22	23.5
13	163	34.5	11	59.5		06.5	9	40.4	+11	59.5	270	12.5		-10.6	237	47.7		23.5
14	178	37.0	26	59.0		05.4	24	41.4		59.0	285	14.9		-10.6	252	50.2		23.5
15	193	39.4	41	58.5		04.3	39	42.3		58.4	300	17.3		-10.6	267	52.8		23.5
16	208	41.9	56	57.9		03.3	54	43.3		57.8	315	19.7		-10.7	282	55.4		23.5
17	223	44.4	71	57.4	+13	02.2	69	44.2	+11	57.2	330	22.1	-22	-10.7	297	58.0	-22	23.6
18	238	46.8	86	56.9	+13	01.2	84	45.2	+11	56.7	345	24.4	-22	-10.7	313	00.6	-22	23.6
19	253	49.3	101	56.4	+13	00.1	99	46.1		56.1	0	26.8		-10.7	328	03.2		23.6
20	268	51.7	116	55.9	+12	59.0	114	47.1		55.5	15	29.2		-10.7	343	05.7		23.6
21	283	54.2	131	55.3		58.0	129	48.0		54.9	30	31.6		-10.7	358	08.3		23.6
22	298	56.7	146	54.8		56.9	144	49.0		54.4	45	34.0		-10.8	13	10.9		23.6
23	313	59.1	161	54.3		55.9	159	49.9		53.8	60	36.4		-10.8	28	13.5		23.7
24	329	01.6	176	53.8	+12	54.8	174	50.9	+11	53.2	75	38.8	-22	-10.8	43	16.1	-22	23.7
Dif.	—		-5		-11		+9		-6		+24		0		+26		0	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°8 PMG: 12 ^h 03 ^m 2				SD: 14°9 Edad: 19 ^d 9 PMG: 04 ^h 01 ^m PHE { 4^h: 54°8 12^h: 54°9 20^h: 55°1 R°: 43 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	R°		Hora	R°				
h	°	'	°	'	°	'			h m	h m	h m	h m m	h m m	h m m				
0	179	10.1	+12	16.8	301	30.9	152	+5	54.4	112	60 N	2 30	3 39	4 28	21 22	13	11 08	79
1	194	10.3		16.0	316	05.1	153	+6	05.6	111	58	2 49	3 50	35	28	15	04	76
2	209	10.4		15.1	330	39.4	152		16.7	112	56	3 05	4 00	42	33	17	11 00	73
3	224	10.6		14.3	345	13.6	151		27.9	111	54	18	09	48	37	20	10 56	71
4	239	10.7		13.5	359	47.7	151		39.0	110	52	29	16	53	41	22	53	69
5	254	10.9	+12	12.7	14	21.8	151	+6	50.0	111	50	3 39	4 23	4 58	21 45	23	10 50	67
6	269	11.0	+12	11.8	28	55.9	150	+7	01.1	110	45	3 59	4 37	5 08	21 53	27	10 44	63
7	284	11.2		11.0	43	29.9	150		12.1	111	40	4 14	48	17	21 59	30	38	60
8	299	11.4		10.2	58	03.9	150		23.2	109	35	26	4 58	24	22 05	33	34	57
9	314	11.5		09.3	72	37.9	149		34.1	110	30	36	5 06	31	10	35	30	55
10	329	11.7		08.5	87	11.8	148		45.1	110	20	4 52	19	42	19	39	23	51
11	344	11.8	+12	07.7	101	45.6	148	+7	56.1	109	10 N	5 04	5 30	5 51	22 26	43	10 17	47
12	359	12.0	+12	06.8	116	19.4	148	+8	07.0	109	0	5 14	5 39	6 00	22 34	45	10 11	44
13	14	12.1		06.0	130	53.2	147		17.9	109	10 S	22	47	09	41	49	10 05	41
14	29	12.3		05.2	145	26.9	147		28.8	108	20	29	5 55	18	49	52	9 59	38
15	44	12.4		04.3	160	00.6	146		39.6	108	30	36	6 04	28	22 58	56	53	33
16	59	12.6		03.5	174	34.2	146	+8	50.4	108	35	38	08	34	23 03	59	49	31
17	74	12.7	+12	02.7	189	07.8	145	+9	01.2	108	40	5 41	6 13	6 41	23 09	61	9 44	29
18	89	12.9	+12	01.8	203	41.3	145	+9	12.0	107	45	5 44	6 18	6 48	23 16	65	9 39	25
19	104	13.1		01.0	218	14.8	144		22.7	107	50	46	24	6 57	25	68	33	22
20	119	13.2	+12	00.2	232	48.2	144		33.4	106	52	48	27	7 02	29	70	30	20
21	134	13.4	+11	59.3	247	21.6	143		44.0	107	54	49	30	06	33	72	27	18
22	149	13.5		58.5	261	54.9	143	+9	54.7	106	56	50	33	12	38	74	24	16
23	164	13.7		57.7	276	28.2	142	+10	05.3	105	58	51	36	17	23 43	77	9 20	13
24	179	13.8	+11	56.8	291	01.4		+10	15.8		60 S	5 52	6 40	7 24	23 49	80	9 16	10
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 03 ^m 6		Mag: -4.0 PMG: 12 ^h 13 ^m				Mag: +1.8 PMG: 12 ^h 20 ^m				Mag: -2.3 PMG: 18 ^h 54 ^m				Mag: +0.3 PMG: 21 ^h 03 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	329	01.6	176	53.8	+12	54.8	174	50.9	+11	53.2	75	38.8	-22	10.8	43	16.1	-22	23.7
1	344	04.1	191	53.3		53.7	189	51.8		52.6	90	41.2		10.8	58	18.6		23.7
2	359	06.5	206	52.8		52.7	204	52.8		52.1	105	43.6		10.8	73	21.2		23.7
3	14	09.0	221	52.2		51.6	219	53.7		51.5	120	45.9		10.8	88	23.8		23.7
4	29	11.5	236	51.7		50.5	234	54.7		50.9	135	48.3		10.8	103	26.4		23.7
5	44	13.9	251	51.2	+12	49.5	249	55.6	+11	50.3	150	50.7	-22	10.9	118	29.0	-22	23.7
6	59	16.4	266	50.7	+12	48.4	264	56.6	+11	49.8	165	53.1	-22	10.9	133	31.5	-22	23.8
7	74	18.8	281	50.2		47.3	279	57.5		49.2	180	55.5		10.9	148	34.1		23.8
8	89	21.3	296	49.7		46.3	294	58.5		48.6	195	57.9		10.9	163	36.7		23.8
9	104	23.8	311	49.2		45.2	309	59.4		48.0	211	00.3		10.9	178	39.3		23.8
10	119	26.2	326	48.7		44.1	325	00.4		47.5	226	02.6		10.9	193	41.8		23.8
11	134	28.7	341	48.1	+12	43.1	340	01.3	+11	46.9	241	05.0	-22	11.0	208	44.4	-22	23.8
12	149	31.2	356	47.6	+12	42.0	355	02.3	+11	46.3	256	07.4	-22	11.0	223	47.0	-22	23.9
13	164	33.6	11	47.1		40.9	10	03.2		45.7	271	09.8		11.0	238	49.6		23.9
14	179	36.1	26	46.6		39.9	25	04.2		45.2	286	12.2		11.0	253	52.2		23.9
15	194	38.6	41	46.1		38.8	40	05.2		44.6	301	14.6		11.0	268	54.7		23.9
16	209	41.0	56	45.6		37.7	55	06.1		44.0	316	16.9		11.0	283	57.3		23.9
17	224	43.5	71	45.1	+12	36.6	70	07.1	+11	43.4	331	19.3	-22	11.1	298	59.9	-22	23.9
18	239	46.0	86	44.6	+12	35.6	85	08.0	+11	42.9	346	21.7	-22	11.1	314	02.5	-22	24.0
19	254	48.4	101	44.1		34.5	100	09.0		42.3	1	24.1		11.1	329	05.0		24.0
20	269	50.9	116	43.6		33.4	115	09.9		41.7	16	26.5		11.1	344	07.6		24.0
21	284	53.3	131	43.1		32.3	130	10.9		41.1	31	28.8		11.1	359	10.2		24.0
22	299	55.8	146	42.5		31.3	145	11.8		40.6	46	31.2		11.1	14	12.8		24.0
23	314	58.3	161	42.0		30.2	160	12.8		40.0	61	33.6		11.2	29	15.4		24.0
24	330	00.7	176	41.5	+12	29.1	175	13.7	+11	39.4	76	36.0	-22	11.2	44	17.9	-22	24.0
Dif.	—		-5		-11		+10		-6		+24		0		+26		0	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8			PHE { 4 ^h : 55'3 12 ^h : 55'5 20 ^h : 55'8													
	PMG: 12 ^h 03 ^m 0			Edad: 20 ^d 9													
	PMG: 04 ^h 44 ^m			R ^o : 47 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	m	
0	179	13.8	+11 56.8	291	01.4	141	+10 15.8	106	60 N	19 34	20 22	21 28	21 35	17	12 27	81	
1	194	14.0	56.0	305	34.5	141	26.4	105	58	27	11	21 11	43	20	20	77	
2	209	14.1	55.2	320	07.6	140	36.9	104	56	21	20 02	20 56	50	23	13	75	
3	224	14.3	54.3	334	40.6	140	47.3	104	54	15	19 54	44	21 57	25	07	73	
4	239	14.5	53.5	349	13.6	139	+10 57.7	104	52	10	47	33	22 03	26	12 02	70	
5	254	14.6	+11 52.7	3	46.5	138	+11 08.1	104	50	19 05	19 40	20 24	22 08	28	11 57	69	
6	269	14.8	+11 51.8	18	19.3	138	+11 18.5	103	45	18 56	19 27	20 05	22 20	32	11 47	65	
7	284	14.9	51.0	32	52.1	137	28.8	102	40	47	16	19 50	29	35	38	62	
8	299	15.1	50.1	47	24.8	137	39.0	103	35	40	19 07	38	38	37	31	59	
9	314	15.2	49.3	61	57.5	136	49.3	101	30	34	18 59	28	45	39	25	57	
10	329	15.4	48.5	76	30.1	135	+11 59.4	102	20	24	46	13	22 58	42	14	53	
11	344	15.6	+11 47.6	91	02.6	135	+12 09.6	101	10 N	18 15	18 36	19 01	23 09	45	11 04	50	
12	359	15.7	+11 46.8	105	35.1	134	+12 19.7	100	0	18 06	18 27	18 52	23 19	49	10 55	47	
13	14	15.9	46.0	120	07.5	133	29.7	100	10 S	17 58	19	44	30	51	46	44	
14	29	16.0	45.1	134	39.8	133	39.7	100	20	49	12	38	41	55	37	40	
15	44	16.2	44.3	149	12.1	132	49.7	99	30	39	04	32	23 54	58	26	37	
16	59	16.4	43.4	163	44.3	131	+12 59.6	98	35	34	18 00	29	***	***	20	34	
17	74	16.5	+11 42.6	178	16.4	131	+13 09.4	98	40	17 27	17 55	18 27	***	***	10 13	32	
18	89	16.7	+11 41.7	192	48.5	129	+13 19.2	98	45	17 20	17 50	18 24	***	***	10 04	29	
19	104	16.8	40.9	207	20.4	129	29.0	97	50	11	44	22	***	***	9 55	25	
20	119	17.0	40.1	221	52.3	129	38.7	96	52	07	42	21	***	***	50	24	
21	134	17.2	39.2	236	24.2	127	48.3	96	54	17 03	39	20	***	***	45	22	
22	149	17.3	38.4	250	55.9	127	+13 57.9	96	56	16 58	36	20	***	***	40	19	
23	164	17.5	37.5	265	27.6	126	+14 07.5	95	58	52	33	19	***	***	33	17	
24	179	17.6	+11 36.7	279	59.2		+14 17.0		60 S	16 46	17 29	18 18	***	***	9 26	14	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 59 ^m 6		Mag: -4.0 PMG: 12 ^h 14 ^m				Mag: +1.8 PMG: 12 ^h 18 ^m				Mag: -2.3 PMG: 18 ^h 51 ^m				Mag: +0.3 PMG: 20 ^h 59 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	330	00.7	176	41.5	+12 29.1	175	13.7	+11 39.4	76	36.0	-22 -11.2	44	17.9	-22 24.0				
1	345	03.2	191	41.0	28.0	190	14.7	38.8	91	38.4	-11.2	59	20.5	24.1				
2	0	05.7	206	40.5	27.0	205	15.6	38.2	106	40.7	-11.2	74	23.1	24.1				
3	15	08.1	221	40.0	25.9	220	16.6	37.7	121	43.1	-11.2	89	25.7	24.1				
4	30	10.6	236	39.5	24.8	235	17.5	37.1	136	45.5	-11.2	104	28.2	24.1				
5	45	13.1	251	39.0	+12 23.7	250	18.5	+11 36.5	151	47.9	-22 -11.3	119	30.8	-22 24.1				
6	60	15.5	266	38.5	+12 22.6	265	19.4	+11 35.9	166	50.3	-22 -11.3	134	33.4	-22 24.1				
7	75	18.0	281	38.0	21.6	280	20.4	35.4	181	52.6	-11.3	149	36.0	24.2				
8	90	20.5	296	37.5	20.5	295	21.3	34.8	196	55.0	-11.3	164	38.5	24.2				
9	105	22.9	311	37.0	19.4	310	22.3	34.2	211	57.4	-11.3	179	41.1	24.2				
10	120	25.4	326	36.5	18.3	325	23.3	33.6	226	59.8	-11.3	194	43.7	24.2				
11	135	27.8	341	36.0	+12 17.2	340	24.2	+11 33.0	242	02.1	-22 -11.4	209	46.3	-22 24.2				
12	150	30.3	356	35.5	+12 16.1	355	25.2	+11 32.5	257	04.5	-22 -11.4	224	48.8	-22 24.2				
13	165	32.8	11	35.0	15.1	10	26.1	31.9	272	06.9	-11.4	239	51.4	24.2				
14	180	35.2	26	34.5	14.0	25	27.1	31.3	287	09.3	-11.4	254	54.0	24.3				
15	195	37.7	41	34.0	12.9	40	28.0	30.7	302	11.6	-11.4	269	56.6	24.3				
16	210	40.2	56	33.5	11.8	55	29.0	30.1	317	14.0	-11.4	284	59.1	24.3				
17	225	42.6	71	33.0	+12 10.7	70	29.9	+11 29.6	332	16.4	-22 -11.5	300	01.7	-22 24.3				
18	240	45.1	86	32.5	+12 09.6	85	30.9	+11 29.0	347	18.8	-22 -11.5	315	04.3	-22 24.3				
19	255	47.6	101	32.0	08.5	100	31.8	28.4	2	21.1	-11.5	330	06.8	24.3				
20	270	50.0	116	31.5	07.5	115	32.8	27.8	17	23.5	-11.5	345	09.4	24.4				
21	285	52.5	131	31.0	06.4	130	33.8	27.2	32	25.9	-11.5	0	12.0	24.4				
22	300	54.9	146	30.5	05.3	145	34.7	26.7	47	28.2	-11.5	15	14.6	24.4				
23	315	57.4	161	30.0	04.2	160	35.7	26.1	62	30.6	-11.6	30	17.1	24.4				
24	330	59.9	176	29.5	+12 03.1	175	36.6	+11 25.5	77	33.0	-22 -11.6	45	19.7	-22 24.4				
Dif.	—		-5 -11			+10 -6			+24 0			+26 0						

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 15'8 PMG: 12 ^h 02 ^m 7			SD: 15'2 Edad: 21 ^d 9 PMG: 05 ^h 31 ^m PHE 4^h: 56'0 12^h: 56'2 20^h: 56'5 Rº: 49^m																
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº					
	h	°	'	°	'	°	'		°	h		m	h	m	h	m	m			
0	179	17.6	+11	36.7	279	59.2	126	+14	17.0	94	60 N	2 38	3 44	4 33	21 52	24	13 48	81		
1	194	17.8		35.9	294	30.8	124		26.4	94	58	2 56	3 55	40	22 03	27	37	78		
2	209	18.0		35.0	309	02.2	124		35.8	93	56	3 10	4 04	46		13 30	28	75		
3	224	18.1		34.2	323	33.6	123		45.1	92	54		23	12	51	22 31	20	73		
4	239	18.3		33.3	338	04.9	122	+14	54.3	92	52		33	20	4 56	29 34	12	72		
5	254	18.5	+11	32.5	352	36.1	122	+15	03.5	92	50	3 43	4 26	5 01	22 36	36	13 06	69		
6	269	18.6	+11	31.6	7	07.3	120	+15	12.7	90	45	4 02	4 40	5 11	22 52	38	12 52	66		
7	284	18.8		30.8	21	38.3	120		21.7	91	40		16	50	19	23 04	41	64		
8	299	18.9		29.9	36	09.3	119		30.8	89	35		28	4 59	26	15 43	30	61		
9	314	19.1		29.1	50	40.2	119		39.7	89	30		38	5 07	32	24 45	22	59		
10	329	19.3		28.2	65	11.1	117		48.6	88	20	4 53	19	42	40 48		12 07	56		
11	344	19.4	+11	27.4	79	41.8	117	+15	57.4	87	10 N	5 05	5 30	5 51	23 54	51	11 54	53		
12	359	19.6	+11	26.6	94	12.5	115	+16	06.1	87	0	5 14	5 38	5 59	***	***	**	11 42	50	
13	14	19.8		25.7	108	43.0	115		14.8	86	10 S		21	46	6 08	***	***	**	30 48	
14	29	19.9		24.9	123	13.5	114		23.4	86	20		28	5 54	16	***	***	**	17 45	
15	44	20.1		24.0	137	43.9	113		32.0	84	30		34	6 02	26	***	***	**	11 03	41
16	59	20.2		23.2	152	14.2	113		40.4	84	35		36	06	31	0 02	60	10 54	40	
17	74	20.4	+11	22.3	166	44.5	111	+16	48.8	83	40	5 38	6 10	6 38	0 10	63	10 45	37		
18	89	20.6	+11	21.5	181	14.6	111	+16	57.1	83	45	5 41	6 15	6 45	0 21	65	10 33	35		
19	104	20.7		20.6	195	44.7	110	+17	05.4	82	50		43	20	54	33 69	20 31			
20	119	20.9		19.8	210	14.7	108		13.6	80	52		44	23	6 58	39 71	14 29			
21	134	21.1		18.9	224	44.5	108		21.6	81	54		44	26	7 02	45 73	10 07	27		
22	149	21.2		18.1	239	14.3	107		29.7	79	56		45	28	07	0 52	76	9 59	25	
23	164	21.4		17.2	253	44.0	107		37.6	78	58		46	31	12	1 00	79	9 50	23	
24	179	21.6	+11	16.4	268	13.7		+17	45.4		60 S	5 47	6 35	7 18	1 09	82	9 40	20		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 1 ^h 55 ^m 7		Mag: -4.0 PMG: 12 ^h 14 ^m				Mag: +1.8 PMG: 12 ^h 17 ^m				Mag: -2.3 PMG: 18 ^h 47 ^m				Mag: +0.3 PMG: 20 ^h 55 ^m					
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	330	59.9	176	29.5	+12	03.1	175	36.6	+11	25.5	77	33.0	-22	11.6	45	19.7	-22	24.4		
1	346	02.3	191	29.0		02.0	190	37.6		24.9	92	35.4		11.6	60	22.3		24.4		
2	1	04.8	206	28.5	+12	00.9	205	38.5		24.3	107	37.7		11.6	75	24.9		24.4		
3	16	07.3	221	28.0	+11	59.8	220	39.5		23.8	122	40.1		11.6	90	27.4		24.5		
4	31	09.7	236	27.5		58.7	235	40.4		23.2	137	42.5		11.6	105	30.0		24.5		
5	46	12.2	251	27.0	+11	57.6	250	41.4	+11	22.6	152	44.8	-22	11.7	120	32.6	-22	24.5		
6	61	14.7	266	26.5	+11	56.5	265	42.3	+11	22.0	167	47.2	-22	11.7	135	35.1	-22	24.5		
7	76	17.1	281	26.0		55.4	280	43.3		21.4	182	49.6		11.7	150	37.7		24.5		
8	91	19.6	296	25.5		54.3	295	44.3		20.9	197	51.9		11.7	165	40.3		24.5		
9	106	22.1	311	25.0		53.2	310	45.2		20.3	212	54.3		11.7	180	42.9		24.5		
10	121	24.5	326	24.5		52.1	325	46.2		19.7	227	56.7		11.8	195	45.4		24.6		
11	136	27.0	341	24.1	+11	51.1	340	47.1	+11	19.1	242	59.1	-22	11.8	210	48.0	-22	24.6		
12	151	29.4	356	23.6	+11	50.0	355	48.1	+11	18.5	258	01.4	-22	11.8	225	50.6	-22	24.6		
13	166	31.9	11	23.1		48.9	10	49.0		17.9	273	03.8		11.8	240	53.1		24.6		
14	181	34.4	26	22.6		47.8	25	50.0		17.4	288	06.2		11.8	255	55.7		24.6		
15	196	36.8	41	22.1		46.7	40	50.9		16.8	303	08.5		11.8	270	58.3		24.6		
16	211	39.3	56	21.6		45.6	55	51.9		16.2	318	10.9		11.9	286	00.9		24.7		
17	226	41.8	71	21.1	+11	44.5	70	52.9	+11	15.6	333	13.3	-22	11.9	301	03.4	-22	24.7		
18	241	44.2	86	20.6	+11	43.4	85	53.8	+11	15.0	348	15.6	-22	11.9	316	06.0	-22	24.7		
19	256	46.7	101	20.1		42.3	100	54.8		14.4	3	18.0		11.9	331	08.6		24.7		
20	271	49.2	116	19.6		41.2	115	55.7		13.9	18	20.3		11.9	346	11.1		24.7		
21	286	51.6	131	19.2		40.1	130	56.7		13.3	33	22.7		12.0	1	13.7		24.7		
22	301	54.1	146	18.7		38.9	145	57.6		12.7	48	25.1		12.0	16	16.3		24.7		
23	316	56.6	161	18.2		37.8	160	58.6		12.1	63	27.4		12.0	31	18.8		24.8		
24	331	59.0	176	17.7	+11	36.7	175	59.6	+11	11.5	78	29.8	-22	12.0	46	21.4	-22	24.8		
Dif.	—		-5		-11		+10		-6		+24		0		+26		0			

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo				Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 02 ^m 4				SD: 15'4 Edad: 22 ^d 9								PHE { 4 ^h : 56'8 12 ^h : 57'1 20 ^h : 57'4								
	PMG: 06 ^h 20 ^m				Rº: 53 ^m																
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.							Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	179	21.6	+11	16.4	268	13.7	105	+17	45.4	78	60 N	19 28	20 16	21 20	22 16	36			15 09	78	
1	194	21.7		15.5	282	43.2	104	+17	53.2	77	58	22	20 05	21 03		30	39		14 55	75	
2	209	21.9		14.7	297	12.6	104	+18	00.9	76	56	16	19 57	20 49		43	41		43	73	
3	224	22.1		13.8	311	42.0	103		08.5	75	54	10	49	38	22	53	43		33	71	
4	239	22.2		13.0	326	11.3	101		16.0	75	52	06	42	28	23	03	44		24	69	
5	254	22.4	+11	12.1	340	40.4	101	+18	23.5	73	50	19 01	19 36	20 19	23	12	45		14 15	68	
6	269	22.6	+11	11.3	355	09.5	100	+18	30.8	73	45	18 52	19 23	20 01	23	30	47		13 58	65	
7	284	22.7		10.4	9	38.5	99		38.1	71	40	44	13	19 47		45	49		44	63	
8	299	22.9		09.5	24	07.4	98		45.2	71	35	38	19 04	35	23	58	50		31	62	
9	314	23.1		08.7	38	36.2	97		52.3	70	30	32	18 57	26	** ** *	**			21	60	
10	329	23.2		07.8	53	04.9	96	+18	59.3	69	20	22	45	11	** ** *	**			13 03	58	
11	344	23.4	+11	07.0	67	33.5	96	+19	06.2	68	10 N	18 14	18 35	19 00	** ** *	**			12 47	56	
12	359	23.6	+11	06.1	82	02.1	94	+19	13.0	67	0	18 06	18 27	18 51	0	08	52		12 32	55	
13	14	23.7		05.3	96	30.5	94		19.7	66	10 S	17 58	19	44		21	55		18	52	
14	29	23.9		04.4	110	58.9	92		26.3	65	20	50	12	38		36	57		12 02	50	
15	44	24.1		03.6	125	27.1	92		32.8	64	30	40	05	33	0	52	60		11 44	48	
16	59	24.2		02.7	139	55.3	91		39.2	63	35	35	18 01	30	1	02	62		34	46	
17	74	24.4	+11	01.9	154	23.4	89	+19	45.5	62	40	17 29	17 57	18 28	1	13	64		11 22	45	
18	89	24.6	+11	01.0	168	51.3	89	+19	51.7	61	45	17 22	17 52	18 26	1	26	67		11 08	42	
19	104	24.7	+11	00.1	183	19.2	88	+19	57.8	60	50	14	47	25		42	70		10 51	40	
20	119	24.9	+10	59.3	197	47.0	87	+20	03.8	59	52	10	45	24		50	71		43	38	
21	134	25.1		58.4	212	14.7	87		09.7	58	54	06	42	24		1	58	73		34	37
22	149	25.2		57.6	226	42.4	85		15.5	57	56	17 01	40	23		2	08	75		24	35
23	164	25.4		56.7	241	09.9	84		21.2	56	58	16 56	37	23		19	77		13	32	
24	179	25.6	+10	55.9	255	37.3		+20	26.8		60 S	16 51	17 34	18 22		2	31	81		10 00	29
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 1 ^h 51 ^m 8		Mag: -4.0 PMG: 12 ^h 15 ^m				Mag: +1.8 PMG: 12 ^h 15 ^m				Mag: -2.3 PMG: 18 ^h 43 ^m				Mag: +0.3 PMG: 20 ^h 51 ^m						
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	331	59.0		176	17.7	+11	175	59.6	+11	11.5	78	29.8	-22	-12.0	46	21.4	-22		24.8		
1	347	01.5		191	17.2		191	00.5		10.9	93	32.2		-12.0	61	24.0			24.8		
2	2	03.9		206	16.7		206	01.5		10.4	108	34.5		-12.0	76	26.6			24.8		
3	17	06.4		221	16.2		221	02.4		09.8	123	36.9		-12.1	91	29.1			24.8		
4	32	08.9		236	15.7		236	03.4		09.2	138	39.3		-12.1	106	31.7			24.8		
5	47	11.3		251	15.3	+11	251	04.3	+11	08.6	153	41.6	-22	-12.1	121	34.3	-22		24.8		
6	62	13.8		266	14.8	+11	266	05.3	+11	08.0	168	44.0	-22	-12.1	136	36.8	-22		24.9		
7	77	16.3		281	14.3		281	06.3		07.4	183	46.3		-12.1	151	39.4			24.9		
8	92	18.7		296	13.8		296	07.2		06.9	198	48.7		-12.2	166	42.0			24.9		
9	107	21.2		311	13.3		311	08.2		06.3	213	51.1		-12.2	181	44.5			24.9		
10	122	23.7		326	12.8		326	09.1		05.7	228	53.4		-12.2	196	47.1			24.9		
11	137	26.1		341	12.3	+11	341	10.1	+11	05.1	243	55.8	-22	-12.2	211	49.7	-22		24.9		
12	152	28.6		356	11.9	+11	356	11.0	+11	04.5	258	58.1	-22	-12.2	226	52.2	-22		24.9		
13	167	31.0		11	11.4		11	12.0		03.9	274	00.5		-12.2	241	54.8			25.0		
14	182	33.5		26	10.9		26	13.0		03.4	289	02.9		-12.3	256	57.4			25.0		
15	197	36.0		41	10.4		41	13.9		02.8	304	05.2		-12.3	271	59.9			25.0		
16	212	38.4		56	09.9		56	14.9		02.2	319	07.6		-12.3	287	02.5			25.0		
17	227	40.9		71	09.5	+11	71	15.8	+11	01.6	334	09.9	-22	-12.3	302	05.1	-22		25.0		
18	242	43.4		86	09.0	+11	86	16.8	+11	01.0	349	12.3	-22	-12.3	317	07.6	-22		25.0		
19	257	45.8		101	08.5		101	17.7	+11	00.4	4	14.6		-12.4	332	10.2			25.0		
20	272	48.3		116	08.0		116	18.7	+10	59.8	19	17.0		-12.4	347	12.8			25.1		
21	287	50.8		131	07.5		131	19.7		59.3	34	19.4		-12.4	2	15.3			25.1		
22	302	53.2		146	07.1		146	20.6		58.7	49	21.7		-12.4	17	17.9			25.1		
23	317	55.7		161	06.6		161	21.6		58.1	64	24.1		-12.4	32	20.5			25.1		
24	332	58.2		176	06.1	+11	176	22.5	+10	57.5	79	26.4	-22	-12.5	47	23.0	-22		25.1		
Dif.	—		-5		-11	+10		-6		+24		0		+26							

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 02 ^m 2				SD: 15'7 Edad: 23 ^d 9 PHE { 4 ^h : 57'7 12 ^h : 58'0 20 ^h : 58'3 PMG: 07 ^h 13 ^m Rº: 57 ^m														
	hG ☉	Dec			hG ☾	Dif.	Dec			Dif.		Náut.	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'		°	'			h m	h m	h m	h m m	h m m	h m m		
0	179	25.6	+10	55.9	255	37.3	84	+20	26.8	55	60 N	2 46	3 50	4 37	22 52	55	16 27	67	
1	194	25.8		55.0	270	04.7	82		32.3	53	58	3 02	4 00	44	23 09	56	16 10	66	
2	209	25.9		54.1	284	31.9	82		37.6	52	56	16	09	50	24	56	15 56	65	
3	224	26.1		53.3	298	59.1	81		42.8	52	54	28	16	4 55	36	56	44	64	
4	239	26.3		52.4	313	26.2	79		48.0	50	52	38	23	5 00	47	57	33	64	
5	254	26.4	+10	51.6	327	53.1	79	+20	53.0	49	50	3 46	4 29	5 04	23 57	57	15 23	64	
6	269	26.6	+10	50.7	342	20.0	78	+20	57.9	48	45	4 04	4 42	5 13	***	***	15 03	63	
7	284	26.8		49.8	356	46.8	78	+21	02.7	46	40	18	4 52	21	***	***	14 47	62	
8	299	26.9		49.0	11	13.6	76		07.3	46	35	30	5 01	27	***	***	33	61	
9	314	27.1		48.1	25	40.2	75		11.9	44	30	39	08	33	0 09	51	21	61	
10	329	27.3		47.3	40	06.7	75		16.3	43	20	4 54	20	43	28	53	14 01	59	
11	344	27.5	+10	46.4	54	33.2	74	+21	20.6	42	10 N	5 05	5 30	5 51	0 45	54	13 43	59	
12	359	27.6	+10	45.5	68	59.6	72	+21	24.8	41	0	5 13	5 38	5 59	1 00	56	13 27	57	
13	14	27.8		44.7	83	25.8	72		28.9	39	10 S	20	45	6 07	16	58	13 10	57	
14	29	28.0		43.8	97	52.0	72		32.8	38	20	26	52	15	33	59	12 52	56	
15	44	28.2		42.9	112	18.2	70		36.6	37	30	31	5 59	24	1 52	61	32	55	
16	59	28.3		42.1	126	44.2	69		40.3	36	35	34	6 03	29	2 04	62	20	54	
17	74	28.5	+10	41.2	141	10.1	69	+21	43.9	34	40	5 36	6 07	6 35	2 17	63	12 07	53	
18	89	28.7	+10	40.4	155	36.0	68	+21	47.3	33	45	5 38	6 12	6 41	2 33	64	11 50	53	
19	104	28.8		39.5	170	01.8	67		50.6	31	50	39	17	50	2 52	66	31	50	
20	119	29.0		38.6	184	27.5	66		53.7	31	52	40	19	53	3 01	67	21	50	
21	134	29.2		37.8	198	53.1	66		56.8	29	54	40	21	6 57	11	69	11 11	49	
22	149	29.4		36.9	213	18.7	64	+21	59.7	27	56	41	24	7 02	23	70	10 59	48	
23	164	29.5		36.0	227	44.1	64	+22	02.4	27	58	41	26	07	3 36	72	10 45	46	
24	179	29.7	+10	35.2	242	09.5		+22	05.1		60 S	5 41	6 30	7 12	3 52	74	10 29	44	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 1 ^h 47 ^m 8		Mag: -4.0 PMG: 12 ^h 16 ^m			Mag: +1.8 PMG: 12 ^h 14 ^m			Mag: -2.3 PMG: 18 ^h 39 ^m			Mag: +0.3 PMG: 20 ^h 47 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'		°	'		°	'	°	'					
0	332	58.2	176	06.1	+11	10.1		176	22.5	+10	57.5	79	26.4	-22	12.5	47	23.0	-22	25.1
1	348	00.6	191	05.6		09.0		191	23.5		56.9	94	28.8		12.5	62	25.6		25.1
2	3	03.1	206	05.1		07.8		206	24.5		56.3	109	31.1		12.5	77	28.2		25.2
3	18	05.5	221	04.7		06.7		221	25.4		55.7	124	33.5		12.5	92	30.7		25.2
4	33	08.0	236	04.2		05.6		236	26.4		55.1	139	35.8		12.5	107	33.3		25.2
5	48	10.5	251	03.7	+11	04.5		251	27.3	+10	54.6	154	38.2	-22	12.5	122	35.8	-22	25.2
6	63	12.9	266	03.2	+11	03.4		266	28.3	+10	54.0	169	40.6	-22	12.6	137	38.4	-22	25.2
7	78	15.4	281	02.8		02.2		281	29.3		53.4	184	42.9		12.6	152	41.0		25.2
8	93	17.9	296	02.3		01.1		296	30.2		52.8	199	45.3		12.6	167	43.5		25.2
9	108	20.3	311	01.8	+11	00.0		311	31.2		52.2	214	47.6		12.6	182	46.1		25.2
10	123	22.8	326	01.3	+10	58.9		326	32.1		51.6	229	50.0		12.6	197	48.7		25.3
11	138	25.3	341	00.9	+10	57.7		341	33.1	+10	51.0	244	52.3	-22	12.7	212	51.2	-22	25.3
12	153	27.7	356	00.4	+10	56.6		356	34.1	+10	50.4	259	54.7	-22	12.7	227	53.8	-22	25.3
13	168	30.2	10	59.9		55.5		11	35.0		49.9	274	57.0		12.7	242	56.4		25.3
14	183	32.7	25	59.4		54.4		26	36.0		49.3	289	59.4		12.7	257	58.9		25.3
15	198	35.1	40	59.0		53.2		41	36.9		48.7	305	01.7		12.7	273	01.5		25.3
16	213	37.6	55	58.5		52.1		56	37.9		48.1	320	04.1		12.8	288	04.0		25.3
17	228	40.0	70	58.0	+10	51.0		71	38.9	+10	47.5	335	06.4	-22	12.8	303	06.6	-22	25.4
18	243	42.5	85	57.5	+10	49.9		86	39.8	+10	46.9	350	08.8	-22	12.8	318	09.2	-22	25.4
19	258	45.0	100	57.1		48.7		101	40.8		46.3	5	11.1		12.8	333	11.7		25.4
20	273	47.4	115	56.6		47.6		116	41.7		45.7	20	13.5		12.8	348	14.3		25.4
21	288	49.9	130	56.1		46.5		131	42.7		45.2	35	15.8		12.9	3	16.9		25.4
22	303	52.4	145	55.7		45.4		146	43.7		44.6	50	18.2		12.9	18	19.4		25.4
23	318	54.8	160	55.2		44.2		161	44.6		44.0	65	20.5		12.9	33	22.0		25.4
24	333	57.3	175	54.7	+10	43.1		176	45.6	+10	43.4	80	22.9	-22	12.9	48	24.5	-22	25.5
Dif.	—		-5		-11			+10		-6		+23		0		+26			

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna										
	SD: 15'8					PHE { 4 ^h : 58'7 12 ^h : 59'0 20 ^h : 59'3																					
	PMG: 12 ^h 01 ^m 9					Edad: 24 ^d 9																					
	PMG: 08 ^h 10 ^m				Rº: 60 ^m																						
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.			Civil	Náut.	Hora	Rº	Hora	Rº								
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m									
0	179	29.7	+10	35.2	242	09.5	64	+22	05.1	25	60 N	19 22	20 09	21 12	23 47	75	17 34	51									
1	194	29.9		34.3	256	34.9	62		07.6	23	58	16	19 59	20 56	** ** *	**	16	53									
2	209	30.1		33.4	271	00.1	62		09.9	23	56	11	51	43	** ** *	**	17 01	54									
3	224	30.2		32.6	285	25.3	61		12.2	20	54	06	44	32	** ** *	**	16 48	55									
4	239	30.4		31.7	299	50.4	60		14.2	20	52	19 01	37	22	** ** *	**	37	55									
5	254	30.6	+10	30.8	314	15.4	60	+22	16.2	18	50	18 57	19 32	20 14	** ** *	**	16 27	56									
6	269	30.8	+10	30.0	328	40.4	58	+22	18.0	16	45	18 49	19 19	19 57	0 17	58	16 06	57									
7	284	30.9		29.1	343	05.2	59		19.6	16	40	41	10	43	34	58	15 49	57									
8	299	31.1		28.2	357	30.1	57		21.2	13	35	35	19 01	32	0 48	58	34	58									
9	314	31.3		27.4	11	54.8	57		22.5	13	30	30	18 54	23	1 00	59	22	58									
10	329	31.5		26.5	26	19.5	56		23.8	10	20	21	43	19 09	21	59	15 00	60									
11	344	31.6	+10	25.6	40	44.1	56	+22	24.8	10	10 N	18 13	18 34	18 59	1 39	59	14 42	60									
12	359	31.8	+10	24.8	55	08.7	55	+22	25.8	8	0	18 05	18 26	18 51	1 56	60	14 24	61									
13	14	32.0		23.9	69	33.2	55		26.6	6	10 S	17 58	19	44	2 14	59	14 07	61									
14	29	32.2		23.0	83	57.7	53		27.2	5	20	50	13	38	32	60	13 48	62									
15	44	32.3		22.1	98	22.0	54		27.7	4	30	42	06	34	2 53	60	27	62									
16	59	32.5		21.3	112	46.4	52		28.1	2	35	37	18 02	32	3 06	60	14	62									
17	74	32.7	+10	20.4	127	10.6	53	+22	28.3	0	40	17 31	17 59	18 30	3 20	60	13 00	62									
18	89	32.9	+10	19.5	141	34.9	51	+22	28.3	1	45	17 25	17 54	18 29	3 37	60	12 43	62									
19	104	33.0		18.7	155	59.0	51		28.2	2	50	17	50	28	3 58	60	21	63									
20	119	33.2		17.8	170	23.1	51		28.0	5	52	13	48	27	4 08	60	11	63									
21	134	33.4		16.9	184	47.2	50		27.5	5	54	10	46	27	20	60	12 00	63									
22	149	33.6		16.1	199	11.2	50		27.0	7	56	05	43	27	33	60	11 47	63									
23	164	33.7		15.2	213	35.2	49		26.3	9	58	17 01	41	27	4 48	60	31	64									
24	179	33.9	+10	14.3	227	59.1		+22	25.4		60 S	16 55	17 38	18 26	5 06	60	11 13	65									
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO												
	PMG: 1 ^h 43 ^m 9		Mag: -3.9 PMG: 12 ^h 17 ^m				Mag: +1.8 PMG: 12 ^h 12 ^m				Mag: -2.3 PMG: 18 ^h 36 ^m				Mag: +0.3 PMG: 20 ^h 43 ^m												
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄												
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'								
0	333	57.3	175	54.7	+10	43.1	176	45.6	+10	43.4	80	22.9	-22	-12.9	48	24.5	-22	25.5									
1	348	59.8	190	54.2		42.0	191	46.5		42.8	95	25.2		-12.9	63	27.1		25.5									
2	4	02.2	205	53.8		40.8	206	47.5		42.2	110	27.5		-13.0	78	29.7		25.5									
3	19	04.7	220	53.3		39.7	221	48.5		41.6	125	29.9		-13.0	93	32.2		25.5									
4	34	07.2	235	52.8		38.6	236	49.4		41.0	140	32.2		-13.0	108	34.8		25.5									
5	49	09.6	250	52.4	+10	37.4	251	50.4	+10	40.4	155	34.6	-22	-13.0	123	37.3	-22	25.5									
6	64	12.1	265	51.9	+10	36.3	266	51.3	+10	39.9	170	36.9	-22	-13.0	138	39.9	-22	25.5									
7	79	14.5	280	51.4		35.2	281	52.3		39.3	185	39.3		-13.1	153	42.5		25.6									
8	94	17.0	295	51.0		34.0	296	53.3		38.7	200	41.6		-13.1	168	45.0		25.6									
9	109	19.5	310	50.5		32.9	311	54.2		38.1	215	44.0		-13.1	183	47.6		25.6									
10	124	21.9	325	50.0		31.8	326	55.2		37.5	230	46.3		-13.1	198	50.2		25.6									
11	139	24.4	340	49.6	+10	30.6	341	56.1	+10	36.9	245	48.7	-22	-13.1	213	52.7	-22	25.6									
12	154	26.9	355	49.1	+10	29.5	356	57.1	+10	36.3	260	51.0	-22	-13.2	228	55.3	-22	25.6									
13	169	29.3	10	48.6		28.4	11	58.1		35.7	275	53.3		-13.2	243	57.8		25.6									
14	184	31.8	25	48.2		27.2	26	59.0		35.1	290	55.7		-13.2	259	00.4		25.7									
15	199	34.3	40	47.7		26.1	42	00.0		34.5	305	58.0		-13.2	274	02.9		25.7									
16	214	36.7	55	47.2		25.0	57	01.0		33.9	321	00.4		-13.2	289	05.5		25.7									
17	229	39.2	70	46.8	+10	23.8	72	01.9	+10	33.4	336	02.7	-22	-13.3	304	08.1	-22	25.7									
18	244	41.6	85	46.3	+10	22.7	87	02.9	+10	32.8	351	05.0	-22	-13.3	319	10.6	-22	25.7									
19	259	44.1	100	45.9		21.5	102	03.8		32.2	6	07.4		-13.3	334	13.2		25.7									
20	274	46.6	115	45.4		20.4	117	04.8		31.6	21	09.7		-13.3	349	15.7		25.7									
21	289	49.0	130	44.9		19.3	132	05.8		31.0	36	12.1		-13.3	4	18.3		25.8									
22	304	51.5	145	44.5		18.1	147	06.7		30.4	51	14.4		-13.4	19	20.9		25.8									
23	319	54.0	160	44.0		17.0	162	07.7		29.8	66	16.8		-13.4	34	23.4		25.8									
24	334	56.4	175	43.5	+10	15.8	177	08.7	+10	29.2	81	19.1	-22	-13.4	49	26.0	-22	25.8									
Dif.	—		-5				-11				+10				-6				+23				0	+26			

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 01 ^m 6				SD: 16'2 Edad: 25 ^d 9 PHE { 4 ^h : 59'6 12 ^h : 59'9 20 ^h : 60'2 PMG: 09 ^h 10 ^m Rº: 61 ^m													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	179	33.9	+10	14.3	227	59.1	49	+22	25.4	10	60 N	2 53	3 55	4 42	*** ** *	18 25	36	
1	194	34.1		13.4	242	23.0	48		24.4	12	58	3 08	4 05	48	0 05	73	18 09	39
2	209	34.3		12.6	256	46.8	48		23.2	13	56	21	13	54	20	71	17 55	41
3	224	34.5		11.7	271	10.6	48		21.9	15	54	32	20	4 59	32	71	43	43
4	239	34.6		10.8	285	34.4	47		20.4	16	52	42	27	5 03	44	70	32	45
5	254	34.8	+10	09.9	299	58.1	47	+22	18.8	18	50	3 50	4 33	5 07	0 54	69	17 23	46
6	269	35.0	+10	09.1	314	21.8	47	+22	17.0	20	45	4 07	4 45	5 15	1 15	67	17 03	49
7	284	35.2		08.2	328	45.5	46		15.0	21	40	21	4 54	23	32	66	16 46	52
8	299	35.4		07.3	343	09.1	46		12.9	22	35	31	5 03	29	46	66	32	54
9	314	35.5		06.4	357	32.7	46		10.7	25	30	40	09	34	1 59	64	20	55
10	329	35.7		05.6	11	56.3	45		08.2	25	20	4 54	21	43	2 20	63	16 00	57
11	344	35.9	+10	04.7	26	19.8	45	+22	05.7	28	10 N	5 05	5 30	5 51	2 38	63	15 42	59
12	359	36.1	+10	03.8	40	43.3	45	+22	02.9	29	0	5 13	5 37	5 58	2 56	61	15 25	61
13	14	36.3		02.9	55	06.8	45	+22	00.0	30	10 S	20	44	6 05	3 13	60	15 08	63
14	29	36.4		02.1	69	30.3	45	+21	57.0	32	20	25	51	13	32	58	14 50	64
15	44	36.6		01.2	83	53.8	44		53.8	34	30	29	5 57	21	3 53	57	29	67
16	59	36.8	+10	00.3	98	17.2	44		50.4	35	35	31	6 01	26	4 06	55	16	69
17	74	37.0	+9	59.4	112	40.6	44	+21	46.9	37	40	5 33	6 04	6 32	4 20	55	14 02	70
18	89	37.2	+9	58.6	127	04.0	44	+21	43.2	38	45	5 34	6 08	6 38	4 37	53	13 45	72
19	104	37.3		57.7	141	27.4	44		39.4	40	50	35	13	46	4 58	51	24	75
20	119	37.5		56.8	155	50.8	44		35.4	42	52	36	15	49	5 08	51	14	76
21	134	37.7		55.9	170	14.2	44		31.2	43	54	36	17	53	20	49	13 03	77
22	149	37.9		55.0	184	37.6	43		26.9	45	56	36	19	6 57	33	47	12 50	79
23	164	38.1		54.2	199	00.9	44		22.4	46	58	36	21	7 02	5 48	45	12 35	82
24	179	38.2	+9	53.3	213	24.3		+21	17.8		60 S	5 36	6 24	7 07	6 06	42	12 18	84
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 40 ^m 0		Mag: -3.9 PMG: 12 ^h 17 ^m				Mag: +1.7 PMG: 12 ^h 11 ^m				Mag: -2.2 PMG: 18 ^h 32 ^m				Mag: +0.3 PMG: 20 ^h 39 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	334	56.4	175	43.5	+10	15.8	177	08.7	+10	29.2	81	19.1	-22	13.4	49	26.0	-22	25.8
1	349	58.9	190	43.1		14.7	192	09.6		28.6	96	21.4		13.4	64	28.5		25.8
2	5	01.4	205	42.6		13.6	207	10.6		28.0	111	23.8		13.4	79	31.1		25.8
3	20	03.8	220	42.2		12.4	222	11.5		27.4	126	26.1		13.5	94	33.6		25.8
4	35	06.3	235	41.7		11.3	237	12.5		26.8	141	28.4		13.5	109	36.2		25.8
5	50	08.8	250	41.2	+10	10.1	252	13.5	+10	26.3	156	30.8	-22	13.5	124	38.8	-22	25.9
6	65	11.2	265	40.8	+10	09.0	267	14.4	+10	25.7	171	33.1	-22	13.5	139	41.3	-22	25.9
7	80	13.7	280	40.3		07.8	282	15.4		25.1	186	35.5		13.5	154	43.9		25.9
8	95	16.1	295	39.9		06.7	297	16.4		24.5	201	37.8		13.6	169	46.4		25.9
9	110	18.6	310	39.4		05.5	312	17.3		23.9	216	40.1		13.6	184	49.0		25.9
10	125	21.1	325	38.9		04.4	327	18.3		23.3	231	42.5		13.6	199	51.5		25.9
11	140	23.5	340	38.5	+10	03.2	342	19.2	+10	22.7	246	44.8	-22	13.6	214	54.1	-22	25.9
12	155	26.0	355	38.0	+10	02.1	357	20.2	+10	22.1	261	47.1	-22	13.6	229	56.7	-22	26.0
13	170	28.5	10	37.6	+10	01.0	12	21.2		21.5	276	49.5		13.7	244	59.2		26.0
14	185	30.9	25	37.1	+9	59.8	27	22.1		20.9	291	51.8		13.7	260	01.8		26.0
15	200	33.4	40	36.7		58.7	42	23.1		20.3	306	54.1		13.7	275	04.3		26.0
16	215	35.9	55	36.2		57.5	57	24.1		19.7	321	56.5		13.7	290	06.9		26.0
17	230	38.3	70	35.8	+9	56.4	72	25.0	+10	19.1	336	58.8	-22	13.8	305	09.4	-22	26.0
18	245	40.8	85	35.3	+9	55.2	87	26.0	+10	18.5	352	01.1	-22	13.8	320	12.0	-22	26.0
19	260	43.3	100	34.8		54.1	102	27.0		17.9	7	03.5		13.8	335	14.5		26.0
20	275	45.7	115	34.4		52.9	117	27.9		17.4	22	05.8		13.8	350	17.1		26.1
21	290	48.2	130	33.9		51.8	132	28.9		16.8	37	08.1		13.8	5	19.6		26.1
22	305	50.6	145	33.5		50.6	147	29.9		16.2	52	10.5		13.9	20	22.2		26.1
23	320	53.1	160	33.0		49.4	162	30.8		15.6	67	12.8		13.9	35	24.8		26.1
24	335	55.6	175	32.6	+9	48.3	177	31.8	+10	15.0	82	15.1	-22	13.9	50	27.3	-22	26.1
Dif.	—		-5		-11		+10		-6		+23		0		+26		0	

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8			PHE { 4 ^h : 60'4 12 ^h : 60'6 20 ^h : 60'8														
	PMG: 12 ^h 01 ^m 3			Edad: 26 ^d 9														
	PMG: 10 ^h 11 ^m			Rº: 61 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°		°	h m	h m	h m	h m m		h m m		
0	179	38.2	+9	53.3	213	24.3	43	+21	17.8	48	60 N	19 16	20 02	21 03	1 02	91	19 01 24	
1	194	38.4		52.4	227	47.6	44		13.0	49	58	11	19 54	20 49	18	87	18 48 28	
2	209	38.6		51.5	242	11.0	43		08.1	51	56	06	46	37	31	85	36 31	
3	224	38.8		50.7	256	34.3	44	+21	03.0	52	54	19 01	39	26	43	83	26 34	
4	239	39.0		49.8	270	57.7	44	+20	57.8	54	52	18 57	33	17	1 54	80	17 36	
5	254	39.1	+9	48.9	285	21.1	43	+20	52.4	56	50	18 53	19 27	20 09	2 03	79	18 09 38	
6	269	39.3	+9	48.0	299	44.4	44	+20	46.8	57	45	18 45	19 16	19 53	2 22	76	17 52 42	
7	284	39.5		47.1	314	07.8	44		41.1	58	40	38	19 06	40	38	73	38 45	
8	299	39.7		46.2	328	31.2	44		35.3	60	35	33	18 59	30	2 52	71	26 47	
9	314	39.9		45.4	342	54.6	44		29.3	62	30	28	52	21	3 03	69	17 15 50	
10	329	40.1		44.5	357	18.0	44		23.1	63	20	19	41	19 08	23	66	16 57 53	
11	344	40.2	+9	43.6	11	41.4	45	+20	16.8	65	10 N	18 12	18 33	18 58	3 41	63	16 41 57	
12	359	40.4	+9	42.7	26	04.9	44	+20	10.3	66	0	18 05	18 26	18 50	3 57	60	16 26 60	
13	14	40.6		41.8	40	28.3	45	+20	03.7	68	10 S	17 58	19	44	4 13	58	16 11 63	
14	29	40.8		41.0	54	51.8	45	+19	56.9	69	20	51	13	39	30	56	15 54 67	
15	44	41.0		40.1	69	15.3	45		50.0	70	30	43	07	35	4 50	52	36 70	
16	59	41.2		39.2	83	38.8	46		43.0	73	35	38	04	33	5 01	51	25 72	
17	74	41.3	+9	38.3	98	02.4	45	+19	35.7	73	40	17 33	18 00	18 32	5 15	48	15 12 75	
18	89	41.5	+9	37.4	112	25.9	46	+19	28.4	75	45	17 27	17 57	18 31	5 30	46	14 57 78	
19	104	41.7		36.5	126	49.5	46		20.9	77	50	20	53	30	49	42	39 82	
20	119	41.9		35.7	141	13.1	47		13.2	77	52	17	51	30	5 59	40	30 84	
21	134	42.1		34.8	155	36.8	47	+19	05.5	80	54	13	49	30	6 09	38	20 87	
22	149	42.3		33.9	170	00.5	47	+18	57.5	80	56	09	47	30	20	36	14 09 89	
23	164	42.5		33.0	184	24.2	47		49.5	82	58	05	45	30	33	33	13 57 92	
24	179	42.6	+9	32.1	198	47.9		+18	41.3		60 S	17 00	17 42	18 31	6 48	30	13 42 96	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 36 ^m 0		Mag: -3.9 PMG: 12 ^h 18 ^m			Mag: +1.7 PMG: 12 ^h 09 ^m			Mag: -2.2 PMG: 18 ^h 28 ^m			Mag: +0.3 PMG: 20 ^h 35 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	335	55.6	175	32.6	+9	48.3	177	31.8	+10	15.0	82	15.1	-22	-13.9	50	27.3	-22	26.1
1	350	58.0	190	32.1		47.1	192	32.7		14.4	97	17.5		-13.9	65	29.9		26.1
2	6	00.5	205	31.7		46.0	207	33.7		13.8	112	19.8		-13.9	80	32.4		26.1
3	21	03.0	220	31.2		44.8	222	34.7		13.2	127	22.1		-14.0	95	35.0		26.2
4	36	05.4	235	30.8		43.7	237	35.6		12.6	142	24.5		-14.0	110	37.5		26.2
5	51	07.9	250	30.3	+9	42.5	252	36.6	+10	12.0	157	26.8	-22	-14.0	125	40.1	-22	26.2
6	66	10.4	265	29.9	+9	41.4	267	37.6	+10	11.4	172	29.1	-22	-14.0	140	42.6	-22	26.2
7	81	12.8	280	29.4		40.2	282	38.5		10.8	187	31.4		-14.1	155	45.2		26.2
8	96	15.3	295	29.0		39.1	297	39.5		10.2	202	33.8		-14.1	170	47.7		26.2
9	111	17.8	310	28.5		37.9	312	40.5		09.6	217	36.1		-14.1	185	50.3		26.2
10	126	20.2	325	28.1		36.7	327	41.4		09.0	232	38.4		-14.1	200	52.8		26.2
11	141	22.7	340	27.6	+9	35.6	342	42.4	+10	08.4	247	40.8	-22	-14.1	215	55.4	-22	26.3
12	156	25.1	355	27.2	+9	34.4	357	43.4	+10	07.8	262	43.1	-22	-14.2	230	57.9	-22	26.3
13	171	27.6	10	26.7		33.3	12	44.3		07.2	277	45.4		-14.2	246	00.5		26.3
14	186	30.1	25	26.3		32.1	27	45.3		06.6	292	47.7		-14.2	261	03.0		26.3
15	201	32.5	40	25.8		30.9	42	46.3		06.0	307	50.1		-14.2	276	05.6		26.3
16	216	35.0	55	25.4		29.8	57	47.2		05.4	322	52.4		-14.2	291	08.2		26.3
17	231	37.5	70	24.9	+9	28.6	72	48.2	+10	04.8	337	54.7	-22	-14.3	306	10.7	-22	26.3
18	246	39.9	85	24.5	+9	27.5	87	49.2	+10	04.3	352	57.0	-22	-14.3	321	13.3	-22	26.3
19	261	42.4	100	24.0		26.3	102	50.1		03.7	7	59.4		-14.3	336	15.8		26.4
20	276	44.9	115	23.6		25.1	117	51.1		03.1	23	01.7		-14.3	351	18.4		26.4
21	291	47.3	130	23.1		24.0	132	52.1		02.5	38	04.0		-14.4	6	20.9		26.4
22	306	49.8	145	22.7		22.8	147	53.0		01.9	53	06.3		-14.4	21	23.5		26.4
23	321	52.2	160	22.2		21.6	162	54.0		01.3	68	08.7		-14.4	36	26.0		26.4
24	336	54.7	175	21.8	+9	20.5	177	54.9	+10	00.7	83	11.0	-22	-14.4	51	28.6	-22	26.4
Dif.	—		-4		-12		+10		-6		+23		0		+26			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 01 ^m 0			SD: 16'6 Edad: 27 ^d 9 PHE 4^h: 61'0 12^h: 61'2 20^h: 61'3 PMG: 11 ^h 12 ^m Rº: 58 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		Rº	Hora	Rº	
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	° 179 ° 194 ° 209 ° 224 ° 239 ° 254 ° 269 ° 284 ° 299 ° 314 ° 329 ° 344 ° 359 ° 14 ° 29 ° 44 ° 59 ° 74 ° 89 ° 104 ° 119 ° 134 ° 149 ° 164 ° 179	' 42.6 ' 42.8 ' 43.0 ' 43.2 ' 43.4 ' 43.6 ' 43.8 ' 43.9 ' 44.1 ' 44.3 ' 44.5 ' 44.7 ' 44.9 ' 45.1 ' 45.2 ' 45.4 ' 45.6 ' 45.8 ' 46.0 ' 46.2 ' 46.4 ' 46.6 ' 46.7 ' 46.9 ' 47.1	° 32.1 ° 31.2 ° 30.3 ° 29.5 ° 28.6 ° 27.7 ° 26.8 ° 25.9 ° 25.0 ° 24.1 ° 23.2 ° 22.4 ° 21.5 ° 20.6 ° 19.7 ° 18.8 ° 17.9 ° 17.0 ° 16.1 ° 15.2 ° 14.3 ° 13.5 ° 12.6 ° 11.7 ° 10.8	° 198 ° 213 ° 227 ° 241 ° 256 ° 270 ° 285 ° 299 ° 313 ° 328 ° 342 ° 357 ° 11 ° 26 ° 40 ° 54 ° 69 ° 83 ° 98 ° 112 ° 126 ° 141 ° 155 ° 170 ° 184	' 47.9 ' 11.7 ' 35.5 ' 59.3 ' 23.2 ' 47.1 ' 11.1 ' 35.1 ' 59.1 ' 23.2 ' 47.3 ' 11.5 ' 35.7 ' 00.0 ' 24.3 ' 48.6 ' 13.0 ' 37.5 ' 02.0 ' 26.5 ' 51.1 ' 15.8 ' 40.5 ' 05.2 ' 30.0	48 48 48 49 49 50 50 51 51 52 52 53 53 53 53 54 55 55 56 57 57 58 58	° +18 ° ° ° +18 ° +17 ° ° +17 ° ° ° ° +17 ° +16 ° ° +16 ° ° ° +15 ° ° ° ° +15 ° ° ° +14 ° ° ° +14	° 60 N ° 58 ° 56 ° 54 ° 52 ° 50 ° 45 ° 40 ° 35 ° 30 ° 20 ° 10 N ° 0 ° 10 S ° 20 ° 30 ° 35 ° 40 ° 45 ° 50 ° 52 ° 54 ° 56 ° 58 ° 60 S	h m 3 00 h m 14 10 h m 26 17 h m 37 24 h m 46 30 h m 54 36 h m 4 10 44 47 h m 23 45 6 h m 33 50 11 h m 42 11 35 h m 4 55 21 44 h m 5 05 30 51 h m 5 12 37 58 h m 19 43 6 04 h m 23 49 11 h m 27 55 19 h m 29 5 58 24 h m 5 30 6 01 6 29 h m 5 31 6 05 6 35 h m 31 09 41 h m 31 10 45 h m 31 12 48 h m 31 14 52 h m 31 16 6 56 h m 5 31 6 19 7 01	h m 4 47 h m 53 h m 4 58 h m 5 02 h m 06 h m 5 10 h m 5 18 h m 25 h m 30 h m 35 h m 44 h m 51 h m 58 h m 6 04 h m 11 h m 19 h m 24 h m 6 29 h m 6 35 h m 41 h m 45 h m 48 h m 52 h m 6 56 h m 7 01	h m 2 33 98 h m 45 95 h m 2 56 92 h m 3 06 88 h m 14 87 h m 3 22 84 h m 3 38 80 h m 3 51 76 h m 4 03 73 h m 12 71 h m 29 66 h m 4 44 62 h m 4 57 60 h m 5 11 56 h m 26 52 h m 42 48 h m 5 52 45 h m 6 03 42 h m 6 16 38 h m 31 35 h m 39 32 h m 47 30 h m 6 56 27 h m 7 06 24 h m 7 18 20	h m 19 25 18 h m 16 21 h m 07 24 h m 19 00 27 h m 18 53 29 h m 18 47 31 h m 18 34 36 h m 23 39 h m 13 43 h m 18 05 45 h m 17 50 51 h m 17 38 54 h m 17 26 58 h m 14 62 h m 17 01 66 h m 16 46 71 h m 37 74 h m 16 27 77 h m 16 15 81 h m 16 01 85 h m 15 54 88 h m 47 90 h m 38 93 h m 15 29 96 h m 15 18 100					
UT	ARIES	VENUS			MARTE			JÚPITER			SATURNO						
	PMG 1 ^h 32 ^m 1	Mag: -3.9 PMG: 12 ^h 19 ^m			Mag: +1.7 PMG: 12 ^h 08 ^m			Mag: -2.2 PMG: 18 ^h 24 ^m			Mag: +0.3 PMG: 20 ^h 31 ^m						
	hG ♈	hG ♀	dec.	hG ♂	dec.	hG ♃	dec.	hG ♄	dec.	hG ♅	dec.						
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	° 336 ° 351 ° 6 ° 22 ° 37 ° 52 ° 67 ° 82 ° 97 ° 112 ° 127 ° 142 ° 157 ° 172 ° 187 ° 202 ° 217 ° 232 ° 247 ° 262 ° 277 ° 292 ° 307 ° 322 ° 337	' 54.7 ' 57.2 ' 59.6 ' 02.1 ' 04.6 ' 07.0 ' 09.5 ' 12.0 ' 14.4 ' 16.9 ' 19.4 ' 21.8 ' 24.3 ' 26.7 ' 29.2 ' 31.7 ' 34.1 ' 36.6 ' 39.1 ' 41.5 ' 44.0 ' 46.5 ' 48.9 ' 51.4 ' 53.9	° 21.8 ° 21.3 ° 20.9 ° 20.5 ° 20.0 ° 19.6 ° 19.1 ° 18.7 ° 18.2 ° 17.8 ° 17.4 ° 16.9 ° 16.5 ° 16.0 ° 15.6 ° 15.1 ° 14.7 ° 14.3 ° 13.8 ° 13.4 ° 12.9 ° 12.5 ° 12.1 ° 11.6 ° 11.2	° 20.5 ° 19.3 ° 18.2 ° 17.0 ° 15.8 ° 14.7 ° 13.5 ° 12.3 ° 11.2 ° 10.0 ° 08.8 ° 07.7 ° 06.5 ° 05.3 ° 04.1 ° 03.0 ° 01.8 ° 00.6 ° 59.5 ° 58.3 ° 57.1 ° 55.9 ° 54.8 ° 53.6 ° 52.4	° 177 ° 192 ° 207 ° 222 ° 237 ° 252 ° 268 ° 283 ° 298 ° 313 ° 328 ° 343 ° 358 ° 13 ° 28 ° 43 ° 58 ° 73 ° 88 ° 103 ° 118 ° 133 ° 148 ° 163 ° 178	' 54.9 ' 55.9 ' 56.9 ' 57.8 ' 58.8 ' 59.8 ' 00.7 ' 01.7 ' 02.7 ' 03.6 ' 04.6 ' 05.6 ' 06.5 ' 07.5 ' 08.5 ' 09.4 ' 10.4 ' 11.4 ' 12.4 ' 13.3 ' 14.3 ' 15.3 ' 16.2 ' 17.2 ' 18.2	° +10 ° +10 ° +9 ° ° ° +9 ° +9 ° ° ° ° +9 ° ° +9 ° ° ° +9 ° ° ° +9 ° °										

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8			SD: 16 ^h 7		PHE { 4^h: 61^m3 12^h: 61^m4 20^h: 61^m4						Edad: 28 ^d 9			R ^o : 56 ^m					
	PMG: 12 ^h 00 ^m 7			PMG: 12 ^h 10 ^m																
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.				Civil	Náut.	Hora	R ^o	Hora	R ^o				
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m	m	h m	m				
0	179	47.1	+9	184	30.0	59	+14	45.5	113	60 N	19 11	19 56	20 55	4 11	101	19 43	14			
1	194	47.3		198	54.9	59		34.2	114	58	05	48	42	20	97	37	17			
2	209	47.5		213	19.8	59		22.8	115	56	19 01	40	30	28	93	31	20			
3	224	47.7		227	44.7	61	+14	11.3	116	54	18 56	34	20	34	91	27	22			
4	239	47.9		242	09.8	60	+13	59.7	117	52	52	28	12	41	87	22	25			
5	254	48.1	+9	256	34.8	62	+13	48.0	118	50	18 49	19 23	20 04	4 46	86	19 18	27			
6	269	48.3	+9	271	00.0	61	+13	36.2	119	45	18 42	19 12	19 49	4 58	80	19 10	31			
7	284	48.5		285	25.1	63		24.3	120	40	35	19 03	36	5 07	77	19 02	36			
8	299	48.6		299	50.4	63		12.3	120	35	30	18 56	27	16	73	18 56	39			
9	314	48.8		314	15.7	63	+13	00.3	122	30	25	50	18	23	70	50	42			
10	329	49.0		328	41.0	64	+12	48.1	123	20	17	40	19 06	35	66	41	47			
11	344	49.2	+9	343	06.4	65	+12	35.8	123	10 N	18 10	18 32	18 56	5 46	61	18 32	51			
12	359	49.4	+9	357	31.9	65	+12	23.5	124	0	18 04	18 25	18 49	5 57	56	18 24	55			
13	14	49.6	+8	11	57.4	66	+12	11.1	125	10 S	17 58	19	44	6 07	52	16	59			
14	29	49.8		26	23.0	66	+11	58.6	126	20	51	13	39	18	48	18 07	64			
15	44	50.0		40	48.6	67		46.0	127	30	44	08	36	30	43	17 57	69			
16	59	50.2		55	14.3	67		33.3	127	35	40	05	35	37	41	51	72			
17	74	50.4	+8	69	40.0	68	+11	20.6	128	40	17 35	18 02	18 34	6 45	37	17 44	76			
18	89	50.5	+8	84	05.8	69	+11	07.8	129	45	17 29	17 59	18 33	6 54	34	17 36	80			
19	104	50.7		98	31.7	69	+10	54.9	130	50	23	56	33	7 06	28	26	86			
20	119	50.9		112	57.6	69		41.9	130	52	20	54	33	11	27	22	88			
21	134	51.1		127	23.5	71		28.9	131	54	17	52	33	17	24	17	90			
22	149	51.3		141	49.6	70		15.8	132	56	13	51	34	23	21	11	94			
23	164	51.5		156	15.6	72	+10	02.6	132	58	09	49	34	30	19	17 05	97			
24	179	51.7	+8	170	41.8		+9	49.4		60 S	17 04	17 47	18 35	7 38	15	16 58	100			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 1 ^h 28 ^m 2		Mag: -3.9 PMG: 12 ^h 20 ^m			Mag: +1.7 PMG: 12 ^h 06 ^m			Mag: -2.2 PMG: 18 ^h 21 ^m			Mag: +0.3 PMG: 20 ^h 27 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	337	53.9	175	11.2	+8	52.4	178	18.2	+9	46.3	84	06.6	-22	-15.0	52	29.7	-22	26.7		
1	352	56.3	190	10.8		51.2	193	19.1		45.7	99	09.0		-15.0	67	32.2		26.7		
2	7	58.8	205	10.3		50.1	208	20.1		45.1	114	11.3		-15.0	82	34.8		26.8		
3	23	01.2	220	09.9		48.9	223	21.1		44.5	129	13.6		-15.0	97	37.3		26.8		
4	38	03.7	235	09.4		47.7	238	22.0		43.9	144	15.9		-15.1	112	39.9		26.8		
5	53	06.2	250	09.0	+8	46.5	253	23.0	+9	43.3	159	18.2	-22	-15.1	127	42.4	-22	26.8		
6	68	08.6	265	08.6	+8	45.4	268	24.0	+9	42.7	174	20.5	-22	-15.1	142	45.0	-22	26.8		
7	83	11.1	280	08.1		44.2	283	24.9		42.1	189	22.8		-15.1	157	47.5		26.8		
8	98	13.6	295	07.7		43.0	298	25.9		41.5	204	25.2		-15.1	172	50.1		26.8		
9	113	16.0	310	07.3		41.8	313	26.9		40.9	219	27.5		-15.2	187	52.6		26.8		
10	128	18.5	325	06.8		40.7	328	27.8		40.3	234	29.8		-15.2	202	55.2		26.9		
11	143	21.0	340	06.4	+8	39.5	343	28.8	+9	39.7	249	32.1	-22	-15.2	217	57.7	-22	26.9		
12	158	23.4	355	06.0	+8	38.3	358	29.8	+9	39.1	264	34.4	-22	-15.2	233	00.2	-22	26.9		
13	173	25.9	10	05.5		37.1	13	30.7		38.5	279	36.7		-15.3	248	02.8		26.9		
14	188	28.3	25	05.1		35.9	28	31.7		37.9	294	39.0		-15.3	263	05.3		26.9		
15	203	30.8	40	04.7		34.8	43	32.7		37.3	309	41.3		-15.3	278	07.9		26.9		
16	218	33.3	55	04.2		33.6	58	33.7		36.7	324	43.7		-15.3	293	10.4		26.9		
17	233	35.7	70	03.8	+8	32.4	73	34.6	+9	36.1	339	46.0	-22	-15.4	308	13.0	-22	26.9		
18	248	38.2	85	03.4	+8	31.2	88	35.6	+9	35.5	354	48.3	-22	-15.4	323	15.5	-22	26.9		
19	263	40.7	100	02.9		30.0	103	36.6		34.9	9	50.6		-15.4	338	18.0		27.0		
20	278	43.1	115	02.5		28.8	118	37.5		34.3	24	52.9		-15.4	353	20.6		27.0		
21	293	45.6	130	02.1		27.7	133	38.5		33.7	39	55.2		-15.4	8	23.1		27.0		
22	308	48.1	145	01.6		26.5	148	39.5		33.1	54	57.5		-15.5	23	25.7		27.0		
23	323	50.5	160	01.2		25.3	163	40.4		32.5	69	59.8		-15.5	38	28.2		27.0		
24	338	53.0	175	00.8	+8	24.1	178	41.4	+9	31.9	85	02.1	-22	-15.5	53	30.8	-22	27.0		
Dif.	—		-4	-12			+10	-6			+23		0		+25		0			

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8			SD: 16'7		PHE {		4 ^h : 61'3									
	PMG: 12 ^h 00 ^m 4			Edad: 0 ^d 6				12 ^h : 61'3									
								20 ^h : 61'2									
				PMG: 13 ^h 06 ^m		Rº: 55 ^m											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	51.7	+8 49.3	170	41.8	71	+9 49.4	133	60 N	3 07	4 06	4 52	5 52	99	19 57	12	
1	194	51.9	48.4	185	07.9	73	36.1	133	58	20	15	4 57	5 57	95	54	15	
2	209	52.1	47.5	199	34.2	73	22.8	135	56	32	22	5 02	6 01	92	51	18	
3	224	52.3	46.6	214	00.5	73	+9 09.3	134	54	41	28	06	05	89	49	21	
4	239	52.5	45.7	228	26.8	74	+8 55.9	136	52	50	34	09	08	87	47	23	
5	254	52.7	+8 44.8	242	53.2	75	+8 42.3	135	50	3 58	4 39	5 13	6 12	84	19 45	25	
6	269	52.9	+8 43.9	257	19.7	75	+8 28.8	137	45	4 13	4 50	5 20	6 18	80	19 41	30	
7	284	53.0	43.0	271	46.2	76	15.1	136	40	25	4 59	26	24	76	38	33	
8	299	53.2	42.1	286	12.8	76	+8 01.5	138	35	35	5 06	32	29	72	35	36	
9	314	53.4	41.2	300	39.4	76	+7 47.7	137	30	43	12	36	33	69	32	40	
10	329	53.6	40.3	315	06.0	78	34.0	138	20	4 55	22	44	41	63	28	44	
11	344	53.8	+8 39.4	329	32.8	77	+7 20.2	139	10 N	5 05	5 30	5 51	6 47	59	19 23	50	
12	359	54.0	+8 38.5	343	59.5	78	+7 06.3	139	0	5 12	5 36	5 57	6 53	55	19 19	54	
13	14	54.2	37.6	358	26.3	79	+6 52.4	139	10 S	17	42	6 03	6 59	51	15	59	
14	29	54.4	36.7	12	53.2	79	38.5	140	20	22	48	10	7 06	46	11	63	
15	44	54.6	35.8	27	20.1	80	24.5	140	30	25	53	17	13	41	06	68	
16	59	54.8	34.9	41	47.1	80	+6 10.5	141	35	26	56	21	18	37	03	72	
17	74	55.0	+8 34.0	56	14.1	81	+5 56.4	140	40	5 27	5 58	6 26	7 22	35	19 00	75	
18	89	55.2	+8 33.1	70	41.2	81	+5 42.4	141	45	5 27	6 01	6 31	7 28	30	18 56	79	
19	104	55.4	32.2	85	08.3	82	28.3	141	50	27	05	37	34	26	52	83	
20	119	55.6	31.3	99	35.5	82	14.2	142	52	27	06	40	38	23	50	86	
21	134	55.8	30.4	114	02.7	82	+5 00.0	142	54	27	08	43	41	21	47	89	
22	149	56.0	29.5	128	29.9	83	+4 45.8	142	56	26	09	47	44	19	45	91	
23	164	56.2	28.6	142	57.2	84	31.6	142	58	26	11	51	7 49	15	18 42	94	
24	179	56.4	+8 27.7	157	24.6		+4 17.4		60 S	5 25	6 13	6 55	7 53	13	18 38	98	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 1 ^h 24 ^m 2		Mag: -3.9 PMG: 12 ^h 20 ^m			Mag: +1.7 PMG: 12 ^h 04 ^m			Mag: -2.2 PMG: 18 ^h 17 ^m			Mag: +0.3 PMG: 20 ^h 22 ^m					
	hG ♈		hG ♀ dec.			hG ♂ dec.			hG ♃ dec.			hG ♄ dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	338	53.0	175	00.8	+8 24.1	178	41.4	+9 31.9	85	02.1	-22 15.5	53	30.8	-22 27.0			
1	353	55.5	190	00.3	22.9	193	42.4	31.3	100	04.4	15.5	68	33.3	27.0			
2	8	57.9	204	59.9	21.7	208	43.4	30.7	115	06.7	15.6	83	35.8	27.0			
3	24	00.4	219	59.5	20.6	223	44.3	30.1	130	09.0	15.6	98	38.4	27.1			
4	39	02.8	234	59.0	19.4	238	45.3	29.5	145	11.3	15.6	113	40.9	27.1			
5	54	05.3	249	58.6	+8 18.2	253	46.3	+9 28.9	160	13.7	-22 15.6	128	43.5	-22 27.1			
6	69	07.8	264	58.2	+8 17.0	268	47.2	+9 28.3	175	16.0	-22 15.7	143	46.0	-22 27.1			
7	84	10.2	279	57.8	15.8	283	48.2	27.7	190	18.3	15.7	158	48.5	27.1			
8	99	12.7	294	57.3	14.6	298	49.2	27.1	205	20.6	15.7	173	51.1	27.1			
9	114	15.2	309	56.9	13.4	313	50.1	26.5	220	22.9	15.7	188	53.6	27.1			
10	129	17.6	324	56.5	12.2	328	51.1	25.9	235	25.2	15.8	203	56.2	27.1			
11	144	20.1	339	56.1	+8 11.1	343	52.1	+9 25.2	250	27.5	-22 15.8	218	58.7	-22 27.2			
12	159	22.6	354	55.6	+8 09.9	358	53.1	+9 24.6	265	29.8	-22 15.8	234	01.2	-22 27.2			
13	174	25.0	9	55.2	08.7	13	54.0	24.0	280	32.1	15.8	249	03.8	27.2			
14	189	27.5	24	54.8	07.5	28	55.0	23.4	295	34.4	15.9	264	06.3	27.2			
15	204	30.0	39	54.3	06.3	43	56.0	22.8	310	36.7	15.9	279	08.9	27.2			
16	219	32.4	54	53.9	05.1	58	56.9	22.2	325	39.0	15.9	294	11.4	27.2			
17	234	34.9	69	53.5	+8 03.9	73	57.9	+9 21.6	340	41.3	-22 15.9	309	13.9	-22 27.2			
18	249	37.3	84	53.1	+8 02.7	88	58.9	+9 21.0	355	43.6	-22 15.9	324	16.5	-22 27.2			
19	264	39.8	99	52.6	01.5	103	59.8	20.4	10	45.9	16.0	339	19.0	27.2			
20	279	42.3	114	52.2	+8 00.3	119	00.8	19.8	25	48.2	16.0	354	21.6	27.3			
21	294	44.7	129	51.8	+7 59.2	134	01.8	19.2	40	50.5	16.0	9	24.1	27.3			
22	309	47.2	144	51.4	58.0	149	02.8	18.6	55	52.8	16.0	24	26.6	27.3			
23	324	49.7	159	50.9	56.8	164	03.7	18.0	70	55.1	16.1	39	29.2	27.3			
24	339	52.1	174	50.5	+7 55.6	179	04.7	+9 17.4	85	57.4	-22 16.1	54	31.7	-22 27.3			
Dif.	—		-4 -12			+10 -6			+23 0			+25 0					

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 00 ^m 1			SD: 16'6 Edad: 1'6 PHE { 4 ^h : 61'0 12 ^h : 60'8 20 ^h : 60'6 PMG: 14 ^h 01 ^m Rº: 52 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.											
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	m	m	m	
0	179	56.4	+8	27.7	157	24.6	83	+4	17.4	142	60 N	19 05	19 49	20 48	7 31	96	20 09	12
1	194	56.5		26.8	171	51.9	85	+4	03.2	143	58	19 00	42	35	32	93	09	15
2	209	56.7		25.9	186	19.4	84	+3	48.9	142	56	18 55	35	24	33	90	09	18
3	224	56.9		25.0	200	46.8	86		34.7	143	54	51	29	15	34	87	10	20
4	239	57.1		24.1	215	14.4	85		20.4	143	52	48	23	20 07	35	85	10	22
5	254	57.3	+8	23.2	229	41.9	86	+3	06.1	143	50	18 45	19 18	19 59	7 36	83	20 10	25
6	269	57.5	+8	22.3	244	09.5	87	+2	51.8	143	45	18 38	19 08	19 45	7 38	78	20 11	28
7	284	57.7		21.4	258	37.2	86		37.5	143	40	32	19 00	33	40	73	11	33
8	299	57.9		20.5	273	04.8	88		23.2	143	35	27	18 53	24	41	70	11	36
9	314	58.1		19.5	287	32.6	87	+2	08.9	143	30	23	47	16	42	67	12	38
10	329	58.3		18.6	302	00.3	88	+1	54.6	143	20	16	38	19 04	44	62	12	44
11	344	58.5	+8	17.7	316	28.1	88	+1	40.3	144	10 N	18 09	18 30	18 55	7 46	57	20 13	48
12	359	58.7	+8	16.8	330	55.9	89	+1	25.9	143	0	18 03	18 24	18 49	7 48	53	20 13	53
13	14	58.9		15.9	345	23.8	89	+1	11.6	143	10 S	17 58	19	43	50	48	14	56
14	29	59.1		15.0	359	51.7	89	+0	57.3	143	20	52	14	39	52	44	14	61
15	44	59.3		14.1	14	19.6	90		43.0	143	30	45	09	37	54	39	14	67
16	59	59.5		13.2	28	47.6	90		28.7	143	35	41	06	36	55	36	15	69
17	74	59.7	+8	12.3	43	15.6	91	+0	14.4	142	40	17 37	18 04	18 35	7 57	32	20 15	73
18	89	59.9	+8	11.4	57	43.7	90	+0	00.2	143	45	17 32	18 01	18 35	7 58	29	20 15	77
19	105	00.1		10.5	72	11.7	91	-0	14.1	142	50	26	17 58	36	8 00	24	15	82
20	120	00.3		09.6	86	39.8	92		28.3	143	52	23	57	36	01	22	16	83
21	135	00.5		08.7	101	08.0	91		42.6	142	54	20	56	37	02	20	16	86
22	150	00.7		07.8	115	36.1	92	-0	56.8	142	56	17	54	37	03	18	16	89
23	165	00.9		06.8	130	04.3	92	-1	11.0	141	58	13	53	38	04	15	16	92
24	180	01.1	+8	05.9	144	32.5		-1	25.1		60 S	17 09	17 51	18 39	8 06	11	20 16	96
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 20 ^m 3		Mag: -3.9 PMG: 12 ^h 21 ^m			Mag: +1.7 PMG: 12 ^h 03 ^m			Mag: -2.2 PMG: 18 ^h 13 ^m			Mag: +0.3 PMG: 20 ^h 18 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	339	52.1	174	50.5	+7	55.6	179	04.7	+9	17.4	85	57.4	-22	-16.1	54	31.7	-22	27.3
1	354	54.6	189	50.1		54.4	194	05.7		16.8	100	59.7		-16.1	69	34.3		27.3
2	9	57.1	204	49.7		53.2	209	06.6		16.2	116	02.0		-16.1	84	36.8		27.3
3	24	59.5	219	49.2		52.0	224	07.6		15.6	131	04.3		-16.2	99	39.3		27.3
4	40	02.0	234	48.8		50.8	239	08.6		15.0	146	06.6		-16.2	114	41.9		27.4
5	55	04.4	249	48.4	+7	49.6	254	09.6	+9	14.4	161	08.9	-22	-16.2	129	44.4	-22	27.4
6	70	06.9	264	48.0	+7	48.4	269	10.5	+9	13.8	176	11.2	-22	-16.2	144	46.9	-22	27.4
7	85	09.4	279	47.6		47.2	284	11.5		13.2	191	13.5		-16.3	159	49.5		27.4
8	100	11.8	294	47.1		46.0	299	12.5		12.6	206	15.8		-16.3	174	52.0		27.4
9	115	14.3	309	46.7		44.8	314	13.5		11.9	221	18.1		-16.3	189	54.5		27.4
10	130	16.8	324	46.3		43.6	329	14.4		11.3	236	20.4		-16.3	204	57.1		27.4
11	145	19.2	339	45.9	+7	42.4	344	15.4	+9	10.7	251	22.7	-22	-16.4	219	59.6	-22	27.4
12	160	21.7	354	45.5	+7	41.2	359	16.4	+9	10.1	266	25.0	-22	-16.4	235	02.2	-22	27.4
13	175	24.2	9	45.0		40.0	14	17.3		09.5	281	27.3		-16.4	250	04.7		27.5
14	190	26.6	24	44.6		38.8	29	18.3		08.9	296	29.6		-16.4	265	07.2		27.5
15	205	29.1	39	44.2		37.6	44	19.3		08.3	311	31.9		-16.5	280	09.8		27.5
16	220	31.6	54	43.8		36.4	59	20.3		07.7	326	34.2		-16.5	295	12.3		27.5
17	235	34.0	69	43.4	+7	35.2	74	21.2	+9	07.1	341	36.5	-22	-16.5	310	14.8	-22	27.5
18	250	36.5	84	42.9	+7	34.0	89	22.2	+9	06.5	356	38.7	-22	-16.5	325	17.4	-22	27.5
19	265	38.9	99	42.5		32.8	104	23.2		05.9	11	41.0		-16.6	340	19.9		27.5
20	280	41.4	114	42.1		31.6	119	24.1		05.3	26	43.3		-16.6	355	22.4		27.5
21	295	43.9	129	41.7		30.4	134	25.1		04.7	41	45.6		-16.6	10	25.0		27.5
22	310	46.3	144	41.3		29.2	149	26.1		04.1	56	47.9		-16.6	25	27.5		27.6
23	325	48.8	159	40.8		28.0	164	27.1		03.5	71	50.2		-16.7	40	30.0		27.6
24	340	51.3	174	40.4	+7	26.8	179	28.0	+9	02.9	86	52.5	-22	-16.7	55	32.6	-22	27.6
Dif.	—		-4		-12		+10		-6		+23		0		+25		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 59 ^m 8				SD: 16'5 Edad: 2 ^d 6 PHE { 4 ^h : 60'4 12 ^h : 60'2 20 ^h : 59'9													
	PMG: 14 ^h 53 ^m Rº: 52 ^m																	
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m			
0	180	01.1	+8	05.9	144	32.5	93	-1	25.1	142	60 N	3 13	4 11	4 56	9 07	94	20 21	12
1	195	01.3		05.0	159	00.8	93		39.3	141	58	26	19	5 01	05	91	24	16
2	210	01.5		04.1	173	29.1	93	-1	53.4	141	56	37	26	05	03	88	27	19
3	225	01.7		03.2	187	57.4	93	-2	07.5	141	54	46	32	09	01	85	30	21
4	240	01.9		02.3	202	25.7	93		21.6	140	52	3 54	37	13	9 00	82	32	24
5	255	02.1	+8	01.4	216	54.0	94	-2	35.6	140	50	4 01	4 42	5 16	8 59	80	20 35	25
6	270	02.3	+8	00.5	231	22.4	94	-2	49.6	140	45	4 16	4 52	5 23	8 56	75	20 39	30
7	285	02.5	+7	59.6	245	50.8	94	-3	03.6	140	40	27	5 01	28	53	72	44	33
8	300	02.7		58.7	260	19.2	95		17.6	139	35	37	07	33	51	68	47	37
9	315	02.9		57.7	274	47.7	94		31.5	138	30	44	13	37	49	66	50	40
10	330	03.1		56.8	289	16.1	95		45.3	139	20	4 56	22	45	46	61	20 56	44
11	345	03.3	+7	55.9	303	44.6	95	-3	59.2	138	10 N	5 05	5 30	5 51	8 43	56	21 01	48
12	0	03.5	+7	55.0	318	13.1	95	-4	13.0	138	0	5 11	5 36	5 56	8 41	52	21 06	51
13	15	03.7		54.1	332	41.6	96		26.8	137	10 S	16	41	6 02	38	48	10	56
14	30	03.9		53.2	347	10.2	95		40.5	136	20	20	46	08	36	43	15	60
15	45	04.1		52.3	1	38.7	96	-4	54.1	137	30	23	51	15	33	38	21	64
16	60	04.3		51.4	16	07.3	96	-5	07.8	136	35	24	53	18	31	36	24	67
17	75	04.5	+7	50.4	30	35.9	96	-5	21.4	135	40	5 24	5 55	6 23	8 29	33	21 28	70
18	90	04.7	+7	49.5	45	04.5	96	-5	34.9	135	45	5 24	5 58	6 27	8 27	29	21 32	74
19	105	04.9		48.6	59	33.1	97	-5	48.4	134	50	23	6 01	33	24	25	37	79
20	120	05.1		47.7	74	01.8	96	-6	01.8	134	52	23	02	36	23	23	39	82
21	135	05.3		46.8	88	30.4	97		15.2	134	54	22	03	39	22	20	42	84
22	150	05.5		45.9	102	59.1	96		28.6	133	56	22	04	42	21	17	45	86
23	165	05.7		45.0	117	27.7	97		41.9	132	58	21	06	45	8 19	15	21 48	89
24	180	05.9	+7	44.1	131	56.4		-6	55.1		60 S	5 19	6 07	6 49	8 17	12	21 52	92

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 1 ^h 16 ^m 4		Mag: -3.9 PMG: 12 ^h 22 ^m			Mag: +1.7 PMG: 12 ^h 01 ^m			Mag: -2.2 PMG: 18 ^h 10 ^m			Mag: +0.3 PMG: 20 ^h 14 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	340	51.3	174	40.4	+7	26.8	179	28.0	+9	02.9	86	52.5	-22	16.7	55	32.6	-22	27.6	
1	355	53.7	189	40.0		25.6	194	29.0		02.2	101	54.8		16.7	70	35.1		27.6	
2	10	56.2	204	39.6		24.4	209	30.0		01.6	116	57.1		16.7	85	37.6		27.6	
3	25	58.7	219	39.2		23.2	224	31.0		01.0	131	59.4		16.8	100	40.2		27.6	
4	41	01.1	234	38.8		22.0	239	31.9	+9	00.4	147	01.7		16.8	115	42.7		27.6	
5	56	03.6	249	38.3	+7	20.8	254	32.9	+8	59.8	162	04.0	-22	16.8	130	45.2	-22	27.6	
6	71	06.0	264	37.9	+7	19.6	269	33.9	+8	59.2	177	06.2	-22	16.8	145	47.8	-22	27.6	
7	86	08.5	279	37.5		18.4	284	34.9		58.6	192	08.5		16.9	160	50.3		27.7	
8	101	11.0	294	37.1		17.2	299	35.8		58.0	207	10.8		16.9	175	52.8		27.7	
9	116	13.4	309	36.7		16.0	314	36.8		57.4	222	13.1		16.9	190	55.4		27.7	
10	131	15.9	324	36.3		14.8	329	37.8		56.8	237	15.4		16.9	205	57.9		27.7	
11	146	18.4	339	35.9	+7	13.6	344	38.7	+8	56.2	252	17.7	-22	17.0	221	00.4	-22	27.7	
12	161	20.8	354	35.4	+7	12.4	359	39.7	+8	55.6	267	20.0	-22	17.0	236	03.0	-22	27.7	
13	176	23.3	9	35.0		11.2	14	40.7		55.0	282	22.3		17.0	251	05.5		27.7	
14	191	25.8	24	34.6		09.9	29	41.7		54.3	297	24.6		17.0	266	08.0		27.7	
15	206	28.2	39	34.2		08.7	44	42.6		53.7	312	26.8		17.1	281	10.6		27.7	
16	221	30.7	54	33.8		07.5	59	43.6		53.1	327	29.1		17.1	296	13.1		27.8	
17	236	33.2	69	33.4	+7	06.3	74	44.6	+8	52.5	342	31.4	-22	17.1	311	15.6	-22	27.8	
18	251	35.6	84	33.0	+7	05.1	89	45.6	+8	51.9	357	33.7	-22	17.1	326	18.2	-22	27.8	
19	266	38.1	99	32.5		03.9	104	46.5		51.3	12	36.0		17.2	341	20.7		27.8	
20	281	40.5	114	32.1		02.7	119	47.5		50.7	27	38.3		17.2	356	23.2		27.8	
21	296	43.0	129	31.7		01.5	134	48.5		50.1	42	40.6		17.2	11	25.7		27.8	
22	311	45.5	144	31.3	+7	00.3	149	49.5		49.5	57	42.8		17.2	26	28.3		27.8	
23	326	47.9	159	30.9	+6	59.1	164	50.4		48.9	72	45.1		17.3	41	30.8		27.8	
24	341	50.4	174	30.5	+6	57.9	179	51.4	+8	48.3	87	47.4	-22	17.3	56	33.3	-22	27.8	
Dif.	—		-4			-12	+10			-6			+23			0	+25		

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9				PHE {			Edad: 3 ^d 6									
	PMG: 11 ^h 59 ^m 4				4 ^h : 59'6 12 ^h : 59'3 20 ^h : 59'0												
	PMG: 15 ^h 45 ^m			Rº: 52 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m		
0	180	05.9	+7 44.1	131	56.4	97 -6 55.1	132	60 N	18 59	19 43	20 40	10 41	91	20 33	16		
1	195	06.1	43.1	146	25.1	97 -7 08.3	131	58	54	36	28	36	87	40	19		
2	210	06.3	42.2	160	53.8	98 21.4	130	56	50	29	18	31	84	46	21		
3	225	06.5	41.3	175	22.6	97 34.4	130	54	47	24	09	26	82	51	24		
4	240	06.7	40.4	189	51.3	97 -7 47.4	130	52	43	18	20 01	22	80	20 56	26		
5	255	06.9	+7 39.5	204	20.0	98 -8 00.4	129	50	18 41	19 14	19 54	10 19	78	21 00	28		
6	270	07.1	+7 38.6	218	48.8	97 -8 13.3	128	45	18 34	19 04	19 40	10 11	74	21 09	32		
7	285	07.3	37.6	233	17.5	98 26.1	127	40	29	18 57	29	10 05	70	17	35		
8	300	07.5	36.7	247	46.3	97 38.8	127	35	25	50	21	9 59	67	24	38		
9	315	07.7	35.8	262	15.0	98 -8 51.5	126	30	21	45	13	55	64	30	40		
10	330	07.9	34.9	276	43.8	98 -9 04.1	126	20	14	36	19 02	47	59	40	45		
11	345	08.1	+7 34.0	291	12.6	97 -9 16.7	124	10 N	18 08	18 29	18 54	9 39	56	21 49	48		
12	0	08.3	+7 33.1	305	41.3	98 -9 29.1	125	0	18 03	18 24	18 48	9 33	51	21 57	52		
13	15	08.5	32.1	320	10.1	98 41.6	123	10 S	17 57	19	43	26	48	22 06	55		
14	30	08.7	31.2	334	38.9	98 -9 53.9	123	20	52	14	40	19	44	15	59		
15	45	08.9	30.3	349	07.7	98 -10 06.2	122	30	46	10	38	11	40	25	64		
16	60	09.1	29.4	3	36.5	98 18.4	121	35	42	08	37	07	37	31	66		
17	75	09.3	+7 28.5	18	05.3	98 -10 30.5	120	40	17 39	18 06	18 37	9 02	34	22 38	69		
18	90	09.6	+7 27.6	32	34.1	98 -10 42.5	120	45	17 34	18 04	18 38	8 56	31	22 46	72		
19	105	09.8	26.6	47	02.9	98 -10 54.5	119	50	29	01	39	49	26	22 56	76		
20	120	10.0	25.7	61	31.7	98 -11 06.4	118	52	26	18 00	39	46	24	23 01	78		
21	135	10.2	24.8	76	00.5	98 18.2	117	54	24	17 59	40	42	23	06	80		
22	150	10.4	23.9	90	29.3	98 29.9	117	56	21	58	41	38	20	11	83		
23	165	10.6	23.0	104	58.1	97 41.6	116	58	17	57	42	34	17	17	86		
24	180	10.8	+7 22.0	119	26.8	-11 53.2		60 S	17 14	17 56	18 44	8 29	14	23 24	90		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 1 ^h 12 ^m 4		Mag: -3.9 PMG: 12 ^h 22 ^m			Mag: +1.7 PMG: 12 ^h 00 ^m			Mag: -2.2 PMG: 18 ^h 06 ^m			Mag: +0.3 PMG: 20 ^h 10 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	341	50.4	174	30.5	+6 57.9	179	51.4	+8 48.3	87	47.4	-22 -17.3	56	33.3	-22 27.8
1	356	52.9	189	30.1	56.6	194	52.4	47.6	102	49.7	-17.3	71	35.9	27.8
2	11	55.3	204	29.7	55.4	209	53.4	47.0	117	52.0	-17.3	86	38.4	27.9
3	26	57.8	219	29.3	54.2	224	54.3	46.4	132	54.3	-17.4	101	40.9	27.9
4	42	00.3	234	28.8	53.0	239	55.3	45.8	147	56.5	-17.4	116	43.4	27.9
5	57	02.7	249	28.4	+6 51.8	254	56.3	+8 45.2	162	58.8	-22 -17.4	131	46.0	-22 27.9
6	72	05.2	264	28.0	+6 50.6	269	57.3	+8 44.6	178	01.1	-22 -17.4	146	48.5	-22 27.9
7	87	07.6	279	27.6	49.4	284	58.2	44.0	193	03.4	-17.5	161	51.0	27.9
8	102	10.1	294	27.2	48.2	299	59.2	43.4	208	05.7	-17.5	176	53.6	27.9
9	117	12.6	309	26.8	46.9	315	00.2	42.8	223	08.0	-17.5	191	56.1	27.9
10	132	15.0	324	26.4	45.7	330	01.2	42.2	238	10.2	-17.5	206	58.6	27.9
11	147	17.5	339	26.0	+6 44.5	345	02.1	+8 41.5	253	12.5	-22 -17.6	222	01.1	-22 28.0
12	162	20.0	354	25.6	+6 43.3	0	03.1	+8 40.9	268	14.8	-22 -17.6	237	03.7	-22 28.0
13	177	22.4	9	25.2	42.1	15	04.1	40.3	283	17.1	-17.6	252	06.2	28.0
14	192	24.9	24	24.8	40.9	30	05.1	39.7	298	19.4	-17.6	267	08.7	28.0
15	207	27.4	39	24.4	39.7	45	06.0	39.1	313	21.6	-17.7	282	11.3	28.0
16	222	29.8	54	23.9	38.4	60	07.0	38.5	328	23.9	-17.7	297	13.8	28.0
17	237	32.3	69	23.5	+6 37.2	75	08.0	+8 37.9	343	26.2	-22 -17.7	312	16.3	-22 28.0
18	252	34.8	84	23.1	+6 36.0	90	09.0	+8 37.3	358	28.5	-22 -17.7	327	18.8	-22 28.0
19	267	37.2	99	22.7	34.8	105	09.9	36.7	13	30.8	-17.8	342	21.4	28.0
20	282	39.7	114	22.3	33.6	120	10.9	36.0	28	33.0	-17.8	357	23.9	28.0
21	297	42.1	129	21.9	32.3	135	11.9	35.4	43	35.3	-17.8	12	26.4	28.1
22	312	44.6	144	21.5	31.1	150	12.9	34.8	58	37.6	-17.9	27	28.9	28.1
23	327	47.1	159	21.1	29.9	165	13.9	34.2	73	39.9	-17.9	42	31.5	28.1
24	342	49.5	174	20.7	+6 28.7	180	14.8	+8 33.6	88	42.1	-22 -17.9	57	34.0	-22 28.1
Dif.	—		-4		-12		+10	-6		+23	0		+25	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°9			PHE { 4 ^h : 58'7 12 ^h : 58'4 20 ^h : 58'1											
	PMG: 11 ^h 59 ^m 1			Edad: 4 ^d 6				PMG: 16 ^h 37 ^m Rº: 52 ^m							
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	10.8	+7 22.0	119	26.8	98 -11 53.2	114	60 N	3 20	4 17	5 01	12 12	87	20 49	20
1	195	11.0	21.1	133	55.6	98 -12 04.6	115	58	31	24	05	12 03	84	20 59	23
2	210	11.2	20.2	148	24.4	98 16.1	113	56	42	30	09	11 55	81	21 07	26
3	225	11.4	19.3	162	53.2	98 27.4	112	54	50	36	13	48	79	15	28
4	240	11.6	18.4	177	22.0	98 38.6	112	52	3 58	41	16	42	76	22	30
5	255	11.8	+7 17.4	191	50.8	98 -12 49.8	110	50	4 05	4 45	5 19	11 37	74	21 28	32
6	270	12.0	+7 16.5	206	19.6	97 -13 00.8	110	45	4 19	4 55	5 25	11 25	70	21 41	36
7	285	12.2	15.6	220	48.3	98 11.8	109	40	30	5 03	30	15	67	21 52	39
8	300	12.4	14.7	235	17.1	98 22.7	108	35	38	09	35	11 06	64	22 02	41
9	315	12.6	13.8	249	45.9	97 33.5	107	30	46	14	38	10 59	62	10	43
10	330	12.8	12.8	264	14.6	98 44.2	106	20	4 57	23	45	46	58	25	46
11	345	13.0	+7 11.9	278	43.4	97 -13 54.8	106	10 N	5 05	5 29	5 51	10 35	55	22 37	50
12	0	13.2	+7 11.0	293	12.1	98 -14 05.4	104	0	5 11	5 35	5 56	10 24	52	22 49	52
13	15	13.5	10.1	307	40.9	97 15.8	103	10 S	15	40	6 01	14	49	23 01	55
14	30	13.7	09.2	322	09.6	98 26.1	103	20	19	44	06	10 03	46	14	58
15	45	13.9	08.2	336	38.4	97 36.4	102	30	20	48	12	9 51	42	29	61
16	60	14.1	07.3	351	07.1	97 46.6	100	35	21	50	16	44	39	37	63
17	75	14.3	+7 06.4	5	35.8	97 -14 56.6	100	40	5 21	5 52	6 19	9 36	37	23 47	65
18	90	14.5	+7 05.5	20	04.5	98 -15 06.6	98	45	5 20	5 54	6 24	9 27	33	23 58	69
19	105	14.7	04.5	34	33.3	97 16.4	98	50	19	57	29	15	30	***	***
20	120	14.9	03.6	49	02.0	97 26.2	97	52	19	57	31	10	28	***	***
21	135	15.1	02.7	63	30.7	96 35.9	96	54	18	58	34	9 05	25	***	***
22	150	15.3	01.8	77	59.3	97 45.5	94	56	17	5 59	37	8 58	24	***	***
23	165	15.5	+7 00.8	92	28.0	97 -15 54.9	94	58	15	6 00	40	8 51	21	***	***
24	180	15.7	+6 59.9	106	56.7	-16 04.3		60 S	5 14	6 02	6 43	8 43	18	***	***

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 08 ^m 5		Mag: -3.9 PMG: 12 ^h 23 ^m			Mag: +1.7 PMG: 11 ^h 58 ^m			Mag: -2.2 PMG: 18 ^h 02 ^m			Mag: +0.3 PMG: 20 ^h 06 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	342	49.5	174	20.7	+6 28.7	180	14.8	+8 33.6	88	42.1	-22 17.9	57	34.0	-22 28.1
1	357	52.0	189	20.3	27.5	195	15.8	33.0	103	44.4	17.9	72	36.5	28.1
2	12	54.5	204	19.9	26.3	210	16.8	32.4	118	46.7	18.0	87	39.0	28.1
3	27	56.9	219	19.5	25.0	225	17.8	31.8	133	49.0	18.0	102	41.6	28.1
4	42	59.4	234	19.1	23.8	240	18.7	31.2	148	51.2	18.0	117	44.1	28.1
5	58	01.9	249	18.7	+6 22.6	255	19.7	+8 30.5	163	53.5	-22 18.0	132	46.6	-22 28.1
6	73	04.3	264	18.3	+6 21.4	270	20.7	+8 29.9	178	55.8	-22 18.1	147	49.1	-22 28.2
7	88	06.8	279	17.9	20.2	285	21.7	29.3	193	58.1	18.1	162	51.7	28.2
8	103	09.3	294	17.5	18.9	300	22.6	28.7	209	00.3	18.1	177	54.2	28.2
9	118	11.7	309	17.1	17.7	315	23.6	28.1	224	02.6	18.1	192	56.7	28.2
10	133	14.2	324	16.7	16.5	330	24.6	27.5	239	04.9	18.2	207	59.2	28.2
11	148	16.6	339	16.3	+6 15.3	345	25.6	+8 26.9	254	07.2	-22 18.2	223	01.8	-22 28.2
12	163	19.1	354	15.9	+6 14.0	0	26.5	+8 26.3	269	09.4	-22 18.2	238	04.3	-22 28.2
13	178	21.6	9	15.5	12.8	15	27.5	25.6	284	11.7	18.2	253	06.8	28.2
14	193	24.0	24	15.1	11.6	30	28.5	25.0	299	14.0	18.3	268	09.3	28.2
15	208	26.5	39	14.6	10.4	45	29.5	24.4	314	16.3	18.3	283	11.9	28.2
16	223	29.0	54	14.2	09.2	60	30.5	23.8	329	18.5	18.3	298	14.4	28.3
17	238	31.4	69	13.8	+6 07.9	75	31.4	+8 23.2	344	20.8	-22 18.4	313	16.9	-22 28.3
18	253	33.9	84	13.4	+6 06.7	90	32.4	+8 22.6	359	23.1	-22 18.4	328	19.4	-22 28.3
19	268	36.4	99	13.0	05.5	105	33.4	22.0	14	25.3	18.4	343	21.9	28.3
20	283	38.8	114	12.6	04.3	120	34.4	21.3	29	27.6	18.4	358	24.5	28.3
21	298	41.3	129	12.2	03.0	135	35.3	20.7	44	29.9	18.5	13	27.0	28.3
22	313	43.7	144	11.8	01.8	150	36.3	20.1	59	32.1	18.5	28	29.5	28.3
23	328	46.2	159	11.4	+6 00.6	165	37.3	19.5	74	34.4	18.5	43	32.0	28.3
24	343	48.7	174	11.0	+5 59.4	180	38.3	+8 18.9	89	36.7	-22 18.5	58	34.6	-22 28.3
Dif.	—		-4 -12			+10 -6			+23 0			+25 0		

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9				SD: 15'8			PHE { 4 ^h : 57'8 12 ^h : 57'5 20 ^h : 57'2				Civil		Náut.		Hora Rº			
	PMG: 11 ^h 58 ^m 8				Edad: 5'6			Rº: 52 ^m											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.												
h	°	'	°	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	180	15.7	+6	59.9		106	56.7	97	-16	04.3	93	60 N	18 53	19 36	20 32	13 39	81		
1	195	15.9		59.0		121	25.4	96		13.6	91	58	49	30	21	27	77		
2	210	16.1		58.1		135	54.0	97		22.7	91	56	45	24	12	16	75		
3	225	16.4		57.1		150	22.7	96		31.8	90	54	42	18	20 03	13 07	72		
4	240	16.6		56.2		164	51.3	97		40.8	88	52	39	14	19 56	12 58	71		
5	255	16.8	+6	55.3		179	20.0	96	-16	49.6	88	50	18 36	19 09	19 50	12 51	69		
6	270	17.0	+6	54.4		193	48.6	96	-16	58.4	87	45	18 31	19 00	19 36	12 35	66		
7	285	17.2		53.4		208	17.2	97	-17	07.1	85	40	26	18 53	26	22	63		
8	300	17.4		52.5		222	45.9	96		15.6	85	35	22	47	18	10	62		
9	315	17.6		51.6		237	14.5	96		24.1	83	30	18	42	11	12 01	60		
10	330	17.8		50.7		251	43.1	96		32.4	82	20	12	34	19 00	11 44	57		
11	345	18.0	+6	49.7		266	11.7	96	-17	40.6	81	10 N	18 07	18 28	18 53	11 30	54		
12	0	18.2	+6	48.8		280	40.3	96	-17	48.7	81	0	18 02	18 23	18 47	11 16	52		
13	15	18.4		47.9		295	08.9	95	-17	56.8	79	10 S	17 57	18	43	11 03	50		
14	30	18.6		47.0		309	37.4	96	-18	04.7	78	20	52	15	40	10 49	47		
15	45	18.9		46.0		324	06.0	96		12.5	77	30	47	11	39	33	44		
16	60	19.1		45.1		338	34.6	95		20.2	75	35	44	09	39	23	43		
17	75	19.3	+6	44.2		353	03.1	96	-18	27.7	75	40	17 40	18 08	18 39	10 13	40		
18	90	19.5	+6	43.3		7	31.7	95	-18	35.2	74	45	17 36	18 06	18 40	10 00	38		
19	105	19.7		42.3		22	00.2	96		42.6	72	50	32	04	41	9 45	35		
20	120	19.9		41.4		36	28.8	95		49.8	71	52	29	03	42	38	34		
21	135	20.1		40.5		50	57.3	95	-18	56.9	71	54	27	03	44	30	32		
22	150	20.3		39.5		65	25.8	96	-19	04.0	69	56	24	02	45	22	29		
23	165	20.5		38.6		79	54.4	95		10.9	68	58	22	01	46	12	27		
24	180	20.7	+6	37.7		94	22.9		-19	17.7		60 S	17 18	18 00	18 48	9 01	24		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 1 ^h 04 ^m 6		Mag: -3.9 PMG: 12 ^h 24 ^m			Mag: +1.7 PMG: 11 ^h 57 ^m			Mag: -2.2 PMG: 17 ^h 59 ^m			Mag: +0.3 PMG: 20 ^h 02 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	343	48.7	174	11.0	+5	59.4		180	38.3	+8	18.9	89	36.7	-22	-18.5	58	34.6	-22	28.3
1	358	51.1	189	10.6		58.1		195	39.3		18.3	104	39.0		-18.6	73	37.1		28.3
2	13	53.6	204	10.2		56.9		210	40.2		17.7	119	41.2		-18.6	88	39.6		28.4
3	28	56.1	219	09.8		55.7		225	41.2		17.1	134	43.5		-18.6	103	42.1		28.4
4	43	58.5	234	09.4		54.5		240	42.2		16.4	149	45.8		-18.6	118	44.6		28.4
5	59	01.0	249	09.0	+5	53.2		255	43.2	+8	15.8	164	48.0	-22	-18.7	133	47.2	-22	28.4
6	74	03.5	264	08.7	+5	52.0		270	44.1	+8	15.2	179	50.3	-22	-18.7	148	49.7	-22	28.4
7	89	05.9	279	08.3		50.8		285	45.1		14.6	194	52.6		-18.7	163	52.2		28.4
8	104	08.4	294	07.9		49.5		300	46.1		14.0	209	54.8		-18.8	178	54.7		28.4
9	119	10.9	309	07.5		48.3		315	47.1		13.4	224	57.1		-18.8	193	57.2		28.4
10	134	13.3	324	07.1		47.1		330	48.1		12.8	239	59.4		-18.8	208	59.8		28.4
11	149	15.8	339	06.7	+5	45.9		345	49.0	+8	12.1	255	01.6	-22	-18.8	224	02.3	-22	28.4
12	164	18.2	354	06.3	+5	44.6		0	50.0	+8	11.5	270	03.9	-22	-18.9	239	04.8	-22	28.4
13	179	20.7	9	05.9		43.4		15	51.0		10.9	285	06.2		-18.9	254	07.3		28.5
14	194	23.2	24	05.5		42.2		30	52.0		10.3	300	08.4		-18.9	269	09.8		28.5
15	209	25.6	39	05.1		40.9		45	52.9		09.7	315	10.7		-18.9	284	12.4		28.5
16	224	28.1	54	04.7		39.7		60	53.9		09.1	330	12.9		-19.0	299	14.9		28.5
17	239	30.6	69	04.3	+5	38.5		75	54.9	+8	08.4	345	15.2	-22	-19.0	314	17.4	-22	28.5
18	254	33.0	84	03.9	+5	37.2		90	55.9	+8	07.8	0	17.5	-22	-19.0	329	19.9	-22	28.5
19	269	35.5	99	03.5		36.0		105	56.9		07.2	15	19.7		-19.1	344	22.4		28.5
20	284	38.0	114	03.1		34.8		120	57.8		06.6	30	22.0		-19.1	359	24.9		28.5
21	299	40.4	129	02.7		33.5		135	58.8		06.0	45	24.3		-19.1	14	27.5		28.5
22	314	42.9	144	02.3		32.3		150	59.8		05.4	60	26.5		-19.1	29	30.0		28.5
23	329	45.4	159	01.9		31.1		166	00.8		04.8	75	28.8		-19.2	44	32.5		28.6
24	344	47.8	174	01.5	+5	29.8		181	01.8	+8	04.1	90	31.0	-22	-19.2	59	35.0	-22	28.6
Dif.	—		-4			-12		+10		-6		+23		0		+25		0	

UT	SOL			 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 15'9 PMG: 11 ^h 58 ^m 4			SD: 15'5 Edad: 6 ^d 6	PHE { 4 ^h : 56'9 12 ^h : 56'6 20 ^h : 56'4																
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº						
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m					
0	180	20.7	+6 37.7	94	22.9	95	-19 17.7	67	60 N	3 26	4 22	5 06	15 00	68	21 37	39					
1	195	21.0		108	51.4	95		24.4	65	58	37	29	10	14 44	67	21 53	41				
2	210	21.2		123	19.9	95		30.9	65	56	46	35	13		31	65	22 06	43			
3	225	21.4		137	48.4	95		37.4	64	54	3 55	40	16		19	64		18 44			
4	240	21.6		152	16.9	95		43.8	62	52	4 02	44	19		09	63		29 44			
5	255	21.8	+6 33.0	166	45.4	95	-19 50.0	61	50	4 08	4 49	5 22		14 00	62		22 38	45			
6	270	22.0	+6 32.1	181	13.9	95	-19 56.1	60	45	4 21	4 57	5 27		13 41	60		22 58	46			
7	285	22.2		195	42.4	95	-20 02.1	59	40	32	5 04	32		25	59		23 14	47			
8	300	22.4		210	10.9	95		08.0	58	35	40	10	36		12	57		27 49			
9	315	22.6		224	39.4	95		13.8	56	30	47	15	39		13 01	56		39 49			
10	330	22.8		239	07.9	95		19.4	56	20	4 57	23	45		12 41	55		23 59	51		
11	345	23.1	+6 27.5	253	36.4	95	-20 25.0	54	10 N	5 05	5 29	5 51		12 24	54	***	***	***			
12	0	23.3	+6 26.5	268	04.9	95	-20 30.4	53	0	5 10	5 34	5 55		12 08	53	***	***	***			
13	15	23.5		282	33.4	95		35.7	52	10 S	14	39	6 00		11 53	51	***	***	***		
14	30	23.7		297	01.9	95		40.9	51	20	17	42	05		36	49		0 12	56		
15	45	23.9		311	30.4	95		46.0	49	30	18	46	10		17	48		30	58		
16	60	24.1		325	58.9	95		50.9	49	35	18	48	13		11 06	46		40	60		
17	75	24.3	+6 21.9	340	27.4	95	-20 55.8	47	40	5 18	5 49	6 16		10 53	45		0 52	62			
18	90	24.5	+6 20.9	354	55.9	95	-21 00.5	46	45	5 17	5 51	6 20		10 38	44		1 07	63			
19	105	24.8		9	24.4	95		05.1	45	50	15	52	25		20	41		24	66		
20	120	25.0		23	52.9	95		09.6	43	52	14	53	27		12	40		32	67		
21	135	25.2		38	21.4	95		13.9	43	54	13	54	29		10 02	39		42	68		
22	150	25.4		52	49.9	95		18.2	41	56	11	54	32		9 51	38		1 52	70		
23	165	25.6		67	18.4	95		22.3	40	58	10	55	34		9 39	35		2 04	72		
24	180	25.8	+6 15.3	81	46.9		-21 26.3		60 S	5 08	5 56	6 37		9 25	32		2 18	75			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 1 ^h 00 ^m 6		Mag: -3.9 PMG: 12 ^h 24 ^m		Mag: +1.7 PMG: 11 ^h 55 ^m		Mag: -2.2 PMG: 17 ^h 55 ^m		Mag: +0.4 PMG: 19 ^h 58 ^m							
	hG ♈		hG ♀	dec.	hG ♂	dec.	hG ♃	dec.	hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'						
0	344	47.8	174	01.5	+5 29.8	181	01.8	+8 04.1	90	31.0	-22 19.2	59	35.0	-22 28.6		
1	359	50.3	189	01.1		196	02.7		105	33.3		74	37.5		28.6	
2	14	52.7	204	00.7		211	03.7		120	35.6		89	40.0		28.6	
3	29	55.2	219	00.3		226	04.7		135	37.8		104	42.6		28.6	
4	44	57.7	233	59.9		241	05.7		150	40.1		119	45.1		28.6	
5	60	00.1	248	59.5	+5 23.7	256	06.7	+8 01.1	165	42.4	-22 19.3	134	47.6	-22 28.6		
6	75	02.6	263	59.2	+5 22.4	271	07.6	+8 00.4	180	44.6	-22 19.4	149	50.1	-22 28.6		
7	90	05.1	278	58.8		286	08.6	+7 59.8	195	46.9		164	52.6		28.6	
8	105	07.5	293	58.4		301	09.6		210	49.1		179	55.1		28.6	
9	120	10.0	308	58.0		316	10.6		225	51.4		194	57.7		28.6	
10	135	12.5	323	57.6		331	11.6		240	53.6		210	00.2		28.7	
11	150	14.9	338	57.2	+5 16.3	346	12.5	+7 57.4	255	55.9	-22 19.5	225	02.7	-22 28.7		
12	165	17.4	353	56.8	+5 15.0	1	13.5	+7 56.7	270	58.2	-22 19.5	240	05.2	-22 28.7		
13	180	19.8	8	56.4		16	14.5		286	00.4		255	07.7		28.7	
14	195	22.3	23	56.0		31	15.5		301	02.7		270	10.2		28.7	
15	210	24.8	38	55.6		46	16.5		316	04.9		285	12.7		28.7	
16	225	27.2	53	55.2		61	17.4		331	07.2		300	15.3		28.7	
17	240	29.7	68	54.8	+5 08.9	76	18.4	+7 53.7	346	09.4	-22 19.7	315	17.8	-22 28.7		
18	255	32.2	83	54.4	+5 07.6	91	19.4	+7 53.0	1	11.7	-22 19.7	330	20.3	-22 28.7		
19	270	34.6	98	54.1		106	20.4		16	14.0		345	22.8		28.7	
20	285	37.1	113	53.7		121	21.4		31	16.2		0	25.3		28.7	
21	300	39.6	128	53.3		136	22.3		46	18.5		15	27.8		28.8	
22	315	42.0	143	52.9		151	23.3		61	20.7		30	30.3		28.8	
23	330	44.5	158	52.5		166	24.3		76	23.0		45	32.9		28.8	
24	345	47.0	173	52.1	+5 00.2	181	25.3	+7 49.3	91	25.2	-22 19.9	60	35.4	-22 28.8		
Dif.	—		-4		-12	+10		-6	+23		0	+25				

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9				SD: 15'3		PHE { 4 ^h : 56'1		Edad: 7 ^d 6										12 ^h : 55'9		20 ^h : 55'7	
	PMG: 11 ^h 58 ^m 1																					
					PMG: 19 ^h 13 ^m		Rº: 51 ^m															
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.			Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'		°	'			°	h	m	h	m	h	m	m			
0	180	25.8	+6	15.3	81	46.9	95	-21	26.3	39	60 N	18 47	19 30	20 25			16 08	55	22 16	52		
1	195	26.0		14.4	96	15.4	96		30.2	38	58	43	24	14			15 51	54	34	51		
2	210	26.2		13.5	110	44.0	95		34.0	37	56	40	18	20 05			36	54	22 49	51		
3	225	26.5		12.5	125	12.5	96		37.7	35	54	37	13	19 58			23	54	23 02	51		
4	240	26.7		11.6	139	41.1	95		41.2	34	52	34	09	51			12	53	13	52		
5	255	26.9	+6	10.7	154	09.6	96	-21	44.6	33	50	18 32	19 05	19 45			15 02	53	23 23	52		
6	270	27.1	+6	09.7	168	38.2	96	-21	47.9	32	45	18 27	18 57	19 32			14 41	53	23 44	52		
7	285	27.3		08.8	183	06.8	95		51.1	31	40	23	50	22			24	53	***	***		
8	300	27.5		07.9	197	35.3	96		54.2	29	35	19	45	15			14 09	53	***	***		
9	315	27.7		06.9	212	03.9	96	-21	57.1	29	30	16	40	19 08			13 57	53	***	***		
10	330	27.9		06.0	226	32.5	97	-22	00.0	27	20	10	33	18 58			36	52	***	***		
11	345	28.2	+6	05.1	241	01.2	96	-22	02.7	26	10 N	18 06	18 27	18 51			13 18	52	0 17	51		
12	0	28.4	+6	04.1	255	29.8	96	-22	05.3	24	0	18 01	18 22	18 46			13 01	51	0 34	52		
13	15	28.6		03.2	269	58.4	97		07.7	24	10 S	17 57	18	43			12 44	51	0 50	53		
14	30	28.8		02.3	284	27.1	97		10.1	22	20	53	15	41			25	51	1 08	53		
15	45	29.0		01.3	298	55.8	96		12.3	22	30	48	12	40			12 05	50	28	55		
16	60	29.2	+6	00.4	313	24.4	97		14.5	20	35	45	11	40			11 52	50	40	55		
17	75	29.4	+5	59.5	327	53.1	98	-22	16.5	18	40	17 42	18 09	18 41			11 38	50	1 54	56		
18	90	29.7	+5	58.5	342	21.9	97	-22	18.3	18	45	17 39	18 08	18 42			11 22	49	2 10	57		
19	105	29.9		57.6	356	50.6	97		20.1	16	50	35	07	44			11 01	49	30	58		
20	120	30.1		56.6	11	19.3	98		21.7	16	52	33	06	46			10 52	48	39	59		
21	135	30.3		55.7	25	48.1	98		23.3	14	54	31	06	47			41	47	2 50	59		
22	150	30.5		54.8	40	16.9	98		24.7	13	56	28	06	49			29	46	3 02	60		
23	165	30.7		53.8	54	45.7	98		26.0	11	58	26	05	51			10 14	46	16	61		
24	180	30.9	+5	52.9	69	14.5		-22	27.1		60 S	17 23	18 05	18 53			9 57	46	3 33	62		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 0 ^h 56 ^m 7		Mag: -3.9 PMG: 12 ^h 25 ^m				Mag: +1.7 PMG: 11 ^h 54 ^m				Mag: -2.2 PMG: 17 ^h 52 ^m				Mag: +0.4 PMG: 19 ^h 54 ^m							
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	345	47.0	173	52.1	+5	00.2	181	25.3	+7	49.3	91	25.2	-22	-19.9	60	35.4	-22	28.8				
1	0	49.4	188	51.7	+4	58.9	196	26.3		48.7	106	27.5		-19.9	75	37.9		28.8				
2	15	51.9	203	51.3		57.7	211	27.2		48.1	121	29.7		-19.9	90	40.4		28.8				
3	30	54.3	218	50.9		56.5	226	28.2		47.5	136	32.0		-19.9	105	42.9		28.8				
4	45	56.8	233	50.5		55.2	241	29.2		46.9	151	34.2		-20.0	120	45.4		28.8				
5	60	59.3	248	50.2	+4	54.0	256	30.2	+7	46.2	166	36.5	-22	-20.0	135	47.9	-22	28.8				
6	76	01.7	263	49.8	+4	52.7	271	31.2	+7	45.6	181	38.7	-22	-20.0	150	50.4	-22	28.8				
7	91	04.2	278	49.4		51.5	286	32.1		45.0	196	41.0		-20.1	165	53.0		28.8				
8	106	06.7	293	49.0		50.3	301	33.1		44.4	211	43.3		-20.1	180	55.5		28.9				
9	121	09.1	308	48.6		49.0	316	34.1		43.8	226	45.5		-20.1	195	58.0		28.9				
10	136	11.6	323	48.2		47.8	331	35.1		43.1	241	47.8		-20.1	211	00.5		28.9				
11	151	14.1	338	47.8	+4	46.5	346	36.1	+7	42.5	256	50.0	-22	-20.2	226	03.0	-22	28.9				
12	166	16.5	353	47.4	+4	45.3	1	37.0	+7	41.9	271	52.3	-22	-20.2	241	05.5	-22	28.9				
13	181	19.0	8	47.1		44.1	16	38.0		41.3	286	54.5		-20.2	256	08.0		28.9				
14	196	21.5	23	46.7		42.8	31	39.0		40.7	301	56.8		-20.3	271	10.5		28.9				
15	211	23.9	38	46.3		41.6	46	40.0		40.1	316	59.0		-20.3	286	13.0		28.9				
16	226	26.4	53	45.9		40.3	61	41.0		39.4	332	01.3		-20.3	301	15.5		28.9				
17	241	28.8	68	45.5	+4	39.1	76	42.0	+7	38.8	347	03.5	-22	-20.3	316	18.1	-22	28.9				
18	256	31.3	83	45.1	+4	37.8	91	42.9	+7	38.2	2	05.8	-22	-20.4	331	20.6	-22	28.9				
19	271	33.8	98	44.7		36.6	106	43.9		37.6	17	08.0		-20.4	346	23.1		29.0				
20	286	36.2	113	44.3		35.4	121	44.9		37.0	32	10.2		-20.4	1	25.6		29.0				
21	301	38.7	128	44.0		34.1	136	45.9		36.3	47	12.5		-20.5	16	28.1		29.0				
22	316	41.2	143	43.6		32.9	151	46.9		35.7	62	14.7		-20.5	31	30.6		29.0				
23	331	43.6	158	43.2		31.6	166	47.8		35.1	77	17.0		-20.5	46	33.1		29.0				
24	346	46.1	173	42.8	+4	30.4	181	48.8	+7	34.5	92	19.2	-22	-20.5	61	35.6	-22	29.0				
Dif.	—		-4 -12				+10 -6				+22 0				+25 0							

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 8				SD: 15'1 Edad: 8 ^d 6 PHE { 4 ^h : 55'5 12 ^h : 55'3 20 ^h : 55'1 PMG: 20 ^h 04 ^m Rº: 50 ^m														
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°		h m	h m	h m	h m m	m	h m m	m		
0	180	30.9	+5	52.9	69	14.5	99	-22	27.1	11	60 N	3 32	4 27	5 11		17 03	39	23 08	63
1	195	31.2		52.0	83	43.4	98		28.2	9	58	42	33	14		16 45	41	25	62
2	210	31.4		51.0	98	12.2	99		29.1	9	56	51	39	17		30	42	40	61
3	225	31.6		50.1	112	41.1	99		30.0	7	54	3 59	44	20		17	43	23 53	60
4	240	31.8		49.1	127	10.0	100		30.7	6	52	4 06	48	22		16 05	44	***	***
5	255	32.0	+5	48.2	141	39.0	99	-22	31.3	4	50	4 12	4 52	5 25		15 55	45	***	***
6	270	32.2	+5	47.3	156	07.9	100	-22	31.7	4	45	4 24	5 00	5 30		15 34	46	***	***
7	285	32.4		46.3	170	36.9	100		32.1	2	40	34	06	34		17	46	0 01	52
8	300	32.7		45.4	185	05.9	100		32.3	2	35	42	12	37		15 02	47	16	51
9	315	32.9		44.5	199	34.9	101		32.5	0	30	48	16	41		14 50	47	28	52
10	330	33.1		43.5	214	04.0	101		32.5	1	20	4 58	24	46		28	49	0 50	51
11	345	33.3	+5	42.6	228	33.1	101	-22	32.4	2	10 N	5 05	5 29	5 50		14 10	49	1 08	51
12	0	33.5	+5	41.6	243	02.2	101	-22	32.2	4	0	5 10	5 34	5 55		13 52	50	1 26	51
13	15	33.7		40.7	257	31.3	102		31.8	4	10 S	13	37	5 59		35	51	1 43	51
14	30	34.0		39.8	272	00.5	102		31.4	6	20	15	41	6 03		13 16	52	2 01	51
15	45	34.2		38.8	286	29.7	102		30.8	7	30	16	43	07		12 55	52	23	50
16	60	34.4		37.9	300	58.9	103		30.1	7	35	15	45	10		42	53	35	50
17	75	34.6	+5	36.9	315	28.2	103	-22	29.4	9	40	5 15	5 46	6 13		12 28	53	2 50	49
18	90	34.8	+5	36.0	329	57.5	103	-22	28.5	10	45	5 13	5 47	6 16		12 11	54	3 07	49
19	105	35.0		35.1	344	26.8	104		27.5	12	50	11	48	20		11 50	55	28	49
20	120	35.3		34.1	358	56.2	103		26.3	12	52	10	49	22		40	55	38	49
21	135	35.5		33.2	13	25.5	105		25.1	14	54	08	49	24		28	56	3 49	49
22	150	35.7		32.2	27	55.0	104		23.7	14	56	06	49	26		15	57	4 02	48
23	165	35.9		31.3	42	24.4	105		22.3	16	58	04	50	29		11 00	57	4 17	48
24	180	36.1	+5	30.4	56	53.9		-22	20.7		60 S	5 02	5 50	6 31		10 43	58	4 35	47
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 0 ^h 52 ^m 8		Mag: -3.9 PMG: 12 ^h 25 ^m				Mag: +1.7 PMG: 11 ^h 52 ^m				Mag: -2.2 PMG: 17 ^h 48 ^m				Mag: +0.4 PMG: 19 ^h 50 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	346	46.1	173	42.8	+4	30.4	181	48.8	+7	34.5	92	19.2	-22	20.5	61	35.6	-22	29.0	
1	1	48.6	188	42.4		29.1	196	49.8		33.9	107	21.5		20.6	76	38.1		29.0	
2	16	51.0	203	42.0		27.9	211	50.8		33.2	122	23.7		20.6	91	40.6		29.0	
3	31	53.5	218	41.6		26.6	226	51.8		32.6	137	26.0		20.6	106	43.1		29.0	
4	46	56.0	233	41.3		25.4	241	52.8		32.0	152	28.2		20.7	121	45.7		29.0	
5	61	58.4	248	40.9	+4	24.1	256	53.7	+7	31.4	167	30.5	-22	20.7	136	48.2	-22	29.0	
6	77	00.9	263	40.5	+4	22.9	271	54.7	+7	30.8	182	32.7	-22	20.7	151	50.7	-22	29.0	
7	92	03.3	278	40.1		21.7	286	55.7		30.1	197	35.0		20.7	166	53.2		29.1	
8	107	05.8	293	39.7		20.4	301	56.7		29.5	212	37.2		20.8	181	55.7		29.1	
9	122	08.3	308	39.3		19.2	316	57.7		28.9	227	39.4		20.8	196	58.2		29.1	
10	137	10.7	323	39.0		17.9	331	58.7		28.3	242	41.7		20.8	212	00.7		29.1	
11	152	13.2	338	38.6	+4	16.7	346	59.6	+7	27.6	257	43.9	-22	20.9	227	03.2	-22	29.1	
12	167	15.7	353	38.2	+4	15.4	2	00.6	+7	27.0	272	46.2	-22	20.9	242	05.7	-22	29.1	
13	182	18.1	8	37.8		14.2	17	01.6		26.4	287	48.4		20.9	257	08.2		29.1	
14	197	20.6	23	37.4		12.9	32	02.6		25.8	302	50.7		20.9	272	10.7		29.1	
15	212	23.1	38	37.0		11.7	47	03.6		25.2	317	52.9		21.0	287	13.2		29.1	
16	227	25.5	53	36.7		10.4	62	04.5		24.5	332	55.1		21.0	302	15.7		29.1	
17	242	28.0	68	36.3	+4	09.2	77	05.5	+7	23.9	347	57.4	-22	21.0	317	18.2	-22	29.1	
18	257	30.4	83	35.9	+4	07.9	92	06.5	+7	23.3	2	59.6	-22	21.1	332	20.7	-22	29.1	
19	272	32.9	98	35.5		06.7	107	07.5		22.7	18	01.9		21.1	347	23.3		29.2	
20	287	35.4	113	35.1		05.4	122	08.5		22.1	33	04.1		21.1	2	25.8		29.2	
21	302	37.8	128	34.7		04.2	137	09.5		21.4	48	06.3		21.1	17	28.3		29.2	
22	317	40.3	143	34.4		02.9	152	10.4		20.8	63	08.6		21.2	32	30.8		29.2	
23	332	42.8	158	34.0		01.7	167	11.4		20.2	78	10.8		21.2	47	33.3		29.2	
24	347	45.2	173	33.6	+4	00.4	182	12.4	+7	19.6	93	13.1	-22	21.2	62	35.8	-22	29.2	
Dif.	—		-4		-12		+10		-6		+22		0		+25				

UT	SOL			☾ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9			SD: 15'0			PHE { 4 ^h : 54'9 12 ^h : 54'8 20 ^h : 54'6										
	PMG: 11 ^h 57 ^m 4			Edad: 9 ^d 6													
				PMG: 20 ^h 54 ^m			Rº: 48 ^m										
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.				Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°		°	h m	h m	h m	h m m	h m m	h m m	
0	180	36.1	+5 30.4	56	53.9	105	-22 20.7	17	60 N	18 40	19 24	20 18	17 42	28	***	***	
1	195	36.3	29.4	71	23.4	106	19.0	18	58	37	18	20 08	26	30	***	***	
2	210	36.6	28.5	85	53.0	106	17.2	19	56	34	13	19 59	12	32	***	***	
3	225	36.8	27.5	100	22.6	106	15.3	20	54	32	08	52	17 00	34	***	***	
4	240	37.0	26.6	114	52.2	107	13.3	21	52	30	04	46	16 49	35	0 05	58	
5	255	37.2	+5 25.6	129	21.9	107	-22 11.2	22	50	18 28	19 00	19 40	16 40	36	0 15	58	
6	270	37.4	+5 24.7	143	51.6	107	-22 09.0	23	45	18 23	18 53	19 28	16 20	38	0 36	56	
7	285	37.6	23.8	158	21.3	108	06.7	25	40	19	47	19	16 03	41	0 53	55	
8	300	37.9	22.8	172	51.1	108	04.2	25	35	16	42	12	15 49	43	1 07	54	
9	315	38.1	21.9	187	20.9	109	-22 01.7	27	30	13	37	19 06	37	44	20	53	
10	330	38.3	20.9	201	50.8	109	-21 59.0	27	20	09	31	18 56	15 17	45	41	52	
11	345	38.5	+5 20.0	216	20.7	109	-21 56.3	29	10 N	18 04	18 26	18 50	14 59	47	1 59	51	
12	0	38.7	+5 19.0	230	50.6	110	-21 53.4	30	0	18 01	18 21	18 46	14 42	49	2 17	49	
13	15	38.9	18.1	245	20.6	110	50.4	30	10 S	17 57	18	43	26	50	34	48	
14	30	39.2	17.2	259	50.6	111	47.4	32	20	53	15	41	14 08	52	2 52	47	
15	45	39.4	16.2	274	20.7	111	44.2	33	30	49	13	41	13 47	54	3 13	46	
16	60	39.6	15.3	288	50.8	111	40.9	34	35	47	12	41	35	55	25	45	
17	75	39.8	+5 14.3	303	20.9	112	-21 37.5	35	40	17 44	18 11	18 43	13 21	57	3 39	44	
18	90	40.0	+5 13.4	317	51.1	112	-21 34.0	36	45	17 41	18 10	18 44	13 05	58	3 56	42	
19	105	40.3	12.4	332	21.3	113	30.4	36	50	38	10	47	12 45	60	4 17	40	
20	120	40.5	11.5	346	51.6	113	26.8	38	52	36	10	49	35	61	27	39	
21	135	40.7	10.6	1	21.9	114	23.0	39	54	34	09	50	24	62	38	38	
22	150	40.9	09.6	15	52.3	114	19.1	40	56	32	09	52	12 12	63	4 50	37	
23	165	41.1	08.7	30	22.7	115	15.1	41	58	30	09	55	11 57	66	5 05	35	
24	180	41.3	+5 07.7	44	53.2		-21 11.0		60 S	17 28	18 09	18 58	11 41	67	5 22	33	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 48 ^m 9		Mag: -3.9 PMG: 12 ^h 26 ^m			Mag: +1.7 PMG: 11 ^h 50 ^m			Mag: -2.2 PMG: 17 ^h 44 ^m			Mag: +0.4 PMG: 19 ^h 46 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	347	45.2	173	33.6	+4 00.4	182	12.4	+7 19.6	93	13.1	-22 -21.2	62	35.8	-22 29.2
1	2	47.7	188	33.2	+3 59.2	197	13.4	19.0	108	15.3	-21.3	77	38.3	29.2
2	17	50.2	203	32.8	57.9	212	14.4	18.3	123	17.5	-21.3	92	40.8	29.2
3	32	52.6	218	32.5	56.7	227	15.4	17.7	138	19.8	-21.3	107	43.3	29.2
4	47	55.1	233	32.1	55.4	242	16.3	17.1	153	22.0	-21.4	122	45.8	29.2
5	62	57.6	248	31.7	+3 54.2	257	17.3	+7 16.5	168	24.3	-22 -21.4	137	48.3	-22 29.2
6	78	00.0	263	31.3	+3 52.9	272	18.3	+7 15.8	183	26.5	-22 -21.4	152	50.8	-22 29.2
7	93	02.5	278	30.9	51.7	287	19.3	15.2	198	28.7	-21.4	167	53.3	29.3
8	108	04.9	293	30.5	50.4	302	20.3	14.6	213	31.0	-21.5	182	55.8	29.3
9	123	07.4	308	30.2	49.2	317	21.3	14.0	228	33.2	-21.5	197	58.3	29.3
10	138	09.9	323	29.8	47.9	332	22.2	13.3	243	35.4	-21.5	213	00.8	29.3
11	153	12.3	338	29.4	+3 46.7	347	23.2	+7 12.7	258	37.7	-22 -21.6	228	03.3	-22 29.3
12	168	14.8	353	29.0	+3 45.4	2	24.2	+7 12.1	273	39.9	-22 -21.6	243	05.8	-22 29.3
13	183	17.3	8	28.6	44.2	17	25.2	11.5	288	42.1	-21.6	258	08.3	29.3
14	198	19.7	23	28.3	42.9	32	26.2	10.9	303	44.4	-21.6	273	10.8	29.3
15	213	22.2	38	27.9	41.7	47	27.2	10.2	318	46.6	-21.7	288	13.3	29.3
16	228	24.7	53	27.5	40.4	62	28.1	09.6	333	48.9	-21.7	303	15.8	29.3
17	243	27.1	68	27.1	+3 39.2	77	29.1	+7 09.0	348	51.1	-22 -21.7	318	18.3	-22 29.3
18	258	29.6	83	26.7	+3 37.9	92	30.1	+7 08.4	3	53.3	-22 -21.8	333	20.8	-22 29.3
19	273	32.1	98	26.4	36.6	107	31.1	07.7	18	55.6	-21.8	348	23.3	29.4
20	288	34.5	113	26.0	35.4	122	32.1	07.1	33	57.8	-21.8	3	25.8	29.4
21	303	37.0	128	25.6	34.1	137	33.1	06.5	49	00.0	-21.9	18	28.3	29.4
22	318	39.4	143	25.2	32.9	152	34.1	05.9	64	02.3	-21.9	33	30.8	29.4
23	333	41.9	158	24.9	31.6	167	35.0	05.2	79	04.5	-21.9	48	33.3	29.4
24	348	44.4	173	24.5	+3 30.4	182	36.0	+7 04.6	94	06.7	-22 -21.9	63	35.8	-22 29.4
Dif.	—		-4	-13		+10	-6		+22	0		+25		

UT	SOL			☾ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 1			SD: 14'9 Edad: 10 ^d 6 PMG: 21 ^h 42 ^m			PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3 Rº: 46 ^m											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m	m
0	180	41.3	+5	07.7	44	53.2	115	-21	11.0	42	60 N	3 38	4 32	5 15	18 10	19	0 11	72
1	195	41.6		06.8	59	23.7	115		06.8	43	58	48	38	18	17 56	22	27	69
2	210	41.8		05.8	73	54.2	116	-21	02.5	44	56	3 56	43	21	44 25		41	66
3	225	42.0		04.9	88	24.8	116	-20	58.1	44	54	4 03	47	24	34 26		0 53	65
4	240	42.2		03.9	102	55.4	117		53.7	46	52	10	51	26	24 29		1 03	63
5	255	42.4	+5	03.0	117	26.1	118	-20	49.1	47	50	4 15	4 55	5 28	17 16	30	1 13	61
6	270	42.7	+5	02.0	131	56.9	117	-20	44.4	47	45	4 27	5 02	5 32	16 58	33	1 32	59
7	285	42.9		01.1	146	27.6	119		39.7	49	40	36	08	36	44 35		1 48	57
8	300	43.1	+5	00.2	160	58.5	118		34.8	50	35	43	13	39	32 37		2 01	56
9	315	43.3	+4	59.2	175	29.3	119		29.8	50	30	49	18	42	21 39		13	54
10	330	43.5		58.3	190	00.2	120		24.8	52	20	4 58	24	46	16 02	42	33	51
11	345	43.8	+4	57.3	204	31.2	120	-20	19.6	52	10 N	5 05	5 29	5 50	15 46	44	2 50	50
12	0	44.0	+4	56.4	219	02.2	121	-20	14.4	53	0	5 09	5 33	5 54	15 31	47	3 06	48
13	15	44.2		55.4	233	33.3	121		09.1	54	10 S	12	36	5 57	16 49		22	46
14	30	44.4		54.5	248	04.4	121	-20	03.7	55	20	13	39	6 01	15 00	51	39	44
15	45	44.6		53.5	262	35.5	123	-19	58.2	56	30	13	41	05	14 41	54	3 59	41
16	60	44.8		52.6	277	06.8	122		52.6	57	35	13	42	07	30 56		4 10	40
17	75	45.1	+4	51.6	291	38.0	123	-19	46.9	58	40	5 11	5 43	6 10	14 18	57	4 23	38
18	90	45.3	+4	50.7	306	09.3	124	-19	41.1	59	45	5 09	5 43	6 13	14 03	60	4 38	36
19	105	45.5		49.7	320	40.7	124		35.2	59	50	07	44	16	13 45	62	4 57	33
20	120	45.7		48.8	335	12.1	124		29.3	60	52	05	44	18	36 64		5 06	32
21	135	45.9		47.8	349	43.5	125		23.3	62	54	03	44	19	26 66		16	30
22	150	46.2		46.9	4	15.0	125		17.1	62	56	5 01	44	21	15 69		27	29
23	165	46.4		45.9	18	46.5	126		10.9	62	58	4 59	44	23	13 03	70	5 40	26
24	180	46.6	+4	45.0	33	18.1		-19	04.7		60 S	4 56	5 44	6 25	12 48	74	5 55	23

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 44 ^m 9		Mag: -3.9 PMG: 12 ^h 27 ^m			Mag: +1.7 PMG: 11 ^h 49 ^m			Mag: -2.2 PMG: 17 ^h 41 ^m			Mag: +0.4 PMG: 19 ^h 42 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	348	44.4	173	24.5	+3	30.4	182	36.0	+7	04.6	94	06.7	-22	21.9	63	35.8	-22	29.4
1	3	46.8	188	24.1		29.1	197	37.0		04.0	109	08.9		22.0	78	38.3		29.4
2	18	49.3	203	23.7		27.9	212	38.0		03.4	124	11.2		22.0	93	40.8		29.4
3	33	51.8	218	23.3		26.6	227	39.0		02.8	139	13.4		22.0	108	43.3		29.4
4	48	54.2	233	23.0		25.4	242	40.0		02.1	154	15.6		22.1	123	45.8		29.4
5	63	56.7	248	22.6	+3	24.1	257	40.9	+7	01.5	169	17.9	-22	22.1	138	48.3	-22	29.4
6	78	59.2	263	22.2	+3	22.8	272	41.9	+7	00.9	184	20.1	-22	22.1	153	50.8	-22	29.4
7	94	01.6	278	21.8		21.6	287	42.9	+7	00.3	199	22.3		22.2	168	53.3		29.4
8	109	04.1	293	21.5		20.3	302	43.9	+6	59.6	214	24.6		22.2	183	55.8		29.5
9	124	06.5	308	21.1		19.1	317	44.9		59.0	229	26.8		22.2	198	58.3		29.5
10	139	09.0	323	20.7		17.8	332	45.9		58.4	244	29.0		22.2	214	00.8		29.5
11	154	11.5	338	20.3	+3	16.6	347	46.9	+6	57.8	259	31.2	-22	22.3	229	03.3	-22	29.5
12	169	13.9	353	19.9	+3	15.3	2	47.8	+6	57.1	274	33.5	-22	22.3	244	05.8	-22	29.5
13	184	16.4	8	19.6		14.0	17	48.8		56.5	289	35.7		22.3	259	08.3		29.5
14	199	18.9	23	19.2		12.8	32	49.8		55.9	304	37.9		22.4	274	10.8		29.5
15	214	21.3	38	18.8		11.5	47	50.8		55.3	319	40.2		22.4	289	13.3		29.5
16	229	23.8	53	18.4		10.3	62	51.8		54.6	334	42.4		22.4	304	15.8		29.5
17	244	26.3	68	18.1	+3	09.0	77	52.8	+6	54.0	349	44.6	-22	22.5	319	18.3	-22	29.5
18	259	28.7	83	17.7	+3	07.8	92	53.7	+6	53.4	4	46.8	-22	22.5	334	20.8	-22	29.5
19	274	31.2	98	17.3		06.5	107	54.7		52.8	19	49.1		22.5	349	23.3		29.5
20	289	33.7	113	16.9		05.2	122	55.7		52.1	34	51.3		22.5	4	25.8		29.5
21	304	36.1	128	16.6		04.0	137	56.7		51.5	49	53.5		22.6	19	28.3		29.5
22	319	38.6	143	16.2		02.7	152	57.7		50.9	64	55.7		22.6	34	30.8		29.6
23	334	41.0	158	15.8		01.5	167	58.7		50.3	79	58.0		22.6	49	33.3		29.6
24	349	43.5	173	15.4	+3	00.2	182	59.7	+6	49.6	95	00.2	-22	22.7	64	35.8	-22	29.6
Dif.	—		-4		-13		+10		-6		+22		0		+25			

UT	SOL				☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9				SD: 14°8		PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'1											
	PMG: 11 ^h 56 ^m 7				Edad: 11 ^d 6													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.				Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	
0	180	46.6	+4	45.0	33	18.1	127	-19	04.7	64	60 N	18 34	19 17	20 10	18 29	14	1 23 75	
1	195	46.8		44.1	47	49.8	127	-18	58.3	65	58	32	12	20 01	18 17		36 72	
2	210	47.0		43.1	62	21.5	127		51.8	65	56	29	07	19 53	09 19		47 70	
3	225	47.3		42.2	76	53.2	128		45.3	66	54	27	19 03	47	18 00	22	1 58 67	
4	240	47.5		41.2	91	25.0	128		38.7	67	52	25	18 59	40	17 53	23	2 06 66	
5	255	47.7	+4	40.3	105	56.8	129	-18	32.0	68	50	18 23	18 56	19 35	17 46	25	2 14 64	
6	270	47.9	+4	39.3	120	28.7	130	-18	25.2	69	45	18 19	18 49	19 24	17 31	29	2 31 61	
7	285	48.1		38.4	135	00.7	130		18.3	69	40	16	43	15	19 31		45 58	
8	300	48.4		37.4	149	32.7	130		11.4	71	35	13	39	09	09 33		2 57 56	
9	315	48.6		36.5	164	04.7	131	-18	04.3	71	30	11	35	19 03	17 00	35	3 07 54	
10	330	48.8		35.5	178	36.8	131	-17	57.2	71	20	07	29	18 55	16 44	39	24 51	
11	345	49.0	+4	34.6	193	08.9	132	-17	50.1	73	10 N	18 03	18 24	18 49	16 30	42	3 40 48	
12	0	49.2	+4	33.6	207	41.1	132	-17	42.8	73	0	18 00	18 21	18 45	16 18	44	3 54 45	
13	15	49.5		32.7	222	13.3	133		35.5	74	10 S	17 57	18	42	16 05	47	4 08 43	
14	30	49.7		31.7	236	45.6	133		28.1	75	20	54	16	41	15 51	50	23 40	
15	45	49.9		30.8	251	17.9	134		20.6	75	30	50	14	42	35 54		40 37	
16	60	50.1		29.8	265	50.3	134		13.1	77	35	48	13	43	26 55		4 50 35	
17	75	50.4	+4	28.9	280	22.7	135	-17	05.4	77	40	17 46	18 13	18 44	15 15	58	5 01 33	
18	90	50.6	+4	27.9	294	55.2	135	-16	57.7	77	45	17 43	18 13	18 47	15 03	60	5 14 31	
19	105	50.8		27.0	309	27.7	135		50.0	79	50	40	13	50	14 47	65	30 28	
20	120	51.0		26.0	324	00.2	136		42.1	79	52	39	13	52	40 66		38 26	
21	135	51.2		25.1	338	32.8	137		34.2	80	54	38	13	54	32 68		46 24	
22	150	51.5		24.1	353	05.5	137		26.2	80	56	36	13	56	24 70		5 56 22	
23	165	51.7		23.2	7	38.2	137		18.2	81	58	34	13	18 59	13 73		6 06 20	
24	180	51.9	+4	22.2	22	10.9		-16	10.1		60 S	17 32	18 14	19 02	14 02	75	6 18 17	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 0 ^h 41 ^m 0		Mag: -3.9 PMG: 12 ^h 27 ^m				Mag: +1.7 PMG: 11 ^h 47 ^m				Mag: -2.2 PMG: 17 ^h 37 ^m				Mag: +0.4 PMG: 19 ^h 38 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	349	43.5	173	15.4	+3	00.2	182	59.7	+6	49.6	95	00.2	-22	-22.7	64	35.8	-22	29.6
1	4	46.0	188	15.1	+2	58.9	198	00.6		49.0	110	02.4		-22.7	79	38.3		29.6
2	19	48.4	203	14.7		57.7	213	01.6		48.4	125	04.6		-22.7	94	40.8		29.6
3	34	50.9	218	14.3		56.4	228	02.6		47.8	140	06.9		-22.8	109	43.3		29.6
4	49	53.4	233	13.9		55.2	243	03.6		47.1	155	09.1		-22.8	124	45.8		29.6
5	64	55.8	248	13.6	+2	53.9	258	04.6	+6	46.5	170	11.3	-22	-22.8	139	48.3	-22	29.6
6	79	58.3	263	13.2	+2	52.6	273	05.6	+6	45.9	185	13.5	-22	-22.8	154	50.7	-22	29.6
7	95	00.8	278	12.8		51.4	288	06.6		45.3	200	15.8		-22.9	169	53.2		29.6
8	110	03.2	293	12.4		50.1	303	07.5		44.6	215	18.0		-22.9	184	55.7		29.6
9	125	05.7	308	12.1		48.9	318	08.5		44.0	230	20.2		-22.9	199	58.2		29.6
10	140	08.2	323	11.7		47.6	333	09.5		43.4	245	22.4		-23.0	215	00.7		29.6
11	155	10.6	338	11.3	+2	46.3	348	10.5	+6	42.8	260	24.6	-22	-23.0	230	03.2	-22	29.7
12	170	13.1	353	10.9	+2	45.1	3	11.5	+6	42.1	275	26.9	-22	-23.0	245	05.7	-22	29.7
13	185	15.5	8	10.6		43.8	18	12.5		41.5	290	29.1		-23.1	260	08.2		29.7
14	200	18.0	23	10.2		42.6	33	13.5		40.9	305	31.3		-23.1	275	10.7		29.7
15	215	20.5	38	09.8		41.3	48	14.4		40.2	320	33.5		-23.1	290	13.2		29.7
16	230	22.9	53	09.4		40.0	63	15.4		39.6	335	35.8		-23.2	305	15.7		29.7
17	245	25.4	68	09.1	+2	38.8	78	16.4	+6	39.0	350	38.0	-22	-23.2	320	18.2	-22	29.7
18	260	27.9	83	08.7	+2	37.5	93	17.4	+6	38.4	5	40.2	-22	-23.2	335	20.7	-22	29.7
19	275	30.3	98	08.3		36.3	108	18.4		37.7	20	42.4		-23.2	350	23.2		29.7
20	290	32.8	113	08.0		35.0	123	19.4		37.1	35	44.6		-23.3	5	25.7		29.7
21	305	35.3	128	07.6		33.7	138	20.4		36.5	50	46.8		-23.3	20	28.1		29.7
22	320	37.7	143	07.2		32.5	153	21.4		35.9	65	49.1		-23.3	35	30.6		29.7
23	335	40.2	158	06.8		31.2	168	22.3		35.2	80	51.3		-23.4	50	33.1		29.7
24	350	42.6	173	06.5	+2	29.9	183	23.3	+6	34.6	95	53.5	-22	-23.4	65	35.6	-22	29.7
Dif.	—		-4		-13		+10		-6		+22		0		+25			

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 56 ^m 4			SD: 14'7 Edad: 12 ^d 6		PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0		Rº: 42 ^m									
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m
0	180	51.9	+4 22.2	22	10.9	138	-16 10.1	82	60 N	3 44	4 37	5 20	18 43	11	2 38	76	
1	195	52.1	21.2	36	43.7	139	-16 01.9	83	58	3 53	42	23	35	14	48	73	
2	210	52.3	20.3	51	16.6	138	-15 53.6	83	56	4 01	47	25	28	16	2 57	70	
3	225	52.6	19.3	65	49.4	140	45.3	84	54	07	51	27	22	18	3 05	68	
4	240	52.8	18.4	80	22.4	139	36.9	84	52	13	55	29	16	20	12	66	
5	255	53.0	+4 17.4	94	55.3	140	-15 28.5	85	50	4 19	4 58	5 31	18 11	22	3 18	65	
6	270	53.2	+4 16.5	109	28.3	141	-15 20.0	86	45	4 30	5 05	5 35	18 00	25	3 32	61	
7	285	53.4	15.5	124	01.4	141	11.4	87	40	38	10	38	17 50	29	43	58	
8	300	53.7	14.6	138	34.5	142	-15 02.7	87	35	45	15	40	42	31	3 53	55	
9	315	53.9	13.6	153	07.7	141	-14 54.0	87	30	50	19	43	35	33	4 01	53	
10	330	54.1	12.7	167	40.8	143	45.3	88	20	4 59	25	47	23	37	15	50	
11	345	54.3	+4 11.7	182	14.1	142	-14 36.5	89	10 N	5 04	5 29	5 50	17 12	40	4 28	46	
12	0	54.6	+4 10.8	196	47.3	144	-14 27.6	90	0	5 08	5 32	5 53	17 02	43	4 39	44	
13	15	54.8	09.8	211	20.7	143	18.6	90	10 S	11	35	56	16 52	46	4 51	41	
14	30	55.0	08.9	225	54.0	144	09.6	90	20	12	37	5 59	41	49	5 03	38	
15	45	55.2	07.9	240	27.4	145	-14 00.6	91	30	11	39	6 02	29	53	17	34	
16	60	55.4	07.0	255	00.9	144	-13 51.5	92	35	10	39	04	21	56	25	32	
17	75	55.7	+4 06.0	269	34.3	146	-13 42.3	93	40	5 08	5 39	6 06	16 13	58	5 34	30	
18	90	55.9	+4 05.1	284	07.9	145	-13 33.0	92	45	5 06	5 40	6 09	16 03	61	5 45	27	
19	105	56.1	04.1	298	41.4	146	23.8	94	50	02	40	12	15 52	64	5 58	23	
20	120	56.3	03.1	313	15.0	147	14.4	94	52	5 00	39	13	46	67	6 04	21	
21	135	56.6	02.2	327	48.7	146	-13 05.0	94	54	4 58	39	14	40	69	10	20	
22	150	56.8	01.2	342	22.3	148	-12 55.6	95	56	56	39	16	34	70	18	17	
23	165	57.0	+4 00.3	356	56.1	147	46.1	96	58	53	39	18	15 26	73	6 26	15	
24	180	57.2	+3 59.3	11	29.8		-12 36.5		60 S	4 50	5 38	6 19	15 17	76	6 35	13	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 37 ^m 1		Mag: -3.9 PMG: 12 ^h 28 ^m			Mag: +1.8 PMG: 11 ^h 46 ^m			Mag: -2.1 PMG: 17 ^h 34 ^m			Mag: +0.4 PMG: 19 ^h 34 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	350	42.6	173	06.5	+2 29.9	183	23.3	+6 34.6	95	53.5	-22 23.4	65	35.6	-22 29.7
1	5	45.1	188	06.1	28.7	198	24.3	34.0	110	55.7	23.4	80	38.1	29.8
2	20	47.6	203	05.7	27.4	213	25.3	33.4	125	57.9	23.5	95	40.6	29.8
3	35	50.0	218	05.3	26.1	228	26.3	32.7	141	00.2	23.5	110	43.1	29.8
4	50	52.5	233	05.0	24.9	243	27.3	32.1	156	02.4	23.5	125	45.6	29.8
5	65	55.0	248	04.6	+2 23.6	258	28.3	+6 31.5	171	04.6	-22 23.6	140	48.1	-22 29.8
6	80	57.4	263	04.2	+2 22.4	273	29.2	+6 30.8	186	06.8	-22 23.6	155	50.6	-22 29.8
7	95	59.9	278	03.9	21.1	288	30.2	30.2	201	09.0	23.6	170	53.1	29.8
8	111	02.4	293	03.5	19.8	303	31.2	29.6	216	11.2	23.6	185	55.5	29.8
9	126	04.8	308	03.1	18.6	318	32.2	29.0	231	13.4	23.7	200	58.0	29.8
10	141	07.3	323	02.7	17.3	333	33.2	28.3	246	15.7	23.7	216	00.5	29.8
11	156	09.8	338	02.4	+2 16.0	348	34.2	+6 27.7	261	17.9	-22 23.7	231	03.0	-22 29.8
12	171	12.2	353	02.0	+2 14.8	3	35.2	+6 27.1	276	20.1	-22 23.8	246	05.5	-22 29.8
13	186	14.7	8	01.6	13.5	18	36.2	26.4	291	22.3	23.8	261	08.0	29.8
14	201	17.1	23	01.3	12.2	33	37.1	25.8	306	24.5	23.8	276	10.5	29.8
15	216	19.6	38	00.9	11.0	48	38.1	25.2	321	26.7	23.9	291	13.0	29.8
16	231	22.1	53	00.5	09.7	63	39.1	24.6	336	28.9	23.9	306	15.5	29.9
17	246	24.5	68	00.1	+2 08.4	78	40.1	+6 23.9	351	31.2	-22 23.9	321	17.9	-22 29.9
18	261	27.0	82	59.8	+2 07.2	93	41.1	+6 23.3	6	33.4	-22 24.0	336	20.4	-22 29.9
19	276	29.5	97	59.4	05.9	108	42.1	22.7	21	35.6	24.0	351	22.9	29.9
20	291	31.9	112	59.0	04.7	123	43.1	22.0	36	37.8	24.0	6	25.4	29.9
21	306	34.4	127	58.7	03.4	138	44.0	21.4	51	40.0	24.0	21	27.9	29.9
22	321	36.9	142	58.3	02.1	153	45.0	20.8	66	42.2	24.1	36	30.4	29.9
23	336	39.3	157	57.9	+2 00.9	168	46.0	20.2	81	44.4	24.1	51	32.9	29.9
24	351	41.8	172	57.5	+1 59.6	183	47.0	+6 19.5	96	46.6	-22 24.1	66	35.4	-22 29.9
Dif.	—		-4		-13	+10		-6	+22		0	+25		

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9			SD: 14°7 Edad: 13 ^d 6													
	PMG: 11 ^h 56 ^m 0			PHE { 4 ^h : 54°0 12 ^h : 54°0 20 ^h : 54°0													
	PMG: 23 ^h 55 ^m			R°: 42 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m
0	180	57.2	+3 59.3	11	29.8	148	-12 36.5	96	60 N	18 28	19 11	20 03	18 54	10	3 54	76	
1	195	57.4	58.4	26	03.6	148	26.9	96	58	26	06	19 55	49	12	4 01	73	
2	210	57.7	57.4	40	37.4	149	17.3	97	56	24	19 02	47	44	14	07	71	
3	225	57.9	56.5	55	11.3	149	-12 07.6	98	54	22	18 58	41	40	16	13	68	
4	240	58.1	55.5	69	45.2	149	-11 57.8	98	52	20	54	35	36	18	18	67	
5	255	58.3	+3 54.6	84	19.1	150	-11 48.0	98	50	18 19	18 51	19 30	18 33	19	4 23	64	
6	270	58.6	+3 53.6	98	53.1	150	-11 38.2	99	45	18 15	18 45	19 20	18 25	23	4 33	61	
7	285	58.8	52.6	113	27.1	150	28.3	99	40	13	40	12	19	26	41	58	
8	300	59.0	51.7	128	01.1	151	18.4	100	35	10	36	06	13	29	48	55	
9	315	59.2	50.7	142	35.2	151	-11 08.4	100	30	08	32	19 00	08	31	4 54	53	
10	330	59.4	49.8	157	09.3	151	-10 58.4	101	20	05	27	18 53	18 00	35	5 05	49	
11	345	59.7	+3 48.8	171	43.4	152	-10 48.3	101	10 N	18 02	18 23	18 47	17 52	39	5 14	46	
12	0	59.9	+3 47.9	186	17.6	152	-10 38.2	102	0	17 59	18 20	18 44	17 45	42	5 23	42	
13	16	00.1	46.9	200	51.8	152	28.0	102	10 S	57	18	42	38	45	32	39	
14	31	00.3	46.0	215	26.0	153	17.8	102	20	54	16	42	30	49	41	35	
15	46	00.6	45.0	230	00.3	153	-10 07.6	103	30	51	15	43	22	52	51	32	
16	61	00.8	44.0	244	34.6	153	-9 57.3	103	35	50	15	44	17	55	5 57	30	
17	76	01.0	+3 43.1	259	08.9	153	-9 47.0	104	40	17 48	18 15	18 46	17 11	58	6 04	27	
18	91	01.2	+3 42.1	273	43.2	154	-9 36.6	104	45	17 46	18 15	18 49	17 04	61	6 12	24	
19	106	01.5	41.2	288	17.6	154	26.2	104	50	43	16	53	16 56	65	21	21	
20	121	01.7	40.2	302	52.0	154	15.8	105	52	42	16	55	53	66	25	19	
21	136	01.9	39.3	317	26.4	155	-9 05.3	105	54	41	16	58	49	68	30	17	
22	151	02.1	38.3	332	00.9	155	-8 54.8	106	56	40	17	19 00	44	70	35	15	
23	166	02.3	37.3	346	35.4	155	44.2	106	58	38	18	03	39	73	41	13	
24	181	02.6	+3 36.4	1	09.9		-8 33.6		60 S	17 37	18 18	19 07	16 33	76	6 48	10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 0 ^h 33 ^m 1		Mag: -3.9 PMG: 12 ^h 28 ^m			Mag: +1.8 PMG: 11 ^h 44 ^m			Mag: -2.1 PMG: 17 ^h 30 ^m			Mag: +0.4 PMG: 19 ^h 30 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	351	41.8	172	57.5	+1 59.6	183	47.0	+6 19.5	96	46.6	-22 -24.1	66	35.4	-22 29.9			
1	6	44.3	187	57.2	58.3	198	48.0	18.9	111	48.9	-24.2	81	37.8	29.9			
2	21	46.7	202	56.8	57.1	213	49.0	18.3	126	51.1	-24.2	96	40.3	29.9			
3	36	49.2	217	56.4	55.8	228	50.0	17.6	141	53.3	-24.2	111	42.8	29.9			
4	51	51.6	232	56.1	54.5	243	51.0	17.0	156	55.5	-24.3	126	45.3	29.9			
5	66	54.1	247	55.7	+1 53.3	258	51.9	+6 16.4	171	57.7	-22 -24.3	141	47.8	-22 29.9			
6	81	56.6	262	55.3	+1 52.0	273	52.9	+6 15.8	186	59.9	-22 -24.3	156	50.3	-22 29.9			
7	96	59.0	277	55.0	50.7	288	53.9	15.1	202	02.1	-24.4	171	52.8	30.0			
8	112	01.5	292	54.6	49.5	303	54.9	14.5	217	04.3	-24.4	186	55.3	30.0			
9	127	04.0	307	54.2	48.2	318	55.9	13.9	232	06.5	-24.4	201	57.7	30.0			
10	142	06.4	322	53.8	46.9	333	56.9	13.2	247	08.7	-24.5	217	00.2	30.0			
11	157	08.9	337	53.5	+1 45.7	348	57.9	+6 12.6	262	10.9	-22 -24.5	232	02.7	-22 30.0			
12	172	11.4	352	53.1	+1 44.4	3	58.9	+6 12.0	277	13.1	-22 -24.5	247	05.2	-22 30.0			
13	187	13.8	7	52.7	43.1	18	59.9	11.4	292	15.4	-24.6	262	07.7	30.0			
14	202	16.3	22	52.4	41.9	34	00.8	10.7	307	17.6	-24.6	277	10.2	30.0			
15	217	18.7	37	52.0	40.6	49	01.8	10.1	322	19.8	-24.6	292	12.6	30.0			
16	232	21.2	52	51.6	39.3	64	02.8	09.5	337	22.0	-24.6	307	15.1	30.0			
17	247	23.7	67	51.3	+1 38.0	79	03.8	+6 08.8	352	24.2	-22 -24.7	322	17.6	-22 30.0			
18	262	26.1	82	50.9	+1 36.8	94	04.8	+6 08.2	7	26.4	-22 -24.7	337	20.1	-22 30.0			
19	277	28.6	97	50.5	35.5	109	05.8	07.6	22	28.6	-24.7	352	22.6	30.0			
20	292	31.1	112	50.1	34.2	124	06.8	06.9	37	30.8	-24.8	7	25.1	30.0			
21	307	33.5	127	49.8	33.0	139	07.8	06.3	52	33.0	-24.8	22	27.5	30.0			
22	322	36.0	142	49.4	31.7	154	08.7	05.7	67	35.2	-24.8	37	30.0	30.0			
23	337	38.5	157	49.0	30.4	169	09.7	05.1	82	37.4	-24.9	52	32.5	30.1			
24	352	40.9	172	48.7	+1 29.2	184	10.7	+6 04.4	97	39.6	-22 -24.9	67	35.0	-22 30.1			
Dif.	—		-4	-13		+10	-6		+22		0		+25				

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15'9 PMG: 11 ^h 55 ^m 7			SD: 14'7 Edad: 14 ^d 6			PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0											R ^o : **				
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	R ^o	Hora	R ^o					
h	°	'	°	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m		
0	181	02.6	+3	36.4	1	09.9	155	-8	33.6	106	60 N	3 49	4 42	5 25		19 04	8	5 10	75			
1	196	02.8		35.4	15	44.4	155		23.0	106	58	3 58	47	27		19 01	11	14	73			
2	211	03.0		34.5	30	18.9	156		12.4	107	56	4 05	51	29		18 58	14	18	70			
3	226	03.2		33.5	44	53.5	156	-8	01.7	107	54	11	55	31		56	15	21	69			
4	241	03.5		32.6	59	28.1	156	-7	51.0	108	52	17	4 58	32		54	17	25	66			
5	256	03.7	+3	31.6	74	02.7	157	-7	40.2	108	50	4 22	5 01	5 34		18 52	19	5 27	65			
6	271	03.9	+3	30.6	88	37.4	156	-7	29.4	108	45	4 32	5 07	5 37		18 48	22	5 34	60			
7	286	04.1		29.7	103	12.0	157		18.6	108	40	40	12	40		45	25	39	57			
8	301	04.4		28.7	117	46.7	157	-7	07.8	109	35	47	16	42		42	28	43	55			
9	316	04.6		27.8	132	21.4	157	-6	56.9	109	30	52	20	44		39	30	47	53			
10	331	04.8		26.8	146	56.1	157		46.0	109	20	4 59	25	47		35	34	5 54	48			
11	346	05.0	+3	25.8	161	30.8	158	-6	35.1	110	10 N	5 04	5 29	5 50		18 31	37	6 00	45			
12	1	05.2	+3	24.9	176	05.6	158	-6	24.1	110	0	5 08	5 32	5 52		18 27	41	6 05	42			
13	16	05.5		23.9	190	40.4	158		13.1	110	10 S	09	34	55		23	45	11	38			
14	31	05.7		23.0	205	15.2	158	-6	02.1	110	20	10	35	5 57		19	48	16	35			
15	46	05.9		22.0	219	50.0	158	-5	51.1	110	30	08	36	6 00		14	53	23	31			
16	61	06.1		21.1	234	24.8	158		40.1	111	35	07	36	02		12	55	27	28			
17	76	06.4	+3	20.1	248	59.6	158	-5	29.0	111	40	5 05	5 36	6 03		18 09	57	6 31	26			
18	91	06.6	+3	19.1	263	34.4	159	-5	17.9	111	45	5 02	5 36	6 05		18 05	61	6 36	22			
19	106	06.8		18.2	278	09.3	159	-5	06.8	112	50	4 58	35	07		18 01	65	42	19			
20	121	07.0		17.2	292	44.2	159	-4	55.6	112	52	56	35	08		17 59	66	44	18			
21	136	07.3		16.3	307	19.1	158		44.4	111	54	53	34	09		57	68	47	16			
22	151	07.5		15.3	321	53.9	159		33.3	113	56	51	34	11		54	71	50	14			
23	166	07.7		14.3	336	28.8	160		22.0	112	58	47	33	12		17 52	73	6 54	11			
24	181	07.9	+3	13.4	351	03.8		-4	10.8		60 S	4 44	5 32	6 13		17 49	75	6 58	9			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO										
	PMG 0 ^h 29 ^m 2		Mag: -3.9 PMG: 12 ^h 29 ^m			Mag: +1.8 PMG: 11 ^h 43 ^m			Mag: -2.1 PMG: 17 ^h 27 ^m			Mag: +0.4 PMG: 19 ^h 26 ^m										
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.									
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	352	40.9		172	48.7	+1	29.2		184	10.7	+6	04.4		97	39.6	-22	24.9		67	35.0	-22	30.1
1	7	43.4		187	48.3		27.9		199	11.7		03.8		112	41.8		24.9		82	37.5		30.1
2	22	45.9		202	47.9		26.6		214	12.7		03.2		127	44.0		25.0		97	40.0		30.1
3	37	48.3		217	47.6		25.4		229	13.7		02.5		142	46.2		25.0		112	42.4		30.1
4	52	50.8		232	47.2		24.1		244	14.7		01.9		157	48.4		25.0		127	44.9		30.1
5	67	53.2		247	46.8	+1	22.8		259	15.7	+6	01.3		172	50.6	-22	25.1		142	47.4	-22	30.1
6	82	55.7		262	46.5	+1	21.6		274	16.7	+6	00.6		187	52.8	-22	25.1		157	49.9	-22	30.1
7	97	58.2		277	46.1		20.3		289	17.6	+6	00.0		202	55.0		25.1		172	52.4		30.1
8	113	00.6		292	45.7		19.0		304	18.6	+5	59.4		217	57.2		25.2		187	54.9		30.1
9	128	03.1		307	45.4		17.7		319	19.6		58.7		232	59.4		25.2		202	57.3		30.1
10	143	05.6		322	45.0		16.5		334	20.6		58.1		248	01.6		25.2		217	59.8		30.1
11	158	08.0		337	44.6	+1	15.2		349	21.6	+5	57.5		263	03.8	-22	25.2		233	02.3	-22	30.1
12	173	10.5		352	44.2	+1	13.9		4	22.6	+5	56.9		278	06.0	-22	25.3		248	04.8	-22	30.1
13	188	13.0		7	43.9		12.7		19	23.6		56.2		293	08.2		25.3		263	07.3		30.1
14	203	15.4		22	43.5		11.4		34	24.6		55.6		308	10.4		25.3		278	09.7		30.1
15	218	17.9		37	43.1		10.1		49	25.6		55.0		323	12.6		25.4		293	12.2		30.1
16	233	20.3		52	42.8		08.9		64	26.5		54.3		338	14.8		25.4		308	14.7		30.2
17	248	22.8		67	42.4	+1	07.6		79	27.5	+5	53.7		353	17.0	-22	25.4		323	17.2	-22	30.2
18	263	25.3		82	42.0	+1	06.3		94	28.5	+5	53.1		8	19.2	-22	25.5		338	19.7	-22	30.2
19	278	27.7		97	41.7		05.0		109	29.5		52.4		23	21.4		25.5		353	22.1		30.2
20	293	30.2		112	41.3		03.8		124	30.5		51.8		38	23.6		25.5		8	24.6		30.2
21	308	32.7		127	40.9		02.5		139	31.5		51.2		53	25.8		25.6		23	27.1		30.2
22	323	35.1		142	40.6		01.2		154	32.5		50.5		68	28.0		25.6		38	29.6		30.2
23	338	37.6		157	40.2	+1	00.0		169	33.5		49.9		83	30.2		25.6		53	32.1		30.2
24	353	40.1		172	39.8	+0	58.7		184	34.5	+5	49.3		98	32.4	-22	25.7		68	34.5	-22	30.2
Dif.	—		-4		-13		+10		-6		+22		0		+25							

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9			SD: 14'7 Edad: 15 ^d 6													
	PMG: 11 ^h 55 ^m 3			PMG: 00 ^h 37 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.						Civil	Náut.	Hora	Rº	Hora
h	°	'	°	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	181	07.9	+3 13.4	351	03.8	159	-4 10.8	112	60 N	18 22	19 04	19 56	19 12	9	6 25	76	
1	196	08.2	12.4	5	38.7	159	-3 59.6	113	58	20	19 00	48	12	11	27	73	
2	211	08.4	11.5	20	13.6	159	48.3	113	56	19	18 56	41	12	13	28	71	
3	226	08.6	10.5	34	48.5	160	37.0	113	54	17	53	36	11	16	30	68	
4	241	08.8	09.5	49	23.5	159	25.7	113	52	16	50	30	11	17	31	66	
5	256	09.0	+3 08.6	63	58.4	160	-3 14.4	113	50	18 14	18 47	19 26	19 11	19	6 32	65	
6	271	09.3	+3 07.6	78	33.4	159	-3 03.1	113	45	18 12	18 41	19 16	19 10	23	6 34	61	
7	286	09.5	06.7	93	08.3	160	-2 51.8	114	40	09	37	08	10	25	36	58	
8	301	09.7	05.7	107	43.3	160	40.4	113	35	08	33	19 03	10	28	38	55	
9	316	09.9	04.7	122	18.3	159	29.1	114	30	06	30	18 58	09	31	40	52	
10	331	10.2	03.8	136	53.2	160	17.7	114	20	03	25	51	09	34	42	49	
11	346	10.4	+3 02.8	151	28.2	160	-2 06.3	114	10 N	18 01	18 22	18 46	19 08	39	6 45	44	
12	1	10.6	+3 01.9	166	03.2	159	-1 54.9	114	0	17 59	18 19	18 43	19 08	42	6 47	41	
13	16	10.8	+3 00.9	180	38.1	160	43.5	114	10 S	57	18	42	08	45	49	38	
14	31	11.1	+2 59.9	195	13.1	160	32.1	115	20	54	16	42	07	49	51	34	
15	46	11.3	59.0	209	48.1	159	20.6	114	30	52	16	44	07	53	54	30	
16	61	11.5	58.0	224	23.0	160	-1 09.2	115	35	51	16	46	07	55	55	28	
17	76	11.7	+2 57.0	238	58.0	159	-0 57.7	114	40	17 50	18 17	18 48	19 06	58	6 57	25	
18	91	12.0	+2 56.1	253	32.9	160	-0 46.3	115	45	17 48	18 17	18 52	19 06	61	6 58	22	
19	106	12.2	55.1	268	07.9	159	34.8	114	50	46	19	56	06	65	7 01	18	
20	121	12.4	54.2	282	42.8	160	23.4	115	52	46	19	18 59	05	67	02	16	
21	136	12.6	53.2	297	17.8	159	11.9	115	54	45	20	19 01	05	69	03	15	
22	151	12.9	52.2	311	52.7	160	-0 00.4	115	56	44	21	04	05	71	04	13	
23	166	13.1	51.3	326	27.7	159	+0 11.1	114	58	43	22	08	05	73	05	11	
24	181	13.3	+2 50.3	341	02.6		+0 22.5		60 S	17 41	18 23	19 12	19 04	76	7 07	8	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 0 ^h 25 ^m 3		Mag: -3.9 PMG: 12 ^h 30 ^m			Mag: +1.8 PMG: 11 ^h 41 ^m			Mag: -2.1 PMG: 17 ^h 23 ^m			Mag: +0.4 PMG: 19 ^h 22 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	353	40.1	172	39.8	+0 58.7	184	34.5	+5 49.3	98	32.4	-22 -25.7	68	34.5	-22 30.2			
1	8	42.5	187	39.5	57.4	199	35.4	48.6	113	34.6	-25.7	83	37.0	30.2			
2	23	45.0	202	39.1	56.1	214	36.4	48.0	128	36.8	-25.7	98	39.5	30.2			
3	38	47.5	217	38.7	54.9	229	37.4	47.4	143	39.0	-25.8	113	42.0	30.2			
4	53	49.9	232	38.4	53.6	244	38.4	46.7	158	41.2	-25.8	128	44.4	30.2			
5	68	52.4	247	38.0	+0 52.3	259	39.4	+5 46.1	173	43.4	-22 -25.8	143	46.9	-22 30.2			
6	83	54.8	262	37.6	+0 51.1	274	40.4	+5 45.5	188	45.6	-22 -25.9	158	49.4	-22 30.2			
7	98	57.3	277	37.3	49.8	289	41.4	44.8	203	47.8	-25.9	173	51.9	30.2			
8	113	59.8	292	36.9	48.5	304	42.4	44.2	218	50.0	-25.9	188	54.3	30.2			
9	129	02.2	307	36.5	47.2	319	43.4	43.6	233	52.2	-26.0	203	56.8	30.2			
10	144	04.7	322	36.2	46.0	334	44.3	42.9	248	54.4	-26.0	218	59.3	30.3			
11	159	07.2	337	35.8	+0 44.7	349	45.3	+5 42.3	263	56.6	-22 -26.0	234	01.8	-22 30.3			
12	174	09.6	352	35.4	+0 43.4	4	46.3	+5 41.7	278	58.7	-22 -26.1	249	04.3	-22 30.3			
13	189	12.1	7	35.1	42.2	19	47.3	41.1	294	00.9	-26.1	264	06.7	30.3			
14	204	14.6	22	34.7	40.9	34	48.3	40.4	309	03.1	-26.1	279	09.2	30.3			
15	219	17.0	37	34.3	39.6	49	49.3	39.8	324	05.3	-26.1	294	11.7	30.3			
16	234	19.5	52	34.0	38.3	64	50.3	39.2	339	07.5	-26.2	309	14.2	30.3			
17	249	21.9	67	33.6	+0 37.1	79	51.3	+5 38.5	354	09.7	-22 -26.2	324	16.6	-22 30.3			
18	264	24.4	82	33.2	+0 35.8	94	52.3	+5 37.9	9	11.9	-22 -26.2	339	19.1	-22 30.3			
19	279	26.9	97	32.9	34.5	109	53.3	37.3	24	14.1	-26.3	354	21.6	30.3			
20	294	29.3	112	32.5	33.2	124	54.2	36.6	39	16.3	-26.3	9	24.1	30.3			
21	309	31.8	127	32.1	32.0	139	55.2	36.0	54	18.5	-26.3	24	26.5	30.3			
22	324	34.3	142	31.8	30.7	154	56.2	35.4	69	20.7	-26.4	39	29.0	30.3			
23	339	36.7	157	31.4	29.4	169	57.2	34.7	84	22.9	-26.4	54	31.5	30.3			
24	354	39.2	172	31.0	+0 28.2	184	58.2	+5 34.1	99	25.0	-22 -26.4	69	34.0	-22 30.3			
Dif.	—		-4		-13	+10		-6	+22		0		+25				

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			SD: 14 ^h 8		PHE { 4^h: 54³ 12^h: 54³ 20^h: 54⁴											
	PMG: 11 ^h 54 ^m 9			Edad: 16 ^d 6													
				PMG: 01 ^h 18 ^m		R ^o : 42 ^m											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Náut.	Civil		Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m		h m m		
0	181	13.3	+2 50.3	341	02.6	159	+0 22.5	115	60 N	3 55	4 47	5 29	19 21	9	7 41	76	
1	196	13.5	49.3	355	37.5	159	34.0	115	58	4 03	51	31	23	12	40	74	
2	211	13.8	48.4	10	12.4	159	45.5	115	56	10	55	33	25	14	39	71	
3	226	14.0	47.4	24	47.3	159	+0 57.0	115	54	16	4 58	34	27	16	38	69	
4	241	14.2	46.5	39	22.2	158	+1 08.5	114	52	21	5 01	36	28	18	37	68	
5	256	14.4	+2 45.5	53	57.0	159	+1 19.9	115	50	4 25	5 04	5 37	19 30	19	7 37	65	
6	271	14.6	+2 44.5	68	31.9	159	+1 31.4	115	45	4 35	5 10	5 39	19 33	23	7 35	62	
7	286	14.9	43.6	83	06.8	158	42.9	115	40	42	14	41	35	27	34	58	
8	301	15.1	42.6	97	41.6	158	+1 54.4	115	35	48	18	43	38	29	33	56	
9	316	15.3	41.6	112	16.4	158	+2 05.9	114	30	4 53	21	45	40	31	32	53	
10	331	15.5	40.7	126	51.2	158	17.3	115	20	5 00	25	47	43	36	31	49	
11	346	15.8	+2 39.7	141	26.0	158	+2 28.8	114	10 N	5 04	5 29	5 50	19 47	39	7 29	46	
12	1	16.0	+2 38.8	156	00.8	157	+2 40.2	115	0	5 07	5 31	5 52	19 50	42	7 28	42	
13	16	16.2	37.8	170	35.5	157	+2 51.7	114	10 S	08	33	54	53	45	27	38	
14	31	16.4	36.8	185	10.2	158	+3 03.1	115	20	08	33	55	19 56	49	25	35	
15	46	16.7	35.9	199	45.0	157	14.6	114	30	06	34	58	20 00	53	24	30	
16	61	16.9	34.9	214	19.7	156	26.0	114	35	04	33	5 59	02	56	23	28	
17	76	17.1	+2 33.9	228	54.3	157	+3 37.4	114	40	5 02	5 33	6 00	20 04	59	7 22	25	
18	91	17.3	+2 33.0	243	29.0	156	+3 48.8	114	45	4 58	5 32	6 01	20 07	62	7 20	23	
19	106	17.6	32.0	258	03.6	156	+4 00.2	114	50	53	31	03	11	66	19	19	
20	121	17.8	31.0	272	38.2	156	11.6	114	52	51	30	04	12	68	18	18	
21	136	18.0	30.1	287	12.8	155	23.0	114	54	48	29	04	14	70	18	15	
22	151	18.2	29.1	301	47.3	156	34.4	113	56	45	28	05	16	72	17	13	
23	166	18.5	28.2	316	21.9	155	45.7	114	58	42	27	06	20 18	74	7 16	11	
24	181	18.7	+2 27.2	330	56.4		+4 57.1		60 S	4 37	5 26	6 07	20 20	78	7 15	9	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 21 ^m 3		Mag: -3.9 PMG: 12 ^h 30 ^m			Mag: +1.8 PMG: 11 ^h 39 ^m			Mag: -2.1 PMG: 17 ^h 20 ^m			Mag: +0.4 PMG: 19 ^h 19 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	354	39.2	172	31.0	+0 28.2	184	58.2	+5 34.1	99	25.0	-22 26.4	69	34.0	-22 30.3
1	9	41.7	187	30.7	26.9	199	59.2	33.5	114	27.2	26.5	84	36.4	30.3
2	24	44.1	202	30.3	25.6	215	00.2	32.8	129	29.4	26.5	99	38.9	30.3
3	39	46.6	217	29.9	24.3	230	01.2	32.2	144	31.6	26.5	114	41.4	30.3
4	54	49.1	232	29.6	23.1	245	02.2	31.6	159	33.8	26.6	129	43.9	30.3
5	69	51.5	247	29.2	+0 21.8	260	03.2	+5 30.9	174	36.0	-22 26.6	144	46.3	-22 30.4
6	84	54.0	262	28.8	+0 20.5	275	04.1	+5 30.3	189	38.2	-22 26.6	159	48.8	-22 30.4
7	99	56.4	277	28.5	19.2	290	05.1	29.7	204	40.4	26.7	174	51.3	30.4
8	114	58.9	292	28.1	18.0	305	06.1	29.0	219	42.6	26.7	189	53.7	30.4
9	130	01.4	307	27.7	16.7	320	07.1	28.4	234	44.7	26.7	204	56.2	30.4
10	145	03.8	322	27.4	15.4	335	08.1	27.7	249	46.9	26.8	219	58.7	30.4
11	160	06.3	337	27.0	+0 14.1	350	09.1	+5 27.1	264	49.1	-22 26.8	235	01.2	-22 30.4
12	175	08.8	352	26.6	+0 12.9	5	10.1	+5 26.5	279	51.3	-22 26.8	250	03.6	-22 30.4
13	190	11.2	7	26.2	11.6	20	11.1	25.8	294	53.5	26.9	265	06.1	30.4
14	205	13.7	22	25.9	10.3	35	12.1	25.2	309	55.7	26.9	280	08.6	30.4
15	220	16.2	37	25.5	09.1	50	13.1	24.6	324	57.9	26.9	295	11.0	30.4
16	235	18.6	52	25.1	07.8	65	14.0	23.9	340	00.0	27.0	310	13.5	30.4
17	250	21.1	67	24.8	+0 06.5	80	15.0	+5 23.3	355	02.2	-22 27.0	325	16.0	-22 30.4
18	265	23.5	82	24.4	+0 05.2	95	16.0	+5 22.7	10	04.4	-22 27.0	340	18.5	-22 30.4
19	280	26.0	97	24.1	04.0	110	17.0	22.0	25	06.6	27.1	355	20.9	30.4
20	295	28.5	112	23.7	02.7	125	18.0	21.4	40	08.8	27.1	10	23.4	30.4
21	310	30.9	127	23.3	01.4	140	19.0	20.8	55	11.0	27.1	25	25.9	30.4
22	325	33.4	142	23.0	+0 00.1	155	20.0	20.1	70	13.1	27.2	40	28.3	30.4
23	340	35.9	157	22.6	-0 01.1	170	21.0	19.5	85	15.3	27.2	55	30.8	30.4
24	355	38.3	172	22.2	-0 02.4	185	22.0	+5 18.9	100	17.5	-22 27.2	70	33.3	-22 30.4
Dif.	—		-4 -13			+10 -6			+22 0			+25 0		

UT	SOL				○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo				Salida de Luna			Puesta de Luna		
	SD: 15'9				SD: 14'8		PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'8															
	PMG: 11 ^h 54 ^m 6				Edad: 17 ^d 6																	
	PMG: 02 ^h 00 ^m				Rº: 42 ^m																	
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.			Civil	Náut.		Hora	Rº		Hora	Rº	
h	°	'	°	'	°	'		°	'			°	h	m	h	m	h	m	m	h	m	m
0	181	18.7	+2	27.2	330	56.4	155	+4	57.1	113		60 N	18	16	18	58	19	49		19	30	11
1	196	18.9		26.2	345	30.9	154	+5	08.4	113		58	15	54	42		35	14		54	75	
2	211	19.1		25.3	0	05.3	154		19.7	113		56	13	51	36		39	16		50	73	
3	226	19.4		24.3	14	39.7	154		31.0	113		54	12	48	30		43	18		47	71	
4	241	19.6		23.3	29	14.1	154		42.3	112		52	11	45	25		46	20		45	68	
5	256	19.8	+2	22.4	43	48.5	153	+5	53.5	112		50	18	10	18	42	19	21		19	49	22
6	271	20.0	+2	21.4	58	22.8	153	+6	04.7	113		45	18	08	18	37	19	12		19	56	26
7	286	20.3		20.4	72	57.1	153		16.0	112		40	06	33	05		20	02	29		32	60
8	301	20.5		19.5	87	31.4	152		27.2	111		35	05	30	19	00		07	31		29	56
9	316	20.7		18.5	102	05.6	152		38.3	112		30	03	27	18	55		11	34		25	55
10	331	20.9		17.5	116	39.8	152	+6	49.5	111		20	18	01	23	49		19	37		20	50
11	346	21.1	+2	16.6	131	14.0	151	+7	00.6	111		10 N	17	59	18	20	18	45		20	26	41
12	1	21.4	+2	15.6	145	48.1	151	+7	11.7	111		0	17	58	18	19	18	43		20	32	44
13	16	21.6		14.6	160	22.2	151		22.8	111		10 S	56	17	42		38	48		05	40	
14	31	21.8		13.7	174	56.3	150		33.9	110		20	55	17	42		45	51		8	00	36
15	46	22.0		12.7	189	30.3	150		44.9	111		30	53	17	45		53	55		7	54	33
16	61	22.3		11.7	204	04.3	149	+7	56.0	109		35	53	18	47		20	58	57		51	30
17	76	22.5	+2	10.8	218	38.2	149	+8	06.9	110		40	17	52	18	19	18	50		21	03	60
18	91	22.7	+2	09.8	233	12.1	149	+8	17.9	109		45	17	51	18	20	18	54		21	09	64
19	106	22.9		08.9	247	46.0	148		28.8	109		50	49	22	18	59		17	67		38	21
20	121	23.2		07.9	262	19.8	148		39.7	109		52	49	22	19	02		20	69		36	19
21	136	23.4		06.9	276	53.6	147	+8	50.6	109		54	48	23	05		24	71		33	17	
22	151	23.6		06.0	291	27.3	147	+9	01.5	108		56	48	25	08		28	73		30	15	
23	166	23.8		05.0	306	01.0	146		12.3	107		58	47	26	12		32	77		27	13	
24	181	24.1	+2	04.0	320	34.6		+9	23.0			60 S	17	46	18	28	19	17		21	38	79
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG		Mag: -3.9				Mag: +1.8				Mag: -2.1				Mag: +0.4							
	0 ^h 17 ^m 4		PMG: 12 ^h 31 ^m				PMG: 11 ^h 38 ^m				PMG: 17 ^h 16 ^m				PMG: 19 ^h 15 ^m							
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	355	38.3	172	22.2	-0	02.4	185	22.0	+5	18.9	100	17.5	-22	-27.2	70	33.3	-22	30.4				
1	10	40.8	187	21.9		03.7	200	23.0		18.2	115	19.7		-27.3	85	35.7		30.5				
2	25	43.3	202	21.5		05.0	215	24.0		17.6	130	21.9		-27.3	100	38.2		30.5				
3	40	45.7	217	21.1		06.2	230	24.9		17.0	145	24.1		-27.3	115	40.7		30.5				
4	55	48.2	232	20.8		07.5	245	25.9		16.3	160	26.2		-27.4	130	43.2		30.5				
5	70	50.7	247	20.4	-0	08.8	260	26.9	+5	15.7	175	28.4	-22	-27.4	145	45.6	-22	30.5				
6	85	53.1	262	20.0	-0	10.1	275	27.9	+5	15.1	190	30.6	-22	-27.4	160	48.1	-22	30.5				
7	100	55.6	277	19.7		11.3	290	28.9		14.4	205	32.8		-27.5	175	50.6		30.5				
8	115	58.0	292	19.3		12.6	305	29.9		13.8	220	35.0		-27.5	190	53.0		30.5				
9	131	00.5	307	18.9		13.9	320	30.9		13.1	235	37.1		-27.5	205	55.5		30.5				
10	146	03.0	322	18.6		15.2	335	31.9		12.5	250	39.3		-27.6	220	58.0		30.5				
11	161	05.4	337	18.2	-0	16.4	350	32.9	+5	11.9	265	41.5	-22	-27.6	236	00.4	-22	30.5				
12	176	07.9	352	17.8	-0	17.7	5	33.9	+5	11.2	280	43.7	-22	-27.6	251	02.9	-22	30.5				
13	191	10.4	7	17.5		19.0	20	34.8		10.6	295	45.9		-27.7	266	05.4		30.5				
14	206	12.8	22	17.1		20.3	35	35.8		10.0	310	48.0		-27.7	281	07.8		30.5				
15	221	15.3	37	16.7		21.5	50	36.8		09.3	325	50.2		-27.7	296	10.3		30.5				
16	236	17.8	52	16.4		22.8	65	37.8		08.7	340	52.4		-27.8	311	12.8		30.5				
17	251	20.2	67	16.0	-0	24.1	80	38.8	+5	08.1	355	54.6	-22	-27.8	326	15.2	-22	30.5				
18	266	22.7	82	15.6	-0	25.4	95	39.8	+5	07.4	10	56.8	-22	-27.8	341	17.7	-22	30.5				
19	281	25.2	97	15.3		26.6	110	40.8		06.8	25	58.9		-27.9	356	20.2		30.5				
20	296	27.6	112	14.9		27.9	125	41.8		06.2	41	01.1		-27.9	11	22.6		30.5				
21	311	30.1	127	14.5		29.2	140	42.8		05.5	56	03.3		-27.9	26	25.1		30.5				
22	326	32.5	142	14.2		30.5	155	43.8		04.9	71	05.5		-28.0	41	27.6		30.5				
23	341	35.0	157	13.8		31.7	170	44.8		04.2	86	07.6		-28.0	56	30.0		30.6				
24	356	37.5	172	13.4	-0	33.0	185	45.8	+5	03.6	101	09.8	-22	-28.0	71	32.5	-22	30.6				
Dif.	—		-4		-13		+10		-6		+22		0		+25							

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 54 ^m 2			SD: 14°9 Edad: 18 ^d 6			PHE { 4 ^h : 54°9 12 ^h : 55°1 20 ^h : 55°2										
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	181	24.1	+2 04.0	320	34.6	146	+9 23.0	108	60 N	4 00	4 52	5 34	19 41	15	10 15	80	
1	196	24.3	03.1	335	08.2	146		33.8	58	08	56	35	49	17	09	76	
2	211	24.5	02.1	349	41.8	145		44.5	56	14	4 59	37	19 55	20	10 03	74	
3	226	24.7	01.1	4	15.3	144	+9	55.2	54	20	5 02	38	20 01	22	9 58	71	
4	241	25.0	+2 00.2	18	48.7	145	+10	05.8	52	24	05	39	06	25	53	69	
5	256	25.2	+1 59.2	33	22.2	143	+10	16.4	50	4 29	5 07	5 40	20 11	26	9 49	67	
6	271	25.4	+1 58.2	47	55.5	143	+10	27.0	45	4 37	5 12	5 42	20 22	29	9 39	64	
7	286	25.6	57.3	62	28.8	143		37.5	40	44	16	43	31	32	32	61	
8	301	25.9	56.3	77	02.1	142		48.0	35	50	19	45	38	35	25	58	
9	316	26.1	55.3	91	35.3	142	+10	58.5	30	4 54	22	46	45	37	20	55	
10	331	26.3	54.4	106	08.5	141	+11	08.9	20	5 00	26	48	20 56	41	10	52	
11	346	26.5	+1 53.4	120	41.6	140	+11	19.3	10 N	5 04	5 29	5 50	21 07	43	9 01	49	
12	1	26.7	+1 52.4	135	14.6	140	+11	29.6	0	5 06	5 30	5 51	21 16	47	8 53	45	
13	16	27.0	51.5	149	47.6	140		39.9	10 S	07	31	52	26	50	45	42	
14	31	27.2	50.5	164	20.6	138	+11	50.2	20	06	32	54	36	53	36	39	
15	46	27.4	49.5	178	53.4	139	+12	00.4	30	03	31	55	48	57	27	35	
16	61	27.6	48.5	193	26.3	137		10.5	35	5 01	31	56	21 55	59	21	33	
17	76	27.9	+1 47.6	207	59.0	138	+12	20.6	40	4 58	5 30	5 57	22 03	62	8 15	30	
18	91	28.1	+1 46.6	222	31.8	136	+12	30.7	45	4 54	5 28	5 57	22 13	64	8 07	28	
19	106	28.3	45.6	237	04.4	136		40.7	50	49	26	59	24	68	7 59	23	
20	121	28.5	44.7	251	37.0	136	+12	50.7	52	46	25	5 59	29	70	55	21	
21	136	28.8	43.7	266	09.6	134	+13	00.6	54	43	24	6 00	35	72	50	20	
22	151	29.0	42.7	280	42.0	135		10.5	56	40	23	00	41	75	45	18	
23	166	29.2	41.8	295	14.5	133		20.3	58	36	22	01	22 49	77	7 40	15	
24	181	29.4	+1 40.8	309	46.8		+13	30.1	60 S	4 31	5 20	6 01	22 57	80	7 34	12	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 0 ^h 13 ^m 5		Mag: -3.9 PMG: 12 ^h 31 ^m		Mag: +1.8 PMG: 11 ^h 36 ^m		Mag: -2.1 PMG: 17 ^h 13 ^m		Mag: +0.4 PMG: 19 ^h 11 ^m	
	hG ♈	dec.	hG ♀	dec.	hG ♂	dec.	hG ♃	dec.	hG ♄	dec.
h	°	'	°	'	°	'	°	'	°	'
0	356	37.5	172	13.4	-0	33.0	101	09.8	-22	28.0
1	11	39.9	187	13.1		34.3	116	12.0		28.1
2	26	42.4	202	12.7		35.6	131	14.2		28.1
3	41	44.9	217	12.3		36.8	146	16.3		28.1
4	56	47.3	232	12.0		38.1	161	18.5		28.2
5	71	49.8	247	11.6	-0	39.4	176	20.7	-22	28.2
6	86	52.3	262	11.2	-0	40.7	191	22.9	-22	28.2
7	101	54.7	277	10.8		41.9	206	25.0		28.3
8	116	57.2	292	10.5		43.2	221	27.2		28.3
9	131	59.6	307	10.1		44.5	236	29.4		28.3
10	147	02.1	322	09.7		45.8	251	31.6		28.4
11	162	04.6	337	09.4	-0	47.0	266	33.7	-22	28.4
12	177	07.0	352	09.0	-0	48.3	281	35.9	-22	28.4
13	192	09.5	7	08.6		49.6	296	38.1		28.5
14	207	12.0	22	08.3		50.9	311	40.3		28.5
15	222	14.4	37	07.9		52.1	326	42.4		28.5
16	237	16.9	52	07.5		53.4	341	44.6		28.6
17	252	19.4	67	07.2	-0	54.7	356	46.8	-22	28.6
18	267	21.8	82	06.8	-0	56.0	11	48.9	-22	28.6
19	282	24.3	97	06.4		57.2	26	51.1		28.7
20	297	26.8	112	06.1		58.5	41	53.3		28.7
21	312	29.2	127	05.7	-0	59.8	56	55.5		28.7
22	327	31.7	142	05.3	-1	01.1	71	57.6		28.8
23	342	34.1	157	05.0		02.3	86	59.8		28.8
24	357	36.6	172	04.6	-1	03.6	102	02.0	-22	28.8
Dif.	—		-4	-13		+10	-6	+22		0
									+25	0

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9			PHE { 4^h: 55'4 12^h: 55'6 20^h: 55'8													
	PMG: 11 ^h 53 ^m 9			Edad: 19 ^d 6													
	PMG: 03 ^h 27 ^m			R ^o : 48 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.				Civil	Náut.	Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	181	29.4	+1	40.8		309	46.8	133	+13	30.1	97	60 N	18 10	18 52	19 43	19 56	20
1	196	29.7		39.8		324	19.1	132		39.8	96	58	09	48	36	20 06	24
2	211	29.9		38.9		338	51.3	132		49.4	96	56	08	45	30	15	26
3	226	30.1		37.9		353	23.5	131	+13	59.0	96	54	07	42	25	23	28
4	241	30.3		36.9		7	55.6	130	+14	08.6	95	52	06	40	20	31	30
5	256	30.6	+1	36.0		22	27.6	130	+14	18.1	94	50	18 06	18 38	19 16	20 37	32
6	271	30.8	+1	35.0		36	59.6	129	+14	27.5	94	45	18 04	18 33	19 08	20 51	35
7	286	31.0		34.0		51	31.5	129		36.9	93	40	03	30	19 02	21 03	38
8	301	31.2		33.1		66	03.4	127		46.2	93	35	02	27	18 57	13	40
9	316	31.4		32.1		80	35.1	128	+14	55.5	92	30	18 01	25	53	22	41
10	331	31.7		31.1		95	06.9	126	+15	04.7	91	20	17 59	21	47	37	45
11	346	31.9	+1	30.2		109	38.5	126	+15	13.8	91	10 N	17 58	18 19	18 44	21 50	48
12	1	32.1	+1	29.2		124	10.1	125	+15	22.9	90	0	17 57	18 18	18 42	22 03	50
13	16	32.3		28.2		138	41.6	124		31.9	89	10 S	56	17	42	16	52
14	31	32.6		27.2		153	13.0	124		40.8	89	20	55	17	43	29	55
15	46	32.8		26.3		167	44.4	122		49.7	88	30	54	18	46	45	58
16	61	33.0		25.3		182	15.6	123	+15	58.5	88	35	54	19	49	22 54	60
17	76	33.2	+1	24.3		196	46.9	121	+16	07.3	86	40	17 53	18 20	18 52	23 05	62
18	91	33.5	+1	23.4		211	18.0	121	+16	15.9	86	45	17 53	18 22	18 56	23 17	65
19	106	33.7		22.4		225	49.1	120		24.5	86	50	52	25	19 02	32	68
20	121	33.9		21.4		240	20.1	119		33.1	84	52	52	26	05	39	70
21	136	34.1		20.5		254	51.0	119		41.5	84	54	52	27	09	47	72
22	151	34.3		19.5		269	21.9	118		49.9	84	56	51	29	12	23 56	74
23	166	34.6		18.5		283	52.7	117	+16	58.3	82	58	51	30	17	** ** *	**
24	181	34.8	+1	17.6		298	23.4		+17	06.5		60 S	17 51	18 32	19 22	** ** *	**

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 09 ^m 5		Mag: -3.9 PMG: 12 ^h 32 ^m			Mag: +1.8 PMG: 11 ^h 35 ^m			Mag: -2.1 PMG: 17 ^h 09 ^m			Mag: +0.4 PMG: 19 ^h 07 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	357	36.6	172	04.6	-1	03.6		186	09.5	+4	48.3	102	02.0	-22	-28.8	
1	12	39.1	187	04.2		04.9		201	10.5		47.7	117	04.1		-28.9	
2	27	41.5	202	03.9		06.2		216	11.5		47.0	132	06.3		-28.9	
3	42	44.0	217	03.5		07.4		231	12.5		46.4	147	08.5		-28.9	
4	57	46.5	232	03.1		08.7		246	13.5		45.8	162	10.6		-29.0	
5	72	48.9	247	02.8	-1	10.0		261	14.5	+4	45.1	177	12.8	-22	-29.0	
6	87	51.4	262	02.4	-1	11.3		276	15.5	+4	44.5	192	15.0	-22	-29.0	
7	102	53.9	277	02.0		12.5		291	16.5		43.9	207	17.1		-29.1	
8	117	56.3	292	01.7		13.8		306	17.5		43.2	222	19.3		-29.1	
9	132	58.8	307	01.3		15.1		321	18.5		42.6	237	21.5		-29.1	
10	148	01.2	322	00.9		16.4		336	19.5		41.9	252	23.6		-29.2	
11	163	03.7	337	00.6	-1	17.6		351	20.5	+4	41.3	267	25.8	-22	-29.2	
12	178	06.2	352	00.2	-1	18.9		6	21.4	+4	40.7	282	28.0	-22	-29.2	
13	193	08.6	6	59.8		20.2		21	22.4		40.0	297	30.1		-29.3	
14	208	11.1	21	59.5		21.5		36	23.4		39.4	312	32.3		-29.3	
15	223	13.6	36	59.1		22.7		51	24.4		38.8	327	34.5		-29.3	
16	238	16.0	51	58.7		24.0		66	25.4		38.1	342	36.6		-29.4	
17	253	18.5	66	58.4	-1	25.3		81	26.4	+4	37.5	357	38.8	-22	-29.4	
18	268	21.0	81	58.0	-1	26.6		96	27.4	+4	36.8	12	41.0	-22	-29.4	
19	283	23.4	96	57.6		27.8		111	28.4		36.2	27	43.1		-29.5	
20	298	25.9	111	57.3		29.1		126	29.4		35.6	42	45.3		-29.5	
21	313	28.4	126	56.9		30.4		141	30.4		34.9	57	47.5		-29.5	
22	328	30.8	141	56.5		31.7		156	31.4		34.3	72	49.6		-29.6	
23	343	33.3	156	56.1		32.9		171	32.4		33.6	87	51.8		-29.6	
24	358	35.7	171	55.8	-1	34.2		186	33.4	+4	33.0	102	53.9	-22	-29.6	
Dif.	—		-4		-13			+10		-6		+22		0		+25

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15°9 PMG: 11 ^h 53 ^m 5			SD: 15°2 Edad: 20 ^d 6 PHE 4^h: 56'0 12^h: 56'2 20^h: 56'5							Rº: 51 ^m			Náut.		Civil	Hora		Rº	Hora		Rº
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.															
h	°	'	°	°	'	°	'	°			h	m	h	m	h	m	m	h	m	m		
0	181	34.8	+1	17.6	298	23.4	116	+17	06.5	82	60 N	4 06	4 57	5 39	20 16	30		12 55	78			
1	196	35.0		16.6	312	54.0	116		14.7	81	58	13	5 00	40	30 32			42 75				
2	211	35.2		15.6	327	24.6	114		22.8	80	56	18	03	41	41 35			31 72				
3	226	35.5		14.6	341	55.0	114		30.8	79	54	23	06	41	20 51	37		21 71				
4	241	35.7		13.7	356	25.4	114		38.7	79	52	28	08	42	21 01	38		12 69				
5	256	35.9	+1	12.7	10	55.8	112	+17	46.6	78	50	4 32	5 10	5 43	21 09	40		12 05	67			
6	271	36.1	+1	11.7	25	26.0	112	+17	54.4	76	45	4 40	5 15	5 44	21 26	43		11 48	64			
7	286	36.4		10.8	39	56.2	111	+18	02.0	77	40	46	18	45	41 44			34 62				
8	301	36.6		09.8	54	26.3	110		09.7	75	35	51	21	46	21 53	46		23 60				
9	316	36.8		08.8	68	56.3	110		17.2	74	30	4 55	23	47	22 03	48		11 13	58			
10	331	37.0		07.9	83	26.3	108		24.6	74	20	5 01	26	48	22 49			10 56	56			
11	346	37.2	+1	06.9	97	56.1	108	+18	32.0	73	10 N	5 04	5 28	5 49	22 38	51		10 41	53			
12	1	37.5	+1	05.9	112	25.9	108	+18	39.3	72	0	5 06	5 30	5 50	22 53	53		10 27	51			
13	16	37.7		04.9	126	55.7	106		46.5	71	10 S	06	30	51	23 08	55		10 13	49			
14	31	37.9		04.0	141	25.3	105	+18	53.6	70	20	04	30	52	24 57			9 58	47			
15	46	38.1		03.0	155	54.8	105	+19	00.6	69	30	5 01	29	53	43 59			41 44				
16	61	38.4		02.0	170	24.3	104		07.5	68	35	4 58	28	53	23 54	61		31 43				
17	76	38.6	+1	01.1	184	53.7	103	+19	14.3	68	40	4 55	5 26	5 53	***	***	**	9 20	40			
18	91	38.8	+1	00.1	199	23.0	103	+19	21.1	66	45	4 50	5 24	5 54	***	***	**	9 06	39			
19	106	39.0	+0	59.1	213	52.3	101		27.7	66	50	44	22	54	***	***	**	8 50	36			
20	121	39.3		58.2	228	21.4	101		34.3	64	52	41	21	54	***	***	**	43	34			
21	136	39.5		57.2	242	50.5	100		40.7	64	54	38	19	55	***	***	**	35	32			
22	151	39.7		56.2	257	19.5	99		47.1	62	56	34	18	55	***	***	**	25	30			
23	166	39.9		55.2	271	48.4	99		53.3	62	58	30	16	55	0 06	77		8 15	27			
24	181	40.1	+0	54.3	286	17.3		+19	59.5		60 S	4 25	5 14	5 55	0 17	80		8 03	24			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 0 ^h 05 ^m 6		Mag: -3.9 PMG: 12 ^h 33 ^m			Mag: +1.8 PMG: 11 ^h 33 ^m			Mag: -2.1 PMG: 17 ^h 06 ^m			Mag: +0.4 PMG: 19 ^h 03 ^m										
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.									
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'								
0	358	35.7	171	55.8	-1	34.2	186	33.4	+4	33.0	102	53.9	-22	29.6	73	30.6	-22	30.7				
1	13	38.2	186	55.4		35.5	201	34.3		32.4	117	56.1		29.7	88	33.1		30.7				
2	28	40.7	201	55.0		36.8	216	35.3		31.7	132	58.3		29.7	103	35.5		30.8				
3	43	43.1	216	54.7		38.0	231	36.3		31.1	148	00.4		29.7	118	38.0		30.8				
4	58	45.6	231	54.3		39.3	246	37.3		30.4	163	02.6		29.8	133	40.4		30.8				
5	73	48.1	246	53.9	-1	40.6	261	38.3	+4	29.8	178	04.8	-22	29.8	148	42.9	-22	30.8				
6	88	50.5	261	53.6	-1	41.9	276	39.3	+4	29.2	193	06.9	-22	29.8	163	45.3	-22	30.8				
7	103	53.0	276	53.2		43.1	291	40.3		28.5	208	09.1		29.9	178	47.8		30.8				
8	118	55.5	291	52.8		44.4	306	41.3		27.9	223	11.2		29.9	193	50.3		30.8				
9	133	57.9	306	52.5		45.7	321	42.3		27.3	238	13.4		29.9	208	52.7		30.8				
10	149	00.4	321	52.1		47.0	336	43.3		26.6	253	15.6		30.0	223	55.2		30.8				
11	164	02.9	336	51.7	-1	48.2	351	44.3	+4	26.0	268	17.7	-22	30.0	238	57.6	-22	30.8				
12	179	05.3	351	51.4	-1	49.5	6	45.3	+4	25.3	283	19.9	-22	30.0	254	00.1	-22	30.8				
13	194	07.8	6	51.0		50.8	21	46.3		24.7	298	22.0		30.1	269	02.5		30.8				
14	209	10.2	21	50.6		52.1	36	47.2		24.1	313	24.2		30.1	284	05.0		30.8				
15	224	12.7	36	50.2		53.3	51	48.2		23.4	328	26.4		30.1	299	07.4		30.8				
16	239	15.2	51	49.9		54.6	66	49.2		22.8	343	28.5		30.2	314	09.9		30.8				
17	254	17.6	66	49.5	-1	55.9	81	50.2	+4	22.1	358	30.7	-22	30.2	329	12.3	-22	30.8				
18	269	20.1	81	49.1	-1	57.2	96	51.2	+4	21.5	13	32.8	-22	30.3	344	14.8	-22	30.8				
19	284	22.6	96	48.8		58.4	111	52.2		20.9	28	35.0		30.3	359	17.3		30.8				
20	299	25.0	111	48.4	-1	59.7	126	53.2		20.2	43	37.1		30.3	14	19.7		30.8				
21	314	27.5	126	48.0	-2	01.0	141	54.2		19.6	58	39.3		30.4	29	22.2		30.8				
22	329	30.0	141	47.7		02.3	156	55.2		18.9	73	41.5		30.4	44	24.6		30.8				
23	344	32.4	156	47.3		03.5	171	56.2		18.3	88	43.6		30.4	59	27.1		30.8				
24	359	34.9	171	46.9	-2	04.8	186	57.2	+4	17.7	103	45.8	-22	30.5	74	29.5	-22	30.8				
Dif.	—		-4		-13		+10		-6		+22		0		+25							

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9				SD: 15°4			PHE { 4 ^h : 56'7 12 ^h : 57'0 20 ^h : 57'2										
	PMG: 11 ^h 53 ^m 1				Edad: 21 ^d 6				R°: 54 ^m									
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.				Civil	Náut.	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°			h m	h m	h m	h m m	h m m	h m m		
0	181	40.1	+0	286	17.3	98	+19	59.5	61	60 N	18 04	18 46	19 36	20 46	45	14 13	70	
1	196	40.4		300	46.1	96	+20	05.6	59	58	03	42	30	21 02	47	13 57	68	
2	211	40.6		315	14.7	97		11.5	59	56	03	40	24	16 48		43 67		
3	226	40.8		329	43.4	95		17.4	58	54	02	37	19	28 49		32 65		
4	241	41.0		344	11.9	94		23.2	56	52	02	35	15	39 50		21 65		
5	256	41.3	+0	358	40.3	94	+20	28.8	56	50	18 01	18 33	19 12	21 49	50	13 12	64	
6	271	41.5	+0	13	08.7	93	+20	34.4	54	45	18 00	18 30	19 04	22 09	51	12 52	62	
7	286	41.7		27	37.0	92		39.8	54	40	17 59	18 26	18 58	25 52		36 61		
8	301	41.9		42	05.2	92		45.2	52	35	59	24	54	39 53		23 60		
9	316	42.1		56	33.4	90		50.4	51	30	58	22	50	22 51	54	12 11	59	
10	331	42.4		71	01.4	90	+20	55.5	50	20	58	19	45	23 11	55	11 52	57	
11	346	42.6	+0	85	29.4	89	+21	00.5	49	10 N	17 57	18 18	18 42	23 29	56	11 34	56	
12	1	42.8	+0	99	57.3	89	+21	05.4	48	0	17 56	18 17	18 41	23 46	57	11 18	55	
13	16	43.0		114	25.2	87		10.2	47	10 S	56	17	41	** ** *	**	11 02	54	
14	31	43.2		128	52.9	87		14.9	46	20	56	18	43	** ** *	**	10 45	52	
15	46	43.5		143	20.6	86		19.5	44	30	56	19	47	** ** *	**	25 50		
16	61	43.7		157	48.2	85		23.9	44	35	55	21	50	** ** *	**	14 49		
17	76	43.9	+0	172	15.7	85	+21	28.3	42	40	17 55	18 22	18 54	0 07	62	10 00	48	
18	91	44.1	+0	186	43.2	83	+21	32.5	41	45	17 55	18 25	18 59	0 22	64	9 45	46	
19	106	44.4		201	10.5	84		36.6	40	50	55	28	19 06	40 66		26 44		
20	121	44.6		215	37.9	82		40.6	38	52	55	29	09	49 67		17 43		
21	136	44.8		230	05.1	81		44.4	38	54	55	31	12	0 59	69	9 07	42	
22	151	45.0		244	32.2	81		48.2	36	56	55	33	17	1 10	70	8 55	41	
23	166	45.2		258	59.3	80		51.8	35	58	55	35	21	23 72		42 39		
24	181	45.5	+0	273	26.3		+21	55.3		60 S	17 55	18 37	19 27	1 37	76	8 27	36	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 01 ^m 7		Mag: -3.9 PMG: 12 ^h 33 ^m			Mag: +1.8 PMG: 11 ^h 31 ^m			Mag: -2.1 PMG: 17 ^h 03 ^m			Mag: +0.4 PMG: 18 ^h 59 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	359	34.9	171	46.9	-2	04.8	186	57.2	+4	17.7	103	45.8	-22	-30.5	74	29.5	-22	30.8
1	14	37.3	186	46.5		06.1	201	58.2		17.0	118	47.9		-30.5	89	32.0		30.8
2	29	39.8	201	46.2		07.4	216	59.2		16.4	133	50.1		-30.5	104	34.4		30.8
3	44	42.3	216	45.8		08.6	232	00.1		15.7	148	52.2		-30.6	119	36.9		30.8
4	59	44.7	231	45.4		09.9	247	01.1		15.1	163	54.4		-30.6	134	39.3		30.8
5	74	47.2	246	45.1	-2	11.2	262	02.1	+4	14.5	178	56.5	-22	-30.6	149	41.8	-22	30.8
6	89	49.7	261	44.7	-2	12.5	277	03.1	+4	13.8	193	58.7	-22	-30.7	164	44.2	-22	30.8
7	104	52.1	276	44.3		13.7	292	04.1		13.2	209	00.9		-30.7	179	46.7		30.8
8	119	54.6	291	44.0		15.0	307	05.1		12.5	224	03.0		-30.7	194	49.1		30.8
9	134	57.1	306	43.6		16.3	322	06.1		11.9	239	05.2		-30.8	209	51.6		30.8
10	149	59.5	321	43.2		17.5	337	07.1		11.2	254	07.3		-30.8	224	54.0		30.9
11	165	02.0	336	42.8	-2	18.8	352	08.1	+4	10.6	269	09.5	-22	-30.8	239	56.5	-22	30.9
12	180	04.5	351	42.5	-2	20.1	7	09.1	+4	10.0	284	11.6	-22	-30.9	254	58.9	-22	30.9
13	195	06.9	6	42.1		21.4	22	10.1		09.3	299	13.8		-30.9	270	01.4		30.9
14	210	09.4	21	41.7		22.6	37	11.1		08.7	314	15.9		-30.9	285	03.8		30.9
15	225	11.8	36	41.4		23.9	52	12.1		08.0	329	18.1		-31.0	300	06.3		30.9
16	240	14.3	51	41.0		25.2	67	13.1		07.4	344	20.2		-31.0	315	08.7		30.9
17	255	16.8	66	40.6	-2	26.5	82	14.0	+4	06.8	359	22.4	-22	-31.0	330	11.2	-22	30.9
18	270	19.2	81	40.2	-2	27.7	97	15.0	+4	06.1	14	24.5	-22	-31.1	345	13.6	-22	30.9
19	285	21.7	96	39.9		29.0	112	16.0		05.5	29	26.7		-31.1	0	16.1		30.9
20	300	24.2	111	39.5		30.3	127	17.0		04.8	44	28.8		-31.1	15	18.5		30.9
21	315	26.6	126	39.1		31.6	142	18.0		04.2	59	31.0		-31.2	30	21.0		30.9
22	330	29.1	141	38.8		32.8	157	19.0		03.6	74	33.1		-31.2	45	23.4		30.9
23	345	31.6	156	38.4		34.1	172	20.0		02.9	89	35.3		-31.3	60	25.9		30.9
24	0	34.0	171	38.0	-2	35.4	187	21.0	+4	02.3	104	37.4	-22	-31.3	75	28.3	-22	30.9
Dif.	—		-4		-13		+10		-6		+22		0		+24			

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 52 ^m 8				SD: 15°6 Edad: 22 ^d 6 PHE 4^h: 57°5 12^h: 57°8 20^h: 58°1 PMG: 06 ^h 00 ^m Rº: 56^m													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m	h	m
0	181	45.5	+0	31.0	273	26.3	80	+21	55.3	34	60 N	4 11	5 02	5 43	21 31	64	15 23	56
1	196	45.7		30.0	287	53.3	79	+21	58.7	33	58	17	05	44	21 49	64	15 05	56
2	211	45.9		29.0	302	20.2	78	+22	02.0	31	56	23	07	44	22 04	63	14 50	57
3	226	46.1		28.0	316	47.0	77		05.1	30	54	27	09	45	17 63		37 57	
4	241	46.3		27.1	331	13.7	77		08.1	29	52	32	12	45	29 62		26 57	
5	256	46.6	+0	26.1	345	40.4	76	+22	11.0	27	50	4 35	5 13	5 46	22 39	62	14 16	57
6	271	46.8	+0	25.1	0	07.0	75	+22	13.7	27	45	4 43	5 17	5 46	23 00	62	13 54	58
7	286	47.0		24.2	14	33.5	75		16.4	25	40	48	20	47	17 61		37 58	
8	301	47.2		23.2	29	00.0	74		18.9	23	35	53	22	48	32 60		23 57	
9	316	47.4		22.2	43	26.4	73		21.2	23	30	4 56	24	48	23 45	60	13 10	58
10	331	47.7		21.2	57	52.7	73		23.5	21	20	5 01	27	49	*** **	**	12 49	57
11	346	47.9	+0	20.3	72	19.0	72	+22	25.6	20	10 N	5 04	5 28	5 49	*** **	**	12 30	58
12	1	48.1	+0	19.3	86	45.2	71	+22	27.6	18	0	5 05	5 29	5 50	*** **	**	12 13	57
13	16	48.3		18.3	101	11.3	71		29.4	17	10 S	04	29	50	0 03	57	11 56	57
14	31	48.6		17.3	115	37.4	71		31.1	16	20	5 02	28	50	21 58		37 57	
15	46	48.8		16.4	130	03.5	69		32.7	14	30	4 58	26	50	42 59		15 57	
16	61	49.0		15.4	144	29.4	69		34.1	13	35	55	25	50	0 55	59	11 03	57
17	76	49.2	+0	14.4	158	55.3	69	+22	35.4	12	40	4 51	5 23	5 50	1 09	59	10 48	57
18	91	49.4	+0	13.5	173	21.2	68	+22	36.6	10	45	4 46	5 21	5 50	1 26	60	10 31	57
19	106	49.7		12.5	187	47.0	67		37.6	9	50	40	18	50	46 61		10 56	
20	121	49.9		11.5	202	12.7	67		38.5	8	52	36	16	50	1 56	62	10 00	56
21	136	50.1		10.5	216	38.4	66		39.3	6	54	33	14	50	2 08	61	9 49	55
22	151	50.3		09.6	231	04.0	66		39.9	5	56	28	12	49	20 63		36 55	
23	166	50.5		08.6	245	29.6	66		40.4	3	58	24	10	49	2 35	63	9 21	54
24	181	50.8	+0	07.6	259	55.2		+22	40.7		60 S	4 18	5 08	5 49	2 53	64	9 03	54

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 23 ^h 53 ^m 8		Mag: -3.9 PMG: 12 ^h 34 ^m				Mag: +1.8 PMG: 11 ^h 30 ^m				Mag: -2.1 PMG: 16 ^h 59 ^m				Mag: +0.4 PMG: 18 ^h 55 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	0	34.0	171	38.0	-2	35.4	187	21.0	+4	02.3	104	37.4	-22	31.3	75	28.3	-22	30.9
1	15	36.5	186	37.6		36.6	202	22.0		01.6	119	39.6		31.3	90	30.8		30.9
2	30	39.0	201	37.3		37.9	217	23.0		01.0	134	41.7		31.4	105	33.2		30.9
3	45	41.4	216	36.9		39.2	232	24.0	+4	00.4	149	43.9		31.4	120	35.7		30.9
4	60	43.9	231	36.5		40.5	247	25.0	+3	59.7	164	46.0		31.4	135	38.1		30.9
5	75	46.3	246	36.2	-2	41.7	262	26.0	+3	59.1	179	48.2	-22	31.5	150	40.5	-22	30.9
6	90	48.8	261	35.8	-2	43.0	277	26.9	+3	58.4	194	50.3	-22	31.5	165	43.0	-22	30.9
7	105	51.3	276	35.4		44.3	292	27.9		57.8	209	52.5		31.5	180	45.4		30.9
8	120	53.7	291	35.0		45.6	307	28.9		57.1	224	54.6		31.6	195	47.9		30.9
9	135	56.2	306	34.7		46.8	322	29.9		56.5	239	56.8		31.6	210	50.3		30.9
10	150	58.7	321	34.3		48.1	337	30.9		55.9	254	58.9		31.6	225	52.8		30.9
11	166	01.1	336	33.9	-2	49.4	352	31.9	+3	55.2	270	01.1	-22	31.7	240	55.2	-22	30.9
12	181	03.6	351	33.5	-2	50.6	7	32.9	+3	54.6	285	03.2	-22	31.7	255	57.7	-22	30.9
13	196	06.1	6	33.2		51.9	22	33.9		53.9	300	05.4		31.7	271	00.1		30.9
14	211	08.5	21	32.8		53.2	37	34.9		53.3	315	07.5		31.8	286	02.6		30.9
15	226	11.0	36	32.4		54.5	52	35.9		52.7	330	09.7		31.8	301	05.0		30.9
16	241	13.5	51	32.1		55.7	67	36.9		52.0	345	11.8		31.8	316	07.4		30.9
17	256	15.9	66	31.7	-2	57.0	82	37.9	+3	51.4	0	13.9	-22	31.9	331	09.9	-22	30.9
18	271	18.4	81	31.3	-2	58.3	97	38.9	+3	50.7	15	16.1	-22	31.9	346	12.3	-22	30.9
19	286	20.8	96	30.9	-2	59.6	112	39.9		50.1	30	18.2		31.9	1	14.8		30.9
20	301	23.3	111	30.6	-3	00.8	127	40.9		49.4	45	20.4		32.0	16	17.2		30.9
21	316	25.8	126	30.2		02.1	142	41.8		48.8	60	22.5		32.0	31	19.7		30.9
22	331	28.2	141	29.8		03.4	157	42.8		48.2	75	24.7		32.1	46	22.1		30.9
23	346	30.7	156	29.4		04.6	172	43.8		47.5	90	26.8		32.1	61	24.6		30.9
24	1	33.2	171	29.1	-3	05.9	187	44.8	+3	46.9	105	28.9	-22	32.1	76	27.0	-22	30.9
Dif.	—		-4		-13		+10		-6		+21		0		+24			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9			PHE { 4^h: 58'4 12^h: 58'6 20^h: 58'9														
	PMG: 11 ^h 52 ^m 4			SD: 15'9 Edad: 23 ^d 6 PMG: 06 ^h 56 ^m Rº: 59^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	181	50.8	+0	07.6	259	55.2	64	+22	40.7	2	60 N	17 58	18 39	19 29	22 35 82	16 19 40		
1	196	51.0		06.6	274	20.6	65		40.9	0	58	58	37	23	22 53 79	16 01 43		
2	211	51.2		05.7	288	46.1	64		40.9	1	56	57	34	18	23 07 77	15 47 44		
3	226	51.4		04.7	303	11.5	63		40.8	2	54	57	32	14	20 75	34 46		
4	241	51.6		03.7	317	36.8	63		40.6	4	52	57	31	10	31 74	23 47		
5	256	51.9	+0	02.8	332	02.1	63	+22	40.2	5	50	17 57	18 29	19 07	23 41 73	15 13 48		
6	271	52.1	+0	01.8	346	27.4	62	+22	39.7	7	45	17 56	18 26	19 00	*** **	14 52 50		
7	286	52.3	+0	00.8	0	52.6	61		39.0	8	40	56	23	18 55	*** **	35 52		
8	301	52.5	-0	00.2	15	17.7	62		38.2	9	35	56	21	51	*** **	20 54		
9	316	52.7		01.1	29	42.9	61		37.3	11	30	56	20	47	*** **	14 08 54		
10	331	53.0		02.1	44	08.0	60		36.2	13	20	56	18	43	0 06 60	13 46 56		
11	346	53.2	-0	03.1	58	33.0	60	+22	34.9	14	10 N	17 56	18 17	18 41	0 25 59	13 28 57		
12	1	53.4	-0	04.1	72	58.0	60	+22	33.5	15	0	17 56	18 16	18 40	0 43 58	13 10 59		
13	16	53.6		05.0	87	23.0	60		32.0	17	10 S	56	17	41	1 00 58	12 53 60		
14	31	53.8		06.0	101	48.0	59		30.3	18	20	56	18	44	19 57	34 61		
15	46	54.0		07.0	116	12.9	58		28.5	20	30	57	20	48	41 56	12 63		
16	61	54.3		07.9	130	37.7	59		26.5	21	35	57	22	52	1 54 55	12 00 63		
17	76	54.5	-0	08.9	145	02.6	58	+22	24.4	23	40	17 57	18 24	18 56	2 08 55	11 45 65		
18	91	54.7	-0	09.9	159	27.4	58	+22	22.1	24	45	17 58	18 27	19 02	2 26 54	11 28 66		
19	106	54.9		10.9	173	52.2	58		19.7	26	50	58	31	09	47 53	11 06 68		
20	121	55.1		11.8	188	17.0	57		17.1	27	52	59	32	12	2 58 52	10 56 68		
21	136	55.4		12.8	202	41.7	58		14.4	29	54	59	34	16	3 09 52	44 69		
22	151	55.6		13.8	217	06.5	57		11.5	30	56	17 59	37	21	23 50	31 70		
23	166	55.8		14.8	231	31.2	57		08.5	32	58	18 00	39	26	38 50	10 15 72		
24	181	56.0	-0	15.7	245	55.9		+22	05.3		60 S	18 00	18 42	19 32	3 57 48	9 57 74		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 49 ^m 9		Mag: -3.9 PMG: 12 ^h 34 ^m			Mag: +1.8 PMG: 11 ^h 28 ^m			Mag: -2.1 PMG: 16 ^h 56 ^m			Mag: +0.4 PMG: 18 ^h 51 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	1	33.2	171	29.1	-3	05.9	187	44.8	+3	46.9	105	28.9	-22	-32.1	76	27.0	-22	30.9
1	16	35.6	186	28.7		07.2	202	45.8		46.2	120	31.1		-32.2	91	29.4		30.9
2	31	38.1	201	28.3		08.5	217	46.8		45.6	135	33.2		-32.2	106	31.9		30.9
3	46	40.6	216	27.9		09.7	232	47.8		44.9	150	35.4		-32.2	121	34.3		31.0
4	61	43.0	231	27.6		11.0	247	48.8		44.3	165	37.5		-32.3	136	36.8		31.0
5	76	45.5	246	27.2	-3	12.3	262	49.8	+3	43.7	180	39.7	-22	-32.3	151	39.2	-22	31.0
6	91	47.9	261	26.8	-3	13.5	277	50.8	+3	43.0	195	41.8	-22	-32.3	166	41.7	-22	31.0
7	106	50.4	276	26.4		14.8	292	51.8		42.4	210	43.9		-32.4	181	44.1		31.0
8	121	52.9	291	26.1		16.1	307	52.8		41.7	225	46.1		-32.4	196	46.5		31.0
9	136	55.3	306	25.7		17.3	322	53.8		41.1	240	48.2		-32.4	211	49.0		31.0
10	151	57.8	321	25.3		18.6	337	54.8		40.4	255	50.4		-32.5	226	51.4		31.0
11	167	00.3	336	24.9	-3	19.9	352	55.7	+3	39.8	270	52.5	-22	-32.5	241	53.9	-22	31.0
12	182	02.7	351	24.6	-3	21.2	7	56.7	+3	39.2	285	54.6	-22	-32.5	256	56.3	-22	31.0
13	197	05.2	6	24.2		22.4	22	57.7		38.5	300	56.8		-32.6	271	58.7		31.0
14	212	07.7	21	23.8		23.7	37	58.7		37.9	315	58.9		-32.6	287	01.2		31.0
15	227	10.1	36	23.4		25.0	52	59.7		37.2	331	01.1		-32.6	302	03.6		31.0
16	242	12.6	51	23.1		26.2	68	00.7		36.6	346	03.2		-32.7	317	06.1		31.0
17	257	15.1	66	22.7	-3	27.5	83	01.7	+3	35.9	1	05.3	-22	-32.7	332	08.5	-22	31.0
18	272	17.5	81	22.3	-3	28.8	98	02.7	+3	35.3	16	07.5	-22	-32.8	347	10.9	-22	31.0
19	287	20.0	96	21.9		30.0	113	03.7		34.7	31	09.6		-32.8	2	13.4		31.0
20	302	22.4	111	21.6		31.3	128	04.7		34.0	46	11.8		-32.8	17	15.8		31.0
21	317	24.9	126	21.2		32.6	143	05.7		33.4	61	13.9		-32.9	32	18.3		31.0
22	332	27.4	141	20.8		33.9	158	06.7		32.7	76	16.0		-32.9	47	20.7		31.0
23	347	29.8	156	20.4		35.1	173	07.7		32.1	91	18.2		-32.9	62	23.1		31.0
24	2	32.3	171	20.0	-3	36.4	188	08.7	+3	31.4	106	20.3	-22	-33.0	77	25.6	-22	31.0
Dif.	—		-4	-13			+10	-6			+21	0			+24	0		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9				SD: 16'1												PHE { 4 ^h : 59'2 12 ^h : 59'5 20 ^h : 59'8	
	PMG: 11 ^h 52 ^m 1				Edad: 24 ^d 6													
	PMG: 07 ^h 55 ^m				Rº: 59 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	'				°	h	m	h	m	h	m	m			
0	181	56.0	-0	15.7	245	55.9	56	+22 05.3	33	60 N	4 16	5 06	5 48	23 57	94	16 59	28	
1	196	56.2		16.7	260	20.5	57	+22 02.0	35	58	22	09	48	** ** *	**	44	32	
2	211	56.5		17.7	274	45.2	56	+21 58.5	36	56	27	11	48	** ** *	**	31	35	
3	226	56.7		18.7	289	09.8	56		38	54	31	13	48	** ** *	**	20	37	
4	241	56.9		19.6	303	34.4	56		39	52	35	15	49	** ** *	**	10	39	
5	256	57.1	-0	20.6	317	59.0	56	+21 47.2	41	50	4 38	5 16	5 49	** ** *	**	16 01	40	
6	271	57.3	-0	21.6	332	23.6	56	+21 43.1	42	45	4 45	5 20	5 49	0 02	70	15 42	44	
7	286	57.5		22.5	346	48.2	55		43	40	50	22	49	18	69	27	46	
8	301	57.8		23.5	1	12.7	56		46	35	54	24	49	32	67	14	48	
9	316	58.0		24.5	15	37.3	56		46	30	4 57	25	49	0 45	65	15 02	51	
10	331	58.2		25.5	30	01.9	55		48	20	5 02	27	49	1 06	63	14 42	54	
11	346	58.4	-0	26.4	44	26.4	55	+21 20.6	50	10 N	5 04	5 28	5 49	1 24	61	14 25	57	
12	1	58.6	-0	27.4	58	50.9	56	+21 15.6	51	0	5 04	5 28	5 49	1 41	59	14 09	59	
13	16	58.8		28.4	73	15.5	55		52	10 S	03	28	49	1 58	57	13 53	61	
14	31	59.1		29.4	87	40.0	55	+21 05.3	54	20	5 01	26	48	2 16	55	35	64	
15	46	59.3		30.3	102	04.5	56	+20 59.9	56	30	4 56	24	48	37	53	15	67	
16	61	59.5		31.3	116	29.1	55		57	35	52	22	47	2 49	51	13 03	69	
17	76	59.7	-0	32.3	130	53.6	56	+20 48.6	58	40	4 48	5 20	5 47	3 03	50	12 50	71	
18	91	59.9	-0	33.3	145	18.2	55	+20 42.8	60	45	4 42	5 17	5 46	3 20	47	12 34	73	
19	107	00.2		34.2	159	42.7	55		61	50	35	13	45	40	45	14	76	
20	122	00.4		35.2	174	07.2	56		63	52	31	11	45	3 50	43	12 04	79	
21	137	00.6		36.2	188	31.8	56		64	54	27	09	45	4 01	41	11 53	81	
22	152	00.8		37.2	202	56.4	55		66	56	23	07	44	13	40	41	83	
23	167	01.0		38.1	217	20.9	56		67	58	18	04	44	4 28	36	11 27	86	
24	182	01.2	-0	39.1	231	45.5		+20 04.7		60 S	4 11	5 01	5 43	4 45	33	11 11	89	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: +1.8				Mag: -2.1				Mag: +0.4			
	23 ^h 45 ^m 9		PMG: 12 ^h 35 ^m				PMG: 11 ^h 27 ^m				PMG: 16 ^h 52 ^m				PMG: 18 ^h 47 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'		°	'	°	'	°	'	°	'	°	'	
0	2	32.3	171	20.0	-3	36.4	188	08.7	+3	31.4	106	20.3	-22	33.0	77	25.6	-22	31.0
1	17	34.8	186	19.7		37.7	203	09.7		30.8	121	22.4		33.0	92	28.0		31.0
2	32	37.2	201	19.3		38.9	218	10.6		30.2	136	24.6		33.0	107	30.5		31.0
3	47	39.7	216	18.9		40.2	233	11.6		29.5	151	26.7		33.1	122	32.9		31.0
4	62	42.2	231	18.5		41.5	248	12.6		28.9	166	28.8		33.1	137	35.3		31.0
5	77	44.6	246	18.2	-3	42.7	263	13.6	+3	28.2	181	31.0	-22	33.1	152	37.8	-22	31.0
6	92	47.1	261	17.8	-3	44.0	278	14.6	+3	27.6	196	33.1	-22	33.2	167	40.2	-22	31.0
7	107	49.6	276	17.4		45.3	293	15.6		26.9	211	35.3		33.2	182	42.6		31.0
8	122	52.0	291	17.0		46.5	308	16.6		26.3	226	37.4		33.2	197	45.1		31.0
9	137	54.5	306	16.6		47.8	323	17.6		25.6	241	39.5		33.3	212	47.5		31.0
10	152	56.9	321	16.3		49.1	338	18.6		25.0	256	41.7		33.3	227	50.0		31.0
11	167	59.4	336	15.9	-3	50.3	353	19.6	+3	24.4	271	43.8	-22	33.4	242	52.4	-22	31.0
12	183	01.9	351	15.5	-3	51.6	8	20.6	+3	23.7	286	45.9	-22	33.4	257	54.8	-22	31.0
13	198	04.3	6	15.1		52.9	23	21.6		23.1	301	48.1		33.4	272	57.3		31.0
14	213	06.8	21	14.7		54.2	38	22.6		22.4	316	50.2		33.5	287	59.7		31.0
15	228	09.3	36	14.4		55.4	53	23.6		21.8	331	52.3		33.5	303	02.1		31.0
16	243	11.7	51	14.0		56.7	68	24.6		21.1	346	54.5		33.5	318	04.6		31.0
17	258	14.2	66	13.6	-3	58.0	83	25.5	+3	20.5	1	56.6	-22	33.6	333	07.0	-22	31.0
18	273	16.7	81	13.2	-3	59.2	98	26.5	+3	19.9	16	58.7	-22	33.6	348	09.4	-22	31.0
19	288	19.1	96	12.9	-4	00.5	113	27.5		19.2	32	00.9		33.6	3	11.9		31.0
20	303	21.6	111	12.5		01.8	128	28.5		18.6	47	03.0		33.7	18	14.3		31.0
21	318	24.1	126	12.1		03.0	143	29.5		17.9	62	05.1		33.7	33	16.8		31.0
22	333	26.5	141	11.7		04.3	158	30.5		17.3	77	07.2		33.7	48	19.2		31.0
23	348	29.0	156	11.3		05.6	173	31.5		16.6	92	09.4		33.8	63	21.6		31.0
24	3	31.4	171	11.0	-4	06.8	188	32.5	+3	16.0	107	11.5	-22	33.8	78	24.1	-22	31.0
Dif.	—		-4		-13		+10		-6		+21		0		+24		0	

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'9			PHE { 4 ^h : 60'0 12 ^h : 60'3 20 ^h : 60'5														
	PMG: 11 ^h 51 ^m 7			Edad: 25 ^d 6														
				PMG: 08 ^h 54 ^m Rº: 58 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°		h m	h m	h m	m	h m	m			
0	182	01.2	-0	231	45.5	56	+20	04.7	68	60 N	17 52	18 33	19 23	***	***	17 27	20	
1	197	01.5		246	10.1	56	+19	57.9	70	58	52	31	17	0 12	90	16	23	
2	212	01.7		260	34.7	56		50.9	71	56	52	29	13	24	87	17 06	26	
3	227	01.9		274	59.3	57		43.8	73	54	52	27	09	35	85	16 57	29	
4	242	02.1		289	24.0	56		36.5	74	52	52	26	05	45	82	49	31	
5	257	02.3	-0	303	48.6	57	+19	29.1	76	50	17 52	18 25	19 02	0 54	80	16 41	34	
6	272	02.5	-0	318	13.3	57	+19	21.5	77	45	17 53	18 22	18 56	1 12	76	16 26	38	
7	287	02.8		332	38.0	57		13.8	78	40	53	20	51	27	73	13	41	
8	302	03.0		347	02.7	57	+19	06.0	80	35	53	18	48	39	71	16 02	44	
9	317	03.2		1	27.4	57	+18	58.0	81	30	53	17	45	1 50	68	15 53	46	
10	332	03.4		15	52.1	58		49.9	82	20	54	16	41	2 09	64	36	51	
11	347	03.6	-0	30	16.9	58	+18	41.7	84	10 N	17 54	18 15	18 40	2 25	61	15 22	54	
12	2	03.8	-0	44	41.7	58	+18	33.3	85	0	17 55	18 16	18 40	2 40	58	15 08	58	
13	17	04.0		59	06.5	58		24.8	86	10 S	56	17	41	2 55	56	14 54	61	
14	32	04.3		73	31.3	59		16.2	88	20	57	19	44	3 11	52	39	65	
15	47	04.5		87	56.2	58	+18	07.4	89	30	58	22	50	30	48	22	69	
16	62	04.7		102	21.0	59	+17	58.5	90	35	58	24	53	40	47	12	72	
17	77	04.9	-0	116	45.9	60	+17	49.5	92	40	17 59	18 26	18 58	3 53	43	14 01	74	
18	92	05.1	-0	131	10.9	59	+17	40.3	92	45	18 00	18 30	19 04	4 07	41	13 47	78	
19	107	05.3		145	35.8	60		31.1	95	50	01	34	12	25	36	30	83	
20	122	05.6		160	00.8	61		21.6	95	52	02	36	16	33	35	23	84	
21	137	05.8	-0	174	25.9	60		12.1	97	54	03	38	20	42	32	14	87	
22	152	06.0	-1	188	50.9	61	+17	02.4	97	56	03	41	25	4 53	29	13 04	90	
23	167	06.2		203	16.0	61	+16	52.7	99	58	04	43	31	5 04	27	12 53	93	
24	182	06.4	-1	217	41.1		+16	42.8		60 S	18 05	18 47	19 37	5 18	23	12 40	97	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 42 ^m 0		Mag: -3.9 PMG: 12 ^h 36 ^m			Mag: +1.8 PMG: 11 ^h 25 ^m			Mag: -2.1 PMG: 16 ^h 49 ^m			Mag: +0.4 PMG: 18 ^h 43 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	3	31.4	171	11.0	-4	06.8	188	32.5	+3	16.0	107	11.5	-22	-33.8	78	24.1	-22	31.0
1	18	33.9	186	10.6		08.1	203	33.5		15.3	122	13.6		-33.8	93	26.5		31.0
2	33	36.4	201	10.2		09.4	218	34.5		14.7	137	15.8		-33.9	108	28.9		31.0
3	48	38.8	216	09.8		10.6	233	35.5		14.1	152	17.9		-33.9	123	31.4		31.0
4	63	41.3	231	09.4		11.9	248	36.5		13.4	167	20.0		-34.0	138	33.8		31.0
5	78	43.8	246	09.0	-4	13.2	263	37.5	+3	12.8	182	22.2	-22	-34.0	153	36.2	-22	31.0
6	93	46.2	261	08.7	-4	14.4	278	38.5	+3	12.1	197	24.3	-22	-34.0	168	38.7	-22	31.0
7	108	48.7	276	08.3		15.7	293	39.5		11.5	212	26.4		-34.1	183	41.1		31.0
8	123	51.2	291	07.9		16.9	308	40.4		10.8	227	28.5		-34.1	198	43.5		31.0
9	138	53.6	306	07.5		18.2	323	41.4		10.2	242	30.7		-34.1	213	46.0		31.0
10	153	56.1	321	07.1		19.5	338	42.4		09.5	257	32.8		-34.2	228	48.4		31.0
11	168	58.5	336	06.8	-4	20.7	353	43.4	+3	08.9	272	34.9	-22	-34.2	243	50.8	-22	31.0
12	184	01.0	351	06.4	-4	22.0	8	44.4	+3	08.3	287	37.0	-22	-34.2	258	53.3	-22	31.0
13	199	03.5	6	06.0		23.3	23	45.4		07.6	302	39.2		-34.3	273	55.7		31.0
14	214	05.9	21	05.6		24.5	38	46.4		07.0	317	41.3		-34.3	288	58.1		31.0
15	229	08.4	36	05.2		25.8	53	47.4		06.3	332	43.4		-34.3	304	00.5		31.0
16	244	10.9	51	04.8		27.1	68	48.4		05.7	347	45.6		-34.4	319	03.0		31.0
17	259	13.3	66	04.5	-4	28.3	83	49.4	+3	05.0	2	47.7	-22	-34.4	334	05.4	-22	31.0
18	274	15.8	81	04.1	-4	29.6	98	50.4	+3	04.4	17	49.8	-22	-34.5	349	07.8	-22	31.0
19	289	18.3	96	03.7		30.9	113	51.4		03.7	32	51.9		-34.5	4	10.3		31.1
20	304	20.7	111	03.3		32.1	128	52.4		03.1	47	54.1		-34.5	19	12.7		31.1
21	319	23.2	126	02.9		33.4	143	53.4		02.4	62	56.2		-34.6	34	15.1		31.1
22	334	25.7	141	02.5		34.6	158	54.4		01.8	77	58.3		-34.6	49	17.6		31.1
23	349	28.1	156	02.2		35.9	173	55.3		01.2	93	00.4		-34.6	64	20.0		31.1
24	4	30.6	171	01.8	-4	37.2	188	56.3	+3	00.5	108	02.6	-22	-34.7	79	22.4	-22	31.1
Dif.	—		-4		-13		+10		-6		+21		0		+24			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 51 ^m 4			SD: 16°5 Edad: 26 ^d 6 PHE { 4 ^h : 60°7 12 ^h : 60°9 20 ^h : 61°0 PMG: 09 ^h 52 ^m Rº: 57 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m				
0	182	06.4	-1	02.5	217	41.1	61	+16	42.8	101	60 N	4 22	5 11	5 53	1 31	99	17 47	14
1	197	06.6		03.4	232	06.2	62		32.7	101	58	27	13	52	42	95	39	18
2	212	06.8		04.4	246	31.4	62		22.6	103	56	31	15	52	1 51	92	32	21
3	227	07.1		05.4	260	56.6	63		12.3	104	54	35	17	52	2 00	89	26	23
4	242	07.3		06.4	275	21.9	62	+16	01.9	105	52	39	18	52	07	87	20	26
5	257	07.5	-1	07.3	289	47.1	63	+15	51.4	106	50	4 42	5 19	5 52	2 14	84	17 15	28
6	272	07.7	-1	08.3	304	12.4	64	+15	40.8	107	45	4 48	5 22	5 51	2 28	79	17 04	33
7	287	07.9		09.3	318	37.8	64		30.1	109	40	52	24	51	40	75	16 54	37
8	302	08.1		10.3	333	03.2	64		19.2	109	35	56	25	51	50	72	46	40
9	317	08.3		11.2	347	28.6	64	+15	08.3	111	30	4 59	26	50	2 58	70	39	43
10	332	08.6		12.2	1	54.0	65	+14	57.2	111	20	5 02	28	50	3 13	65	27	48
11	347	08.8	-1	13.2	16	19.5	65	+14	46.1	113	10 N	5 04	5 28	5 49	3 26	61	16 16	52
12	2	09.0	-1	14.2	30	45.0	66	+14	34.8	114	0	5 03	5 27	5 48	3 38	57	16 06	56
13	17	09.2		15.1	45	10.6	66		23.4	115	10 S	5 02	26	47	3 51	53	15 55	61
14	32	09.4		16.1	59	36.2	66		11.9	116	20	4 59	24	46	4 03	50	44	65
15	47	09.6		17.1	74	01.8	67	+14	00.3	116	30	53	21	45	18	45	31	70
16	62	09.8		18.0	88	27.5	67	+13	48.7	118	35	49	19	44	27	41	24	73
17	77	10.1	-1	19.0	102	53.2	67	+13	36.9	119	40	4 45	5 16	5 43	4 36	39	15 15	76
18	92	10.3	-1	20.0	117	18.9	68	+13	25.0	120	45	4 38	5 13	5 42	4 48	35	15 05	80
19	107	10.5		21.0	131	44.7	68		13.0	121	50	30	09	41	5 01	31	14 53	85
20	122	10.7		21.9	146	10.5	69	+13	00.9	121	52	26	07	40	08	28	47	88
21	137	10.9		22.9	160	36.4	69	+12	48.8	123	54	22	04	40	14	26	41	90
22	152	11.1		23.9	175	02.3	69		36.5	124	56	17	5 02	39	22	24	34	93
23	167	11.3		24.9	189	28.2	70		24.1	124	58	11	4 59	38	5 31	20	14 26	96
24	182	11.6	-1	25.8	203	54.2		+12	11.7		60 S	4 05	4 55	5 37	5 41	17	14 17	100

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 38 ^m 1		Mag: -3.9 PMG: 12 ^h 36 ^m			Mag: +1.8 PMG: 11 ^h 23 ^m			Mag: -2.1 PMG: 16 ^h 45 ^m			Mag: +0.4 PMG: 18 ^h 39 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	4	30.6	171	01.8	-4	37.2	188	56.3	+3	00.5	108	02.6	-22	34.7	79	22.4	-22	31.1
1	19	33.0	186	01.4		38.4	203	57.3	+2	59.9	123	04.7		34.7	94	24.9		31.1
2	34	35.5	201	01.0		39.7	218	58.3		59.2	138	06.8		34.7	109	27.3		31.1
3	49	38.0	216	00.6		41.0	233	59.3		58.6	153	08.9		34.8	124	29.7		31.1
4	64	40.4	231	00.2		42.2	249	00.3		57.9	168	11.0		34.8	139	32.1		31.1
5	79	42.9	245	59.8	-4	43.5	264	01.3	+2	57.3	183	13.2	-22	34.8	154	34.6	-22	31.1
6	94	45.4	260	59.5	-4	44.7	279	02.3	+2	56.6	198	15.3	-22	34.9	169	37.0	-22	31.1
7	109	47.8	275	59.1		46.0	294	03.3		56.0	213	17.4		34.9	184	39.4		31.1
8	124	50.3	290	58.7		47.3	309	04.3		55.3	228	19.5		35.0	199	41.9		31.1
9	139	52.8	305	58.3		48.5	324	05.3		54.7	243	21.7		35.0	214	44.3		31.1
10	154	55.2	320	57.9		49.8	339	06.3		54.1	258	23.8		35.0	229	46.7		31.1
11	169	57.7	335	57.5	-4	51.1	354	07.3	+2	53.4	273	25.9	-22	35.1	244	49.1	-22	31.1
12	185	00.2	350	57.1	-4	52.3	9	08.3	+2	52.8	288	28.0	-22	35.1	259	51.6	-22	31.1
13	200	02.6	5	56.8		53.6	24	09.3		52.1	303	30.1		35.1	274	54.0		31.1
14	215	05.1	20	56.4		54.8	39	10.2		51.5	318	32.3		35.2	289	56.4		31.1
15	230	07.5	35	56.0		56.1	54	11.2		50.8	333	34.4		35.2	304	58.9		31.1
16	245	10.0	50	55.6		57.4	69	12.2		50.2	348	36.5		35.2	320	01.3		31.1
17	260	12.5	65	55.2	-4	58.6	84	13.2	+2	49.5	3	38.6	-22	35.3	335	03.7	-22	31.1
18	275	14.9	80	54.8	-4	59.9	99	14.2	+2	48.9	18	40.7	-22	35.3	350	06.1	-22	31.1
19	290	17.4	95	54.4	-5	01.1	114	15.2		48.2	33	42.9		35.3	5	08.6		31.1
20	305	19.9	110	54.1		02.4	129	16.2		47.6	48	45.0		35.4	20	11.0		31.1
21	320	22.3	125	53.7		03.7	144	17.2		47.0	63	47.1		35.4	35	13.4		31.1
22	335	24.8	140	53.3		04.9	159	18.2		46.3	78	49.2		35.5	50	15.8		31.1
23	350	27.3	155	52.9		06.2	174	19.2		45.7	93	51.3		35.5	65	18.3		31.1
24	5	29.7	170	52.5	-5	07.4	189	20.2	+2	45.0	108	53.5	-22	35.5	80	20.7	-22	31.1
Dif.	—		-4	-13			+10	-6			+21	0			+24			

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 51. ^m 1				SD: 16'6 Edad: 27 ^d 6 PMG: 10 ^h 49 ^m PHE { 4 ^h : 61'1 12 ^h : 61'2 20 ^h : 61'3 Rº: 55 ^m														
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.						
	h	°	'	°	'	h	°	'	°	'			h	°	'	°	'	h	°
0	182	11.6	-1	25.8	203	54.2	70	+12	11.7	125	60 N	17 46	18 27	19 16	3 10	100	18 01	13	
1	197	11.8		26.8	218	20.2	70	+11	59.2	126	58	46	25	11	17	96	17 57	16	
2	212	12.0		27.8	232	46.2	71		46.6	127	56	47	24	07	23	93	53	18	
3	227	12.2		28.8	247	12.3	72		33.9	128	54	47	22	04	29	90	49	21	
4	242	12.4		29.7	261	38.5	71		21.1	129	52	48	21	19 01	34	87	46	24	
5	257	12.6	-1	30.7	276	04.6	72	+11	08.2	129	50	17 48	18 20	18 58	3 38	85	17 43	26	
6	272	12.8	-1	31.7	290	30.8	73	+10	55.3	130	45	17 49	18 18	18 52	3 47	81	17 37	30	
7	287	13.0		32.7	304	57.1	72		42.3	131	40	50	17	48	3 55	76	31	34	
8	302	13.3		33.6	319	23.3	74		29.2	132	35	50	15	45	4 02	73	26	38	
9	317	13.5		34.6	333	49.7	73		16.0	132	30	51	15	42	08	70	22	41	
10	332	13.7		35.6	348	16.0	74	+10	02.8	133	20	52	14	40	18	65	15	45	
11	347	13.9	-1	36.5	2	42.4	74	+9	49.5	134	10 N	17 53	18 14	18 38	4 27	60	17 08	51	
12	2	14.1	-1	37.5	17	08.8	75	+9	36.1	134	0	17 54	18 15	18 39	4 35	56	17 02	55	
13	17	14.3		38.5	31	35.3	75		22.7	135	10 S	56	17	41	44	51	16 56	59	
14	32	14.5		39.5	46	01.8	75	+9	09.2	136	20	57	19	45	4 53	46	49	64	
15	47	14.7		40.4	60	28.3	76	+8	55.6	136	30	17 59	23	51	5 03	41	41	69	
16	62	14.9		41.4	74	54.9	76		42.0	137	35	18 00	25	18 55	08	39	37	72	
17	77	15.2	-1	42.4	89	21.5	76	+8	28.3	137	40	18 01	18 28	19 00	5 15	35	16 31	76	
18	92	15.4	-1	43.4	103	48.1	77	+8	14.6	138	45	18 03	18 32	19 07	5 23	31	16 25	81	
19	107	15.6		44.3	118	14.8	77	+8	00.8	139	50	04	37	15	32	26	18	85	
20	122	15.8		45.3	132	41.5	78	+7	46.9	139	52	05	39	20	36	24	15	87	
21	137	16.0		46.3	147	08.3	77		33.0	139	54	06	42	24	40	23	11	90	
22	152	16.2		47.3	161	35.0	79		19.1	140	56	07	45	30	46	19	07	93	
23	167	16.4		48.2	176	01.9	78	+7	05.1	141	58	08	48	36	51	17	16 02	97	
24	182	16.6	-1	49.2	190	28.7		+6	51.0		60 S	18 10	18 52	19 43	5 58	13	15 57	100	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 23 ^h 34. ^m 1		Mag: -3.9 PMG: 12 ^h 37 ^m			Mag: +1.8 PMG: 11 ^h 22 ^m			Mag: -2.1 PMG: 16 ^h 42 ^m			Mag: +0.5 PMG: 18 ^h 36 ^m							
	hG ♈		hG ♀ dec.			hG ♂ dec.			hG ♃ dec.			hG ♄ dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	5	29.7	170	52.5	-5	07.4	189	20.2	+2	45.0	108	53.5	-22	-35.5	80	20.7	-22	31.1	
1	20	32.2	185	52.1		08.7	204	21.2		44.4	123	55.6		-35.6	95	23.1		31.1	
2	35	34.6	200	51.7		10.0	219	22.2		43.7	138	57.7		-35.6	110	25.5		31.1	
3	50	37.1	215	51.3		11.2	234	23.2		43.1	153	59.8		-35.6	125	28.0		31.1	
4	65	39.6	230	50.9		12.5	249	24.2		42.4	169	01.9		-35.7	140	30.4		31.1	
5	80	42.0	245	50.6	-5	13.7	264	25.1	+2	41.8	184	04.0	-22	-35.7	155	32.8	-22	31.1	
6	95	44.5	260	50.2	-5	15.0	279	26.1	+2	41.1	199	06.2	-22	-35.7	170	35.2	-22	31.1	
7	110	47.0	275	49.8		16.3	294	27.1		40.5	214	08.3		-35.8	185	37.7		31.1	
8	125	49.4	290	49.4		17.5	309	28.1		39.8	229	10.4		-35.8	200	40.1		31.1	
9	140	51.9	305	49.0		18.8	324	29.1		39.2	244	12.5		-35.8	215	42.5		31.1	
10	155	54.4	320	48.6		20.0	339	30.1		38.6	259	14.6		-35.9	230	44.9		31.1	
11	170	56.8	335	48.2	-5	21.3	354	31.1	+2	37.9	274	16.7	-22	-35.9	245	47.4	-22	31.1	
12	185	59.3	350	47.8	-5	22.5	9	32.1	+2	37.3	289	18.8	-22	-36.0	260	49.8	-22	31.1	
13	201	01.8	5	47.4		23.8	24	33.1		36.6	304	21.0		-36.0	275	52.2		31.1	
14	216	04.2	20	47.0		25.1	39	34.1		36.0	319	23.1		-36.0	290	54.6		31.1	
15	231	06.7	35	46.7		26.3	54	35.1		35.3	334	25.2		-36.1	305	57.0		31.1	
16	246	09.1	50	46.3		27.6	69	36.1		34.7	349	27.3		-36.1	320	59.5		31.1	
17	261	11.6	65	45.9	-5	28.8	84	37.1	+2	34.0	4	29.4	-22	-36.1	336	01.9	-22	31.1	
18	276	14.1	80	45.5	-5	30.1	99	38.1	+2	33.4	19	31.5	-22	-36.2	351	04.3	-22	31.1	
19	291	16.5	95	45.1		31.3	114	39.1		32.7	34	33.6		-36.2	6	06.7		31.1	
20	306	19.0	110	44.7		32.6	129	40.0		32.1	49	35.8		-36.2	21	09.2		31.1	
21	321	21.5	125	44.3		33.8	144	41.0		31.4	64	37.9		-36.3	36	11.6		31.1	
22	336	23.9	140	43.9		35.1	159	42.0		30.8	79	40.0		-36.3	51	14.0		31.1	
23	351	26.4	155	43.5		36.4	174	43.0		30.1	94	42.1		-36.4	66	16.4		31.1	
24	6	28.9	170	43.1	-5	37.6	189	44.0	+2	29.5	109	44.2	-22	-36.4	81	18.8	-22	31.1	
Dif.	—		-4 -13			+10 -6			+21 0			+24 0							

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 50 ^m 7			SD: 16'7 Edad: 28 ^d 6 PHE { 4^h: 61'3 12^h: 61'3 20^h: 61'2													
				PMG: 11 ^h 44 ^m Rº: 54^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m		
0	182	16.6	-1	190	28.7	79	+6	51.0	141	60 N	4 27	5 16	5 57	4 50	99	18 14	11
1	197	16.8		204	55.6	79		36.9	141	58	31	18	57	53	96	13	14
2	212	17.1		219	22.5	79		22.8	142	56	35	19	56	56	93	11	18
3	227	17.3		233	49.4	80	+6	08.6	142	54	39	20	56	4 59	90	10	20
4	242	17.5		248	16.4	80	+5	54.4	143	52	42	22	55	5 01	87	10	22
5	257	17.7	-1	262	43.4	81	+5	40.1	143	50	4 45	5 23	5 55	5 03	85	18 09	24
6	272	17.9	-1	277	10.5	80	+5	25.8	143	45	4 50	5 24	5 54	5 08	79	18 07	29
7	287	18.1		291	37.5	81	+5	11.5	144	40	54	26	53	11	76	05	33
8	302	18.3		306	04.6	81	+4	57.1	144	35	4 57	27	52	15	72	04	36
9	317	18.5		320	31.7	82		42.7	144	30	5 00	28	51	18	68	03	39
10	332	18.7		334	58.9	82		28.3	144	20	03	28	50	23	63	18 00	45
11	347	18.9	-1	349	26.1	82	+4	13.9	145	10 N	5 03	5 28	5 49	5 27	58	17 59	49
12	2	19.2	-2	3	53.3	82	+3	59.4	145	0	5 03	5 27	5 47	5 31	54	17 57	53
13	17	19.4		18	20.5	83		44.9	145	10 S	5 01	25	46	35	50	55	58
14	32	19.6		32	47.8	83		30.4	146	20	4 57	22	44	39	45	53	63
15	47	19.8		47	15.1	83		15.8	145	30	51	19	43	44	40	50	69
16	62	20.0		61	42.4	83	+3	01.3	146	35	46	16	41	47	37	49	72
17	77	20.2	-2	76	09.7	84	+2	46.7	146	40	4 41	5 13	5 40	5 50	34	17 47	76
18	92	20.4	-2	90	37.1	84	+2	32.1	146	45	4 34	5 09	5 38	5 54	29	17 46	79
19	107	20.6		105	04.5	84		17.5	146	50	26	04	37	5 58	25	43	85
20	122	20.8		119	31.9	84	+2	02.9	146	52	21	5 02	36	6 00	23	42	87
21	137	21.0		133	59.3	85	+1	48.3	146	54	17	4 59	35	03	20	41	89
22	152	21.2		148	26.8	84		33.7	146	56	11	56	34	05	18	40	92
23	167	21.5		162	54.2	85		19.1	146	58	4 05	53	32	6 08	15	17 39	95
24	182	21.7	-2	177	21.7		+1	04.5		60 S	3 58	4 49	5 31	6 11	11	17 37	99
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 30 ^m 2		Mag: -3.9 PMG: 12 ^h 37 ^m			Mag: +1.8 PMG: 11 ^h 20 ^m			Mag: -2.1 PMG: 16 ^h 39 ^m			Mag: +0.5 PMG: 18 ^h 32 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°			
0	6	28.9	170	43.1	-5	189	44.0	+2	109	44.2	-22	81	18.8	-22			
1	21	31.3	185	42.7		204	45.0		124	46.3		96	21.3				
2	36	33.8	200	42.3		219	46.0		139	48.4		111	23.7				
3	51	36.2	215	41.9		234	47.0		154	50.5		126	26.1				
4	66	38.7	230	41.5		249	48.0		169	52.6		141	28.5				
5	81	41.2	245	41.2	-5	264	49.0	+2	184	54.8	-22	156	30.9	-22			
6	96	43.6	260	40.8	-5	279	50.0	+2	199	56.9	-22	171	33.4	-22			
7	111	46.1	275	40.4		294	51.0		214	59.0		186	35.8				
8	126	48.6	290	40.0		309	52.0		230	01.1		201	38.2				
9	141	51.0	305	39.6		324	53.0		245	03.2		216	40.6				
10	156	53.5	320	39.2		339	54.0		260	05.3		231	43.0				
11	171	56.0	335	38.8	-5	354	55.0	+2	275	07.4	-22	246	45.5	-22			
12	186	58.4	350	38.4	-5	9	55.9	+2	290	09.5	-22	261	47.9	-22			
13	202	00.9	5	38.0		24	56.9		305	11.6		276	50.3				
14	217	03.4	20	37.6		39	57.9		320	13.7		291	52.7				
15	232	05.8	35	37.2		54	58.9		335	15.8		306	55.1				
16	247	08.3	50	36.8		69	59.9		350	18.0		321	57.6				
17	262	10.7	65	36.4	-5	85	00.9	+2	5	20.1	-22	337	00.0	-22			
18	277	13.2	80	36.0	-6	100	01.9	+2	20	22.2	-22	352	02.4	-22			
19	292	15.7	95	35.6		115	02.9		35	24.3		7	04.8				
20	307	18.1	110	35.2		130	03.9		50	26.4		22	07.2				
21	322	20.6	125	34.8		145	04.9		65	28.5		37	09.6				
22	337	23.1	140	34.4		160	05.9		80	30.6		52	12.1				
23	352	25.5	155	34.0		175	06.9		95	32.7		67	14.5				
24	7	28.0	170	33.6	-6	190	07.9	+2	110	34.8	-22	82	16.9	-22			
Dif.	—		-4	-13		+10	-6		+21		0		+24				

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0			PHE { 4^h: 61'1 12^h: 61'0 20^h: 60'8														
	PMG: 11 ^h 50 ^m 4			SD: 16'7 Edad: 0 ^d 2														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Civil			Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	° N	h	m	h	m	h	m	m		
0	182	21.7	-2	12.5	177	21.7	85	+1 04.5	147	60 N	17 40	18 21	19 10	6 29	98	18 25	12	
1	197	21.9		13.5	191	49.2	86	+0 49.8	146	58	41	20	05	29	94	27	15	
2	212	22.1		14.5	206	16.8	85		35.2	146	56	41	18	19 02	29	91	29	18
3	227	22.3		15.5	220	44.3	86		20.6	146	54	42	17	18 59	29	88	30	21
4	242	22.5		16.4	235	11.9	86	+0 06.0	147	52	43	16	56	28	86	32	23	
5	257	22.7	-2	17.4	249	39.5	86	-0 08.7	146	50	17 44	18 16	18 53	6 28	84	18 33	25	
6	272	22.9	-2	18.4	264	07.1	86	-0 23.3	146	45	17 45	18 14	18 48	6 27	79	18 36	30	
7	287	23.1		19.4	278	34.7	86		37.9	146	40	46	13	45	27	75	38	34
8	302	23.3		20.3	293	02.3	87	-0 52.5	145	35	47	13	42	27	71	40	37	
9	317	23.5		21.3	307	30.0	87	-1 07.0	146	30	48	12	40	26	68	42	40	
10	332	23.7		22.3	321	57.7	86		21.6	145	20	50	12	38	26	62	45	45
11	347	23.9	-2	23.2	336	25.3	87	-1 36.1	145	10 N	17 52	18 13	18 37	6 25	58	18 48	49	
12	2	24.2	-2	24.2	350	53.0	87	-1 50.6	146	0	17 54	18 14	18 38	6 25	54	18 50	54	
13	17	24.4		25.2	5	20.7	88	-2 05.2	144	10 S	55	16	41	25	49	53	58	
14	32	24.6		26.2	19	48.5	87		19.6	145	20	17 58	20	45	24	45	56	62
15	47	24.8		27.1	34	16.2	87		34.1	144	30	18 00	24	52	24	39	18 59	67
16	62	25.0		28.1	48	43.9	88	-2 48.5	144	35	01	27	18 56	24	36	19 01	70	
17	77	25.2	-2	29.1	63	11.7	88	-3 02.9	144	40	18 03	18 30	19 02	6 24	33	19 03	74	
18	92	25.4	-2	30.0	77	39.5	87	-3 17.3	143	45	18 05	18 35	19 09	6 23	30	19 05	78	
19	107	25.6		31.0	92	07.2	88		31.6	144	50	07	40	19	23	25	08	83
20	122	25.8		32.0	106	35.0	88	-3 46.0	142	52	09	43	23	23	22	09	85	
21	137	26.0		33.0	121	02.8	88	-4 00.2	143	54	10	45	28	23	20	10	88	
22	152	26.2		33.9	135	30.6	88		14.5	142	56	11	49	34	23	17	12	90
23	167	26.4		34.9	149	58.4	88		28.7	142	58	13	52	41	23	14	14	93
24	182	26.6	-2	35.9	164	26.2		-4 42.9		60 S	18 14	18 57	19 48	6 22	12	19 16	97	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 26 ^m 3		Mag: -3.9 PMG: 12 ^h 38 ^m			Mag: +1.8 PMG: 11 ^h 19 ^m			Mag: -2.0 PMG: 16 ^h 35 ^m			Mag: +0.5 PMG: 18 ^h 28 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	7	28.0	170	33.6	-6 07.7	190	07.9	+2 14.0	110	34.8	-22 -37.3	82	16.9	-22 31.1				
1	22	30.5	185	33.2	08.9	205	08.9	13.3	125	36.9	-37.3	97	19.3	31.1				
2	37	32.9	200	32.8	10.2	220	09.9	12.7	140	39.0	-37.3	112	21.7	31.1				
3	52	35.4	215	32.4	11.4	235	10.8	12.0	155	41.1	-37.4	127	24.1	31.1				
4	67	37.8	230	32.0	12.7	250	11.8	11.4	170	43.2	-37.4	142	26.6	31.1				
5	82	40.3	245	31.6	-6 13.9	265	12.8	+2 10.7	185	45.3	-22 -37.4	157	29.0	-22 31.1				
6	97	42.8	260	31.2	-6 15.2	280	13.8	+2 10.1	200	47.4	-22 -37.5	172	31.4	-22 31.1				
7	112	45.2	275	30.8	16.4	295	14.8	09.4	215	49.5	-37.5	187	33.8	31.1				
8	127	47.7	290	30.4	17.7	310	15.8	08.8	230	51.6	-37.5	202	36.2	31.1				
9	142	50.2	305	30.0	18.9	325	16.8	08.1	245	53.7	-37.6	217	38.6	31.1				
10	157	52.6	320	29.6	20.2	340	17.8	07.5	260	55.8	-37.6	232	41.1	31.1				
11	172	55.1	335	29.2	-6 21.4	355	18.8	+2 06.8	275	57.9	-22 -37.7	247	43.5	-22 31.1				
12	187	57.6	350	28.8	-6 22.7	10	19.8	+2 06.2	291	00.1	-22 -37.7	262	45.9	-22 31.1				
13	203	00.0	5	28.4	23.9	25	20.8	05.6	306	02.2	-37.7	277	48.3	31.1				
14	218	02.5	20	28.0	25.1	40	21.8	04.9	321	04.3	-37.8	292	50.7	31.1				
15	233	05.0	35	27.6	26.4	55	22.8	04.3	336	06.4	-37.8	307	53.1	31.1				
16	248	07.4	50	27.2	27.6	70	23.8	03.6	351	08.5	-37.8	322	55.5	31.1				
17	263	09.9	65	26.8	-6 28.9	85	24.8	+2 03.0	6	10.6	-22 -37.9	337	57.9	-22 31.1				
18	278	12.3	80	26.4	-6 30.1	100	25.7	+2 02.3	21	12.7	-22 -37.9	353	00.4	-22 31.1				
19	293	14.8	95	26.0	31.4	115	26.7	01.7	36	14.8	-37.9	8	02.8	31.1				
20	308	17.3	110	25.6	32.6	130	27.7	01.0	51	16.9	-38.0	23	05.2	31.1				
21	323	19.7	125	25.2	33.9	145	28.7	+2 00.4	66	19.0	-38.0	38	07.6	31.1				
22	338	22.2	140	24.8	35.1	160	29.7	+1 59.7	81	21.1	-38.1	53	10.0	31.1				
23	353	24.7	155	24.4	36.4	175	30.7	59.1	96	23.2	-38.1	68	12.4	31.1				
24	8	27.1	170	24.0	-6 37.6	190	31.7	+1 58.4	111	25.3	-22 -38.1	83	14.8	-22 31.1				
Dif.	—		-4		-12	+10		-6	+21		0		+24					

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 50 ^m 1			SD: 16'5 Edad: 1 ^d 2			PHE { 4 ^h : 60'6 12 ^h : 60'4 20 ^h : 60'1				Rº: 54 ^m							
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'		h	m	h	m	h	m	h	m	m	
0	182	26.6	-2	35.9	164	26.2	88	-4	42.9	141	60 N	4 32	5 21	6 02	8 07	96	18 37	14
1	197	26.8		36.8	178	54.0	88	-4	57.0	141	58	36	22	01	03	93	42	18
2	212	27.0		37.8	193	21.8	89	-5	11.1	140	56	40	23	6 00	8 00	89	47	20
3	227	27.2		38.8	207	49.7	88		25.1	140	54	43	24	5 59	7 57	86	51	23
4	242	27.5		39.8	222	17.5	88		39.1	140	52	46	25	59	54	84	55	25
5	257	27.7	-2	40.7	236	45.3	89	-5	53.1	139	50	4 48	5 26	5 58	7 52	81	18 58	27
6	272	27.9	-2	41.7	251	13.2	88	-6	07.0	138	45	4 53	5 27	5 56	7 46	77	19 06	31
7	287	28.1		42.7	265	41.0	88		20.8	138	40	56	28	55	42	73	12	35
8	302	28.3		43.6	280	08.8	89		34.6	138	35	4 59	28	54	38	69	17	38
9	317	28.5		44.6	294	36.7	88	-6	48.4	137	30	5 01	29	53	34	67	22	41
10	332	28.7		45.6	309	04.5	89	-7	02.1	136	20	03	29	51	28	62	30	46
11	347	28.9	-2	46.6	323	32.4	88	-7	15.7	136	10 N	5 03	5 28	5 49	7 23	58	19 37	50
12	2	29.1	-2	47.5	338	00.2	89	-7	29.3	136	0	5 02	5 26	5 47	7 19	53	19 44	53
13	17	29.3		48.5	352	28.1	88		42.9	134	10 S	4 59	24	45	14	49	51	57
14	32	29.5		49.5	6	55.9	89	-7	56.3	134	20	55	21	43	09	45	19 58	61
15	47	29.7		50.4	21	23.8	88	-8	09.7	134	30	48	16	40	03	41	20 06	66
16	62	29.9		51.4	35	51.6	88		23.1	132	35	44	13	39	7 00	38	11	69
17	77	30.1	-2	52.4	50	19.4	89	-8	36.3	133	40	4 38	5 10	5 37	6 57	34	20 17	72
18	92	30.3	-2	53.4	64	47.3	88	-8	49.6	131	45	4 30	5 05	5 35	6 53	30	20 23	76
19	107	30.5		54.3	79	15.1	88	-9	02.7	131	50	21	5 00	32	48	26	31	80
20	122	30.7		55.3	93	42.9	89		15.8	130	52	16	4 57	31	45	24	34	83
21	137	30.9		56.3	108	10.8	88		28.8	129	54	11	54	30	43	21	38	85
22	152	31.1		57.2	122	38.6	88		41.7	129	56	4 05	51	28	40	19	42	88
23	167	31.3		58.2	137	06.4	88	-9	54.6	128	58	3 59	47	27	6 37	16	20 47	91
24	182	31.5	-2	59.2	151	34.2		-10	07.4		60 S	3 51	4 43	5 25	6 34	13	20 53	94

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 23 ^h 22 ^m 4		Mag: -3.9 PMG: 12 ^h 39 ^m			Mag: +1.8 PMG: 11 ^h 17 ^m			Mag: -2.0 PMG: 16 ^h 32 ^m			Mag: +0.5 PMG: 18 ^h 24 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	8	27.1	170	24.0	-6	37.6	190	31.7	+1	58.4	111	25.3	-22	38.1
1	23	29.6	185	23.6		38.8	205	32.7		57.8	126	27.4		38.2
2	38	32.1	200	23.2		40.1	220	33.7		57.1	141	29.5		38.2
3	53	34.5	215	22.8		41.3	235	34.7		56.5	156	31.6		38.2
4	68	37.0	230	22.4		42.6	250	35.7		55.8	171	33.7		38.3
5	83	39.5	245	22.0	-6	43.8	265	36.7	+1	55.2	186	35.8	-22	38.3
6	98	41.9	260	21.6	-6	45.1	280	37.7	+1	54.5	201	37.9	-22	38.3
7	113	44.4	275	21.2		46.3	295	38.7		53.9	216	39.9		38.4
8	128	46.8	290	20.8		47.5	310	39.6		53.2	231	42.0		38.4
9	143	49.3	305	20.4		48.8	325	40.6		52.6	246	44.1		38.4
10	158	51.8	320	20.0		50.0	340	41.6		51.9	261	46.2		38.5
11	173	54.2	335	19.6	-6	51.3	355	42.6	+1	51.3	276	48.3	-22	38.5
12	188	56.7	350	19.2	-6	52.5	10	43.6	+1	50.6	291	50.4	-22	38.6
13	203	59.2	5	18.7		53.8	25	44.6		50.0	306	52.5		38.6
14	219	01.6	20	18.3		55.0	40	45.6		49.3	321	54.6		38.6
15	234	04.1	35	17.9		56.2	55	46.6		48.7	336	56.7		38.7
16	249	06.6	50	17.5		57.5	70	47.6		48.1	351	58.8		38.7
17	264	09.0	65	17.1	-6	58.7	85	48.6	+1	47.4	7	00.9	-22	38.7
18	279	11.5	80	16.7	-7	00.0	100	49.6	+1	46.8	22	03.0	-22	38.8
19	294	13.9	95	16.3		01.2	115	50.6		46.1	37	05.1		38.8
20	309	16.4	110	15.9		02.4	130	51.6		45.5	52	07.2		38.8
21	324	18.9	125	15.5		03.7	145	52.6		44.8	67	09.3		38.9
22	339	21.3	140	15.1		04.9	160	53.6		44.2	82	11.4		38.9
23	354	23.8	155	14.7		06.2	175	54.5		43.5	97	13.5		39.0
24	9	26.3	170	14.3	-7	07.4	190	55.5	+1	42.9	112	15.6	-22	39.0
Dif.	—		-4	-12			+10	-6			+21	0		+24

UT	SOL			 LUNA			Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'0			SD: 16'3 Edad: 2 ^d											PHE { 4 ^h : 59'9 12 ^h : 59'6 20 ^h : 59'3		
	PMG: 11 ^h 49 ^m 7			PMG: 14 ^h 25 ^m											Rº: 53 ^m		
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	182	31.5	-2	151	34.2	89	-10	07.4	17 34	18 15	19 03	9 43 93	18 51 18				
1	197	31.7	-3	166	02.1	88		20.1	35	14	19 00	36 89	19 00 21				
2	212	31.9		180	29.9	88		32.7	36	13	18 56	29 86	07 25				
3	227	32.1		194	57.7	88		45.3	37	12	53	23 84	14 27				
4	242	32.3		209	25.5	87	-10	57.8	38	12	51	18 81	20 29				
5	257	32.5	-3	223	53.2	88	-11	10.2	17 39	18 11	18 49	9 13 79	19 25 31				
6	272	32.8	-3	238	21.0	88	-11	22.5	17 41	18 10	18 44	9 03 75	19 37 35				
7	287	33.0		252	48.8	88		34.7	43	10	41	8 55 71	47 38				
8	302	33.2		267	16.6	87		46.9	45	10	39	47 68	19 55 41				
9	317	33.4		281	44.3	88	-11	58.9	46	10	38	41 65	20 03 43				
10	332	33.6		296	12.1	87	-12	10.9	48	10	36	30 61	16 47				
11	347	33.8	-3	310	39.8	88	-12	22.8	17 51	18 12	18 36	8 21 57	20 27 51				
12	2	34.0	-3	325	07.6	87	-12	34.6	17 53	18 14	18 38	8 12 54	20 37 54				
13	17	34.2		339	35.3	87		46.3	55	16	41	8 03 50	48 57				
14	32	34.4		354	03.0	88	-12	58.0	17 58	20	46	7 54 46	20 59 61				
15	47	34.6		8	30.8	87	-13	09.5	18 01	25	53	44 42	21 12 65				
16	62	34.8		22	58.5	87		20.9	03	28	18 58	38 39	20 67				
17	77	35.0	-3	37	26.2	87	-13	32.3	18 05	18 32	19 04	7 31 36	21 29 69				
18	92	35.2	-3	51	53.9	86	-13	43.5	18 08	18 37	19 12	7 23 33	21 39 73				
19	107	35.4		66	21.5	87	-13	54.7	11	43	22	14 28	51 77				
20	122	35.6		80	49.2	87	-14	05.8	12	46	27	09 27	21 57 79				
21	137	35.8		95	16.9	86		16.7	13	49	32	7 04 25	22 03 81				
22	152	36.0		109	44.5	87		27.6	15	53	39	6 59 22	10 84				
23	167	36.2		124	12.2	86		38.4	17	18 57	46	53 20	18 87				
24	182	36.4	-3	138	39.8		-14	49.0	18 19	19 02	19 54	6 47 16	22 27 91				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG 23 ^h 18 ^m 4		Mag: -3.9 PMG: 12 ^h 39 ^m		Mag: +1.8 PMG: 11 ^h 16 ^m		Mag: -2.0 PMG: 16 ^h 29 ^m		Mag: +0.5 PMG: 18 ^h 20 ^m								
	hG ♈		hG ♀	dec.	hG ♂	dec.	hG ♃	dec.	hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'							
0	9	26.3	170	14.3	-7	07.4	112	15.6	-22	-39.0							
1	24	28.7	185	13.9		08.6	127	17.7		-39.0							
2	39	31.2	200	13.4		09.9	142	19.8		-39.1							
3	54	33.7	215	13.0		11.1	157	21.9		-39.1							
4	69	36.1	230	12.6		12.4	172	23.9		-39.1							
5	84	38.6	245	12.2	-7	13.6	187	26.0	-22	-39.2							
6	99	41.1	260	11.8	-7	14.8	202	28.1	-22	-39.2							
7	114	43.5	275	11.4		16.1	217	30.2		-39.2							
8	129	46.0	290	11.0		17.3	232	32.3		-39.3							
9	144	48.4	305	10.6		18.5	247	34.4		-39.3							
10	159	50.9	320	10.2		19.8	262	36.5		-39.4							
11	174	53.4	335	09.7	-7	21.0	277	38.6	-22	-39.4							
12	189	55.8	350	09.3	-7	22.2	292	40.7	-22	-39.4							
13	204	58.3	5	08.9		23.5	307	42.8		-39.5							
14	220	00.8	20	08.5		24.7	322	44.9		-39.5							
15	235	03.2	35	08.1		25.9	337	46.9		-39.5							
16	250	05.7	50	07.7		27.2	352	49.0		-39.6							
17	265	08.2	65	07.3	-7	28.4	7	51.1	-22	-39.6							
18	280	10.6	80	06.9	-7	29.7	22	53.2	-22	-39.7							
19	295	13.1	95	06.4		30.9	37	55.3		-39.7							
20	310	15.5	110	06.0		32.1	52	57.4		-39.7							
21	325	18.0	125	05.6		33.4	67	59.5		-39.8							
22	340	20.5	140	05.2		34.6	83	01.6		-39.8							
23	355	22.9	155	04.8		35.8	98	03.7		-39.8							
24	10	25.4	170	04.4	-7	37.0	113	05.7	-22	-39.9							
Dif.	—		-4	-12		+10	-6	+21	0	+24	0						

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'0			PHE { 4 ^h : 59'0 12 ^h : 58'7 20 ^h : 58'3															
	PMG: 11 ^h 49 ^m 4			Edad: 3 ^d 2															
	PMG: 15 ^h 18 ^m			Rº: 54 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	182	36.4	-3	22.5		138	39.8	87	-14	49.0	106	60 N	4 37	5 25	6 07	11 16	87	19 09	25
1	197	36.6		23.4		153	07.5	86	-14	59.6	104	58	40	26	05	11 05	84	21	28
2	212	36.8		24.4		167	35.1	86	-15	10.0	104	56	44	27	04	10 55	81	32	31
3	227	37.0		25.4		182	02.7	86		20.4	102	54	47	28	03	47	78	41	33
4	242	37.2		26.3		196	30.3	86		30.6	102	52	49	28	02	39	76	49	35
5	257	37.4	-3	27.3		210	57.9	86	-15	40.8	100	50	4 51	5 29	6 01	10 32	74	19 56	37
6	272	37.6	-3	28.3		225	25.5	86	-15	50.8	100	45	4 55	5 29	5 59	10 18	70	20 12	40
7	287	37.8		29.2		239	53.1	86	-16	00.8	98	40	4 58	30	57	10 06	67	25	43
8	302	38.0		30.2		254	20.7	85		10.6	97	35	5 01	30	55	9 55	66	36	45
9	317	38.2		31.2		268	48.2	86		20.3	96	30	02	30	54	46	64	20 46	46
10	332	38.4		32.1		283	15.8	85		29.9	95	20	03	29	51	31	60	21 03	49
11	347	38.6	-3	33.1		297	43.3	86	-16	39.4	94	10 N	5 03	5 28	5 49	9 18	57	21 18	51
12	2	38.8	-3	34.1		312	10.9	85	-16	48.8	93	0	5 01	5 25	5 46	9 06	54	21 31	54
13	17	39.0		35.0		326	38.4	86	-16	58.1	91	10 S	4 58	23	44	8 53	51	21 45	56
14	32	39.2		36.0		341	06.0	85	-17	07.2	91	20	53	19	41	40	48	22 00	59
15	47	39.4		37.0		355	33.5	85		16.3	89	30	46	14	38	26	44	17	62
16	62	39.6		37.9		10	01.0	85		25.2	89	35	41	10	36	17	43	27	63
17	77	39.8	-3	38.9		24	28.5	85	-17	34.1	87	40	4 34	5 06	5 33	8 07	40	22 38	66
18	92	40.0	-3	39.9		38	56.0	85	-17	42.8	86	45	4 26	5 01	5 31	7 56	37	22 52	67
19	107	40.2		40.9		53	23.5	85		51.4	84	50	16	4 55	28	42	34	23 08	71
20	122	40.4		41.8		67	51.0	85	-17	59.8	84	52	11	52	26	36	32	16	72
21	137	40.6		42.8		82	18.5	85	-18	08.2	82	54	06	49	25	29	30	24	75
22	152	40.7		43.8		96	46.0	85		16.4	82	56	4 00	45	23	21	28	34	76
23	167	40.9		44.7		111	13.5	85		24.6	80	58	3 52	41	21	7 13	24	23 45	79
24	182	41.1	-3	45.7		125	41.0		-18	32.6		60 S	3 44	4 36	5 19	7 03	21	23 58	82

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG		Mag: -3.9			Mag: +1.8			Mag: -2.0			Mag: +0.5							
	23 ^h 14 ^m 5		PMG: 12 ^h 40 ^m			PMG: 11 ^h 14 ^m			PMG: 16 ^h 25 ^m			PMG: 18 ^h 16 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	10	25.4	170	04.4	-7	37.0		191	19.4	+1	27.3	113	05.7	-22	39.9	85	10.4	-22	31.0
1	25	27.9	185	04.0		38.3		206	20.4		26.6	128	07.8		39.9	100	12.8		31.0
2	40	30.3	200	03.5		39.5		221	21.4		26.0	143	09.9		39.9	115	15.2		31.0
3	55	32.8	215	03.1		40.7		236	22.3		25.3	158	12.0		40.0	130	17.6		31.0
4	70	35.3	230	02.7		42.0		251	23.3		24.7	173	14.1		40.0	145	20.0		31.0
5	85	37.7	245	02.3	-7	43.2		266	24.3	+1	24.0	188	16.2	-22	40.1	160	22.4	-22	31.0
6	100	40.2	260	01.9	-7	44.4		281	25.3	+1	23.4	203	18.3	-22	40.1	175	24.8	-22	31.0
7	115	42.7	275	01.5		45.7		296	26.3		22.7	218	20.3		40.1	190	27.2		31.0
8	130	45.1	290	01.0		46.9		311	27.3		22.1	233	22.4		40.2	205	29.6		31.0
9	145	47.6	305	00.6		48.1		326	28.3		21.4	248	24.5		40.2	220	32.0		31.0
10	160	50.0	320	00.2		49.4		341	29.3		20.8	263	26.6		40.2	235	34.4		31.0
11	175	52.5	334	59.8	-7	50.6		356	30.3	+1	20.1	278	28.7	-22	40.3	250	36.8	-22	31.0
12	190	55.0	349	59.4	-7	51.8		11	31.3	+1	19.5	293	30.8	-22	40.3	265	39.2	-22	31.0
13	205	57.4	4	58.9		53.0		26	32.3		18.8	308	32.9		40.3	280	41.6		31.0
14	220	59.9	19	58.5		54.3		41	33.3		18.2	323	34.9		40.4	295	44.0		31.0
15	236	02.4	34	58.1		55.5		56	34.3		17.6	338	37.0		40.4	310	46.4		31.0
16	251	04.8	49	57.7		56.7		71	35.3		16.9	353	39.1		40.5	325	48.8		31.0
17	266	07.3	64	57.3	-7	58.0		86	36.2	+1	16.3	8	41.2	-22	40.5	340	51.2	-22	31.0
18	281	09.8	79	56.9	-7	59.2		101	37.2	+1	15.6	23	43.3	-22	40.5	355	53.6	-22	31.0
19	296	12.2	94	56.4	-8	00.4		116	38.2		15.0	38	45.4		40.6	10	56.0		30.9
20	311	14.7	109	56.0		01.6		131	39.2		14.3	53	47.4		40.6	25	58.4		30.9
21	326	17.2	124	55.6		02.9		146	40.2		13.7	68	49.5		40.6	41	00.8		30.9
22	341	19.6	139	55.2		04.1		161	41.2		13.0	83	51.6		40.7	56	03.2		30.9
23	356	22.1	154	54.7		05.3		176	42.2		12.4	98	53.7		40.7	71	05.6		30.9
24	11	24.5	169	54.3	-8	06.5		191	43.2	+1	11.7	113	55.8	-22	40.7	86	08.0	-22	30.9
Dif.	—		-4		-12			+10		-6		+21		0			+24		

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'0				SD: 15'9												PHE { 4 ^h : 58'0 12 ^h : 57'7 20 ^h : 57'4			
	PMG: 11 ^h 49 ^m 1				Edad: 4 ^d 2															
	PMG: 16 ^h 12 ^m				Rº: 54 ^m															
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	182	41.1	-3	45.7	125	41.0	84	-18	32.6	79	60 N	17 28	18 09	18 57	12 43	77	19 34	35		
1	197	41.3		46.7	140	08.4	85		40.5	77	58	29	08	54	29	73	19 49	38		
2	212	41.5		47.6	154	35.9	85		48.2	77	56	31	08	51	16	71	20 03	39		
3	227	41.7		48.6	169	03.4	84	-18	55.9	75	54	32	08	48	12 05	70	14	41		
4	242	41.9		49.6	183	30.8	85	-19	03.4	74	52	34	07	46	11 55	68	24	42		
5	257	42.1	-3	50.5	197	58.3	85	-19	10.8	73	50	17 35	18 07	18 44	11 46	67	20 33	43		
6	272	42.3	-3	51.5	212	25.8	84	-19	18.1	72	45	17 38	18 07	18 41	11 28	65	20 52	45		
7	287	42.5		52.5	226	53.2	85		25.3	70	40	40	07	38	13	63	21 08	47		
8	302	42.7		53.4	241	20.7	85		32.3	70	35	42	07	36	11 01	61	21	48		
9	317	42.9		54.4	255	48.2	84		39.3	68	30	44	07	35	10 50	59	32	50		
10	332	43.1		55.4	270	15.6	85		46.1	66	20	47	09	34	31	57	21 52	51		
11	347	43.3	-3	56.3	284	43.1	85	-19	52.7	66	10 N	17 50	18 11	18 35	10 15	55	22 09	53		
12	2	43.5	-3	57.3	299	10.6	84	-19	59.3	64	0	17 52	18 13	18 37	10 00	53	22 25	54		
13	17	43.7		58.3	313	38.0	85	-20	05.7	63	10 S	55	16	41	9 44	52	41	55		
14	32	43.9	-3	59.2	328	05.5	85		12.0	62	20	17 59	21	46	28	51	22 59	56		
15	47	44.1	-4	00.2	342	33.0	85		18.2	61	30	18 02	26	18 54	10	48	23 19	57		
16	62	44.3		01.2	357	00.5	84		24.3	59	35	04	30	19 00	9 00	46	30	59		
17	77	44.5	-4	02.1	11	27.9	85	-20	30.2	58	40	18 07	18 34	19 07	8 47	45	23 44	59		
18	92	44.7	-4	03.1	25	55.4	85	-20	36.0	57	45	18 10	18 40	19 15	8 33	43	23 59	62		
19	107	44.9		04.1	40	22.9	85		41.7	56	50	14	46	26	16	40	***	***		
20	122	45.1		05.0	54	50.4	85		47.3	54	52	15	50	31	8 08	38	***	***		
21	137	45.3		06.0	69	17.9	85		52.7	53	54	17	53	37	7 59	37	***	***		
22	152	45.4		06.9	83	45.4	86	-20	58.0	52	56	19	18 57	43	49	34	***	***		
23	167	45.6		07.9	98	13.0	85	-21	03.2	51	58	21	19 02	19 51	37	33	***	***		
24	182	45.8	-4	08.9	112	40.5		-21	08.3		60 S	18 24	19 07	20 00	7 24	29	***	***		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 23 ^h 10 ^m 6		Mag: -3.9 PMG: 12 ^h 41 ^m			Mag: +1.8 PMG: 11 ^h 12 ^m			Mag: -2.0 PMG: 16 ^h 22 ^m			Mag: +0.5 PMG: 18 ^h 13 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.				
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	11	24.5	169	54.3	-8	06.5	191	43.2	+1	11.7	113	55.8	-22	-40.7	86	08.0	-22	30.9		
1	26	27.0	184	53.9		07.8	206	44.2		11.1	128	57.8		-40.8	101	10.4		30.9		
2	41	29.5	199	53.5		09.0	221	45.2		10.4	143	59.9		-40.8	116	12.8		30.9		
3	56	31.9	214	53.1		10.2	236	46.2		09.8	159	02.0		-40.9	131	15.2		30.9		
4	71	34.4	229	52.6		11.4	251	47.2		09.1	174	04.1		-40.9	146	17.6		30.9		
5	86	36.9	244	52.2	-8	12.7	266	48.2	+1	08.5	189	06.2	-22	-40.9	161	20.0	-22	30.9		
6	101	39.3	259	51.8	-8	13.9	281	49.2	+1	07.8	204	08.3	-22	-41.0	176	22.4	-22	30.9		
7	116	41.8	274	51.4		15.1	296	50.1		07.2	219	10.3		-41.0	191	24.8		30.9		
8	131	44.3	289	50.9		16.3	311	51.1		06.5	234	12.4		-41.0	206	27.2		30.9		
9	146	46.7	304	50.5		17.5	326	52.1		05.9	249	14.5		-41.1	221	29.6		30.9		
10	161	49.2	319	50.1		18.8	341	53.1		05.2	264	16.6		-41.1	236	32.0		30.9		
11	176	51.6	334	49.7	-8	20.0	356	54.1	+1	04.6	279	18.7	-22	-41.1	251	34.4	-22	30.9		
12	191	54.1	349	49.2	-8	21.2	11	55.1	+1	03.9	294	20.7	-22	-41.2	266	36.8	-22	30.9		
13	206	56.6	4	48.8		22.4	26	56.1		03.3	309	22.8		-41.2	281	39.2		30.9		
14	221	59.0	19	48.4		23.7	41	57.1		02.6	324	24.9		-41.3	296	41.6		30.9		
15	237	01.5	34	48.0		24.9	56	58.1		02.0	339	27.0		-41.3	311	44.0		30.9		
16	252	04.0	49	47.5		26.1	71	59.1		01.3	354	29.0		-41.3	326	46.4		30.9		
17	267	06.4	64	47.1	-8	27.3	87	00.1	+1	00.7	9	31.1	-22	-41.4	341	48.8	-22	30.9		
18	282	08.9	79	46.7	-8	28.5	102	01.1	+1	00.0	24	33.2	-22	-41.4	356	51.2	-22	30.9		
19	297	11.4	94	46.3		29.8	117	02.1	+0	59.4	39	35.3		-41.4	11	53.6		30.9		
20	312	13.8	109	45.8		31.0	132	03.0		58.7	54	37.4		-41.5	26	56.0		30.9		
21	327	16.3	124	45.4		32.2	147	04.0		58.1	69	39.4		-41.5	41	58.4		30.9		
22	342	18.8	139	45.0		33.4	162	05.0		57.4	84	41.5		-41.6	57	00.8		30.9		
23	357	21.2	154	44.5		34.6	177	06.0		56.8	99	43.6		-41.6	72	03.2		30.9		
24	12	23.7	169	44.1	-8	35.8	192	07.0	+0	56.1	114	45.7	-22	-41.6	87	05.6	-22	30.9		
Dif.	—		-4	-12			+10	-6			+21	0			+24	0				

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'0			SD: 15'6 Edad: 5 ^d 2														PHE { 4 ^h : 57'1 12 ^h : 56'8 20 ^h : 56'5					
	PMG: 11 ^h 48 ^m 8			PMG: 17 ^h 06 ^m Rº: 53 ^m																			
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		Rº	Hora	Rº							
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m								
0	182	45.8	-4	08.9	112	40.5	85	-21	08.3	49	60 N	4 42	5 30	6 12	14 00	61	20 09	48					
1	197	46.0		09.8	127	08.0	86		13.2	48	58	45	31	10	13 42	60	27	49					
2	212	46.2		10.8	141	35.6	86		18.0	47	56	48	31	08	27	60	42	50					
3	227	46.4		11.8	156	03.2	85		22.7	45	54	50	31	07	15	58	20 55	50					
4	242	46.6		12.7	170	30.7	86		27.2	44	52	52	32	05	13 03	59	21 06	51					
5	257	46.8	-4	13.7	184	58.3	86	-21	31.6	43	50	4 54	5 32	6 04	12 53	58	21 16	51					
6	272	47.0	-4	14.7	199	25.9	86	-21	35.9	42	45	4 58	5 32	6 01	12 33	57	21 37	52					
7	287	47.2		15.6	213	53.5	86		40.1	41	40	5 00	32	5 59	16	56	21 55	51					
8	302	47.4		16.6	228	21.1	87		44.2	39	35	02	31	57	12 02	55	22 09	52					
9	317	47.6		17.6	242	48.8	86		48.1	38	30	03	31	55	11 49	56	22	51					
10	332	47.8		18.5	257	16.4	87		51.9	36	20	04	29	52	28	55	22 43	52					
11	347	48.0	-4	19.5	271	44.1	87	-21	55.5	36	10 N	5 03	5 27	5 48	11 10	54	23 02	52					
12	2	48.2	-4	20.5	286	11.8	87	-21	59.1	34	0	5 01	5 25	5 46	10 53	53	23 19	53					
13	17	48.3		21.4	300	39.5	87	-22	02.5	33	10 S	4 57	21	42	36	53	36	53					
14	32	48.5		22.4	315	07.2	88		05.8	31	20	51	17	39	10 19	51	23 55	53					
15	47	48.7		23.3	329	35.0	88		08.9	31	30	43	11	35	9 58	50	***	***					
16	62	48.9		24.3	344	02.8	87		12.0	29	35	38	07	33	46	50	***	***					
17	77	49.1	-4	25.3	358	30.5	89	-22	14.9	27	40	4 31	5 03	5 30	9 32	49	***	***					
18	92	49.3	-4	26.2	12	58.4	88	-22	17.6	27	45	4 22	4 58	5 27	9 16	48	***	***					
19	107	49.5		27.2	27	26.2	88		20.3	25	50	12	51	23	8 56	47	0	19	63				
20	122	49.7		28.2	41	54.0	89		22.8	24	52	06	47	22	46	46	28	64					
21	137	49.9		29.1	56	21.9	89		25.2	23	54	4 00	44	20	36	45	39	64					
22	152	50.1		30.1	70	49.8	89		27.5	22	56	3 54	40	18	23	45	0	50	66				
23	167	50.3		31.1	85	17.7	90		29.7	20	58	46	35	15	8	10	43	1	04	67			
24	182	50.4	-4	32.0	99	45.7		-22	31.7		60 S	3 37	4 30	5 13	7 53	42	1	20	69				

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 23 ^h 06 ^m 6		Mag: -3.9 PMG: 12 ^h 41 ^m			Mag: +1.8 PMG: 11 ^h 11 ^m			Mag: -2.0 PMG: 16 ^h 19 ^m			Mag: +0.5 PMG: 18 ^h 09 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	12	23.7	169	44.1	-8	35.8	192	07.0	+0	56.1	114	45.7	-22	41.6	87	05.6	-22	30.9	
1	27	26.1	184	43.7		37.1	207	08.0		55.5	129	47.7		41.7	102	07.9		30.9	
2	42	28.6	199	43.3		38.3	222	09.0		54.8	144	49.8		41.7	117	10.3		30.9	
3	57	31.1	214	42.8		39.5	237	10.0		54.2	159	51.9		41.7	132	12.7		30.9	
4	72	33.5	229	42.4		40.7	252	11.0		53.5	174	54.0		41.8	147	15.1		30.9	
5	87	36.0	244	42.0	-8	41.9	267	12.0	+0	52.9	189	56.0	-22	41.8	162	17.5	-22	30.9	
6	102	38.5	259	41.5	-8	43.1	282	13.0	+0	52.2	204	58.1	-22	41.8	177	19.9	-22	30.9	
7	117	40.9	274	41.1		44.4	297	14.0		51.6	220	00.2		41.9	192	22.3		30.9	
8	132	43.4	289	40.7		45.6	312	15.0		50.9	235	02.3		41.9	207	24.7		30.9	
9	147	45.9	304	40.2		46.8	327	15.9		50.3	250	04.3		42.0	222	27.1		30.9	
10	162	48.3	319	39.8		48.0	342	16.9		49.6	265	06.4		42.0	237	29.5		30.8	
11	177	50.8	334	39.4	-8	49.2	357	17.9	+0	49.0	280	08.5	-22	42.0	252	31.9	-22	30.8	
12	192	53.3	349	39.0	-8	50.4	12	18.9	+0	48.3	295	10.6	-22	42.1	267	34.3	-22	30.8	
13	207	55.7	4	38.5		51.6	27	19.9		47.7	310	12.6		42.1	282	36.7		30.8	
14	222	58.2	19	38.1		52.9	42	20.9		47.0	325	14.7		42.1	297	39.1		30.8	
15	238	00.6	34	37.7		54.1	57	21.9		46.4	340	16.8		42.2	312	41.5		30.8	
16	253	03.1	49	37.2		55.3	72	22.9		45.7	355	18.8		42.2	327	43.8		30.8	
17	268	05.6	64	36.8	-8	56.5	87	23.9	+0	45.1	10	20.9	-22	42.2	342	46.2	-22	30.8	
18	283	08.0	79	36.4	-8	57.7	102	24.9	+0	44.4	25	23.0	-22	42.3	357	48.6	-22	30.8	
19	298	10.5	94	35.9	-8	58.9	117	25.9		43.8	40	25.1		42.3	12	51.0		30.8	
20	313	13.0	109	35.5	-9	00.1	132	26.9		43.1	55	27.1		42.4	27	53.4		30.8	
21	328	15.4	124	35.0		01.3	147	27.8		42.5	70	29.2		42.4	42	55.8		30.8	
22	343	17.9	139	34.6		02.6	162	28.8		41.8	85	31.3		42.4	57	58.2		30.8	
23	358	20.4	154	34.2		03.8	177	29.8		41.2	100	33.3		42.5	73	00.6		30.8	
24	13	22.8	169	33.7	-9	05.0	192	30.8	+0	40.5	115	35.4	-22	42.5	88	03.0	-22	30.8	
Dif.	—		-4		-12		+10		-7		+21		0		+24				

UT	SOL			 LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'0			SD: 15'4 PHE { 4 ^h : 56'2 12 ^h : 56'0 20 ^h : 55'7															
	PMG: 11 ^h 48 ^m 5			Edad: 6 ^d 2															
	PMG: 17 ^h 59 ^m			Rº: 51 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº				
h	°	'	°	°	'	°	'	°		h m	h m	h m	m	h m	m				
0	182	50.4	-4	99	45.7	90	-22	31.7	19	60 N	17 22	18 03	18 51	15 01	45	20 57	62		
1	197	50.6		114	13.7	90		33.6	18	58	24	03	48	14 42	46	21 16	60		
2	212	50.8		128	41.7	90		35.4	16	56	26	03	46	27	46	32	58		
3	227	51.0		143	09.7	91		37.0	15	54	28	03	44	13	48	45	58		
4	242	51.2		157	37.8	91		38.5	15	52	29	03	42	14 02	47	21 57	57		
5	257	51.4	-4	172	05.9	91	-22	40.0	12	50	17 31	18 03	18 40	13 51	49	22 07	57		
6	272	51.6	-4	186	34.0	91	-22	41.2	12	45	17 34	18 03	18 37	13 30	49	22 29	55		
7	287	51.8		201	02.1	92		42.4	10	40	37	04	35	13 12	50	22 46	55		
8	302	52.0		215	30.3	92		43.4	9	35	39	04	34	12 57	50	23 01	54		
9	317	52.2		229	58.5	93		44.3	8	30	41	05	33	45	50	13	54		
10	332	52.3		244	26.8	93		45.1	7	20	45	07	33	23	51	35	53		
11	347	52.5	-4	258	55.1	93	-22	45.8	5	10 N	17 48	18 09	18 34	12 04	51	23 54	52		
12	2	52.7	-4	273	23.4	93	-22	46.3	5	0	17 52	18 12	18 37	11 46	52	***	***		
13	17	52.9		287	51.7	94		46.8	3	10 S	55	16	41	29	52	***	***		
14	32	53.1		302	20.1	94		47.1	1	20	17 59	21	47	11 10	52	***	***		
15	47	53.3		316	48.5	95		47.2	1	30	18 03	28	18 56	10 48	53	0	16	53	
16	62	53.5		331	17.0	95		47.3	1	35	06	32	19 02	36	53	29	53		
17	77	53.7	-4	345	45.5	95	-22	47.2	1	40	18 09	18 36	19 09	10 21	53	0	43	53	
18	92	53.9	-4	0	14.0	96	-22	47.1	3	45	18 13	18 42	19 18	10 04	53	1	01	53	
19	107	54.0		14	42.6	96		46.8	4	50	17	50	29	9	43	53	22	53	
20	122	54.2		29	11.2	96		46.4	6	52	19	53	35	32	54	32	53		
21	137	54.4		43	39.8	97		45.8	6	54	21	18 57	41	21	54	43	53		
22	152	54.6		58	08.5	98		45.2	8	56	23	19 01	48	9	08	54	1	56	53
23	167	54.8		72	37.3	97		44.4	9	58	26	06	19 56	8	53	54	2	11	54
24	182	55.0	-4	87	06.0		-22	43.5		60 S	18 29	19 12	20 06	8	35	54	2	29	54

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 02 ^m 7		Mag: -3.9 PMG: 12 ^h 42 ^m		Mag: +1.8 PMG: 11 ^h 09 ^m		Mag: -2.0 PMG: 16 ^h 15 ^m		Mag: +0.5 PMG: 18 ^h 05 ^m	
	hG ♈	dec.	hG ♀	dec.	hG ♂	dec.	hG ♃	dec.	hG ♄	dec.
h	°	'	°	'	°	'	°	'	°	'
0	13	22.8	169	33.7	192	30.8	115	35.4	88	03.0
1	28	25.3	184	33.3	207	31.8	130	37.5	103	05.4
2	43	27.8	199	32.9	222	32.8	145	39.6	118	07.8
3	58	30.2	214	32.4	237	33.8	160	41.6	133	10.1
4	73	32.7	229	32.0	252	34.8	175	43.7	148	12.5
5	88	35.1	244	31.6	267	35.8	190	45.8	163	14.9
6	103	37.6	259	31.1	282	36.8	205	47.8	178	17.3
7	118	40.1	274	30.7	297	37.8	220	49.9	193	19.7
8	133	42.5	289	30.2	312	38.8	235	52.0	208	22.1
9	148	45.0	304	29.8	327	39.7	250	54.0	223	24.5
10	163	47.5	319	29.4	342	40.7	265	56.1	238	26.9
11	178	49.9	334	28.9	357	41.7	280	58.2	253	29.3
12	193	52.4	349	28.5	12	42.7	296	00.2	268	31.6
13	208	54.9	4	28.0	27	43.7	311	02.3	283	34.0
14	223	57.3	19	27.6	42	44.7	326	04.4	298	36.4
15	238	59.8	34	27.2	57	45.7	341	06.4	313	38.8
16	254	02.2	49	26.7	72	46.7	356	08.5	328	41.2
17	269	04.7	64	26.3	87	47.7	11	10.6	343	43.6
18	284	07.2	79	25.8	102	48.7	26	12.6	358	46.0
19	299	09.6	94	25.4	117	49.7	41	14.7	13	48.4
20	314	12.1	109	25.0	132	50.7	56	16.8	28	50.7
21	329	14.6	124	24.5	147	51.6	71	18.8	43	53.1
22	344	17.0	139	24.1	162	52.6	86	20.9	58	55.5
23	359	19.5	154	23.6	177	53.6	101	23.0	73	57.9
24	14	22.0	169	23.2	192	54.6	116	25.0	89	00.3
Dif.	—		-4	-12	+10	-7	+21	0	+24	0

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 48 ^m 2			SD: 15'1 Edad: 7 ^d 2		PHE { 4 ^h : 55'5 12 ^h : 55'3 20 ^h : 55'1		PMG: 18 ^h 50 ^m Rº: 49 ^m									
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	182	55.0	-4	55.1	87	06.0	99	-22	43.5	10	60 N	4 47	5 35	6 17	15 46	30	21 59 70
1	197	55.2		56.1	101	34.9	98		42.5	11	58	49	35	14	28 33	22 16	67
2	212	55.3		57.0	116	03.7	99		41.4	12	56	52	35	12	13 36	30	66
3	227	55.5		58.0	130	32.6	100		40.2	14	54	54	35	10	15 01	36	43 64
4	242	55.7		58.9	145	01.6	99		38.8	15	52	56	35	09	14 49	39	22 54 62
5	257	55.9	-4	59.9	159	30.5	101	-22	37.3	15	50	4 57	5 35	6 07	14 40	39	23 04 61
6	272	56.1	-5	00.9	173	59.6	101	-22	35.8	17	45	5 00	5 34	6 04	14 19	41	23 24 59
7	287	56.3		01.8	188	28.7	101		34.1	18	40	02	34	6 01	14 02	42	41 57
8	302	56.5		02.8	202	57.8	102		32.3	20	35	04	33	5 58	13 47	44	23 55 55
9	317	56.7		03.7	217	27.0	102		30.3	20	30	04	32	56	35 45	***	***
10	332	56.8		04.7	231	56.2	102		28.3	21	20	04	30	52	13 14	47	***
11	347	57.0	-5	05.7	246	25.4	103	-22	26.2	23	10 N	5 03	5 27	5 48	12 55	49	***
12	2	57.2	-5	06.6	260	54.7	104	-22	23.9	23	0	5 00	5 24	5 45	12 38	50	0 12 50
13	17	57.4		07.6	275	24.1	104		21.6	25	10 S	4 56	20	41	21 51		29 50
14	32	57.6		08.5	289	53.5	105		19.1	26	20	49	15	37	12 02	53	0 48 49
15	47	57.8		09.5	304	23.0	105		16.5	27	30	41	09	33	11 41	54	1 09 48
16	62	57.9		10.5	318	52.5	105		13.8	28	35	35	05	30	29 55		22 47
17	77	58.1	-5	11.4	333	22.0	106	-22	11.0	29	40	4 27	5 00	5 27	11 14	56	1 36 47
18	92	58.3	-5	12.4	347	51.6	107	-22	08.1	30	45	4 18	4 54	5 23	10 57	58	1 54 45
19	107	58.5		13.3	2	21.3	107		05.1	31	50	07	46	19	36 59		2 15 44
20	122	58.7		14.3	16	51.0	108	-22	02.0	33	52	4 01	43	17	26 60		25 43
21	137	58.9		15.2	31	20.8	108	-21	58.7	33	54	3 55	39	15	15 61		36 42
22	152	59.0		16.2	45	50.6	108		55.4	34	56	48	34	12	10 02	62	2 49 41
23	167	59.2		17.2	60	20.4	110		52.0	36	58	39	29	10	9 47	64	3 05 39
24	182	59.4	-5	18.1	74	50.4		-21	48.4		60 S	3 30	4 24	5 07	9 29	66	3 23 37

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 58 ^m 8		Mag: -3.9 PMG: 12 ^h 43 ^m			Mag: +1.8 PMG: 11 ^h 08 ^m			Mag: -2.0 PMG: 16 ^h 12 ^m			Mag: +0.5 PMG: 18 ^h 01 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	14	22.0	169	23.2	-9	33.9	192	54.6	+0	24.9	116	25.0	-22	43.4	89	00.3	-22	30.7
1	29	24.4	184	22.7		35.1	207	55.6		24.3	131	27.1		43.4	104	02.7		30.7
2	44	26.9	199	22.3		36.3	222	56.6		23.6	146	29.2		43.5	119	05.1		30.7
3	59	29.4	214	21.9		37.5	237	57.6		23.0	161	31.2		43.5	134	07.4		30.7
4	74	31.8	229	21.4		38.7	252	58.6		22.3	176	33.3		43.5	149	09.8		30.7
5	89	34.3	244	21.0	-9	39.9	267	59.6	+0	21.7	191	35.3	-22	43.6	164	12.2	-22	30.7
6	104	36.7	259	20.5	-9	41.1	283	00.6	+0	21.0	206	37.4	-22	43.6	179	14.6	-22	30.7
7	119	39.2	274	20.1		42.3	298	01.6		20.4	221	39.5		43.6	194	17.0		30.7
8	134	41.7	289	19.6		43.5	313	02.6		19.7	236	41.5		43.7	209	19.4		30.7
9	149	44.1	304	19.2		44.7	328	03.5		19.1	251	43.6		43.7	224	21.7		30.7
10	164	46.6	319	18.7		45.9	343	04.5		18.4	266	45.7		43.7	239	24.1		30.7
11	179	49.1	334	18.3	-9	47.1	358	05.5	+0	17.8	281	47.7	-22	43.8	254	26.5	-22	30.7
12	194	51.5	349	17.8	-9	48.3	13	06.5	+0	17.1	296	49.8	-22	43.8	269	28.9	-22	30.7
13	209	54.0	4	17.4		49.5	28	07.5		16.5	311	51.8		43.9	284	31.3		30.7
14	224	56.5	19	16.9		50.7	43	08.5		15.8	326	53.9		43.9	299	33.7		30.7
15	239	58.9	34	16.5		51.9	58	09.5		15.2	341	56.0		43.9	314	36.1		30.7
16	255	01.4	49	16.0		53.1	73	10.5		14.5	356	58.0		44.0	329	38.4		30.7
17	270	03.9	64	15.6	-9	54.3	88	11.5	+0	13.9	12	00.1	-22	44.0	344	40.8	-22	30.7
18	285	06.3	79	15.1	-9	55.4	103	12.5	+0	13.2	27	02.2	-22	44.0	359	43.2	-22	30.7
19	300	08.8	94	14.7		56.6	118	13.5		12.5	42	04.2		44.1	14	45.6		30.7
20	315	11.2	109	14.2		57.8	133	14.4		11.9	57	06.3		44.1	29	48.0		30.6
21	330	13.7	124	13.8	-9	59.0	148	15.4		11.2	72	08.3		44.2	44	50.3		30.6
22	345	16.2	139	13.3	-10	00.2	163	16.4		10.6	87	10.4		44.2	59	52.7		30.6
23	0	18.6	154	12.9		01.4	178	17.4		09.9	102	12.5		44.2	74	55.1		30.6
24	15	21.1	169	12.4	-10	02.6	193	18.4	+0	09.3	117	14.5	-22	44.3	89	57.5	-22	30.6
Dif.	—		-4	-12			+10	-7			+21	0			+24	0		

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 11 ^h 47 ^m 9			SD: 15:0 Edad: 8 ^d 2			PHE { 4 ^h : 54:9 12 ^h : 54:7 20 ^h : 54:6											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	59.4	-5	18.1	74	50.4	109	-21	48.4	36	60 N	17 16	17 57	18 45	16 16	22	23 09	
1	197	59.6		19.1	89	20.3	110		44.8	38	58	18	57	43	16 01	25	23 72	
2	212	59.8		20.0	103	50.3	111		41.0	38	56	21	58	41	15 49	26	36 69	
3	228	00.0		21.0	118	20.4	111		37.2	40	54	23	58	39	37 29		47 67	
4	243	00.1		22.0	132	50.5	112		33.2	40	52	25	58	37	28 30		23 56	
5	258	00.3	-5	22.9	147	20.7	112	-21	29.2	42	50	17 26	17 59	18 36	15 19	31	*** **	
6	273	00.5	-5	23.9	161	50.9	113	-21	25.0	42	45	17 30	17 59	18 33	15 00	34	*** **	
7	288	00.7		24.8	176	21.2	114		20.8	44	40	33	18 00	32	14 44	37	*** **	
8	303	00.9		25.8	190	51.6	114		16.4	44	35	36	02	31	31 39		*** **	
9	318	01.1		26.7	205	22.0	114		12.0	46	30	39	03	30	20 40		0 07	
10	333	01.2		27.7	219	52.4	115		07.4	46	20	43	05	31	14 01	43	28 52	
11	348	01.4	-5	28.7	234	22.9	116	-21	02.8	48	10 N	17 47	18 08	18 33	13 44	45	0 46	
12	3	01.6	-5	29.6	248	53.5	116	-20	58.0	48	0	17 51	18 12	18 36	13 28	47	1 02	
13	18	01.8		30.6	263	24.1	116		53.2	49	10 S	17 55	16	41	13 12	49	19 47	
14	33	02.0		31.5	277	54.7	118		48.3	51	20	18 00	22	48	12 55	51	37 45	
15	48	02.1		32.5	292	25.5	117		43.2	51	30	05	29	18 57	35 54		1 57	
16	63	02.3		33.4	306	56.2	119		38.1	52	35	08	33	19 03	24 55		2 09	
17	78	02.5	-5	34.4	321	27.1	118	-20	32.9	53	40	18 11	18 39	19 11	12 10	58	2 23	
18	93	02.7	-5	35.3	335	57.9	120	-20	27.6	54	45	18 15	18 45	19 21	11 55	59	2 39	
19	108	02.9		36.3	350	28.9	120		22.2	55	50	20	53	33	35 63		2 59	
20	123	03.0		37.3	4	59.9	120		16.7	56	52	22	18 57	39	26 64		3 08	
21	138	03.2		38.2	19	30.9	121		11.1	56	54	25	19 01	45	16 66		18 33	
22	153	03.4		39.2	34	02.0	122	-20	05.5	58	56	27	06	19 53	11 04	68	30 31	
23	168	03.6		40.1	48	33.2	122	-19	59.7	58	58	30	11	20 02	10 51	70	3 44	
24	183	03.8	-5	41.1	63	04.4		-19	53.9		60 S	18 34	19 17	20 12	10 35	73	4 00	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 22 ^h 54 ^m 8		Mag: -3.9 PMG: 12 ^h 44 ^m				Mag: +1.8 PMG: 11 ^h 06 ^m				Mag: -2.0 PMG: 16 ^h 09 ^m				Mag: +0.5 PMG: 17 ^h 57 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	15	21.1	169	12.4	-10	02.6	193	18.4	+0	09.3	117	14.5	-22	-44.3	89	57.5	-22	30.6
1	30	23.6	184	12.0		03.8	208	19.4		08.6	132	16.6		-44.3	104	59.9		30.6
2	45	26.0	199	11.5		05.0	223	20.4		08.0	147	18.6		-44.3	120	02.3		30.6
3	60	28.5	214	11.1		06.2	238	21.4		07.3	162	20.7		-44.4	135	04.6		30.6
4	75	31.0	229	10.6		07.4	253	22.4		06.7	177	22.7		-44.4	150	07.0		30.6
5	90	33.4	244	10.2	-10	08.6	268	23.4	+0	06.0	192	24.8	-22	-44.4	165	09.4	-22	30.6
6	105	35.9	259	09.7	-10	09.7	283	24.4	+0	05.4	207	26.9	-22	-44.5	180	11.8	-22	30.6
7	120	38.4	274	09.3		10.9	298	25.3		04.7	222	28.9		-44.5	195	14.2		30.6
8	135	40.8	289	08.8		12.1	313	26.3		04.1	237	31.0		-44.6	210	16.5		30.6
9	150	43.3	304	08.4		13.3	328	27.3		03.4	252	33.0		-44.6	225	18.9		30.6
10	165	45.7	319	07.9		14.5	343	28.3		02.8	267	35.1		-44.6	240	21.3		30.6
11	180	48.2	334	07.4	-10	15.7	358	29.3	+0	02.1	282	37.2	-22	-44.7	255	23.7	-22	30.6
12	195	50.7	349	07.0	-10	16.9	13	30.3	+0	01.5	297	39.2	-22	-44.7	270	26.1	-22	30.6
13	210	53.1	4	06.5		18.1	28	31.3		00.8	312	41.3		-44.7	285	28.4		30.6
14	225	55.6	19	06.1		19.2	43	32.3	+0	00.2	327	43.3		-44.8	300	30.8		30.6
15	240	58.1	34	05.6		20.4	58	33.3	-0	00.5	342	45.4		-44.8	315	33.2		30.6
16	256	00.5	49	05.2		21.6	73	34.3		01.1	357	47.4		-44.8	330	35.6		30.6
17	271	03.0	64	04.7	-10	22.8	88	35.3	-0	01.8	12	49.5	-22	-44.9	345	38.0	-22	30.6
18	286	05.5	79	04.2	-10	24.0	103	36.2	-0	02.4	27	51.5	-22	-44.9	0	40.3	-22	30.6
19	301	07.9	94	03.8		25.2	118	37.2		03.1	42	53.6		-45.0	15	42.7		30.6
20	316	10.4	109	03.3		26.4	133	38.2		03.7	57	55.7		-45.0	30	45.1		30.5
21	331	12.8	124	02.9		27.5	148	39.2		04.4	72	57.7		-45.0	45	47.5		30.5
22	346	15.3	139	02.4		28.7	163	40.2		05.0	87	59.8		-45.1	60	49.8		30.5
23	1	17.8	154	02.0		29.9	178	41.2		05.7	103	01.8		-45.1	75	52.2		30.5
24	16	20.2	169	01.5	-10	31.1	193	42.2	-0	06.3	118	03.9	-22	-45.1	90	54.6	-22	30.5
Dif.	—		-5		-12		+10		-7		+21		0		+24		0	

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'0			SD: 14'9 Edad: 9 ^d 2	PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3			Náut.	Civil		Hora	Rº		Hora	Rº				
	PMG: 11 ^h 47 ^m 6				PMG: 20 ^h 26 ^m Rº: 45 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.												
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m		
0	183	03.8	-5	63	04.4	123	-19	53.9	60	60 N	4 51	5 40	6 21	16 38	15	***	***		
1	198	03.9		77	35.7	123		47.9	60	58	54	39	19	26	18	***	***		
2	213	04.1		92	07.0	123		41.9	61	56	56	39	16	15	21	***	***		
3	228	04.3		106	38.3	125		35.8	62	54	58	39	14	16 06	23	***	***		
4	243	04.5		121	09.8	125		29.6	63	52	4 59	38	12	15 58	24	***	***		
5	258	04.6	-5	135	41.3	125	-19	23.3	64	50	5 00	5 38	6 10	15 50	27	0 05	64		
6	273	04.8	-5	150	12.8	126	-19	16.9	64	45	5 03	5 37	6 06	15 34	30	0 23	61		
7	288	05.0		164	44.4	126		10.5	65	40	04	36	03	21	33	38	58		
8	303	05.2		179	16.0	127	-19	04.0	67	35	05	35	6 00	10	35	0 50	56		
9	318	05.4		193	47.7	128	-18	57.3	67	30	06	33	5 57	15 00	37	1 01	54		
10	333	05.5		208	19.5	128		50.6	67	20	05	30	53	14 44	39	20	51		
11	348	05.7	-5	222	51.3	129	-18	43.9	69	10 N	5 03	5 27	5 48	14 29	42	1 36	48		
12	3	05.9	-5	237	23.2	129	-18	37.0	69	0	4 59	5 24	5 44	14 15	45	1 51	46		
13	18	06.1		251	55.1	130		30.1	71	10 S	55	19	40	14 01	48	2 06	44		
14	33	06.2		266	27.1	130		23.0	71	20	48	14	36	13 46	51	22	41		
15	48	06.4		280	59.1	130		15.9	71	30	38	06	30	29	54	40	38		
16	63	06.6		295	31.1	132		08.8	73	35	32	5 02	27	19	56	2 50	37		
17	78	06.8	-5	310	03.3	132	-18	01.5	73	40	4 24	4 56	5 24	13 08	58	3 02	35		
18	93	06.9	-5	324	35.5	132	-17	54.2	74	45	4 14	4 50	5 20	12 54	61	3 17	32		
19	108	07.1	-5	339	07.7	133		46.8	75	50	4 02	42	15	38	64	34	29		
20	123	07.3	-6	353	40.0	133		39.3	76	52	3 56	38	12	30	66	42	27		
21	138	07.5		8	12.3	134		31.7	76	54	49	34	10	22	67	3 51	26		
22	153	07.6		22	44.7	134		24.1	77	56	42	29	07	12	70	4 01	24		
23	168	07.8		37	17.1	135		16.4	78	58	33	23	04	12 01	72	4 13	21		
24	183	08.0	-6	51	49.6		-17	08.6		60 S	3 23	4 17	5 01	11 48	76	4 26	18		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 22 ^h 50 ^m 9		Mag: -3.9 PMG: 12 ^h 44 ^m				Mag: +1.8 PMG: 11 ^h 04 ^m				Mag: -2.0 PMG: 16 ^h 06 ^m				Mag: +0.5 PMG: 17 ^h 54 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	16	20.2	169	01.5	-10	193	42.2	-0	118	03.9	-22	90	54.6	-22	30.5				
1	31	22.7	184	01.0		208	43.2		133	05.9		105	57.0		30.5				
2	46	25.2	199	00.6		223	44.2		148	08.0		120	59.4		30.5				
3	61	27.6	214	00.1		238	45.2		163	10.0		136	01.7		30.5				
4	76	30.1	228	59.6		253	46.1		178	12.1		151	04.1		30.5				
5	91	32.6	243	59.2	-10	268	47.1	-0	193	14.1	-22	166	06.5	-22	30.5				
6	106	35.0	258	58.7	-10	283	48.1	-0	208	16.2	-22	181	08.9	-22	30.5				
7	121	37.5	273	58.3		298	49.1	10.9	223	18.2		196	11.2		30.5				
8	136	40.0	288	57.8		313	50.1	11.5	238	20.3		211	13.6		30.5				
9	151	42.4	303	57.3		328	51.1	12.2	253	22.3		226	16.0		30.5				
10	166	44.9	318	56.9		343	52.1	12.8	268	24.4		241	18.4		30.5				
11	181	47.3	333	56.4	-10	358	53.1	-0	283	26.4	-22	256	20.7	-22	30.5				
12	196	49.8	348	55.9	-10	13	54.1	-0	298	28.5	-22	271	23.1	-22	30.5				
13	211	52.3	3	55.5		28	55.1	14.8	313	30.5		286	25.5		30.5				
14	226	54.7	18	55.0		43	56.0	15.4	328	32.6		301	27.9		30.5				
15	241	57.2	33	54.5		58	57.0	16.1	343	34.6		316	30.2		30.5				
16	256	59.7	48	54.1		73	58.0	16.7	358	36.7		331	32.6		30.5				
17	272	02.1	63	53.6	-10	88	59.0	-0	13	38.7	-22	346	35.0	-22	30.5				
18	287	04.6	78	53.1	-10	104	00.0	-0	28	40.8	-22	1	37.4	-22	30.4				
19	302	07.1	93	52.7		119	01.0	18.7	43	42.8		16	39.7		30.4				
20	317	09.5	108	52.2		134	02.0	19.3	58	44.9		31	42.1		30.4				
21	332	12.0	123	51.7		149	03.0	20.0	73	46.9		46	44.5		30.4				
22	347	14.5	138	51.3		164	04.0	20.6	88	49.0		61	46.9		30.4				
23	2	16.9	153	50.8		179	05.0	21.3	103	51.0		76	49.2		30.4				
24	17	19.4	168	50.3	-10	194	05.9	-0	118	53.1	-22	91	51.6	-22	30.4				
Dif.	—		-5	-12		+10	-7		+21		0	+24							

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0			SD: 14'8 Edad: 10 ^d 2														
	PMG: 11 ^h 47 ^m 3			PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	Rº: 43 ^m										
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	183	08.0	-6	04.0	51	49.6	135	-17	08.6	78	60 N	17 10	17 51	18 39	16 53	11	0 24	76
1	198	08.2		04.9	66	22.1	136	-17	00.8	79	58	13	52	37	44	14	35	73
2	213	08.3		05.9	80	54.7	137	-16	52.9	80	56	15	53	35	36	16	45	71
3	228	08.5		06.8	95	27.4	136		44.9	81	54	18	53	34	29	18	0 54	68
4	243	08.7		07.8	110	00.0	138		36.8	81	52	20	54	33	22	21	1 02	66
5	258	08.9	-6	08.7	124	32.8	138	-16	28.7	82	50	17 22	17 54	18 32	16 17	22	1 09	64
6	273	09.0	-6	09.7	139	05.6	138	-16	20.5	82	45	17 27	17 56	18 30	16 04	26	1 24	61
7	288	09.2		10.6	153	38.4	139		12.3	84	40	30	57	29	15 54	28	36	58
8	303	09.4		11.6	168	11.3	139	-16	03.9	84	35	34	17 59	28	45	31	46	56
9	318	09.6		12.5	182	44.2	139	-15	55.5	84	30	36	18 00	28	37	33	1 55	54
10	333	09.7		13.5	197	17.1	141		47.1	85	20	42	04	29	23	37	2 11	50
11	348	09.9	-6	14.4	211	50.2	140	-15	38.6	86	10 N	17 46	18 07	18 32	15 11	41	2 24	48
12	3	10.1	-6	15.4	226	23.2	141	-15	30.0	87	0	17 51	18 11	18 36	15 00	44	2 37	44
13	18	10.2		16.3	240	56.3	142		21.3	87	10 S	17 55	16	41	14 49	46	2 50	41
14	33	10.4		17.3	255	29.5	142		12.6	88	20	18 00	22	48	37	50	3 03	38
15	48	10.6		18.2	270	02.7	142	-15	03.8	88	30	06	30	18 59	23	53	18	35
16	63	10.8		19.2	284	35.9	143	-14	55.0	89	35	09	35	19 05	15	56	27	33
17	78	10.9	-6	20.1	299	09.2	143	-14	46.1	90	40	18 13	18 41	19 13	14 06	58	3 37	30
18	93	11.1	-6	21.1	313	42.5	144	-14	37.1	90	45	18 18	18 48	19 23	13 55	61	3 49	27
19	108	11.3		22.0	328	15.9	144		28.1	91	50	23	18 56	36	42	65	4 03	24
20	123	11.4		23.0	342	49.3	145		19.0	91	52	26	19 00	43	36	67	09	23
21	138	11.6		23.9	357	22.8	145		09.9	92	54	28	05	50	29	69	17	20
22	153	11.8		24.9	11	56.3	145	-14	00.7	92	56	31	10	19 58	22	71	25	18
23	168	12.0		25.8	26	29.8	146	-13	51.5	94	58	35	16	20 07	13	74	34	16
24	183	12.1	-6	26.7	41	03.4		-13	42.1		60 S	18 39	19 23	20 18	13 04	76	4 44	13

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: +1.8				Mag: -2.0				Mag: +0.5			
	22 ^h 47 ^m 0		PMG: 12 ^h 45 ^m				PMG: 11 ^h 03 ^m				PMG: 16 ^h 02 ^m				PMG: 17 ^h 50 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♎	dec.		hG ♊	dec.		hG ♉	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	17	19.4	168	50.3	-10	59.3	194	05.9	-0	21.9	118	53.1	-22	-46.0	91	51.6	-22	30.4
1	32	21.8	183	49.9	-11	00.5	209	06.9		22.6	133	55.1		-46.1	106	54.0		30.4
2	47	24.3	198	49.4		01.7	224	07.9		23.2	148	57.2		-46.1	121	56.3		30.4
3	62	26.8	213	48.9		02.8	239	08.9		23.9	163	59.2		-46.1	136	58.7		30.4
4	77	29.2	228	48.5		04.0	254	09.9		24.5	179	01.3		-46.2	152	01.1		30.4
5	92	31.7	243	48.0	-11	05.2	269	10.9	-0	25.2	194	03.3	-22	-46.2	167	03.5	-22	30.4
6	107	34.2	258	47.5	-11	06.4	284	11.9	-0	25.8	209	05.4	-22	-46.2	182	05.8	-22	30.4
7	122	36.6	273	47.0		07.5	299	12.9		26.5	224	07.4		-46.3	197	08.2		30.4
8	137	39.1	288	46.6		08.7	314	13.9		27.1	239	09.5		-46.3	212	10.6		30.4
9	152	41.6	303	46.1		09.9	329	14.8		27.8	254	11.5		-46.3	227	13.0		30.4
10	167	44.0	318	45.6		11.0	344	15.8		28.4	269	13.6		-46.4	242	15.3		30.4
11	182	46.5	333	45.2	-11	12.2	359	16.8	-0	29.1	284	15.6	-22	-46.4	257	17.7	-22	30.4
12	197	48.9	348	44.7	-11	13.4	14	17.8	-0	29.7	299	17.7	-22	-46.5	272	20.1	-22	30.4
13	212	51.4	3	44.2		14.5	29	18.8		30.4	314	19.7		-46.5	287	22.4		30.4
14	227	53.9	18	43.7		15.7	44	19.8		31.0	329	21.7		-46.5	302	24.8		30.3
15	242	56.3	33	43.3		16.9	59	20.8		31.7	344	23.8		-46.6	317	27.2		30.3
16	257	58.8	48	42.8		18.0	74	21.8		32.3	359	25.8		-46.6	332	29.5		30.3
17	273	01.3	63	42.3	-11	19.2	89	22.8	-0	33.0	14	27.9	-22	-46.6	347	31.9	-22	30.3
18	288	03.7	78	41.8	-11	20.3	104	23.7	-0	33.6	29	29.9	-22	-46.7	2	34.3	-22	30.3
19	303	06.2	93	41.4		21.5	119	24.7		34.3	44	32.0		-46.7	17	36.7		30.3
20	318	08.7	108	40.9		22.7	134	25.7		34.9	59	34.0		-46.7	32	39.0		30.3
21	333	11.1	123	40.4		23.8	149	26.7		35.6	74	36.1		-46.8	47	41.4		30.3
22	348	13.6	138	39.9		25.0	164	27.7		36.2	89	38.1		-46.8	62	43.8		30.3
23	3	16.1	153	39.4		26.2	179	28.7		36.9	104	40.1		-46.9	77	46.1		30.3
24	18	18.5	168	39.0	-11	27.3	194	29.7	-0	37.5	119	42.2	-22	-46.9	92	48.5	-22	30.3
Dif.	—		-5		-12		+10		-7		+20		0		+24			

UT	SOL				○ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna																																																								
	SD: 16'0 PMG: 11 ^h 47 ^m 1				SD: 14'7 Edad: 11 ^d 2 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 21 ^h 54 ^m Rº: 42 ^m					Náut.	Civil		Hora	Rº	Hora	Rº																																																							
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.																																																																	
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° ' ° '	° ' ° ' ° ' ° ' ° ' ° ' °

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'0			SD: 14'7 Edad: 12 ^d 2	PHE { 4 ^h : 54'0 12 ^h : 54'1 20 ^h : 54'1																
	PMG: 11 ^h 46 ^m 8				PMG: 22 ^h 36 ^m			Rº: 41 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m						
0	183	16.2	-6	49.5	30	40.1	154	-9	43.6	105	60 N	17 04	17 46	18 33	17 14	8	2 56	76			
1	198	16.3		50.4	45	14.5	154		33.1	105	58	07	47	32	10	11	3 02	73			
2	213	16.5		51.3	59	48.9	155		22.6	106	56	10	48	30	07	13	07	70			
3	228	16.6		52.3	74	23.4	155		12.0	106	54	13	48	29	04	15	11	68			
4	243	16.8		53.2	88	57.9	155	-9	01.4	107	52	16	49	28	17 01	17	15	66			
5	258	17.0	-6	54.2	103	32.4	155	-8	50.7	106	50	17 18	17 50	18 28	16 59	18	3 18	65			
6	273	17.1	-6	55.1	118	06.9	156	-8	40.1	108	45	17 23	17 52	18 26	16 53	23	3 26	61			
7	288	17.3		56.1	132	41.5	155		29.3	107	40	27	54	26	49	25	32	58			
8	303	17.5		57.0	147	16.0	156		18.6	108	35	31	56	25	45	28	37	55			
9	318	17.6		57.9	161	50.6	156	-8	07.8	109	30	34	17 58	26	42	30	42	53			
10	333	17.8		58.9	176	25.2	157	-7	56.9	108	20	40	18 02	28	36	34	50	49			
11	348	18.0	-6	59.8	190	59.9	156	-7	46.1	109	10 N	17 45	18 06	18 31	16 30	38	3 57	45			
12	3	18.1	-7	00.8	205	34.5	157	-7	35.2	109	0	17 50	18 11	18 35	16 26	41	4 04	42			
13	18	18.3		01.7	220	09.2	157		24.3	110	10 S	17 55	16	41	21	44	10	39			
14	33	18.4		02.7	234	43.9	157		13.3	110	20	18 01	23	18 49	15	49	17	35			
15	48	18.6		03.6	249	18.6	157	-7	02.3	110	30	07	31	19 00	09	53	25	31			
16	63	18.8		04.5	263	53.3	158	-6	51.3	110	35	11	37	07	06	55	30	28			
17	78	18.9	-7	05.5	278	28.1	157	-6	40.3	111	40	18 15	18 43	19 16	16 02	58	4 35	26			
18	93	19.1	-7	06.4	293	02.8	158	-6	29.2	111	45	18 20	18 50	19 26	15 57	61	4 41	23			
19	108	19.3		07.4	307	37.6	158		18.1	111	50	26	19 00	40	52	65	48	19			
20	123	19.4		08.3	322	12.4	158	-6	07.0	112	52	29	04	47	49	67	51	18			
21	138	19.6		09.3	336	47.2	158	-5	55.8	112	54	32	09	19 54	46	69	55	15			
22	153	19.7		10.2	351	22.0	158		44.6	112	56	36	15	20 03	43	71	4 59	13			
23	168	19.9		11.1	5	56.8	158		33.4	112	58	39	21	13	40	73	5 03	11			
24	183	20.1	-7	12.1	20	31.6		-5	22.2		60 S	18 44	19 28	20 25	15 36	76	5 08	8			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 22 ^h 39 ^m 1		Mag: -3.9 PMG: 12 ^h 47 ^m				Mag: +1.8 PMG: 11 ^h 00 ^m				Mag: -2.0 PMG: 15 ^h 56 ^m				Mag: +0.5 PMG: 17 ^h 42 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	19	17.7	168	27.4	-11	55.0	194	53.4	-0	53.1	120	31.2	-22	-47.8	93	45.3	-22	30.2			
1	34	20.1	183	26.9		56.2	209	54.4		53.8	135	33.2		-47.8	108	47.7		30.2			
2	49	22.6	198	26.4		57.3	224	55.4		54.4	150	35.2		-47.8	123	50.0		30.1			
3	64	25.0	213	25.9		58.5	239	56.4		55.1	165	37.3		-47.9	138	52.4		30.1			
4	79	27.5	228	25.4	-11	59.6	254	57.4		55.8	180	39.3		-47.9	153	54.8		30.1			
5	94	30.0	243	24.9	-12	00.8	269	58.3	-0	56.4	195	41.3	-22	-47.9	168	57.1	-22	30.1			
6	109	32.4	258	24.4	-12	01.9	284	59.3	-0	57.1	210	43.4	-22	-48.0	183	59.5	-22	30.1			
7	124	34.9	273	24.0		03.1	300	00.3		57.7	225	45.4		-48.0	199	01.9		30.1			
8	139	37.4	288	23.5		04.2	315	01.3		58.4	240	47.5		-48.0	214	04.2		30.1			
9	154	39.8	303	23.0		05.4	330	02.3		59.0	255	49.5		-48.1	229	06.6		30.1			
10	169	42.3	318	22.5		06.5	345	03.3	-0	59.7	270	51.5		-48.1	244	08.9		30.1			
11	184	44.8	333	22.0	-12	07.7	0	04.3	-1	00.3	285	53.6	-22	-48.2	259	11.3	-22	30.1			
12	199	47.2	348	21.5	-12	08.8	15	05.3	-1	01.0	300	55.6	-22	-48.2	274	13.7	-22	30.1			
13	214	49.7	3	21.0		09.9	30	06.2		01.6	315	57.6		-48.2	289	16.0		30.1			
14	229	52.2	18	20.5		11.1	45	07.2		02.3	330	59.7		-48.3	304	18.4		30.1			
15	244	54.6	33	20.0		12.2	60	08.2		02.9	346	01.7		-48.3	319	20.8		30.1			
16	259	57.1	48	19.5		13.4	75	09.2		03.6	1	03.7		-48.3	334	23.1		30.1			
17	274	59.5	63	19.0	-12	14.5	90	10.2	-1	04.2	16	05.8	-22	-48.4	349	25.5	-22	30.1			
18	290	02.0	78	18.5	-12	15.7	105	11.2	-1	04.9	31	07.8	-22	-48.4	4	27.8	-22	30.0			
19	305	04.5	93	18.0		16.8	120	12.2		05.5	46	09.8		-48.4	19	30.2		30.0			
20	320	06.9	108	17.5		17.9	135	13.2		06.2	61	11.9		-48.5	34	32.6		30.0			
21	335	09.4	123	17.0		19.1	150	14.1		06.8	76	13.9		-48.5	49	34.9		30.0			
22	350	11.9	138	16.5		20.2	165	15.1		07.5	91	15.9		-48.6	64	37.3		30.0			
23	5	14.3	153	16.0		21.3	180	16.1		08.1	106	18.0		-48.6	79	39.6		30.0			
24	20	16.8	168	15.6	-12	22.5	195	17.1	-1	08.8	121	20.0	-22	-48.6	94	42.0	-22	30.0			
Dif.	—		-5				-11	+10				-7	+20				0	+24			

No usar para navegación

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 46 ^m 3			SD: 14'8 Edad: 14 ^d 2		PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5		PMG: 23 ^h 58 ^m Rº: 43 ^m				Civil		Náut.		Hora Rº		Hora Rº	
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.												
h	°	'	°	°	'	°	'	°	°	h m	h m	h m	h m	h m	m	h m	m		
0	183	23.8	-7	10	29.0	158	-0	47.0	117	60 N	16 58	17 40	18 28	17 30	9	5 28	77		
1	198	24.0		25	03.8	159		35.3	116	58	17 02	41	27	31	12	28	75		
2	213	24.2		39	38.7	158		23.7	116	56	05	43	25	33	13	28	72		
3	228	24.3		54	13.5	159		12.1	117	54	08	44	25	34	15	28	70		
4	243	24.5		68	48.4	158	-0	00.4	116	52	11	45	24	35	17	28	68		
5	258	24.6	-7	83	23.2	158	+0	11.2	117	50	17 14	17 46	18 23	17 36	19	5 28	66		
6	273	24.8	-7	97	58.0	158	+0	22.9	117	45	17 19	17 49	18 23	17 38	23	5 28	62		
7	288	24.9		112	32.8	158		34.6	116	40	24	51	23	39	26	28	58		
8	303	25.1		127	07.6	158		46.2	117	35	28	54	23	41	28	28	55		
9	318	25.2		141	42.4	158	+0	57.9	117	30	32	17 56	24	42	31	27	54		
10	333	25.4		156	17.2	158	+1	09.6	116	20	38	18 00	26	44	36	27	49		
11	348	25.5	-7	170	52.0	157	+1	21.2	117	10 N	17 44	18 05	18 30	17 46	39	5 27	45		
12	3	25.7	-7	185	26.7	157	+1	32.9	117	0	17 50	18 10	18 35	17 48	43	5 27	42		
13	18	25.8		200	01.4	157		44.6	116	10 S	17 55	16	41	50	46	27	38		
14	33	26.0		214	36.1	157	+1	56.2	117	20	18 01	24	18 50	52	50	26	35		
15	48	26.1		229	10.8	157	+2	07.9	116	30	08	33	19 01	55	54	26	31		
16	63	26.3		243	45.5	156		19.5	117	35	13	38	09	56	57	26	28		
17	78	26.4	-7	258	20.1	157	+2	31.2	116	40	18 17	18 45	19 18	17 58	59	5 26	25		
18	93	26.6	-7	272	54.8	156	+2	42.8	117	45	18 23	18 53	19 29	18 00	62	5 26	22		
19	108	26.8		287	29.4	156	+2	54.5	116	50	29	19 03	44	02	66	25	19		
20	123	26.9		302	04.0	155	+3	06.1	117	52	33	08	51	03	68	25	17		
21	138	27.1		316	38.5	156		17.8	116	54	36	13	19 59	04	70	25	15		
22	153	27.2		331	13.1	155		29.4	116	56	40	19	20 08	05	73	25	13		
23	168	27.4		345	47.6	155		41.0	116	58	44	26	19	07	75	25	10		
24	183	27.5	-7	0	22.1		+3	52.6		60 S	18 49	19 33	20 31	18 08	78	5 25	8		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 22 ^h 31 ^m 2		Mag: -3.8 PMG: 12 ^h 48 ^m				Mag: +1.8 PMG: 10 ^h 57 ^m				Mag: -2.0 PMG: 15 ^h 49 ^m				Mag: +0.5 PMG: 17 ^h 35 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	°	'		°	'	°	'	°	'	°	'	°	'	°	'	
0	21	15.9		168	03.5	-12	195	40.8	-1	122	08.7	-22	-49.5	95	38.6	-22	29.9		
1	36	18.4		183	03.0		210	41.8		137	10.8		-49.5	110	41.0		29.8		
2	51	20.9		198	02.5		225	42.7		152	12.8		-49.6	125	43.3		29.8		
3	66	23.3		213	02.0		240	43.7		167	14.8		-49.6	140	45.7		29.8		
4	81	25.8		228	01.4		255	44.7		182	16.8		-49.6	155	48.0		29.8		
5	96	28.2		243	00.9	-12	270	45.7	-1	197	18.9	-22	-49.7	170	50.4	-22	29.8		
6	111	30.7		258	00.4	-12	285	46.7	-1	212	20.9	-22	-49.7	185	52.7	-22	29.8		
7	126	33.2		272	59.9		300	47.7		227	22.9		-49.7	200	55.1		29.8		
8	141	35.6		287	59.4		315	48.7		242	25.0		-49.8	215	57.5		29.8		
9	156	38.1		302	58.9	-12	330	49.6	30.2	257	27.0		-49.8	230	59.8		29.8		
10	171	40.6		317	58.4	-13	345	50.6	30.9	272	29.0		-49.8	246	02.2		29.8		
11	186	43.0		332	57.9	-13	0	51.6	-1	287	31.0	-22	-49.9	261	04.5	-22	29.8		
12	201	45.5		347	57.4	-13	15	52.6	-1	302	33.1	-22	-49.9	276	06.9	-22	29.8		
13	216	48.0		2	56.8		30	53.6		317	35.1		-50.0	291	09.2		29.8		
14	231	50.4		17	56.3		45	54.6		332	37.1		-50.0	306	11.6		29.8		
15	246	52.9		32	55.8		60	55.6	34.1	347	39.1		-50.0	321	13.9		29.8		
16	261	55.4		47	55.3		75	56.5	34.8	2	41.2		-50.1	336	16.3		29.7		
17	276	57.8		62	54.8	-13	90	57.5	-1	17	43.2	-22	-50.1	351	18.6	-22	29.7		
18	292	00.3		77	54.3	-13	105	58.5	-1	32	45.2	-22	-50.1	6	21.0	-22	29.7		
19	307	02.7		92	53.8		120	59.5		47	47.2		-50.2	21	23.3		29.7		
20	322	05.2		107	53.2		136	00.5		62	49.2		-50.2	36	25.7		29.7		
21	337	07.7		122	52.7		151	01.5		77	51.3		-50.2	51	28.1		29.7		
22	352	10.1		137	52.2		166	02.5		92	53.3		-50.3	66	30.4		29.7		
23	7	12.6		152	51.7		181	03.4		107	55.3		-50.3	81	32.8		29.7		
24	22	15.1		167	51.2	-13	196	04.4	-1	122	57.3	-22	-50.3	96	35.1	-22	29.7		
Dif.	—		-5		-11	+10		-6		+20		0		+24		0			

UT	SOL			○ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 46 ^m 1			SD: 14'9 Edad: 15 ^d 2	PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'8										
	PMG: ** **			Rº: **											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº
h	° ' "	° ' "		° ' "		° ' "		°	h m	h m	h m	h m m	h m m	h m m	
0	183 27.5	-7 57.0		0 22.1	155	+3 52.6	116	60 N	5 06	5 54	6 36	17 39 10	6 45 79		
1	198 27.7	57.9		14 56.6	154	+4 04.2	116	58	07	52	32	43 12	43 75		
2	213 27.8	58.9		29 31.0	155	15.8	116	56	08	51	28	46 15	40 73		
3	228 27.9	-7 59.8		44 05.5	153	27.4	115	54	09	50	25	49 18	38 70		
4	243 28.1	-8 00.7		58 39.8	154	38.9	116	52	09	48	22	52 19	36 68		
5	258 28.2	-8 01.7		73 14.2	154	+4 50.5	115	50	5 10	5 47	6 20	17 55 21	6 34 67		
6	273 28.4	-8 02.6		87 48.6	153	+5 02.0	115	45	5 10	5 44	6 14	18 01 24	6 30 63		
7	288 28.5	03.5		102 22.9	152	13.5	115	40	10	42	09	05 28	26 60		
8	303 28.7	04.4		116 57.1	153	25.0	115	35	10	39	05	09 31	23 57		
9	318 28.8	05.4		131 31.4	152	36.5	115	30	09	37	6 01	13 33	21 54		
10	333 29.0	06.3		146 05.6	152	48.0	114	20	06	32	5 54	20 37	16 50		
11	348 29.1	-8 07.2		160 39.8	151	+5 59.4	115	10 N	5 03	5 27	5 48	18 25 41	6 12 47		
12	3 29.3	-8 08.2		175 13.9	152	+6 10.9	114	0	4 58	5 22	5 43	18 31 44	6 09 43		
13	18 29.4	09.1		189 48.1	150	22.3	114	10 S	51	16	37	36 48	05 40		
14	33 29.6	10.0		204 22.1	151	33.7	114	20	42	5 08	31	42 51	6 01 36		
15	48 29.7	11.0		218 56.2	150	45.1	113	30	31	4 59	24	49 55	5 57 31		
16	63 29.9	11.9		233 30.2	150	+6 56.4	114	35	23	54	19	53 57	54 29		
17	78 30.0	-8 12.8		248 04.2	149	+7 07.8	113	40	4 14	4 47	5 14	18 57 60	5 51 27		
18	93 30.2	-8 13.7		262 38.1	149	+7 19.1	113	45	4 02	4 39	5 09	19 02 64	5 48 23		
19	108 30.3	14.7		277 12.0	149	30.4	112	50	3 48	29	5 02	08 68	44 20		
20	123 30.4	15.6		291 45.9	148	41.6	113	52	41	24	4 59	11 70	42 18		
21	138 30.6	16.5		306 19.7	148	+7 52.9	112	54	32	18	56	14 72	40 16		
22	153 30.7	17.4		320 53.5	147	+8 04.1	111	56	23	12	52	18 74	38 14		
23	168 30.9	18.4		335 27.2	147	15.2	112	58	13	4 06	47	19 22 76	5 35 12		
24	183 31.0	-8 19.3		350 00.9		+8 26.4		60 S	3 00	3 58	4 43	19 26 80	5 33 9		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 27 ^m 3		Mag: -3.8 PMG: 12 ^h 49 ^m			Mag: +1.8 PMG: 10 ^h 55 ^m			Mag: -2.0 PMG: 15 ^h 46 ^m			Mag: +0.5 PMG: 17 ^h 31 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	° ' "		° ' "	° ' "		° ' "	° ' "		° ' "	° ' "		° ' "	° ' "	
0	22 15.1		167 51.2	-13 16.5		196 04.4	-1 40.0		122 57.3	-22 50.3		96 35.1	-22 29.7	
1	37 17.5		182 50.7	17.6		211 05.4	40.6		137 59.4	50.4		111 37.5	29.7	
2	52 20.0		197 50.1	18.7		226 06.4	41.3		153 01.4	50.4		126 39.8	29.7	
3	67 22.5		212 49.6	19.8		241 07.4	41.9		168 03.4	50.5		141 42.2	29.7	
4	82 24.9		227 49.1	20.9		256 08.4	42.5		183 05.4	50.5		156 44.5	29.7	
5	97 27.4		242 48.6	-13 22.0		271 09.4	-1 43.2		198 07.5	-22 50.5		171 46.9	-22 29.6	
6	112 29.8		257 48.1	-13 23.2		286 10.3	-1 43.8		213 09.5	-22 50.6		186 49.2	-22 29.6	
7	127 32.3		272 47.5	24.3		301 11.3	44.5		228 11.5	50.6		201 51.6	29.6	
8	142 34.8		287 47.0	25.4		316 12.3	45.1		243 13.5	50.6		216 53.9	29.6	
9	157 37.2		302 46.5	26.5		331 13.3	45.8		258 15.5	50.7		231 56.3	29.6	
10	172 39.7		317 46.0	27.6		346 14.3	46.4		273 17.6	50.7		246 58.6	29.6	
11	187 42.2		332 45.4	-13 28.7		1 15.3	-1 47.1		288 19.6	-22 50.7		262 01.0	-22 29.6	
12	202 44.6		347 44.9	-13 29.8		16 16.2	-1 47.7		303 21.6	-22 50.8		277 03.3	-22 29.6	
13	217 47.1		2 44.4	30.9		31 17.2	48.4		318 23.6	50.8		292 05.7	29.6	
14	232 49.6		17 43.9	32.0		46 18.2	49.0		333 25.6	50.8		307 08.0	29.6	
15	247 52.0		32 43.3	33.1		61 19.2	49.7		348 27.7	50.9		322 10.4	29.6	
16	262 54.5		47 42.8	34.2		76 20.2	50.3		3 29.7	50.9		337 12.7	29.6	
17	277 57.0		62 42.3	-13 35.3		91 21.2	-1 51.0		18 31.7	-22 51.0		352 15.1	-22 29.6	
18	292 59.4		77 41.8	-13 36.4		106 22.1	-1 51.6		33 33.7	-22 51.0		7 17.4	-22 29.6	
19	308 01.9		92 41.2	37.5		121 23.1	52.3		48 35.7	51.0		22 19.8	29.5	
20	323 04.3		107 40.7	38.6		136 24.1	52.9		63 37.8	51.1		37 22.1	29.5	
21	338 06.8		122 40.2	39.7		151 25.1	53.6		78 39.8	51.1		52 24.5	29.5	
22	353 09.3		137 39.7	40.8		166 26.1	54.2		93 41.8	51.1		67 26.8	29.5	
23	8 11.7		152 39.1	41.9		181 27.1	54.9		108 43.8	51.2		82 29.2	29.5	
24	23 14.2		167 38.6	-13 43.0		196 28.1	-1 55.5		123 45.8	-22 51.2		97 31.5	-22 29.5	
Dif.	—		-5	-11		+10	-6		+20	0		+23	0	

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16°0			SD: 14°9		PHE { 4^h: 54°9 12^h: 55°0 20^h: 55°2						Edad: 16 ^d 2		R ^o : 45 ^m					
	PMG: 11 ^h 45 ^m 8	PMG:00 ^h 41 ^m		Dif.		Dec		Dif.				Civil	Náut.	Hora	R ^o	Hora	R ^o		
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.													
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m			
0	183	31.0	-8	19.3	350	00.9	147	+8	26.4	111	60 N	16 52	17 34	18 22	17 49	13			
1	198	31.2		20.2	4	34.6	146		37.5	111	58	16 56	36	21	17 55	16			
2	213	31.3		21.2	19	08.2	146		48.6	111	56	17 00	38	21	18 01	19			
3	228	31.5		22.1	33	41.8	145	+8	59.7	110	54	04	39	20	07	20			
4	243	31.6		23.0	48	15.3	145	+9	10.7	110	52	07	41	20	11	23			
5	258	31.7	-8	23.9	62	48.8	145	+9	21.7	110	50	17 10	17 42	18 20	18 16	24			
6	273	31.9	-8	24.9	77	22.3	144	+9	32.7	109	45	17 16	17 45	18 19	18 25	28			
7	288	32.0		25.8	91	55.7	143		43.6	109	40	21	48	20	33	31			
8	303	32.2		26.7	106	29.0	143	+9	54.5	109	35	26	51	20	40	34			
9	318	32.3		27.6	121	02.3	143	+10	05.4	108	30	30	54	22	46	36			
10	333	32.5		28.6	135	35.6	142		16.2	108	20	37	17 59	25	18 57	39			
11	348	32.6	-8	29.5	150	08.8	141	+10	27.0	107	10 N	17 43	18 04	18 29	19 06	43			
12	3	32.7	-8	30.4	164	41.9	141	+10	37.7	107	0	17 49	18 10	18 34	19 15	46			
13	18	32.9		31.3	179	15.0	141		48.4	107	10 S	17 55	17	41	24	49			
14	33	33.0		32.3	193	48.1	140	+10	59.1	106	20	18 02	24	18 51	33	53			
15	48	33.2		33.2	208	21.1	139	+11	09.7	106	30	10	34	19 03	44	56			
16	63	33.3		34.1	222	54.0	139		20.3	106	35	14	40	11	50	59			
17	78	33.4	-8	35.0	237	26.9	139	+11	30.9	105	40	18 19	18 47	19 21	19 57	62			
18	93	33.6	-8	36.0	251	59.8	138	+11	41.4	104	45	18 25	18 56	19 33	20 06	65			
19	108	33.7		36.9	266	32.6	137	+11	51.8	104	50	33	19 06	48	16	69			
20	123	33.9		37.8	281	05.3	137	+12	02.2	104	52	36	12	19 55	21	70			
21	138	34.0		38.7	295	38.0	136		12.6	103	54	40	17	20 04	26	73			
22	153	34.1		39.6	310	10.6	136		22.9	103	56	44	24	14	32	75			
23	168	34.3		40.6	324	43.2	135		33.2	102	58	48	31	25	38	78			
24	183	34.4	-8	41.5	339	15.7		+12	43.4		60 S	18 54	19 39	20 38	20 46	81			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG		Mag: -3.8			Mag: +1.8			Mag: -2.0			Mag: +0.5							
	22 ^h 23 ^m 4		PMG: 12 ^h 50 ^m			PMG: 10 ^h 53 ^m			PMG: 15 ^h 43 ^m			PMG: 17 ^h 27 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	23	14.2	167	38.6	-13	43.0	196	28.1	-1	55.5	123	45.8	-22	-51.2	97	31.5			
1	38	16.7	182	38.1		44.1	211	29.0		56.2	138	47.8		-51.2	112	33.9			
2	53	19.1	197	37.5		45.2	226	30.0		56.8	153	49.9		-51.3	127	36.2			
3	68	21.6	212	37.0		46.3	241	31.0		57.5	168	51.9		-51.3	142	38.6			
4	83	24.1	227	36.5		47.4	256	32.0		58.1	183	53.9		-51.3	157	40.9			
5	98	26.5	242	35.9	-13	48.5	271	33.0	-1	58.8	198	55.9	-22	-51.4	172	43.2			
6	113	29.0	257	35.4	-13	49.6	286	34.0	-1	59.4	213	57.9	-22	-51.4	187	45.6			
7	128	31.4	272	34.9		50.7	301	34.9	-2	00.1	228	59.9		-51.5	202	47.9			
8	143	33.9	287	34.3		51.8	316	35.9		00.7	244	02.0		-51.5	217	50.3			
9	158	36.4	302	33.8		52.9	331	36.9		01.4	259	04.0		-51.5	232	52.6			
10	173	38.8	317	33.3		54.0	346	37.9		02.0	274	06.0		-51.6	247	55.0			
11	188	41.3	332	32.7	-13	55.1	1	38.9	-2	02.7	289	08.0	-22	-51.6	262	57.3			
12	203	43.8	347	32.2	-13	56.2	16	39.9	-2	03.3	304	10.0	-22	-51.6	277	59.7			
13	218	46.2	2	31.7		57.3	31	40.8		04.0	319	12.0		-51.7	293	02.0			
14	233	48.7	17	31.1		58.3	46	41.8		04.6	334	14.1		-51.7	308	04.4			
15	248	51.2	32	30.6	-13	59.4	61	42.8		05.3	349	16.1		-51.7	323	06.7			
16	263	53.6	47	30.1	-14	00.5	76	43.8		05.9	4	18.1		-51.8	338	09.1			
17	278	56.1	62	29.5	-14	01.6	91	44.8	-2	06.6	19	20.1	-22	-51.8	353	11.4			
18	293	58.6	77	29.0	-14	02.7	106	45.8	-2	07.2	34	22.1	-22	-51.8	8	13.7			
19	309	01.0	92	28.5		03.8	121	46.7		07.9	49	24.1		-51.9	23	16.1			
20	324	03.5	107	27.9		04.9	136	47.7		08.5	64	26.1		-51.9	38	18.4			
21	339	05.9	122	27.4		06.0	151	48.7		09.2	79	28.2		-51.9	53	20.8			
22	354	08.4	137	26.8		07.0	166	49.7		09.8	94	30.2		-52.0	68	23.1			
23	9	10.9	152	26.3		08.1	181	50.7		10.5	109	32.2		-52.0	83	25.5			
24	24	13.3	167	25.8	-14	09.2	196	51.6	-2	11.1	124	34.2	-22	-52.1	98	27.8			
Dif.	—		-5	-11			+10	-6			+20		0		+23	0			

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 45 ^m 6				SD: 15'1 Edad: 17 ^d 2 PMG: 01 ^h 26 ^m PHE { 4^h: 55'3 12^h: 55'5 20^h: 55'6 Rº: 46 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	183	34.4	-8	41.5	339	15.7	135	+12	43.4	102	60 N	5 10	5 59	6 41	18 02	17	9 24	81
1	198	34.5		42.4	353	48.2	134	+12	53.6	101	58	11	57	36	11	21	15	78
2	213	34.7		43.3	8	20.6	133	+13	03.7	101	56	12	55	32	20	23	07	75
3	228	34.8		44.3	22	52.9	133		13.8	100	54	12	53	29	27	26	9 00	73
4	243	35.0		45.2	37	25.2	132		23.8	99	52	12	52	26	34	28	8 54	71
5	258	35.1	-8	46.1	51	57.4	132	+13	33.7	100	50	5 13	5 50	6 23	18 40	30	8 49	68
6	273	35.2	-8	47.0	66	29.6	131	+13	43.7	98	45	5 13	5 47	6 16	18 53	33	8 37	65
7	288	35.4		47.9	81	01.7	131	+13	53.5	98	40	12	44	11	19 04	36	27	62
8	303	35.5		48.9	95	33.8	129	+14	03.3	97	35	11	41	06	14	38	18	60
9	318	35.6		49.8	110	05.7	130		13.0	97	30	10	38	6 02	22	40	8 11	57
10	333	35.8		50.7	124	37.7	128		22.7	96	20	07	33	5 55	36	44	7 58	54
11	348	35.9	-8	51.6	139	09.5	128	+14	32.3	96	10 N	5 03	5 27	5 48	19 49	46	7 47	50
12	3	36.0	-8	52.5	153	41.3	128	+14	41.9	95	0	4 57	5 21	5 42	20 01	49	7 37	47
13	18	36.2		53.5	168	13.1	127	+14	51.4	94	10 S	50	15	36	13	52	26	45
14	33	36.3		54.4	182	44.8	126	+15	00.8	94	20	41	5 07	29	26	54	15	42
15	48	36.5		55.3	197	16.4	125		10.2	93	30	28	4 57	21	40	58	7 03	37
16	63	36.6		56.2	211	47.9	125		19.5	92	35	20	51	17	49	60	6 55	36
17	78	36.7	-8	57.1	226	19.4	124	+15	28.7	92	40	4 10	4 44	5 11	20 59	62	6 47	33
18	93	36.9	-8	58.0	240	50.8	124	+15	37.9	91	45	3 58	4 35	5 05	21 11	65	6 38	30
19	108	37.0		59.0	255	22.2	122		47.0	91	50	43	24	4 58	25	68	26	27
20	123	37.1	-8	59.9	269	53.4	123	+15	56.1	89	52	35	19	55	31	71	21	24
21	138	37.3	-9	00.8	284	24.7	121	+16	05.0	89	54	27	13	51	39	72	15	23
22	153	37.4		01.7	298	55.8	121		13.9	89	56	17	07	47	47	75	08	21
23	168	37.5		02.6	313	26.9	120		22.8	87	58	3 06	4 00	42	21 56	78	6 01	18
24	183	37.7	-9	03.6	327	57.9		+16	31.5		60 S	2 52	3 51	4 37	22 07	81	5 53	15

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 22 ^h 19 ^m 4		Mag: -3.8 PMG: 12 ^h 51 ^m				Mag: +1.8 PMG: 10 ^h 52 ^m				Mag: -2.0 PMG: 15 ^h 40 ^m				Mag: +0.5 PMG: 17 ^h 23 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	24	13.3	167	25.8	-14	09.2	196	51.6	-2	11.1	124	34.2	-22	52.1	98	27.8	-22	29.3	
1	39	15.8	182	25.2		10.3	211	52.6		11.8	139	36.2		52.1	113	30.2		29.3	
2	54	18.3	197	24.7		11.4	226	53.6		12.4	154	38.2		52.1	128	32.5		29.3	
3	69	20.7	212	24.1		12.5	241	54.6		13.1	169	40.2		52.2	143	34.8		29.3	
4	84	23.2	227	23.6		13.6	256	55.6		13.7	184	42.2		52.2	158	37.2		29.3	
5	99	25.7	242	23.1	-14	14.6	271	56.6	-2	14.4	199	44.3	-22	52.2	173	39.5	-22	29.3	
6	114	28.1	257	22.5	-14	15.7	286	57.5	-2	15.0	214	46.3	-22	52.3	188	41.9	-22	29.3	
7	129	30.6	272	22.0		16.8	301	58.5		15.7	229	48.3		52.3	203	44.2		29.3	
8	144	33.1	287	21.4		17.9	316	59.5		16.3	244	50.3		52.3	218	46.6		29.2	
9	159	35.5	302	20.9		19.0	332	00.5		17.0	259	52.3		52.4	233	48.9		29.2	
10	174	38.0	317	20.3		20.0	347	01.5		17.6	274	54.3		52.4	248	51.2		29.2	
11	189	40.4	332	19.8	-14	21.1	2	02.5	-2	18.3	289	56.3	-22	52.4	263	53.6	-22	29.2	
12	204	42.9	347	19.2	-14	22.2	17	03.4	-2	18.9	304	58.3	-22	52.5	278	55.9	-22	29.2	
13	219	45.4	2	18.7		23.3	32	04.4		19.6	320	00.3		52.5	293	58.3		29.2	
14	234	47.8	17	18.2		24.3	47	05.4		20.2	335	02.4		52.5	309	00.6		29.2	
15	249	50.3	32	17.6		25.4	62	06.4		20.8	350	04.4		52.6	324	03.0		29.2	
16	264	52.8	47	17.1		26.5	77	07.4		21.5	5	06.4		52.6	339	05.3		29.2	
17	279	55.2	62	16.5	-14	27.6	92	08.3	-2	22.1	20	08.4	-22	52.7	354	07.6	-22	29.2	
18	294	57.7	77	16.0	-14	28.6	107	09.3	-2	22.8	35	10.4	-22	52.7	9	10.0	-22	29.2	
19	310	00.2	92	15.4		29.7	122	10.3		23.4	50	12.4		52.7	24	12.3		29.2	
20	325	02.6	107	14.9		30.8	137	11.3		24.1	65	14.4		52.8	39	14.7		29.1	
21	340	05.1	122	14.3		31.9	152	12.3		24.7	80	16.4		52.8	54	17.0		29.1	
22	355	07.5	137	13.8		32.9	167	13.3		25.4	95	18.4		52.8	69	19.3		29.1	
23	10	10.0	152	13.2		34.0	182	14.2		26.0	110	20.4		52.9	84	21.7		29.1	
24	25	12.5	167	12.7	-14	35.1	197	15.2	-2	26.7	125	22.4	-22	52.9	99	24.0	-22	29.1	
Dif.	—		-5		-11		+10		-6		+20		0		+23				

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 45 ^m 4			SD: 15'2 Edad: 18 ^d 2														
	PMG: 02 ^h 12 ^m			Rº: 50 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	183	37.7	-9	03.6	327	57.9	120	+16	31.5	87	60 N	16 46	17 29	18 17	18 19 26	10 45 80		
1	198	37.8		04.5	342	28.9	119		40.2	86	58	51	31	16	32 29	33 76		
2	213	37.9		05.4	356	59.8	118		48.8	86	56	55	33	16	43 32	22 74		
3	228	38.0		06.3	11	30.6	117	+16	57.4	85	54	16 59	35	16	18 53 33	13 72		
4	243	38.2		07.2	26	01.3	117	+17	05.9	83	52	17 02	37	16	19 02 35	10 05 69		
5	258	38.3	-9	08.1	40	32.0	116	+17	14.2	83	50	17 06	17 38	18 16	19 10 36	9 57 68		
6	273	38.4	-9	09.0	55	02.6	116	+17	22.5	83	45	17 12	17 42	18 16	19 26 40	9 42 64		
7	288	38.6		10.0	69	33.2	115		30.8	81	40	18	45	17	40 42	29 62		
8	303	38.7		10.9	84	03.7	114		38.9	81	35	23	49	18	19 52 43	18 60		
9	318	38.8		11.8	98	34.1	113		47.0	80	30	27	52	19	20 02 45	9 08 59		
10	333	39.0		12.7	113	04.4	113	+17	55.0	79	20	35	17 57	23	20 47	8 52 55		
11	348	39.1	-9	13.6	127	34.7	112	+18	02.9	78	10 N	17 42	18 03	18 28	20 35 50	8 37 53		
12	3	39.2	-9	14.5	142	04.9	111	+18	10.7	78	0	17 49	18 10	18 34	20 50 52	8 24 50		
13	18	39.3		15.5	156	35.0	111		18.5	76	10 S	17 55	17	42	21 05 54	8 11 48		
14	33	39.5		16.4	171	05.1	110		26.1	76	20	18 03	25	18 51	20 56	7 57 45		
15	48	39.6		17.3	185	35.1	109		33.7	75	30	11	36	19 04	38 59	40 43		
16	63	39.7		18.2	200	05.0	108		41.2	74	35	16	42	13	21 49 60	31 40		
17	78	39.9	-9	19.1	214	34.8	108	+18	48.6	73	40	18 22	18 50	19 23	22 01 62	7 20 39		
18	93	40.0	-9	20.0	229	04.6	107	+18	55.9	72	45	18 28	18 59	19 36	22 16 64	7 08 36		
19	108	40.1		20.9	243	34.3	107	+19	03.1	71	50	36	19 10	19 52	33 67	6 53 32		
20	123	40.2		21.8	258	04.0	105		10.2	70	52	40	15	20 00	42 68	45 31		
21	138	40.4		22.8	272	33.5	105		17.2	70	54	44	21	09	22 51 70	38 29		
22	153	40.5		23.7	287	03.0	105		24.2	68	56	48	28	19	23 02 72	29 27		
23	168	40.6		24.6	301	32.5	103		31.0	68	58	53	36	31	14 74	19 24		
24	183	40.7	-9	25.5	316	01.8		+19	37.8		60 S	18 59	19 45	20 45	23 28 77	6 08 20		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 22 ^h 15 ^m 5		Mag: -3.8 PMG: 12 ^h 52 ^m				Mag: +1.8 PMG: 10 ^h 50 ^m				Mag: -2.0 PMG: 15 ^h 36 ^m				Mag: +0.5 PMG: 17 ^h 20 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	25	12.5	167	12.7	-14	35.1	197	15.2	-2	26.7	125	22.4	-22	-52.9	99	24.0	-22	29.1
1	40	14.9	182	12.1		36.1	212	16.2		27.3	140	24.5		-52.9	114	26.4		29.1
2	55	17.4	197	11.6		37.2	227	17.2		28.0	155	26.5		-53.0	129	28.7		29.1
3	70	19.9	212	11.0		38.3	242	18.2		28.6	170	28.5		-53.0	144	31.0		29.1
4	85	22.3	227	10.4		39.3	257	19.1		29.3	185	30.5		-53.0	159	33.4		29.1
5	100	24.8	242	09.9	-14	40.4	272	20.1	-2	29.9	200	32.5	-22	-53.1	174	35.7	-22	29.1
6	115	27.3	257	09.3	-14	41.5	287	21.1	-2	30.6	215	34.5	-22	-53.1	189	38.1	-22	29.1
7	130	29.7	272	08.8		42.5	302	22.1		31.2	230	36.5		-53.1	204	40.4		29.1
8	145	32.2	287	08.2		43.6	317	23.1		31.9	245	38.5		-53.2	219	42.7		29.0
9	160	34.7	302	07.7		44.7	332	24.0		32.5	260	40.5		-53.2	234	45.1		29.0
10	175	37.1	317	07.1		45.7	347	25.0		33.2	275	42.5		-53.2	249	47.4		29.0
11	190	39.6	332	06.6	-14	46.8	2	26.0	-2	33.8	290	44.5	-22	-53.3	264	49.8	-22	29.0
12	205	42.0	347	06.0	-14	47.9	17	27.0	-2	34.5	305	46.5	-22	-53.3	279	52.1	-22	29.0
13	220	44.5	2	05.4		48.9	32	28.0		35.1	320	48.5		-53.4	294	54.4		29.0
14	235	47.0	17	04.9		50.0	47	28.9		35.8	335	50.5		-53.4	309	56.8		29.0
15	250	49.4	32	04.3		51.1	62	29.9		36.4	350	52.5		-53.4	324	59.1		29.0
16	265	51.9	47	03.8		52.1	77	30.9		37.1	5	54.5		-53.5	340	01.4		29.0
17	280	54.4	62	03.2	-14	53.2	92	31.9	-2	37.7	20	56.6	-22	-53.5	355	03.8	-22	29.0
18	295	56.8	77	02.6	-14	54.2	107	32.9	-2	38.4	35	58.6	-22	-53.5	10	06.1	-22	29.0
19	310	59.3	92	02.1		55.3	122	33.8		39.0	51	00.6		-53.6	25	08.4		28.9
20	326	01.8	107	01.5		56.3	137	34.8		39.7	66	02.6		-53.6	40	10.8		28.9
21	341	04.2	122	01.0		57.4	152	35.8		40.3	81	04.6		-53.6	55	13.1		28.9
22	356	06.7	137	00.4		58.5	167	36.8		40.9	96	06.6		-53.7	70	15.5		28.9
23	11	09.2	151	59.8	-14	59.5	182	37.8		41.6	111	08.6		-53.7	85	17.8		28.9
24	26	11.6	166	59.3	-15	00.6	197	38.7	-2	42.2	126	10.6	-22	-53.7	100	20.1	-22	28.9
Dif.	—		-6		-11		+10		-6		+20		0		+23			

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 45 ^m 2				SD: 15'3 Edad: 19 ^d 2 PMG: 03 ^h 02 ^m PHE { 4^h: 56'3 12^h: 56'5 20^h: 56'7 Rº: 53^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº					
h	°	'	°	'	°	'												
0	183	40.7	-9	25.5	316	01.8	103	+19	37.8	66	60 N	5 15	6 03	6 46	18 45	39	12 05	73
1	198	40.9		26.4	330	31.1	102		44.4	66	58	15	6 01	41	19 01	41	11 49	71
2	213	41.0		27.3	345	00.3	102		51.0	64	56	16	5 59	37	15 42		36	69
3	228	41.1		28.2	359	29.5	101	+19	57.4	64	54	16	57	33	26 44		25	67
4	243	41.2		29.1	13	58.6	100	+20	03.8	62	52	16	55	29	37 45		14	66
5	258	41.4	-9	30.0	28	27.6	99	+20	10.0	62	50	5 16	5 53	6 26	19 46	46	11 05	65
6	273	41.5	-9	31.0	42	56.5	99	+20	16.2	60	45	5 15	5 49	6 19	20 06	47	10 46	63
7	288	41.6		31.9	57	25.4	98		22.2	60	40	14	46	13	22 49		31	61
8	303	41.7		32.8	71	54.2	98		28.2	58	35	13	42	08	35 50		18	59
9	318	41.9		33.7	86	23.0	96		34.0	58	30	11	39	6 04	20 47	51	10 07	58
10	333	42.0		34.6	100	51.6	97		39.8	56	20	08	33	5 56	21 07	53	9 47	57
11	348	42.1	-9	35.5	115	20.3	95	+20	45.4	56	10 N	5 03	5 27	5 49	21 25	54	9 30	55
12	3	42.2	-9	36.4	129	48.8	95	+20	51.0	54	0	4 57	5 21	5 42	21 42	54	9 14	54
13	18	42.4		37.3	144	17.3	94	+20	56.4	53	10 S	49	14	35	21 59	55	8 59	51
14	33	42.5		38.2	158	45.7	93	+21	01.7	52	20	39	5 05	28	22 16	57	42	50
15	48	42.6		39.1	173	14.0	93		06.9	51	30	26	4 55	19	37 58		23	48
16	63	42.7		40.0	187	42.3	92		12.0	50	35	17	48	14	22 49	59	8 11	47
17	78	42.8	-9	40.9	202	10.5	91	+21	17.0	49	40	4 07	4 41	5 08	23 03	60	7 59	45
18	93	43.0	-9	41.9	216	38.6	91	+21	21.9	47	45	3 54	4 31	5 02	23 20	60	7 44	43
19	108	43.1		42.8	231	06.7	90		26.6	47	50	38	20	4 54	40 62		25	41
20	123	43.2		43.7	245	34.7	90		31.3	45	52	30	14	50	23 50	63	16	40
21	138	43.3		44.6	260	02.7	89		35.8	45	54	21	08	46	** ** *	**	7 07	38
22	153	43.4		45.5	274	30.6	88		40.3	43	56	3 11	4 02	42	** ** *	**	6 56	36
23	168	43.6		46.4	288	58.4	88		44.6	42	58	2 59	3 54	37	** ** *	**	6 43	34
24	183	43.7	-9	47.3	303	26.2		+21	48.8		60 S	2 44	3 45	4 31	** ** *	**	6 28	31

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 11 ^m 6		Mag: -3.8 PMG: 12 ^h 53 ^m			Mag: +1.8 PMG: 10 ^h 49 ^m			Mag: -2.0 PMG: 15 ^h 33 ^m			Mag: +0.5 PMG: 17 ^h 16 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	26	11.6	166	59.3	-15	00.6	197	38.7	-2	42.2	126	10.6	-22	53.7	
1	41	14.1	181	58.7		01.6	212	39.7		42.9	141	12.6		53.8	
2	56	16.5	196	58.1		02.7	227	40.7		43.5	156	14.6		53.8	
3	71	19.0	211	57.6		03.7	242	41.7		44.2	171	16.6		53.8	
4	86	21.5	226	57.0		04.8	257	42.7		44.8	186	18.6		53.9	
5	101	23.9	241	56.5	-15	05.8	272	43.6	-2	45.5	201	20.6	-22	53.9	
6	116	26.4	256	55.9	-15	06.9	287	44.6	-2	46.1	216	22.6	-22	53.9	
7	131	28.9	271	55.3		07.9	302	45.6		46.8	231	24.6		54.0	
8	146	31.3	286	54.8		09.0	317	46.6		47.4	246	26.6		54.0	
9	161	33.8	301	54.2		10.0	332	47.6		48.1	261	28.6		54.0	
10	176	36.3	316	53.6		11.1	347	48.5		48.7	276	30.6		54.1	
11	191	38.7	331	53.0	-15	12.1	2	49.5	-2	49.4	291	32.6	-22	54.1	
12	206	41.2	346	52.5	-15	13.2	17	50.5	-2	50.0	306	34.6	-22	54.1	
13	221	43.6	1	51.9		14.2	32	51.5		50.7	321	36.6		54.2	
14	236	46.1	16	51.3		15.3	47	52.5		51.3	336	38.6		54.2	
15	251	48.6	31	50.8		16.3	62	53.4		52.0	351	40.6		54.3	
16	266	51.0	46	50.2		17.4	77	54.4		52.6	6	42.6		54.3	
17	281	53.5	61	49.6	-15	18.4	92	55.4	-2	53.3	21	44.6	-22	54.3	
18	296	56.0	76	49.1	-15	19.5	107	56.4	-2	53.9	36	46.6	-22	54.4	
19	311	58.4	91	48.5		20.5	122	57.4		54.5	51	48.6		54.4	
20	327	00.9	106	47.9		21.5	137	58.3		55.2	66	50.6		54.4	
21	342	03.4	121	47.3		22.6	152	59.3		55.8	81	52.6		54.5	
22	357	05.8	136	46.8		23.6	168	00.3		56.5	96	54.6		54.5	
23	12	08.3	151	46.2		24.7	183	01.3		57.1	111	56.6		54.5	
24	27	10.8	166	45.6	-15	25.7	198	02.2	-2	57.8	126	58.6	-22	54.6	
Dif.	—		-6	-10			+10	-6			+20	0			+23

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 45 ^m 0			SD: 15'5 Edad: 20 ^d 2 PMG: 03 ^h 55 ^m PHE { 4^h: 56'9 12^h: 57'1 20^h: 57'3 Rº: 55 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'			h	m	h	m	h	m	h	m	
0	183	43.7	-9	47.3	303	26.2	87	+21	48.8	40	60 N	16 41	17 23	18 11	19 24	56	13 18	
1	198	43.8		48.2	317	53.9	86		52.8	40	58	46	26	11	42	56	13 00	
2	213	43.9		49.1	332	21.5	86	+21	56.8	38	56	50	28	11	19 57	57	12 45	
3	228	44.0		50.0	346	49.1	85	+22	00.6	37	54	54	30	11	20 10	57	32 58	
4	243	44.2		50.9	1	16.6	85		04.3	36	52	16 58	32	12	22	56	20 59	
5	258	44.3	-9	51.8	15	44.1	84	+22	07.9	35	50	17 02	17 34	18 12	20 32	57	12 10	
6	273	44.4	-9	52.7	30	11.5	83	+22	11.4	33	45	17 09	17 39	18 13	20 53	57	11 49	
7	288	44.5		53.6	44	38.8	83		14.7	33	40	15	43	14	21 11	56	32 57	
8	303	44.6		54.5	59	06.1	83		18.0	31	35	21	46	16	25	57	17 58	
9	318	44.7		55.4	73	33.4	81		21.1	30	30	25	50	17	21 38	57	11 05	
10	333	44.9		56.3	88	00.5	82		24.1	28	20	34	17 56	22	22 00	56	10 44	
11	348	45.0	-9	57.2	102	27.7	80	+22	26.9	27	10 N	17 41	18 03	18 27	22 19	56	10 25	
12	3	45.1	-9	58.1	116	54.7	81	+22	29.6	26	0	17 48	18 09	18 34	22 36	57	10 08	
13	18	45.2		59.0	131	21.8	79		32.2	25	10 S	17 56	17	42	22 54	56	9 50	
14	33	45.3	-9	59.9	145	48.7	80		34.7	24	20	18 03	26	18 52	23 13	56	32 54	
15	48	45.4	-10	00.8	160	15.7	78		37.1	22	30	12	37	19 06	35	56	9 11	
16	63	45.6		01.7	174	42.5	78		39.3	21	35	18	44	15	23 48	56	8 58	
17	78	45.7	-10	02.6	189	09.3	78	+22	41.4	19	40	18 24	18 52	19 26	** ** *	**	8 44	
18	93	45.8	-10	03.5	203	36.1	77	+22	43.3	19	45	18 31	19 01	19 39	** ** *	**	8 27	
19	108	45.9		04.4	218	02.8	77		45.2	17	50	39	14	19 56	** ** *	**	8 06	
20	123	46.0		05.4	232	29.5	76		46.9	15	52	43	19	20 04	** ** *	**	7 56	
21	138	46.1		06.3	246	56.1	76		48.4	15	54	48	26	14	0 01	64	45 49	
22	153	46.2		07.2	261	22.7	76		49.9	13	56	52	33	25	14	64	32 49	
23	168	46.4		08.1	275	49.3	75		51.2	11	58	18 58	41	37	28	66	7 17	
24	183	46.5	-10	09.0	290	15.8		+22	52.3		60 S	19 04	19 50	20 53	0 45	68	6 59	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 07 ^m 6		Mag: -3.8 PMG: 12 ^h 53 ^m			Mag: +1.8 PMG: 10 ^h 47 ^m			Mag: -2.0 PMG: 15 ^h 30 ^m			Mag: +0.5 PMG: 17 ^h 12 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	27	10.8	166	45.6	-15	25.7	198	02.2	-2	57.8	126	58.6	-22	-54.6
1	42	13.2	181	45.0		26.7	213	03.2		58.4	142	00.6		-54.6
2	57	15.7	196	44.5		27.8	228	04.2		59.1	157	02.6		-54.6
3	72	18.1	211	43.9		28.8	243	05.2	-2	59.7	172	04.6		-54.7
4	87	20.6	226	43.3		29.9	258	06.2	-3	00.4	187	06.6		-54.7
5	102	23.1	241	42.7	-15	30.9	273	07.1	-3	01.0	202	08.6	-22	-54.7
6	117	25.5	256	42.1	-15	31.9	288	08.1	-3	01.7	217	10.6	-22	-54.8
7	132	28.0	271	41.6		33.0	303	09.1		02.3	232	12.6		-54.8
8	147	30.5	286	41.0		34.0	318	10.1		03.0	247	14.6		-54.8
9	162	32.9	301	40.4		35.0	333	11.0		03.6	262	16.6		-54.9
10	177	35.4	316	39.8		36.1	348	12.0		04.3	277	18.6		-54.9
11	192	37.9	331	39.3	-15	37.1	3	13.0	-3	04.9	292	20.6	-22	-54.9
12	207	40.3	346	38.7	-15	38.1	18	14.0	-3	05.6	307	22.6	-22	-55.0
13	222	42.8	1	38.1		39.2	33	15.0		06.2	322	24.6		-55.0
14	237	45.3	16	37.5		40.2	48	15.9		06.8	337	26.6		-55.0
15	252	47.7	31	36.9		41.2	63	16.9		07.5	352	28.6		-55.1
16	267	50.2	46	36.3		42.2	78	17.9		08.1	7	30.6		-55.1
17	282	52.6	61	35.8	-15	43.3	93	18.9	-3	08.8	22	32.5	-22	-55.1
18	297	55.1	76	35.2	-15	44.3	108	19.8	-3	09.4	37	34.5	-22	-55.2
19	312	57.6	91	34.6		45.3	123	20.8		10.1	52	36.5		-55.2
20	328	00.0	106	34.0		46.4	138	21.8		10.7	67	38.5		-55.3
21	343	02.5	121	33.4		47.4	153	22.8		11.4	82	40.5		-55.3
22	358	05.0	136	32.8		48.4	168	23.8		12.0	97	42.5		-55.3
23	13	07.4	151	32.2		49.4	183	24.7		12.7	112	44.5		-55.4
24	28	09.9	166	31.7	-15	50.4	198	25.7	-3	13.3	127	46.5	-22	-55.4
Dif.	—		-6	-10			+10	-6			+20	0		+23

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1				SD: 15'6		PHE { 4 ^h : 57'5 12 ^h : 57'7 20 ^h : 57'9		Edad: 21 ^d 2			PMG: 04 ^h 50 ^m			Rº: 56 ^m		Hora		Rº	
	PMG: 11 ^h 44 ^m 8																			
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	183	46.5	-10	09.0	290	15.8	74	+22	52.3	11	60 N	5 20	6 08	6 51	20 20	74	14 18	44		
1	198	46.6		09.8	304	42.2	74		53.4	9	58	20	05	45	38 72	13 59	46			
2	213	46.7		10.7	319	08.6	74		54.3	7	56	20	03	41	20 54	70	44	47		
3	228	46.8		11.6	333	35.0	74		55.0	7	54	19	6 00	37	21 07	69	30	49		
4	243	46.9		12.5	348	01.4	73		55.7	5	52	19	5 58	33	18 68	19	49			
5	258	47.0	-10	13.4	2	27.7	72	+22	56.2	3	50	5 19	5 56	6 29	21 29	67	13 09	50		
6	273	47.1	-10	14.3	16	53.9	73	+22	56.5	2	45	5 18	5 52	6 22	21 50	65	12 47	51		
7	288	47.2		15.2	31	20.2	72		56.7	1	40	16	48	15	22 07	64	29	53		
8	303	47.4		16.1	45	46.4	71		56.8	0	35	15	44	10	22 63	15	53			
9	318	47.5		17.0	60	12.5	71		56.8	2	30	13	41	6 05	35 61	12 02	54			
10	333	47.6		17.9	74	38.6	71		56.6	3	20	08	34	5 56	22 56	60	11 40	55		
11	348	47.7	-10	18.8	89	04.7	71	+22	56.3	5	10 N	5 03	5 27	5 49	23 15	59	11 21	56		
12	3	47.8	-10	19.7	103	30.8	70	+22	55.8	6	0	4 56	5 20	5 41	23 33	57	11 03	57		
13	18	47.9		20.6	117	56.8	71		55.2	8	10 S	48	13	34	23 50	56	10 45	58		
14	33	48.0		21.5	132	22.9	69		54.4	8	20	37	5 04	26	** ** *	**	26	59		
15	48	48.1		22.4	146	48.8	70		53.6	11	30	23	4 52	17	** ** *	**	10 04	60		
16	63	48.2		23.3	161	14.8	69		52.5	11	35	15	46	12	** ** *	**	9 51	60		
17	78	48.3	-10	24.2	175	40.7	69	+22	51.4	13	40	4 04	4 37	5 06	0 03	55	9 37	60		
18	93	48.4	-10	25.1	190	06.6	69	+22	50.1	15	45	3 50	4 28	4 58	0 20	55	9 19	61		
19	108	48.6		26.0	204	32.5	69		48.6	16	50	33	16	50	42 55	8 57	62			
20	123	48.7		26.9	218	58.4	68		47.0	17	52	25	10	46	0 53	54	46	63		
21	138	48.8		27.8	233	24.2	69		45.3	19	54	15	4 03	41	1 05	54	34	63		
22	153	48.9		28.7	247	50.1	68		43.4	20	56	3 04	3 56	37	18 54	21	63			
23	168	49.0		29.6	262	15.9	68		41.4	21	58	2 52	48	31	1 34	53	8 05	64		
24	183	49.1	-10	30.5	276	41.7		+22	39.3		60 S	2 36	3 38	4 25	1 53	52	7 46	65		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG		Mag: -3.8				Mag: +1.8				Mag: -1.9				Mag: +0.5					
	22 ^h 03 ^m 7		PMG: 12 ^h 54 ^m				PMG: 10 ^h 46 ^m				PMG: 15 ^h 27 ^m				PMG: 17 ^h 09 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	28	09.9	166	31.7	-15	50.4	198	25.7	-3	13.3	127	46.5	-22	55.4	102	12.1	-22	28.4		
1	43	12.4	181	31.1		51.5	213	26.7		14.0	142	48.5		55.4	117	14.4		28.4		
2	58	14.8	196	30.5		52.5	228	27.7		14.6	157	50.5		55.5	132	16.7		28.4		
3	73	17.3	211	29.9		53.5	243	28.6		15.3	172	52.5		55.5	147	19.0		28.4		
4	88	19.8	226	29.3		54.5	258	29.6		15.9	187	54.5		55.5	162	21.4		28.4		
5	103	22.2	241	28.7	-15	55.6	273	30.6	-3	16.5	202	56.5	-22	55.6	177	23.7	-22	28.4		
6	118	24.7	256	28.1	-15	56.6	288	31.6	-3	17.2	217	58.5	-22	55.6	192	26.0	-22	28.4		
7	133	27.1	271	27.5		57.6	303	32.5		17.8	233	00.5		55.6	207	28.4		28.4		
8	148	29.6	286	26.9		58.6	318	33.5		18.5	248	02.5		55.7	222	30.7		28.4		
9	163	32.1	301	26.4	-15	59.6	333	34.5		19.1	263	04.4		55.7	237	33.0		28.3		
10	178	34.5	316	25.8	-16	00.6	348	35.5		19.8	278	06.4		55.7	252	35.3		28.3		
11	193	37.0	331	25.2	-16	01.7	3	36.4	-3	20.4	293	08.4	-22	55.8	267	37.7	-22	28.3		
12	208	39.5	346	24.6	-16	02.7	18	37.4	-3	21.1	308	10.4	-22	55.8	282	40.0	-22	28.3		
13	223	41.9	1	24.0		03.7	33	38.4		21.7	323	12.4		55.8	297	42.3		28.3		
14	238	44.4	16	23.4		04.7	48	39.4		22.4	338	14.4		55.9	312	44.6		28.3		
15	253	46.9	31	22.8		05.7	63	40.4		23.0	353	16.4		55.9	327	47.0		28.3		
16	268	49.3	46	22.2		06.7	78	41.3		23.7	8	18.4		55.9	342	49.3		28.3		
17	283	51.8	61	21.6	-16	07.7	93	42.3	-3	24.3	23	20.4	-22	56.0	357	51.6	-22	28.3		
18	298	54.3	76	21.0	-16	08.8	108	43.3	-3	24.9	38	22.4	-22	56.0	12	53.9	-22	28.3		
19	313	56.7	91	20.4		09.8	123	44.3		25.6	53	24.4		56.0	27	56.3		28.2		
20	328	59.2	106	19.8		10.8	138	45.2		26.2	68	26.4		56.1	42	58.6		28.2		
21	344	01.6	121	19.2		11.8	153	46.2		26.9	83	28.3		56.1	58	00.9		28.2		
22	359	04.1	136	18.6		12.8	168	47.2		27.5	98	30.3		56.1	73	03.2		28.2		
23	14	06.6	151	18.0		13.8	183	48.2		28.2	113	32.3		56.2	88	05.6		28.2		
24	29	09.0	166	17.4	-16	14.8	198	49.1	-3	28.8	128	34.3	-22	56.2	103	07.9	-22	28.2		
Dif.	—		-6		-10		+10		-6		+20		0		+23		0			

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 6				SD: 15'8 Edad: 22 ^d 2		PHE { 4 ^h : 58'2 12 ^h : 58'4 20 ^h : 58'6		Rº: 57 ^m				Civil	Náut.	Hora	Rº	Hora	Rº		
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.												
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	49.1	-10	30.5	276	41.7	67	+22	39.3	23	60 N	16 35	17 18	18 06	21 34	88	15 02	30		
1	198	49.2		31.4	291	07.4	68		37.0	24	58	41	21	06	21 50	84	14 45	34		
2	213	49.3		32.3	305	33.2	68		34.6	26	56	45	24	07	22 04	81	31	36		
3	228	49.4		33.1	319	59.0	67		32.0	27	54	50	26	07	16	79	19	38		
4	243	49.5		34.0	334	24.7	67		29.3	29	52	54	28	08	26	77	14 08	40		
5	258	49.6	-10	34.9	348	50.4	67	+22	26.4	30	50	16 58	17 31	18 08	22 36	75	13 59	41		
6	273	49.7	-10	35.8	3	16.1	67	+22	23.4	31	45	17 06	17 36	18 10	22 55	72	13 38	45		
7	288	49.8		36.7	17	41.8	67		20.3	33	40	12	40	11	23 11	69	22	47		
8	303	49.9		37.6	32	07.5	67		17.0	34	35	18	44	13	25	67	13 08	49		
9	318	50.0		38.5	46	33.2	67		13.6	36	30	23	48	16	36	65	12 56	50		
10	333	50.1		39.4	60	58.9	67		10.0	37	20	32	17 55	20	23 56	62	35	53		
11	348	50.2	-10	40.3	75	24.6	67	+22	06.3	38	10 N	17 40	18 02	18 26	** ** *	**	12 17	55		
12	3	50.3	-10	41.2	89	50.3	67	+22	02.5	40	0	17 48	18 09	18 33	** ** *	**	12 00	57		
13	18	50.4		42.1	104	16.0	67	+21	58.5	41	10 S	17 56	17	42	** ** *	**	11 43	59		
14	33	50.5		42.9	118	41.7	66		54.4	43	20	18 04	27	18 53	0 09	54	25	61		
15	48	50.6		43.8	133	07.3	67		50.1	44	30	14	38	19 08	31	52	11 04	63		
16	63	50.7		44.7	147	33.0	67		45.7	45	35	19	46	17	44	51	10 51	65		
17	78	50.8	-10	45.6	161	58.7	67	+21	41.2	47	40	18 26	18 54	19 28	0 58	50	10 37	66		
18	93	50.9	-10	46.5	176	24.4	67	+21	36.5	48	45	18 33	19 04	19 42	1 15	49	10 20	69		
19	108	51.0		47.4	190	50.1	67		31.7	50	50	43	17	20 00	37	46	9 59	71		
20	123	51.1		48.3	205	15.8	67		26.7	51	52	47	23	09	47	45	49	72		
21	138	51.2		49.2	219	41.5	67		21.6	52	54	51	30	19	1 59	43	37	75		
22	153	51.3		50.1	234	07.2	67		16.4	54	56	18 57	38	30	2 12	41	24	77		
23	168	51.4		50.9	248	32.9	67		11.0	55	58	19 02	46	20 44	27	39	9 09	79		
24	183	51.5	-10	51.8	262	58.6		+21	05.5		60 S	19 09	19 56	21 00	2 45	37	8 51	82		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 21 ^h 59 ^m 8		Mag: -3.8 PMG: 12 ^h 55 ^m				Mag: +1.8 PMG: 10 ^h 44 ^m				Mag: -1.9 PMG: 15 ^h 24 ^m				Mag: +0.5 PMG: 17 ^h 05 ^m					
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	29	09.0	166	17.4	-16	14.8	198	49.1	-3	28.8	128	34.3	-22	-56.2	103	07.9	-22	28.2		
1	44	11.5	181	16.8		15.8	213	50.1		29.5	143	36.3		-56.2	118	10.2		28.2		
2	59	14.0	196	16.2		16.8	228	51.1		30.1	158	38.3		-56.3	133	12.5		28.2		
3	74	16.4	211	15.6		17.8	243	52.1		30.8	173	40.3		-56.3	148	14.9		28.2		
4	89	18.9	226	15.0		18.8	258	53.0		31.4	188	42.3		-56.3	163	17.2		28.2		
5	104	21.4	241	14.4	-16	19.8	273	54.0	-3	32.1	203	44.3	-22	-56.4	178	19.5	-22	28.1		
6	119	23.8	256	13.8	-16	20.8	288	55.0	-3	32.7	218	46.2	-22	-56.4	193	21.8	-22	28.1		
7	134	26.3	271	13.2		21.8	303	56.0		33.3	233	48.2		-56.4	208	24.1		28.1		
8	149	28.7	286	12.6		22.8	318	56.9		34.0	248	50.2		-56.5	223	26.5		28.1		
9	164	31.2	301	12.0		23.8	333	57.9		34.6	263	52.2		-56.5	238	28.8		28.1		
10	179	33.7	316	11.4		24.8	348	58.9		35.3	278	54.2		-56.5	253	31.1		28.1		
11	194	36.1	331	10.8	-16	25.8	3	59.9	-3	35.9	293	56.2	-22	-56.6	268	33.4	-22	28.1		
12	209	38.6	346	10.2	-16	26.8	19	00.8	-3	36.6	308	58.2	-22	-56.6	283	35.8	-22	28.1		
13	224	41.1	1	09.6		27.8	34	01.8		37.2	324	00.2		-56.6	298	38.1		28.1		
14	239	43.5	16	09.0		28.8	49	02.8		37.9	339	02.1		-56.7	313	40.4		28.0		
15	254	46.0	31	08.4		29.8	64	03.8		38.5	354	04.1		-56.7	328	42.7		28.0		
16	269	48.5	46	07.7		30.8	79	04.7		39.2	9	06.1		-56.7	343	45.0		28.0		
17	284	50.9	61	07.1	-16	31.8	94	05.7	-3	39.8	24	08.1	-22	-56.8	358	47.4	-22	28.0		
18	299	53.4	76	06.5	-16	32.8	109	06.7	-3	40.4	39	10.1	-22	-56.8	13	49.7	-22	28.0		
19	314	55.9	91	05.9		33.8	124	07.6		41.1	54	12.1		-56.8	28	52.0		28.0		
20	329	58.3	106	05.3		34.8	139	08.6		41.7	69	14.1		-56.9	43	54.3		28.0		
21	345	00.8	121	04.7		35.8	154	09.6		42.4	84	16.0		-56.9	58	56.6		28.0		
22	0	03.2	136	04.1		36.8	169	10.6		43.0	99	18.0		-56.9	73	59.0		28.0		
23	15	05.7	151	03.5		37.8	184	11.5		43.7	114	20.0		-57.0	89	01.3		27.9		
24	30	08.2	166	02.9	-16	38.7	199	12.5	-3	44.3	129	22.0	-22	-57.0	104	03.6	-22	27.9		
Dif.	—		-6		-10		+10		-6		+20		0		+23					

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1				SD: 16'0												PHE { 4 ^h : 58'8 12 ^h : 59'1 20 ^h : 59'3	
	PMG: 11 ^h 44 ^m 5				Edad: 23 ^d 2													
	PMG: 06 ^h 43 ^m				Rº: 57 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	° N	h m	h m	h m	h m m	m	h m m	m			
0	183	51.5	-10	51.8	262	58.6	67	+21	05.5	57	60 N	5 24	6 13	6 56	23 02 94	15 32 21		
1	198	51.6		52.7	277	24.3	68	+20	59.8	58	58	24	10	50	14 91	19 24		
2	213	51.7		53.6	291	50.1	67		54.0	59	56	23	07	45	25 87	15 07 28		
3	228	51.8		54.5	306	15.8	68		48.1	61	54	23	04	40	35 84	14 57 30		
4	243	51.9		55.4	320	41.6	68		42.0	62	52	22	6 02	36	43 82	48 33		
5	258	52.0	-10	56.3	335	07.4	68	+20	35.8	63	50	5 22	5 59	6 32	23 51 80	14 40 34		
6	273	52.1	-10	57.1	349	33.2	68	+20	29.5	65	45	5 20	5 54	6 24	***	14 23 38		
7	288	52.2		58.0	3	59.0	68		23.0	66	40	18	50	17	***	14 09 41		
8	303	52.3		58.9	18	24.8	69		16.4	67	35	16	46	12	***	13 57 44		
9	318	52.4	-10	59.8	32	50.7	68		09.7	69	30	14	42	6 06	***	46 46		
10	333	52.5	-11	00.7	47	16.5	69	+20	02.8	70	20	09	35	5 57	***	28 50		
11	348	52.6	-11	01.6	61	42.4	69	+19	55.8	71	10 N	5 03	5 28	5 49	0 14 59	13 12 53		
12	3	52.7	-11	02.4	76	08.3	69	+19	48.7	73	0	4 56	5 20	5 41	0 30 57	12 57 56		
13	18	52.8		03.3	90	34.2	70		41.4	74	10 S	47	12	33	0 46 54	42 59		
14	33	52.9		04.2	105	00.2	69		34.0	75	20	36	5 02	25	1 03 52	26 62		
15	48	53.0		05.1	119	26.1	70		26.5	76	30	21	4 50	15	23 48	12 07 66		
16	63	53.1		06.0	133	52.1	70		18.9	78	35	12	43	09	35 46	11 56 68		
17	78	53.2	-11	06.9	148	18.1	70	+19	11.1	79	40	4 01	4 34	5 03	1 48 44	11 43 71		
18	93	53.3	-11	07.7	162	44.1	71	+19	03.2	81	45	3 47	4 24	4 55	2 04 41	11 29 74		
19	108	53.4		08.6	177	10.2	71	+18	55.1	81	50	29	11	46	23 37	10 78		
20	123	53.4		09.5	191	36.3	71		47.0	83	52	20	4 05	42	32 36	11 01 80		
21	138	53.5		10.4	206	02.4	71		38.7	84	54	3 10	3 58	37	42 34	10 52 82		
22	153	53.6		11.3	220	28.5	71		30.3	85	56	2 58	51	32	2 53 32	41 85		
23	168	53.7		12.1	234	54.6	72		21.8	87	58	44	42	26	3 06 29	10 28 88		
24	183	53.8	-11	13.0	249	20.8		+18	13.1		60 S	2 28	3 32	4 19	3 22 24	10 13 92		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 55 ^m 9		Mag: -3.8 PMG: 12 ^h 56 ^m				Mag: +1.8 PMG: 10 ^h 42 ^m				Mag: -1.9 PMG: 15 ^h 21 ^m				Mag: +0.5 PMG: 17 ^h 01 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	30	08.2	166	02.9	-16	38.7	199	12.5	-3	44.3	129	22.0	-22	57.0	104	03.6	-22	27.9
1	45	10.6	181	02.3		39.7	214	13.5		45.0	144	24.0		57.0	119	05.9		27.9
2	60	13.1	196	01.6		40.7	229	14.5		45.6	159	26.0		57.1	134	08.2		27.9
3	75	15.6	211	01.0		41.7	244	15.4		46.3	174	28.0		57.1	149	10.6		27.9
4	90	18.0	226	00.4		42.7	259	16.4		46.9	189	29.9		57.1	164	12.9		27.9
5	105	20.5	240	59.8	-16	43.7	274	17.4	-3	47.5	204	31.9	-22	57.2	179	15.2	-22	27.9
6	120	23.0	255	59.2	-16	44.7	289	18.4	-3	48.2	219	33.9	-22	57.2	194	17.5	-22	27.9
7	135	25.4	270	58.6		45.6	304	19.3		48.8	234	35.9		57.2	209	19.8		27.9
8	150	27.9	285	58.0		46.6	319	20.3		49.5	249	37.9		57.3	224	22.2		27.8
9	165	30.4	300	57.3		47.6	334	21.3		50.1	264	39.9		57.3	239	24.5		27.8
10	180	32.8	315	56.7		48.6	349	22.2		50.8	279	41.8		57.3	254	26.8		27.8
11	195	35.3	330	56.1	-16	49.6	4	23.2	-3	51.4	294	43.8	-22	57.4	269	29.1	-22	27.8
12	210	37.7	345	55.5	-16	50.6	19	24.2	-3	52.1	309	45.8	-22	57.4	284	31.4	-22	27.8
13	225	40.2	0	54.9		51.5	34	25.2		52.7	324	47.8		57.4	299	33.8		27.8
14	240	42.7	15	54.2		52.5	49	26.1		53.3	339	49.8		57.5	314	36.1		27.8
15	255	45.1	30	53.6		53.5	64	27.1		54.0	354	51.8		57.5	329	38.4		27.8
16	270	47.6	45	53.0		54.5	79	28.1		54.6	9	53.7		57.5	344	40.7		27.8
17	285	50.1	60	52.4	-16	55.4	94	29.1	-3	55.3	24	55.7	-22	57.6	359	43.0	-22	27.7
18	300	52.5	75	51.8	-16	56.4	109	30.0	-3	55.9	39	57.7	-22	57.6	14	45.3	-22	27.7
19	315	55.0	90	51.1		57.4	124	31.0		56.6	54	59.7		57.6	29	47.7		27.7
20	330	57.5	105	50.5		58.4	139	32.0		57.2	70	01.7		57.7	44	50.0		27.7
21	345	59.9	120	49.9	-16	59.3	154	32.9		57.9	85	03.6		57.7	59	52.3		27.7
22	1	02.4	135	49.3	-17	00.3	169	33.9		58.5	100	05.6		57.7	74	54.6		27.7
23	16	04.9	150	48.6		01.3	184	34.9		59.1	115	07.6		57.8	89	56.9		27.7
24	31	07.3	165	48.0	-17	02.3	199	35.9	-3	59.8	130	09.6	-22	57.8	104	59.2	-22	27.7
Dif.	—		-6		-10		+10		-6		+20		0		+23			

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 44 ^m 3				SD: 16:2 Edad: 24:2 PHE { 4 ^h : 59:5 12 ^h : 59:7 20 ^h : 59:9 PMG:07 ^h 40 ^m Rº: 55 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.												
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	183	53.8	-11	13.0	249	20.8	72	+18	13.1	88	60 N	16 29	17 13	18 01	** ** *	**	15 53	15
1	198	53.9		13.9	263	47.0	72	+18	04.3	89	58	35	16	02	** ** *	**	43	19
2	213	54.0		14.8	278	13.2	73	+17	55.4	90	56	41	19	02	** ** *	**	35	22
3	228	54.1		15.7	292	39.5	73		46.4	91	54	45	22	03	** ** *	**	27	25
4	243	54.2		16.5	307	05.8	73		37.3	93	52	50	24	04	** ** *	**	21	26
5	258	54.3	-11	17.4	321	32.1	73	+17	28.0	94	50	16 54	17 27	18 04	** ** *	**	15 14	29
6	273	54.4	-11	18.3	335	58.4	74	+17	18.6	95	45	17 02	17 32	18 07	0 07	76	15 01	33
7	288	54.4		19.2	350	24.8	74	+17	09.1	96	40	10	37	09	20	73	14 50	37
8	303	54.5		20.1	4	51.2	74	+16	59.5	97	35	16	42	11	32	69	41	40
9	318	54.6		20.9	19	17.6	75		49.8	98	30	21	46	14	41	67	32	43
10	333	54.7		21.8	33	44.1	75		40.0	100	20	31	17 53	19	0 58	63	18	47
11	348	54.8	-11	22.7	48	10.6	75	+16	30.0	100	10 N	17 40	18 01	18 26	1 13	59	14 05	51
12	3	54.9	-11	23.6	62	37.1	76	+16	20.0	102	0	17 48	18 09	18 33	1 27	55	13 53	55
13	18	55.0		24.4	77	03.7	75	+16	09.8	103	10 S	17 56	17	43	40	52	41	59
14	33	55.1		25.3	91	30.2	76	+15	59.5	104	20	18 05	28	18 54	1 55	48	28	63
15	48	55.1		26.2	105	56.8	77		49.1	105	30	15	40	19 09	2 11	45	13	67
16	63	55.2		27.1	120	23.5	77		38.6	106	35	21	48	19	21	42	13 04	70
17	78	55.3	-11	27.9	134	50.2	77	+15	28.0	107	40	18 28	18 57	19 31	2 32	39	12 54	73
18	93	55.4	-11	28.8	149	16.9	77	+15	17.3	108	45	18 36	19 07	19 45	2 45	35	12 43	76
19	108	55.5		29.7	163	43.6	78	+15	06.5	109	50	46	21	20 04	3 00	32	28	82
20	123	55.6		30.6	178	10.4	77	+14	55.6	110	52	50	27	13	08	29	21	84
21	138	55.7		31.4	192	37.1	79		44.6	111	54	18 55	34	24	16	26	14	86
22	153	55.7		32.3	207	04.0	78		33.5	113	56	19 01	42	36	25	24	12 06	89
23	168	55.8		33.2	221	30.8	79		22.2	113	58	07	19 52	20 51	35	21	11 56	92
24	183	55.9	-11	34.1	235	57.7		+14	10.9		60 S	19 14	20 02	21 08	3 46	18	11 45	96
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 51 ^m 9		Mag: -3.8 PMG: 12 ^h 57 ^m				Mag: +1.8 PMG: 10 ^h 41 ^m				Mag: -1.9 PMG: 15 ^h 17 ^m				Mag: +0.5 PMG: 16 ^h 57 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	31	07.3	165	48.0	-17	02.3	199	35.9	-3	59.8	130	09.6	-22	-57.8	104	59.2	-22	27.7
1	46	09.8	180	47.4		03.2	214	36.8	-4	00.4	145	11.6		-57.8	120	01.6		27.7
2	61	12.2	195	46.8		04.2	229	37.8		01.1	160	13.5		-57.9	135	03.9		27.6
3	76	14.7	210	46.1		05.2	244	38.8		01.7	175	15.5		-57.9	150	06.2		27.6
4	91	17.2	225	45.5		06.1	259	39.7		02.4	190	17.5		-57.9	165	08.5		27.6
5	106	19.6	240	44.9	-17	07.1	274	40.7	-4	03.0	205	19.5	-22	-58.0	180	10.8	-22	27.6
6	121	22.1	255	44.3	-17	08.1	289	41.7	-4	03.7	220	21.5	-22	-58.0	195	13.1	-22	27.6
7	136	24.6	270	43.6		09.0	304	42.7		04.3	235	23.4		-58.0	210	15.5		27.6
8	151	27.0	285	43.0		10.0	319	43.6		04.9	250	25.4		-58.1	225	17.8		27.6
9	166	29.5	300	42.4		11.0	334	44.6		05.6	265	27.4		-58.1	240	20.1		27.6
10	181	32.0	315	41.7		11.9	349	45.6		06.2	280	29.4		-58.1	255	22.4		27.6
11	196	34.4	330	41.1	-17	12.9	4	46.5	-4	06.9	295	31.4	-22	-58.2	270	24.7	-22	27.5
12	211	36.9	345	40.5	-17	13.9	19	47.5	-4	07.5	310	33.3	-22	-58.2	285	27.0	-22	27.5
13	226	39.3	0	39.9		14.8	34	48.5		08.2	325	35.3		-58.2	300	29.3		27.5
14	241	41.8	15	39.2		15.8	49	49.5		08.8	340	37.3		-58.3	315	31.7		27.5
15	256	44.3	30	38.6		16.7	64	50.4		09.5	355	39.3		-58.3	330	34.0		27.5
16	271	46.7	45	38.0		17.7	79	51.4		10.1	10	41.2		-58.3	345	36.3		27.5
17	286	49.2	60	37.3	-17	18.7	94	52.4	-4	10.7	25	43.2	-22	-58.4	0	38.6	-22	27.5
18	301	51.7	75	36.7	-17	19.6	109	53.3	-4	11.4	40	45.2	-22	-58.4	15	40.9	-22	27.5
19	316	54.1	90	36.0		20.6	124	54.3		12.0	55	47.2		-58.4	30	43.2		27.4
20	331	56.6	105	35.4		21.5	139	55.3		12.7	70	49.2		-58.5	45	45.5		27.4
21	346	59.1	120	34.8		22.5	154	56.3		13.3	85	51.1		-58.5	60	47.8		27.4
22	2	01.5	135	34.1		23.4	169	57.2		14.0	100	53.1		-58.5	75	50.2		27.4
23	17	04.0	150	33.5		24.4	184	58.2		14.6	115	55.1		-58.6	90	52.5		27.4
24	32	06.5	165	32.9	-17	25.3	199	59.2	-4	15.2	130	57.1	-22	-58.6	105	54.8	-22	27.4
Dif.	—		-6		-10		+10		-6		+20		0		+23		0	

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 44 ^m 2				SD: 16'3 Edad: 25 ^d 2 PHE { 4 ^h : 60'1 12 ^h : 60'2 20 ^h : 60'4 PMG: 08 ^h 35 ^m Rº: 54 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº					
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	55.9	-11	34.1	235	57.7	79	+14	10.9	114	60 N	5 29	6 17	7 01	0 36	97	16 08	13
1	198	56.0		34.9	250	24.6	80	+13	59.5	115	58	28	14	6 55	45	93	16 02	16
2	213	56.1		35.8	264	51.6	80		48.0	116	56	27	11	49	52	90	15 57	18
3	228	56.2		36.7	279	18.6	80		36.4	117	54	26	08	44	0 59	87	52	21
4	243	56.2		37.5	293	45.6	80		24.7	118	52	26	05	40	1 05	85	47	24
5	258	56.3	-11	38.4	308	12.6	81	+13	12.9	118	50	5 25	6 03	6 36	1 11	82	15 43	26
6	273	56.4	-11	39.3	322	39.7	81	+13	01.1	120	45	5 23	5 57	6 27	1 23	77	15 34	30
7	288	56.5		40.2	337	06.8	81	+12	49.1	120	40	20	52	20	33	73	27	34
8	303	56.6		41.0	351	33.9	82		37.1	122	35	18	47	13	41	70	21	37
9	318	56.7		41.9	6	01.1	82		24.9	122	30	15	43	6 08	1 48	68	15	40
10	333	56.7		42.8	20	28.3	82		12.7	123	20	10	35	5 58	2 01	62	15 05	45
11	348	56.8	-11	43.6	34	55.5	83	+12	00.4	124	10 N	5 03	5 28	5 49	2 12	58	14 56	50
12	3	56.9	-11	44.5	49	22.8	83	+11	48.0	125	0	4 55	5 20	5 41	2 22	54	14 48	54
13	18	57.0		45.4	63	50.1	83		35.5	125	10 S	46	11	32	32	51	40	57
14	33	57.1		46.3	78	17.4	83		23.0	126	20	34	5 01	23	43	46	31	62
15	48	57.1		47.1	92	44.7	84	+11	10.4	127	30	19	4 48	13	2 56	41	20	68
16	63	57.2		48.0	107	12.1	84	+10	57.7	128	35	4 09	41	07	3 03	38	14	71
17	78	57.3	-11	48.9	121	39.5	84	+10	44.9	129	40	3 57	4 32	5 00	3 11	35	14 07	74
18	93	57.4	-11	49.7	136	06.9	84	+10	32.0	129	45	3 43	4 21	4 52	3 20	32	13 59	78
19	108	57.5		50.6	150	34.3	85		19.1	130	50	24	07	42	32	26	50	83
20	123	57.5		51.5	165	01.8	85	+10	06.1	130	52	15	4 01	37	37	25	45	85
21	138	57.6		52.3	179	29.3	85	+9	53.1	132	54	3 04	3 53	32	42	23	40	88
22	153	57.7		53.2	193	56.8	86		39.9	132	56	2 52	45	27	49	20	35	90
23	168	57.8		54.1	208	24.4	86		26.7	132	58	37	36	20	3 56	17	13 28	94
24	183	57.8	-11	54.9	222	52.0		+9	13.5		60 S	2 19	3 25	4 13	4 04	13	13 21	98
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 48 ^m 0		Mag: -3.8 PMG: 12 ^h 58 ^m				Mag: +1.8 PMG: 10 ^h 39 ^m				Mag: -1.9 PMG: 15 ^h 14 ^m				Mag: +0.5 PMG: 16 ^h 54 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	32	06.5	165	32.9	-17	25.3	199	59.2	-4	15.2	130	57.1	-22	58.6	105	54.8	-22	27.4
1	47	08.9	180	32.2		26.3	215	00.1		15.9	145	59.0		58.6	120	57.1		27.4
2	62	11.4	195	31.6		27.2	230	01.1		16.5	161	01.0		58.7	135	59.4		27.4
3	77	13.8	210	31.0		28.2	245	02.1		17.2	176	03.0		58.7	151	01.7		27.4
4	92	16.3	225	30.3		29.1	260	03.0		17.8	191	05.0		58.7	166	04.0		27.3
5	107	18.8	240	29.7	-17	30.1	275	04.0	-4	18.5	206	06.9	-22	58.8	181	06.3	-22	27.3
6	122	21.2	255	29.0	-17	31.0	290	05.0	-4	19.1	221	08.9	-22	58.8	196	08.7	-22	27.3
7	137	23.7	270	28.4		32.0	305	05.9		19.7	236	10.9		58.8	211	11.0		27.3
8	152	26.2	285	27.7		32.9	320	06.9		20.4	251	12.9		58.9	226	13.3		27.3
9	167	28.6	300	27.1		33.9	335	07.9		21.0	266	14.8		58.9	241	15.6		27.3
10	182	31.1	315	26.5		34.8	350	08.9		21.7	281	16.8		58.9	256	17.9		27.3
11	197	33.6	330	25.8	-17	35.8	5	09.8	-4	22.3	296	18.8	-22	59.0	271	20.2	-22	27.3
12	212	36.0	345	25.2	-17	36.7	20	10.8	-4	23.0	311	20.8	-22	59.0	286	22.5	-22	27.2
13	227	38.5	0	24.5		37.7	35	11.8		23.6	326	22.7		59.0	301	24.8		27.2
14	242	40.9	15	23.9		38.6	50	12.7		24.2	341	24.7		59.1	316	27.1		27.2
15	257	43.4	30	23.2		39.5	65	13.7		24.9	356	26.7		59.1	331	29.4		27.2
16	272	45.9	45	22.6		40.5	80	14.7		25.5	11	28.7		59.1	346	31.8		27.2
17	287	48.3	60	21.9	-17	41.4	95	15.6	-4	26.2	26	30.6	-22	59.2	1	34.1	-22	27.2
18	302	50.8	75	21.3	-17	42.4	110	16.6	-4	26.8	41	32.6	-22	59.2	16	36.4	-22	27.2
19	317	53.3	90	20.7		43.3	125	17.6		27.5	56	34.6		59.2	31	38.7		27.2
20	332	55.7	105	20.0		44.2	140	18.5		28.1	71	36.5		59.3	46	41.0		27.1
21	347	58.2	120	19.4		45.2	155	19.5		28.7	86	38.5		59.3	61	43.3		27.1
22	3	00.7	135	18.7		46.1	170	20.5		29.4	101	40.5		59.3	76	45.6		27.1
23	18	03.1	150	18.1		47.0	185	21.5		30.0	116	42.5		59.4	91	47.9		27.1
24	33	05.6	165	17.4	-17	48.0	200	22.4	-4	30.7	131	44.4	-22	59.4	106	50.2	-22	27.1
Dif.	—		-6		-9		+10		-6		+20		0		+23			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'1			PHE { 4 ^h : 60'5 12 ^h : 60'6 20 ^h : 60'6														
	PMG: 11 ^h 44 ^m 1			Edad: 26 ^d 2														
	PMG: 09 ^h 29 ^m			Rº: 53 ^m														
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	57.8	-11	54.9	222	52.0	86	+9	13.5	134	60 N	16 24	17 07	17 56	2 13	98	16 21	10
1	198	57.9		55.8	237	19.6	86	+9	00.1	134	58	30	11	57	18 94		18 14	
2	213	58.0		56.7	251	47.2	87	+8	46.7	134	56	36	15	58	22 91		15 17	
3	228	58.1		57.5	266	14.9	86		33.3	135	54	41	18	17 59	26 88		13 19	
4	243	58.1		58.4	280	42.5	87		19.8	136	52	46	21	18 00	30 86		11 21	
5	258	58.2	-11	59.2	295	10.2	87	+8	06.2	136	50	16 50	17 23	18 01	2 33	84	16 09	24
6	273	58.3	-12	00.1	309	37.9	88	+7	52.6	137	45	16 59	17 29	18 04	2 40	79	16 04	29
7	288	58.4		01.0	324	05.7	87		38.9	137	40	17 07	35	06	46 74		16 01	32
8	303	58.4		01.8	338	33.4	88		25.2	138	35	14	39	09	51 71		15 58	35
9	318	58.5		02.7	353	01.2	88	+7	11.4	139	30	19	44	12	2 56	67	55 39	
10	333	58.6		03.6	7	29.0	88	+6	57.5	138	20	30	17 52	18	3 03	63	50 44	
11	348	58.7	-12	04.4	21	56.8	89	+6	43.7	140	10 N	17 39	18 00	18 25	3 10	58	15 46	48
12	3	58.7	-12	05.3	36	24.7	88	+6	29.7	139	0	17 47	18 09	18 33	3 16	54	15 42	53
13	18	58.8		06.1	50	52.5	89		15.8	141	10 S	17 56	18	43	23 48		37 58	
14	33	58.9		07.0	65	20.4	89	+6	01.7	140	20	18 06	28	18 55	29 45		33 62	
15	48	59.0		07.9	79	48.3	89	+5	47.7	141	30	17	42	19 11	37 39		28 67	
16	63	59.0		08.7	94	16.2	89		33.6	141	35	23	50	21	41 36		25 70	
17	78	59.1	-12	09.6	108	44.1	90	+5	19.5	142	40	18 30	18 59	19 33	3 46	33	15 21	75
18	93	59.2	-12	10.5	123	12.1	89	+5	05.3	142	45	18 39	19 10	19 49	3 52	29	15 17	79
19	108	59.2		11.3	137	40.0	90	+4	51.1	143	50	49	24	20 08	3 58	25	13 83	
20	123	59.3		12.2	152	08.0	90		36.8	143	52	54	31	18	4 02	22	10 86	
21	138	59.4		13.0	166	36.0	90		22.5	143	54	18 59	39	29	05 20		08 88	
22	153	59.4		13.9	181	04.0	90	+4	08.2	143	56	19 05	47	42	09 17		05 91	
23	168	59.5		14.7	195	32.0	90	+3	53.9	144	58	12	19 57	20 58	13 14		15 02	94
24	183	59.6	-12	15.6	210	00.0		+3	39.5		60 S	19 19	20 08	21 17	4 17	12	14 59	97
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 44 ^m 1		Mag: -3.8 PMG: 12 ^h 59 ^m				Mag: +1.8 PMG: 10 ^h 38 ^m				Mag: -1.9 PMG: 15 ^h 11 ^m				Mag: +0.5 PMG: 16 ^h 50 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	33	05.6	165	17.4	-17	48.0	200	22.4	-4	30.7	131	44.4	-22	-59.4	106	50.2	-22	27.1
1	48	08.1	180	16.8		48.9	215	23.4		31.3	146	46.4		-59.4	121	52.5		27.1
2	63	10.5	195	16.1		49.8	230	24.4		32.0	161	48.4		-59.5	136	54.8		27.1
3	78	13.0	210	15.5		50.8	245	25.3		32.6	176	50.4		-59.5	151	57.2		27.1
4	93	15.4	225	14.8		51.7	260	26.3		33.2	191	52.3		-59.5	166	59.5		27.1
5	108	17.9	240	14.1	-17	52.6	275	27.3	-4	33.9	206	54.3	-22	-59.5	182	01.8	-22	27.0
6	123	20.4	255	13.5	-17	53.6	290	28.2	-4	34.5	221	56.3	-22	-59.6	197	04.1	-22	27.0
7	138	22.8	270	12.8		54.5	305	29.2		35.2	236	58.2		-59.6	212	06.4		27.0
8	153	25.3	285	12.2		55.4	320	30.2		35.8	252	00.2		-59.6	227	08.7		27.0
9	168	27.8	300	11.5		56.3	335	31.1		36.4	267	02.2		-59.7	242	11.0		27.0
10	183	30.2	315	10.9		57.3	350	32.1		37.1	282	04.1		-59.7	257	13.3		27.0
11	198	32.7	330	10.2	-17	58.2	5	33.1	-4	37.7	297	06.1	-22	-59.7	272	15.6	-22	27.0
12	213	35.2	345	09.6	-17	59.1	20	34.0	-4	38.4	312	08.1	-22	-59.8	287	17.9	-22	27.0
13	228	37.6	0	08.9	-18	00.0	35	35.0		39.0	327	10.1		-59.8	302	20.2		26.9
14	243	40.1	15	08.2		01.0	50	36.0		39.7	342	12.0		-59.8	317	22.5		26.9
15	258	42.6	30	07.6		01.9	65	36.9		40.3	357	14.0		-59.9	332	24.8		26.9
16	273	45.0	45	06.9		02.8	80	37.9		40.9	12	16.0		-59.9	347	27.1		26.9
17	288	47.5	60	06.3	-18	03.7	95	38.9	-4	41.6	27	17.9	-22	-59.9	2	29.4	-22	26.9
18	303	49.9	75	05.6	-18	04.7	110	39.8	-4	42.2	42	19.9	-23	00.0	17	31.8	-22	26.9
19	318	52.4	90	04.9		05.6	125	40.8		42.9	57	21.9		00.0	32	34.1		26.9
20	333	54.9	105	04.3		06.5	140	41.8		43.5	72	23.8		00.0	47	36.4		26.8
21	348	57.3	120	03.6		07.4	155	42.7		44.1	87	25.8		-00.1	62	38.7		26.8
22	3	59.8	135	03.0		08.3	170	43.7		44.8	102	27.8		-00.1	77	41.0		26.8
23	19	02.3	150	02.3		09.2	185	44.7		45.4	117	29.7		-00.1	92	43.3		26.8
24	34	04.7	165	01.6	-18	10.2	200	45.6	-4	46.1	132	31.7	-23	-00.2	107	45.6	-22	26.8
Dif.	—		-7		-9		+10		-6		+20		0		+23			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 11 ^h 44 ^m 0				SD: 16'5 Edad: 27 ^d 2 PHE { 4 ^h : 60'7 12 ^h : 60'7 20 ^h : 60'7 PMG: 10 ^h 22 ^m Rº: 53 ^m														
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº	Hora	Rº						
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m			
0	183	59.6	-12	15.6	210	00.0	90	+3 39.5	143	60 N	5 33	6 22	7 06	3 51	97	16 31	11		
1	198	59.7		16.5	224	28.0	91		25.2	145	58	32	18	6 59	52	94	32	14	
2	213	59.7		17.3	238	56.1	90	+3	10.7	144	56	31	15	53	53	91	32	17	
3	228	59.8		18.2	253	24.1	91	+2	56.3	144	54	30	11	48	54	89	32	20	
4	243	59.9		19.0	267	52.2	91		41.9	145	52	29	08	43	56	85	32	22	
5	258	59.9	-12	19.9	282	20.3	90	+2	27.4	145	50	5 28	6 06	6 39	3 57	83	16 33	23	
6	274	00.0	-12	20.7	296	48.3	91	+2	12.9	145	45	5 25	5 59	6 30	3 59	78	16 33	28	
7	289	00.1		21.6	311	16.4	91	+1	58.4	145	40	22	54	22	4 00	75	33	33	
8	304	00.1		22.5	325	44.5	91		43.9	146	35	20	49	15	02	71	33	36	
9	319	00.2		23.3	340	12.6	91		29.3	145	30	17	45	6 09	03	68	34	38	
10	334	00.3		24.2	354	40.7	91		14.8	146	20	10	36	5 59	06	62	34	44	
11	349	00.3	-12	25.0	9	08.8	91	+1	00.2	145	10 N	5 03	5 28	5 49	4 08	57	16 34	49	
12	4	00.4	-12	25.9	23	36.9	91	+0	45.7	146	0	4 55	5 19	5 41	4 10	52	16 35	53	
13	19	00.5		26.7	38	05.0	91		31.1	146	10 S	45	5 10	32	11	49	35	57	
14	34	00.5		27.6	52	33.1	91		16.5	145	20	33	4 59	22	14	43	35	62	
15	49	00.6		28.4	67	01.2	91	+0	02.0	146	30	17	46	11	16	39	35	68	
16	64	00.6		29.3	81	29.3	92	-0	12.6	146	35	4 07	38	5 05	17	36	35	71	
17	79	00.7	-12	30.1	95	57.5	91	-0	27.2	145	40	3 54	4 29	4 57	4 19	32	16 36	74	
18	94	00.8	-12	31.0	110	25.6	91	-0	41.7	146	45	3 39	4 17	4 49	4 21	28	16 36	78	
19	109	00.8		31.8	124	53.7	91	-0	56.3	145	50	19	4 03	38	23	24	36	83	
20	124	00.9		32.7	139	21.8	91	-1	10.8	146	52	3 09	3 56	33	24	21	36	86	
21	139	01.0		33.5	153	49.9	91		25.4	145	54	2 58	49	28	25	19	36	88	
22	154	01.0		34.4	168	18.0	91		39.9	146	56	45	40	22	26	17	36	91	
23	169	01.1		35.2	182	46.1	91	-1	54.5	145	58	30	30	15	4 27	14	16 36	94	
24	184	01.1	-12	36.1	197	14.2		-2	09.0		60 S	2 10	3 19	4 08	4 29	11	16 36	98	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 21 ^h 40 ^m 1		Mag: -3.8 PMG: 13 ^h 00 ^m			Mag: +1.8 PMG: 10 ^h 36 ^m			Mag: -1.9 PMG: 15 ^h 08 ^m			Mag: +0.6 PMG: 16 ^h 46 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	34	04.7	165	01.6	-18	10.2	200	45.6	-4	46.1	132	31.7	-23	00.2	107	45.6	-22	26.8	
1	49	07.2	180	01.0		11.1	215	46.6		46.7	147	33.7		00.2	122	47.9		26.8	
2	64	09.7	195	00.3		12.0	230	47.6		47.4	162	35.6		00.2	137	50.2		26.8	
3	79	12.1	209	59.6		12.9	245	48.5		48.0	177	37.6		00.3	152	52.5		26.8	
4	94	14.6	224	59.0		13.8	260	49.5		48.6	192	39.6		00.3	167	54.8		26.7	
5	109	17.0	239	58.3	-18	14.7	275	50.5	-4	49.3	207	41.5	-23	00.3	182	57.1	-22	26.7	
6	124	19.5	254	57.6	-18	15.6	290	51.4	-4	49.9	222	43.5	-23	00.3	197	59.4	-22	26.7	
7	139	22.0	269	57.0		16.5	305	52.4		50.6	237	45.5		00.4	213	01.7		26.7	
8	154	24.4	284	56.3		17.4	320	53.4		51.2	252	47.4		00.4	228	04.0		26.7	
9	169	26.9	299	55.6		18.3	335	54.3		51.8	267	49.4		00.4	243	06.3		26.7	
10	184	29.4	314	55.0		19.3	350	55.3		52.5	282	51.4		00.5	258	08.6		26.7	
11	199	31.8	329	54.3	-18	20.2	5	56.3	-4	53.1	297	53.3	-23	00.5	273	10.9	-22	26.7	
12	214	34.3	344	53.6	-18	21.1	20	57.2	-4	53.8	312	55.3	-23	00.5	288	13.2	-22	26.6	
13	229	36.8	359	53.0		22.0	35	58.2		54.4	327	57.3		00.6	303	15.5		26.6	
14	244	39.2	14	52.3		22.9	50	59.2		55.0	342	59.2		00.6	318	17.8		26.6	
15	259	41.7	29	51.6		23.8	66	00.1		55.7	358	01.2		00.6	333	20.1		26.6	
16	274	44.2	44	51.0		24.7	81	01.1		56.3	13	03.2		00.7	348	22.4		26.6	
17	289	46.6	59	50.3	-18	25.6	96	02.0	-4	57.0	28	05.1	-23	00.7	3	24.7	-22	26.6	
18	304	49.1	74	49.6	-18	26.5	111	03.0	-4	57.6	43	07.1	-23	00.7	18	27.0	-22	26.6	
19	319	51.5	89	48.9		27.4	126	04.0		58.2	58	09.1		00.8	33	29.3		26.6	
20	334	54.0	104	48.3		28.3	141	04.9		58.9	73	11.0		00.8	48	31.6		26.5	
21	349	56.5	119	47.6		29.2	156	05.9	-4	59.5	88	13.0		00.8	63	33.9		26.5	
22	4	58.9	134	46.9		30.1	171	06.9	-5	00.2	103	14.9		00.9	78	36.2		26.5	
23	20	01.4	149	46.2		31.0	186	07.8		00.8	118	16.9		00.9	93	38.5		26.5	
24	35	03.9	164	45.6	-18	31.9	201	08.8	-5	01.4	133	18.9	-23	00.9	108	40.8	-22	26.5	
Dif.	—		-7			-9	+10			-6	+20			0			+23		

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 9				SD: 16'5 Edad: 28 ^d 2		PHE { 4 ^h : 60'6 12 ^h : 60'5 20 ^h : 60'4		Rº: 53 ^m									
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.					
	h	°	'	°	'	h	°	'	°	'			°	'	h	m	h	m
0	184	01.1	-12	36.1	197	14.2	91	-2	09.0	145	60 N	16 18	17 02	17 51	5 28	98	16 42	13
1	199	01.2		36.9	211	42.3	91		23.5	144	58	25	06	52	26	94	46	15
2	214	01.3		37.8	226	10.4	91		37.9	145	56	31	10	54	24	91	49	18
3	229	01.3		38.6	240	38.5	90	-2	52.4	144	54	37	14	55	23	88	52	21
4	244	01.4		39.5	255	06.5	91	-3	06.8	145	52	42	17	56	21	86	54	24
5	259	01.4	-12	40.3	269	34.6	91	-3	21.3	144	50	16 46	17 20	17 58	5 20	83	16 56	26
6	274	01.5	-12	41.2	284	02.7	90	-3	35.7	143	45	16 56	17 26	18 01	5 17	78	17 01	31
7	289	01.6		42.0	298	30.7	91	-3	50.0	144	40	17 04	32	04	15	74	06	34
8	304	01.6		42.9	312	58.8	90	-4	04.4	143	35	11	37	07	13	70	09	37
9	319	01.7		43.7	327	26.8	90		18.7	143	30	18	42	10	11	67	12	41
10	334	01.7		44.6	341	54.8	90		33.0	142	20	28	17 51	17	08	62	18	45
11	349	01.8	-12	45.4	356	22.8	90	-4	47.2	143	10 N	17 38	18 00	18 24	5 05	57	17 23	49
12	4	01.9	-12	46.3	10	50.8	90	-5	01.5	141	0	17 47	18 08	18 33	5 02	54	17 28	53
13	19	01.9		47.1	25	18.8	90		15.6	142	10 S	17 57	18	43	5 00	49	32	58
14	34	02.0		48.0	39	46.8	89		29.8	141	20	18 07	29	18 56	4 57	45	37	62
15	49	02.0		48.8	54	14.7	90		43.9	141	30	18	43	19 13	55	39	43	67
16	64	02.1		49.7	68	42.7	89	-5	58.0	140	35	25	18 51	23	53	36	46	70
17	79	02.1	-12	50.5	83	10.6	89	-6	12.0	140	40	18 33	19 01	19 36	4 51	33	17 50	74
18	94	02.2	-12	51.3	97	38.5	90	-6	26.0	139	45	18 42	19 13	19 52	4 49	29	17 54	78
19	109	02.2		52.2	112	06.5	88		39.9	139	50	53	28	20 13	47	24	17 59	83
20	124	02.3		53.0	126	34.3	89	-6	53.8	139	52	18 58	35	23	45	23	18 02	85
21	139	02.4		53.9	141	02.2	89	-7	07.7	138	54	19 03	43	35	44	20	04	88
22	154	02.4		54.7	155	30.1	88		21.5	137	56	10	19 52	20 48	43	17	07	90
23	169	02.5		55.6	169	57.9	88		35.2	137	58	17	20 02	21 05	41	15	10	94
24	184	02.5	-12	56.4	184	25.7		-7	48.9		60 S	19 25	20 14	21 26	4 40	11	18 14	97
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 36 ^m 2		Mag: -3.8 PMG: 13 ^h 02 ^m				Mag: +1.8 PMG: 10 ^h 35 ^m				Mag: -1.9 PMG: 15 ^h 05 ^m				Mag: +0.6 PMG: 16 ^h 43 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	35	03.9	164	45.6	-18	31.9	201	08.8	-5	01.4	133	18.9	-23	-00.9	108	40.8	-22	26.5
1	50	06.3	179	44.9		32.7	216	09.8		02.1	148	20.8		-01.0	123	43.1		26.5
2	65	08.8	194	44.2		33.6	231	10.7		02.7	163	22.8		-01.0	138	45.5		26.5
3	80	11.3	209	43.5		34.5	246	11.7		03.4	178	24.8		-01.0	153	47.8		26.4
4	95	13.7	224	42.8		35.4	261	12.7		04.0	193	26.7		-01.0	168	50.1		26.4
5	110	16.2	239	42.2	-18	36.3	276	13.6	-5	04.6	208	28.7	-23	-01.1	183	52.4	-22	26.4
6	125	18.6	254	41.5	-18	37.2	291	14.6	-5	05.3	223	30.7	-23	-01.1	198	54.7	-22	26.4
7	140	21.1	269	40.8		38.1	306	15.6		05.9	238	32.6		-01.1	213	57.0		26.4
8	155	23.6	284	40.1		39.0	321	16.5		06.6	253	34.6		-01.2	228	59.3		26.4
9	170	26.0	299	39.4		39.9	336	17.5		07.2	268	36.5		-01.2	244	01.5		26.4
10	185	28.5	314	38.8		40.7	351	18.4		07.8	283	38.5		-01.2	259	03.8		26.4
11	200	31.0	329	38.1	-18	41.6	6	19.4	-5	08.5	298	40.5	-23	-01.3	274	06.1	-22	26.3
12	215	33.4	344	37.4	-18	42.5	21	20.4	-5	09.1	313	42.4	-23	-01.3	289	08.4	-22	26.3
13	230	35.9	359	36.7		43.4	36	21.3		09.8	328	44.4		-01.3	304	10.7		26.3
14	245	38.4	14	36.0		44.3	51	22.3		10.4	343	46.3		-01.4	319	13.0		26.3
15	260	40.8	29	35.3		45.2	66	23.3		11.0	358	48.3		-01.4	334	15.3		26.3
16	275	43.3	44	34.7		46.0	81	24.2		11.7	13	50.3		-01.4	349	17.6		26.3
17	290	45.8	59	34.0	-18	46.9	96	25.2	-5	12.3	28	52.2	-23	-01.5	4	19.9	-22	26.3
18	305	48.2	74	33.3	-18	47.8	111	26.1	-5	13.0	43	54.2	-23	-01.5	19	22.2	-22	26.2
19	320	50.7	89	32.6		48.7	126	27.1		13.6	58	56.1		-01.5	34	24.5		26.2
20	335	53.1	104	31.9		49.6	141	28.1		14.2	73	58.1		-01.5	49	26.8		26.2
21	350	55.6	119	31.2		50.4	156	29.0		14.9	89	00.1		-01.6	64	29.1		26.2
22	5	58.1	134	30.5		51.3	171	30.0		15.5	104	02.0		-01.6	79	31.4		26.2
23	21	00.5	149	29.9		52.2	186	31.0		16.2	119	04.0		-01.6	94	33.7		26.2
24	36	03.0	164	29.2	-18	53.1	201	31.9	-5	16.8	134	05.9	-23	-01.7	109	36.0	-22	26.2
Dif.	—		-7		-9		+10		-6		+20		0		+23			

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 43 ^m 8				SD: 16'4 Edad: 29 ^d 2 PMG: 12 ^h 08 ^m PHE 4^h: 60'3 12^h: 60'1 20^h: 59'9 Rº: 55^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº					
h 0	184 02.5	-12 56.4	184 25.7	88 -7 48.9 136	60 N	5 38	6 27	7 11	7 06 96	16 55 15								
1	199 02.6	57.2	198 53.5	88 -8 02.5 136	58	36 22	7 04	7 00 93	17 01 19									
2	214 02.6	58.1	213 21.3	88 16.1 135	56	35 19	6 58	6 55 90	07 22									
3	229 02.7	58.9	227 49.1	87 29.6 135	54	34 15	52	51 86	13 24									
4	244 02.7	-12 59.8	242 16.8	88 43.1 134	52	32 12	47	47 84	18 26									
5	259 02.8	-13 00.6	256 44.6	87 -8 56.5 134	50	5 31	6 09	6 43 82	17 22 29									
6	274 02.8	-13 01.4	271 12.3	87 -9 09.9 132	45	5 28	6 02	6 35 77	17 32 33									
7	289 02.9	02.3	285 40.0	86 23.1 132	40	24 5 56	24	29 73	40 37									
8	304 02.9	03.1	300 07.6	87 36.3 132	35	21 51	17	23 70	46 40									
9	319 03.0	04.0	314 35.3	86 -9 49.5 131	30	18 46	6 11	18 67	17 53 42									
10	334 03.0	04.8	329 02.9	86 -10 02.6 130	20	11 37	5 59	10 62	18 03 47									
11	349 03.1	-13 05.6	343 30.5	86 -10 15.6 129	10 N	5 03	5 28	5 50	6 02 58	18 12 51								
12	4 03.1	-13 06.5	357 58.1	86 -10 28.5 129	0	4 55	5 19	5 40	5 56 54	18 21 55								
13	19 03.2	07.3	12 25.7	85 41.4 128	10 S	44 5 09	31	49 50	30 58									
14	34 03.2	08.1	26 53.2	85 -10 54.2 127	20	31 4 58	21	42 46	39 63									
15	49 03.3	09.0	41 20.7	85 -11 06.9 126	30	15 44	09	34 41	50 67									
16	64 03.3	09.8	55 48.2	85 19.5 126	35	4 04	36	5 02	29 39	18 56 70								
17	79 03.4	-13 10.7	70 15.7	85 -11 32.1 125	40	3 51	4 26	4 55	5 24 35	19 04 72								
18	94 03.4	-13 11.5	84 43.2	84 -11 44.6 124	45	3 35	4 14	4 45	5 18 32	19 12 76								
19	109 03.5	12.3	99 10.6	84 -11 57.0 123	50	14 3 59	34	11 27	22 81									
20	124 03.5	13.2	113 38.0	84 -12 09.3 122	52	3 04	52	29	08 25	27 82								
21	139 03.6	14.0	128 05.4	83 21.5 121	54	2 52	44	24	04 23	32 85								
22	154 03.6	14.8	142 32.7	84 33.6 121	56	39 35	17	5 00 20	37 89									
23	169 03.7	15.7	157 00.1	83 45.7 120	58	22 24	10	4 56 17	19 44 91									
24	184 03.7	-13 16.5	171 27.4	-12 57.7	60 S	2 01	3 12	4 02	4 51 14	19 51 95								
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 32 ^m 3		Mag: -3.8 PMG: 13 ^h 03 ^m			Mag: +1.8 PMG: 10 ^h 33 ^m			Mag: -1.9 PMG: 15 ^h 02 ^m			Mag: +0.6 PMG: 16 ^h 39 ^m						
	hG ♈	dec.	hG ♀	dec.	hG ♂	dec.	hG ♃	dec.	hG ♄	dec.								
h 0	36 03.0	164 29.2	-18 53.1	201 31.9	-5 16.8	134 05.9	-23 01.7	109 36.0	-22 26.2									
1	51 05.5	179 28.5	53.9	216 32.9	17.4	149 07.9	01.7	124 38.3	26.1									
2	66 07.9	194 27.8	54.8	231 33.8	18.1	164 09.9	01.7	139 40.6	26.1									
3	81 10.4	209 27.1	55.7	246 34.8	18.7	179 11.8	01.8	154 42.9	26.1									
4	96 12.9	224 26.4	56.5	261 35.8	19.4	194 13.8	01.8	169 45.2	26.1									
5	111 15.3	239 25.7	-18 57.4	276 36.7	-5 20.0	209 15.7	-23 01.8	184 47.5	-22 26.1									
6	126 17.8	254 25.0	-18 58.3	291 37.7	-5 20.6	224 17.7	-23 01.9	199 49.8	-22 26.1									
7	141 20.2	269 24.3	-18 59.2	306 38.7	21.3	239 19.7	01.9	214 52.1	26.1									
8	156 22.7	284 23.6	-19 00.0	321 39.6	21.9	254 21.6	01.9	229 54.4	26.0									
9	171 25.2	299 22.9	00.9	336 40.6	22.5	269 23.6	01.9	244 56.7	26.0									
10	186 27.6	314 22.2	01.7	351 41.5	23.2	284 25.5	02.0	259 59.0	26.0									
11	201 30.1	329 21.5	-19 02.6	6 42.5	-5 23.8	299 27.5	-23 02.0	275 01.3	-22 26.0									
12	216 32.6	344 20.8	-19 03.5	21 43.5	-5 24.5	314 29.4	-23 02.0	290 03.6	-22 26.0									
13	231 35.0	359 20.2	04.3	36 44.4	25.1	329 31.4	02.1	305 05.9	26.0									
14	246 37.5	14 19.5	05.2	51 45.4	25.7	344 33.4	02.1	320 08.2	26.0									
15	261 40.0	29 18.8	06.1	66 46.3	26.4	359 35.3	02.1	335 10.5	26.0									
16	276 42.4	44 18.1	06.9	81 47.3	27.0	14 37.3	02.2	350 12.8	25.9									
17	291 44.9	59 17.4	-19 07.8	96 48.3	-5 27.6	29 39.2	-23 02.2	5 15.1	-22 25.9									
18	306 47.4	74 16.7	-19 08.6	111 49.2	-5 28.3	44 41.2	-23 02.2	20 17.3	-22 25.9									
19	321 49.8	89 16.0	09.5	126 50.2	28.9	59 43.1	02.3	35 19.6	25.9									
20	336 52.3	104 15.3	10.4	141 51.2	29.6	74 45.1	02.3	50 21.9	25.9									
21	351 54.7	119 14.6	11.2	156 52.1	30.2	89 47.1	02.3	65 24.2	25.9									
22	6 57.2	134 13.9	12.1	171 53.1	30.8	104 49.0	02.3	80 26.5	25.9									
23	21 59.7	149 13.2	12.9	186 54.0	31.5	119 51.0	02.4	95 28.8	25.8									
24	37 02.1	164 12.5	-19 13.8	201 55.0	-5 32.1	134 52.9	-23 02.4	110 31.1	-22 25.8									
Dif.	—	-7	-9	+10	-6	+20	0	+23										

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna							
	SD: 16'1				SD: 16'3 Edad: 0 ^d 8						PHE { 4 ^h : 59'7 12 ^h : 59'5 20 ^h : 59'2													
	PMG: 11 ^h 43 ^m 7				PMG: 13 ^h 03 ^m						Rº: 55 ^m													
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.		Civil	Náut.	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'		°	'		°	h	m	h	m	h	m	m	h	m	m			
0	184	03.7	-13	16.5	171	27.4	83	-12	57.7	119	60 N	16	13	16	57	17	46		8	42	93	17	10	21
1	199	03.7		17.3	185	54.7	82	-13	09.6	117	58	20		17	02		48		33	89		20	25	
2	214	03.8		18.2	200	21.9	83		21.3	117	56	27		06		50		25	86		29	28		
3	229	03.8		19.0	214	49.2	82		33.0	117	54	33		10		51		17	84		37	30		
4	244	03.9		19.8	229	16.4	82		44.7	115	52	38		13		53		11	81		44	33		
5	259	03.9	-13	20.7	243	43.6	82	-13	56.2	114	50	16	43	17	16	17	54	8	05	79	17	51	34	
6	274	04.0	-13	21.5	258	10.8	81	-14	07.6	113	45	16	53	17	23	17	58	7	52	75	18	05	38	
7	289	04.0		22.3	272	37.9	82		18.9	112	40	17	02		30	18	01		42	71		17	41	
8	304	04.1		23.2	287	05.1	81		30.1	111	35		09		35		05		33	68		26	44	
9	319	04.1		24.0	301	32.2	81		41.2	111	30		16		40		09		25	66		35	46	
10	334	04.1		24.8	315	59.3	80	-14	52.3	109	20		27		50		16		12	62		18	50	
11	349	04.2	-13	25.6	330	26.3	81	-15	03.2	108	10 N	17	37	17	59	18	24	7	00	59		19	03	53
12	4	04.2	-13	26.5	344	53.4	80	-15	14.0	107	0	17	47	18	08	18	33	6	50	55		19	16	55
13	19	04.3		27.3	359	20.4	80		24.7	106	10 S	17	57		19		44		39	52		28	59	
14	34	04.3		28.1	13	47.4	79		35.3	105	20	18	07		30	18	57		28	48		42	61	
15	49	04.4		29.0	28	14.3	80		45.8	104	30		20		45	19	15		15	44		19	57	65
16	64	04.4		29.8	42	41.3	79	-15	56.2	103	35		27	18	53		26		6	08	41	20	06	67
17	79	04.4	-13	30.6	57	08.2	79	-16	06.5	102	40	18	35	19	04	19	39		5	59	39	20	16	70
18	94	04.5	-13	31.4	71	35.1	79	-16	16.7	100	45	18	44	19	16	19	55		5	50	35	20	28	73
19	109	04.5		32.3	86	02.0	79		26.7	100	50	18	56		32	20	17		38	31		43	76	
20	124	04.5		33.1	100	28.9	79		36.7	98	52	19	01		39		28		33	29		49	79	
21	139	04.6		33.9	114	55.8	78		46.5	98	54		07		48		40		27	27		20	57	80
22	154	04.6		34.7	129	22.6	78	-16	56.3	96	56		14	19	57	20	55		20	25		21	06	83
23	169	04.7		35.6	143	49.4	78	-17	05.9	95	58		21	20	08	21	12		13	21		15	86	
24	184	04.7	-13	36.4	158	16.2		-17	15.4		60 S	19	30	20	21	21	35		5	05	18	21	26	90
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO									
	PMG		Mag: -3.8				Mag: +1.8				Mag: -1.9				Mag: +0.6									
	21 ^h 28 ^m 3		PMG: 13 ^h 04 ^m				PMG: 10 ^h 32 ^m				PMG: 14 ^h 59 ^m				PMG: 16 ^h 35 ^m									
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	37	02.1	164	12.5	-19	13.8	201	55.0	-5	32.1	134	52.9	-23	-02.4	110	31.1	-22	25.8						
1	52	04.6	179	11.8		14.6	216	56.0		32.7	149	54.9		-02.4	125	33.4		25.8						
2	67	07.1	194	11.1		15.5	231	56.9		33.4	164	56.8		-02.5	140	35.7		25.8						
3	82	09.5	209	10.3		16.3	246	57.9		34.0	179	58.8		-02.5	155	38.0		25.8						
4	97	12.0	224	09.6		17.2	261	58.8		34.7	195	00.7		-02.5	170	40.3		25.8						
5	112	14.5	239	08.9	-19	18.0	276	59.8	-5	35.3	210	02.7	-23	-02.6	185	42.6	-22	25.8						
6	127	16.9	254	08.2	-19	18.9	292	00.8	-5	35.9	225	04.6	-23	-02.6	200	44.9	-22	25.7						
7	142	19.4	269	07.5		19.7	307	01.7		36.6	240	06.6		-02.6	215	47.2		25.7						
8	157	21.9	284	06.8		20.6	322	02.7		37.2	255	08.6		-02.6	230	49.4		25.7						
9	172	24.3	299	06.1		21.4	337	03.6		37.8	270	10.5		-02.7	245	51.7		25.7						
10	187	26.8	314	05.4		22.2	352	04.6		38.5	285	12.5		-02.7	260	54.0		25.7						
11	202	29.2	329	04.7	-19	23.1	7	05.6	-5	39.1	300	14.4	-23	-02.7	275	56.3	-22	25.7						
12	217	31.7	344	04.0	-19	23.9	22	06.5	-5	39.8	315	16.4	-23	-02.8	290	58.6	-22	25.7						
13	232	34.2	359	03.3		24.8	37	07.5		40.4	330	18.3		-02.8	306	00.9		25.6						
14	247	36.6	14	02.6		25.6	52	08.4		41.0	345	20.3		-02.8	321	03.2		25.6						
15	262	39.1	29	01.9		26.5	67	09.4		41.7	0	22.2		-02.9	336	05.5		25.6						
16	277	41.6	44	01.1		27.3	82	10.4		42.3	15	24.2		-02.9	351	07.8		25.6						
17	292	44.0	59	00.4	-19	28.1	97	11.3	-5	42.9	30	26.1	-23	-02.9	6	10.1	-22	25.6						
18	307	46.5	73	59.7	-19	29.0	112	12.3	-5	43.6	45	28.1	-23	-03.0	21	12.4	-22	25.6						
19	322	49.0	88	59.0		29.8	127	13.2		44.2	60	30.0		-03.0	36	14.7		25.5						
20	337	51.4	103	58.3		30.6	142	14.2		44.9	75	32.0		-03.0	51	16.9		25.5						
21	352	53.9	118	57.6		31.5	157	15.1		45.5	90	33.9		-03.0	66	19.2		25.5						
22	7	56.4	133	56.9		32.3	172	16.1		46.1	105	35.9		-03.1	81	21.5		25.5						
23	22	58.8	148	56.2		33.1	187	17.1		46.8	120	37.8		-03.1	96	23.8		25.5						
24	38	01.3	163	55.4	-19	34.0	202	18.0	-5	47.4	135	39.8	-23	-03.1	111	26.1	-22	25.5						
Dif.	—		-7		-8		+10		-6		+20		0		+23									

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1				PHE {	4 ^h : 58'9 12 ^h : 58'7 20 ^h : 58'4				Náut.	Civil		Hora	Rº	Hora	Rº		
	PMG: 11 ^h 43 ^m 7					PMG: 13 ^h 58 ^m Rº: 56 ^m												
	hG ☉	Dec			hG ☾	Dif.	Dec		Dif.									
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	184	04.7	-13	36.4	158	16.2	78	-17	15.4	94	60 N	5 42	6 31	7 16	10 15	86	17 31 30	
1	199	04.7		37.2	172	43.0	77		24.8	93	58	40	27	09	10 02	82	45 33	
2	214	04.8		38.0	187	09.7	78		34.1	91	56	39	23	7 02	9 51	79	17 57 36	
3	229	04.8		38.9	201	36.5	77		43.2	90	54	37	19	6 56	41	76	18 07 38	
4	244	04.8		39.7	216	03.2	77	-17	52.2	90	52	35	15	51	32	74	17 39	
5	259	04.9	-13	40.5	230	29.9	77	-18	01.2	87	50	5 34	6 12	6 46	9 24	73	18 25 41	
6	274	04.9	-13	41.3	244	56.6	77	-18	09.9	87	45	5 30	6 05	6 35	9 07	70	18 43 44	
7	289	05.0		42.2	259	23.3	76		18.6	86	40	26	5 58	26	8 53	67	18 58 46	
8	304	05.0		43.0	273	49.9	77		27.2	84	35	23	53	19	41	66	19 10 48	
9	319	05.0		43.8	288	16.6	76		35.6	83	30	19	47	12	31	64	21 49	
10	334	05.1		44.6	302	43.2	77		43.9	82	20	12	38	6 00	8 14	60	40 51	
11	349	05.1	-13	45.4	317	09.9	76	-18	52.1	80	10 N	5 04	5 28	5 50	7 59	58	19 56 54	
12	4	05.1	-13	46.3	331	36.5	76	-19	00.1	80	0	4 54	5 19	5 40	7 45	55	20 11 56	
13	19	05.2		47.1	346	03.1	76		08.1	78	10 S	43	5 09	30	31	53	27 57	
14	34	05.2		47.9	0	29.7	76		15.9	77	20	30	4 57	20	7 16	50	20 43 59	
15	49	05.2		48.7	14	56.3	75		23.6	75	30	13	42	07	6 59	48	21 02 62	
16	64	05.3		49.5	29	22.8	76		31.1	74	35	4 01	33	5 00	49	46	13 63	
17	79	05.3	-13	50.4	43	49.4	76	-19	38.5	73	40	3 48	4 23	4 52	6 38	44	21 26 64	
18	94	05.3	-13	51.2	58	16.0	75	-19	45.8	72	45	3 31	4 11	4 42	6 25	41	21 41 66	
19	109	05.4		52.0	72	42.5	76	-19	53.0	71	50	3 10	3 55	31	09	38	21 59 69	
20	124	05.4		52.8	87	09.1	75	-20	00.1	69	52	2 59	47	25	6 02	36	22 08 70	
21	139	05.4		53.6	101	35.6	75		07.0	67	54	47	39	19	5 54	34	17 72	
22	154	05.4		54.4	116	02.1	76		13.7	67	56	32	30	13	45	31	29 73	
23	169	05.5		55.3	130	28.7	75		20.4	65	58	2 14	19	4 05	5 34	29	22 41 76	
24	184	05.5	-13	56.1	144	55.2		-20	26.9		60 S	1 52	3 06	3 56	5 23	25	22 56 79	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.8				Mag: +1.8				Mag: -1.9				Mag: +0.6			
	21 ^h 24 ^m 4		PMG: 13 ^h 05 ^m				PMG: 10 ^h 30 ^m				PMG: 14 ^h 55 ^m				PMG: 16 ^h 32 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	38	01.3	163	55.4	-19	34.0	202	18.0	-5	47.4	135	39.8	-23	03.1	111	26.1	-22	25.5
1	53	03.7	178	54.7		34.8	217	19.0		48.0	150	41.7		03.2	126	28.4		25.5
2	68	06.2	193	54.0		35.6	232	19.9		48.7	165	43.7		03.2	141	30.7		25.4
3	83	08.7	208	53.3		36.5	247	20.9		49.3	180	45.6		03.2	156	33.0		25.4
4	98	11.1	223	52.6		37.3	262	21.9		49.9	195	47.6		03.3	171	35.3		25.4
5	113	13.6	238	51.9	-19	38.1	277	22.8	-5	50.6	210	49.5	-23	03.3	186	37.6	-22	25.4
6	128	16.1	253	51.1	-19	38.9	292	23.8	-5	51.2	225	51.5	-23	03.3	201	39.8	-22	25.4
7	143	18.5	268	50.4		39.8	307	24.7		51.8	240	53.4		03.3	216	42.1		25.4
8	158	21.0	283	49.7		40.6	322	25.7		52.5	255	55.4		03.4	231	44.4		25.4
9	173	23.5	298	49.0		41.4	337	26.6		53.1	270	57.3		03.4	246	46.7		25.3
10	188	25.9	313	48.3		42.2	352	27.6		53.8	285	59.3		03.4	261	49.0		25.3
11	203	28.4	328	47.5	-19	43.0	7	28.6	-5	54.4	301	01.2	-23	03.5	276	51.3	-22	25.3
12	218	30.8	343	46.8	-19	43.9	22	29.5	-5	55.0	316	03.2	-23	03.5	291	53.6	-22	25.3
13	233	33.3	358	46.1		44.7	37	30.5		55.7	331	05.1		03.5	306	55.9		25.3
14	248	35.8	13	45.4		45.5	52	31.4		56.3	346	07.1		03.6	321	58.1		25.3
15	263	38.2	28	44.7		46.3	67	32.4		56.9	1	09.0		03.6	337	00.4		25.3
16	278	40.7	43	43.9		47.1	82	33.3		57.6	16	11.0		03.6	352	02.7		25.2
17	293	43.2	58	43.2	-19	48.0	97	34.3	-5	58.2	31	12.9	-23	03.6	7	05.0	-22	25.2
18	308	45.6	73	42.5	-19	48.8	112	35.3	-5	58.8	46	14.9	-23	03.7	22	07.3	-22	25.2
19	323	48.1	88	41.8		49.6	127	36.2	-5	59.5	61	16.8		03.7	37	09.6		25.2
20	338	50.6	103	41.0		50.4	142	37.2	-6	00.1	76	18.8		03.7	52	11.9		25.2
21	353	53.0	118	40.3		51.2	157	38.1		00.7	91	20.7		03.8	67	14.2		25.2
22	8	55.5	133	39.6		52.0	172	39.1		01.4	106	22.7		03.8	82	16.4		25.1
23	23	58.0	148	38.8		52.8	187	40.0		02.0	121	24.6		03.8	97	18.7		25.1
24	39	00.4	163	38.1	-19	53.6	202	41.0	-6	02.6	136	26.6	-23	03.8	112	21.0	-22	25.1
Dif.	—		-7		-8		+10		-6		+19		0		+23			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'1				SD: 15'9												PHE { 4 ^h : 58'1 12 ^h : 57'8 20 ^h : 57'5	
	PMG: 11 ^h 43 ^m 6				Edad: 2 ^d 8													
	PMG: 14 ^h 54 ^m				Rº: 55 ^m													
	hG ☉	Dec			hG ☾	Dif. Dec			Dif.		Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	° N	h m	h m	h m	h m m	h m m	h m m		
0	184	05.5	-13	56.1	144	55.2	75	-20	26.9	64	60 N	16 08	16 52	17 42	11 41	71	18 01	43
1	199	05.5		56.9	159	21.7	76		33.3	63	58	15	16 57	44	24	69	18	45
2	214	05.6		57.7	173	48.3	75		39.6	61	56	22	17 02	46	11 10	67	33	46
3	229	05.6		58.5	188	14.8	75		45.7	60	54	29	06	48	10 57	66	45	46
4	244	05.6	-13	59.3	202	41.3	76		51.7	58	52	34	10	49	46	66	18 56	48
5	259	05.7	-14	00.1	217	07.9	75	-20	57.5	58	50	16 39	17 13	17 51	10 37	64	19 06	49
6	274	05.7	-14	01.0	231	34.4	75	-21	03.3	56	45	16 50	17 21	17 55	10 17	62	19 27	50
7	289	05.7		01.8	246	00.9	76		08.9	54	40	16 59	27	17 59	10 00	62	44	51
8	304	05.7		02.6	260	27.5	75		14.3	53	35	17 07	33	18 03	9 47	60	19 58	52
9	319	05.8		03.4	274	54.0	76		19.6	52	30	14	39	07	35	59	20 10	53
10	334	05.8		04.2	289	20.6	76		24.8	51	20	26	49	15	9 14	58	31	54
11	349	05.8	-14	05.0	303	47.2	75	-21	29.9	49	10 N	17 37	17 58	18 23	8 57	56	20 50	54
12	4	05.8	-14	05.8	318	13.7	76	-21	34.8	48	0	17 47	18 08	18 33	8 40	55	21 07	55
13	19	05.9		06.6	332	40.3	76		39.6	46	10 S	17 57	19	44	24	54	24	55
14	34	05.9		07.4	347	06.9	76		44.2	46	20	18 08	31	18 58	8 06	53	21 42	56
15	49	05.9		08.3	1	33.5	76		48.8	43	30	21	46	19 16	7 47	50	22 04	56
16	64	05.9		09.1	16	00.1	77		53.1	43	35	29	18 56	28	35	50	16	57
17	79	06.0	-14	09.9	30	26.8	76	-21	57.4	41	40	18 37	19 06	19 42	7 22	48	22 30	58
18	94	06.0	-14	10.7	44	53.4	77	-22	01.5	40	45	18 47	19 19	19 59	7 06	47	22 47	59
19	109	06.0		11.5	59	20.1	76		05.5	38	50	18 59	36	20 21	6 47	45	23 08	60
20	124	06.0		12.3	73	46.7	77		09.3	37	52	19 05	43	33	38	43	18	60
21	139	06.1		13.1	88	13.4	77		13.0	36	54	11	19 52	20 46	28	42	29	61
22	154	06.1		13.9	102	40.1	78		16.6	35	56	18	20 02	21 01	16	41	42	61
23	169	06.1		14.7	117	06.9	77		20.1	33	58	26	14	20	6 03	39	23 57	62
24	184	06.1	-14	15.5	131	33.6		-22	23.4		60 S	19 35	20 27	21 45	5 48	36	***	***

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.8				Mag: +1.8				Mag: -1.9				Mag: +0.6			
	21 ^h 20 ^m 5		PMG: 13 ^h 06 ^m				PMG: 10 ^h 29 ^m				PMG: 14 ^h 52 ^m				PMG: 16 ^h 28 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	39	00.4	163	38.1	-19	53.6	202	41.0	-6	02.6	136	26.6	-23	-03.8	112	21.0	-22	25.1
1	54	02.9	178	37.4		54.4	217	42.0		03.3	151	28.5		-03.9	127	23.3		25.1
2	69	05.3	193	36.7		55.2	232	42.9		03.9	166	30.5		-03.9	142	25.6		25.1
3	84	07.8	208	35.9		56.1	247	43.9		04.5	181	32.4		-03.9	157	27.9		25.1
4	99	10.3	223	35.2		56.9	262	44.8		05.2	196	34.4		-04.0	172	30.2		25.1
5	114	12.7	238	34.5	-19	57.7	277	45.8	-6	05.8	211	36.3	-23	-04.0	187	32.4	-22	25.0
6	129	15.2	253	33.7	-19	58.5	292	46.7	-6	06.5	226	38.3	-23	-04.0	202	34.7	-22	25.0
7	144	17.7	268	33.0	-19	59.3	307	47.7		07.1	241	40.2		-04.1	217	37.0		25.0
8	159	20.1	283	32.3	-20	00.1	322	48.6		07.7	256	42.1		-04.1	232	39.3		25.0
9	174	22.6	298	31.5		00.9	337	49.6		08.4	271	44.1		-04.1	247	41.6		25.0
10	189	25.1	313	30.8		01.7	352	50.6		09.0	286	46.0		-04.1	262	43.9		25.0
11	204	27.5	328	30.1	-20	02.5	7	51.5	-6	09.6	301	48.0	-23	-04.2	277	46.1	-22	24.9
12	219	30.0	343	29.3	-20	03.3	22	52.5	-6	10.3	316	49.9	-23	-04.2	292	48.4	-22	24.9
13	234	32.5	358	28.6		04.1	37	53.4		10.9	331	51.9		-04.2	307	50.7		24.9
14	249	34.9	13	27.9		04.9	52	54.4		11.5	346	53.8		-04.3	322	53.0		24.9
15	264	37.4	28	27.1		05.7	67	55.3		12.2	1	55.8		-04.3	337	55.3		24.9
16	279	39.8	43	26.4		06.4	82	56.3		12.8	16	57.7		-04.3	352	57.6		24.9
17	294	42.3	58	25.7	-20	07.2	97	57.2	-6	13.4	31	59.7	-23	-04.3	7	59.9	-22	24.9
18	309	44.8	73	24.9	-20	08.0	112	58.2	-6	14.1	47	01.6	-23	-04.4	23	02.1	-22	24.8
19	324	47.2	88	24.2		08.8	127	59.1		14.7	62	03.5		-04.4	38	04.4		24.8
20	339	49.7	103	23.4		09.6	143	00.1		15.3	77	05.5		-04.4	53	06.7		24.8
21	354	52.2	118	22.7		10.4	158	01.1		16.0	92	07.4		-04.5	68	09.0		24.8
22	9	54.6	133	22.0		11.2	173	02.0		16.6	107	09.4		-04.5	83	11.3		24.8
23	24	57.1	148	21.2		12.0	188	03.0		17.2	122	11.3		-04.5	98	13.6		24.8
24	39	59.6	163	20.5	-20	12.8	203	03.9	-6	17.9	137	13.3	-23	-04.5	113	15.8	-22	24.7
Dif.	—		-7	-8			+10		-6		+19		0		+23			

UT	SOL				 LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'1				SD: 15'6		PHE { 4 ^h : 57'2 12 ^h : 56'9 20 ^h : 56'6														
	PMG: 11 ^h 43 ^m 6				Edad: 3 ^d 8		Rº: 53 ^m														
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº	Hora		Rº								
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m				
0	184	06.1	-14	15.5	131	33.6	78	-22	23.4	31	60 N	5 47	6 36	7 21	12 52	53	18 44	58			
1	199	06.1		16.3	146	00.4	78		26.5	31	58	44	31	13	33	53	19 03	57			
2	214	06.2		17.1	160	27.2	78		29.6	29	56	42	27	06	17	54	19	57			
3	229	06.2		17.9	174	54.0	79		32.5	27	54	40	22	7 00	12 03	54	32	57			
4	244	06.2		18.7	189	20.9	78		35.2	27	52	39	19	6 54	11 52	53	44	56			
5	259	06.2	-14	19.5	203	47.7	79	-22	37.9	25	50	5 37	6 15	6 49	11 41	54	19 55	56			
6	274	06.2	-14	20.3	218	14.6	79	-22	40.4	23	45	5 33	6 07	6 38	11 19	54	20 17	55			
7	289	06.3		21.2	232	41.5	80		42.7	23	40	28	6 00	29	11 02	54	35	55			
8	304	06.3		22.0	247	08.5	80		45.0	20	35	25	5 54	21	10 47	54	20 50	54			
9	319	06.3		22.8	261	35.5	80		47.0	20	30	21	49	14	34	54	21 03	54			
10	334	06.3		23.6	276	02.5	80		49.0	18	20	12	39	6 01	10 12	54	25	53			
11	349	06.3	-14	24.4	290	29.5	81	-22	50.8	17	10 N	5 04	5 29	5 50	9 53	54	21 44	53			
12	4	06.4	-14	25.2	304	56.6	81	-22	52.5	16	0	4 54	5 19	5 40	9 35	54	22 02	53			
13	19	06.4		26.0	319	23.7	82		54.1	14	10 S	43	5 08	30	9 18	54	19	53			
14	34	06.4		26.8	333	50.9	81		55.5	13	20	29	4 56	19	8 59	54	22 38	52			
15	49	06.4		27.6	348	18.0	82		56.8	12	30	4 11	40	5 06	37	54	23 00	52			
16	64	06.4		28.4	2	45.2	83		58.0	11	35	3 59	31	4 58	25	53	13	51			
17	79	06.4	-14	29.2	17	12.5	83	-22	59.1	9	40	3 45	4 20	4 49	8 10	53	23 28	51			
18	94	06.5	-14	30.0	31	39.8	83	-23	00.0	7	45	3 28	4 07	4 39	7 53	53	23 46	49			
19	109	06.5		30.8	46	07.1	84		00.7	7	50	3 05	3 51	27	32	52	***	***			
20	124	06.5		31.6	60	34.5	84		01.4	5	52	2 54	43	21	21	53	***	***			
21	139	06.5		32.4	75	01.9	85		01.9	4	54	41	34	15	7 10	52	***	***			
22	154	06.5		33.2	89	29.4	84		02.3	3	56	25	24	08	6 57	51	***	***			
23	169	06.5		33.9	103	56.8	86		02.6	1	58	2 06	3 13	4 00	6 42	51	***	***			
24	184	06.5	-14	34.7	118	24.4		-23	02.7		60 S	1 42	2 59	3 51	6 24	50	0 15	62			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 16 ^m 5		Mag: -3.8 PMG: 13 ^h 07 ^m				Mag: +1.8 PMG: 10 ^h 27 ^m				Mag: -1.9 PMG: 14 ^h 49 ^m				Mag: +0.6 PMG: 16 ^h 24 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	°	'	°	°	'	°	°	°	°	°	°	°	°	°	°
0	39	59.6	163	20.5	-20	12.8	203	03.9	-6	17.9	137	13.3	-23	04.5	113	15.8	-22	24.7
1	55	02.0	178	19.7		13.5	218	04.9		18.5	152	15.2		04.6	128	18.1		24.7
2	70	04.5	193	19.0		14.3	233	05.8		19.1	167	17.1		04.6	143	20.4		24.7
3	85	07.0	208	18.3		15.1	248	06.8		19.8	182	19.1		04.6	158	22.7		24.7
4	100	09.4	223	17.5		15.9	263	07.7		20.4	197	21.0		04.7	173	25.0		24.7
5	115	11.9	238	16.8	-20	16.7	278	08.7	-6	21.0	212	23.0	-23	04.7	188	27.2	-22	24.7
6	130	14.3	253	16.0	-20	17.5	293	09.6	-6	21.7	227	24.9	-23	04.7	203	29.5	-22	24.6
7	145	16.8	268	15.3		18.2	308	10.6		22.3	242	26.9		04.8	218	31.8		24.6
8	160	19.3	283	14.5		19.0	323	11.6		22.9	257	28.8		04.8	233	34.1		24.6
9	175	21.7	298	13.8		19.8	338	12.5		23.6	272	30.7		04.8	248	36.4		24.6
10	190	24.2	313	13.1		20.6	353	13.5		24.2	287	32.7		04.8	263	38.7		24.6
11	205	26.7	328	12.3	-20	21.3	8	14.4	-6	24.8	302	34.6	-23	04.9	278	40.9	-22	24.6
12	220	29.1	343	11.6	-20	22.1	23	15.4	-6	25.5	317	36.6	-23	04.9	293	43.2	-22	24.6
13	235	31.6	358	10.8		22.9	38	16.3		26.1	332	38.5		04.9	308	45.5		24.5
14	250	34.1	13	10.1		23.7	53	17.3		26.7	347	40.5		05.0	323	47.8		24.5
15	265	36.5	28	09.3		24.4	68	18.2		27.3	2	42.4		05.0	338	50.1		24.5
16	280	39.0	43	08.6		25.2	83	19.2		28.0	17	44.3		05.0	353	52.3		24.5
17	295	41.4	58	07.8	-20	26.0	98	20.1	-6	28.6	32	46.3	-23	05.0	8	54.6	-22	24.5
18	310	43.9	73	07.1	-20	26.7	113	21.1	-6	29.2	47	48.2	-23	05.1	23	56.9	-22	24.5
19	325	46.4	88	06.3		27.5	128	22.0		29.9	62	50.2		05.1	38	59.2		24.4
20	340	48.8	103	05.6		28.3	143	23.0		30.5	77	52.1		05.1	54	01.5		24.4
21	355	51.3	118	04.8		29.0	158	23.9		31.1	92	54.0		05.2	69	03.7		24.4
22	10	53.8	133	04.1		29.8	173	24.9		31.8	107	56.0		05.2	84	06.0		24.4
23	25	56.2	148	03.3		30.6	188	25.8		32.4	122	57.9		05.2	99	08.3		24.4
24	40	58.7	163	02.6	-20	31.3	203	26.8	-6	33.0	137	59.9	-23	05.2	114	10.6	-22	24.4
Dif.	—		-7		-8		+10		-6		+19		0		+23			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'1			 SD: 15'4 Edad: 4'8		PHE { 4 ^h : 56'3 12 ^h : 56'1 20 ^h : 55'8													
	PMG: 11 ^h 43 ^m 6																		
				PMG: 16 ^h 42 ^m		Rº: 51 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº				
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	h m m	m				
0	184	06.5	-14	34.7	118	24.4	86	-23	02.7	0	60 N	16 02	16 48	17 37	13 45	36	19 42	69	
1	199	06.6		35.5	132	52.0	86		02.7	1	58	11	53	40	26	39	20 00	67	
2	214	06.6		36.3	147	19.6	87		02.6	3	56	18	16 58	42	13 11	40	16	64	
3	229	06.6		37.1	161	47.3	87		02.3	3	54	25	17 02	44	12 57	42	29	63	
4	244	06.6		37.9	176	15.0	88		02.0	5	52	30	06	46	45	43	40	63	
5	259	06.6	-14	38.7	190	42.8	88	-23	01.5	7	50	16 36	17 10	17 48	12 35	44	20 51	61	
6	274	06.6	-14	39.5	205	10.6	88	-23	00.8	7	45	16 47	17 18	17 53	12 13	46	21 12	59	
7	289	06.6		40.3	219	38.4	90	-23	00.1	9	40	16 57	25	17 57	11 56	46	30	57	
8	304	06.6		41.1	234	06.4	89	-22	59.2	10	35	17 05	31	18 01	41	47	44	57	
9	319	06.6		41.9	248	34.3	90		58.2	11	30	12	37	05	28	48	21 57	55	
10	334	06.7		42.7	263	02.3	91		57.1	12	20	25	48	14	11 06	50	22 18	54	
11	349	06.7	-14	43.5	277	30.4	91	-22	55.9	14	10 N	17 36	17 58	18 23	10 47	51	22 37	52	
12	4	06.7	-14	44.3	291	58.5	92	-22	54.5	15	0	17 47	18 08	18 33	10 29	52	22 55	50	
13	19	06.7		45.1	306	26.7	92		53.0	16	10 S	17 58	20	45	10 12	52	23 12	49	
14	34	06.7		45.9	320	54.9	93		51.4	17	20	18 09	32	18 59	9 53	53	30	48	
15	49	06.7		46.6	335	23.2	94		49.7	18	30	23	48	19 18	31	55	23 52	45	
16	64	06.7		47.4	349	51.6	93		47.9	20	35	31	18 58	30	18	56	***	***	
17	79	06.7	-14	48.2	4	19.9	95	-22	45.9	21	40	18 40	19 09	19 44	9 03	57	***	***	
18	94	06.7	-14	49.0	18	48.4	95	-22	43.8	22	45	18 50	19 22	20 02	8 46	57	***	***	
19	109	06.7		49.8	33	16.9	96		41.6	23	50	19 03	39	26	24	59	0 08	48	
20	124	06.7		50.6	47	45.5	96		39.3	24	52	09	47	38	14	59	18	48	
21	139	06.7		51.4	62	14.1	97		36.9	26	54	15	19 57	20 51	8 02	60	30	47	
22	154	06.8		52.2	76	42.8	97		34.3	26	56	23	20 07	21 08	7 48	61	43	47	
23	169	06.8		52.9	91	11.5	98		31.7	28	58	31	19	28	33	62	0 59	46	
24	184	06.8	-14	53.7	105	40.3		-22	28.9		60 S	19 41	20 34	21 55	7 14	64	1 17	45	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 21 ^h 12 ^m 6		Mag: -3.8 PMG: 13 ^h 08 ^m				Mag: +1.8 PMG: 10 ^h 26 ^m				Mag: -1.9 PMG: 14 ^h 46 ^m				Mag: +0.6 PMG: 16 ^h 21 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	40	58.7	163	02.6	-20	31.3	203	26.8	-6	33.0	137	59.9	-23	-05.2	114	10.6	-22	24.4	
1	56	01.2	178	01.8		32.1	218	27.7		33.7	153	01.8		-05.3	129	12.8		24.3	
2	71	03.6	193	01.1		32.9	233	28.7		34.3	168	03.7		-05.3	144	15.1		24.3	
3	86	06.1	208	00.3		33.6	248	29.6		34.9	183	05.7		-05.3	159	17.4		24.3	
4	101	08.6	222	59.5		34.4	263	30.6		35.6	198	07.6		-05.4	174	19.7		24.3	
5	116	11.0	237	58.8	-20	35.1	278	31.6	-6	36.2	213	09.6	-23	-05.4	189	22.0	-22	24.3	
6	131	13.5	252	58.0	-20	35.9	293	32.5	-6	36.8	228	11.5	-23	-05.4	204	24.2	-22	24.3	
7	146	15.9	267	57.3		36.7	308	33.5		37.5	243	13.4		-05.4	219	26.5		24.2	
8	161	18.4	282	56.5		37.4	323	34.4		38.1	258	15.4		-05.5	234	28.8		24.2	
9	176	20.9	297	55.8		38.2	338	35.4		38.7	273	17.3		-05.5	249	31.1		24.2	
10	191	23.3	312	55.0		38.9	353	36.3		39.3	288	19.3		-05.5	264	33.4		24.2	
11	206	25.8	327	54.2	-20	39.7	8	37.3	-6	40.0	303	21.2	-23	-05.5	279	35.6	-22	24.2	
12	221	28.3	342	53.5	-20	40.4	23	38.2	-6	40.6	318	23.1	-23	-05.6	294	37.9	-22	24.2	
13	236	30.7	357	52.7		41.2	38	39.2		41.2	333	25.1		-05.6	309	40.2		24.2	
14	251	33.2	12	52.0		41.9	53	40.1		41.9	348	27.0		-05.6	324	42.5		24.1	
15	266	35.7	27	51.2		42.7	68	41.1		42.5	3	28.9		-05.7	339	44.7		24.1	
16	281	38.1	42	50.4		43.4	83	42.0		43.1	18	30.9		-05.7	354	47.0		24.1	
17	296	40.6	57	49.7	-20	44.2	98	43.0	-6	43.8	33	32.8	-23	-05.7	9	49.3	-22	24.1	
18	311	43.1	72	48.9	-20	44.9	113	43.9	-6	44.4	48	34.8	-23	-05.7	24	51.6	-22	24.1	
19	326	45.5	87	48.1		45.6	128	44.9		45.0	63	36.7		-05.8	39	53.8		24.1	
20	341	48.0	102	47.4		46.4	143	45.8		45.7	78	38.6		-05.8	54	56.1		24.0	
21	356	50.4	117	46.6		47.1	158	46.8		46.3	93	40.6		-05.8	69	58.4		24.0	
22	11	52.9	132	45.9		47.9	173	47.7		46.9	108	42.5		-05.9	85	00.7		24.0	
23	26	55.4	147	45.1		48.6	188	48.7		47.5	123	44.4		-05.9	100	02.9		24.0	
24	41	57.8	162	44.3	-20	49.4	203	49.6	-6	48.2	138	46.4	-23	-05.9	115	05.2	-22	24.0	
Dif.	—		-8		-8	+10		-6			+19		0			+23			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'1 PMG: 11 ^h 43 ^m 5			SD: 15'2 Edad: 5 ^d 8 PMG: 17 ^h 33 ^m											PHE { 4 ^h : 55'6 12 ^h : 55'4 20 ^h : 55'2 Rº: 49 ^m				
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.	Náut.		Civil	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	184	06.8	-14	53.7	105	40.3	99	-22	28.9	29	60 N	5 51	6 41	7 26	14 21	25	20 51	75	
1	199	06.8		54.5	120	09.2	99		26.0	30	58	49	35	18	14 05	27	21 07	72	
2	214	06.8		55.3	134	38.1	100		23.0	31	56	46	30	10	13 51	30	20	70	
3	229	06.8		56.1	149	07.1	100		19.9	32	54	44	26	7 04	39	31	32	68	
4	244	06.8		56.9	163	36.1	101		16.7	33	52	42	22	6 58	28	33	43	65	
5	259	06.8	-14	57.7	178	05.2	102	-22	13.4	35	50	5 40	6 18	6 52	13 19	34	21 52	64	
6	274	06.8	-14	58.4	192	34.4	102	-22	09.9	35	45	5 35	6 10	6 41	12 59	37	22 11	61	
7	289	06.8	-14	59.2	207	03.6	103		06.4	37	40	31	6 03	31	42	40	27	59	
8	304	06.8	-15	00.0	221	32.9	104	-22	02.7	37	35	26	5 56	22	28	42	41	56	
9	319	06.8		00.8	236	02.3	104	-21	59.0	39	30	22	50	15	12 16	43	22 52	55	
10	334	06.8		01.6	250	31.7	105		55.1	40	20	13	39	6 02	11 56	45	23 12	52	
11	349	06.8	-15	02.4	265	01.2	105	-21	51.1	40	10 N	5 04	5 29	5 51	11 38	47	23 29	50	
12	4	06.8	-15	03.1	279	30.7	106	-21	47.1	42	0	4 54	5 19	5 40	11 21	49	23 45	48	
13	19	06.8		03.9	294	00.3	107		42.9	43	10 S	42	5 07	29	11 04	51	***	***	***
14	34	06.8		04.7	308	30.0	108		38.6	44	20	27	4 54	18	10 46	53	***	***	***
15	49	06.8		05.5	322	59.8	108		34.2	45	30	4 09	39	5 04	26	55	***	***	***
16	64	06.8		06.3	337	29.6	108		29.7	46	35	3 57	29	4 56	14	56	0 04	45	
17	79	06.8	-15	07.0	351	59.4	110	-21	25.1	47	40	3 42	4 18	4 47	10 00	58	0 19	43	
18	94	06.8	-15	07.8	6	29.4	110	-21	20.4	48	45	3 24	4 04	4 36	9 43	60	0 35	42	
19	109	06.8		08.6	20	59.4	110		15.6	49	50	3 01	3 47	24	23	62	0 56	39	
20	124	06.8		09.4	35	29.4	111		10.7	50	52	2 49	39	18	13	64	1 06	38	
21	139	06.8		10.2	49	59.5	112		05.7	50	54	35	30	11	9 02	65	17	37	
22	154	06.8		10.9	64	29.7	113	-21	00.7	52	56	2 19	19	4 04	8 49	68	30	35	
23	169	06.8		11.7	79	00.0	113	-20	55.5	53	58	1 58	3 07	3 55	8 35	69	1 45	33	
24	184	06.8	-15	12.5	93	30.3		-20	50.2		60 S	1 31	2 53	3 46	8 18	72	2 02	30	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 08 ^m 7		Mag: -3.8 PMG: 13 ^h 10 ^m				Mag: +1.8 PMG: 10 ^h 24 ^m				Mag: -1.9 PMG: 14 ^h 43 ^m				Mag: +0.6 PMG: 16 ^h 17 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	41	57.8	162	44.3	-20	49.4	203	49.6	-6	48.2	138	46.4	-23	05.9	115	05.2	-22	24.0
1	57	00.3	177	43.6		50.1	218	50.6		48.8	153	48.3		05.9	130	07.5		24.0
2	72	02.8	192	42.8		50.8	233	51.5		49.4	168	50.2		06.0	145	09.8		23.9
3	87	05.2	207	42.0		51.6	248	52.5		50.1	183	52.2		06.0	160	12.0		23.9
4	102	07.7	222	41.3		52.3	263	53.4		50.7	198	54.1		06.0	175	14.3		23.9
5	117	10.2	237	40.5	-20	53.0	278	54.4	-6	51.3	213	56.1	-23	06.1	190	16.6	-22	23.9
6	132	12.6	252	39.7	-20	53.8	293	55.3	-6	51.9	228	58.0	-23	06.1	205	18.9	-22	23.9
7	147	15.1	267	39.0		54.5	308	56.3		52.6	243	59.9		06.1	220	21.1		23.9
8	162	17.6	282	38.2		55.2	323	57.2		53.2	259	01.9		06.1	235	23.4		23.8
9	177	20.0	297	37.4		56.0	338	58.2		53.8	274	03.8		06.2	250	25.7		23.8
10	192	22.5	312	36.6		56.7	353	59.1		54.5	289	05.7		06.2	265	28.0		23.8
11	207	24.9	327	35.9	-20	57.4	9	00.1	-6	55.1	304	07.7	-23	06.2	280	30.2	-22	23.8
12	222	27.4	342	35.1	-20	58.1	24	01.0	-6	55.7	319	09.6	-23	06.2	295	32.5	-22	23.8
13	237	29.9	357	34.3		58.9	39	01.9		56.4	334	11.5		06.3	310	34.8		23.8
14	252	32.3	12	33.6	-20	59.6	54	02.9		57.0	349	13.5		06.3	325	37.1		23.7
15	267	34.8	27	32.8	-21	00.3	69	03.8		57.6	4	15.4		06.3	340	39.3		23.7
16	282	37.3	42	32.0		01.0	84	04.8		58.2	19	17.3		06.4	355	41.6		23.7
17	297	39.7	57	31.2	-21	01.8	99	05.7	-6	58.9	34	19.3	-23	06.4	10	43.9	-22	23.7
18	312	42.2	72	30.5	-21	02.5	114	06.7	-6	59.5	49	21.2	-23	06.4	25	46.2	-22	23.7
19	327	44.7	87	29.7		03.2	129	07.6	-7	00.1	64	23.1		06.4	40	48.4		23.6
20	342	47.1	102	28.9		03.9	144	08.6		00.8	79	25.1		06.5	55	50.7		23.6
21	357	49.6	117	28.1		04.6	159	09.5		01.4	94	27.0		06.5	70	53.0		23.6
22	12	52.0	132	27.4		05.4	174	10.5		02.0	109	28.9		06.5	85	55.2		23.6
23	27	54.5	147	26.6		06.1	189	11.4		02.6	124	30.9		06.5	100	57.5		23.6
24	42	57.0	162	25.8	-21	06.8	204	12.4	-7	03.3	139	32.8	-23	06.6	115	59.8	-22	23.6
Dif.	—		-8	-7			+9	-6			+19			0		+23		

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 6			SD: 15'0 Edad: 6 ^d 8 PHE { 4 ^h : 55'0 12 ^h : 54'8 20 ^h : 54'7 PMG: 18 ^h 22 ^m Rº: 45 ^m																
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m					
0	184	06.8	-15	93	30.3	114	-20	50.2	54	60 N	15 57	16 43	17 33	14 46	16	22 06 77				
1	199	06.8		108	00.7	115		44.8	54	58	16 06	49	36	32	20	19 73				
2	214	06.8		122	31.2	115		39.4	56	56	14	54	38	21	22	30 71				
3	229	06.8		137	01.7	116		33.8	57	54	21	16 58	41	10	25	40 68				
4	244	06.8		151	32.3	116		28.1	57	52	27	17 03	43	14 01	27	48 67				
5	259	06.8	-15	166	02.9	118	-20	22.4	59	50	16 32	17 07	17 45	13 53	28	22 56 65				
6	274	06.8	-15	180	33.7	117	-20	16.5	59	45	16 45	17 15	17 50	13 36	31	23 12 62				
7	289	06.8		195	04.4	119		10.6	60	40	16 55	23	17 55	22	34	26 59				
8	304	06.7		209	35.3	119	-20	04.6	61	35	17 03	30	18 00	13 10	36	37 57				
9	319	06.7		224	06.2	120	-19	58.5	62	30	11	36	04	12 59	38	23 47 55				
10	334	06.7		238	37.2	120		52.3	63	20	24	47	13	41	41	*** **				
11	349	06.7	-15	253	08.2	121	-19	46.0	64	10 N	17 36	17 58	18 23	12 25	44	*** **				
12	4	06.7	-15	267	39.3	122	-19	39.6	64	0	17 47	18 08	18 33	12 10	46	*** **				
13	19	06.7		282	10.5	122		33.2	66	10 S	17 58	20	18 46	11 55	49	0 01 45				
14	34	06.7		296	41.7	123		26.6	66	20	18 10	33	19 01	39	52	18 43				
15	49	06.7		311	13.0	124		20.0	67	30	24	18 50	20	21	54	37 41				
16	64	06.7		325	44.4	124		13.3	68	35	32	19 00	32	11 10	57	0 49 38				
17	79	06.7	-15	340	15.8	125	-19	06.5	69	40	18 42	19 11	19 47	10 58	58	1 02 36				
18	94	06.7	-15	354	47.3	126	-18	59.6	69	45	18 53	19 25	20 06	10 43	61	1 17 34				
19	109	06.7		9	18.9	126		52.7	70	50	19 06	43	30	25	65	35 32				
20	124	06.7		23	50.5	126		45.7	72	52	12	19 52	43	17	66	44 30				
21	139	06.6		38	22.1	128		38.5	72	54	19	20 01	20 57	10 07	68	1 54 28				
22	154	06.6		52	53.9	128		31.3	72	56	27	12	21 15	9 57	70	2 05 26				
23	169	06.6		67	25.7	128		24.1	74	58	36	25	21 37	44	73	18 23				
24	184	06.6	-15	81	57.5		-18	16.7		60 S	19 46	20 40	22 06	9 30	76	2 32 21				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 21 ^h 04 ^m 7		Mag: -3.8 PMG: 13 ^h 11 ^m			Mag: +1.8 PMG: 10 ^h 23 ^m			Mag: -1.9 PMG: 14 ^h 40 ^m			Mag: +0.6 PMG: 16 ^h 14 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'					
0	42	57.0	162	25.8	-21	204	12.4	-7	139	32.8	-23	115	59.8	-22	23.6					
1	57	59.4	177	25.0		219	13.3		154	34.7		131	02.1		23.5					
2	73	01.9	192	24.2		234	14.3		169	36.7		146	04.3		23.5					
3	88	04.4	207	23.5		249	15.2		184	38.6		161	06.6		23.5					
4	103	06.8	222	22.7		264	16.2		199	40.5		176	08.9		23.5					
5	118	09.3	237	21.9	-21	279	17.1	-7	214	42.5	-23	191	11.1	-22	23.5					
6	133	11.8	252	21.1	-21	294	18.1	-7	229	44.4	-23	206	13.4	-22	23.5					
7	148	14.2	267	20.3		309	19.0		244	46.3		221	15.7		23.4					
8	163	16.7	282	19.6		324	19.9		259	48.3		236	18.0		23.4					
9	178	19.2	297	18.8		339	20.9		274	50.2		251	20.2		23.4					
10	193	21.6	312	18.0		354	21.8		289	52.1		266	22.5		23.4					
11	208	24.1	327	17.2	-21	9	22.8	-7	304	54.0	-23	281	24.8	-22	23.4					
12	223	26.5	342	16.4	-21	24	23.7	-7	319	56.0	-23	296	27.0	-22	23.4					
13	238	29.0	357	15.6		39	24.7		334	57.9		311	29.3		23.3					
14	253	31.5	12	14.9		54	25.6		349	59.8		326	31.6		23.3					
15	268	33.9	27	14.1		69	26.6		5	01.8		341	33.9		23.3					
16	283	36.4	42	13.3		84	27.5		20	03.7		356	36.1		23.3					
17	298	38.9	57	12.5	-21	99	28.5	-7	35	05.6	-23	11	38.4	-22	23.3					
18	313	41.3	72	11.7	-21	114	29.4	-7	50	07.6	-23	26	40.7	-22	23.3					
19	328	43.8	87	10.9		129	30.4		65	09.5		41	42.9		23.2					
20	343	46.3	102	10.1		144	31.3		80	11.4		56	45.2		23.2					
21	358	48.7	117	09.4		159	32.2		95	13.3		71	47.5		23.2					
22	13	51.2	132	08.6		174	33.2		110	15.3		86	49.7		23.2					
23	28	53.7	147	07.8		189	34.1		125	17.2		101	52.0		23.2					
24	43	56.1	162	07.0	-21	204	35.1	-7	140	19.1	-23	116	54.3	-22	23.1					
Dif.	—		-8 -7			+9 -6			+19 0			+23 0								

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1				SD: 14'9 Edad: 7'8	PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3		Náut.		Civil	Hora		Rº	Hora	Rº	
	PMG: 11 ^h 43 ^m 6					PMG: 19 ^h 07 ^m Rº: 44 ^m										
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.									
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	m
0	184	06.6	-15	81	57.5	130	-18	16.7	74	60 N	5 55	6 45	7 32	15 02	13	23 23 77
1	199	06.6		96	29.5	130		09.3	75	58	53	40	23	14 52	15	32 74
2	214	06.6		111	01.5	130	-18	01.8	76	56	50	34	15	43 18		41 71
3	229	06.6		125	33.5	131	-17	54.2	76	54	47	30	08	35 20		48 69
4	244	06.6		140	05.6	132		46.6	78	52	45	25	7 01	28 22		23 55 67
5	259	06.5	-15	154	37.8	132	-17	38.8	78	50	5 43	6 21	6 56	14 21	24	*** ** *
6	274	06.5	-15	169	10.0	133	-17	31.0	78	45	5 38	6 12	6 43	14 07	27	*** ** *
7	289	06.5		183	42.3	133		23.2	80	40	33	6 05	33	13 56	30	*** ** *
8	304	06.5		198	14.6	134		15.2	80	35	28	5 58	24	46 32		*** ** *
9	319	06.5		212	47.0	135	-17	07.2	81	30	23	52	17	37 35		*** ** *
10	334	06.5		227	19.5	135	-16	59.1	81	20	14	40	6 03	22 38		0 04 51
11	349	06.5	-15	241	52.0	135	-16	51.0	82	10 N	5 04	5 30	5 51	13 09	41	0 19 48
12	4	06.4	-15	256	24.5	137	-16	42.8	83	0	4 54	5 19	5 40	12 56	45	0 33 45
13	19	06.4		270	57.2	136		34.5	84	10 S	41	5 07	29	44 47		0 46 43
14	34	06.4		285	29.8	138		26.1	84	20	26	4 53	17	31 50		1 01 40
15	49	06.4		300	02.6	138		17.7	85	30	4 07	37	5 02	15 54		18 36
16	64	06.4		314	35.4	138		09.2	86	35	3 54	27	4 54	12 07	55	27 34
17	79	06.4	-15	329	08.2	139	-16	00.6	86	40	3 39	4 15	4 45	11 56	59	1 38 32
18	94	06.3	-15	343	41.1	140	-15	52.0	87	45	3 21	4 01	4 34	11 44	62	1 51 29
19	109	06.3		358	14.1	140		43.3	87	50	2 56	3 43	20	30 65		2 07 25
20	124	06.3		12	47.1	140		34.6	88	52	44	35	14	23 67		14 24
21	139	06.3		27	20.1	141		25.8	89	54	29	25	4 07	15 69		22 22
22	154	06.3		41	53.2	142		16.9	89	56	2 12	14	3 59	11 07	71	31 20
23	169	06.3		56	26.4	142	-15	08.0	90	58	1 50	3 01	50	10 57	74	2 41 18
24	184	06.2	-15	70	59.6		-14	59.0		60 S	1 20	2 46	3 40	10 46	77	2 53 14

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.8				Mag: +1.8				Mag: -1.9				Mag: +0.6			
	21 ^h 00 ^m 8		PMG: 13 ^h 12 ^m				PMG: 10 ^h 21 ^m				PMG: 14 ^h 37 ^m				PMG: 16 ^h 10 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	43	56.1	162	07.0	-21	204	35.1	-7	140	19.1	-23	116	54.3	-22	131	54.3		
1	58	58.6	177	06.2		219	36.0		155	21.1		131	56.5		146	58.8		
2	74	01.0	192	05.4		234	37.0		170	23.0		146	58.8		162	01.1		
3	89	03.5	207	04.6		249	37.9		185	24.9		177	03.4		192	05.6		
4	104	06.0	222	03.8		264	38.9		200	26.9		177	03.4		192	05.6		
5	119	08.4	237	03.0	-21	279	39.8	-7	215	28.8	-23	192	05.6	-22	207	07.9		
6	134	10.9	252	02.2	-21	294	40.7	-7	230	30.7	-23	207	07.9	-22	222	10.2		
7	149	13.4	267	01.4		309	41.7		245	32.6		222	10.2		237	12.4		
8	164	15.8	282	00.6		324	42.6		260	34.6		237	12.4		252	14.7		
9	179	18.3	296	59.9		339	43.6		275	36.5		252	14.7		267	17.0		
10	194	20.8	311	59.1		354	44.5		290	38.4		267	17.0		282	19.2		
11	209	23.2	326	58.3	-21	9	45.5	-7	305	40.3	-23	282	19.2	-22	297	21.5		
12	224	25.7	341	57.5	-21	24	46.4	-7	320	42.3	-23	297	21.5	-22	312	23.8		
13	239	28.2	356	56.7		39	47.4		335	44.2		312	23.8		327	26.0		
14	254	30.6	11	55.9		54	48.3		350	46.1		327	26.0		342	28.3		
15	269	33.1	26	55.1		69	49.2		5	48.1		342	28.3		357	30.6		
16	284	35.5	41	54.3		84	50.2		20	50.0		357	30.6		12	32.8		
17	299	38.0	56	53.5	-21	99	51.1	-7	35	51.9	-23	12	32.8	-22	27	35.1		
18	314	40.5	71	52.7	-21	114	52.1	-7	50	53.8	-23	27	35.1	-22	42	37.4		
19	329	42.9	86	51.9		129	53.0		65	55.8		42	37.4		57	39.6		
20	344	45.4	101	51.1		144	54.0		80	57.7		57	39.6		72	41.9		
21	359	47.9	116	50.3		159	54.9		95	59.6		72	41.9		87	44.2		
22	14	50.3	131	49.5		174	55.8		111	01.5		87	44.2		102	46.4		
23	29	52.8	146	48.7		189	56.8		126	03.5		102	46.4		117	48.7		
24	44	55.3	161	47.9	-21	204	57.7	-7	141	05.4	-23	117	48.7	-22				
Dif.	—		-8	-7		+9	-6		+19	0		+23	0					

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'1			SD: 14'8			PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2												
	PMG: 11 ^h 43 ^m 6			Edad: 8 ^d 8															
	PMG: 19 ^h 51 ^m			Rº: 42 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.				Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°		°	h m	h m	h m	h m	m	h m	m		
0	184	06.2	-15	49.2		70	59.6	142	-14	59.0	91	60 N	15 52	16 39	17 29	15 15	9		
1	199	06.2		50.0		85	32.8	143		49.9	91	58	16 01	45	32	07 13	*** **		
2	214	06.2		50.7		100	06.1	144		40.8	91	56	10	50	35	15 01	14		
3	229	06.2		51.5		114	39.5	144		31.7	93	54	17	16 55	37	14 55	17		
4	244	06.1		52.2		129	12.9	144		22.4	93	52	23	17 00	40	50 18	*** **		
5	259	06.1	-15	53.0		143	46.3	145	-14	13.1	93	50	16 29	17 04	17 42	14 45	20		
6	274	06.1	-15	53.7		158	19.8	146	-14	03.8	94	45	16 42	17 13	17 48	14 34	24		
7	289	06.1		54.5		172	53.4	145	-13	54.4	94	40	16 52	21	53	26 27	25 58		
8	304	06.1		55.2		187	26.9	147		45.0	95	35	17 01	28	17 58	18 30	34 55		
9	319	06.0		56.0		202	00.6	146		35.5	96	30	09	34	18 03	12 31	42 53		
10	334	06.0		56.7		216	34.2	148		25.9	96	20	23	46	12	14 00	36		
11	349	06.0	-15	57.5		231	08.0	147	-13	16.3	97	10 N	17 36	17 57	18 23	13 50	39		
12	4	06.0	-15	58.2		245	41.7	148	-13	06.6	97	0	17 47	18 09	18 34	13 41	42		
13	19	05.9		59.0		260	15.5	149	-12	56.9	98	10 S	17 59	21	18 46	31 46	29 40		
14	34	05.9	-15	59.7		274	49.4	148		47.1	98	20	18 11	35	19 02	21 49	41 36		
15	49	05.9	-16	00.5		289	23.2	150		37.3	98	30	26	18 51	22	09 53	1 54 33		
16	64	05.9		01.2		303	57.2	149		27.5	99	35	34	19 02	35	13 02	56		
17	79	05.8	-16	02.0		318	31.1	150	-12	17.6	100	40	18 44	19 14	19 50	12 55	58		
18	94	05.8	-16	02.7		333	05.1	151	-12	07.6	100	45	18 56	19 28	20 09	12 46	61		
19	109	05.8		03.5		347	39.2	150	-11	57.6	101	50	19 10	47	35	35 65	32 22		
20	124	05.8		04.2		2	13.2	151		47.5	101	52	16	19 56	20 48	30 66	38 20		
21	139	05.7		05.0		16	47.3	152		37.4	101	54	23	20 06	21 03	24 69	44 18		
22	154	05.7		05.7		31	21.5	152		27.3	102	56	32	17	22	18 71	51 16		
23	169	05.7		06.4		45	55.7	152		17.1	103	58	41	31	21 45	11 73	2 59 13		
24	184	05.6	-16	07.2		60	29.9		-11	06.8		60 S	19 51	20 47	22 19	12 03	76		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 20 ^h 56 ^m 9		Mag: -3.8 PMG: 13 ^h 14 ^m			Mag: +1.8 PMG: 10 ^h 20 ^m			Mag: -1.9 PMG: 14 ^h 34 ^m			Mag: +0.6 PMG: 16 ^h 06 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	44	55.3	161	47.9	-21	39.9	204	57.7	-7	33.3	141	05.4	-23	-07.9	117	48.7	-22	22.7	
1	59	57.7	176	47.1		40.6	219	58.7		33.9	156	07.3		-07.9	132	51.0		22.7	
2	75	00.2	191	46.3		41.2	234	59.6		34.6	171	09.2		-07.9	147	53.2		22.7	
3	90	02.6	206	45.5		41.9	250	00.6		35.2	186	11.2		-07.9	162	55.5		22.7	
4	105	05.1	221	44.7		42.5	265	01.5		35.8	201	13.1		-08.0	177	57.7		22.6	
5	120	07.6	236	43.9	-21	43.2	280	02.4	-7	36.4	216	15.0	-23	-08.0	193	00.0	-22	22.6	
6	135	10.0	251	43.1	-21	43.9	295	03.4	-7	37.1	231	16.9	-23	-08.0	208	02.3	-22	22.6	
7	150	12.5	266	42.3		44.5	310	04.3		37.7	246	18.9		-08.0	223	04.5		22.6	
8	165	15.0	281	41.4		45.2	325	05.3		38.3	261	20.8		-08.1	238	06.8		22.6	
9	180	17.4	296	40.6		45.8	340	06.2		38.9	276	22.7		-08.1	253	09.1		22.6	
10	195	19.9	311	39.8		46.5	355	07.1		39.6	291	24.6		-08.1	268	11.3		22.5	
11	210	22.4	326	39.0	-21	47.1	10	08.1	-7	40.2	306	26.6	-23	-08.1	283	13.6	-22	22.5	
12	225	24.8	341	38.2	-21	47.8	25	09.0	-7	40.8	321	28.5	-23	-08.2	298	15.9	-22	22.5	
13	240	27.3	356	37.4		48.4	40	10.0		41.4	336	30.4		-08.2	313	18.1		22.5	
14	255	29.8	11	36.6		49.1	55	10.9		42.1	351	32.3		-08.2	328	20.4		22.5	
15	270	32.2	26	35.8		49.7	70	11.8		42.7	6	34.3		-08.2	343	22.6		22.4	
16	285	34.7	41	35.0		50.4	85	12.8		43.3	21	36.2		-08.3	358	24.9		22.4	
17	300	37.1	56	34.2	-21	51.0	100	13.7	-7	43.9	36	38.1	-23	-08.3	13	27.2	-22	22.4	
18	315	39.6	71	33.4	-21	51.7	115	14.7	-7	44.5	51	40.0	-23	-08.3	28	29.4	-22	22.4	
19	330	42.1	86	32.6		52.3	130	15.6		45.2	66	42.0		-08.3	43	31.7		22.4	
20	345	44.5	101	31.7		53.0	145	16.6		45.8	81	43.9		-08.4	58	34.0		22.4	
21	0	47.0	116	30.9		53.6	160	17.5		46.4	96	45.8		-08.4	73	36.2		22.3	
22	15	49.5	131	30.1		54.3	175	18.4		47.0	111	47.7		-08.4	88	38.5		22.3	
23	30	51.9	146	29.3		54.9	190	19.4		47.7	126	49.6		-08.4	103	40.7		22.3	
24	45	54.4	161	28.5	-21	55.5	205	20.3	-7	48.3	141	51.6	-23	-08.5	118	43.0	-22	22.3	
Dif.	—		-8			-7	+9			-6	+19			0		+23			0

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'1				SD: 14'8 Edad: 9'8	PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2			R ^o : 41 ^m	Náut.		Civil	Hora		R ^o	Hora	R ^o			
	PMG: 11 ^h 43 ^m 6																			
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.									
h	°	'	°	'	°	'		°	'			° N	h m	h m	h m	h m m		h m m		
0	184	05.6	-16	07.2	60	29.9	152	-11	06.8	103		60 N	6 00	6 50	7 37	15 24	8	0 40	76	
1	199	05.6		07.9	75	04.1	153	-10	56.5	103		58	5 56	44	27	20	10	46	74	
2	214	05.6		08.7	89	38.4	153		46.2	103		56	54	38	19	15	13	52	71	
3	229	05.6		09.4	104	12.7	154		35.9	105		54	51	33	12	12	15	0 57	69	
4	244	05.5		10.2	118	47.1	153		25.4	104		52	48	29	7 05	08	17	1 02	67	
5	259	05.5	-16	10.9	133	21.4	154	-10	15.0	105		50	5 46	6 24	6 59	15 05	19	1 06	65	
6	274	05.5	-16	11.6	147	55.8	155	-10	04.5	105		45	5 40	6 15	6 46	14 58	23	1 15	61	
7	289	05.4		12.4	162	30.3	154	-9	54.0	106		40	35	07	35	53	25	23	58	
8	304	05.4		13.1	177	04.7	155		43.4	106		35	30	6 00	26	48	28	29	55	
9	319	05.4		13.9	191	39.2	155		32.8	107		30	25	5 53	18	43	31	35	53	
10	334	05.3		14.6	206	13.7	156		22.1	107		20	15	41	6 04	36	34	45	48	
11	349	05.3	-16	15.3	220	48.3	155	-9	11.4	107		10 N	5 05	5 30	5 52	14 29	38	1 53	45	
12	4	05.3	-16	16.1	235	22.8	156	-9	00.7	108		0	4 54	5 19	5 40	14 23	41	2 01	42	
13	19	05.2		16.8	249	57.4	156	-8	49.9	108		10 S	41	5 06	28	17	44	09	38	
14	34	05.2		17.5	264	32.0	157		39.1	108		20	25	4 52	16	10	48	17	35	
15	49	05.2		18.3	279	06.7	156		28.3	109		30	4 05	35	5 01	14 02	53	27	31	
16	64	05.1		19.0	293	41.3	157		17.4	109		35	3 52	25	4 52	13 58	55	32	29	
17	79	05.1	-16	19.8	308	16.0	157	-8	06.5	109		40	3 37	4 13	4 43	13 53	58	2 38	26	
18	94	05.1	-16	20.5	322	50.7	158	-7	55.6	110		45	3 17	3 58	4 31	13 47	61	2 46	23	
19	109	05.0		21.2	337	25.5	157		44.6	110		50	2 52	40	17	40	65	54	19	
20	124	05.0		22.0	352	00.2	158		33.6	110		52	39	31	10	36	67	2 58	18	
21	139	05.0		22.7	6	35.0	157		22.6	111		54	23	21	4 03	33	69	3 02	16	
22	154	04.9		23.4	21	09.7	158		11.5	110		56	2 05	3 09	3 55	29	71	07	14	
23	169	04.9		24.2	35	44.5	158	-7	00.5	112		58	1 41	2 56	46	13 24	74	3 12	12	
24	184	04.9	-16	24.9	50	19.3		-6	49.3			60 S	1 07	2 40	3 35	13 19	77	3 18	9	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 20 ^h 52 ^m 9		Mag: -3.8 PMG: 13 ^h 15 ^m				Mag: +1.8 PMG: 10 ^h 18 ^m				Mag: -1.9 PMG: 14 ^h 31 ^m				Mag: +0.6 PMG: 16 ^h 03 ^m					
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	45	54.4	161	28.5	-21	55.5	205	20.3	-7	48.3	141	51.6	-23	08.5	118	43.0	-22	22.3		
1	60	56.9	176	27.7		56.2	220	21.3		48.9	156	53.5		08.5	133	45.3		22.3		
2	75	59.3	191	26.9		56.8	235	22.2		49.5	171	55.4		08.5	148	47.5		22.2		
3	91	01.8	206	26.1		57.4	250	23.1		50.1	186	57.3		08.5	163	49.8		22.2		
4	106	04.2	221	25.2		58.1	265	24.1		50.8	201	59.3		08.6	178	52.1		22.2		
5	121	06.7	236	24.4	-21	58.7	280	25.0	-7	51.4	217	01.2	-23	08.6	193	54.3	-22	22.2		
6	136	09.2	251	23.6	-21	59.3	295	25.9	-7	52.0	232	03.1	-23	08.6	208	56.6	-22	22.2		
7	151	11.6	266	22.8	-22	00.0	310	26.9		52.6	247	05.0		08.7	223	58.8		22.2		
8	166	14.1	281	22.0		00.6	325	27.8		53.3	262	06.9		08.7	239	01.1		22.1		
9	181	16.6	296	21.2		01.2	340	28.8		53.9	277	08.9		08.7	254	03.4		22.1		
10	196	19.0	311	20.3		01.9	355	29.7		54.5	292	10.8		08.7	269	05.6		22.1		
11	211	21.5	326	19.5	-22	02.5	10	30.6	-7	55.1	307	12.7	-23	08.8	284	07.9	-22	22.1		
12	226	24.0	341	18.7	-22	03.1	25	31.6	-7	55.7	322	14.6	-23	08.8	299	10.1	-22	22.1		
13	241	26.4	356	17.9		03.7	40	32.5		56.4	337	16.5		08.8	314	12.4		22.0		
14	256	28.9	11	17.1		04.4	55	33.5		57.0	352	18.5		08.8	329	14.7		22.0		
15	271	31.4	26	16.2		05.0	70	34.4		57.6	7	20.4		08.9	344	16.9		22.0		
16	286	33.8	41	15.4		05.6	85	35.3		58.2	22	22.3		08.9	359	19.2		22.0		
17	301	36.3	56	14.6	-22	06.2	100	36.3	-7	58.9	37	24.2	-23	08.9	14	21.4	-22	22.0		
18	316	38.7	71	13.8	-22	06.9	115	37.2	-7	59.5	52	26.1	-23	08.9	29	23.7	-22	21.9		
19	331	41.2	86	13.0		07.5	130	38.1	-8	00.1	67	28.1		09.0	44	26.0		21.9		
20	346	43.7	101	12.1		08.1	145	39.1		00.7	82	30.0		09.0	59	28.2		21.9		
21	1	46.1	116	11.3		08.7	160	40.0		01.3	97	31.9		09.0	74	30.5		21.9		
22	16	48.6	131	10.5		09.3	175	41.0		02.0	112	33.8		09.0	89	32.7		21.9		
23	31	51.1	146	09.7		09.9	190	41.9		02.6	127	35.7		09.1	104	35.0		21.9		
24	46	53.5	161	08.8	-22	10.6	205	42.8	-8	03.2	142	37.7	-23	09.1	119	37.3	-22	21.8		
Dif.	—		-8		-6		+9		-6		+19		0		+23					

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'1				SD: 14'8 Edad: 10 ^d 8												PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3		
	PMG: 11 ^h 43 ^m 7				PMG: 21 ^h 14 ^m													Rº: 42 ^m	
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.											
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	184	04.9	-16	24.9	50	19.3	159	-6	49.3	111	60 N	15 47	16 34	17 25	15 32	8	1 56	76	
1	199	04.8		25.6	64	54.2	158		38.2	112	58	15 57	41	28	30	11	2 00	73	
2	214	04.8		26.4	79	29.0	158		27.0	112	56	16 06	46	31	28	13	03	71	
3	229	04.7		27.1	94	03.8	159		15.8	112	54	13	52	34	27	14	06	69	
4	244	04.7		27.8	108	38.7	159	-6	04.6	113	52	20	16 56	37	25	17	09	66	
5	259	04.7	-16	28.5	123	13.6	159	-5	53.3	113	50	16 26	17 01	17 39	15 24	18	2 11	65	
6	274	04.6	-16	29.3	137	48.5	159	-5	42.0	113	45	16 39	17 11	17 46	15 21	21	2 16	61	
7	289	04.6		30.0	152	23.4	159		30.7	113	40	16 50	19	51	18	25	21	57	
8	304	04.6		30.7	166	58.3	159		19.4	114	35	17 00	26	17 56	16	27	24	55	
9	319	04.5		31.5	181	33.2	159	-5	08.0	114	30	08	33	18 02	14	30	28	52	
10	334	04.5		32.2	196	08.1	159	-4	56.6	114	20	22	45	12	10	34	33	49	
11	349	04.4	-16	32.9	210	43.0	160	-4	45.2	114	10 N	17 35	17 57	18 22	15 07	38	2 38	45	
12	4	04.4	-16	33.6	225	18.0	159	-4	33.8	115	0	17 47	18 09	18 34	15 04	42	2 43	41	
13	19	04.3		34.4	239	52.9	160		22.3	115	10 S	17 59	21	18 47	15 01	45	47	38	
14	34	04.3		35.1	254	27.9	159	-4	10.8	114	20	18 12	36	19 03	14 58	49	52	34	
15	49	04.3		35.8	269	02.8	160	-3	59.4	116	30	28	18 53	24	55	53	2 58	30	
16	64	04.2		36.5	283	37.8	159		47.8	115	35	36	19 04	37	53	55	3 01	28	
17	79	04.2	-16	37.3	298	12.7	160	-3	36.3	115	40	18 47	19 16	19 53	14 51	58	3 04	25	
18	94	04.1	-16	38.0	312	47.7	159	-3	24.8	116	45	18 58	19 32	20 13	14 48	61	3 09	21	
19	109	04.1		38.7	327	22.6	160		13.2	116	50	19 13	19 51	40	45	65	13	19	
20	124	04.0		39.4	341	57.6	160	-3	01.6	116	52	20	20 00	20 53	43	67	16	16	
21	139	04.0		40.2	356	32.6	159	-2	50.0	116	54	27	10	21 09	42	69	18	15	
22	154	04.0		40.9	11	07.5	160		38.4	116	56	36	23	29	40	71	21	12	
23	169	03.9		41.6	25	42.5	159		26.8	117	58	46	37	21 55	38	74	24	10	
24	184	03.9	-16	42.3	40	17.4		-2	15.1		60 S	19 57	20 54	22 33	14 36	76	3 27	8	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 20 ^h 49 ^m 0		Mag: -3.8 PMG: 13 ^h 16 ^m				Mag: +1.8 PMG: 10 ^h 17 ^m				Mag: -1.9 PMG: 14 ^h 28 ^m				Mag: +0.6 PMG: 15 ^h 59 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	46	53.5	161	08.8	-22	10.6	205	42.8	-8	03.2	142	37.7	-23	-09.1	119	37.3	-22	21.8	
1	61	56.0	176	08.0		11.2	220	43.8		03.8	157	39.6		-09.1	134	39.5		21.8	
2	76	58.5	191	07.2		11.8	235	44.7		04.4	172	41.5		-09.1	149	41.8		21.8	
3	92	00.9	206	06.4		12.4	250	45.6		05.1	187	43.4		-09.1	164	44.0		21.8	
4	107	03.4	221	05.5		13.0	265	46.6		05.7	202	45.3		-09.2	179	46.3		21.8	
5	122	05.9	236	04.7	-22	13.6	280	47.5	-8	06.3	217	47.3	-23	-09.2	194	48.6	-22	21.7	
6	137	08.3	251	03.9	-22	14.2	295	48.5	-8	06.9	232	49.2	-23	-09.2	209	50.8	-22	21.7	
7	152	10.8	266	03.1		14.8	310	49.4		07.5	247	51.1		-09.2	224	53.1		21.7	
8	167	13.2	281	02.2		15.4	325	50.3		08.2	262	53.0		-09.3	239	55.3		21.7	
9	182	15.7	296	01.4		16.0	340	51.3		08.8	277	54.9		-09.3	254	57.6		21.7	
10	197	18.2	311	00.6		16.6	355	52.2		09.4	292	56.8		-09.3	269	59.8		21.6	
11	212	20.6	325	59.7	-22	17.2	10	53.1	-8	10.0	307	58.8	-23	-09.3	285	02.1	-22	21.6	
12	227	23.1	340	58.9	-22	17.8	25	54.1	-8	10.6	323	00.7	-23	-09.4	300	04.4	-22	21.6	
13	242	25.6	355	58.1		18.4	40	55.0		11.2	338	02.6		-09.4	315	06.6		21.6	
14	257	28.0	10	57.3		19.0	55	55.9		11.9	353	04.5		-09.4	330	08.9		21.6	
15	272	30.5	25	56.4		19.6	70	56.9		12.5	8	06.4		-09.4	345	11.1		21.5	
16	287	33.0	40	55.6		20.2	85	57.8		13.1	23	08.3		-09.5	0	13.4		21.5	
17	302	35.4	55	54.8	-22	20.8	100	58.8	-8	13.7	38	10.3	-23	-09.5	15	15.6	-22	21.5	
18	317	37.9	70	53.9	-22	21.4	115	59.7	-8	14.3	53	12.2	-23	-09.5	30	17.9	-22	21.5	
19	332	40.3	85	53.1		22.0	131	00.6		15.0	68	14.1		-09.5	45	20.2		21.5	
20	347	42.8	100	52.3		22.6	146	01.6		15.6	83	16.0		-09.6	60	22.4		21.4	
21	2	45.3	115	51.4		23.2	161	02.5		16.2	98	17.9		-09.6	75	24.7		21.4	
22	17	47.7	130	50.6		23.8	176	03.4		16.8	113	19.8		-09.6	90	26.9		21.4	
23	32	50.2	145	49.8		24.4	191	04.4		17.4	128	21.8		-09.6	105	29.2		21.4	
24	47	52.7	160	48.9	-22	24.9	206	05.3	-8	18.1	143	23.7	-23	-09.7	120	31.4	-22	21.4	
Dif.	—		-8		-6		+9		-6		+19		0		+23		0		

UT	SOL				○ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 43 ^m 8				SD: 14'8 Edad: 11 ^d 8 PMG: 21 ^h 56 ^m PHE { 4^h: 54'4 12^h: 54'4 20^h: 54'5 Rº: 42 ^m															
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº	Hora	Rº							
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	° 184 199 214 229 244 259 274 289 304 319 334 349 4 19 34 49 64 79 94 109 124 139 154 169 184	' 03.9 03.8 03.8 03.7 03.7 03.6 03.6 03.5 03.5 03.4 03.4 03.3 03.3 03.2 03.2 03.1 03.1 03.0 03.0 02.9 02.9 02.8 02.8 02.7 02.7	° -16 -16 -16 -16 -16 -16 -16 -16	° 40 54 69 84 98 113 127 142 156 171 186 200 215 229 244 259 273 288 302 317 331 346 1 15 30	' 17.4 52.4 27.3 02.2 37.2 12.1 47.0 21.9 56.8 31.7 06.5 41.4 16.2 51.0 25.9 00.7 35.4 10.2 44.9 19.7 54.4 29.1 03.7 38.4 13.0	° 160 159 159 160 159 159 159 159 159 158 159 158 158 159 158 157 158 157 158 157 157 156 157 156 156	' -2 -2 -1 -1 -1 -0 -0 +0 +0 +1 +1 +1 +2 +2	° 15.1 03.4 51.8 40.1 28.4 16.7 05.0 53.2 41.5 29.7 18.0 06.2 05.6 17.3 29.1 40.9 52.7 04.5 16.3 28.1 39.9 51.7 03.5 15.3 27.1	° 60 N 58 56 54 52 50 45 40 35 30 20 10 N 0 10 S 20 30 35 40 45 50 52 54 56 58 60 S	h 6 6 5 5 5 5 4 3 3 2 1 5 4 4 4 3 3 3 2 2 3 2 1 0 5	h 6 6 4 4 3 6 5 6 6 5 4 5 5 5 4 3 2 4 3 3 4 3 0 3 2	h 7 4 2 2 0 7 6 4 3 2 6 5 4 2 1 5 4 4 2 1 4 3 5 4 3	h 15 4 4 4 4 1 5 4 3 3 4 1 4 6 4 8 5 9 6 5 6 7 1 5 2	h 3 1 4 1 1 6 4 3 2 4 4 5 2 4 7 5 5 9 6 6 9 5 3 3 5	h 3 1 2 1 1 6 4 3 2 4 4 5 2 4 7 5 5 9 6 6 9 5 3 3 5					
Dif.	—				-8				+9				+19				+23			

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43. ^m 9				SD: 14'9 Edad: 12 ^d 8 PMG: 22 ^h 38 ^m Rº: 44 ^m													
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.					
	h	°	'	°	'	h	°	'			°	h	m	h	m	h	m	m
0	184	02.7	-16	59.5	30	13.0	156	+2	27.1	118	60 N	15 43	16 30	17 21	15 48	9	4 29	79
1	199	02.6	-17	00.2	44	47.6	155		38.9	118	58	15 53	37	24	51	12	27	76
2	214	02.6		00.9	59	22.1	156	+2	50.7	117	56	16 02	43	28	54	14	26	73
3	229	02.5		01.6	73	56.7	155	+3	02.4	118	54	10	48	31	56	17	24	71
4	244	02.4		02.3	88	31.2	155		14.2	118	52	17	53	34	15 58	19	23	69
5	259	02.4	-17	03.0	103	05.7	154	+3	26.0	118	50	16 23	16 58	17 37	16 00	20	4 22	67
6	274	02.3	-17	03.7	117	40.1	155	+3	37.8	117	45	16 37	17 08	17 43	16 05	24	4 19	63
7	289	02.3		04.4	132	14.6	154	+3	49.5	118	40	48	17	49	08	27	17	60
8	304	02.2		05.1	146	49.0	153	+4	01.3	117	35	16 58	25	17 55	11	30	15	57
9	319	02.2		05.8	161	23.3	154		13.0	118	30	17 07	32	18 01	14	33	13	55
10	334	02.1		06.5	175	57.7	153		24.8	117	20	22	45	11	19	37	11	50
11	349	02.0	-17	07.2	190	32.0	153	+4	36.5	117	10 N	17 35	17 57	18 22	16 24	40	4 08	46
12	4	02.0	-17	07.9	205	06.3	152	+4	48.2	117	0	17 47	18 09	18 34	16 28	43	4 06	42
13	19	01.9		08.6	219	40.5	152	+4	59.9	117	10 S	18 00	22	18 48	32	47	03	39
14	34	01.9		09.3	234	14.7	152	+5	11.6	117	20	14	37	19 04	36	51	4 01	35
15	49	01.8		10.0	248	48.9	151		23.3	116	30	29	18 55	26	41	56	3 58	31
16	64	01.7		10.7	263	23.0	151		34.9	117	35	38	19 06	39	44	58	56	29
17	79	01.7	-17	11.4	277	57.1	151	+5	46.6	116	40	18 49	19 19	19 56	16 48	60	3 54	26
18	94	01.6	-17	12.1	292	31.2	150	+5	58.2	116	45	19 01	19 35	20 17	16 52	63	3 52	23
19	109	01.6		12.8	307	05.2	150	+6	09.8	116	50	16	19 55	44	56	68	50	19
20	124	01.5		13.5	321	39.2	149		21.4	116	52	24	20 04	20 59	16 59	69	49	17
21	139	01.4		14.2	336	13.1	149		33.0	116	54	32	15	21 15	17 01	72	47	16
22	154	01.4		14.9	350	47.0	149		44.6	115	56	40	28	21 36	04	74	46	13
23	169	01.3		15.6	5	20.9	148	+6	56.1	116	58	19 51	20 43	22 05	07	76	44	11
24	184	01.2	-17	16.3	19	54.7		+7	07.7		60 S	20 02	21 00	22 51	17 10	80	3 43	8
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.8 PMG: 13 ^h 19 ^m				Mag: +1.8 PMG: 10 ^h 14 ^m				Mag: -1.9 PMG: 14 ^h 22 ^m				Mag: +0.6 PMG: 15 ^h 52 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	48	51.8	160	28.7	-22	38.7	206	27.7	-8	32.9	144	09.6	-23	-10.2	121	25.5	-22	20.9
1	63	54.3	175	27.9		39.2	221	28.6		33.5	159	11.5		-10.3	136	27.8		20.9
2	78	56.7	190	27.1		39.8	236	29.6		34.1	174	13.4		-10.3	151	30.0		20.9
3	93	59.2	205	26.2		40.4	251	30.5		34.7	189	15.4		-10.3	166	32.3		20.8
4	109	01.7	220	25.4		40.9	266	31.4		35.3	204	17.3		-10.3	181	34.5		20.8
5	124	04.1	235	24.5	-22	41.5	281	32.4	-8	35.9	219	19.2	-23	-10.3	196	36.8	-22	20.8
6	139	06.6	250	23.7	-22	42.0	296	33.3	-8	36.6	234	21.1	-23	-10.4	211	39.0	-22	20.8
7	154	09.1	265	22.8		42.6	311	34.2		37.2	249	23.0		-10.4	226	41.3		20.8
8	169	11.5	280	22.0		43.1	326	35.1		37.8	264	24.9		-10.4	241	43.5		20.7
9	184	14.0	295	21.1		43.7	341	36.1		38.4	279	26.8		-10.4	256	45.8		20.7
10	199	16.4	310	20.3		44.2	356	37.0		39.0	294	28.7		-10.5	271	48.0		20.7
11	214	18.9	325	19.4	-22	44.8	11	37.9	-8	39.6	309	30.7	-23	-10.5	286	50.3	-22	20.7
12	229	21.4	340	18.6	-22	45.3	26	38.9	-8	40.2	324	32.6	-23	-10.5	301	52.5	-22	20.7
13	244	23.8	355	17.7		45.9	41	39.8		40.9	339	34.5		-10.5	316	54.8		20.6
14	259	26.3	10	16.9		46.4	56	40.7		41.5	354	36.4		-10.6	331	57.0		20.6
15	274	28.8	25	16.0		46.9	71	41.7		42.1	9	38.3		-10.6	346	59.3		20.6
16	289	31.2	40	15.2		47.5	86	42.6		42.7	24	40.2		-10.6	2	01.5		20.6
17	304	33.7	55	14.3	-22	48.0	101	43.5	-8	43.3	39	42.1	-23	-10.6	17	03.8	-22	20.6
18	319	36.2	70	13.4	-22	48.6	116	44.4	-8	43.9	54	44.0	-23	-10.6	32	06.0	-22	20.5
19	334	38.6	85	12.6		49.1	131	45.4		44.6	69	45.9		-10.7	47	08.3		20.5
20	349	41.1	100	11.7		49.6	146	46.3		45.2	84	47.8		-10.7	62	10.5		20.5
21	4	43.6	115	10.9		50.2	161	47.2		45.8	99	49.8		-10.7	77	12.8		20.5
22	19	46.0	130	10.0		50.7	176	48.2		46.4	114	51.7		-10.7	92	15.0		20.5
23	34	48.5	145	09.2		51.2	191	49.1		47.0	129	53.6		-10.8	107	17.3		20.4
24	49	50.9	160	08.3	-22	51.8	206	50.0	-8	47.6	144	55.5	-23	-10.8	122	19.5	-22	20.4
Dif.	—		-9		-5		+9		-6		+19		0		+23			

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 44 ^m 0				SD: 15'0 Edad: 13 ^d 8 PHE { 4 ^h : 55'0 12 ^h : 55'2 20 ^h : 55'3 PMG: 23 ^h 22 ^m Rº: 47 ^m														
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	184	01.2	-17	16.3	19	54.7	148	+7	07.7	115	60 N	6 08	6 59	7 47	15 57	12	5 48	81	
1	199	01.2		17.0	34	28.5	147		19.2	114	58	04	52	36	16 03	14	43	78	
2	214	01.1		17.7	49	02.2	147		30.6	115	56	6 01	46	27	08	17	39	75	
3	229	01.1		18.4	63	35.9	147		42.1	114	54	5 57	40	19	13	19	35	73	
4	244	01.0		19.1	78	09.6	146	+7	53.5	114	52	54	35	12	17	21	32	70	
5	259	00.9	-17	19.8	92	43.2	145	+8	04.9	114	50	5 52	6 31	7 06	16 20	23	5 29	68	
6	274	00.9	-17	20.5	107	16.7	145	+8	16.3	114	45	5 45	6 20	6 52	16 29	26	5 22	65	
7	289	00.8		21.2	121	50.2	145		27.7	113	40	39	11	40	35	30	17	61	
8	304	00.7		21.9	136	23.7	144		39.0	113	35	33	6 03	30	41	33	12	58	
9	319	00.7		22.6	150	57.1	144	+8	50.3	112	30	28	5 56	21	47	35	08	56	
10	334	00.6		23.2	165	30.5	143	+9	01.5	113	20	17	43	6 06	16 56	39	5 01	51	
11	349	00.5	-17	23.9	180	03.8	142	+9	12.8	112	10 N	5 06	5 31	5 53	17 04	42	4 54	48	
12	4	00.5	-17	24.6	194	37.0	142	+9	24.0	112	0	4 54	5 19	5 40	17 11	46	4 48	45	
13	19	00.4		25.3	209	10.2	142		35.2	111	10 S	40	5 06	28	19	49	42	42	
14	34	00.3		26.0	223	43.4	141		46.3	111	20	23	4 51	5 14	27	53	36	38	
15	49	00.3		26.7	238	16.5	140	+9	57.4	111	30	4 02	33	4 58	37	56	29	34	
16	64	00.2		27.4	252	49.5	140	+10	08.5	110	35	3 48	21	49	42	59	25	31	
17	79	00.1	-17	28.1	267	22.5	140	+10	19.5	110	40	3 32	4 08	4 38	17 48	62	4 20	29	
18	94	00.0	-17	28.8	281	55.5	139	+10	30.5	110	45	3 11	3 53	4 26	17 55	66	4 15	25	
19	109	00.0		29.4	296	28.4	138		41.5	109	50	2 43	33	11	18 04	70	09	21	
20	123	59.9		30.1	311	01.2	138	+10	52.4	109	52	29	23	4 04	08	72	06	19	
21	138	59.8		30.8	325	34.0	137	+11	03.3	109	54	2 12	3 12	3 56	13	73	4 03	17	
22	153	59.8		31.5	340	06.7	136		14.2	108	56	1 51	2 59	47	18	76	3 59	15	
23	168	59.7		32.2	354	39.3	136		25.0	107	58	1 22	45	37	18 23	79	3 55	13	
24	183	59.6	-17	32.9	9	11.9		+11	35.7		60 S	0 36	2 27	3 25	18 30	82	3 51	10	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 20 ^h 37 ^m 2		Mag: -3.8 PMG: 13 ^h 20 ^m				Mag: +1.8 PMG: 10 ^h 12 ^m				Mag: -1.9 PMG: 14 ^h 18 ^m				Mag: +0.6 PMG: 15 ^h 48 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	49	50.9	160	08.3	-22	51.8	206	50.0	-8	47.6	144	55.5	-23	10.8	122	19.5	-22	20.4	
1	64	53.4	175	07.5		52.3	221	51.0		48.2	159	57.4		10.8	137	21.8		20.4	
2	79	55.9	190	06.6		52.8	236	51.9		48.8	174	59.3		10.8	152	24.0		20.4	
3	94	58.3	205	05.7		53.4	251	52.8		49.5	190	01.2		10.8	167	26.3		20.4	
4	110	00.8	220	04.9		53.9	266	53.7		50.1	205	03.1		10.9	182	28.5		20.3	
5	125	03.3	235	04.0	-22	54.4	281	54.7	-8	50.7	220	05.0	-23	10.9	197	30.8	-22	20.3	
6	140	05.7	250	03.2	-22	54.9	296	55.6	-8	51.3	235	06.9	-23	10.9	212	33.0	-22	20.3	
7	155	08.2	265	02.3		55.5	311	56.5		51.9	250	08.9		10.9	227	35.3		20.3	
8	170	10.7	280	01.5		56.0	326	57.4		52.5	265	10.8		11.0	242	37.5		20.2	
9	185	13.1	295	00.6		56.5	341	58.4		53.1	280	12.7		11.0	257	39.8		20.2	
10	200	15.6	309	59.7		57.0	356	59.3		53.8	295	14.6		11.0	272	42.0		20.2	
11	215	18.0	324	58.9	-22	57.6	12	00.2	-8	54.4	310	16.5	-23	11.0	287	44.3	-22	20.2	
12	230	20.5	339	58.0	-22	58.1	27	01.2	-8	55.0	325	18.4	-23	11.0	302	46.5	-22	20.2	
13	245	23.0	354	57.2		58.6	42	02.1		55.6	340	20.3		11.1	317	48.8		20.1	
14	260	25.4	9	56.3		59.1	57	03.0		56.2	355	22.2		11.1	332	51.0		20.1	
15	275	27.9	24	55.4	-22	59.6	72	03.9		56.8	10	24.1		11.1	347	53.3		20.1	
16	290	30.4	39	54.6	-23	00.1	87	04.9		57.4	25	26.0		11.1	2	55.5		20.1	
17	305	32.8	54	53.7	-23	00.7	102	05.8	-8	58.0	40	27.9	-23	11.2	17	57.8	-22	20.1	
18	320	35.3	69	52.8	-23	01.2	117	06.7	-8	58.7	55	29.8	-23	11.2	33	00.0	-22	20.0	
19	335	37.8	84	52.0		01.7	132	07.6		59.3	70	31.7		11.2	48	02.3		20.0	
20	350	40.2	99	51.1		02.2	147	08.6	-8	59.9	85	33.7		11.2	63	04.5		20.0	
21	5	42.7	114	50.2		02.7	162	09.5	-9	00.5	100	35.6		11.2	78	06.7		20.0	
22	20	45.2	129	49.4		03.2	177	10.4		01.1	115	37.5		11.3	93	09.0		20.0	
23	35	47.6	144	48.5		03.7	192	11.4		01.7	130	39.4		11.3	108	11.2		19.9	
24	50	50.1	159	47.7	-23	04.2	207	12.3	-9	02.3	145	41.3	-23	11.3	123	13.5	-22	19.9	
Dif.	—		-9		-5		+9		-6		+19		0		+22		0		

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2			SD: 15'1		PHE { 4 ^h : 55'5 12 ^h : 55'6 20 ^h : 55'8											
	PMG: 11 ^h 44 ^m 1			Edad: 14 ^d 8													
				PMG: ** **		R ^o : **											
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.			Civil	Náut.	Hora	R ^o	Hora	R ^o
h	°	'	°	°	'		°	'			h m	h m	h m	h m m		h m m	
0	183	59.6	-17 32.9	9	11.9	136	+11 35.7	107	60 N	15 38	16 26	17 17	16 09	15	7 09	82	
1	198	59.6		23	44.5	135		46.4	107	58	49	33	21	17 19	7 01	79	
2	213	59.5		38	17.0	134	+11 57.1	106	56	15 58	40	25	25 21		6 54	76	
3	228	59.4		52	49.4	133	+12 07.7	106	54	16 06	45	28	32 24		48	74	
4	243	59.3		67	21.7	133		18.3	106	52	14	51	31	38 26		42	72
5	258	59.3	-17 36.3	81	54.0	133	+12 28.9	104	50	16 20	16 55	17 35	16 43	28	6 37	70	
6	273	59.2	-17 37.0	96	26.3	131	+12 39.3	105	45	16 35	17 06	17 41	16 55	32	6 27	66	
7	288	59.1		110	58.4	131	+12 49.8	104	40	47	15	48	17 05	35	18	63	
8	303	59.0		125	30.5	131	+13 00.2	103	35	16 57	23	17 54	14 37		10	60	
9	318	59.0		140	02.6	130		10.5	103	30	17 06	31	18 00	22 39		6 04	57
10	333	58.9		154	34.6	129		20.8	102	20	21	44	11	35 42		5 52	54
11	348	58.8	-17 40.4	169	06.5	128	+13 31.0	102	10 N	17 35	17 57	18 22	17 46	46	5 42	51	
12	3	58.7	-17 41.0	183	38.3	128	+13 41.2	101	0	17 48	18 09	18 35	17 57	49	5 33	47	
13	18	58.7		198	10.1	127	+13 51.3	101	10 S	18 01	23	18 49	18 08	52	24	44	
14	33	58.6		212	41.8	127	+14 01.4	100	20	15	38	19 06	20 55		14	40	
15	48	58.5		227	13.5	126		11.4	99	30	31	18 57	28	33 59	5 03	36	
16	63	58.4		241	45.1	125		21.3	99	35	40	19 08	42	41 61	4 56	35	
17	78	58.3	-17 44.4	256	16.6	124	+14 31.2	99	40	18 51	19 21	19 59	18 50	64	4 49	32	
18	93	58.3	-17 45.1	270	48.0	124	+14 41.1	97	45	19 04	19 38	20 20	19 01	66	4 40	29	
19	108	58.2		285	19.4	123	+14 50.8	97	50	20	19 58	20 49	14 70		30	25	
20	123	58.1		299	50.7	123	+15 00.5	97	52	27	20 08	21 04	20 72		25	23	
21	138	58.0		314	22.0	122		10.2	95	54	35	20	22	26 75	20	21	
22	153	57.9		328	53.2	121		19.7	96	56	45	33	21 44	34 77	14	19	
23	168	57.9		343	24.3	120		29.3	94	58	19 55	20 48	22 15	42 80	08	16	
24	183	57.8	-17 49.1	357	55.3		+15 38.7		60 S	20 08	21 07	23 16	19 52	83	4 01	13	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 20 ^h 33 ^m 3		Mag: -3.8 PMG: 13 ^h 22 ^m			Mag: +1.8 PMG: 10 ^h 11 ^m			Mag: -1.9 PMG: 14 ^h 15 ^m			Mag: +0.6 PMG: 15 ^h 45 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	50	50.1	159	47.7	-23 04.2	207	12.3	-9 02.3	145	41.3	-23 -11.3	123	13.5	-22 19.9
1	65	52.5	174	46.8	04.7	222	13.2	02.9	160	43.2	-11.3	138	15.7	19.9
2	80	55.0	189	45.9	05.2	237	14.1	03.5	175	45.1	-11.4	153	18.0	19.9
3	95	57.5	204	45.1	05.7	252	15.1	04.2	190	47.0	-11.4	168	20.2	19.9
4	110	59.9	219	44.2	06.2	267	16.0	04.8	205	48.9	-11.4	183	22.5	19.8
5	126	02.4	234	43.3	-23 06.7	282	16.9	-9 05.4	220	50.8	-23 -11.4	198	24.7	-22 19.8
6	141	04.9	249	42.4	-23 07.2	297	17.8	-9 06.0	235	52.7	-23 -11.4	213	27.0	-22 19.8
7	156	07.3	264	41.6	07.7	312	18.8	06.6	250	54.6	-11.5	228	29.2	19.8
8	171	09.8	279	40.7	08.2	327	19.7	07.2	265	56.5	-11.5	243	31.4	19.7
9	186	12.3	294	39.8	08.7	342	20.6	07.8	280	58.4	-11.5	258	33.7	19.7
10	201	14.7	309	39.0	09.2	357	21.5	08.4	296	00.3	-11.5	273	35.9	19.7
11	216	17.2	324	38.1	-23 09.7	12	22.5	-9 09.0	311	02.2	-23 -11.6	288	38.2	-22 19.7
12	231	19.7	339	37.2	-23 10.2	27	23.4	-9 09.7	326	04.1	-23 -11.6	303	40.4	-22 19.7
13	246	22.1	354	36.4	10.7	42	24.3	10.3	341	06.1	-11.6	318	42.7	19.6
14	261	24.6	9	35.5	11.1	57	25.2	10.9	356	08.0	-11.6	333	44.9	19.6
15	276	27.0	24	34.6	11.6	72	26.2	11.5	11	09.9	-11.6	348	47.2	19.6
16	291	29.5	39	33.7	12.1	87	27.1	12.1	26	11.8	-11.7	3	49.4	19.6
17	306	32.0	54	32.9	-23 12.6	102	28.0	-9 12.7	41	13.7	-23 -11.7	18	51.6	-22 19.6
18	321	34.4	69	32.0	-23 13.1	117	28.9	-9 13.3	56	15.6	-23 -11.7	33	53.9	-22 19.5
19	336	36.9	84	31.1	13.6	132	29.9	13.9	71	17.5	-11.7	48	56.1	19.5
20	351	39.4	99	30.3	14.1	147	30.8	14.5	86	19.4	-11.7	63	58.4	19.5
21	6	41.8	114	29.4	14.5	162	31.7	15.1	101	21.3	-11.8	79	00.6	19.5
22	21	44.3	129	28.5	15.0	177	32.6	15.7	116	23.2	-11.8	94	02.9	19.4
23	36	46.8	144	27.6	15.5	192	33.5	16.4	131	25.1	-11.8	109	05.1	19.4
24	51	49.2	159	26.8	-23 16.0	207	34.5	-9 17.0	146	27.0	-23 -11.8	124	07.4	-22 19.4
Dif.	—		-9	-5		+9	-6		+19	0		+22	0	

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			SD: 15'2			PHE { 4^h: 55'9 12^h: 56'1 20^h: 56'3											
	PMG: 11 ^h 44 ^m 2			Edad: 15 ^d 8			Rº: 49 ^m											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	183	57.8	-17	49.1	357	55.3	120	+15	38.7	94	60 N	6 12	7 04	7 52	16 24	23	8 31	83
1	198	57.7		49.8	12	26.3	119		48.1	93	58	08	6 56	41	36	26	20	79
2	213	57.6		50.5	26	57.2	118	+15	57.4	92	56	04	50	32	46	29	10	76
3	228	57.5		51.1	41	28.0	118	+16	06.6	92	54	6 01	44	23	16 56	30	8 02	73
4	243	57.5		51.8	55	58.8	116		15.8	91	52	5 58	39	16	17 04	32	7 54	72
5	258	57.4	-17	52.5	70	29.4	117	+16	24.9	90	50	5 54	6 34	7 09	17 11	34	7 47	70
6	273	57.3	-17	53.1	85	00.1	115	+16	33.9	89	45	5 47	6 23	6 54	17 27	37	7 33	66
7	288	57.2		53.8	99	30.6	115		42.8	89	40	41	13	42	40	40	21	63
8	303	57.1		54.5	114	01.1	114	+16	51.7	88	35	35	6 05	32	17 51	42	10	61
9	318	57.0		55.1	128	31.5	113	+17	00.5	87	30	29	5 58	23	18 01	43	7 01	60
10	333	57.0		55.8	143	01.8	112		09.2	87	20	18	44	6 07	17	47	6 46	56
11	348	56.9	-17	56.5	157	32.0	112	+17	17.9	85	10 N	5 06	5 32	5 54	18 32	50	6 33	53
12	3	56.8	-17	57.1	172	02.2	111	+17	26.4	85	0	4 54	5 19	5 41	18 46	52	6 20	50
13	18	56.7		57.8	186	32.3	111		34.9	84	10 S	39	5 05	28	19 00	54	6 08	47
14	33	56.6		58.5	201	02.4	109		43.3	83	20	22	4 50	5 13	15	56	5 54	45
15	48	56.5		59.1	215	32.3	109		51.6	83	30	4 00	31	4 57	32	60	39	42
16	63	56.4	-17	59.8	230	02.2	108	+17	59.9	81	35	3 46	20	48	42	61	31	39
17	78	56.4	-18	00.4	244	32.0	108	+18	08.0	81	40	3 29	4 06	4 37	19 54	63	5 21	37
18	93	56.3	-18	01.1	259	01.8	106	+18	16.1	79	45	3 08	3 50	4 24	20 07	66	5 09	34
19	108	56.2		01.8	273	31.4	106		24.0	79	50	2 39	29	08	24	69	4 55	30
20	123	56.1		02.4	288	01.0	106		31.9	78	52	24	19	4 00	32	71	48	29
21	138	56.0		03.1	302	30.6	104		39.7	77	54	2 06	3 08	3 52	41	72	41	27
22	153	55.9		03.7	317	00.0	104		47.4	76	56	1 43	2 55	43	20 51	75	33	24
23	168	55.8		04.4	331	29.4	103	+18	55.0	76	58	1 12	39	32	21 02	78	4 24	22
24	183	55.7	-18	05.1	345	58.7		+19	02.6		60 S	0 09	2 20	3 20	21 15	81	4 14	18

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 29 ^m 4		Mag: -3.8 PMG: 13 ^h 23 ^m			Mag: +1.8 PMG: 10 ^h 09 ^m			Mag: -1.9 PMG: 14 ^h 12 ^m			Mag: +0.6 PMG: 15 ^h 41 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'			
0	51	49.2	159	26.8	-23	16.0	207	34.5	-9	17.0	146	27.0	-23	11.8	124	07.4	-22	19.4
1	66	51.7	174	25.9		16.4	222	35.4		17.6	161	28.9		11.9	139	09.6		19.4
2	81	54.1	189	25.0		16.9	237	36.3		18.2	176	30.8		11.9	154	11.8		19.4
3	96	56.6	204	24.1		17.4	252	37.2		18.8	191	32.7		11.9	169	14.1		19.3
4	111	59.1	219	23.3		17.9	267	38.2		19.4	206	34.6		11.9	184	16.3		19.3
5	127	01.5	234	22.4	-23	18.3	282	39.1	-9	20.0	221	36.5	-23	11.9	199	18.6	-22	19.3
6	142	04.0	249	21.5	-23	18.8	297	40.0	-9	20.6	236	38.4	-23	12.0	214	20.8	-22	19.3
7	157	06.5	264	20.6		19.3	312	40.9		21.2	251	40.3		12.0	229	23.1		19.3
8	172	08.9	279	19.7		19.7	327	41.9		21.8	266	42.2		12.0	244	25.3		19.2
9	187	11.4	294	18.9		20.2	342	42.8		22.4	281	44.1		12.0	259	27.5		19.2
10	202	13.9	309	18.0		20.7	357	43.7		23.1	296	46.0		12.0	274	29.8		19.2
11	217	16.3	324	17.1	-23	21.1	12	44.6	-9	23.7	311	47.9	-23	12.1	289	32.0	-22	19.2
12	232	18.8	339	16.2	-23	21.6	27	45.5	-9	24.3	326	49.8	-23	12.1	304	34.3	-22	19.1
13	247	21.3	354	15.3		22.1	42	46.5		24.9	341	51.7		12.1	319	36.5		19.1
14	262	23.7	9	14.5		22.5	57	47.4		25.5	356	53.6		12.1	334	38.7		19.1
15	277	26.2	24	13.6		23.0	72	48.3		26.1	11	55.5		12.1	349	41.0		19.1
16	292	28.6	39	12.7		23.4	87	49.2		26.7	26	57.4		12.2	4	43.2		19.1
17	307	31.1	54	11.8	-23	23.9	102	50.1	-9	27.3	41	59.3	-23	12.2	19	45.5	-22	19.0
18	322	33.6	69	10.9	-23	24.3	117	51.1	-9	27.9	57	01.2	-23	12.2	34	47.7	-22	19.0
19	337	36.0	84	10.1		24.8	132	52.0		28.5	72	03.1		12.2	49	49.9		19.0
20	352	38.5	99	09.2		25.2	147	52.9		29.1	87	05.0		12.2	64	52.2		19.0
21	7	41.0	114	08.3		25.7	162	53.8		29.7	102	06.9		12.3	79	54.4		19.0
22	22	43.4	129	07.4		26.2	177	54.7		30.3	117	08.8		12.3	94	56.7		18.9
23	37	45.9	144	06.5		26.6	192	55.7		30.9	132	10.7		12.3	109	58.9		18.9
24	52	48.4	159	05.6	-23	27.0	207	56.6	-9	31.6	147	12.6	-23	12.3	125	01.1	-22	18.9
Dif.	—		-9		-5		+9		-6		+19		0		+22			

UT	SOL				○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 44 ^m 4				SD: 15'4 Edad: 16 ^d 8 PMG:00 ^h 58 ^m PHE { 4^h: 56'4 12^h: 56'6 20^h: 56'8 R ^o : 53 ^m															
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.							
	h	°	'	°	'	°	'	°	'	°			'	h	m	h	m	h	m	m
0	183	55.7	-18	05.1	345	58.7	102	+19	02.6	74	60 N	15 33	16 22	17 14	16 47	34	9 54	77		
1	198	55.6		05.7	0	27.9	102		10.0	73	58	45	30	18	17 02	37	39	74		
2	213	55.6		06.4	14	57.1	101		17.3	73	56	15 54	36	22	15 39	26	72			
3	228	55.5		07.0	29	26.2	100		24.6	71	54	16 03	42	26	26 41	15	71			
4	243	55.4		07.7	43	55.2	100		31.7	70	52	11	48	29	36 42	9 06	68			
5	258	55.3	-18	08.3	58	24.2	98	+19	38.7	70	50	16 18	16 53	17 32	17 45	43	8 57	67		
6	273	55.2	-18	09.0	72	53.0	98	+19	45.7	68	45	16 33	17 04	17 40	18 04	46	8 39	65		
7	288	55.1		09.7	87	21.8	98		52.5	68	40	45	14	46	20 47	24	63			
8	303	55.0		10.3	101	50.6	96	+19	59.3	66	35	16 55	22	53	33 48	11	61			
9	318	54.9		11.0	116	19.2	96	+20	05.9	66	30	17 05	30	17 59	18 44	50	8 01	59		
10	333	54.8		11.6	130	47.8	96		12.5	64	20	21	44	18 10	19 04	52	7 42	57		
11	348	54.7	-18	12.3	145	16.4	94	+20	18.9	63	10 N	17 35	17 57	18 22	19 22	53	7 26	55		
12	3	54.6	-18	12.9	159	44.8	94	+20	25.2	63	0	17 48	18 10	18 35	19 38	54	7 10	54		
13	18	54.5		13.6	174	13.2	93		31.5	61	10 S	18 01	24	18 50	19 54	56	6 55	52		
14	33	54.4		14.2	188	41.5	93		37.6	60	20	16	39	19 07	20 11	58	39	49		
15	48	54.3		14.9	203	09.8	92		43.6	59	30	33	18 59	30	32 59	21	46			
16	63	54.3		15.5	217	38.0	91		49.5	58	35	42	19 10	19 44	43 61	6 10	45			
17	78	54.2	-18	16.2	232	06.1	90	+20	55.3	57	40	18 54	19 24	20 02	20 57	62	5 58	43		
18	93	54.1	-18	16.8	246	34.1	90	+21	01.0	55	45	19 07	19 41	20 24	21 13	63	5 43	41		
19	108	54.0		17.5	261	02.1	89		06.5	55	50	23	20 02	20 54	33 65	25	39			
20	123	53.9		18.1	275	30.0	89		12.0	53	52	31	13	21 09	43 66	17	37			
21	138	53.8		18.8	289	57.9	88		17.3	53	54	39	24	28	21 53	68	5 08	35		
22	153	53.7		19.4	304	25.7	87		22.6	51	56	19 49	38	21 52	22 06	68	4 57	33		
23	168	53.6		20.0	318	53.4	87		27.7	50	58	20 00	20 54	22 27	20 70	46	30			
24	183	53.5	-18	20.7	333	21.1		+21	32.7		60 S	20 13	21 14	** **	22 36	73	4 32	27		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 25 ^m 4		Mag: -3.8 PMG: 13 ^h 24 ^m				Mag: +1.8 PMG: 10 ^h 08 ^m				Mag: -1.9 PMG: 14 ^h 09 ^m				Mag: +0.6 PMG: 15 ^h 38 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	52	48.4	159	05.6	-23 27.0	207	56.6	-9 31.6	147	12.6	-23 -12.3	125	01.1	-22 18.9				
1	67	50.8	174	04.8	27.5	222	57.5	32.2	162	14.6	-12.3	140	03.4	18.9				
2	82	53.3	189	03.9	27.9	237	58.4	32.8	177	16.5	-12.4	155	05.6	18.8				
3	97	55.8	204	03.0	28.4	252	59.3	33.4	192	18.4	-12.4	170	07.9	18.8				
4	112	58.2	219	02.1	28.8	268	00.3	34.0	207	20.3	-12.4	185	10.1	18.8				
5	128	00.7	234	01.2	-23 29.3	283	01.2	-9 34.6	222	22.2	-23 -12.4	200	12.3	-22 18.8				
6	143	03.1	249	00.3	-23 29.7	298	02.1	-9 35.2	237	24.1	-23 -12.5	215	14.6	-22 18.8				
7	158	05.6	263	59.4	30.2	313	03.0	35.8	252	26.0	-12.5	230	16.8	18.7				
8	173	08.1	278	58.6	30.6	328	03.9	36.4	267	27.9	-12.5	245	19.1	18.7				
9	188	10.5	293	57.7	31.0	343	04.9	37.0	282	29.8	-12.5	260	21.3	18.7				
10	203	13.0	308	56.8	31.5	358	05.8	37.6	297	31.6	-12.5	275	23.5	18.7				
11	218	15.5	323	55.9	-23 31.9	13	06.7	-9 38.2	312	33.5	-23 -12.6	290	25.8	-22 18.6				
12	233	17.9	338	55.0	-23 32.3	28	07.6	-9 38.8	327	35.4	-23 -12.6	305	28.0	-22 18.6				
13	248	20.4	353	54.1	32.8	43	08.5	39.4	342	37.3	-12.6	320	30.3	18.6				
14	263	22.9	8	53.2	33.2	58	09.5	40.0	357	39.2	-12.6	335	32.5	18.6				
15	278	25.3	23	52.3	33.6	73	10.4	40.6	12	41.1	-12.6	350	34.7	18.6				
16	293	27.8	38	51.4	34.1	88	11.3	41.2	27	43.0	-12.7	5	37.0	18.5				
17	308	30.3	53	50.6	-23 34.5	103	12.2	-9 41.9	42	44.9	-23 -12.7	20	39.2	-22 18.5				
18	323	32.7	68	49.7	-23 34.9	118	13.1	-9 42.5	57	46.8	-23 -12.7	35	41.4	-22 18.5				
19	338	35.2	83	48.8	35.3	133	14.0	43.1	72	48.7	-12.7	50	43.7	18.5				
20	353	37.6	98	47.9	35.8	148	15.0	43.7	87	50.6	-12.7	65	45.9	18.4				
21	8	40.1	113	47.0	36.2	163	15.9	44.3	102	52.5	-12.8	80	48.2	18.4				
22	23	42.6	128	46.1	36.6	178	16.8	44.9	117	54.4	-12.8	95	50.4	18.4				
23	38	45.0	143	45.2	37.0	193	17.7	45.5	132	56.3	-12.8	110	52.6	18.4				
24	53	47.5	158	44.3	-23 37.4	208	18.6	-9 46.1	147	58.2	-23 -12.8	125	54.9	-22 18.4				
Dif.	—		-9		-4	+9		-6	+19		0	+22						

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2				PHE { 4 ^h : 56'9 12 ^h : 57'1 20 ^h : 57'2													
	PMG: 11 ^h 44 ^m 5				Edad: 17 ^d 8													
	PMG: 01 ^h 51 ^m				Rº: 55 ^m													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	183	53.5	-18	20.7	333	21.1	86	+21	32.7	49	60 N	6 16	7 08	7 57	17 21	50	11 11	65
1	198	53.4		21.3	347	48.7	85		37.6	47	58	12	7 00	46	39	51	10 53	65
2	213	53.3		22.0	2	16.2	85		42.3	47	56	08	6 54	36	17 54	52	38	64
3	228	53.2		22.6	16	43.7	84		47.0	45	54	04	47	27	18 07	53	26	62
4	243	53.1		23.3	31	11.1	84		51.5	44	52	6 01	42	19	18	53	14	62
5	258	53.0	-18	23.9	45	38.5	83	+21	55.9	43	50	5 57	6 37	7 12	18 28	54	10 04	62
6	273	52.9	-18	24.6	60	05.8	83	+22	00.2	41	45	5 50	6 25	6 57	18 50	54	9 44	60
7	288	52.8		25.2	74	33.1	82		04.3	41	40	43	16	45	19 07	55	27	59
8	303	52.7		25.8	89	00.3	81		08.4	39	35	37	6 07	34	21	55	12	59
9	318	52.6		26.5	103	27.4	81		12.3	38	30	30	5 59	25	34	55	9 00	58
10	333	52.5		27.1	117	54.5	80		16.1	37	20	19	45	6 09	19 56	56	8 39	57
11	348	52.4	-18	27.8	132	21.5	80	+22	19.8	35	10 N	5 07	5 32	5 54	20 15	56	8 21	56
12	3	52.3	-18	28.4	146	48.5	79	+22	23.3	34	0	4 54	5 19	5 41	20 32	57	8 04	55
13	18	52.2		29.0	161	15.4	79		26.7	33	10 S	39	5 05	27	20 50	57	7 47	54
14	33	52.1		29.7	175	42.3	78		30.0	32	20	4 21	4 49	5 13	21 09	57	28	54
15	48	52.0		30.3	190	09.1	78		33.2	30	30	3 59	30	4 56	31	57	7 07	53
16	63	51.8		30.9	204	35.9	77		36.2	29	35	44	18	46	44	57	6 55	52
17	78	51.7	-18	31.6	219	02.6	77	+22	39.1	28	40	3 27	4 04	4 35	21 59	57	6 41	51
18	93	51.6	-18	32.2	233	29.3	76	+22	41.9	26	45	3 05	3 48	4 21	22 16	58	6 24	50
19	108	51.5		32.8	247	55.9	76		44.5	25	50	2 35	26	4 05	38	58	6 04	48
20	123	51.4		33.5	262	22.5	76		47.0	24	52	19	16	3 57	22 49	57	5 54	47
21	138	51.3		34.1	276	49.1	75		49.4	22	54	2 00	3 04	49	23 01	57	43	46
22	153	51.2		34.7	291	15.6	75		51.6	21	56	1 36	2 50	39	14	58	30	45
23	168	51.1		35.4	305	42.1	74		53.7	20	58	1 01	34	28	23 30	58	5 16	43
24	183	51.0	-18	36.0	320	08.5		+22	55.7		60 S	** **	2 14	3 15	23 49	58	4 59	41

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.8				Mag: +1.8				Mag: -1.9				Mag: +0.6			
	20 ^h 21 ^m 5		PMG: 13 ^h 26 ^m				PMG: 10 ^h 06 ^m				PMG: 14 ^h 06 ^m				PMG: 15 ^h 34 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	53	47.5	158	44.3	-23	37.4	208	18.6	-9	46.1	147	58.2	-23	12.8	125	54.9		
1	68	50.0	173	43.4		37.9	223	19.5		46.7	163	00.1		12.8	140	57.1		
2	83	52.4	188	42.5		38.3	238	20.5		47.3	178	02.0		12.8	155	59.3		
3	98	54.9	203	41.6		38.7	253	21.4		47.9	193	03.9		12.9	171	01.6		
4	113	57.4	218	40.7		39.1	268	22.3		48.5	208	05.8		12.9	186	03.8		
5	128	59.8	233	39.8	-23	39.5	283	23.2	-9	49.1	223	07.7	-23	12.9	201	06.1		
6	144	02.3	248	39.0	-23	39.9	298	24.1	-9	49.7	238	09.6	-23	12.9	216	08.3		
7	159	04.7	263	38.1		40.3	313	25.0		50.3	253	11.5		12.9	231	10.5		
8	174	07.2	278	37.2		40.8	328	26.0		50.9	268	13.4		13.0	246	12.8		
9	189	09.7	293	36.3		41.2	343	26.9		51.5	283	15.3		13.0	261	15.0		
10	204	12.1	308	35.4		41.6	358	27.8		52.1	298	17.2		13.0	276	17.2		
11	219	14.6	323	34.5	-23	42.0	13	28.7	-9	52.7	313	19.1	-23	13.0	291	19.5		
12	234	17.1	338	33.6	-23	42.4	28	29.6	-9	53.3	328	21.0	-23	13.0	306	21.7		
13	249	19.5	353	32.7		42.8	43	30.5		53.9	343	22.9		13.1	321	23.9		
14	264	22.0	8	31.8		43.2	58	31.5		54.5	358	24.8		13.1	336	26.2		
15	279	24.5	23	30.9		43.6	73	32.4		55.1	13	26.7		13.1	351	28.4		
16	294	26.9	38	30.0		44.0	88	33.3		55.7	28	28.6		13.1	6	30.7		
17	309	29.4	53	29.1	-23	44.4	103	34.2	-9	56.3	43	30.5	-23	13.1	21	32.9		
18	324	31.9	68	28.2	-23	44.8	118	35.1	-9	56.9	58	32.4	-23	13.2	36	35.1		
19	339	34.3	83	27.3		45.2	133	36.0		57.5	73	34.3		13.2	51	37.4		
20	354	36.8	98	26.4		45.6	148	36.9		58.1	88	36.2		13.2	66	39.6		
21	9	39.2	113	25.5		46.0	163	37.9		58.7	103	38.1		13.2	81	41.8		
22	24	41.7	128	24.6		46.4	178	38.8		59.3	118	40.0		13.2	96	44.1		
23	39	44.2	143	23.7		46.8	193	39.7	-9	59.9	133	41.8		13.3	111	46.3		
24	54	46.6	158	22.8	-23	47.1	208	40.6	-10	00.5	148	43.7	-23	13.3	126	48.5		
Dif.	—		-9		-4		+9		-6		+19		0		+22		0	

UT	SOL				☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo				Salida de Luna			Puesta de Luna						
	SD: 16'2 PMG: 11 ^h 44 ^m 7				SD: 15'6 Edad: 18'8		PHE { 4 ^h : 57'4 12 ^h : 57'6 20 ^h : 57'7		PMG: 02 ^h 46 ^m Rº: 56 ^m				Civil		Náut.		Hora		Rº		Hora		Rº			
	hG ☉	Dec			hG ☾	Dif.	Dec		Dif.																	
h	°	'	°	'	°	'		°	'		°	h	m	h	m	h	m	m	h	m	m					
0	183	51.0	-18	36.0	320	08.5	74	+22	55.7	18	60 N	15 29	16 18	17 10	18 11	69		12 16	49							
1	198	50.9		36.6	334	34.9	73		57.5	17	58	41	26	15	30	68		11 58	50							
2	213	50.8		37.3	349	01.2	73	+22	59.2	16	56	15 51	33	19	18 46	66		42	51							
3	228	50.7		37.9	3	27.5	73	+23	00.8	14	54	16 00	40	23	19 00	65		28	52							
4	243	50.6		38.5	17	53.8	72		02.2	13	52	08	45	27	11	65		16	53							
5	258	50.5	-18	39.2	32	20.0	72	+23	03.5	12	50	16 15	16 51	17 30	19 22	64		11 06	53							
6	273	50.3	-18	39.8	46	46.2	72	+23	04.7	10	45	16 31	17 02	17 38	19 44	63		10 44	54							
7	288	50.2		40.4	61	12.4	72		05.7	9	40	43	12	45	20 02	61		26	55							
8	303	50.1		41.0	75	38.6	71		06.6	8	35	16 54	21	52	16	61		10 11	55							
9	318	50.0		41.7	90	04.7	71		07.4	6	30	17 04	29	17 58	29	61		9 58	56							
10	333	49.9		42.3	104	30.8	70		08.0	5	20	20	43	18 10	20 52	58		36	56							
11	348	49.8	-18	42.9	118	56.8	71	+23	08.5	3	10 N	17 35	17 57	18 22	21 11	58		9 17	56							
12	3	49.7	-18	43.5	133	22.9	70	+23	08.8	2	0	17 48	18 10	18 35	21 29	56		8 59	57							
13	18	49.6		44.2	147	48.9	70		09.0	0	10 S	18 02	24	18 50	21 47	55		41	57							
14	33	49.5		44.8	162	14.9	69		09.0	0	20	17	18 41	19 09	22 06	54		22	57							
15	48	49.3		45.4	176	40.8	70		09.0	3	30	34	19 00	32	28	53		8 00	57							
16	63	49.2		46.0	191	06.8	69		08.7	3	35	44	12	19 46	41	52		7 47	58							
17	78	49.1	-18	46.7	205	32.7	69	+23	08.4	5	40	18 56	19 27	20 04	22 56	51		7 32	58							
18	93	49.0	-18	47.3	219	58.6	69	+23	07.9	7	45	19 10	19 44	20 27	23 14	50		7 14	58							
19	108	48.9		47.9	234	24.5	69		07.2	8	50	27	20 06	20 58	36	48		6 52	58							
20	123	48.8		48.5	248	50.4	69		06.4	9	52	34	17	21 15	46	48		41	59							
21	138	48.7		49.1	263	16.3	68		05.5	11	54	43	29	21 35	23 58	46		29	59							
22	153	48.5		49.7	277	42.1	69		04.4	12	56	19 53	20 43	22 00	** ** *	**		6 15	60							
23	168	48.4		50.4	292	08.0	68		03.2	13	58	20 05	21 00	22 40	** ** *	**		5 59	60							
24	183	48.3	-18	51.0	306	33.8		+23	01.9		60 S	20 18	21 22	** ** *	** ** *	**		5 40	60							
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 20 ^h 17 ^m 6		Mag: -3.9 PMG: 13 ^h 27 ^m			Mag: +1.8 PMG: 10 ^h 05 ^m			Mag: -1.9 PMG: 14 ^h 03 ^m			Mag: +0.6 PMG: 15 ^h 30 ^m														
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.													
h	°	'	°	'	°	'		°	'		°	'	°	'												
0	54	46.6	158	22.8	-23	208	40.6	-10	148	43.7	-23	126	48.5	-22												
1	69	49.1	173	21.9		223	41.5		163	45.6		141	50.8													
2	84	51.6	188	21.0		238	42.4		178	47.5		156	53.0													
3	99	54.0	203	20.1		253	43.3		193	49.4		171	55.2													
4	114	56.5	218	19.2		268	44.3		208	51.3		186	57.5													
5	129	59.0	233	18.3	-23	283	45.2	-10	223	53.2	-23	201	59.7	-22												
6	145	01.4	248	17.4	-23	298	46.1	-10	238	55.1	-23	217	01.9	-22												
7	160	03.9	263	16.5		313	47.0		253	57.0		232	04.2													
8	175	06.4	278	15.6		328	47.9		268	58.9		247	06.4													
9	190	08.8	293	14.7		343	48.8		284	00.8	-13.4	262	08.6													
10	205	11.3	308	13.8		358	49.7		299	02.7	-13.5	277	10.9													
11	220	13.7	323	12.9	-23	13	50.6	-10	314	04.6	-23	292	13.1	-22												
12	235	16.2	338	12.0	-23	28	51.6	-10	329	06.5	-23	307	15.3	-22												
13	250	18.7	353	11.1		43	52.5		344	08.4		322	17.6													
14	265	21.1	8	10.1		58	53.4		359	10.3		337	19.8													
15	280	23.6	23	09.2		73	54.3		14	12.2	-13.6	352	22.0													
16	295	26.1	38	08.3		88	55.2		29	14.0	-13.6	7	24.3													
17	310	28.5	53	07.4	-23	103	56.1	-10	44	15.9	-23	22	26.5	-22												
18	325	31.0	68	06.5	-23	118	57.0	-10	59	17.8	-23	37	28.7	-22												
19	340	33.5	83	05.6		133	57.9		74	19.7	-13.6	52	31.0													
20	355	35.9	98	04.7		148	58.8		89	21.6	-13.6	67	33.2													
21	10	38.4	113	03.8		163	59.8		104	23.5	-13.7	82	35.4													
22	25	40.9	128	02.9		179	00.7		119	25.4	-13.7	97	37.6													
23	40	43.3	143	02.0		194	01.6		134	27.3	-13.7	112	39.9													
24	55	45.8	158	01.1	-23	209	02.5	-10	149	29.2	-23	127	42.1	-22												
Dif.	—		-9			-4			+9			-6			+19			0			+22			0		

UT	SOL				 LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16°2				SD: 15°7 Edad: 19°8								PHE { 4 ^h : 57°9 12 ^h : 58°0 20 ^h : 58°2			PMG: 03 ^h 42 ^m		Rº: 57 ^m					
	PMG: 11 ^h 44 ^m 9																						
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.				Náut.	Civil		Hora	Rº	Hora	Rº					
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m					
0	183	48.3	-18	51.0	306	33.8	68	+23	01.9	15	60 N	6 20	7 12	8 02	19 20	84	13 05	34					
1	198	48.2		51.6	320	59.6	68	+23	00.4	17	58	16	7 04	7 50	38	80	12 48	36					
2	213	48.1		52.2	335	25.4	69	+22	58.7	17	56	11	6 57	40	19 52	78	33	39					
3	228	48.0		52.8	349	51.3	68		57.0	19	54	07	51	31	20 05	75	20	41					
4	243	47.8		53.5	4	17.1	68		55.1	21	52	04	45	23	16	74	12 09	42					
5	258	47.7	-18	54.1	18	42.9	68	+22	53.0	22	50	6 00	6 40	7 15	20 26	72	11 59	43					
6	273	47.6	-18	54.7	33	08.7	68	+22	50.8	23	45	5 52	6 28	7 00	20 47	69	11 38	46					
7	288	47.5		55.3	47	34.5	68		48.5	25	40	45	18	6 47	21 03	67	21	48					
8	303	47.4		55.9	62	00.3	68		46.0	26	35	38	09	36	17	65	11 06	50					
9	318	47.2		56.5	76	26.1	68		43.4	28	30	32	6 01	26	30	63	10 54	51					
10	333	47.1		57.1	90	51.9	68		40.6	29	20	20	5 46	6 10	21 50	61	32	53					
11	348	47.0	-18	57.7	105	17.7	68	+22	37.7	30	10 N	5 07	5 33	5 55	22 09	58	10 13	55					
12	3	46.9	-18	58.4	119	43.5	68	+22	34.7	32	0	4 54	5 19	5 41	22 25	57	9 56	56					
13	18	46.8		59.0	134	09.3	68		31.5	34	10 S	39	5 05	27	22 42	54	38	58					
14	33	46.6	-18	59.6	148	35.1	69		28.1	34	20	4 21	4 49	5 12	23 00	52	9 19	60					
15	48	46.5	-19	00.2	163	01.0	68		24.7	36	30	3 57	29	4 55	21	49	8 57	62					
16	63	46.4		00.8	177	26.8	69		21.1	38	35	43	17	45	33	47	45	63					
17	78	46.3	-19	01.4	191	52.7	68	+22	17.3	38	40	3 25	4 03	4 33	23 47	45	8 30	64					
18	93	46.1	-19	02.0	206	18.5	69	+22	13.5	41	45	3 02	3 45	4 19	***	***	8 12	66					
19	108	46.0		02.6	220	44.4	69		09.4	41	50	2 31	23	4 02	***	***	7 50	69					
20	123	45.9		03.2	235	10.3	69		05.3	43	52	2 14	12	3 54	***	***	40	70					
21	138	45.8		03.8	249	36.2	69	+22	01.0	44	54	1 54	3 00	46	***	***	28	71					
22	153	45.7		04.4	264	02.1	70	+21	56.6	46	56	1 28	2 46	36	0 12	45	7 15	72					
23	168	45.5		05.0	278	28.1	69		52.0	47	58	0 49	28	24	0 28	43	6 59	74					
24	183	45.4	-19	05.6	292	54.0		+21	47.3		60 S	**	**	2 07	3 11	0 47	40	6 40	77				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO								
	PMG		Mag: -3.9				Mag: +1.7				Mag: -1.9				Mag: +0.6								
	20 ^h 13 ^m 6		PMG: 13 ^h 29 ^m				PMG: 10 ^h 03 ^m				PMG: 14 ^h 00 ^m				PMG: 15 ^h 27 ^m								
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	55	45.8	158	01.1	-23	56.1	209	02.5	-10	15.0	149	29.2	-23	13.7	127	42.1	-22	17.3					
1	70	48.2	173	00.2		56.5	224	03.4		15.6	164	31.1		13.7	142	44.3		17.2					
2	85	50.7	187	59.3		56.9	239	04.3		16.1	179	33.0		13.8	157	46.6		17.2					
3	100	53.2	202	58.4		57.2	254	05.2		16.7	194	34.9		13.8	172	48.8		17.2					
4	115	55.6	217	57.4		57.6	269	06.1		17.3	209	36.8		13.8	187	51.0		17.2					
5	130	58.1	232	56.5	-23	57.9	284	07.0	-10	17.9	224	38.7	-23	13.8	202	53.3	-22	17.1					
6	146	00.6	247	55.6	-23	58.3	299	08.0	-10	18.5	239	40.5	-23	13.8	217	55.5	-22	17.1					
7	161	03.0	262	54.7		58.6	314	08.9		19.1	254	42.4		13.8	232	57.7		17.1					
8	176	05.5	277	53.8		59.0	329	09.8		19.7	269	44.3		13.9	248	00.0		17.1					
9	191	08.0	292	52.9		59.3	344	10.7		20.3	284	46.2		13.9	263	02.2		17.0					
10	206	10.4	307	52.0	-23	59.7	359	11.6		20.9	299	48.1		13.9	278	04.4		17.0					
11	221	12.9	322	51.1	-24	00.0	14	12.5	-10	21.5	314	50.0	-23	13.9	293	06.6	-22	17.0					
12	236	15.4	337	50.2	-24	00.4	29	13.4	-10	22.1	329	51.9	-23	13.9	308	08.9	-22	17.0					
13	251	17.8	352	49.3		00.7	44	14.3		22.7	344	53.8		13.9	323	11.1		17.0					
14	266	20.3	7	48.3		01.1	59	15.2		23.3	359	55.7		14.0	338	13.3		16.9					
15	281	22.7	22	47.4		01.4	74	16.1		23.9	14	57.6		14.0	353	15.6		16.9					
16	296	25.2	37	46.5		01.7	89	17.0		24.5	29	59.5		14.0	8	17.8		16.9					
17	311	27.7	52	45.6	-24	02.1	104	17.9	-10	25.1	45	01.3	-23	14.0	23	20.0	-22	16.9					
18	326	30.1	67	44.7	-24	02.4	119	18.9	-10	25.7	60	03.2	-23	14.0	38	22.3	-22	16.8					
19	341	32.6	82	43.8		02.8	134	19.8		26.3	75	05.1		14.1	53	24.5		16.8					
20	356	35.1	97	42.9		03.1	149	20.7		26.9	90	07.0		14.1	68	26.7		16.8					
21	11	37.5	112	41.9		03.4	164	21.6		27.5	105	08.9		14.1	83	28.9		16.8					
22	26	40.0	127	41.0		03.8	179	22.5		28.1	120	10.8		14.1	98	31.2		16.7					
23	41	42.5	142	40.1		04.1	194	23.4		28.7	135	12.7		14.1	113	33.4		16.7					
24	56	44.9	157	39.2	-24	04.4	209	24.3	-10	29.3	150	14.6	-23	14.1	128	35.6	-22	16.7					
Dif.	—		-9		-3		+9		-6		+19		0		+22								

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna													
	SD: 16'2						PHE { 4 ^h : 58'3 12 ^h : 58'5 20 ^h : 58'6																							
	PMG: 11 ^h 45 ^m 1																													
					SD: 15'9		Edad: 20 ^d 8		Rº: 56 ^m																					
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº										
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m								
0	183	45.4	-19	05.6	292	54.0	70	+21	47.3	49	60 N	15 25	16 15	17 07	20 44	91	13 39	23												
1	198	45.3		06.2	307	20.0	70		42.4	49	58	37	23	12	20 58	87	24	27												
2	213	45.2		06.8	321	46.0	70		37.5	51	56	48	30	17	21 10	84	12	29												
3	228	45.0		07.4	336	12.0	71		32.4	53	54	15 57	37	21	20 82	13 01	31													
4	243	44.9		08.0	350	38.1	70		27.1	54	52	16 05	43	25	30 79	12 51	34													
5	258	44.8	-19	08.6	5	04.1	71	+21	21.7	55	50	16 13	16 49	17 28	21 38	77	12 42	36												
6	273	44.6	-19	09.2	19	30.2	72	+21	16.2	56	45	16 29	17 01	17 36	21 56	73	12 24	39												
7	288	44.5		09.8	33	56.4	71		10.6	58	40	42	11	44	22 10	70	12 09	42												
8	303	44.4		10.4	48	22.5	72	+21	04.8	59	35	16 53	20	51	22 67	11 56	44													
9	318	44.3		11.0	62	48.7	72	+20	58.9	61	30	17 03	28	17 57	33 65	45	46													
10	333	44.1		11.6	77	14.9	72		52.8	61	20	20	43	18 10	22 51	61	25	50												
11	348	44.0	-19	12.2	91	41.1	73	+20	46.7	63	10 N	17 35	17 57	18 22	23 07	57	11 08	53												
12	3	43.9	-19	12.8	106	07.4	72	+20	40.4	65	0	17 49	18 11	18 36	23 22	54	10 52	56												
13	18	43.7		13.4	120	33.6	74		33.9	65	10 S	18 03	25	18 51	36 52	36	58													
14	33	43.6		14.0	135	00.0	73		27.4	67	20	18	18 42	19 10	23 52	48	10 19	61												
15	48	43.5		14.6	149	26.3	74		20.7	68	30	36	19 02	34	** ** *	**	9 59	65												
16	63	43.3		15.2	163	52.7	74		13.9	70	35	46	15	19 49	** ** *	**	48	66												
17	78	43.2	-19	15.8	178	19.1	74	+20	06.9	71	40	18 58	19 29	20 07	** ** *	**	9 34	69												
18	93	43.1	-19	16.4	192	45.5	75	+19	59.8	72	45	19 12	19 47	20 31	0 04	42	9 18	72												
19	108	43.0		17.0	207	12.0	75		52.6	73	50	30	20 10	21 03	24 39	8 59	75													
20	123	42.8		17.6	221	38.5	76		45.3	74	52	38	21	20	34 37	50	76													
21	138	42.7		18.2	236	05.1	76		37.9	76	54	47	34	21 41	44 36	39	79													
22	153	42.6		18.8	250	31.7	76		30.3	77	56	19 58	20 48	22 09	0 57	33	27	82												
23	168	42.4		19.4	264	58.3	77		22.6	78	58	20 10	21 06	22 55	1 11	30	8 13	85												
24	183	42.3	-19	19.9	279	25.0		+19	14.8		60 S	20 23	21 29	** ** *	1 27	27	7 57	88												
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG: 20 ^h 09 ^m 7		Mag: -3.9 PMG: 13 ^h 30 ^m				Mag: +1.7 PMG: 10 ^h 02 ^m				Mag: -1.9 PMG: 13 ^h 57 ^m				Mag: +0.6 PMG: 15 ^h 23 ^m															
	hG ♂		hG ♀				hG ♂				hG ♀				hG ♀															
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'										
0	56	44.9	157	39.2	-24	04.4	209	24.3	-10	29.3	150	14.6	-23	-14.1	128	35.6	-22	16.7												
1	71	47.4	172	38.3		04.8	224	25.2		29.9	165	16.5		-14.2	143	37.9		16.7												
2	86	49.8	187	37.4		05.1	239	26.1		30.5	180	18.4		-14.2	158	40.1		16.6												
3	101	52.3	202	36.5		05.4	254	27.0		31.1	195	20.2		-14.2	173	42.3		16.6												
4	116	54.8	217	35.5		05.7	269	27.9		31.7	210	22.1		-14.2	188	44.5		16.6												
5	131	57.2	232	34.6	-24	06.1	284	28.8	-10	32.3	225	24.0	-23	-14.2	203	46.8	-22	16.6												
6	146	59.7	247	33.7	-24	06.4	299	29.7	-10	32.9	240	25.9	-23	-14.2	218	49.0	-22	16.5												
7	162	02.2	262	32.8		06.7	314	30.7		33.5	255	27.8		-14.3	233	51.2		16.5												
8	177	04.6	277	31.9		07.0	329	31.6		34.1	270	29.7		-14.3	248	53.5		16.5												
9	192	07.1	292	31.0		07.3	344	32.5		34.7	285	31.6		-14.3	263	55.7		16.5												
10	207	09.6	307	30.0		07.7	359	33.4		35.2	300	33.5		-14.3	278	57.9		16.5												
11	222	12.0	322	29.1	-24	08.0	14	34.3	-10	35.8	315	35.4	-23	-14.3	294	00.1	-22	16.4												
12	237	14.5	337	28.2	-24	08.3	29	35.2	-10	36.4	330	37.2	-23	-14.3	309	02.4	-22	16.4												
13	252	17.0	352	27.3		08.6	44	36.1		37.0	345	39.1		-14.4	324	04.6		16.4												
14	267	19.4	7	26.4		08.9	59	37.0		37.6	0	41.0		-14.4	339	06.8		16.4												
15	282	21.9	22	25.4		09.2	74	37.9		38.2	15	42.9		-14.4	354	09.0		16.3												
16	297	24.3	37	24.5		09.6	89	38.8		38.8	30	44.8		-14.4	9	11.3		16.3												
17	312	26.8	52	23.6	-24	09.9	104	39.7	-10	39.4	45	46.7	-23	-14.4	24	13.5	-22	16.3												
18	327	29.3	67	22.7	-24	10.2	119	40.6	-10	40.0	60	48.6	-23	-14.4	39	15.7	-22	16.3												
19	342	31.7	82	21.8		10.5	134	41.5		40.6	75	50.5		-14.5	54	17.9		16.2												
20	357	34.2	97	20.8		10.8	149	42.4		41.2	90	52.3		-14.5	69	20.2		16.2												
21	12	36.7	112	19.9		11.1	164	43.3		41.8	105	54.2		-14.5	84	22.4		16.2												
22	27	39.1	127	19.0		11.4	179	44.2		42.4	120	56.1		-14.5	99	24.6		16.2												
23	42	41.6	142	18.1		11.7	194	45.1		43.0	135	58.0		-14.5	114	26.8		16.1												
24	57	44.1	157	17.2	-24	12.0	209	46.0	-10	43.6	150	59.9	-23	-14.5	129	29.1	-22	16.1												
Dif.	—		-9				-3				+9				-6				+19				0				+22			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 45 ^m 3				SD: 16'0 Edad: 21 ^d 8 PMG: 05 ^h 35 ^m					PHE { 4 ^h : 58'7 12 ^h : 58'9 20 ^h : 59'0 Rº: 54 ^m									
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	° N	h	m	h	m	h	m	m	h	m	m
0	183	42.3	-19	19.9	279	25.0	77	+19	14.8	79	6	24	7	17	8	07	22	15	93
1	198	42.2		20.5	293	51.7	77	+19	06.9	81	19	08		7	55		25	90	13
2	213	42.0		21.1	308	18.4	78	+18	58.8	81	15	7	01		44		34	86	41
3	228	41.9		21.7	322	45.2	78		50.7	83	10	6	54		34		42	84	32
4	243	41.7		22.3	337	12.0	78		42.4	84	06	48		26			49	81	25
5	258	41.6	-19	22.9	351	38.8	79	+18	34.0	85	6	03	6	42	7	19	22	55	79
6	273	41.5	-19	23.5	6	05.7	79	+18	25.5	87	5	54	6	30	7	02	23	09	74
7	288	41.3		24.1	20	32.6	80		16.8	87	47	20		6	49		20	71	12
8	303	41.2		24.6	34	59.6	80	+18	08.1	89	40	11		38			29	68	40
9	318	41.1		25.2	49	26.6	81	+17	59.2	89	33	6	03	28			38	65	31
10	333	40.9		25.8	63	53.7	80		50.3	91	21	5	48	6	11		23	52	61
11	348	40.8	-19	26.4	78	20.7	82	+17	41.2	92	5	08	5	34	5	56	**	**	**
12	3	40.6	-19	27.0	92	47.9	81	+17	32.0	93	4	54	5	20	5	42	**	**	**
13	18	40.5		27.5	107	15.0	82		22.7	94	39	5	05	27			**	**	**
14	33	40.4		28.1	121	42.2	83		13.3	95	4	20	4	48	5	12	**	**	**
15	48	40.2		28.7	136	09.5	83	+17	03.8	97	3	56	28	4	54		0	10	44
16	63	40.1		29.3	150	36.8	83	+16	54.1	97	41	16	44				20	42	10
17	78	40.0	-19	29.9	165	04.1	84	+16	44.4	98	3	23	4	01	4	32	0	32	40
18	93	39.8	-19	30.4	179	31.5	84	+16	34.6	100	2	59	3	43	4	18	0	46	36
19	108	39.7		31.0	193	58.9	85		24.6	100	27	20	4	00			1	03	32
20	123	39.5		31.6	208	26.4	84		14.6	101	2	10	3	09	3	52	11	30	10
21	138	39.4		32.2	222	53.8	86	+16	04.5	103	1	49	2	56	43		20	28	9
22	153	39.2		32.8	237	21.4	86	+15	54.2	103	1	21	41	32			30	25	49
23	168	39.1		33.3	251	49.0	86		43.9	105	0	34	23	20			1	41	23
24	183	39.0	-19	33.9	266	16.6		+15	33.4		**	**	2	01	3	06	1	54	19

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 20 ^h 05 ^m 8		Mag: -3.9 PMG: 13 ^h 32 ^m				Mag: +1.7 PMG: 10 ^h 00 ^m				Mag: -1.9 PMG: 13 ^h 54 ^m				Mag: +0.6 PMG: 15 ^h 20 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	57	44.1	157	17.2	-24	12.0	209	46.0	-10	43.6	150	59.9	-23	14.5	129	29.1	-22	16.1	
1	72	46.5	172	16.2		12.3	224	46.9		44.2	166	01.8		14.6	144	31.3		16.1	
2	87	49.0	187	15.3		12.6	239	47.8		44.7	181	03.7		14.6	159	33.5		16.1	
3	102	51.5	202	14.4		12.9	254	48.7		45.3	196	05.6		14.6	174	35.8		16.0	
4	117	53.9	217	13.5		13.2	269	49.7		45.9	211	07.4		14.6	189	38.0		16.0	
5	132	56.4	232	12.6	-24	13.5	284	50.6	-10	46.5	226	09.3	-23	14.6	204	40.2	-22	16.0	
6	147	58.8	247	11.6	-24	13.8	299	51.5	-10	47.1	241	11.2	-23	14.6	219	42.4	-22	16.0	
7	163	01.3	262	10.7		14.1	314	52.4		47.7	256	13.1		14.7	234	44.7		15.9	
8	178	03.8	277	09.8		14.4	329	53.3		48.3	271	15.0		14.7	249	46.9		15.9	
9	193	06.2	292	08.9		14.6	344	54.2		48.9	286	16.9		14.7	264	49.1		15.9	
10	208	08.7	307	07.9		14.9	359	55.1		49.5	301	18.8		14.7	279	51.3		15.9	
11	223	11.2	322	07.0	-24	15.2	14	56.0	-10	50.1	316	20.6	-23	14.7	294	53.6	-22	15.8	
12	238	13.6	337	06.1	-24	15.5	29	56.9	-10	50.7	331	22.5	-23	14.7	309	55.8	-22	15.8	
13	253	16.1	352	05.2		15.8	44	57.8		51.3	346	24.4		14.8	324	58.0		15.8	
14	268	18.6	7	04.2		16.1	59	58.7		51.9	1	26.3		14.8	340	00.2		15.8	
15	283	21.0	22	03.3		16.4	74	59.6		52.4	16	28.2		14.8	355	02.4		15.7	
16	298	23.5	37	02.4		16.6	90	00.5		53.0	31	30.1		14.8	10	04.7		15.7	
17	313	26.0	52	01.5	-24	16.9	105	01.4	-10	53.6	46	32.0	-23	14.8	25	06.9	-22	15.7	
18	328	28.4	67	00.5	-24	17.2	120	02.3	-10	54.2	61	33.8	-23	14.8	40	09.1	-22	15.7	
19	343	30.9	81	59.6		17.5	135	03.2		54.8	76	35.7		14.9	55	11.3		15.7	
20	358	33.3	96	58.7		17.8	150	04.1		55.4	91	37.6		14.9	70	13.6		15.6	
21	13	35.8	111	57.8		18.0	165	05.0		56.0	106	39.5		14.9	85	15.8		15.6	
22	28	38.3	126	56.8		18.3	180	05.9		56.6	121	41.4		14.9	100	18.0		15.6	
23	43	40.7	141	55.9		18.6	195	06.8		57.2	136	43.3		14.9	115	20.2		15.6	
24	58	43.2	156	55.0	-24	18.8	210	07.7	-10	57.8	151	45.1	-23	14.9	130	22.5	-22	15.5	
Dif.	—		-9		-3		+9		-6		+19		0		+22				

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2			PHE { 4 ^h : 59'1 12 ^h : 59'2 20 ^h : 59'4														
	PMG: 11 ^h 45 ^m 5			SD: 16'1 Edad: 22 ^d 8														
				PMG: 06 ^h 29 ^m Rº: 52 ^m														
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	183	39.0	-19	33.9	266	16.6	86	+15	33.4	105	60 N	15 21	16 12	17 04	23 48	94	14 18	12
1	198	38.8		34.5	280	44.2	87		22.9	106	58	34	20	09	23 55	90	10	16
2	213	38.7		35.1	295	11.9	88		12.3	107	56	45	28	14	** ** *	**	14 04	18
3	228	38.5		35.6	309	39.7	88	+15	01.6	109	54	15 54	35	18	** ** *	**	13 58	20
4	243	38.4		36.2	324	07.5	88	+14	50.7	109	52	16 03	41	23	** ** *	**	52	23
5	258	38.2	-19	36.8	338	35.3	88	+14	39.8	110	50	16 10	16 47	17 26	** ** *	**	13 47	26
6	273	38.1	-19	37.3	353	03.1	89	+14	28.8	111	45	16 27	16 59	17 35	** ** *	**	13 37	29
7	288	37.9		37.9	7	31.0	90		17.7	111	40	40	17 10	43	** ** *	**	28	33
8	303	37.8		38.5	21	59.0	90	+14	06.6	113	35	16 52	19	50	** ** *	**	20	37
9	318	37.7		39.1	36	27.0	90	+13	55.3	114	30	17 02	27	17 57	** ** *	**	13	40
10	333	37.5		39.6	50	55.0	90		43.9	114	20	19	43	18 10	** ** *	**	13 02	44
11	348	37.4	-19	40.2	65	23.0	91	+13	32.5	115	10 N	17 35	17 57	18 23	0 04	57	12 51	48
12	3	37.2	-19	40.8	79	51.1	92	+13	21.0	116	0	17 49	18 11	18 37	0 16	53	12 41	53
13	18	37.1		41.3	94	19.3	91	+13	09.4	117	10 S	18 04	26	18 52	28	49	32	56
14	33	36.9		41.9	108	47.4	92	+12	57.7	118	20	19	18 43	19 11	40	45	21	60
15	48	36.8		42.5	123	15.6	93		45.9	118	30	38	19 04	36	0 54	41	09	65
16	63	36.6		43.0	137	43.9	92		34.1	120	35	18 48	17	19 51	1 02	38	12 02	68
17	78	36.5	-19	43.6	152	12.1	94	+12	22.1	120	40	19 01	19 32	20 10	1 12	35	11 54	71
18	93	36.3	-19	44.1	166	40.5	93	+12	10.1	120	45	19 15	19 50	20 34	1 22	32	11 44	75
19	108	36.2		44.7	181	08.8	94	+11	58.1	122	50	33	20 13	21 08	35	27	32	80
20	123	36.0		45.3	195	37.2	94		45.9	122	52	42	25	25	41	25	27	82
21	138	35.9		45.8	210	05.6	95		33.7	123	54	19 51	38	21 48	48	23	21	85
22	153	35.7		46.4	224	34.1	94		21.4	124	56	20 02	20 54	22 18	1 55	20	14	88
23	168	35.6		47.0	239	02.5	96	+11	09.0	124	58	14	21 12	23 17	2 04	17	11 07	90
24	183	35.4	-19	47.5	253	31.1		+10	56.6		60 S	20 29	21 36	** ** *	2 13	14	10 58	95

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 01 ^m 8		Mag: -3.9 PMG: 13 ^h 33 ^m				Mag: +1.7 PMG: 09 ^h 59 ^m				Mag: -1.9 PMG: 13 ^h 51 ^m				Mag: +0.6 PMG: 15 ^h 16 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	58	43.2	156	55.0	-24	18.8	210	07.7	-10	57.8	151	45.1	-23	-14.9	130	22.5	-22	15.5
1	73	45.7	171	54.0		19.1	225	08.6		58.4	166	47.0		-15.0	145	24.7		15.5
2	88	48.1	186	53.1		19.4	240	09.5		58.9	181	48.9		-15.0	160	26.9		15.5
3	103	50.6	201	52.2		19.6	255	10.4	-10	59.5	196	50.8		-15.0	175	29.1		15.5
4	118	53.1	216	51.3		19.9	270	11.3	-11	00.1	211	52.7		-15.0	190	31.3		15.4
5	133	55.5	231	50.3	-24	20.2	285	12.2	-11	00.7	226	54.6	-23	-15.0	205	33.6	-22	15.4
6	148	58.0	246	49.4	-24	20.4	300	13.1	-11	01.3	241	56.5	-23	-15.0	220	35.8	-22	15.4
7	164	00.4	261	48.5		20.7	315	14.0		01.9	256	58.3		-15.0	235	38.0		15.4
8	179	02.9	276	47.5		21.0	330	14.9		02.5	272	00.2		-15.1	250	40.2		15.3
9	194	05.4	291	46.6		21.2	345	15.8		03.1	287	02.1		-15.1	265	42.5		15.3
10	209	07.8	306	45.7		21.5	0	16.7		03.7	302	04.0		-15.1	280	44.7		15.3
11	224	10.3	321	44.8	-24	21.7	15	17.6	-11	04.3	317	05.9	-23	-15.1	295	46.9	-22	15.3
12	239	12.8	336	43.8	-24	22.0	30	18.5	-11	04.8	332	07.8	-23	-15.1	310	49.1	-22	15.2
13	254	15.2	351	42.9		22.2	45	19.4		05.4	347	09.6		-15.1	325	51.3		15.2
14	269	17.7	6	42.0		22.5	60	20.3		06.0	2	11.5		-15.2	340	53.6		15.2
15	284	20.2	21	41.0		22.8	75	21.2		06.6	17	13.4		-15.2	355	55.8		15.2
16	299	22.6	36	40.1		23.0	90	22.1		07.2	32	15.3		-15.2	10	58.0		15.1
17	314	25.1	51	39.2	-24	23.3	105	23.0	-11	07.8	47	17.2	-23	-15.2	26	00.2	-22	15.1
18	329	27.6	66	38.2	-24	23.5	120	23.9	-11	08.4	62	19.1	-23	-15.2	41	02.5	-22	15.1
19	344	30.0	81	37.3		23.7	135	24.8		09.0	77	20.9		-15.2	56	04.7		15.1
20	359	32.5	96	36.4		24.0	150	25.7		09.5	92	22.8		-15.2	71	06.9		15.0
21	14	34.9	111	35.5		24.2	165	26.6		10.1	107	24.7		-15.3	86	09.1		15.0
22	29	37.4	126	34.5		24.5	180	27.5		10.7	122	26.6		-15.3	101	11.3		15.0
23	44	39.9	141	33.6		24.7	195	28.4		11.3	137	28.5		-15.3	116	13.6		15.0
24	59	42.3	156	32.7	-24	25.0	210	29.3	-11	11.9	152	30.3	-23	-15.3	131	15.8	-22	14.9
Dif.	—		-9	-3			+9	-6			+19	0			+22			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2				SD: 16'2					Rº: 52º			Rº		Rº	
	PMG: 11 ^h 45 ^m 8				Edad: 23 ^d 8					PMG: 07 ^h 21 ^m			Rº: 52º		Rº	
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	35.4	-19	253	31.1	95	+10	56.6	125	60 N	6 28	7 21	8 12	***	***	***
1	198	35.3		267	59.6	96		44.1	126	58	23	12	7 59	***	***	***
2	213	35.1		282	28.2	96		31.5	126	56	18	7 04	48	0 00	88	22
3	228	35.0		296	56.8	96		18.9	127	54	13	6 57	38	06	84	18
4	243	34.8		311	25.4	97	+10	06.2	128	52	09	51	29	10	83	15
5	258	34.7	-19	325	54.1	97	+9	53.4	128	50	6 05	6 45	7 22	0 14	81	14
6	273	34.5	-19	340	22.8	97	+9	40.6	129	45	5 57	6 33	7 05	0 23	76	14
7	288	34.3		354	51.5	98		27.7	130	40	49	22	6 51	31	71	14
8	303	34.2		9	20.3	98		14.7	130	35	42	13	40	37	68	13
9	318	34.0		23	49.1	98	+9	01.7	130	30	35	6 04	30	43	65	53
10	333	33.9		38	17.9	98	+8	48.7	132	20	22	5 49	6 12	0 53	60	46
11	348	33.7	-19	52	46.7	99	+8	35.5	131	10 N	5 09	5 34	5 57	1 01	56	13
12	3	33.6	-19	67	15.6	99	+8	22.4	133	0	4 55	5 20	5 42	1 09	52	13
13	18	33.4		81	44.5	99	+8	09.1	132	10 S	39	5 05	27	17	47	28
14	33	33.3		96	13.4	99	+7	55.9	134	20	4 20	4 48	5 12	25	43	21
15	48	33.1		110	42.3	100		42.5	133	30	3 55	27	4 53	35	38	14
16	63	32.9		125	11.3	99		29.2	135	35	40	4 14	43	40	36	10
17	78	32.8	-19	139	40.2	100	+7	15.7	134	40	3 21	3 59	4 30	1 47	32	13
18	93	32.6	-19	154	09.2	100	+7	02.3	135	45	2 56	3 41	4 16	1 54	28	12
19	108	32.5		168	38.2	101	+6	48.8	136	50	23	17	3 58	2 02	24	52
20	123	32.3		183	07.3	100		35.2	136	52	2 05	3 06	49	06	22	49
21	138	32.2		197	36.3	101		21.6	136	54	1 43	2 53	40	11	19	46
22	153	32.0	-19	212	05.4	101	+6	08.0	137	56	1 12	37	29	15	17	42
23	168	31.8	-20	226	34.5	101	+5	54.3	137	58	0 12	2 18	16	2 21	14	12
24	183	31.7	-20	241	03.6		+5	40.6		60 S	** **	1 54	3 02	2 27	11	12

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: +1.7				Mag: -1.9				Mag: +0.6			
	19 ^h 57 ^m 9		PMG: 13 ^h 35 ^m				PMG: 09 ^h 57 ^m				PMG: 13 ^h 48 ^m				PMG: 15 ^h 13 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	59	42.3	156	32.7	-24	210	29.3	-11	152	30.3	-23	131	15.8	-22	146	18.0		
1	74	44.8	171	31.7		225	30.2		167	32.2		146			161	20.2		
2	89	47.3	186	30.8		240	31.1		182	34.1		161			176	22.4		
3	104	49.7	201	29.9		255	31.9		197	36.0		176			191	24.7		
4	119	52.2	216	28.9		270	32.8		212	37.9		191			206	26.9		
5	134	54.7	231	28.0	-24	285	33.7	-11	227	39.8	-23	206	26.9	-22				
6	149	57.1	246	27.1	-24	300	34.6	-11	242	41.6	-23	221	29.1	-22				
7	164	59.6	261	26.1		315	35.5		257	43.5		236	31.3					
8	180	02.1	276	25.2		330	36.4		272	45.4		251	33.5					
9	195	04.5	291	24.3		345	37.3		287	47.3		266	35.8					
10	210	07.0	306	23.3		0	38.2		302	49.2		281	38.0					
11	225	09.4	321	22.4	-24	15	39.1	-11	317	51.0	-23	296	40.2	-22				
12	240	11.9	336	21.5	-24	30	40.0	-11	332	52.9	-23	311	42.4	-22				
13	255	14.4	351	20.5		45	40.9		347	54.8		326	44.6					
14	270	16.8	6	19.6		60	41.8		2	56.7		341	46.8					
15	285	19.3	21	18.6		75	42.7		17	58.6		356	49.1					
16	300	21.8	36	17.7		90	43.6		33	00.4		11	51.3					
17	315	24.2	51	16.8	-24	105	44.5	-11	48	02.3	-23	26	53.5	-22				
18	330	26.7	66	15.8	-24	120	45.4	-11	63	04.2	-23	41	55.7	-22				
19	345	29.2	81	14.9		135	46.3		78	06.1		56	57.9					
20	0	31.6	96	14.0		150	47.2		93	08.0		72	00.2					
21	15	34.1	111	13.0		165	48.1		108	09.8		87	02.4					
22	30	36.5	126	12.1		180	49.0		123	11.7		102	04.6					
23	45	39.0	141	11.2		195	49.9		138	13.6		117	06.8					
24	60	41.5	156	10.2	-24	210	50.7	-11	153	15.5	-23	132	09.0	-22				
Dif.	—		-9	-2		+9	-6		+19	0		+22	0					

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna													
	SD: 16'2 PMG: 11 ^h 46 ^m 0			SD: 16'3 Edad: 24 ^d 8 PHE { 4 ^h : 59'7 12 ^h : 59'7 20 ^h : 59'8 PMG: 08 ^h 13 ^m Rº: 51 ^m																										
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº													
h	°	'	°	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m											
0	183	31.7	-20	00.8		241	03.6	101	+5	40.6	138	60 N	15 17	16 08	17 02		1 22	95	14 40	10										
1	198	31.5		01.3		255	32.7	102		26.8	138	58	30	17	07		25	91	39	13										
2	213	31.4		01.9		270	01.9	101	+5	13.0	138	56	42	25	12		28	88	38	16										
3	228	31.2		02.4		284	31.0	102	+4	59.2	138	54	15 52	32	16		30	86	37	18										
4	243	31.0		02.9		299	00.2	101		45.4	139	52	16 00	39	21		33	82	36	21										
5	258	30.9	-20	03.5		313	29.3	102	+4	31.5	139	50	16 08	16 45	17 25		1 35	80	14 36	22										
6	273	30.7	-20	04.0		327	58.5	102	+4	17.6	140	45	16 25	16 58	17 34		1 39	75	14 34	27										
7	288	30.5		04.6		342	27.7	102	+4	03.6	140	40	39	17 09	42		42	72	33	30										
8	303	30.4		05.1		356	56.9	102	+3	49.6	140	35	16 51	18	49		45	68	31	34										
9	318	30.2		05.6		11	26.1	103		35.6	140	30	17 01	27	17 56		48	65	30	37										
10	333	30.1		06.2		25	55.4	102		21.6	140	20	19	43	18 09		53	59	28	42										
11	348	29.9	-20	06.7		40	24.6	102	+3	07.6	141	10 N	17 35	17 57	18 23		1 57	55	14 26	47										
12	3	29.7	-20	07.3		54	53.8	103	+2	53.5	141	0	17 50	18 12	18 37		2 01	51	14 25	51										
13	18	29.6		07.8		69	23.1	102		39.4	141	10 S	18 05	27	18 53		04	47	23	55										
14	33	29.4		08.3		83	52.3	102		25.3	141	20	21	18 45	19 13		08	43	21	60										
15	48	29.2		08.9		98	21.5	103	+2	11.2	141	30	39	19 06	38		13	37	19	65										
16	63	29.1		09.4		112	50.8	103	+1	57.1	142	35	18 50	19	19 54		16	34	18	68										
17	78	28.9	-20	09.9		127	20.1	102	+1	42.9	141	40	19 03	19 34	20 13		2 19	31	14 16	72										
18	93	28.7	-20	10.5		141	49.3	103	+1	28.8	142	45	19 18	19 53	20 38		2 22	27	14 15	75										
19	108	28.6		11.0		156	18.6	102		14.6	142	50	36	20 17	21 12		26	23	13	80										
20	123	28.4		11.5		170	47.8	103	+1	00.4	142	52	45	29	31		28	21	12	83										
21	138	28.2		12.1		185	17.1	102	+0	46.2	142	54	19 55	42	21 54		30	19	11	85										
22	153	28.1		12.6		199	46.3	103		32.0	142	56	20 06	20 59	22 28		32	16	10	88										
23	168	27.9		13.1		214	15.6	102		17.8	142	58	19	21 18	** **		35	13	08	91										
24	183	27.7	-20	13.7		228	44.8		+0	03.6		60 S	20 34	21 43	** **		2 38	10	14 07	94										
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG: 19 ^h 54 ^m 0		Mag: -3.9 PMG: 13 ^h 36 ^m				Mag: +1.7 PMG: 09 ^h 56 ^m				Mag: -1.9 PMG: 13 ^h 45 ^m				Mag: +0.6 PMG: 15 ^h 09 ^m															
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.														
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'													
0	60	41.5		156	10.2	-24	210	50.7	-11	153	15.5	-23	132	09.0	-22	14.3														
1	75	43.9		171	09.3		225	51.6		168	17.4		147	11.2		14.3														
2	90	46.4		186	08.4		240	52.5		183	19.2		162	13.5		14.3														
3	105	48.9		201	07.4		255	53.4		198	21.1		177	15.7		14.2														
4	120	51.3		216	06.5		270	54.3		213	23.0		192	17.9		14.2														
5	135	53.8		231	05.5	-24	285	55.2	-11	228	24.9	-23	207	20.1	-22	14.2														
6	150	56.3		246	04.6	-24	300	56.1	-11	243	26.8	-23	222	22.3	-22	14.2														
7	165	58.7		261	03.7		315	57.0		258	28.6		237	24.5		14.1														
8	181	01.2		276	02.7		330	57.9		273	30.5		252	26.8		14.1														
9	196	03.7		291	01.8		345	58.8		288	32.4		267	29.0		14.1														
10	211	06.1		306	00.8		0	59.7		303	34.3		282	31.2		14.1														
11	226	08.6		320	59.9	-24	16	00.6	-11	318	36.2	-23	297	33.4	-22	14.0														
12	241	11.0		335	59.0	-24	31	01.5	-11	333	38.0	-23	312	35.6	-22	14.0														
13	256	13.5		350	58.0		46	02.3		348	39.9		327	37.8		14.0														
14	271	16.0		5	57.1		61	03.2		3	41.8		342	40.1		14.0														
15	286	18.4		20	56.2		76	04.1		18	43.7		357	42.3		13.9														
16	301	20.9		35	55.2		91	05.0		33	45.5		12	44.5		13.9														
17	316	23.4		50	54.3	-24	106	05.9	-11	48	47.4	-23	27	46.7	-22	13.9														
18	331	25.8		65	53.3	-24	121	06.8	-11	63	49.3	-23	42	48.9	-22	13.9														
19	346	28.3		80	52.4		136	07.7		78	51.2		57	51.1		13.8														
20	1	30.8		95	51.5		151	08.6		93	53.1		72	53.4		13.8														
21	16	33.2		110	50.5		166	09.5		108	54.9		87	55.6		13.8														
22	31	35.7		125	49.6		181	10.4		123	56.8		102	57.8		13.7														
23	46	38.1		140	48.6		196	11.3		138	58.7		118	00.0		13.7														
24	61	40.6		155	47.7	-24	211	12.1	-11	154	00.6	-23	133	02.2	-22	13.7														
Dif.	—		-9				-2				+9				-6				+19				0				+22			

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 46 ^m 3				SD: 16'3 Edad: 25 ^d 8 PMG: 09 ^h 04 ^m PHE { 4 ^h : 59'8 12 ^h : 59'8 20 ^h : 59'8 Rº: 51 ^m													
	hG ☉		Dec		hG ☾		Dif.		Dec			Dif.						
	h	°	'	°	'	°	'	°	'	°		'						
0	183	27.7	-20	13.7	228	44.8	103	+0	03.6	142	60 N	6 32	7 25	8 17	2 57	95	14 50	11
1	198	27.6		14.2	243	14.1	102	-0	10.6	142	58	26	16	8 03	56	92	52	14
2	213	27.4		14.7	257	43.3	102		24.8	142	56	21	08	7 52	56	88	54	17
3	228	27.2		15.2	272	12.5	102		39.0	143	54	16	7 01	42	56	85	55	20
4	243	27.0		15.8	286	41.7	103	-0	53.3	142	52	12	6 54	33	55	83	57	21
5	258	26.9	-20	16.3	301	11.0	102	-1	07.5	142	50	6 08	6 48	7 25	2 55	81	14 58	24
6	273	26.7	-20	16.8	315	40.2	102	-1	21.7	142	45	5 59	6 35	7 08	2 54	76	15 01	28
7	288	26.5		17.3	330	09.4	101		35.9	141	40	51	24	6 54	54	72	03	32
8	303	26.4		17.9	344	38.5	102	-1	50.0	142	35	43	14	42	53	69	05	36
9	318	26.2		18.4	359	07.7	102	-2	04.2	142	30	36	6 06	31	53	65	07	38
10	333	26.0		18.9	13	36.9	101		18.4	142	20	23	5 50	6 13	52	61	10	43
11	348	25.8	-20	19.4	28	06.0	102	-2	32.6	141	10 N	5 09	5 35	5 58	2 52	56	15 13	48
12	3	25.7	-20	20.0	42	35.2	101	-2	46.7	141	0	4 55	5 21	5 43	2 52	51	15 16	51
13	18	25.5		20.5	57	04.3	101	-3	00.8	141	10 S	39	5 05	28	51	47	18	56
14	33	25.3		21.0	71	33.4	101		14.9	141	20	4 19	4 48	5 11	51	42	21	61
15	48	25.2		21.5	86	02.5	101		29.0	141	30	3 54	26	4 53	50	38	24	66
16	63	25.0		22.0	100	31.6	100		43.1	141	35	38	4 13	42	50	34	26	69
17	78	24.8	-20	22.6	115	00.6	101	-3	57.2	140	40	3 19	3 58	4 29	2 50	31	15 28	72
18	93	24.6	-20	23.1	129	29.7	100	-4	11.2	140	45	2 54	3 39	4 14	2 49	28	15 30	76
19	108	24.5		23.6	143	58.7	100		25.2	140	50	20	15	3 56	49	23	33	81
20	123	24.3		24.1	158	27.7	100		39.2	139	52	2 01	3 03	47	49	21	35	83
21	138	24.1		24.6	172	56.7	99	-4	53.1	140	54	1 37	2 49	37	49	18	36	86
22	153	23.9		25.1	187	25.6	100	-5	07.1	139	56	1 04	33	26	48	16	38	88
23	168	23.7		25.7	201	54.6	99		21.0	138	58	** **	2 13	3 13	2 48	13	15 39	92
24	183	23.6	-20	26.2	216	23.5		-5	34.8		60 S	** **	1 48	2 58	2 48	10	15 41	95
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 50 ^m 0		Mag: -3.9 PMG: 13 ^h 38 ^m				Mag: +1.7 PMG: 09 ^h 55 ^m				Mag: -1.9 PMG: 13 ^h 42 ^m				Mag: +0.6 PMG: 15 ^h 06 ^m			
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	61	40.6	155	47.7	-24	35.0	211	12.1	-11	39.9	154	00.6	-23	16.0	133	02.2	-22	13.7
1	76	43.1	170	46.7		35.2	226	13.0		40.5	169	02.4		16.0	148	04.4		13.7
2	91	45.5	185	45.8		35.4	241	13.9		41.1	184	04.3		16.0	163	06.6		13.6
3	106	48.0	200	44.9		35.5	256	14.8		41.7	199	06.2		16.0	178	08.9		13.6
4	121	50.5	215	43.9		35.7	271	15.7		42.3	214	08.1		16.0	193	11.1		13.6
5	136	52.9	230	43.0	-24	35.9	286	16.6	-11	42.9	229	09.9	-23	16.0	208	13.3	-22	13.6
6	151	55.4	245	42.0	-24	36.0	301	17.5	-11	43.4	244	11.8	-23	16.1	223	15.5	-22	13.5
7	166	57.9	260	41.1		36.2	316	18.4		44.0	259	13.7		16.1	238	17.7		13.5
8	182	00.3	275	40.2		36.4	331	19.3		44.6	274	15.6		16.1	253	19.9		13.5
9	197	02.8	290	39.2		36.5	346	20.2		45.2	289	17.5		16.1	268	22.1		13.5
10	212	05.3	305	38.3		36.7	1	21.0		45.8	304	19.3		16.1	283	24.4		13.4
11	227	07.7	320	37.3	-24	36.9	16	21.9	-11	46.3	319	21.2	-23	16.1	298	26.6	-22	13.4
12	242	10.2	335	36.4	-24	37.0	31	22.8	-11	46.9	334	23.1	-23	16.1	313	28.8	-22	13.4
13	257	12.6	350	35.4		37.2	46	23.7		47.5	349	25.0		16.1	328	31.0		13.4
14	272	15.1	5	34.5		37.4	61	24.6		48.1	4	26.8		16.2	343	33.2		13.3
15	287	17.6	20	33.6		37.5	76	25.5		48.7	19	28.7		16.2	358	35.4		13.3
16	302	20.0	35	32.6		37.7	91	26.4		49.2	34	30.6		16.2	13	37.6		13.3
17	317	22.5	50	31.7	-24	37.8	106	27.3	-11	49.8	49	32.5	-23	16.2	28	39.9	-22	13.2
18	332	25.0	65	30.7	-24	38.0	121	28.1	-11	50.4	64	34.3	-23	16.2	43	42.1	-22	13.2
19	347	27.4	80	29.8		38.2	136	29.0		51.0	79	36.2		16.2	58	44.3		13.2
20	2	29.9	95	28.8		38.3	151	29.9		51.5	94	38.1		16.2	73	46.5		13.2
21	17	32.4	110	27.9		38.5	166	30.8		52.1	109	40.0		16.2	88	48.7		13.1
22	32	34.8	125	27.0		38.6	181	31.7		52.7	124	41.8		16.3	103	50.9		13.1
23	47	37.3	140	26.0		38.8	196	32.6		53.3	139	43.7		16.3	118	53.1		13.1
24	62	39.8	155	25.1	-24	38.9	211	33.5	-11	53.9	154	45.6	-23	16.3	133	55.3	-22	13.1
Dif.	—		-9 -2				+9 -6				+19 0				+22 0			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2				SD: 16'3												PHE {	
	PMG: 11 ^h 46 ^m 6				Edad: 26 ^d 8													
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.					
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	183	23.6	-20	26.2	216	23.5	99	-5	34.8	139	60 N	15 14	16 06	16 59	4 32	95	15 01 13	
1	198	23.4		26.7	230	52.4	98	-5	48.7	138	58	27	15	17 05	28	91	06 16	
2	213	23.2		27.2	245	21.2	99	-6	02.5	137	56	39	23	10	24	89	11 19	
3	228	23.0		27.7	259	50.1	98		16.2	137	54	49	30	15	21	86	15 21	
4	243	22.9		28.2	274	18.9	98		29.9	137	52	15 58	37	19	18	84	18 24	
5	258	22.7	-20	28.7	288	47.7	98	-6	43.6	137	50	16 06	16 43	17 23	4 16	81	15 22 26	
6	273	22.5	-20	29.2	303	16.5	97	-6	57.3	136	45	16 24	16 56	17 33	4 10	76	15 29 31	
7	288	22.3		29.8	317	45.2	97	-7	10.9	135	40	38	17 08	41	06	72	35 35	
8	303	22.1		30.3	332	13.9	97		24.4	136	35	16 50	18	48	4 02	69	41 37	
9	318	22.0		30.8	346	42.6	96		38.0	134	30	17 01	26	17 56	3 58	66	45 41	
10	333	21.8		31.3	1	11.2	97	-7	51.4	135	20	19	43	18 10	53	60	15 53 46	
11	348	21.6	-20	31.8	15	39.9	96	-8	04.9	133	10 N	17 35	17 57	18 23	3 48	56	16 01 49	
12	3	21.4	-20	32.3	30	08.5	95	-8	18.2	134	0	17 50	18 12	18 38	3 43	52	16 07 54	
13	18	21.2		32.8	44	37.0	96		31.6	132	10 S	18 05	28	18 55	38	48	14 57	
14	33	21.1		33.3	59	05.6	95		44.8	132	20	22	18 46	19 14	33	44	22 61	
15	48	20.9		33.8	73	34.1	94	-8	58.0	132	30	41	19 08	40	28	39	30 66	
16	63	20.7		34.3	88	02.5	95	-9	11.2	131	35	18 52	21	19 56	24	37	35 68	
17	78	20.5	-20	34.8	102	31.0	94	-9	24.3	131	40	19 05	19 37	20 16	3 21	33	16 40 72	
18	93	20.3	-20	35.3	116	59.4	94	-9	37.4	130	45	19 20	19 56	20 41	3 17	29	16 46 76	
19	108	20.1		35.8	131	27.8	93	-9	50.4	129	50	39	20 20	21 17	12	24	54 81	
20	123	20.0		36.3	145	56.1	93	-10	03.3	129	52	48	33	21 36	10	22	16 58 83	
21	138	19.8		36.8	160	24.4	93		16.2	128	54	19 58	20 47	22 01	07	20	17 02 85	
22	153	19.6		37.3	174	52.7	92		29.0	127	56	20 10	21 04	22 38	04	18	06 88	
23	168	19.4		37.8	189	20.9	92		41.7	127	58	23	24	** **	3 01	15	11 91	
24	183	19.2	-20	38.3	203	49.1		-10	54.4		60 S	20 39	21 51	** **	2 58	12	17 16 95	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: +1.7				Mag: -1.9				Mag: +0.6			
	19 ^h 46 ^m 1		PMG: 13 ^h 39 ^m				PMG: 09 ^h 53 ^m				PMG: 13 ^h 39 ^m				PMG: 15 ^h 02 ^m			
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	62	39.8	155	25.1	-24	38.9	211	33.5	-11	53.9	154	45.6	-23	-16.3	133	55.3	-22	13.1
1	77	42.2	170	24.1		39.1	226	34.4		54.4	169	47.5		-16.3	148	57.6		13.0
2	92	44.7	185	23.2		39.2	241	35.2		55.0	184	49.3		-16.3	163	59.8		13.0
3	107	47.1	200	22.2		39.3	256	36.1		55.6	199	51.2		-16.3	179	02.0		13.0
4	122	49.6	215	21.3		39.5	271	37.0		56.2	214	53.1		-16.3	194	04.2		13.0
5	137	52.1	230	20.4	-24	39.6	286	37.9	-11	56.7	229	55.0	-23	-16.3	209	06.4	-22	12.9
6	152	54.5	245	19.4	-24	39.8	301	38.8	-11	57.3	244	56.8	-23	-16.4	224	08.6	-22	12.9
7	167	57.0	260	18.5		39.9	316	39.7		57.9	259	58.7		-16.4	239	10.8		12.9
8	182	59.5	275	17.5		40.0	331	40.6		58.5	275	00.6		-16.4	254	13.0		12.8
9	198	01.9	290	16.6		40.2	346	41.4		59.1	290	02.5		-16.4	269	15.2		12.8
10	213	04.4	305	15.6		40.3	1	42.3	-11	59.6	305	04.3		-16.4	284	17.5		12.8
11	228	06.9	320	14.7	-24	40.4	16	43.2	-12	00.2	320	06.2	-23	-16.4	299	19.7	-22	12.8
12	243	09.3	335	13.7	-24	40.6	31	44.1	-12	00.8	335	08.1	-23	-16.4	314	21.9	-22	12.7
13	258	11.8	350	12.8		40.7	46	45.0		01.4	350	10.0		-16.4	329	24.1		12.7
14	273	14.2	5	11.8		40.8	61	45.9		01.9	5	11.8		-16.4	344	26.3		12.7
15	288	16.7	20	10.9		41.0	76	46.7		02.5	20	13.7		-16.5	359	28.5		12.7
16	303	19.2	35	10.0		41.1	91	47.6		03.1	35	15.6		-16.5	14	30.7		12.6
17	318	21.6	50	09.0	-24	41.2	106	48.5	-12	03.7	50	17.4	-23	-16.5	29	32.9	-22	12.6
18	333	24.1	65	08.1	-24	41.3	121	49.4	-12	04.2	65	19.3	-23	-16.5	44	35.1	-22	12.6
19	348	26.6	80	07.1		41.5	136	50.3		04.8	80	21.2		-16.5	59	37.4		12.6
20	3	29.0	95	06.2		41.6	151	51.2		05.4	95	23.1		-16.5	74	39.6		12.5
21	18	31.5	110	05.2		41.7	166	52.1		06.0	110	24.9		-16.5	89	41.8		12.5
22	33	34.0	125	04.3		41.8	181	52.9		06.5	125	26.8		-16.5	104	44.0		12.5
23	48	36.4	140	03.3		41.9	196	53.8		07.1	140	28.7		-16.6	119	46.2		12.4
24	63	38.9	155	02.4	-24	42.1	211	54.7	-12	07.7	155	30.6	-23	-16.6	134	48.4	-22	12.4
Dif.	—		-9 -1				+9 -6				+19 0				+22 0			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2			PHE { 4 ^h : 59'5 12 ^h : 59'4 20 ^h : 59'2							Salida de Luna			Puesta de Luna			
	PMG: 11 ^h 46 ^m 9			Edad: 27 ^d 8							Salida de Luna			Puesta de Luna			
	PMG: 10 ^h 48 ^m			Rº: 54 ^m							Salida de Luna			Puesta de Luna			
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	19.2	-20	203	49.1	92	-10	54.4	126	6	35	7	29	8	21	6	07
1	198	19.0		218	17.3	91	-11	07.0	125	29	20	8	07	5	59	91	22
2	213	18.8		232	45.4	91		19.5	125	24	11	7	56	53	87	30	24
3	228	18.7		247	13.5	91		32.0	123	19	7	04	45	47	85	36	27
4	243	18.5		261	41.6	90		44.3	124	15	6	57	36	42	82	42	29
5	258	18.3	-20	276	09.6	90	-11	56.7	122	6	11	6	51	7	28	5	37
6	273	18.1	-20	290	37.6	89	-12	08.9	122	6	01	6	38	7	10	5	26
7	288	17.9		305	05.5	89		21.1	121	5	53	26	6	56	18	72	10
8	303	17.7		319	33.4	89		33.2	120	45	16	44		11	68	18	41
9	318	17.5		334	01.3	88		45.2	119	38	6	07	33	5	04	66	26
10	333	17.4		348	29.1	88	-12	57.1	118	24	5	51	6	15	4	53	62
11	348	17.2	-20	2	56.9	88	-13	08.9	118	5	10	5	36	5	58	4	44
12	3	17.0	-20	17	24.7	87	-13	20.7	117	4	55	5	21	5	43	4	35
13	18	16.8		31	52.4	87		32.4	116	39	5	05	28		26	51	11
14	33	16.6		46	20.1	86		44.0	115	4	19	4	47	5	11	17	46
15	48	16.4		60	47.7	86	-13	55.5	114	3	53	26	4	52		07	41
16	63	16.2		75	15.3	86	-14	06.9	113	37	4	12	41		4	01	39
17	78	16.0	-20	89	42.9	85	-14	18.2	112	3	17	3	57	4	28	3	54
18	93	15.8	-20	104	10.4	85	-14	29.4	112	2	52	3	37	4	13	3	46
19	108	15.6		118	37.9	85		40.6	110	2	16	13	3	54		36	29
20	123	15.4		133	05.4	84	-14	51.6	110	1	57	3	00	4	5	32	26
21	138	15.3		147	32.8	84	-15	02.6	108	1	32	2	46	3	4	27	24
22	153	15.1		162	00.2	83		13.4	108	0	55	29	23		22	21	34
23	168	14.9		176	27.5	83		24.2	107	** **	2	09	3	10	3	16	19
24	183	14.7	-20	190	54.8		-15	34.9		** **	1	42	2	54	3	10	15

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 42 ^m 2		Mag: -3.9 PMG: 13 ^h 41 ^m			Mag: +1.7 PMG: 09 ^h 52 ^m			Mag: -1.8 PMG: 13 ^h 36 ^m			Mag: +0.6 PMG: 14 ^h 59 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	63	38.9	155	02.4	-24	211	54.7	-12	155	30.6	-23	134	48.4	-22
1	78	41.4	170	01.4		226	55.6		170	32.4		149	50.6	
2	93	43.8	185	00.5		241	56.5		185	34.3		164	52.8	
3	108	46.3	199	59.5		256	57.3		200	36.2		179	55.0	
4	123	48.7	214	58.6		271	58.2		215	38.0		194	57.2	
5	138	51.2	229	57.7	-24	286	59.1	-12	230	39.9	-23	209	59.5	-22
6	153	53.7	244	56.7	-24	302	00.0	-12	245	41.8	-23	225	01.7	-22
7	168	56.1	259	55.8		317	00.9		260	43.7		240	03.9	
8	183	58.6	274	54.8		332	01.8		275	45.5		255	06.1	
9	199	01.1	289	53.9		347	02.6		290	47.4		270	08.3	
10	214	03.5	304	52.9		2	03.5	13.4	305	49.3		285	10.5	12.1
11	229	06.0	319	52.0	-24	17	04.4	-12	320	51.2	-23	300	12.7	-22
12	244	08.5	334	51.0	-24	32	05.3	-12	335	53.0	-23	315	14.9	-22
13	259	10.9	349	50.1		47	06.2	15.1	350	54.9		330	17.1	12.1
14	274	13.4	4	49.1		62	07.0	15.7	5	56.8		345	19.3	12.0
15	289	15.9	19	48.2		77	07.9	16.3	20	58.6		0	21.5	12.0
16	304	18.3	34	47.2		92	08.8	16.9	36	00.5		15	23.7	12.0
17	319	20.8	49	46.3	-24	107	09.7	-12	51	02.4	-23	30	26.0	-22
18	334	23.2	64	45.3	-24	122	10.6	-12	66	04.3	-23	45	28.2	-22
19	349	25.7	79	44.4		137	11.4	18.6	81	06.1		60	30.4	11.9
20	4	28.2	94	43.4		152	12.3	19.2	96	08.0		75	32.6	11.9
21	19	30.6	109	42.5		167	13.2	19.7	111	09.9		90	34.8	11.8
22	34	33.1	124	41.5		182	14.1	20.3	126	11.7		105	37.0	11.8
23	49	35.6	139	40.6		197	15.0	20.9	141	13.6		120	39.2	11.8
24	64	38.0	154	39.6	-24	212	15.8	-12	156	15.5	-23	135	41.4	-22
Dif.	—		-9		-1	+9		-6	+19		0	+22		0

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna									
	SD: 16'2				SD: 16'1 Edad: 28 ^d 8								PHE { 4 ^h : 59'1 12 ^h : 58'9 20 ^h : 58'7													
	PMG: 11 ^h 47 ^m 2				PMG: 11 ^h 42 ^m								Rº: 56 ^m													
	hG ☉	Dec			hG ☾	Dif.		Dec		Dif.					Civil	Náut.	Hora	Rº	Hora	Rº						
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m				
0	183	14.7	-20	50.1	190	54.8	83	-15	34.9	105	60 N	15 10	16 03	16 57	7 42	90	15 31	24								
1	198	14.5		50.6	205	22.1	82		45.4	105	58	24	12	17 03	30	87	43	28								
2	213	14.3		51.0	219	49.3	82	-15	55.9	103	56	36	21	08	20	84	15 54	31								
3	228	14.1		51.5	234	16.5	82	-16	06.2	103	54	47	28	13	12	80	16 03	33								
4	243	13.9		52.0	248	43.7	81		16.5	102	52	15 56	35	18	7 04	78	11	36								
5	258	13.7	-20	52.5	263	10.8	81	-16	26.7	100	50	16 05	16 42	17 22	6 57	77	16 19	37								
6	273	13.5	-20	53.0	277	37.9	80	-16	36.7	99	45	16 23	16 55	17 32	6 42	73	16 35	41								
7	288	13.3		53.4	292	04.9	80		46.6	99	40	37	17 07	40	30	69	48	44								
8	303	13.1		53.9	306	31.9	80	-16	56.5	97	35	16 49	17	48	19	68	16 59	46								
9	318	12.9		54.4	320	58.9	79	-17	06.2	96	30	17 00	26	17 55	6 10	65	17 09	48								
10	333	12.7		54.9	335	25.8	80		15.8	95	20	19	43	18 10	5 55	61	26	51								
11	348	12.5	-20	55.3	349	52.8	78	-17	25.3	94	10 N	17 35	17 58	18 24	5 41	59	17 41	54								
12	3	12.3	-20	55.8	4	19.6	79	-17	34.7	92	0	17 51	18 13	18 39	5 29	55	17 55	56								
13	18	12.1		56.3	18	46.5	78		43.9	92	10 S	18 06	29	18 56	17	52	18 09	59								
14	33	11.9		56.8	33	13.3	78	-17	53.1	91	20	23	18 47	19 16	5 03	50	24	61								
15	48	11.7		57.2	47	40.1	77	-18	02.2	89	30	43	19 09	42	4 48	46	42	64								
16	63	11.5		57.7	62	06.8	77		11.1	88	35	18 54	23	19 58	40	43	18 52	65								
17	78	11.3	-20	58.2	76	33.5	77	-18	19.9	87	40	19 07	19 39	20 18	4 30	41	19 03	68								
18	93	11.1	-20	58.6	91	00.2	77	-18	28.6	86	45	19 23	19 59	20 45	4 19	37	19 17	70								
19	108	10.9		59.1	105	26.9	76		37.2	84	50	42	20 24	21 21	4 05	34	34	73								
20	123	10.7	-20	59.6	119	53.5	76		45.6	83	52	19 52	37	21 42	3 58	32	41	76								
21	138	10.5	-21	00.0	134	20.1	76	-18	53.9	82	54	20 02	20 51	22 08	51	30	19 50	78								
22	153	10.3		00.5	148	46.7	75	-19	02.1	81	56	14	21 08	22 49	43	28	20 00	80								
23	168	10.1		01.0	163	13.2	76		10.2	80	58	28	30	** **	35	24	11	83								
24	183	09.9	-21	01.4	177	39.8		-19	18.2		60 S	20 44	21 58	** **	3 25	20	20 25	86								
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO											
	PMG: 19 ^h 38 ^m 2		Mag: -3.9 PMG: 13 ^h 42 ^m				Mag: +1.7 PMG: 09 ^h 50 ^m				Mag: -1.8 PMG: 13 ^h 33 ^m				Mag: +0.6 PMG: 14 ^h 55 ^m											
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	64	38.0	154	39.6	-24	44.5	212	15.8	-12	21.4	156	15.5	-23	-16.8	135	41.4	-22	11.8								
1	79	40.5	169	38.7		44.6	227	16.7		22.0	171	17.3		-16.8	150	43.6		11.7								
2	94	43.0	184	37.8		44.6	242	17.6		22.6	186	19.2		-16.8	165	45.8		11.7								
3	109	45.4	199	36.8		44.7	257	18.5		23.2	201	21.1		-16.9	180	48.0		11.7								
4	124	47.9	214	35.9		44.8	272	19.4		23.7	216	23.0		-16.9	195	50.2		11.6								
5	139	50.4	229	34.9	-24	44.9	287	20.2	-12	24.3	231	24.8	-23	-16.9	210	52.4	-22	11.6								
6	154	52.8	244	34.0	-24	45.0	302	21.1	-12	24.9	246	26.7	-23	-16.9	225	54.6	-22	11.6								
7	169	55.3	259	33.0		45.0	317	22.0		25.4	261	28.6		-16.9	240	56.9		11.6								
8	184	57.7	274	32.1		45.1	332	22.9		26.0	276	30.4		-16.9	255	59.1		11.5								
9	200	00.2	289	31.1		45.2	347	23.8		26.6	291	32.3		-16.9	271	01.3		11.5								
10	215	02.7	304	30.2		45.3	2	24.6		27.1	306	34.2		-16.9	286	03.5		11.5								
11	230	05.1	319	29.2	-24	45.3	17	25.5	-12	27.7	321	36.0	-23	-16.9	301	05.7	-22	11.5								
12	245	07.6	334	28.3	-24	45.4	32	26.4	-12	28.3	336	37.9	-23	-16.9	316	07.9	-22	11.4								
13	260	10.1	349	27.3		45.5	47	27.3		28.9	351	39.8		-17.0	331	10.1		11.4								
14	275	12.5	4	26.4		45.5	62	28.1		29.4	6	41.7		-17.0	346	12.3		11.4								
15	290	15.0	19	25.4		45.6	77	29.0		30.0	21	43.5		-17.0	1	14.5		11.3								
16	305	17.5	34	24.5		45.7	92	29.9		30.6	36	45.4		-17.0	16	16.7		11.3								
17	320	19.9	49	23.5	-24	45.7	107	30.8	-12	31.1	51	47.3	-23	-17.0	31	18.9	-22	11.3								
18	335	22.4	64	22.6	-24	45.8	122	31.7	-12	31.7	66	49.1	-23	-17.0	46	21.1	-22	11.3								
19	350	24.8	79	21.6		45.9	137	32.5		32.3	81	51.0		-17.0	61	23.3		11.2								
20	5	27.3	94	20.7		45.9	152	33.4		32.8	96	52.9		-17.0	76	25.5		11.2								
21	20	29.8	109	19.7		46.0	167	34.3		33.4	111	54.7		-17.0	91	27.7		11.2								
22	35	32.2	124	18.8		46.0	182	35.2		34.0	126	56.6		-17.0	106	29.9		11.1								
23	50	34.7	139	17.8		46.1	197	36.0		34.5	141	58.5		-17.1	121	32.1		11.1								
24	65	37.2	154	16.9	-24	46.1	212	36.9	-12	35.1	157	00.3	-23	-17.1	136	34.4	-22	11.1								
Dif.	—		-9				+9				-6				+19				0				+22			

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 47 ^m 5				SD: 16'0 Edad: 0 ^d 4		PHE { 4 ^h : 58'5 12 ^h : 58'2 20 ^h : 58'0		R ^o : 56 ^m									
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	R ^o		Hora	R ^o					
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	183 09.9 198 09.7 213 09.5 228 09.3 243 09.1 258 08.9 273 08.7 288 08.5 303 08.3 318 08.1 333 07.9 348 07.7 3 07.5 18 07.3 33 07.1 48 06.9 63 06.7 78 06.5 93 06.3 108 06.1 123 05.9 138 05.7 153 05.4 168 05.2 183 05.0	-21 01.4 01.9 02.4 02.8 03.3 -21 03.8 -21 04.2 04.7 05.1 05.6 06.1 -21 06.5 -21 07.0 07.4 07.9 08.3 08.8 -21 09.3 -21 09.7 10.2 10.6 11.1 11.5 12.0 -21 12.4	177 39.8 192 06.3 206 32.7 220 59.2 235 25.6 249 52.0 264 18.4 278 44.8 293 11.1 307 37.5 322 03.8 336 30.1 350 56.3 5 22.6 19 48.9 34 15.1 48 41.3 63 07.6 77 33.8 92 00.0 106 26.2 120 52.4 135 18.6 149 44.8 164 10.9	75 74 75 74 74 74 74 73 74 73 73 72 73 73 72 72 73 72 72 72 72 72 71 71	-19 18.2 26.0 33.8 41.3 48.8 -19 56.1 -20 03.3 10.4 17.4 24.2 30.9 -20 37.4 -20 43.9 50.2 -20 56.3 -21 02.3 08.2 -21 14.0 -21 19.6 25.1 30.5 35.7 40.8 45.7 -21 50.5	78 78 75 75 73 72 71 70 68 67 65 65 63 61 60 59 58 56 55 54 52 51 49 48	60 N 58 56 54 52 50 45 40 35 30 20 10 N 0 10 S 20 30 35 40 45 50 52 54 56 58 60 S	h m 6 39 33 27 22 18 6 13 6 03 5 55 47 39 25 5 11 4 56 39 4 19 3 53 36 3 16 2 50 2 13 1 53 1 26 0 45 ** ** ** **	h m 7 33 23 15 07 7 00 6 54 6 40 28 18 6 09 5 52 5 37 5 22 5 06 4 47 25 4 11 3 55 3 36 3 10 2 58 43 26 2 04 1 36	h m 8 26 8 11 7 59 49 39 7 31 7 13 6 58 46 35 6 16 5 59 5 44 28 5 11 4 52 40 4 27 4 11 3 52 43 32 20 3 07 2 50	h m m 9 12 81 8 57 77 44 75 32 74 22 72 8 14 70 7 55 67 39 66 27 63 7 15 63 6 56 60 6 40 58 6 24 56 6 09 54 5 53 52 34 50 23 48 5 11 46 4 56 44 39 41 30 40 21 38 4 11 35 3 59 33 3 45 30	h m m 15 55 37 16 11 39 25 41 36 43 47 44 16 56 45 17 16 47 32 49 45 51 17 57 51 18 17 53 18 35 54 18 51 56 19 08 57 25 59 46 60 19 57 62 20 11 63 20 27 64 47 66 20 57 67 21 08 67 20 69 21 34 71 21 51 72						
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 19 ^h 34 ^m 3		Mag: -3.9 PMG: 13 ^h 44 ^m				Mag: +1.7 PMG: 09 ^h 49 ^m				Mag: -1.8 PMG: 13 ^h 30 ^m				Mag: +0.6 PMG: 14 ^h 52 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	65 37.2 80 39.6 95 42.1 110 44.6 125 47.0 140 49.5 155 52.0 170 54.4 185 56.9 200 59.3 216 01.8 231 04.3 246 06.7 261 09.2 276 11.7 291 14.1 306 16.6 321 19.1 336 21.5 351 24.0 6 26.5 21 28.9 36 31.4 51 33.8 66 36.3	154 16.9 169 15.9 184 15.0 199 14.0 214 13.1 229 12.1 244 11.2 259 10.2 274 09.3 289 08.3 304 07.4 319 06.4 334 05.5 349 04.5 4 03.6 19 02.6 34 01.7 49 00.7 63 59.8 78 58.8 93 57.9 108 56.9 123 56.0 138 55.0 153 54.1	-24 46.1 46.2 46.2 46.3 46.3 -24 46.4 -24 46.4 46.5 46.5 46.6 46.6 -24 46.7 -24 46.7 46.7 46.8 46.8 46.8 -24 46.9 -24 46.9 46.9 47.0 47.0 47.0 47.1	212 36.9 227 37.8 242 38.7 257 39.5 272 40.4 287 41.3 302 42.2 317 43.0 332 43.9 347 44.8 2 45.7 17 46.5 32 47.4 47 48.3 62 49.2 77 50.0 92 50.9 107 51.8 122 52.6 137 53.5 152 54.4 167 55.3 182 56.1 197 57.0 212 57.9	-12 35.1 35.7 36.2 36.8 37.4 -12 37.9 -12 38.5 39.1 39.6 40.2 40.8 -12 41.3 -12 41.9 42.5 43.0 43.6 44.2 -12 44.7 -12 45.3 45.9 46.4 47.0 47.6 48.1 -12 48.7	157 00.3 172 02.2 187 04.1 202 05.9 217 07.8 232 09.7 247 11.6 262 13.4 277 15.3 292 17.2 307 19.0 322 20.9 337 22.8 352 24.6 7 26.5 22 28.4 37 30.2 52 32.1 67 34.0 82 35.8 97 37.7 112 39.6 127 41.4 142 43.3 157 45.2	-23 17.1 17.1 17.1 17.1 17.1 -23 17.1 -23 17.1 17.1 17.1 17.1 17.2 -23 17.2 -23 17.2 17.2 17.2 17.2 17.2 -23 17.2 -23 17.2 17.2 17.3 17.3 17.3 -23 17.3	136 34.4 151 36.6 166 38.8 181 41.0 196 43.2 211 45.4 226 47.6 241 49.8 256 52.0 271 54.2 286 56.4 301 58.6 317 00.8 332 03.0 347 05.2 2 07.4 17 09.6 32 11.8 47 14.0 62 16.2 77 18.4 92 20.6 107 22.8 122 25.0 137 27.2	-22 11.1 11.1 11.0 11.0 11.0 -22 10.9 -22 10.9 10.9 10.9 10.8 10.8 -22 10.8 -22 10.7 10.7 10.7 10.7 10.6 -22 10.6 -22 10.6 10.5 10.5 10.5 10.4 -22 10.4									
Dif.	—		-9				+9				+19				+22			

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna							
	SD: 16'2 PMG: 11 ^h 47 ^m 8				SD: 15'8 Edad: 1 ^d 4 PMG: 13 ^h 34 ^m												PHE { 4 ^h : 57'8 12 ^h : 57'5 20 ^h : 57'3 Rº: 55 ^m					
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.									
	h	°	'	°	'	h	°	'			°	'	h	m	h	m	h	m	m	h	m	m
0	183	05.0	-21	12.4	164	10.9	72	-21	50.5	47	60 N	15 07	16 00	16 55	10 33	63	16 32	51				
1	198	04.8		12.9	178	37.1	72		55.2	45	58	22	10	17 01	10 14	63	16 50	52				
2	213	04.6		13.3	193	03.3	72	-21	59.7	44	56	34	19	06	9 59	62	17 06	52				
3	228	04.4		13.8	207	29.5	72	-22	04.1	43	54	45	27	12	46	61	19	53				
4	243	04.2		14.2	221	55.7	72		08.4	41	52	15 55	34	16	34	61	31	53				
5	258	04.0	-21	14.7	236	21.9	72	-22	12.5	40	50	16 03	16 40	17 21	9 24	60	17 41	54				
6	273	03.8	-21	15.1	250	48.1	72	-22	16.5	38	45	16 21	16 54	17 31	9 02	60	18 03	54				
7	288	03.6		15.5	265	14.3	72		20.3	37	40	36	17 06	40	8 45	59	21	54				
8	303	03.4		16.0	279	40.5	73		24.0	36	35	16 49	17	48	30	59	36	54				
9	318	03.1		16.4	294	06.8	72		27.6	34	30	17 00	26	17 55	8 18	58	18 48	55				
10	333	02.9		16.9	308	33.0	72		31.0	33	20	19	43	18 10	7 56	57	19 10	55				
11	348	02.7	-21	17.3	322	59.2	73	-22	34.3	32	10 N	17 36	17 58	18 24	7 38	56	19 29	55				
12	3	02.5	-21	17.8	337	25.5	73	-22	37.5	30	0	17 51	18 14	18 40	7 20	56	19 47	55				
13	18	02.3		18.2	351	51.8	73		40.5	28	10 S	18 07	30	18 57	7 03	55	20 05	55				
14	33	02.1		18.6	6	18.1	73		43.3	28	20	24	18 49	19 17	6 45	54	24	55				
15	48	01.9		19.1	20	44.4	73		46.1	26	30	44	19 11	19 44	24	53	46	55				
16	63	01.7		19.5	35	10.7	74		48.7	24	35	18 56	25	20 00	6 11	53	20 59	55				
17	78	01.4	-21	20.0	49	37.1	73	-22	51.1	24	40	19 09	19 41	20 21	5 57	52	21 14	55				
18	93	01.2	-21	20.4	64	03.4	74	-22	53.5	21	45	19 25	20 01	20 48	5 40	51	21 31	56				
19	108	01.0		20.8	78	29.8	75		55.6	21	50	45	27	21 26	20	49	21 53	55				
20	123	00.8		21.3	92	56.3	74		57.7	19	52	19 55	40	21 47	5 10	49	22 04	55				
21	138	00.6		21.7	107	22.7	75	-22	59.6	18	54	20 05	20 55	22 15	4 59	48	15	55				
22	153	00.4		22.1	121	49.2	75	-23	01.4	16	56	18	21 13	23 01	46	47	29	55				
23	168	00.2		22.6	136	15.7	75		03.0	15	58	32	21 36	** **	32	45	22 45	54				
24	182	59.9	-21	23.0	150	42.2		-23	04.5		60 S	20 48	22 06	** **	4 15	44	23 03	55				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 19 ^h 30 ^m 4		Mag: -3.9 PMG: 13 ^h 45 ^m				Mag: +1.7 PMG: 09 ^h 48 ^m				Mag: -1.8 PMG: 13 ^h 27 ^m				Mag: +0.6 PMG: 14 ^h 48 ^m							
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	66	36.3	153	54.1	-24	47.1	212	57.9	-12	48.7	157	45.2	-23	-17.3	137	27.2	-22	10.4				
1	81	38.8	168	53.1		47.1	227	58.8		49.3	172	47.0		-17.3	152	29.4		10.4				
2	96	41.2	183	52.2		47.1	242	59.6		49.8	187	48.9		-17.3	167	31.6		10.4				
3	111	43.7	198	51.2		47.1	258	00.5		50.4	202	50.8		-17.3	182	33.8		10.3				
4	126	46.2	213	50.3		47.1	273	01.4		51.0	217	52.6		-17.3	197	36.1		10.3				
5	141	48.6	228	49.3	-24	47.1	288	02.2	-12	51.5	232	54.5	-23	-17.3	212	38.3	-22	10.3				
6	156	51.1	243	48.4	-24	47.2	303	03.1	-12	52.1	247	56.4	-23	-17.3	227	40.5	-22	10.2				
7	171	53.6	258	47.4		47.2	318	04.0		52.6	262	58.2		-17.3	242	42.7		10.2				
8	186	56.0	273	46.5		47.2	333	04.9		53.2	278	00.1		-17.4	257	44.9		10.2				
9	201	58.5	288	45.5		47.2	348	05.7		53.8	293	02.0		-17.4	272	47.1		10.1				
10	217	01.0	303	44.6		47.2	3	06.6		54.3	308	03.8		-17.4	287	49.3		10.1				
11	232	03.4	318	43.6	-24	47.2	18	07.5	-12	54.9	323	05.7	-23	-17.4	302	51.5	-22	10.1				
12	247	05.9	333	42.7	-24	47.2	33	08.3	-12	55.5	338	07.6	-23	-17.4	317	53.7	-22	10.1				
13	262	08.3	348	41.7		47.2	48	09.2		56.0	353	09.4		-17.4	332	55.9		10.0				
14	277	10.8	3	40.8		47.2	63	10.1		56.6	8	11.3		-17.4	347	58.1		10.0				
15	292	13.3	18	39.8		47.2	78	10.9		57.1	23	13.1		-17.4	3	00.3		10.0				
16	307	15.7	33	38.9		47.2	93	11.8		57.7	38	15.0		-17.4	18	02.5		09.9				
17	322	18.2	48	38.0	-24	47.2	108	12.7	-12	58.3	53	16.9	-23	-17.4	33	04.7	-22	09.9				
18	337	20.7	63	37.0	-24	47.2	123	13.6	-12	58.8	68	18.7	-23	-17.4	48	06.9	-22	09.9				
19	352	23.1	78	36.1		47.2	138	14.4	-12	59.4	83	20.6		-17.4	63	09.1		09.9				
20	7	25.6	93	35.1		47.2	153	15.3	-13	00.0	98	22.5		-17.4	78	11.3		09.8				
21	22	28.1	108	34.2		47.2	168	16.2		00.5	113	24.3		-17.5	93	13.5		09.8				
22	37	30.5	123	33.2		47.2	183	17.0		01.1	128	26.2		-17.5	108	15.7		09.8				
23	52	33.0	138	32.3		47.2	198	17.9		01.6	143	28.1		-17.5	123	17.9		09.7				
24	67	35.5	153	31.3	-24	47.2	213	18.8	-13	02.2	158	29.9	-23	-17.5	138	20.1	-22	09.7				
Dif.	—		-9				+9				-6				+19				+22			

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 48 ^m 2				SD: 15'6 Edad: 2 ^d 4		PHE { 4 ^h : 57'0 12 ^h : 56'8 20 ^h : 56'5		Rº: 54 ^m			Náut.	Civil		Hora	Rº	Hora	Rº			
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.															
h	°	'	°	'	°	'		°	'			h	m	h	m	h	m	m			
0	182	59.9	-21	23.0	150	42.2	75	-23	04.5	13	60 N	6 42	7 37	8 30	11 36	45	17 23	66			
1	197	59.7		23.4	165	08.7	76		05.8	13	58	36	27	15	17 46		42	64			
2	212	59.5		23.9	179	35.3	76		07.1	10	56	30	18	8 03	11 01	47	17 58	63			
3	227	59.3		24.3	194	01.9	77		08.1	10	54	25	10	7 52	10 47	48	18 12	62			
4	242	59.1		24.7	208	28.6	77		09.1	8	52	20	7 03	42	35	49	24	61			
5	257	58.9	-21	25.1	222	55.3	77	-23	09.9	7	50	6 16	6 56	7 33	10 24	49	18 35	60			
6	272	58.6	-21	25.6	237	22.0	78	-23	10.6	5	45	6 06	6 42	7 15	10 02	50	18 57	59			
7	287	58.4		26.0	251	48.8	78		11.1	4	40	5 57	30	7 00	9 44	51	19 15	58			
8	302	58.2		26.4	266	15.6	78		11.5	3	35	49	20	6 47	29	51	30	57			
9	317	58.0		26.9	280	42.4	79		11.8	2	30	41	6 10	36	9 16	52	19 43	56			
10	332	57.8		27.3	295	09.3	79		12.0	0	20	26	5 53	17	8 53	53	20 05	55			
11	347	57.6	-21	27.7	309	36.2	80	-23	12.0	2	10 N	5 12	5 38	6 00	8 34	54	20 24	54			
12	2	57.3	-21	28.1	324	03.2	80	-23	11.8	2	0	4 56	5 22	5 44	8 16	54	20 42	53			
13	17	57.1		28.6	338	30.2	80		11.6	4	10 S	39	5 06	29	7 58	55	21 00	52			
14	32	56.9		29.0	352	57.2	81		11.2	5	20	4 19	4 47	5 11	39	55	19	51			
15	47	56.7		29.4	7	24.3	82		10.7	7	30	3 52	25	4 51	17	55	41	50			
16	62	56.5		29.8	21	51.5	82		10.0	8	35	35	4 11	40	7 04	56	21 54	49			
17	77	56.2	-21	30.2	36	18.7	82	-23	09.2	9	40	3 15	3 54	4 26	6 49	56	22 09	47			
18	92	56.0	-21	30.7	50	45.9	83	-23	08.3	10	45	2 48	3 34	4 10	6 31	57	22 27	46			
19	107	55.8		31.1	65	13.2	83		07.3	12	50	2 10	3 08	3 50	6 09	57	48	45			
20	122	55.6		31.5	79	40.5	84		06.1	13	52	1 49	2 55	41	5 59	57	22 59	43			
21	137	55.3		31.9	94	07.9	85		04.8	14	54	1 21	40	30	47	57	23 10	43			
22	152	55.1		32.3	108	35.4	85		03.4	15	56	0 34	22	18	33	58	24	41			
23	167	54.9		32.7	123	02.9	85		01.9	17	58	** **	2 00	3 04	5 17	59	23 39	39			
24	182	54.7	-21	33.2	137	30.4		-23	00.2		60 S	** **	1 30	2 47	4 59	58	23 58	37			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG 19 ^h 26 ^m 4		Mag: -3.9 PMG: 13 ^h 47 ^m				Mag: +1.7 PMG: 09 ^h 46 ^m				Mag: -1.8 PMG: 13 ^h 24 ^m				Mag: +0.6 PMG: 14 ^h 45 ^m						
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	67	35.5	153	31.3	-24	47.2	213	18.8	-13	02.2	158	29.9	-23	17.5	138	20.1	-22	09.7			
1	82	37.9	168	30.4		47.2	228	19.6		02.8	173	31.8		17.5	153	22.3		09.7			
2	97	40.4	183	29.4		47.2	243	20.5		03.3	188	33.7		17.5	168	24.5		09.7			
3	112	42.8	198	28.5		47.2	258	21.4		03.9	203	35.5		17.5	183	26.7		09.6			
4	127	45.3	213	27.5		47.2	273	22.2		04.4	218	37.4		17.5	198	28.9		09.6			
5	142	47.8	228	26.6	-24	47.2	288	23.1	-13	05.0	233	39.3	-23	17.5	213	31.1	-22	09.6			
6	157	50.2	243	25.6	-24	47.1	303	24.0	-13	05.6	248	41.1	-23	17.5	228	33.3	-22	09.5			
7	172	52.7	258	24.7		47.1	318	24.8		06.1	263	43.0		17.5	243	35.5		09.5			
8	187	55.2	273	23.7		47.1	333	25.7		06.7	278	44.8		17.5	258	37.7		09.5			
9	202	57.6	288	22.8		47.1	348	26.6		07.2	293	46.7		17.5	273	39.9		09.5			
10	218	00.1	303	21.8		47.1	3	27.4		07.8	308	48.6		17.6	288	42.1		09.4			
11	233	02.6	318	20.9	-24	47.0	18	28.3	-13	08.4	323	50.4	-23	17.6	303	44.3	-22	09.4			
12	248	05.0	333	19.9	-24	47.0	33	29.2	-13	08.9	338	52.3	-23	17.6	318	46.5	-22	09.4			
13	263	07.5	348	19.0		47.0	48	30.0		09.5	353	54.2		17.6	333	48.7		09.3			
14	278	10.0	3	18.0		47.0	63	30.9		10.0	8	56.0		17.6	348	50.9		09.3			
15	293	12.4	18	17.1		46.9	78	31.8		10.6	23	57.9		17.6	3	53.1		09.3			
16	308	14.9	33	16.1		46.9	93	32.6		11.1	38	59.8		17.6	18	55.3		09.2			
17	323	17.3	48	15.2	-24	46.9	108	33.5	-13	11.7	54	01.6	-23	17.6	33	57.5	-22	09.2			
18	338	19.8	63	14.2	-24	46.8	123	34.4	-13	12.3	69	03.5	-23	17.6	48	59.7	-22	09.2			
19	353	22.3	78	13.3		46.8	138	35.2		12.8	84	05.3		17.6	64	01.9		09.2			
20	8	24.7	93	12.3		46.8	153	36.1		13.4	99	07.2		17.6	79	04.1		09.1			
21	23	27.2	108	11.4		46.7	168	37.0		13.9	114	09.1		17.6	94	06.3		09.1			
22	38	29.7	123	10.4		46.7	183	37.8		14.5	129	10.9		17.6	109	08.5		09.1			
23	53	32.1	138	09.5		46.7	198	38.7		15.0	144	12.8		17.6	124	10.7		09.0			
24	68	34.6	153	08.5	-24	46.6	213	39.6	-13	15.6	159	14.7	-23	17.7	139	12.8	-22	09.0			
Dif.	—		-9				0	+9				-6	+19				0	+22			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2			PHE { 4 ^h : 56'3 12 ^h : 56'0 20 ^h : 55'8														
	PMG: 11 ^h 48 ^m 5			Edad: 3'4														
	PMG: 15 ^h 23 ^m			Rº: 50 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'				h m	h m	h m	h m m		h m m		
0	182	54.7	-21	137	30.4	87	-23	00.2	18	60 N	15 04	15 58	16 53	12 21	30	18 29	75	
1	197	54.5		151	58.1	86	-22	58.4	19	58	19	16 08	16 59	12 03	33	18 46	72	
2	212	54.2		166	25.7	88		56.5	21	56	32	17	17 05	11 48	35	19 01	70	
3	227	54.0		180	53.5	87		54.4	21	54	43	25	10	35	37	14	67	
4	242	53.8		195	21.2	89		52.3	23	52	15 53	33	15	24	38	25	66	
5	257	53.6	-21	209	49.1	89	-22	50.0	24	50	16 02	16 39	17 20	11 13	40	19 35	65	
6	272	53.3	-21	224	17.0	90	-22	47.6	26	45	16 20	16 53	17 30	10 52	42	19 56	62	
7	287	53.1		238	45.0	90		45.0	26	40	36	17 06	39	35	43	20 13	59	
8	302	52.9		253	13.0	91		42.4	28	35	16 49	16	47	20	45	27	58	
9	317	52.7		267	41.1	91		39.6	29	30	17 00	26	17 55	10 08	46	20 39	57	
10	332	52.4		282	09.2	92		36.7	30	20	19	43	18 10	9 46	48	21 00	54	
11	347	52.2	-21	296	37.4	93	-22	33.7	31	10 N	17 36	17 59	18 25	9 28	49	21 18	52	
12	2	52.0	-21	311	05.7	94	-22	30.6	33	0	17 52	18 14	18 40	9 10	51	21 35	50	
13	17	51.8		325	34.1	94		27.3	33	10 S	18 08	31	18 58	8 53	53	21 52	48	
14	32	51.5		340	02.5	95		24.0	35	20	26	18 50	19 19	34	54	22 10	46	
15	47	51.3		354	31.0	95		20.5	36	30	46	19 13	19 45	12	57	31	43	
16	62	51.1		8	59.5	96		16.9	37	35	18 58	27	20 03	8 00	57	43	41	
17	77	50.9	-21	23	28.1	97	-22	13.2	38	40	19 12	19 44	20 24	7 45	59	22 56	40	
18	92	50.6	-21	37	56.8	97	-22	09.4	39	45	19 28	20 04	20 51	7 28	60	23 13	38	
19	107	50.4		52	25.5	99		05.5	41	50	48	31	21 30	7 06	63	33	35	
20	122	50.2		66	54.4	98	-22	01.4	41	52	19 58	44	21 52	6 56	64	42	34	
21	137	49.9		81	23.2	100	-21	57.3	43	54	20 09	20 59	22 21	44	65	23 53	32	
22	152	49.7		95	52.2	100		53.0	43	56	21	21 18	23 17	31	66	***	***	
23	167	49.5		110	21.2	101		48.7	45	58	36	21 41	***	6 16	68	***	***	
24	182	49.3	-21	124	50.3		-21	44.2		60 S	20 53	22 13	***	5 57	71	***	***	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: +1.7				Mag: -1.8				Mag: +0.6			
	19 ^h 22 ^m 5		PMG: 13 ^h 48 ^m				PMG: 09 ^h 45 ^m				PMG: 13 ^h 21 ^m				PMG: 14 ^h 41 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	68	34.6	153	08.5	-24	46.6	213	39.6	-13	15.6	159	14.7	-23	-17.7	139	12.8	-22	09.0
1	83	37.1	168	07.6		46.6	228	40.4		16.2	174	16.5		-17.7	154	15.0		09.0
2	98	39.5	183	06.6		46.5	243	41.3		16.7	189	18.4		-17.7	169	17.2		09.0
3	113	42.0	198	05.7		46.5	258	42.2		17.3	204	20.2		-17.7	184	19.4		08.9
4	128	44.4	213	04.8		46.4	273	43.0		17.8	219	22.1		-17.7	199	21.6		08.9
5	143	46.9	228	03.8	-24	46.4	288	43.9	-13	18.4	234	24.0	-23	-17.7	214	23.8	-22	08.9
6	158	49.4	243	02.9	-24	46.4	303	44.8	-13	18.9	249	25.8	-23	-17.7	229	26.0	-22	08.8
7	173	51.8	258	01.9		46.3	318	45.6		19.5	264	27.7		-17.7	244	28.2		08.8
8	188	54.3	273	01.0		46.3	333	46.5		20.1	279	29.6		-17.7	259	30.4		08.8
9	203	56.8	288	00.0		46.2	348	47.3		20.6	294	31.4		-17.7	274	32.6		08.7
10	218	59.2	302	59.1		46.1	3	48.2	21.2		309	33.3		-17.7	289	34.8		08.7
11	234	01.7	317	58.1	-24	46.1	18	49.1	-13	21.7	324	35.1	-23	-17.7	304	37.0	-22	08.7
12	249	04.2	332	57.2	-24	46.0	33	49.9	-13	22.3	339	37.0	-23	-17.7	319	39.2	-22	08.7
13	264	06.6	347	56.2		46.0	48	50.8		22.8	354	38.9		-17.7	334	41.4		08.6
14	279	09.1	2	55.3		45.9	63	51.7	23.4		9	40.7		-17.7	349	43.6		08.6
15	294	11.6	17	54.3		45.9	78	52.5	23.9		24	42.6		-17.8	4	45.8		08.6
16	309	14.0	32	53.4		45.8	93	53.4	24.5		39	44.4		-17.8	19	48.0		08.5
17	324	16.5	47	52.4	-24	45.7	108	54.2	-13	25.1	54	46.3	-23	-17.8	34	50.2	-22	08.5
18	339	18.9	62	51.5	-24	45.7	123	55.1	-13	25.6	69	48.2	-23	-17.8	49	52.4	-22	08.5
19	354	21.4	77	50.5		45.6	138	56.0	26.2		84	50.0		-17.8	64	54.6		08.5
20	9	23.9	92	49.6		45.5	153	56.8	26.7		99	51.9		-17.8	79	56.8		08.4
21	24	26.3	107	48.7		45.5	168	57.7	27.3		114	53.8		-17.8	94	59.0		08.4
22	39	28.8	122	47.7		45.4	183	58.6	27.8		129	55.6		-17.8	110	01.2		08.4
23	54	31.3	137	46.8		45.3	198	59.4	28.4		144	57.5		-17.8	125	03.4		08.3
24	69	33.7	152	45.8	-24	45.3	214	00.3	-13	28.9	159	59.3	-23	-17.8	140	05.6	-22	08.3
Dif.	—		-9		+1		+9		-6		+19		0		+22		0	

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 48 ^m 9				SD: 15'2 Edad: 4 ^d 4 PHE { 4 ^h : 55'6 12 ^h : 55'4 20 ^h : 55'2 PMG: 16 ^h 13 ^m Rº: 48 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº					
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	49.3	-21	42.9	124	50.3	102	-21	44.2	46	60 N	6 45	7 40	8 34	12 51	19	19 44	78
1	197	49.0		43.3	139	19.5	102		39.6	46	58	39	30	19	36	23	19 58	75
2	212	48.8		43.7	153	48.7	103		35.0	48	56	33	21	8 06	23	25	20 11	71
3	227	48.6		44.1	168	18.0	104		30.2	49	54	28	13	7 55	12	27	21 70	
4	242	48.3		44.5	182	47.4	105		25.3	50	52	23	7 05	45	12 02	29	31	68
5	257	48.1	-21	44.9	197	16.9	105	-21	20.3	51	50	6 18	6 59	7 36	11 53	31	20 40	66
6	272	47.9	-21	45.3	211	46.4	106	-21	15.2	52	45	6 08	6 44	7 17	11 34	34	20 58	62
7	287	47.6		45.7	226	16.0	106		10.0	53	40	5 59	32	7 02	18	37	21 12	60
8	302	47.4		46.1	240	45.6	108	-21	04.7	54	35	50	21	6 49	11 05	39	25	57
9	317	47.2		46.5	255	15.4	108	-20	59.3	54	30	42	6 12	38	10 54	41	36	55
10	332	46.9		46.9	269	45.2	109		53.9	56	20	27	5 55	18	34	44	21 54	52
11	347	46.7	-21	47.3	284	15.1	109	-20	48.3	57	10 N	5 13	5 39	6 01	10 17	46	22 10	50
12	2	46.5	-21	47.7	298	45.0	110	-20	42.6	58	0	4 57	5 23	5 45	10 01	49	22 25	47
13	17	46.2		48.0	313	15.0	111		36.8	59	10 S	40	5 06	29	9 46	50	40	44
14	32	46.0		48.4	327	45.1	112		30.9	59	20	4 19	4 47	5 12	28	53	22 56	41
15	47	45.8		48.8	342	15.3	113		25.0	61	30	3 52	24	4 51	9 09	56	23 14	38
16	62	45.5		49.2	356	45.6	113		18.9	62	35	35	4 10	39	8 57	58	24	37
17	77	45.3	-21	49.6	11	15.9	114	-20	12.7	62	40	3 14	3 54	4 26	8 44	60	23 36	35
18	92	45.1	-21	50.0	25	46.3	114	-20	06.5	63	45	2 46	3 33	4 09	8 28	62	23 51	31
19	107	44.8		50.4	40	16.7	116	-20	00.2	65	50	2 07	3 07	3 49	09	65	***	***
20	122	44.6		50.7	54	47.3	116	-19	53.7	65	52	1 45	2 53	39	8 00	66	***	***
21	137	44.4		51.1	69	17.9	117		47.2	66	54	1 15	38	28	7 49	69	***	***
22	152	44.1		51.5	83	48.6	117		40.6	67	56	0 20	2 19	16	37	71	0 05	30
23	167	43.9		51.9	98	19.3	119		33.9	67	58	** **	1 56	3 01	7 24	73	0 18	28
24	182	43.7	-21	52.3	112	50.2		-19	27.2		60 S	** **	1 24	2 44	7 08	77	0 35	24

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 18 ^m 6		Mag: -3.9 PMG: 13 ^h 50 ^m				Mag: +1.7 PMG: 09 ^h 43 ^m				Mag: -1.8 PMG: 13 ^h 18 ^m				Mag: +0.6 PMG: 14 ^h 37 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	69	33.7	152	45.8	-24	45.3	214	00.3	-13	28.9	159	59.3	-23	17.8	140	05.6	-22	08.3
1	84	36.2	167	44.9		45.2	229	01.1		29.5	175	01.2		17.8	155	07.8		08.3
2	99	38.7	182	43.9		45.1	244	02.0		30.0	190	03.1		17.8	170	10.0		08.2
3	114	41.1	197	43.0		45.0	259	02.9		30.6	205	04.9		17.8	185	12.2		08.2
4	129	43.6	212	42.0		45.0	274	03.7		31.1	220	06.8		17.8	200	14.4		08.2
5	144	46.1	227	41.1	-24	44.9	289	04.6	-13	31.7	235	08.6	-23	17.8	215	16.5	-22	08.2
6	159	48.5	242	40.1	-24	44.8	304	05.4	-13	32.2	250	10.5	-23	17.8	230	18.7	-22	08.1
7	174	51.0	257	39.2		44.7	319	06.3		32.8	265	12.4		17.9	245	20.9		08.1
8	189	53.4	272	38.3		44.7	334	07.2		33.3	280	14.2		17.9	260	23.1		08.1
9	204	55.9	287	37.3		44.6	349	08.0		33.9	295	16.1		17.9	275	25.3		08.0
10	219	58.4	302	36.4		44.5	4	08.9		34.4	310	17.9		17.9	290	27.5		08.0
11	235	00.8	317	35.4	-24	44.4	19	09.7	-13	35.0	325	19.8	-23	17.9	305	29.7	-22	08.0
12	250	03.3	332	34.5	-24	44.3	34	10.6	-13	35.6	340	21.7	-23	17.9	320	31.9	-22	07.9
13	265	05.8	347	33.5		44.2	49	11.5		36.1	355	23.5		17.9	335	34.1		07.9
14	280	08.2	2	32.6		44.1	64	12.3		36.7	10	25.4		17.9	350	36.3		07.9
15	295	10.7	17	31.6		44.0	79	13.2		37.2	25	27.2		17.9	5	38.5		07.9
16	310	13.2	32	30.7		44.0	94	14.0		37.8	40	29.1		17.9	20	40.7		07.8
17	325	15.6	47	29.8	-24	43.9	109	14.9	-13	38.3	55	31.0	-23	17.9	35	42.9	-22	07.8
18	340	18.1	62	28.8	-24	43.8	124	15.8	-13	38.9	70	32.8	-23	17.9	50	45.1	-22	07.8
19	355	20.6	77	27.9		43.7	139	16.6		39.4	85	34.7		17.9	65	47.3		07.7
20	10	23.0	92	26.9		43.6	154	17.5		40.0	100	36.5		17.9	80	49.5		07.7
21	25	25.5	107	26.0		43.5	169	18.3		40.5	115	38.4		17.9	95	51.7		07.7
22	40	27.9	122	25.0		43.4	184	19.2		41.1	130	40.3		17.9	110	53.9		07.6
23	55	30.4	137	24.1		43.3	199	20.0		41.6	145	42.1		17.9	125	56.0		07.6
24	70	32.9	152	23.2	-24	43.2	214	20.9	-13	42.2	160	44.0	-23	17.9	140	58.2	-22	07.6
Dif.	—		-9		+1		+9		-6		+19		0		+22			

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna											
	SD: 16'2			PHE { 4 ^h : 55'0 12 ^h : 54'8 20 ^h : 54'7																						
	PMG: 11 ^h 49 ^m 3			SD: 15'0 Edad: 5 ^d 4																						
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº											
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m										
0	182	43.7	-21	52.3	112	50.2	119	-19	27.2	69	60 N	15 02	15 56	16 51	13 10	14	21 02	78								
1	197	43.4		52.7	127	21.1	119		20.3	69	58	17	16 07	16 58	12 59	16		13 75								
2	212	43.2		53.0	141	52.0	121		13.4	71	56	30	16	17 04	48	20		22 73								
3	227	43.0		53.4	156	23.1	121	-19	06.3	71	54	42	24	09	39	22		31 70								
4	242	42.7		53.8	170	54.2	122	-18	59.2	72	52	15 52	31	14	31	24		39 67								
5	257	42.5	-21	54.2	185	25.4	122	-18	52.0	72	50	16 01	16 38	17 19	12 24	25	21 46	65								
6	272	42.2	-21	54.5	199	56.6	123	-18	44.8	74	45	16 20	16 53	17 29	12 08	29	22 00	62								
7	287	42.0		54.9	214	27.9	124		37.4	74	40	35	17 05	39	11 55	32		12 59								
8	302	41.8		55.3	228	59.3	125		30.0	75	35	16 48	16	47	44	34		22 57								
9	317	41.5		55.7	243	30.8	125		22.5	76	30	17 00	26	17 55	35	36		31 54								
10	332	41.3		56.0	258	02.3	126		14.9	77	20	19	43	18 10	18	40	22 46	51								
11	347	41.0	-21	56.4	272	33.9	127	-18	07.2	77	10 N	17 37	17 59	18 25	11 03	43	23 00	47								
12	2	40.8	-21	56.8	287	05.6	127	-17	59.5	78	0	17 53	18 15	18 41	10 50	45	23 12	44								
13	17	40.6		57.2	301	37.3	129		51.7	79	10 S	18 09	32	18 59	36	48		24 42								
14	32	40.3		57.5	316	09.2	128		43.8	80	20	27	18 51	19 20	21	52		37 39								
15	47	40.1		57.9	330	41.0	130		35.8	80	30	18 48	19 15	19 47	10 05	54	23 52	35								
16	62	39.8		58.3	345	13.0	130		27.8	81	35	19 00	29	20 05	9 55	57	*** **	***								
17	77	39.6	-21	58.6	359	45.0	131	-17	19.7	82	40	19 14	19 46	20 26	9 44	59	*** **	***								
18	92	39.4	-21	59.0	14	17.1	131	-17	11.5	83	45	19 30	20 07	20 54	9 30	62	*** **	***								
19	107	39.1		59.4	28	49.2	132	-17	03.2	83	50	19 51	34	21 34	14	66	0 08	28								
20	122	38.9	-21	59.7	43	21.4	133	-16	54.9	84	52	20 01	20 47	21 57	9 06	68	16	26								
21	137	38.6	-22	00.1	57	53.7	133		46.5	84	54	12	21 03	22 28	8 58	69	25	24								
22	152	38.4		00.5	72	26.0	134		38.1	85	56	25	22	*** **	48	72	35	22								
23	167	38.2		00.8	86	58.4	135		29.6	86	58	40	21 46	*** **	37	75	46	20								
24	182	37.9	-22	01.2	101	30.9		-16	21.0		60 S	20 57	22 20	*** **	8 25	78	0 59	17								
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO											
	PMG: 19 ^h 14 ^m 6		Mag: -3.9 PMG: 13 ^h 51 ^m				Mag: +1.7 PMG: 09 ^h 42 ^m				Mag: -1.8 PMG: 13 ^h 15 ^m				Mag: +0.6 PMG: 14 ^h 34 ^m											
	hG ♂		hG ♀		dec.		hG ♂		dec.		hG ♀		dec.		hG ♀		dec.									
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'									
0	70	32.9	152	23.2	-24	43.2	214	20.9	-13	42.2	160	44.0	-23	-17.9	140	58.2	-22	07.6								
1	85	35.3	167	22.2		43.1	229	21.8		42.7	175	45.8		-17.9	156	00.4		07.5								
2	100	37.8	182	21.3		43.0	244	22.6		43.3	190	47.7		-18.0	171	02.6		07.5								
3	115	40.3	197	20.3		42.9	259	23.5		43.8	205	49.6		-18.0	186	04.8		07.5								
4	130	42.7	212	19.4		42.7	274	24.3		44.3	220	51.4		-18.0	201	07.0		07.5								
5	145	45.2	227	18.4	-24	42.6	289	25.2	-13	44.9	235	53.3	-23	-18.0	216	09.2	-22	07.4								
6	160	47.7	242	17.5	-24	42.5	304	26.0	-13	45.4	250	55.1	-23	-18.0	231	11.4	-22	07.4								
7	175	50.1	257	16.6		42.4	319	26.9		46.0	265	57.0		-18.0	246	13.6		07.4								
8	190	52.6	272	15.6		42.3	334	27.8		46.5	280	58.8		-18.0	261	15.8		07.3								
9	205	55.0	287	14.7		42.2	349	28.6		47.1	296	00.7		-18.0	276	18.0		07.3								
10	220	57.5	302	13.7		42.1	4	29.5		47.6	311	02.6		-18.0	291	20.2		07.3								
11	236	00.0	317	12.8	-24	42.0	19	30.3	-13	48.2	326	04.4	-23	-18.0	306	22.4	-22	07.2								
12	251	02.4	332	11.8	-24	41.8	34	31.2	-13	48.7	341	06.3	-23	-18.0	321	24.6	-22	07.2								
13	266	04.9	347	10.9		41.7	49	32.0		49.3	356	08.1		-18.0	336	26.8		07.2								
14	281	07.4	2	10.0		41.6	64	32.9		49.8	11	10.0		-18.0	351	28.9		07.2								
15	296	09.8	17	09.0		41.5	79	33.7		50.4	26	11.9		-18.0	6	31.1		07.1								
16	311	12.3	32	08.1		41.4	94	34.6		50.9	41	13.7		-18.0	21	33.3		07.1								
17	326	14.8	47	07.1	-24	41.2	109	35.5	-13	51.5	56	15.6	-23	-18.0	36	35.5	-22	07.1								
18	341	17.2	62	06.2	-24	41.1	124	36.3	-13	52.0	71	17.4	-23	-18.0	51	37.7	-22	07.0								
19	356	19.7	77	05.3		41.0	139	37.2		52.6	86	19.3		-18.0	66	39.9		07.0								
20	11	22.2	92	04.3		40.8	154	38.0		53.1	101	21.1		-18.0	81	42.1		07.0								
21	26	24.6	107	03.4		40.7	169	38.9		53.7	116	23.0		-18.0	96	44.3		06.9								
22	41	27.1	122	02.4		40.6	184	39.7		54.2	131	24.9		-18.0	111	46.5		06.9								
23	56	29.5	137	01.5		40.5	199	40.6		54.7	146	26.7		-18.0	126	48.7		06.9								
24	71	32.0	152	00.6	-24	40.3	214	41.4	-13	55.3	161	28.6	-23	-18.0	141	50.9	-22	06.8								
Dif.	—		-9				+9				-5				+19				0				+22			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 49 ^m 7			SD: 14'9 Edad: 6 ^d 4 PMG: 17 ^h 46 ^m PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4 Rº: 43 ^m										
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.	Náut.		Civil	Hora	Rº	Hora
h	° ' "	° ' "		° ' "		° ' "		h m	h m	h m	h m m	h m m	h m m	
0	182 37.9	-22 01.2		101 30.9	135	-16 21.0	87	60 N	6 48	7 43	8 38	13 24 10	22 20 77	
1	197 37.7		01.6	116 03.4	136		12.3	87	58	42	33	15 14	28 73	
2	212 37.4		01.9	130 36.0	136	-16 03.6	88	56	36	24	8 09	08 15	35 71	
3	227 37.2		02.3	145 08.6	138	-15 54.8	88	54	30	15	7 58	13 01 18	41 69	
4	242 36.9		02.6	159 41.4	137		46.0	89	52	25	08	12 55 19	46 67	
5	257 36.7	-22 03.0		174 14.1	139	-15 37.1	90	50	6 20	7 01	7 39	12 49 22	22 51 66	
6	272 36.5	-22 03.4		188 47.0	138	-15 28.1	90	45	6 10	6 46	7 20	12 37 25	23 02 61	
7	287 36.2		03.7	203 19.8	140		19.1	91	40	6 00	34	27 28	11 58	
8	302 36.0		04.1	217 52.8	140		10.0	91	35	5 52	23	18 31	19 55	
9	317 35.7		04.4	232 25.8	141	-15 00.9	92	30	44	6 13	39	12 11 33	25 54	
10	332 35.5		04.8	246 58.9	141	-14 51.7	93	20	29	5 56	20	11 58 36	37 49	
11	347 35.2	-22 05.1		261 32.0	142	-14 42.4	93	10 N	5 14	5 40	6 02	11 46 40	23 47 46	
12	2 35.0	-22 05.5		276 05.2	142	-14 33.1	94	0	4 58	5 24	5 46	11 35 43	23 56 43	
13	17 34.7		05.9	290 38.4	143		23.7	94	10 S	40	5 07	24 47	*** **	
14	32 34.5		06.2	305 11.7	143		14.3	95	20	4 19	4 47	11 13 49	*** **	
15	47 34.3		06.6	319 45.0	144	-14 04.8	95	30	3 51	24	4 51	10 59 54	*** **	
16	62 34.0		06.9	334 18.4	145	-13 55.3	96	35	34	4 10	39	52 56	0 01 32	
17	77 33.8	-22 07.3		348 51.9	145	-13 45.7	96	40	3 13	3 53	4 25	10 43 58	0 11 29	
18	92 33.5	-22 07.6		3 25.4	145	-13 36.1	97	45	2 45	3 32	4 08	10 32 62	0 22 27	
19	107 33.3		08.0	17 58.9	146		26.4	98	50	2 05	3 05	20 65	36 23	
20	122 33.0		08.3	32 32.5	146		16.6	98	52	1 42	2 51	14 67	42 22	
21	137 32.8		08.7	47 06.1	147	-13 06.8	98	54	1 10	35	27	07 70	49 20	
22	152 32.5		09.0	61 39.8	148	-12 57.0	99	56	*** **	2 16	3 14	10 00 72	0 57 17	
23	167 32.3		09.4	76 13.6	148		47.1	99	58	*** **	1 52	2 59	9 52 74	1 06 15
24	182 32.0	-22 09.7		90 47.4		-12 37.2		60 S	*** **	1 18	2 41	9 43 77	1 16 12	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 19 ^h 10 ^m 7		Mag: -3.9 PMG: 13 ^h 53 ^m			Mag: +1.7 PMG: 09 ^h 41 ^m			Mag: -1.8 PMG: 13 ^h 12 ^m			Mag: +0.6 PMG: 14 ^h 30 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	° ' "	° ' "	° ' "	° ' "		° ' "	° ' "		° ' "	° ' "		° ' "	° ' "	
0	71 32.0		152 00.6	-24 40.3		214 41.4	-13 55.3		161 28.6	-23 18.0		141 50.9	-22 06.8	
1	86 34.5		166 59.6		40.2	229 42.3		55.8	176 30.4		18.1	156 53.1		06.8
2	101 36.9		181 58.7		40.0	244 43.1		56.4	191 32.3		18.1	171 55.2		06.8
3	116 39.4		196 57.7		39.9	259 44.0		56.9	206 34.2		18.1	186 57.4		06.8
4	131 41.9		211 56.8		39.8	274 44.8		57.5	221 36.0		18.1	201 59.6		06.7
5	146 44.3		226 55.9	-24 39.6		289 45.7	-13 58.0		236 37.9	-23 18.1		217 01.8	-22 06.7	
6	161 46.8		241 54.9	-24 39.5		304 46.5	-13 58.6		251 39.7	-23 18.1		232 04.0	-22 06.7	
7	176 49.3		256 54.0		39.3	319 47.4		59.1	266 41.6		18.1	247 06.2		06.6
8	191 51.7		271 53.0		39.2	334 48.3	-13 59.6		281 43.4		18.1	262 08.4		06.6
9	206 54.2		286 52.1		39.1	349 49.1	-14 00.2		296 45.3		18.1	277 10.6		06.6
10	221 56.7		301 51.2		38.9	4 50.0		00.7	311 47.2		18.1	292 12.8		06.5
11	236 59.1		316 50.2	-24 38.8		19 50.8	-14 01.3		326 49.0	-23 18.1		307 15.0	-22 06.5	
12	252 01.6		331 49.3	-24 38.6		34 51.7	-14 01.8		341 50.9	-23 18.1		322 17.2	-22 06.5	
13	267 04.0		346 48.4		38.5	49 52.5		02.4	356 52.7		18.1	337 19.3		06.4
14	282 06.5		1 47.4		38.3	64 53.4		02.9	11 54.6		18.1	352 21.5		06.4
15	297 09.0		16 46.5		38.2	79 54.2		03.4	26 56.4		18.1	7 23.7		06.4
16	312 11.4		31 45.5		38.0	94 55.1		04.0	41 58.3		18.1	22 25.9		06.3
17	327 13.9		46 44.6	-24 37.8		109 55.9	-14 04.5		57 00.1	-23 18.1		37 28.1	-22 06.3	
18	342 16.4		61 43.7	-24 37.7		124 56.8	-14 05.1		72 02.0	-23 18.1		52 30.3	-22 06.3	
19	357 18.8		76 42.7		37.5	139 57.6		05.6	87 03.9		18.1	67 32.5		06.3
20	12 21.3		91 41.8		37.4	154 58.5		06.2	102 05.7		18.1	82 34.7		06.2
21	27 23.8		106 40.9		37.2	169 59.3		06.7	117 07.6		18.1	97 36.9		06.2
22	42 26.2		121 39.9		37.0	185 00.2		07.2	132 09.4		18.1	112 39.1		06.2
23	57 28.7		136 39.0		36.9	200 01.0		07.8	147 11.3		18.1	127 41.2		06.1
24	72 31.2		151 38.1	-24 36.7		215 01.9	-14 08.3		162 13.1	-23 18.1		142 43.4	-22 06.1	
Dif.	—		-9	+2		+9	-5		+19	0		+22		

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 50 ^m 1			SD: 14'8 Edad: 7 ^d 4 PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 PMG: 18 ^h 29 ^m Rº: 41 ^m												
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº	
h	° ' "	° ' "		° ' "		° ' "		°	h m	h m	h m	h m m	h m m	h m m		
0	182 32.0	-22 09.7		90 47.4	148	-12 37.2	100	60 N	15 00	15 55	16 50	13 34 9	23 37 76			
1	197 31.8	10.0		105 21.2	149	27.2	101	58	15	16 05	16 57	29 11	41 74			
2	212 31.5	10.4		119 55.1	149	17.1	100	56	29	15	17 03	23 14	46 71			
3	227 31.3	10.7		134 29.0	150	-12 07.1	102	54	40	23	08	19 15	50 68			
4	242 31.0	11.1		149 03.0	150	-11 56.9	101	52	15 51	31	14	14 18	53 67			
5	257 30.8	-22 11.4		163 37.0	151	-11 46.8	103	50	16 00	16 37	17 18	13 11 19	23 57 64			
6	272 30.5	-22 11.8		178 11.1	151	-11 36.5	102	45	16 19	16 52	17 29	13 02 23	*** ** *			
7	287 30.3	12.1		192 45.2	151	26.3	103	40	35	17 05	39	12 55 26	*** ** *			
8	302 30.0	12.4		207 19.3	152	16.0	104	35	16 48	16	47	49 28	*** ** *			
9	317 29.8	12.8		221 53.5	152	-11 05.6	104	30	17 00	26	17 55	44 30	*** ** *			
10	332 29.5	13.1		236 27.7	153	-10 55.2	104	20	20	17 44	18 11	34 35	*** ** *			
11	347 29.3	-22 13.4		251 02.0	153	-10 44.8	105	10 N	17 37	18 00	18 26	12 26 39	*** ** *			
12	2 29.0	-22 13.8		265 36.3	153	-10 34.3	105	0	17 54	18 16	18 42	12 18 42	*** ** *			
13	17 28.8	14.1		280 10.6	154	23.8	105	10 S	18 10	33	19 00	11 45	0 06 39			
14	32 28.5	14.5		294 45.0	154	13.3	106	20	28	18 53	22	12 02 49	16 35			
15	47 28.3	14.8		309 19.4	155	-10 02.7	106	30	18 49	19 16	19 49	11 53 53	27 31			
16	62 28.0	15.1		323 53.9	154	-9 52.1	107	35	19 01	31	20 07	48 55	33 30			
17	77 27.8	-22 15.5		338 28.3	156	-9 41.4	107	40	19 16	19 48	20 28	11 41 58	0 40 27			
18	92 27.5	-22 15.8		353 02.9	155	-9 30.7	107	45	19 33	20 09	20 57	11 34 61	0 49 24			
19	107 27.3	16.1		7 37.4	156	20.0	108	50	19 54	37	21 38	25 65	0 59 20			
20	122 27.0	16.5		22 12.0	156	-9 09.2	108	52	20 04	20 50	22 01	21 67	1 04 18			
21	137 26.8	16.8		36 46.6	156	-8 58.4	108	54	15	21 07	22 35	17 68	09 16			
22	152 26.5	17.1		51 21.2	157	47.6	109	56	28	26	*** ** *	12 71	14 15			
23	167 26.2	17.4		65 55.9	156	36.7	109	58	20 43	21 52	*** ** *	06 74	21 12			
24	182 26.0	-22 17.8		80 30.5		-8 25.8		60 S	21 02	22 28	*** ** *	11 00 76	1 28 9			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 19 ^h 06 ^m 8		Mag: -3.9 PMG: 13 ^h 54 ^m			Mag: +1.7 PMG: 09 ^h 39 ^m			Mag: -1.8 PMG: 13 ^h 09 ^m			Mag: +0.6 PMG: 14 ^h 27 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	° ' "		° ' "	° ' "		° ' "	° ' "		° ' "	° ' "		° ' "	° ' "			
0	72 31.2		151 38.1	-24 36.7		215 01.9	-14 08.3		162 13.1	-23 -18.1		142 43.4	-22 06.1			
1	87 33.6		166 37.1	36.5		230 02.7	08.9		177 15.0	-18.1		157 45.6	06.1			
2	102 36.1		181 36.2	36.4		245 03.6	09.4		192 16.9	-18.1		172 47.8	06.0			
3	117 38.5		196 35.3	36.2		260 04.4	09.9		207 18.7	-18.1		187 50.0	06.0			
4	132 41.0		211 34.3	36.0		275 05.3	10.5		222 20.6	-18.1		202 52.2	06.0			
5	147 43.5		226 33.4	-24 35.9		290 06.1	-14 11.0		237 22.4	-23 -18.1		217 54.4	-22 05.9			
6	162 45.9		241 32.4	-24 35.7		305 07.0	-14 11.6		252 24.3	-23 -18.2		232 56.6	-22 05.9			
7	177 48.4		256 31.5	35.5		320 07.8	12.1		267 26.1	-18.2		247 58.8	05.9			
8	192 50.9		271 30.6	35.3		335 08.7	12.6		282 28.0	-18.2		263 00.9	05.8			
9	207 53.3		286 29.6	35.2		350 09.5	13.2		297 29.8	-18.2		278 03.1	05.8			
10	222 55.8		301 28.7	35.0		5 10.4	13.7		312 31.7	-18.2		293 05.3	05.8			
11	237 58.3		316 27.8	-24 34.8		20 11.2	-14 14.3		327 33.6	-23 -18.2		308 07.5	-22 05.8			
12	253 00.7		331 26.8	-24 34.6		35 12.0	-14 14.8		342 35.4	-23 -18.2		323 09.7	-22 05.7			
13	268 03.2		346 25.9	34.5		50 12.9	15.3		357 37.3	-18.2		338 11.9	05.7			
14	283 05.6		1 25.0	34.3		65 13.7	15.9		12 39.1	-18.2		353 14.1	05.7			
15	298 08.1		16 24.0	34.1		80 14.6	16.4		27 41.0	-18.2		8 16.3	05.6			
16	313 10.6		31 23.1	33.9		95 15.4	17.0		42 42.8	-18.2		23 18.5	05.6			
17	328 13.0		46 22.2	-24 33.7		110 16.3	-14 17.5		57 44.7	-23 -18.2		38 20.6	-22 05.6			
18	343 15.5		61 21.3	-24 33.5		125 17.1	-14 18.0		72 46.5	-23 -18.2		53 22.8	-22 05.5			
19	358 18.0		76 20.3	33.3		140 18.0	18.6		87 48.4	-18.2		68 25.0	05.5			
20	13 20.4		91 19.4	33.1		155 18.8	19.1		102 50.2	-18.2		83 27.2	05.5			
21	28 22.9		106 18.5	33.0		170 19.7	19.6		117 52.1	-18.2		98 29.4	05.4			
22	43 25.4		121 17.5	32.8		185 20.5	20.2		132 54.0	-18.2		113 31.6	05.4			
23	58 27.8		136 16.6	32.6		200 21.4	20.7		147 55.8	-18.2		128 33.8	05.4			
24	73 30.3		151 15.7	-24 32.4		215 22.2	-14 21.3		162 57.7	-23 -18.2		143 36.0	-22 05.3			
Dif.	—		-9	+2		+8	-5		+19	0		+22	0			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 50 ^m 5			SD: 14'8 Edad: 8 ^d 4	PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3			Náut.	Civil		Hora	Rº	Hora	Rº	
	PMG: 19 ^h 10 ^m			Rº: 41 ^m											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.								
h	° ' "	° ' "		° ' "		° ' "		°	h m	h m	h m	h m	m	h m	m
0	182 26.0	-22 17.8		80 30.5	158	-8 25.8	109	60 N	6 51	7 47	8 42	13 43	7	*** **	*** **
1	197 25.7	18.1		95 05.3	157	14.9	110	58	44	36	26	40	10	*** **	*** **
2	212 25.5	18.4		109 40.0	158	-8 03.9	110	56	38	26	13	37	12	*** **	*** **
3	227 25.2	18.7		124 14.8	158	-7 52.9	110	54	33	18	8 01	34	15	*** **	*** **
4	242 25.0	19.1		138 49.6	158	41.9	111	52	27	10	7 50	32	16	*** **	*** **
5	257 24.7	-22 19.4		153 24.4	158	-7 30.8	111	50	6 23	7 04	7 41	13 30	18	*** **	*** **
6	272 24.5	-22 19.7		167 59.2	159	-7 19.7	111	45	6 12	6 49	7 22	13 25	22	0 03 61	
7	287 24.2	20.0		182 34.1	158	-7 08.6	111	40	6 02	36	7 06	21	25	09 58	
8	302 23.9	20.4		197 08.9	159	-6 57.5	112	35	5 53	25	6 53	17	28	14 55	
9	317 23.7	20.7		211 43.8	159	46.3	112	30	45	6 15	41	14	30	19 52	
10	332 23.4	21.0		226 18.7	160	35.1	112	20	30	5 57	21	09	34	26 48	
11	347 23.2	-22 21.3		240 53.7	159	-6 23.9	113	10 N	5 14	5 41	6 03	13 05	37	0 33 44	
12	2 22.9	-22 21.6		255 28.6	160	-6 12.6	113	0	4 58	5 24	5 47	13 00	41	0 39 41	
13	17 22.7	22.0		270 03.6	160	-6 01.3	113	10 S	40	5 07	30	12 56	44	45 38	
14	32 22.4	22.3		284 38.6	160	-5 50.0	113	20	4 19	4 48	5 12	51	48	51 34	
15	47 22.1	22.6		299 13.6	160	38.7	113	30	3 51	24	4 51	46	52	0 58 31	
16	62 21.9	22.9		313 48.6	160	27.4	114	35	34	4 10	39	43	55	1 03 27	
17	77 21.6	-22 23.2		328 23.6	160	-5 16.0	114	40	3 12	3 52	4 25	12 39	58	1 07 25	
18	92 21.4	-22 23.5		342 58.6	161	-5 04.6	114	45	2 43	3 31	4 08	12 35	61	1 13 22	
19	107 21.1	23.8		357 33.7	160	-4 53.2	115	50	2 02	3 04	3 47	30	65	19 18	
20	122 20.9	24.2		12 08.7	161	41.7	114	52	1 39	2 50	37	28	67	22 17	
21	137 20.6	24.5		26 43.8	161	30.3	115	54	1 05	33	25	25	69	25 15	
22	152 20.3	24.8		41 18.9	160	18.8	115	56	*** **	2 14	3 12	23	71	29 13	
23	167 20.1	25.1		55 53.9	161	-4 07.3	115	58	*** **	1 49	2 57	12 20	73	1 33 10	
24	182 19.8	-22 25.4		70 29.0		-3 55.8		60 S	*** **	1 12	2 39	12 16	76	1 37 8	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 02 ^m 9		Mag: -3.9 PMG: 13 ^h 56 ^m				Mag: +1.7 PMG: 09 ^h 38 ^m				Mag: -1.8 PMG: 13 ^h 07 ^m				Mag: +0.6 PMG: 14 ^h 24 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	° ' "		° ' "	° ' "	° ' "		° ' "	° ' "			° ' "	° ' "			° ' "	° ' "		
0	73 30.3		151 15.7	-24 32.4			215 22.2	-14 21.3			162 57.7	-23 18.2			143 36.0	-22 05.3		
1	88 32.8		166 14.7	32.2			230 23.1	21.8			177 59.5	18.2			158 38.1	05.3		
2	103 35.2		181 13.8	32.0			245 23.9	22.3			193 01.4	18.2			173 40.3	05.3		
3	118 37.7		196 12.9	31.8			260 24.7	22.9			208 03.2	18.2			188 42.5	05.2		
4	133 40.1		211 11.9	31.6			275 25.6	23.4			223 05.1	18.2			203 44.7	05.2		
5	148 42.6		226 11.0	-24 31.4			290 26.4	-14 23.9			238 06.9	-23 18.2			218 46.9	-22 05.2		
6	163 45.1		241 10.1	-24 31.2			305 27.3	-14 24.5			253 08.8	-23 18.2			233 49.1	-22 05.1		
7	178 47.5		256 09.2	31.0			320 28.1	25.0			268 10.6	18.2			248 51.3	05.1		
8	193 50.0		271 08.2	30.8			335 29.0	25.6			283 12.5	18.2			263 53.5	05.1		
9	208 52.5		286 07.3	30.5			350 29.8	26.1			298 14.4	18.2			278 55.6	05.1		
10	223 54.9		301 06.4	30.3			5 30.7	26.6			313 16.2	18.2			293 57.8	05.0		
11	238 57.4		316 05.4	-24 30.1			20 31.5	-14 27.2			328 18.1	-23 18.2			309 00.0	-22 05.0		
12	253 59.9		331 04.5	-24 29.9			35 32.3	-14 27.7			343 19.9	-23 18.2			324 02.2	-22 05.0		
13	269 02.3		346 03.6	29.7			50 33.2	28.2			358 21.8	18.2			339 04.4	04.9		
14	284 04.8		1 02.7	29.5			65 34.0	28.8			13 23.6	18.2			354 06.6	04.9		
15	299 07.2		16 01.7	29.3			80 34.9	29.3			28 25.5	18.2			9 08.8	04.9		
16	314 09.7		31 00.8	29.1			95 35.7	29.8			43 27.3	18.2			24 10.9	04.8		
17	329 12.2		45 59.9	-24 28.8			110 36.6	-14 30.4			58 29.2	-23 18.2			39 13.1	-22 04.8		
18	344 14.6		60 59.0	-24 28.6			125 37.4	-14 30.9			73 31.0	-23 18.2			54 15.3	-22 04.8		
19	359 17.1		75 58.0	28.4			140 38.2	31.4			88 32.9	18.2			69 17.5	04.7		
20	14 19.6		90 57.1	28.2			155 39.1	32.0			103 34.7	18.2			84 19.7	04.7		
21	29 22.0		105 56.2	28.0			170 39.9	32.5			118 36.6	18.2			99 21.9	04.7		
22	44 24.5		120 55.2	27.7			185 40.8	33.0			133 38.5	18.2			114 24.1	04.6		
23	59 27.0		135 54.3	27.5			200 41.6	33.6			148 40.3	18.2			129 26.2	04.6		
24	74 29.4		150 53.4	-24 27.3			215 42.5	-14 34.1			163 42.2	-23 18.2			144 28.4	-22 04.6		
Dif.	—		-9	+2			+8	-5			+19	0			+22			

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 50 ^m 9				SD: 14'8 Edad: 9 ^d 4 PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'4 PMG: 19 ^h 51 ^m Rº: 42 ^m															
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	h m	h m	h m	h m			Rº	Hora	Rº	Hora	Rº			
	°	'	°	'	°	'	°	'	°	'			°	'	°	'	°	'		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	182	19.8	-22	25.4	70	29.0	161	-3	55.8	116	60 N	14 58	15 53	16 49	13 50	8	0 53	76		
1	197	19.6		25.7	85	04.1	161		44.2	115	58	15 14	16 04	16 56	50	10	55	73		
2	212	19.3		26.0	99	39.2	161		32.7	116	56	27	14	17 02	49	12	57	71		
3	227	19.0		26.3	114	14.3	161		21.1	116	54	39	22	08	49	14	0 58	69		
4	242	18.8		26.6	128	49.4	161	-3	09.5	116	52	50	30	13	48	16	1 00	67		
5	257	18.5	-22	26.9	143	24.5	161	-2	57.9	116	50	15 59	16 37	17 18	13 48	17	1 01	65		
6	272	18.3	-22	27.2	157	59.6	161	-2	46.3	116	45	16 19	16 52	17 29	13 47	21	1 04	62		
7	287	18.0		27.6	172	34.7	161		34.7	116	40	35	17 05	39	46	24	07	58		
8	302	17.7		27.9	187	09.8	161		23.1	117	35	16 48	16	47	45	27	09	55		
9	317	17.5		28.2	201	44.9	161	-2	11.4	117	30	17 00	26	17 56	44	30	11	53		
10	332	17.2		28.5	216	20.0	161	-1	59.7	117	20	20	17 44	18 11	43	34	14	49		
11	347	16.9	-22	28.8	230	55.1	161	-1	48.0	117	10 N	17 38	18 01	18 27	13 42	38	1 17	45		
12	2	16.7	-22	29.1	245	30.2	160	-1	36.3	117	0	17 55	18 17	18 43	13 41	42	1 20	41		
13	17	16.4		29.4	260	05.2	161		24.6	117	10 S	18 11	34	19 01	40	45	23	37		
14	32	16.2		29.7	274	40.3	161		12.9	117	20	30	18 54	23	39	49	25	34		
15	47	15.9		30.0	289	15.4	160	-1	01.2	117	30	18 51	19 18	19 51	38	53	29	29		
16	62	15.6		30.3	303	50.4	161	-0	49.5	118	35	19 03	32	20 09	38	55	30	28		
17	77	15.4	-22	30.6	318	25.5	160	-0	37.7	117	40	19 17	19 50	20 31	13 37	58	1 32	25		
18	92	15.1	-22	30.8	333	00.5	160	-0	26.0	118	45	19 35	20 11	21 00	13 36	62	1 35	21		
19	107	14.8		31.1	347	35.5	160		14.2	118	50	19 56	39	21 42	35	66	37	18		
20	122	14.6		31.4	2	10.5	160	-0	02.4	117	52	20 06	20 54	22 06	35	67	39	16		
21	137	14.3		31.7	16	45.5	160	+0	09.3	118	54	18	21 10	22 41	34	69	40	14		
22	152	14.0		32.0	31	20.5	160		21.1	118	56	31	30	** **	34	71	42	12		
23	167	13.8		32.3	45	55.5	159		32.9	118	58	20 47	21 56	** **	33	74	43	10		
24	182	13.5	-22	32.6	60	30.4		+0	44.7		60 S	21 05	22 35	** **	13 32	77	1 45	8		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 18 ^h 58 ^m 9		Mag: -3.9 PMG: 13 ^h 57 ^m				Mag: +1.7 PMG: 09 ^h 37 ^m				Mag: -1.8 PMG: 13 ^h 04 ^m				Mag: +0.6 PMG: 14 ^h 20 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	74	29.4	150	53.4	-24	27.3	215	42.5	-14	34.1	163	42.2	-23	-18.2	144	28.4	-22	04.6		
1	89	31.9	165	52.5		27.0	230	43.3		34.6	178	44.0		-18.2	159	30.6		04.5		
2	104	34.4	180	51.5		26.8	245	44.1		35.2	193	45.9		-18.2	174	32.8		04.5		
3	119	36.8	195	50.6		26.6	260	45.0		35.7	208	47.7		-18.2	189	35.0		04.5		
4	134	39.3	210	49.7		26.4	275	45.8		36.2	223	49.6		-18.2	204	37.2		04.4		
5	149	41.7	225	48.8	-24	26.1	290	46.7	-14	36.8	238	51.4	-23	-18.2	219	39.4	-22	04.4		
6	164	44.2	240	47.9	-24	25.9	305	47.5	-14	37.3	253	53.3	-23	-18.2	234	41.5	-22	04.4		
7	179	46.7	255	46.9		25.6	320	48.3		37.8	268	55.1		-18.2	249	43.7		04.3		
8	194	49.1	270	46.0		25.4	335	49.2		38.4	283	57.0		-18.2	264	45.9		04.3		
9	209	51.6	285	45.1		25.2	350	50.0		38.9	298	58.8		-18.2	279	48.1		04.3		
10	224	54.1	300	44.2		24.9	5	50.9		39.4	314	00.7		-18.2	294	50.3		04.2		
11	239	56.5	315	43.2	-24	24.7	20	51.7	-14	39.9	329	02.5	-23	-18.2	309	52.5	-22	04.2		
12	254	59.0	330	42.3	-24	24.5	35	52.5	-14	40.5	344	04.4	-23	-18.2	324	54.7	-22	04.2		
13	270	01.5	345	41.4		24.2	50	53.4		41.0	359	06.2		-18.2	339	56.8		04.2		
14	285	03.9	0	40.5		24.0	65	54.2		41.5	14	08.1		-18.2	354	59.0		04.1		
15	300	06.4	15	39.6		23.7	80	55.1		42.1	29	09.9		-18.2	10	01.2		04.1		
16	315	08.9	30	38.6		23.5	95	55.9		42.6	44	11.8		-18.2	25	03.4		04.1		
17	330	11.3	45	37.7	-24	23.2	110	56.7	-14	43.1	59	13.7	-23	-18.2	40	05.6	-22	04.0		
18	345	13.8	60	36.8	-24	23.0	125	57.6	-14	43.7	74	15.5	-23	-18.2	55	07.8	-22	04.0		
19	0	16.2	75	35.9		22.7	140	58.4		44.2	89	17.4		-18.2	70	09.9		04.0		
20	15	18.7	90	34.9		22.5	155	59.3		44.7	104	19.2		-18.2	85	12.1		03.9		
21	30	21.2	105	34.0		22.2	171	00.1		45.2	119	21.1		-18.2	100	14.3		03.9		
22	45	23.6	120	33.1		22.0	186	00.9		45.8	134	22.9		-18.2	115	16.5		03.9		
23	60	26.1	135	32.2		21.7	201	01.8		46.3	149	24.8		-18.2	130	18.7		03.8		
24	75	28.6	150	31.3	-24	21.4	216	02.6	-14	46.8	164	26.6	-23	-18.2	145	20.9	-22	03.8		
Dif.	—		-9		+2		+8		-5		+19		0		+22					

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 51 ^m 3				SD: 14'8 Edad: 10 ^d 4 PMG: 20 ^h 33 ^m PHE { 4 ^h : 54'5 12 ^h : 54'7 20 ^h : 54'8 Rº: 43 ^m					Náut.	Civil		Hora	Rº	Hora	Rº		
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.												
h	°	'	°	'	°	'	°	'	° N	h m	h m	h m	h m m	h m m	h m m			
0	182	13.5	-22	32.6	60	30.4	160	+0	44.7	118	6 54	7 50	8 45	13 58	8	2 09	77	
1	197	13.2		32.9	75	05.4	159	+0	56.5	117	58	47	39	29	14 00	11	08	75
2	212	13.0		33.2	89	40.3	159	+1	08.2	118	56	41	29	15	01 14		08	72
3	227	12.7		33.5	104	15.2	159		20.0	118	54	35	20	8 04	03 15		07	70
4	242	12.4		33.8	118	50.1	158		31.8	118	52	30	13	7 53	04 18		07	68
5	257	12.2	-22	34.0	133	24.9	158	+1	43.6	118	50	6 25	7 06	7 44	14 05	20	2 06	67
6	272	11.9	-22	34.3	147	59.7	158	+1	55.4	118	45	6 14	6 50	7 24	14 08	23	2 06	62
7	287	11.6		34.6	162	34.5	158	+2	07.2	118	40	6 04	38	7 08	10 26		05	59
8	302	11.4		34.9	177	09.3	158		19.0	118	35	5 55	26	6 54	12 29		04	56
9	317	11.1		35.2	191	44.1	157		30.8	118	30	47	6 16	42	14 31		04	53
10	332	10.8		35.5	206	18.8	157		42.6	118	20	31	5 58	22	17 36		03	49
11	347	10.6	-22	35.8	220	53.5	157	+2	54.4	118	10 N	5 15	5 42	6 04	14 20	39	2 02	45
12	2	10.3	-22	36.0	235	28.2	157	+3	06.2	118	0	4 59	5 25	5 48	14 23	42	2 01	42
13	17	10.0		36.3	250	02.9	156		18.0	117	10 S	41	5 08	31	25 46		2 00	38
14	32	09.8		36.6	264	37.5	156		29.7	118	20	4 19	4 48	5 12	28 50		1 59	35
15	47	09.5		36.9	279	12.1	156		41.5	118	30	3 51	24	4 51	31 54		58	31
16	62	09.2		37.2	293	46.7	155	+3	53.3	117	35	33	4 10	39	33 57		58	28
17	77	09.0	-22	37.4	308	21.2	155	+4	05.0	118	40	3 11	3 52	4 24	14 35	60	1 57	25
18	92	08.7	-22	37.7	322	55.7	155	+4	16.8	117	45	2 42	3 31	4 07	14 38	63	1 56	22
19	107	08.4		38.0	337	30.2	154		28.5	118	50	2 00	3 03	3 46	41 67		55	19
20	122	08.2		38.3	352	04.6	154		40.3	117	52	1 36	2 48	36	42 69		55	16
21	137	07.9		38.5	6	39.0	153	+4	52.0	117	54	1 00	32	24	43 71		54	15
22	152	07.6		38.8	21	13.3	153	+5	03.7	117	56	** **	2 12	3 11	45 73		54	12
23	167	07.4		39.1	35	47.6	153		15.4	117	58	** **	1 45	2 55	14 47	76	1 53	11
24	182	07.1	-22	39.4	50	21.9		+5	27.1		60 S	** **	1 07	2 36	14 49	79	1 53	7
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 55 ^m 0		Mag: -3.9 PMG: 13 ^h 59 ^m				Mag: +1.7 PMG: 09 ^h 35 ^m				Mag: -1.8 PMG: 13 ^h 01 ^m				Mag: +0.6 PMG: 14 ^h 17 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	75	28.6	150	31.3	-24	21.4	216	02.6	-14	46.8	164	26.6	-23	18.2	145	20.9	-22	03.8
1	90	31.0	165	30.4		21.2	231	03.5		47.4	179	28.5		18.2	160	23.0		03.8
2	105	33.5	180	29.4		20.9	246	04.3		47.9	194	30.3		18.2	175	25.2		03.7
3	120	36.0	195	28.5		20.7	261	05.1		48.4	209	32.2		18.2	190	27.4		03.7
4	135	38.4	210	27.6		20.4	276	06.0		48.9	224	34.0		18.2	205	29.6		03.7
5	150	40.9	225	26.7	-24	20.1	291	06.8	-14	49.5	239	35.9	-23	18.2	220	31.8	-22	03.6
6	165	43.3	240	25.8	-24	19.9	306	07.6	-14	50.0	254	37.7	-23	18.2	235	34.0	-22	03.6
7	180	45.8	255	24.8		19.6	321	08.5		50.5	269	39.6		18.2	250	36.1		03.6
8	195	48.3	270	23.9		19.3	336	09.3		51.1	284	41.4		18.2	265	38.3		03.5
9	210	50.7	285	23.0		19.1	351	10.1		51.6	299	43.3		18.2	280	40.5		03.5
10	225	53.2	300	22.1		18.8	6	11.0		52.1	314	45.1		18.2	295	42.7		03.5
11	240	55.7	315	21.2	-24	18.5	21	11.8	-14	52.6	329	47.0	-23	18.2	310	44.9	-22	03.4
12	255	58.1	330	20.3	-24	18.2	36	12.7	-14	53.2	344	48.8	-23	18.2	325	47.1	-22	03.4
13	271	00.6	345	19.4		18.0	51	13.5		53.7	359	50.7		18.2	340	49.2		03.4
14	286	03.1	0	18.4		17.7	66	14.3		54.2	14	52.5		18.2	355	51.4		03.3
15	301	05.5	15	17.5		17.4	81	15.2		54.7	29	54.4		18.2	10	53.6		03.3
16	316	08.0	30	16.6		17.1	96	16.0		55.3	44	56.2		18.2	25	55.8		03.3
17	331	10.5	45	15.7	-24	16.9	111	16.8	-14	55.8	59	58.1	-23	18.2	40	58.0	-22	03.2
18	346	12.9	60	14.8	-24	16.6	126	17.7	-14	56.3	74	59.9	-23	18.2	56	00.2	-22	03.2
19	1	15.4	75	13.9		16.3	141	18.5		56.8	90	01.8		18.2	71	02.3		03.2
20	16	17.8	90	13.0		16.0	156	19.3		57.4	105	03.6		18.2	86	04.5		03.1
21	31	20.3	105	12.0		15.7	171	20.2		57.9	120	05.5		18.2	101	06.7		03.1
22	46	22.8	120	11.1		15.4	186	21.0		58.4	135	07.3		18.2	116	08.9		03.1
23	61	25.2	135	10.2		15.2	201	21.8		58.9	150	09.2		18.2	131	11.1		03.0
24	76	27.7	150	09.3	-24	14.9	216	22.7	-14	59.5	165	11.0	-23	18.2	146	13.2	-22	03.0
Dif.	—		-9		+3		+8		-5		+19		0		+22			

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2			PHE { 4^h: 54'9 12^h: 55'1 20^h: 55'3													
	PMG: 11 ^h 51 ^m 7			Edad: 11 ^d 4													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m		
0	182	07.1	-22 39.4	50	21.9	153	+5 27.1	116	60 N	14 56	15 52	16 48	14 06	10	3 26 80		
1	197	06.8	39.6	64	56.2	152	38.7	117	58	15 12	16 03	16 55	11 13	23 77			
2	212	06.5	39.9	79	30.4	151	+5 50.4	117	56	26	13	17 01	15 15	20 74			
3	227	06.3	40.2	94	04.5	151	+6 02.1	116	54	38	22	07	18 18	17 72			
4	242	06.0	40.4	108	38.6	151	13.7	116	52	49	29	13	22 19	15 70			
5	257	05.7	-22 40.7	123	12.7	151	+6 25.3	116	50	15 58	16 36	17 18	14 25	21	3 13 67		
6	272	05.5	-22 41.0	137	46.8	149	+6 36.9	116	45	16 18	16 52	17 29	14 31	25	3 08 64		
7	287	05.2	41.3	152	20.7	150	+6 48.5	115	40	35	17 05	39	36 29	04 60			
8	302	04.9	41.5	166	54.7	149	+7 00.0	116	35	16 48	16	48	41 31	3 00 58			
9	317	04.6	41.8	181	28.6	148	11.6	115	30	17 00	26	17 56	45 34	2 57 55			
10	332	04.4	42.0	196	02.4	148	23.1	115	20	21	17 45	18 12	53 37	52 51			
11	347	04.1	-22 42.3	210	36.2	148	+7 34.6	115	10 N	17 39	18 01	18 28	14 59	42	2 47 47		
12	2	03.8	-22 42.6	225	10.0	147	+7 46.1	114	0	17 55	18 18	18 44	15 05	45	2 43 43		
13	17	03.5	42.8	239	43.7	146	+7 57.5	115	10 S	18 12	35	19 02	11 49	38 41			
14	32	03.3	43.1	254	17.3	146	+8 09.0	114	20	31	18 55	24	18 52	34 36			
15	47	03.0	43.4	268	50.9	146	20.4	114	30	18 52	19 19	19 52	25 57	29 32			
16	62	02.7	43.6	283	24.5	145	31.8	113	35	19 05	34	20 11	30 59	26 29			
17	77	02.5	-22 43.9	297	58.0	144	+8 43.1	113	40	19 19	19 52	20 33	15 35	61	2 22 27		
18	92	02.2	-22 44.1	312	31.4	144	+8 54.4	113	45	19 37	20 14	21 02	15 41	65	2 18 24		
19	107	01.9	44.4	327	04.8	143	+9 05.7	113	50	19 58	42	21 45	48 69	14 19			
20	122	01.6	44.7	341	38.1	143	17.0	113	52	20 09	20 56	22 10	51 71	11 19			
21	137	01.4	44.9	356	11.4	142	28.3	112	54	20	21 13	22 48	54 74	09 16			
22	152	01.1	45.2	10	44.6	141	39.5	112	56	34	21 34	** **	15 58	76	06 14		
23	167	00.8	45.4	25	17.7	141	+9 50.7	111	58	20 50	22 01	** **	16 03	78	04 11		
24	182	00.5	-22 45.7	39	50.8		+10 01.8		60 S	21 09	22 41	** **	16 08	81	2 00 9		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 18 ^h 51 ^m 1		Mag: -3.9 PMG: 14 ^h 00 ^m			Mag: +1.7 PMG: 09 ^h 34 ^m			Mag: -1.8 PMG: 12 ^h 58 ^m			Mag: +0.6 PMG: 14 ^h 13 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	76	27.7	150 09.3	-24 14.9		216 22.7	-14 59.5		165 11.0	-23 -18.2		146 13.2	-22 03.0				
1	91	30.2	165 08.4	14.6		231 23.5	-15 00.0		180 12.9	-18.2		161 15.4	03.0				
2	106	32.6	180 07.5	14.3		246 24.3	00.5		195 14.7	-18.2		176 17.6	02.9				
3	121	35.1	195 06.6	14.0		261 25.2	01.0		210 16.6	-18.2		191 19.8	02.9				
4	136	37.6	210 05.7	13.7		276 26.0	01.6		225 18.4	-18.2		206 22.0	02.9				
5	151	40.0	225 04.7	-24 13.4		291 26.8	-15 02.1		240 20.3	-23 -18.2		221 24.2	-22 02.8				
6	166	42.5	240 03.8	-24 13.1		306 27.7	-15 02.6		255 22.1	-23 -18.2		236 26.3	-22 02.8				
7	181	45.0	255 02.9	12.8		321 28.5	03.1		270 24.0	-18.2		251 28.5	02.8				
8	196	47.4	270 02.0	12.5		336 29.3	03.7		285 25.8	-18.2		266 30.7	02.7				
9	211	49.9	285 01.1	12.2		351 30.2	04.2		300 27.7	-18.2		281 32.9	02.7				
10	226	52.3	300 00.2	11.9		6 31.0	04.7		315 29.5	-18.2		296 35.1	02.7				
11	241	54.8	314 59.3	-24 11.6		21 31.8	-15 05.2		330 31.4	-23 -18.2		311 37.2	-22 02.6				
12	256	57.3	329 58.4	-24 11.3		36 32.7	-15 05.7		345 33.2	-23 -18.2		326 39.4	-22 02.6				
13	271	59.7	344 57.5	11.0		51 33.5	06.3		0 35.1	-18.2		341 41.6	02.6				
14	287	02.2	359 56.6	10.7		66 34.3	06.8		15 36.9	-18.2		356 43.8	02.5				
15	302	04.7	14 55.7	10.4		81 35.2	07.3		30 38.8	-18.2		11 46.0	02.5				
16	317	07.1	29 54.8	10.1		96 36.0	07.8		45 40.6	-18.2		26 48.1	02.5				
17	332	09.6	44 53.8	-24 09.8		111 36.8	-15 08.4		60 42.5	-23 -18.2		41 50.3	-22 02.4				
18	347	12.1	59 52.9	-24 09.5		126 37.7	-15 08.9		75 44.3	-23 -18.2		56 52.5	-22 02.4				
19	2	14.5	74 52.0	09.2		141 38.5	09.4		90 46.2	-18.2		71 54.7	02.4				
20	17	17.0	89 51.1	08.8		156 39.3	09.9		105 48.0	-18.2		86 56.9	02.3				
21	32	19.4	104 50.2	08.5		171 40.1	10.4		120 49.9	-18.2		101 59.0	02.3				
22	47	21.9	119 49.3	08.2		186 41.0	11.0		135 51.7	-18.2		117 01.2	02.3				
23	62	24.4	134 48.4	07.9		201 41.8	11.5		150 53.6	-18.2		132 03.4	02.2				
24	77	26.8	149 47.5	-24 07.6		216 42.6	-15 12.0		165 55.4	-23 -18.2		147 05.6	-22 02.2				
Dif.	—		-9	+3		+8	-5		+18	0		+22					

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 52 ^m 2			SD: 15'1 Edad: 12 ^d 4		PHE { 4 ^h : 55'4 12 ^h : 55'6 20 ^h : 55'8		PMG: 22 ^h 01 ^m Rº: 49 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº	Hora	Rº					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m			
0	182	00.5	-22	45.7	39	50.8	141	+10	01.8	111	60 N	6 56	7 52	8 49	14 16	14	4 46	83				
1	197	00.3		45.9	54	23.9	139		12.9	111	58	49	41	32	24	16	40	79				
2	212	00.0		46.2	68	56.8	140		24.0	111	56	43	31	18	30	19	34	77				
3	226	59.7		46.4	83	29.8	138		35.1	110	54	37	23	8 06	36	22	29	74				
4	241	59.4		46.7	98	02.6	138		46.1	110	52	32	15	7 55	41	24	25	71				
5	256	59.2	-22	46.9	112	35.4	137	+10	57.1	109	50	6 27	7 08	7 46	14 46	25	4 20	70				
6	271	58.9	-22	47.2	127	08.1	137	+11	08.0	109	45	6 15	6 52	7 26	14 56	30	4 12	65				
7	286	58.6		47.4	141	40.8	136		18.9	109	40	6 05	5 39	7 10	15 05	32	4 04	63				
8	301	58.3		47.7	156	13.4	135		29.8	108	35	5 56	5 28	6 56	12	35	3 58	59				
9	316	58.0		47.9	170	45.9	135		40.6	108	30	48	6 18	44	19	37	52	57				
10	331	57.8		48.2	185	18.4	134	+11	51.4	107	20	32	5 59	23	30	42	43	53				
11	346	57.5	-22	48.4	199	50.8	133	+12	02.1	107	10 N	5 16	5 43	6 05	15 41	44	3 34	50				
12	1	57.2	-22	48.7	214	23.1	132	+12	12.8	106	0	5 00	5 26	5 48	15 50	48	3 26	47				
13	16	56.9		48.9	228	55.3	132		23.4	106	10 S	4 41	5 08	31	16 00	51	19	42				
14	31	56.7		49.2	243	27.5	131		34.0	106	20	4 20	4 49	5 13	10	54	10	40				
15	46	56.4		49.4	257	59.6	131		44.6	105	30	3 51	4 24	4 52	22	58	3 01	35				
16	61	56.1		49.6	272	31.7	130	+12	55.1	105	35	33	4 10	39	29	60	2 55	33				
17	76	55.8	-22	49.9	287	03.7	129	+13	05.6	104	40	3 11	3 52	4 24	16 36	64	2 49	30				
18	91	55.5	-22	50.1	301	35.6	128	+13	16.0	103	45	2 42	3 30	4 07	16 46	66	2 42	27				
19	106	55.3		50.4	316	07.4	128		26.3	103	50	1 59	3 02	3 45	16 57	71	33	24				
20	121	55.0		50.6	330	39.2	126		36.6	103	52	1 34	2 47	35	17 02	73	30	21				
21	136	54.7		50.8	345	10.8	127		46.9	102	54	0 56	30	23	08	75	25	19				
22	151	54.4		51.1	359	42.5	125	+13	57.1	101	56	** **	2 10	3 10	14	78	20	17				
23	166	54.2		51.3	14	14.0	125	+14	07.2	101	58	** **	1 43	2 54	17 21	81	2 15	14				
24	181	53.9	-22	51.5	28	45.5		+14	17.3		60 S	** **	1 02	2 35	17 29	84	2 09	11				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 18 ^h 47 ^m 1		Mag: -3.9 PMG: 14 ^h 02 ^m				Mag: +1.7 PMG: 09 ^h 33 ^m				Mag: -1.8 PMG: 12 ^h 55 ^m				Mag: +0.6 PMG: 14 ^h 10 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	77	26.8	149	47.5	-24	07.6	216	42.6	-15	12.0	165	55.4	-23	18.2	147	05.6	-22	02.2				
1	92	29.3	164	46.6		07.3	231	43.5		12.5	180	57.3		18.2	162	07.8		02.2				
2	107	31.8	179	45.7		06.9	246	44.3		13.0	195	59.1		18.2	177	09.9		02.1				
3	122	34.2	194	44.8		06.6	261	45.1		13.6	211	01.0		18.2	192	12.1		02.1				
4	137	36.7	209	43.9		06.3	276	46.0		14.1	226	02.8		18.2	207	14.3		02.1				
5	152	39.2	224	43.0	-24	06.0	291	46.8	-15	14.6	241	04.7	-23	18.2	222	16.5	-22	02.0				
6	167	41.6	239	42.1	-24	05.6	306	47.6	-15	15.1	256	06.5	-23	18.2	237	18.7	-22	02.0				
7	182	44.1	254	41.2		05.3	321	48.4		15.6	271	08.4		18.2	252	20.8		02.0				
8	197	46.6	269	40.3		05.0	336	49.3		16.1	286	10.2		18.2	267	23.0		01.9				
9	212	49.0	284	39.4		04.6	351	50.1		16.7	301	12.1		18.2	282	25.2		01.9				
10	227	51.5	299	38.5		04.3	6	50.9		17.2	316	13.9		18.2	297	27.4		01.9				
11	242	53.9	314	37.6	-24	04.0	21	51.8	-15	17.7	331	15.8	-23	18.2	312	29.6	-22	01.8				
12	257	56.4	329	36.7	-24	03.7	36	52.6	-15	18.2	346	17.6	-23	18.2	327	31.7	-22	01.8				
13	272	58.9	344	35.8		03.3	51	53.4		18.7	1	19.5		18.2	342	33.9		01.8				
14	288	01.3	359	34.9		03.0	66	54.2		19.3	16	21.3		18.2	357	36.1		01.7				
15	303	03.8	14	34.0		02.6	81	55.1		19.8	31	23.2		18.2	12	38.3		01.7				
16	318	06.3	29	33.1		02.3	96	55.9		20.3	46	25.0		18.2	27	40.5		01.7				
17	333	08.7	44	32.2	-24	02.0	111	56.7	-15	20.8	61	26.9	-23	18.2	42	42.6	-22	01.6				
18	348	11.2	59	31.3	-24	01.6	126	57.5	-15	21.3	76	28.7	-23	18.2	57	44.8	-22	01.6				
19	3	13.7	74	30.4		01.3	141	58.4		21.8	91	30.6		18.2	72	47.0		01.6				
20	18	16.1	89	29.5		00.9	156	59.2		22.3	106	32.4		18.2	87	49.2		01.5				
21	33	18.6	104	28.6		00.6	172	00.0		22.9	121	34.3		18.2	102	51.4		01.5				
22	48	21.1	119	27.7	-24	00.2	187	00.8		23.4	136	36.1		18.2	117	53.5		01.5				
23	63	23.5	134	26.8	-23	59.9	202	01.7		23.9	151	38.0		18.2	132	55.7		01.4				
24	78	26.0	149	25.9	-23	59.5	217	02.5	-15	24.4	166	39.8	-23	18.2	147	57.9	-22	01.4				
Dif.	—		-9				+3				+18				0				+22			

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16'2 PMG: 11 ^h 52 ^m 6			SD: 15'2 Edad: 13 ^d 4 PHE { 4 ^h : 56'0 12 ^h : 56'2 20 ^h : 56'4 PMG: 22 ^h 50 ^m Rº: 52 ^m																		
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Civil			Náut.	Hora	Rº	Hora	Rº						
	h	°	'	°	'	°	'	°	'			h	m	h	m	h	m	m	h	m	m	
0	181	53.9	-22	51.5	28	45.5	123	+14	17.3	101	60 N	14 55	15 51	16 47	14 30	19	6 09	84				
1	196	53.6		51.8	43	16.8	123		27.4	99	58	15 11	16 02	16 55	40 23		5 59	81				
2	211	53.3		52.0	57	48.1	123		37.3	99	56	26	12	17 01	49 26		51	77				
3	226	53.0		52.2	72	19.4	121		47.2	99	54	38	21	07	14 58	27	43	75				
4	241	52.8		52.5	86	50.5	121	+14	57.1	98	52	49	29	12	15 05	30	36	73				
5	256	52.5	-22	52.7	101	21.6	120	+15	06.9	97	50	15 58	16 36	17 18	15 11	32	5 30	71				
6	271	52.2	-22	52.9	115	52.6	119	+15	16.6	97	45	16 18	16 52	17 29	15 26	35	5 17	67				
7	286	51.9		53.2	130	23.5	118		26.3	96	40	35	17 05	39	37 38		5 07	64				
8	301	51.6		53.4	144	54.3	118		35.9	95	35	16 48	16	48	47 41		4 57	62				
9	316	51.3		53.6	159	25.1	117		45.4	95	30	17 00	27	17 57	15 56	43	49	60				
10	331	51.1		53.9	173	55.8	116	+15	54.9	94	20	21	17 45	18 13	16 12	45	36	55				
11	346	50.8	-22	54.1	188	26.4	115	+16	04.3	93	10 N	17 39	18 02	18 28	16 25	49	4 24	52				
12	1	50.5	-22	54.3	202	56.9	114	+16	13.6	93	0	17 56	18 19	18 45	16 38	51	4 13	49				
13	16	50.2		54.5	217	27.3	114		22.9	92	10 S	18 14	37	19 04	16 51	54	4 01	47				
14	31	49.9		54.8	231	57.7	113		32.1	91	20	32	18 57	26	17 04	57	3 50	43				
15	46	49.7		55.0	246	28.0	111		41.2	90	30	18 54	19 21	19 54	20 60		36	40				
16	61	49.4		55.2	260	58.1	112		50.2	90	35	19 06	36	20 12	29 63		28	38				
17	76	49.1	-22	55.4	275	28.3	110	+16	59.2	89	40	19 21	19 54	20 35	17 40	65	3 19	35				
18	91	48.8	-22	55.6	289	58.3	109	+17	08.1	88	45	19 39	20 16	21 05	17 52	68	3 09	32				
19	106	48.5		55.9	304	28.2	109		16.9	87	50	20 00	44	21 48	18 08	71	2 57	28				
20	121	48.2		56.1	318	58.1	108		25.6	86	52	11	20 59	22 14	15 73		51	26				
21	136	48.0		56.3	333	27.9	107		34.2	86	54	23	21 16	22 54	23 75		44	25				
22	151	47.7		56.5	347	57.6	106		42.8	85	56	37	21 37	** **	32 77		37	22				
23	166	47.4		56.7	2	27.2	105		51.3	84	58	20 53	22 05	** **	42 80		29	19				
24	181	47.1	-22	57.0	16	56.7		+17	59.7		60 S	21 12	22 48	** **	18 53	85	2 20	16				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 18 ^h 43 ^m 2		Mag: -3.9 PMG: 14 ^h 03 ^m				Mag: +1.7 PMG: 09 ^h 31 ^m				Mag: -1.8 PMG: 12 ^h 52 ^m				Mag: +0.6 PMG: 14 ^h 06 ^m							
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	78	26.0	149	25.9	-23	59.5	217	02.5	-15	24.4	166	39.8	-23	-18.2	147	57.9	-22	01.4				
1	93	28.4	164	25.0		59.2	232	03.3		24.9	181	41.7		-18.1	163	00.1		01.4				
2	108	30.9	179	24.1		58.8	247	04.1		25.4	196	43.5		-18.1	178	02.2		01.3				
3	123	33.4	194	23.2		58.5	262	05.0		26.0	211	45.3		-18.1	193	04.4		01.3				
4	138	35.8	209	22.3		58.1	277	05.8		26.5	226	47.2		-18.1	208	06.6		01.3				
5	153	38.3	224	21.4	-23	57.8	292	06.6	-15	27.0	241	49.0	-23	-18.1	223	08.8	-22	01.2				
6	168	40.8	239	20.5	-23	57.4	307	07.4	-15	27.5	256	50.9	-23	-18.1	238	11.0	-22	01.2				
7	183	43.2	254	19.6		57.1	322	08.3		28.0	271	52.7		-18.1	253	13.1		01.2				
8	198	45.7	269	18.7		56.7	337	09.1		28.5	286	54.6		-18.1	268	15.3		01.1				
9	213	48.2	284	17.9		56.4	352	09.9		29.0	301	56.4		-18.1	283	17.5		01.1				
10	228	50.6	299	17.0		56.0	7	10.7		29.6	316	58.3		-18.1	298	19.7		01.1				
11	243	53.1	314	16.1	-23	55.6	22	11.6	-15	30.1	332	00.1	-23	-18.1	313	21.8	-22	01.0				
12	258	55.5	329	15.2	-23	55.3	37	12.4	-15	30.6	347	02.0	-23	-18.1	328	24.0	-22	01.0				
13	273	58.0	344	14.3		54.9	52	13.2		31.1	2	03.8		-18.1	343	26.2		00.9				
14	289	00.5	359	13.4		54.5	67	14.0		31.6	17	05.7		-18.1	358	28.4		00.9				
15	304	02.9	14	12.5		54.2	82	14.9		32.1	32	07.5		-18.1	13	30.6		00.9				
16	319	05.4	29	11.6		53.8	97	15.7		32.6	47	09.4		-18.1	28	32.7		00.8				
17	334	07.9	44	10.7	-23	53.4	112	16.5	-15	33.1	62	11.2	-23	-18.1	43	34.9	-22	00.8				
18	349	10.3	59	09.8	-23	53.1	127	17.3	-15	33.7	77	13.1	-23	-18.1	58	37.1	-22	00.8				
19	4	12.8	74	08.9		52.7	142	18.2		34.2	92	14.9		-18.1	73	39.3		00.7				
20	19	15.3	89	08.1		52.3	157	19.0		34.7	107	16.8		-18.1	88	41.4		00.7				
21	34	17.7	104	07.2		51.9	172	19.8		35.2	122	18.6		-18.1	103	43.6		00.7				
22	49	20.2	119	06.3		51.6	187	20.6		35.7	137	20.5		-18.1	118	45.8		00.6				
23	64	22.7	134	05.4		51.2	202	21.4		36.2	152	22.3		-18.1	133	48.0		00.6				
24	79	25.1	149	04.5	-23	50.8	217	22.3	-15	36.7	167	24.1	-23	-18.1	148	50.1	-22	00.6				
Dif.	—		-9				+4				+18				0				+22			

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 53 ^m 1			SD: 15'4 Edad: 14 ^d 4			PHE { 4 ^h : 56'6 12 ^h : 56'8 20 ^h : 57'0											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil			Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	181	47.1	-22	16	56.7	104	+17	59.7	83	60 N	6 59	7 55	8 52	14 49	29	7 33	82	
1	196	46.8		31	26.1	104	+18	08.0	82	58	51	44	35	15 03	32	20	78	
2	211	46.5		45	55.5	103		16.2	82	56	45	34	21	15 35		7 08	76	
3	226	46.3		60	24.8	102		24.4	80	54	39	25	8 08	25 37		6 58	74	
4	241	46.0		74	54.0	101		32.4	80	52	33	17	7 58	35 38		49	72	
5	256	45.7	-22	89	23.1	100	+18	40.4	79	50	6 28	7 10	7 48	15 43	40	6 41	71	
6	271	45.4	-22	103	52.1	99	+18	48.3	78	45	6 17	6 54	7 28	16 01	43	6 24	67	
7	286	45.1		118	21.0	99	+18	56.1	77	40	6 07	41	7 11	15 45		6 11	64	
8	301	44.8		132	49.9	98	+19	03.8	76	35	5 58	29	6 57	28 47		5 59	62	
9	316	44.5		147	18.7	97		11.4	75	30	49	19	45	39 48		49	61	
10	331	44.3		161	47.4	96		18.9	74	20	33	6 01	25	16 57	51	31	58	
11	346	44.0	-22	176	16.0	95	+19	26.3	73	10 N	5 17	5 44	6 06	17 14	53	5 16	55	
12	1	43.7	-22	190	44.5	95	+19	33.6	72	0	5 01	5 27	5 49	17 29	55	5 02	53	
13	16	43.4		205	13.0	93		40.8	71	10 S	4 42	5 09	32	17 45	56	4 48	51	
14	31	43.1	-22	219	41.3	93		47.9	70	20	4 20	4 49	5 14	18 01	59	33	48	
15	46	42.8	-23	234	09.6	92	+19	54.9	69	30	3 51	25	4 52	20 61		16	45	
16	61	42.5		248	37.8	91	+20	01.8	68	35	33	4 10	39	32 62		4 06	43	
17	76	42.3	-23	263	05.9	91	+20	08.6	67	40	3 11	3 52	4 25	18 45	63	3 54	41	
18	91	42.0	-23	277	34.0	89	+20	15.3	66	45	2 41	3 30	4 07	19 00	66	3 41	38	
19	106	41.7		292	01.9	89		21.9	64	50	1 57	3 01	3 45	19 68		25	35	
20	121	41.4		306	29.8	88		28.3	64	52	1 31	2 46	34	28 70		17	34	
21	136	41.1		320	57.6	87		34.7	63	54	0 52	29	23	38 71		3 09	31	
22	151	40.8		335	25.3	87		41.0	61	56	** **	2 08	3 09	19 49	73	2 59	29	
23	166	40.5		349	53.0	85		47.1	61	58	** **	1 40	2 53	20 02	76	2 48	27	
24	181	40.2	-23	4	20.5		+20	53.2		60 S	** **	0 57	2 33	20 18	78	2 36	23	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG: 18 ^h 39 ^m 3		Mag: -3.9 PMG: 14 ^h 05 ^m				Mag: +1.7 PMG: 09 ^h 30 ^m				Mag: -1.8 PMG: 12 ^h 49 ^m				Mag: +0.6 PMG: 14 ^h 03 ^m															
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'												
0	79	25.1	149	04.5	-23	50.8	217	22.3	-15	36.7	167	24.1	-23	18.1	148	50.1	-22	00.6												
1	94	27.6	164	03.6		50.4	232	23.1		37.2	182	26.0		18.1	163	52.3		00.5												
2	109	30.0	179	02.7		50.0	247	23.9		37.7	197	27.8		18.1	178	54.5		00.5												
3	124	32.5	194	01.8		49.7	262	24.7		38.3	212	29.7		18.1	193	56.7		00.5												
4	139	35.0	209	01.0		49.3	277	25.5		38.8	227	31.5		18.1	208	58.9		00.4												
5	154	37.4	224	00.1	-23	48.9	292	26.4	-15	39.3	242	33.4	-23	18.0	224	01.0	-22	00.4												
6	169	39.9	238	59.2	-23	48.5	307	27.2	-15	39.8	257	35.2	-23	18.0	239	03.2	-22	00.4												
7	184	42.4	253	58.3		48.1	322	28.0		40.3	272	37.1		18.0	254	05.4		00.3												
8	199	44.8	268	57.4		47.7	337	28.8		40.8	287	38.9		18.0	269	07.6		00.3												
9	214	47.3	283	56.5		47.3	352	29.6		41.3	302	40.8		18.0	284	09.7		00.3												
10	229	49.8	298	55.6		46.9	7	30.5		41.8	317	42.6		18.0	299	11.9		00.2												
11	244	52.2	313	54.8	-23	46.6	22	31.3	-15	42.3	332	44.5	-23	18.0	314	14.1	-22	00.2												
12	259	54.7	328	53.9	-23	46.2	37	32.1	-15	42.8	347	46.3	-23	18.0	329	16.3	-22	00.2												
13	274	57.2	343	53.0		45.8	52	32.9		43.3	2	48.2		18.0	344	18.4		00.1												
14	289	59.6	358	52.1		45.4	67	33.7		43.9	17	50.0		18.0	359	20.6		00.1												
15	305	02.1	13	51.2		45.0	82	34.6		44.4	32	51.8		18.0	14	22.8		00.1												
16	320	04.5	28	50.4		44.6	97	35.4		44.9	47	53.7		18.0	29	25.0		00.0												
17	335	07.0	43	49.5	-23	44.2	112	36.2	-15	45.4	62	55.5	-23	18.0	44	27.1	-22	00.0												
18	350	09.5	58	48.6	-23	43.8	127	37.0	-15	45.9	77	57.4	-23	18.0	59	29.3	-21	59.9												
19	5	11.9	73	47.7		43.4	142	37.8		46.4	92	59.2		18.0	74	31.5		59.9												
20	20	14.4	88	46.8		43.0	157	38.7		46.9	108	01.1		18.0	89	33.7		59.9												
21	35	16.9	103	46.0		42.6	172	39.5		47.4	123	02.9		18.0	104	35.8		59.8												
22	50	19.3	118	45.1		42.2	187	40.3		47.9	138	04.8		18.0	119	38.0		59.8												
23	65	21.8	133	44.2		41.8	202	41.1		48.4	153	06.6		18.0	134	40.2		59.8												
24	80	24.3	148	43.3	-23	41.3	217	41.9	-15	48.9	168	08.5	-23	18.0	149	42.4	-21	59.7												
Dif.	—		-9				+4				+8				-5				+18				0				+22			

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2			PHE { 4^h: 57'2 12^h: 57'4 20^h: 57'6														
	PMG: 11 ^h 53. ^m 5			Edad: 15. ^d 4														
	PMG: ** **			R ^º : **														
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.			Civil	Náut.	Hora	R ^º	Hora	R ^º	
h	°	'	°	°	'		°	'		°	h m	h m	h m	h m m		h m m		
0	181	40.2	-23 01.9	4	20.5	85	+20	53.2	59	60 N	14 54	15 51	16 47	15 18	45	8 55	73	
1	196	40.0	02.1	18	48.0	85	+20	59.1	58	58	15 11	16 02	16 54	35	47	38	71	
2	211	39.7	02.3	33	15.5	83	+21	04.9	57	56	25	12	17 01	15 50	48	24	69	
3	226	39.4	02.5	47	42.8	83		10.6	56	54	37	21	07	16 02	49	12	68	
4	241	39.1	02.7	62	10.1	81		16.2	55	52	48	29	13	13	50	8 01	67	
5	256	38.8	-23 02.9	76	37.2	82	+21	21.7	53	50	15 58	16 36	17 18	16 23	51	7 52	65	
6	271	38.5	-23 03.1	91	04.4	80	+21	27.0	52	45	16 18	16 52	17 29	16 44	52	7 31	64	
7	286	38.2	03.3	105	31.4	80		32.2	51	40	35	17 05	39	17 00	54	15	63	
8	301	37.9	03.5	119	58.4	79		37.3	50	35	16 49	17	48	15	53	7 01	62	
9	316	37.6	03.7	134	25.3	78		42.3	49	30	17 01	27	17 57	27	55	6 50	60	
10	331	37.4	03.9	148	52.1	78		47.2	47	20	22	17 46	18 13	17 48	56	29	59	
11	346	37.1	-23 04.0	163	18.9	77	+21	51.9	46	10 N	17 40	18 03	18 29	18 07	56	6 11	58	
12	1	36.8	-23 04.2	177	45.6	76	+21	56.5	45	0	17 57	18 20	18 46	18 24	57	5 55	56	
13	16	36.5	04.4	192	12.2	75	+22	01.0	44	10 S	18 15	38	19 05	18 41	58	39	54	
14	31	36.2	04.6	206	38.7	75		05.4	42	20	33	18 58	27	19 00	58	21	53	
15	46	35.9	04.8	221	05.2	75		09.6	41	30	18 55	19 22	19 56	21	60	5 01	51	
16	61	35.6	05.0	235	31.7	73		13.7	40	35	19 08	37	20 14	34	60	4 49	50	
17	76	35.3	-23 05.2	249	58.0	73	+22	17.7	39	40	19 23	19 55	20 37	19 48	61	4 35	49	
18	91	35.0	-23 05.3	264	24.3	73	+22	21.6	37	45	19 40	20 18	21 07	20 06	61	4 19	48	
19	106	34.7	05.5	278	50.6	72		25.3	36	50	20 02	20 47	21 51	27	63	4 00	45	
20	121	34.5	05.7	293	16.8	71		28.9	34	52	13	21 01	22 17	38	62	3 51	43	
21	136	34.2	05.9	307	42.9	71		32.3	33	54	25	19	22 59	20 49	63	40	43	
22	151	33.9	06.1	322	09.0	70		35.6	32	56	39	21 40	** **	21 02	64	28	41	
23	166	33.6	06.3	336	35.0	69		38.8	31	58	20 55	22 09	** **	18	65	3 15	38	
24	181	33.3	-23 06.4	351	00.9		+22	41.9		60 S	21 15	22 54	** **	21 36	66	2 59	36	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 35. ^m 3		Mag: -3.9 PMG: 14 ^h 06. ^m				Mag: +1.7 PMG: 09 ^h 29. ^m				Mag: -1.8 PMG: 12 ^h 46. ^m				Mag: +0.6 PMG: 13 ^h 59. ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	80	24.3	148	43.3	-23 41.3	217	41.9	-15 48.9	168	08.5	-23 -18.0	149	42.4	-21 59.7				
1	95	26.7	163	42.4	40.9	232	42.7	49.4	183	10.3	-18.0	164	44.5	59.7				
2	110	29.2	178	41.6	40.5	247	43.6	49.9	198	12.1	-18.0	179	46.7	59.7				
3	125	31.7	193	40.7	40.1	262	44.4	50.4	213	14.0	-17.9	194	48.9	59.6				
4	140	34.1	208	39.8	39.7	277	45.2	50.9	228	15.8	-17.9	209	51.1	59.6				
5	155	36.6	223	38.9	-23 39.3	292	46.0	-15 51.4	243	17.7	-23 -17.9	224	53.2	-21 59.6				
6	170	39.0	238	38.1	-23 38.9	307	46.8	-15 52.0	258	19.5	-23 -17.9	239	55.4	-21 59.5				
7	185	41.5	253	37.2	38.5	322	47.6	52.5	273	21.4	-17.9	254	57.6	59.5				
8	200	44.0	268	36.3	38.0	337	48.5	53.0	288	23.2	-17.9	269	59.8	59.5				
9	215	46.4	283	35.4	37.6	352	49.3	53.5	303	25.1	-17.9	285	01.9	59.4				
10	230	48.9	298	34.6	37.2	7	50.1	54.0	318	26.9	-17.9	300	04.1	59.4				
11	245	51.4	313	33.7	-23 36.8	22	50.9	-15 54.5	333	28.8	-23 -17.9	315	06.3	-21 59.4				
12	260	53.8	328	32.8	-23 36.4	37	51.7	-15 55.0	348	30.6	-23 -17.9	330	08.5	-21 59.3				
13	275	56.3	343	31.9	35.9	52	52.5	55.5	3	32.5	-17.9	345	10.6	59.3				
14	290	58.8	358	31.1	35.5	67	53.4	56.0	18	34.3	-17.9	0	12.8	59.2				
15	306	01.2	13	30.2	35.1	82	54.2	56.5	33	36.1	-17.9	15	15.0	59.2				
16	321	03.7	28	29.3	34.6	97	55.0	57.0	48	38.0	-17.9	30	17.2	59.2				
17	336	06.2	43	28.5	-23 34.2	112	55.8	-15 57.5	63	39.8	-23 -17.9	45	19.3	-21 59.1				
18	351	08.6	58	27.6	-23 33.8	127	56.6	-15 58.0	78	41.7	-23 -17.9	60	21.5	-21 59.1				
19	6	11.1	73	26.7	33.4	142	57.4	58.5	93	43.5	-17.9	75	23.7	59.1				
20	21	13.5	88	25.8	32.9	157	58.2	59.0	108	45.4	-17.9	90	25.8	59.0				
21	36	16.0	103	25.0	32.5	172	59.0	-15 59.5	123	47.2	-17.9	105	28.0	59.0				
22	51	18.5	118	24.1	32.1	187	59.9	-16 00.0	138	49.1	-17.8	120	30.2	59.0				
23	66	20.9	133	23.2	31.6	203	00.7	00.5	153	50.9	-17.8	135	32.4	58.9				
24	81	23.4	148	22.4	-23 31.2	218	01.5	-16 01.0	168	52.7	-23 -17.8	150	34.5	-21 58.9				
Dif.	—		-9		+4	+8		-5	+18		0		+22					

UT	SOL				○ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna															
	SD: 16°2 PMG: 11 ^h 54 ^m 0				SD: 15°7 Edad: 16 ^d 4 PMG: 00 ^h 37 ^m PHE { 4^h: 57'8 12^h: 58'0 20^h: 58'1 R°: 58 ^m																									
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	R°		Hora	R°																
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	° 181 196 211 226 241 256 271 286 301 316 331 346 1 16 31 46 61 76 91 106 121 136 151 166 181	° 33.3 33.0 32.7 32.4 32.1 31.8 31.5 31.2 30.9 30.7 30.4 30.1 29.8 29.5 29.2 28.9 28.6 28.3 28.0 27.7 27.4 27.1 26.8 26.5 26.2	° −23	° 351 5 19 34 48 63 77 92 106 120 135 149 164 178 192 207 221 236 250 265 279 293 308 322 337	° 00.9 26.8 52.7 18.5 44.2 09.9 35.6 01.2 26.8 52.3 17.8 43.2 08.6 34.0 59.3 24.6 49.9 15.1 40.3 05.5 30.7 55.8 20.9 46.0 11.0	° 69 69 68 67 67 67 66 66 65 65 64 64 64 63 63 63 62 62 62 62 61 61 61 60 60	° +22 +22 +22 +22 +22 +22 +22 +22 +23 +23 +23 +23 +23 +23 +23 +23 +23 +23 +23 +23 +23 +23 +23 +23 +23	° 29 28 26 25 24 22 21 19 18 17 15 14 12 11 10 8 6 5 4 2 1 1 2 4 2	° 60 N 58 56 54 52 50 45 40 35 30 20 10 N 0 10 S 20 30 35 40 45 50 52 54 56 58 60 S	h m 7 01 6 53 47 41 35 6 30 6 19 6 08 5 59 51 34 5 18 5 02 4 43 4 21 3 52 33 3 11 2 41 1 56 1 30 0 48 ** ** ** ** ** **	h m 7 57 46 36 27 19 7 12 6 56 42 31 20 6 02 5 45 5 28 5 10 4 50 25 4 10 3 52 3 30 3 01 2 46 28 2 07 1 38 0 53	h m 8 54 37 23 10 8 00 7 50 7 29 7 13 6 59 47 26 6 07 5 50 33 5 14 4 52 40 4 25 4 07 3 45 34 22 3 08 2 52 2 32	h m m 16 03 64 22 63 38 63 16 51 63 17 03 62 17 14 62 17 36 61 17 54 60 18 08 61 22 60 18 44 59 19 03 59 19 21 58 39 58 19 58 57 20 21 56 34 56 20 49 55 21 07 54 30 52 40 53 21 52 52 22 06 51 22 23 49 22 42 48	h m m 10 08 56 9 49 57 33 57 20 57 9 08 57 8 57 58 8 35 58 18 58 8 03 58 7 50 58 28 58 7 09 58 6 51 58 33 58 6 14 58 5 52 57 39 57 5 24 57 5 07 56 4 45 56 34 56 23 55 4 09 55 3 53 55 3 35 54																
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG 18 ^h 31 ^m 4		Mag: −3.9 PMG: 14 ^h 07 ^m				Mag: +1.7 PMG: 09 ^h 27 ^m				Mag: −1.8 PMG: 12 ^h 43 ^m				Mag: +0.6 PMG: 13 ^h 56 ^m															
	hG ☊	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec																		
h 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	° 81 96 111 126 141 156 171 186 201 216 231 246 261 276 291 307 322 337 352 7 22 37 52 67 82	° 23.4 25.9 28.3 30.8 33.3 35.7 38.2 40.7 43.1 45.6 48.0 50.5 53.0 55.4 57.9 00.4 02.8 05.3 07.8 10.2 12.7 15.2 17.6 20.1 22.5	° 148 163 178 193 208 223 238 253 268 283 298 313 328 343 358 13 28 43 58 73 88 103 118 133 148	° 22.4 21.5 20.6 19.8 18.9 18.0 17.2 16.3 15.4 14.6 13.7 12.8 12.0 11.1 10.3 09.4 08.5 07.7 06.8 05.9 05.1 04.2 03.4 02.5 01.7	° −23	° 31.2 30.7 30.3 29.9 29.4 29.0 28.5 28.1 27.6 27.2 26.7 26.3 25.8 25.4 24.9 24.5 24.0 23.6 23.1 22.6 22.2 21.7 21.3 20.8 20.3	° 218 233 248 263 278 293 308 323 338 353 8 23 38 53 68 83 98 113 128 143 158 173 188 203 218	° 01.5 02.3 03.1 03.9 04.7 05.6 06.4 07.2 08.0 08.8 09.6 10.4 11.2 12.0 12.9 13.7 14.5 15.3 16.1 16.9 17.7 18.5 19.3 20.1 20.9	° −16	° 01.0 01.5 02.0 02.5 03.0 03.5 04.0 04.5 05.0 05.5 06.0 06.5 07.0 07.5 08.0 08.5 09.0 09.5 10.0 10.5 11.0 11.5 12.0 12.5 13.0	° 168 183 198 213 229 244 259 274 289 304 319 334 349 4 19 34 49 64 79 94 109 124 139 154 169	° 52.7 54.6 56.4 58.3 00.1 02.0 03.8 05.7 07.5 09.3 11.2 13.0 14.9 16.7 18.6 20.4 22.3 24.1 25.9 27.8 29.6 31.5 33.3 35.2 37.0	° −23	° 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.8 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17.7	° 150 165 180 195 210 225 240 255 270 285 300 315 331 346 1 16 31 46 61 76 91 106 121 136 151	° 34.5 36.7 38.9 41.1 43.2 45.4 47.6 49.8 51.9 54.1 56.3 58.4 00.6 02.8 05.0 07.1 09.3 11.5 13.7 15.8 18.0 20.2 22.3 24.5 26.7	° −21	° 58.9 58.9 58.8 58.8 58.8 58.7 58.7 58.6 58.6 58.6 58.5 58.5 58.5 58.4 58.4 58.4 58.3 58.3 58.3 58.2 58.2 58.1 58.1 58.1 58.0												
Dif.	—		−9				+5				+8				−5				+18				0				+22			

UT	SOL				○ LUNA								Latitud	Puesta de Sol	Fin del crepúsculo				Salida de Luna				Puesta de Luna			
	SD: 16'2				SD: 15'9				PHE { 4 ^h : 58'3 12 ^h : 58'4 20 ^h : 58'5						Edad: 17 ^d 4				Rº: 58 ^m				PMG: 01 ^h 35 ^m			
	PMG: 11 ^h 54 ^m 5																									
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.				Civil		Náut.		Hora		Rº		Hora		Rº	
h	°	'	°	'	°	'			°	'			h	m	h	m	h	m	m	h	m	m				
0	181	26.2	-23	10.5	337	11.0	61	+23	12.9	5	60 N	14	53	15	50	16	47	17	07	81	11	04	40			
1	196	25.9		10.6	351	36.1	60		12.4	7	58	15	10	16	02	16	54		25	78	10	46	42			
2	211	25.7		10.8	6	01.1	60		11.7	8	56	25	12	17	01				41	75	30	44				
3	226	25.4		11.0	20	26.1	60		10.9	10	54	37	21	07				17	54	74	17	46				
4	241	25.1		11.1	34	51.1	60		09.9	11	52	48	29	13				18	05	73	10	05	47			
5	256	24.8	-23	11.3	49	16.1	60	+23	08.8	13	50	15	58	16	36	17	18	18	16	71	9	55	48			
6	271	24.5	-23	11.4	63	41.1	60	+23	07.5	14	45	16	19	16	52	17	30	18	37	69	9	33	50			
7	286	24.2		11.6	78	06.1	60		06.1	15	40	35	17	06	40			18	54	67	16	51				
8	301	23.9		11.7	92	31.1	59		04.6	17	35	16	49	17	49			19	09	65	9	01	53			
9	316	23.6		11.9	106	56.0	60		02.9	19	30	17	02	28	17	58		22	63		8	48	54			
10	331	23.3		12.0	121	21.0	60	+23	01.0	20	20	23	17	47	18	14		19	43	62	26	55				
11	346	23.0	-23	12.2	135	46.0	59	+22	59.0	21	10 N	17	41	18	04	18	30	20	02	59	8	07	57			
12	1	22.7	-23	12.3	150	10.9	60	+22	56.9	23	0	17	58	18	21	18	47	20	19	58	7	49	58			
13	16	22.4		12.5	164	35.9	60		54.6	25	10 S	18	16	39	19	06		37	56		31	59				
14	31	22.1		12.6	179	00.9	59		52.1	26	20	34	18	59	28			20	55	54	7	12	60			
15	46	21.8		12.8	193	25.8	60		49.5	27	30	18	56	19	24	19	57	21	17	51	6	49	63			
16	61	21.5		12.9	207	50.8	60		46.8	29	35	19	09	39	20	16		30	49		36	63				
17	76	21.2	-23	13.1	222	15.8	60	+22	43.9	30	40	19	24	19	57	20	38	21	44	48	6	21	64			
18	91	20.9	-23	13.2	236	40.8	60	+22	40.9	32	45	19	42	20	19	21	09	22	01	46	6	03	66			
19	106	20.6		13.4	251	05.8	60		37.7	33	50	20	04	20	49	21	54	22	43		5	41	67			
20	121	20.3		13.5	265	30.8	61		34.4	35	52	15	21	04	22	21		33	41		30	68				
21	136	20.0		13.6	279	55.9	60		30.9	36	54	27	21	23	04			44	40		18	69				
22	151	19.7		13.8	294	20.9	61		27.3	38	56	41	21	43	** **			22	57	37	5	04	70			
23	166	19.4		13.9	308	46.0	61		23.5	39	58	20	58	22	12	** **		23	12	35	4	48	72			
24	181	19.1	-23	14.1	323	11.1		+22	19.6		60 S	21	18	22	59	** **		23	30	31	4	29	73			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO											
	PMG		Mag: -3.9				Mag: +1.7				Mag: -1.8				Mag: +0.6											
	18 ^h 27 ^m 5		PMG: 14 ^h 09 ^m				PMG: 09 ^h 26 ^m				PMG: 12 ^h 40 ^m				PMG: 13 ^h 52 ^m											
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄											
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	82	22.5	148	01.7	-23	20.3	218	20.9	-16	13.0	169	37.0	-23	-17.7	151	26.7	-21	58.0								
1	97	25.0	163	00.8		19.9	233	21.8		13.5	184	38.9		-17.7	166	28.9		58.0								
2	112	27.5	177	59.9		19.4	248	22.6		14.0	199	40.7		-17.7	181	31.0		58.0								
3	127	29.9	192	59.1		18.9	263	23.4		14.5	214	42.5		-17.7	196	33.2		57.9								
4	142	32.4	207	58.2		18.4	278	24.2		15.0	229	44.4		-17.7	211	35.4		57.9								
5	157	34.9	222	57.4	-23	18.0	293	25.0	-16	15.5	244	46.2	-23	-17.6	226	37.5	-21	57.9								
6	172	37.3	237	56.5	-23	17.5	308	25.8	-16	16.0	259	48.1	-23	-17.6	241	39.7	-21	57.8								
7	187	39.8	252	55.7		17.0	323	26.6		16.5	274	49.9		-17.6	256	41.9		57.8								
8	202	42.3	267	54.8		16.5	338	27.4		16.9	289	51.8		-17.6	271	44.1		57.8								
9	217	44.7	282	54.0		16.1	353	28.2		17.4	304	53.6		-17.6	286	46.2		57.7								
10	232	47.2	297	53.1		15.6	8	29.0		17.9	319	55.4		-17.6	301	48.4		57.7								
11	247	49.6	312	52.2	-23	15.1	23	29.8	-16	18.4	334	57.3	-23	-17.6	316	50.6	-21	57.6								
12	262	52.1	327	51.4	-23	14.6	38	30.6	-16	18.9	349	59.1	-23	-17.6	331	52.7	-21	57.6								
13	277	54.6	342	50.5		14.1	53	31.4		19.4	5	01.0		-17.6	346	54.9		57.6								
14	292	57.0	357	49.7		13.7	68	32.3		19.9	20	02.8		-17.6	1	57.1		57.5								
15	307	59.5	12	48.8		13.2	83	33.1		20.4	35	04.7		-17.6	16	59.3		57.5								
16	323	02.0	27	48.0		12.7	98	33.9		20.9	50	06.5		-17.6	32	01.4		57.5								
17	338	04.4	42	47.1	-23	12.2	113	34.7	-16	21.4	65	08.4	-23	-17.6	47	03.6	-21	57.4								
18	353	06.9	57	46.3	-23	11.7	128	35.5	-16	21.9	80	10.2	-23	-17.6	62	05.8	-21	57.4								
19	8	09.4	72	45.4		11.2	143	36.3		22.4	95	12.0		-17.5	77	07.9		57.4								
20	23	11.8	87	44.6		10.7	158	37.1		22.9	110	13.9		-17.5	92	10.1		57.3								
21	38	14.3	102	43.7		10.2	173	37.9		23.4	125	15.7		-17.5	107	12.3		57.3								
22	53	16.8	117	42.9		09.8	188	38.7		23.9	140	17.6		-17.5	122	14.4		57.3								
23	68	19.2	132	42.0		09.3	203	39.5		24.3	155	19.4		-17.5	137	16.6		57.2								
24	83	21.7	147	41.2	-23	08.8	218	40.3	-16	24.8	170	21.3	-23	-17.5	152	18.8	-21	57.2								
Dif.	—		-9				+5				+8				-5				+18				0			

UT	SOL				LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16°2 PMG: 11 ^h 55 ^m 0				SD: 16°0 Edad: 18 ^d 4		PHE { 4 ^h : 58'7 12 ^h : 58'8 20 ^h : 58'9			R°: 57 ^m									
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.		Náut.	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'		°	'	°	'	°	h	m	h	m	h	m	m
0	181	19.1	-23	14.1	323	11.1	61	+22	19.6	40	60 N	7 03	7 59	8 57	18 28	91	11 44	25	
1	196	18.8		14.2	337	36.2	61		15.6	42	58	6 55	48	39	43	87	28	29	
2	211	18.5		14.3	352	01.3	61		11.4	44	56	49	38	25	18 56	84	14	33	
3	226	18.2		14.5	6	26.4	62		07.0	45	54	42	29	12	19 08	81	11 03	34	
4	241	17.9		14.6	20	51.6	62	+22	02.5	46	52	37	21	8 01	18 79	10 52	37		
5	256	17.6	-23	14.8	35	16.8	62	+21	57.9	47	50	6 32	7 13	7 52	19 27	77	10 43	38	
6	271	17.3	-23	14.9	49	42.0	63	+21	53.2	49	45	6 20	6 57	7 31	19 46	73	10 23	42	
7	286	17.0		15.0	64	07.3	63		48.3	51	40	10	44	14	20 01	70	10 07	45	
8	301	16.7		15.2	78	32.6	63		43.2	52	35	6 00	32	7 00	14 68	9 54	47		
9	316	16.4		15.3	92	57.9	63		38.0	53	30	5 52	22	6 48	25 66	42 49			
10	331	16.1		15.4	107	23.2	64		32.7	55	20	35	6 03	27	20 45	61	21 52		
11	346	15.8	-23	15.6	121	48.6	64	+21	27.2	56	10 N	5 19	5 46	6 09	21 01	59	9 04	54	
12	1	15.5	-23	15.7	136	14.0	65	+21	21.6	57	0	5 03	5 29	5 51	21 17	56	8 47	57	
13	16	15.2		15.8	150	39.5	65		15.9	59	10 S	4 44	5 11	34	33 52	30 60			
14	31	14.9		15.9	165	05.0	65		10.0	60	20	4 21	4 50	5 15	21 49	50	8 12	62	
15	46	14.6		16.1	179	30.5	65	+21	04.0	62	30	3 52	26	4 53	22 08	46	7 52	64	
16	61	14.3		16.2	193	56.0	66	+20	57.8	62	35	34	4 10	40	19 44	39 67			
17	76	14.0	-23	16.3	208	21.6	67	+20	51.6	64	40	3 11	3 52	4 25	22 32	42	7 25	69	
18	91	13.7	-23	16.5	222	47.3	67	+20	45.2	66	45	2 41	3 30	4 07	22 47	39	7 09	71	
19	106	13.4		16.6	237	13.0	67		38.6	67	50	1 56	3 01	3 45	23 05	35	6 48	75	
20	121	13.1		16.7	251	38.7	68		31.9	68	52	1 29	2 46	34	14 33	38 76			
21	136	12.8		16.8	266	04.5	68		25.1	69	54	0 45	28	22	24 30	27 78			
22	151	12.5		16.9	280	30.3	68		18.2	71	56	** ** *	2 06	3 08	34 28	14 81			
23	166	12.2		17.1	294	56.1	69		11.1	72	58	** ** *	1 37	2 51	23 47	24	6 00	83	
24	181	11.9	-23	17.2	309	22.0		+20	03.9		60 S	** ** *	0 50	2 31	** ** *	**	5 42	87	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 23 ^m 5		Mag: -3.9 PMG: 14 ^h 10 ^m				Mag: +1.7 PMG: 09 ^h 25 ^m				Mag: -1.8 PMG: 12 ^h 37 ^m				Mag: +0.6 PMG: 13 ^h 49 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	83	21.7	147	41.2	-23	08.8	218	40.3	-16	24.8	170	21.3	-23	17.5	152	18.8	-21	57.2
1	98	24.1	162	40.3		08.3	233	41.1		25.3	185	23.1		17.5	167	21.0		57.1
2	113	26.6	177	39.5		07.8	248	41.9		25.8	200	24.9		17.5	182	23.1		57.1
3	128	29.1	192	38.7		07.3	263	42.7		26.3	215	26.8		17.5	197	25.3		57.1
4	143	31.5	207	37.8		06.8	278	43.5		26.8	230	28.6		17.5	212	27.5		57.0
5	158	34.0	222	37.0	-23	06.3	293	44.3	-16	27.3	245	30.5	-23	17.5	227	29.6	-21	57.0
6	173	36.5	237	36.1	-23	05.8	308	45.1	-16	27.8	260	32.3	-23	17.5	242	31.8	-21	57.0
7	188	38.9	252	35.3		05.3	323	45.9		28.3	275	34.2		17.5	257	34.0		56.9
8	203	41.4	267	34.4		04.8	338	46.7		28.8	290	36.0		17.4	272	36.2		56.9
9	218	43.9	282	33.6		04.3	353	47.5		29.3	305	37.8		17.4	287	38.3		56.9
10	233	46.3	297	32.7		03.7	8	48.3		29.7	320	39.7		17.4	302	40.5		56.8
11	248	48.8	312	31.9	-23	03.2	23	49.1	-16	30.2	335	41.5	-23	17.4	317	42.7	-21	56.8
12	263	51.3	327	31.1	-23	02.7	38	49.9	-16	30.7	350	43.4	-23	17.4	332	44.8	-21	56.7
13	278	53.7	342	30.2		02.2	53	50.7		31.2	5	45.2		17.4	347	47.0		56.7
14	293	56.2	357	29.4		01.7	68	51.6		31.7	20	47.1		17.4	2	49.2		56.7
15	308	58.6	12	28.5		01.2	83	52.4		32.2	35	48.9		17.4	17	51.3		56.6
16	324	01.1	27	27.7		00.7	98	53.2		32.7	50	50.7		17.4	32	53.5		56.6
17	339	03.6	42	26.9	-23	00.2	113	54.0	-16	33.2	65	52.6	-23	17.4	47	55.7	-21	56.6
18	354	06.0	57	26.0	-22	59.7	128	54.8	-16	33.7	80	54.4	-23	17.4	62	57.8	-21	56.5
19	9	08.5	72	25.2		59.1	143	55.6		34.1	95	56.3		17.3	78	00.0		56.5
20	24	11.0	87	24.3		58.6	158	56.4		34.6	110	58.1		17.3	93	02.2		56.5
21	39	13.4	102	23.5		58.1	173	57.2		35.1	126	00.0		17.3	108	04.4		56.4
22	54	15.9	117	22.7		57.6	188	58.0		35.6	141	01.8		17.3	123	06.5		56.4
23	69	18.4	132	21.8		57.1	203	58.8		36.1	156	03.6		17.3	138	08.7		56.3
24	84	20.8	147	21.0	-22	56.5	218	59.6	-16	36.6	171	05.5	-23	17.3	153	10.9	-21	56.3
Dif.	—		-8		+5		+8		-5		+18		0		+22			

UT	SOL				 LUNA								Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'3				SD: 16'0				PHE { 4 ^h : 58'9 12 ^h : 59'0 20 ^h : 59'1													
	PMG: 11 ^h 55 ^m 4				Edad: 19 ^d 4																	
	PMG: 03 ^h 30 ^m				Rº: 56 ^m																	
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'			°	'			h	m	h	m	h	m	m	h	m	m
0	181	11.9	-23	17.2	309	22.0	70	+20	03.9	73	60 N	14 53	15 50	16 47	19 59	93	12 09	18				
1	196	11.6		17.3	323	48.0	70	+19	56.6	75	58	15 10	16 02	16 55	20 10	90	11 57	22				
2	211	11.3		17.4	338	14.0	70		49.1	75	56	25	12	17 01	20	87	47	24				
3	226	11.0		17.6	352	40.0	71		41.6	77	54	38	21	07	29	84	37	27				
4	241	10.7		17.7	7	06.1	72		33.9	78	52	49	29	13	37	81	29	29				
5	256	10.4	-23	17.8	21	32.3	72	+19	26.1	80	50	15 58	16 37	17 18	20 44	79	11 21	32				
6	271	10.1	-23	17.9	35	58.5	72	+19	18.1	81	45	16 19	16 53	17 30	20 59	74	11 05	36				
7	286	09.8		18.0	50	24.7	73		10.0	81	40	36	17 06	40	21 11	71	10 52	39				
8	301	09.5		18.1	64	51.0	73	+19	01.9	83	35	16 50	18	50	22	67	41	41				
9	316	09.2		18.2	79	17.3	74	+18	53.6	85	30	17 02	29	17 58	31	65	31	43				
10	331	08.9		18.4	93	43.7	75		45.1	85	20	23	17 47	18 15	21 46	61	10 13	48				
11	346	08.6	-23	18.5	108	10.2	75	+18	36.6	86	10 N	17 42	18 05	18 31	22 00	57	9 58	51				
12	1	08.3	-23	18.6	122	36.7	76	+18	28.0	88	0	17 59	18 22	18 48	22 13	53	9 44	55				
13	16	08.0		18.7	137	03.3	76		19.2	89	10 S	18 17	18 40	19 07	25	50	30	57				
14	31	07.7		18.8	151	29.9	76		10.3	90	20	36	19 00	29	39	46	9 14	62				
15	46	07.4		18.9	165	56.5	77	+18	01.3	91	30	18 58	25	19 58	22 54	42	8 56	66				
16	61	07.1		19.0	180	23.2	78	+17	52.2	92	35	19 11	40	20 17	23 03	40	46	68				
17	76	06.8	-23	19.1	194	50.0	79	+17	43.0	93	40	19 26	19 58	20 40	23 14	36	8 34	71				
18	91	06.5	-23	19.2	209	16.9	78	+17	33.7	95	45	19 43	20 21	21 10	23 26	32	8 20	74				
19	106	06.2		19.3	223	43.7	80		24.2	95	50	20 06	20 50	21 56	40	28	8 03	78				
20	121	05.9		19.4	238	10.7	80		14.7	96	52	17	21 05	22 23	47	26	7 54	81				
21	136	05.6		19.5	252	37.7	80	+17	05.1	98	54	29	23	23 08	23 54	24	45	83				
22	151	05.3		19.7	267	04.7	81	+16	55.3	98	56	20 43	21 45	*** **	*** **	**	35	86				
23	166	05.0		19.8	281	31.8	82		45.5	100	58	21 00	22 15	*** **	*** **	**	23	89				
24	181	04.7	-23	19.9	295	59.0		+16	35.5		60 S	21 20	23 04	*** **	0 01	21	7 09	93				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG		Mag: -3.9				Mag: +1.7				Mag: -1.8				Mag: +0.6							
	18 ^h 19 ^m 6		PMG: 14 ^h 11 ^m				PMG: 09 ^h 24 ^m				PMG: 12 ^h 34 ^m				PMG: 13 ^h 45 ^m							
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	84	20.8	147	21.0	-22	56.5	218	59.6	-16	36.6	171	05.5	-23	-17.3	153	10.9	-21	56.3				
1	99	23.3	162	20.2		56.0	234	00.4		37.1	186	07.3		-17.3	168	13.0		56.3				
2	114	25.8	177	19.3		55.5	249	01.2		37.6	201	09.2		-17.3	183	15.2		56.2				
3	129	28.2	192	18.5		55.0	264	02.0		38.0	216	11.0		-17.3	198	17.4		56.2				
4	144	30.7	207	17.7		54.4	279	02.8		38.5	231	12.8		-17.3	213	19.5		56.2				
5	159	33.1	222	16.8	-22	53.9	294	03.6	-16	39.0	246	14.7	-23	-17.3	228	21.7	-21	56.1				
6	174	35.6	237	16.0	-22	53.4	309	04.4	-16	39.5	261	16.5	-23	-17.3	243	23.9	-21	56.1				
7	189	38.1	252	15.2		52.8	324	05.2		40.0	276	18.4		-17.2	258	26.0		56.1				
8	204	40.5	267	14.3		52.3	339	06.0		40.5	291	20.2		-17.2	273	28.2		56.0				
9	219	43.0	282	13.5		51.8	354	06.8		40.9	306	22.1		-17.2	288	30.4		56.0				
10	234	45.5	297	12.7		51.2	9	07.6		41.4	321	23.9		-17.2	303	32.5		55.9				
11	249	47.9	312	11.8	-22	50.7	24	08.4	-16	41.9	336	25.7	-23	-17.2	318	34.7	-21	55.9				
12	264	50.4	327	11.0	-22	50.2	39	09.1	-16	42.4	351	27.6	-23	-17.2	333	36.9	-21	55.9				
13	279	52.9	342	10.2		49.6	54	09.9		42.9	6	29.4		-17.2	348	39.1		55.8				
14	294	55.3	357	09.3		49.1	69	10.7		43.4	21	31.3		-17.2	3	41.2		55.8				
15	309	57.8	12	08.5		48.5	84	11.5		43.9	36	33.1		-17.2	18	43.4		55.8				
16	325	00.3	27	07.7		48.0	99	12.3		44.3	51	34.9		-17.2	33	45.6		55.7				
17	340	02.7	42	06.9	-22	47.5	114	13.1	-16	44.8	66	36.8	-23	-17.1	48	47.7	-21	55.7				
18	355	05.2	57	06.0	-22	46.9	129	13.9	-16	45.3	81	38.6	-23	-17.1	63	49.9	-21	55.6				
19	10	07.6	72	05.2		46.4	144	14.7		45.8	96	40.5		-17.1	78	52.1		55.6				
20	25	10.1	87	04.4		45.8	159	15.5		46.3	111	42.3		-17.1	93	54.2		55.6				
21	40	12.6	102	03.6		45.3	174	16.3		46.8	126	44.2		-17.1	108	56.4		55.5				
22	55	15.0	117	02.7		44.7	189	17.1		47.2	141	46.0		-17.1	123	58.6		55.5				
23	70	17.5	132	01.9		44.2	204	17.9		47.7	156	47.8		-17.1	139	00.7		55.5				
24	85	20.0	147	01.1	-22	43.6	219	18.7	-16	48.2	171	49.7	-23	-17.1	154	02.9	-21	55.4				
Dif.	—		-8		+5		+8		-5		+18		0		+22							

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 55 ^m 9				SD: 16'1 Edad: 20 ^d 4 PMG: 04 ^h 26 ^m PHE 4^h: 59'1 12^h: 59'2 20^h: 59'2 Rº: 53^m															
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.				Náut.	Civil			Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°		h m	h m	h m	h m m		h m m				
0	181	04.7	-23	19.9	295	59.0	82	+16	35.5	100	60 N	7 04	8 01	8 59	21 32	93	12 27	13		
1	196	04.4		20.0	310	26.2	83		25.5	102	58	6 57	7 50	41	40	90	19	16		
2	211	04.1		20.1	324	53.5	83		15.3	102	56	50	39	27	47	86	11	19		
3	226	03.8		20.2	339	20.8	84	+16	05.1	104	54	44	30	14	53	83	12	04	22	
4	241	03.4		20.3	353	48.2	85	+15	54.7	104	52	38	22	8 03	21 58	81	11	58	24	
5	256	03.1	-23	20.4	8	15.7	85	+15	44.3	106	50	6 33	7 15	7 53	22 03	79	11	53	26	
6	271	02.8	-23	20.4	22	43.2	85	+15	33.7	106	45	6 21	6 59	7 32	22 13	75	11	41	30	
7	286	02.5		20.5	37	10.7	87		23.1	107	40	11	45	16	22	71	31	34		
8	301	02.2		20.6	51	38.4	86		12.4	108	35	6 02	33	7 02	29	68	22	37		
9	316	01.9		20.7	66	06.0	87	+15	01.6	109	30	5 53	23	6 49	36	65	14	40		
10	331	01.6		20.8	80	33.7	88	+14	50.7	110	20	37	6 04	28	47	60	11	01	45	
11	346	01.3	-23	20.9	95	01.5	89	+14	39.7	111	10 N	5 20	5 47	6 10	22 57	55	10	49	49	
12	1	01.0	-23	21.0	109	29.4	89	+14	28.6	111	0	5 03	5 30	5 52	23 06	52	10	39	52	
13	16	00.7		21.1	123	57.3	89		17.5	113	10 S	4 44	5 12	35	15	48	27	57		
14	31	00.4		21.2	138	25.2	90	+14	06.2	113	20	4 22	4 51	5 16	25	43	16	60		
15	46	00.1		21.3	152	53.2	90	+13	54.9	114	30	3 53	26	4 54	36	39	10	02	65	
16	60	59.8		21.4	167	21.2	91		43.5	115	35	34	4 11	41	43	35	9	54	68	
17	75	59.5	-23	21.5	181	49.3	92	+13	32.0	115	40	3 11	3 53	4 26	23 50	32	9	45	71	
18	90	59.2	-23	21.5	196	17.5	92	+13	20.5	117	45	2 41	3 30	4 08	23 58	29	9	34	75	
19	105	58.9		21.6	210	45.7	93	+13	08.8	117	50	1 56	3 01	3 45	** ** *	**	21	79		
20	120	58.6		21.7	225	14.0	93	+12	57.1	118	52	1 28	2 46	35	** ** *	**	15	82		
21	135	58.3		21.8	239	42.3	93		45.3	119	54	0 43	28	22	** ** *	**	08	84		
22	150	58.0		21.9	254	10.6	95		33.4	119	56	** ** *	2 06	3 08	0 02	21	9	01	87	
23	165	57.7		22.0	268	39.1	94		21.5	120	58	** ** *	1 36	2 51	0 11	19	8	52	90	
24	180	57.3	-23	22.1	283	07.5		+12	09.5		60 S	** ** *	0 47	2 31	0 22	15	8	42	94	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 18 ^h 15 ^m 7		Mag: -3.9 PMG: 14 ^h 13 ^m				Mag: +1.6 PMG: 09 ^h 22 ^m				Mag: -1.8 PMG: 12 ^h 31 ^m				Mag: +0.6 PMG: 13 ^h 42 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	85	20.0	147	01.1	-22	43.6	219	18.7	-16	48.2	171	49.7	-23	17.1	154	02.9	-21	55.4	
1	100	22.4	162	00.3		43.1	234	19.5		48.7	186	51.5		17.1	169	05.1		55.4	
2	115	24.9	176	59.4		42.5	249	20.3		49.2	201	53.4		17.1	184	07.2		55.4	
3	130	27.4	191	58.6		42.0	264	21.1		49.6	216	55.2		17.1	199	09.4		55.3	
4	145	29.8	206	57.8		41.4	279	21.9		50.1	231	57.0		17.0	214	11.6		55.3	
5	160	32.3	221	57.0	-22	40.8	294	22.7	-16	50.6	246	58.9	-23	17.0	229	13.7	-21	55.2	
6	175	34.7	236	56.2	-22	40.3	309	23.5	-16	51.1	262	00.7	-23	17.0	244	15.9	-21	55.2	
7	190	37.2	251	55.3		39.7	324	24.3		51.6	277	02.6		17.0	259	18.1		55.2	
8	205	39.7	266	54.5		39.2	339	25.1		52.0	292	04.4		17.0	274	20.2		55.1	
9	220	42.1	281	53.7		38.6	354	25.9		52.5	307	06.3		17.0	289	22.4		55.1	
10	235	44.6	296	52.9		38.0	9	26.7		53.0	322	08.1		17.0	304	24.6		55.1	
11	250	47.1	311	52.1	-22	37.5	24	27.5	-16	53.5	337	09.9	-23	17.0	319	26.7	-21	55.0	
12	265	49.5	326	51.2	-22	36.9	39	28.2	-16	54.0	352	11.8	-23	17.0	334	28.9	-21	55.0	
13	280	52.0	341	50.4		36.3	54	29.0		54.4	7	13.6		16.9	349	31.1		54.9	
14	295	54.5	356	49.6		35.8	69	29.8		54.9	22	15.5		16.9	4	33.2		54.9	
15	310	56.9	11	48.8		35.2	84	30.6		55.4	37	17.3		16.9	19	35.4		54.9	
16	325	59.4	26	48.0		34.6	99	31.4		55.9	52	19.1		16.9	34	37.6		54.8	
17	341	01.9	41	47.2	-22	34.1	114	32.2	-16	56.4	67	21.0	-23	16.9	49	39.7	-21	54.8	
18	356	04.3	56	46.3	-22	33.5	129	33.0	-16	56.8	82	22.8	-23	16.9	64	41.9	-21	54.8	
19	11	06.8	71	45.5		32.9	144	33.8		57.3	97	24.7		16.9	79	44.1		54.7	
20	26	09.2	86	44.7		32.4	159	34.6		57.8	112	26.5		16.9	94	46.2		54.7	
21	41	11.7	101	43.9		31.8	174	35.4		58.3	127	28.3		16.9	109	48.4		54.6	
22	56	14.2	116	43.1		31.2	189	36.2		58.7	142	30.2		16.9	124	50.6		54.6	
23	71	16.6	131	42.3		30.6	204	37.0		59.2	157	32.0		16.8	139	52.7		54.6	
24	86	19.1	146	41.5	-22	30.0	219	37.8	-16	59.7	172	33.9	-23	16.8	154	54.9	-21	54.5	
Dif.	—		-8		+6		+8		-5		+18		0		+22				

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'3				PHE { 4 ^h : 59'2 12 ^h : 59'2 20 ^h : 59'2													
	PMG: 11 ^h 56 ^m 4				Edad: 21 ^d 4													
	PMG: 05 ^h 19 ^m				Rº: 51 ^m													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°		h m	h m	h m	h m m	h m m	h m m		
0	180	57.3	-23	22.1	283	07.5	95	+12 09.5	121	60 N	14 53	15 51	16 48	23 05	93	12 40	11	
1	195	57.0		22.1	297	36.0	96	+11 57.4	122	58	15 11	16 02	16 55	10 89		35	14	
2	210	56.7		22.2	312	04.6	96		45.2	122	56	25	13	17 02	13 86	30	17	
3	225	56.4		22.3	326	33.2	97		33.0	123	54	38	22	08	16 84	26	19	
4	240	56.1		22.4	341	01.9	97		20.7	123	52	49	30	14	19 81	22	21	
5	255	55.8	-23	22.5	355	30.6	97	+11 08.4	124	50	15 59	16 37	17 19	23 22	79	12 19	23	
6	270	55.5	-23	22.5	9	59.3	98	+10 56.0	125	45	16 20	16 54	17 31	23 28	74	12 11	28	
7	285	55.2		22.6	24	28.1	99		43.5	125	40	36	17 07	41	33 70	12 05	31	
8	300	54.9		22.7	38	57.0	99		31.0	126	35	16 51	19	50	37 67	11 59	35	
9	315	54.6		22.8	53	25.9	99		18.4	126	30	17 03	29	17 59	41 63	54	37	
10	330	54.3		22.8	67	54.8	100	+10 05.8	128	20	24	17 48	18 16	47 58	46	42		
11	345	54.0	-23	22.9	82	23.8	100	+9 53.0	127	10 N	17 43	18 06	18 32	23 52	55	11 38	47	
12	0	53.7	-23	23.0	96	52.8	101	+9 40.3	128	0	18 00	18 23	18 49	23 58	50	11 31	50	
13	15	53.4		23.0	111	21.9	101		27.5	129	10 S	18	18 41	19 08	** ** *	24	54	
14	30	53.1		23.1	125	51.0	101		14.6	129	20	37	19 01	19 31	** ** *	16	59	
15	45	52.7		23.2	140	20.1	102	+9 01.7	130	30	18 59	26	20 00	** ** *	07	64		
16	60	52.4		23.3	154	49.3	102	+8 48.7	130	35	19 12	19 41	18	** ** *	11 02	67		
17	75	52.1	-23	23.3	169	18.5	103	+8 35.7	131	40	19 27	20 00	20 41	** ** *	10 56	70		
18	90	51.8	-23	23.4	183	47.8	103	+8 22.6	131	45	19 45	20 22	21 12	** ** *	10 49	74		
19	105	51.5		23.5	198	17.1	103	+8 09.5	131	50	20 07	20 52	21 58	0 08	24	40	80	
20	120	51.2		23.5	212	46.4	104	+7 56.4	132	52	18	21 07	22 25	13 22	37	81		
21	135	50.9		23.6	227	15.8	104		43.2	133	54	31	23 12	18 20	32	84		
22	150	50.6		23.7	241	45.2	104		29.9	133	56	20 45	21 47	** ** *	23 18	28	86	
23	165	50.3		23.7	256	14.6	105		16.6	133	58	21 02	22 17	** ** *	30 14	22	90	
24	180	50.0	-23	23.8	270	44.1		+7 03.3		60 S	21 22	23 07	** ** *	0 37	11	10 16	93	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 11 ^m 7		Mag: -3.9 PMG: 14 ^h 14 ^m				Mag: +1.6 PMG: 09 ^h 21 ^m				Mag: -1.8 PMG: 12 ^h 28 ^m				Mag: +0.6 PMG: 13 ^h 38 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	86	19.1	146	41.5	-22	30.0	219	37.8	-16	59.7	172	33.9	-23	-16.8	154	54.9	-21	54.5
1	101	21.6	161	40.6		29.5	234	38.5	-17	00.2	187	35.7		-16.8	169	57.1		54.5
2	116	24.0	176	39.8		28.9	249	39.3		00.6	202	37.5		-16.8	184	59.2		54.5
3	131	26.5	191	39.0		28.3	264	40.1		01.1	217	39.4		-16.8	200	01.4		54.4
4	146	29.0	206	38.2		27.7	279	40.9		01.6	232	41.2		-16.8	215	03.6		54.4
5	161	31.4	221	37.4	-22	27.1	294	41.7	-17	02.1	247	43.1	-23	-16.8	230	05.7	-21	54.3
6	176	33.9	236	36.6	-22	26.5	309	42.5	-17	02.5	262	44.9	-23	-16.8	245	07.9	-21	54.3
7	191	36.4	251	35.8		26.0	324	43.3		03.0	277	46.8		-16.8	260	10.1		54.3
8	206	38.8	266	35.0		25.4	339	44.1		03.5	292	48.6		-16.7	275	12.2		54.2
9	221	41.3	281	34.2		24.8	354	44.9		04.0	307	50.4		-16.7	290	14.4		54.2
10	236	43.7	296	33.4		24.2	9	45.7		04.4	322	52.3		-16.7	305	16.6		54.2
11	251	46.2	311	32.6	-22	23.6	24	46.4	-17	04.9	337	54.1	-23	-16.7	320	18.7	-21	54.1
12	266	48.7	326	31.7	-22	23.0	39	47.2	-17	05.4	352	56.0	-23	-16.7	335	20.9	-21	54.1
13	281	51.1	341	30.9		22.4	54	48.0		05.9	7	57.8		-16.7	350	23.1		54.0
14	296	53.6	356	30.1		21.8	69	48.8		06.3	22	59.6		-16.7	5	25.2		54.0
15	311	56.1	11	29.3		21.2	84	49.6		06.8	38	01.5		-16.7	20	27.4		54.0
16	326	58.5	26	28.5		20.6	99	50.4		07.3	53	03.3		-16.7	35	29.6		53.9
17	342	01.0	41	27.7	-22	20.0	114	51.2	-17	07.8	68	05.2	-23	-16.6	50	31.7	-21	53.9
18	357	03.5	56	26.9	-22	19.4	129	52.0	-17	08.2	83	07.0	-23	-16.6	65	33.9	-21	53.9
19	12	05.9	71	26.1		18.8	144	52.8		08.7	98	08.8		-16.6	80	36.0		53.8
20	27	08.4	86	25.3		18.2	159	53.5		09.2	113	10.7		-16.6	95	38.2		53.8
21	42	10.8	101	24.5		17.6	174	54.3		09.7	128	12.5		-16.6	110	40.4		53.7
22	57	13.3	116	23.7		17.0	189	55.1		10.1	143	14.4		-16.6	125	42.5		53.7
23	72	15.8	131	22.9		16.4	204	55.9		10.6	158	16.2		-16.6	140	44.7		53.7
24	87	18.2	146	22.1	-22	15.8	219	56.7	-17	11.1	173	18.0	-23	-16.6	155	46.9	-21	53.6
Dif.	—		-8		+6		+8		-5		+18		0		+22			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 56 ^m 9				SD: 16'1 Edad: 22 ^d 4 PMG:06 ^h 10 ^m PHE { 4 ^h : 59'2 12 ^h : 59'2 20 ^h : 59'2 Rº: 49 ^m													
	hG ☉		Dec		hG ☾		Dif. Dec			Dif.								
	h	°	'	°	'	h	°	'		h	°		'	h	m	m	h	m
0	180	50.0	-23	23.8	270	44.1	105	+7	03.3	133	60 N	7 06	8 03	9 00	** ** *	**	12 51	9
1	195	49.7		23.8	285	13.6	105	+6	50.0	134	58	6 58	7 51	8 43	** ** *	**	49	12
2	210	49.4		23.9	299	43.1	106		36.6	135	56	52	41	28	** ** *	**	47	15
3	225	49.1		24.0	314	12.7	106		23.1	134	54	45	32	15	** ** *	**	45	18
4	240	48.7		24.0	328	42.3	106	+6	09.7	135	52	40	23	8 04	** ** *	**	43	20
5	255	48.4	-23	24.1	343	11.9	107	+5	56.2	136	50	6 34	7 16	7 54	** ** *	**	12 42	22
6	270	48.1	-23	24.1	357	41.6	107	+5	42.6	135	45	6 23	7 00	7 34	** ** *	**	12 39	26
7	285	47.8		24.2	12	11.3	107		29.1	136	40	12	6 46	17	** ** *	**	36	30
8	300	47.5		24.3	26	41.0	107		15.5	136	35	6 03	35	7 03	** ** *	**	34	33
9	315	47.2		24.3	41	10.7	108	+5	01.9	137	30	5 54	24	6 50	** ** *	**	31	37
10	330	46.9		24.4	55	40.5	108	+4	48.2	137	20	38	6 05	29	** ** *	**	28	41
11	345	46.6	-23	24.4	70	10.3	108	+4	34.5	136	10 N	5 21	5 48	6 11	** ** *	**	12 25	45
12	0	46.3	-23	24.5	84	40.1	108	+4	20.9	138	0	5 04	5 31	5 53	** ** *	**	12 21	50
13	15	46.0		24.5	99	09.9	108	+4	07.1	137	10 S	4 45	5 13	36	0 03	46	18	54
14	30	45.7		24.6	113	39.7	109	+3	53.4	138	20	4 23	4 52	5 17	08	42	15	58
15	45	45.4		24.6	128	09.6	109		39.6	137	30	3 54	27	4 55	15	36	11	64
16	60	45.0		24.7	142	39.5	109		25.9	138	35	35	4 12	42	18	34	09	66
17	75	44.7	-23	24.7	157	09.4	109	+3	12.1	138	40	3 12	3 54	4 26	0 22	31	12 06	70
18	90	44.4	-23	24.8	171	39.3	109	+2	58.3	139	45	2 41	3 31	4 08	0 27	27	12 03	74
19	105	44.1		24.8	186	09.2	110		44.4	138	50	1 56	3 01	3 46	32	23	12 00	78
20	120	43.8		24.9	200	39.2	110		30.6	139	52	1 28	2 46	35	35	20	11 58	81
21	135	43.5		24.9	215	09.2	109		16.7	138	54	0 41	28	23	38	18	56	83
22	150	43.2		25.0	229	39.1	110	+2	02.9	139	56	** ** *	2 06	3 08	41	15	54	86
23	165	42.9		25.0	244	09.1	110	+1	49.0	139	58	** ** *	1 36	2 52	0 44	13	11 52	89
24	180	42.6	-23	25.0	258	39.1		+1	35.1		60 S	** ** *	0 46	2 31	0 48	10	11 49	92
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 18 ^h 07 ^m 8		Mag: -3.9 PMG: 14 ^h 15 ^m				Mag: +1.6 PMG: 09 ^h 20 ^m				Mag: -1.8 PMG: 12 ^h 25 ^m				Mag: +0.6 PMG: 13 ^h 35 ^m			
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	87	18.2	146	22.1	-22	15.8	219	56.7	-17	11.1	173	18.0	-23	16.6	155	46.9	-21	53.6
1	102	20.7	161	21.3		15.2	234	57.5		11.5	188	19.9		16.5	170	49.0		53.6
2	117	23.2	176	20.5		14.6	249	58.3		12.0	203	21.7		16.5	185	51.2		53.6
3	132	25.6	191	19.7		14.0	264	59.1		12.5	218	23.6		16.5	200	53.4		53.5
4	147	28.1	206	18.9		13.4	279	59.8		12.9	233	25.4		16.5	215	55.5		53.5
5	162	30.6	221	18.1	-22	12.8	295	00.6	-17	13.4	248	27.2	-23	16.5	230	57.7	-21	53.4
6	177	33.0	236	17.3	-22	12.2	310	01.4	-17	13.9	263	29.1	-23	16.5	245	59.9	-21	53.4
7	192	35.5	251	16.5		11.5	325	02.2		14.4	278	30.9		16.5	261	02.0		53.4
8	207	38.0	266	15.7		10.9	340	03.0		14.8	293	32.8		16.5	276	04.2		53.3
9	222	40.4	281	14.9		10.3	355	03.8		15.3	308	34.6		16.4	291	06.4		53.3
10	237	42.9	296	14.2		09.7	10	04.6		15.8	323	36.4		16.4	306	08.5		53.3
11	252	45.3	311	13.4	-22	09.1	25	05.3	-17	16.2	338	38.3	-23	16.4	321	10.7	-21	53.2
12	267	47.8	326	12.6	-22	08.5	40	06.1	-17	16.7	353	40.1	-23	16.4	336	12.8	-21	53.2
13	282	50.3	341	11.8		07.8	55	06.9		17.2	8	42.0		16.4	351	15.0		53.1
14	297	52.7	356	11.0		07.2	70	07.7		17.6	23	43.8		16.4	6	17.2		53.1
15	312	55.2	11	10.2		06.6	85	08.5		18.1	38	45.6		16.4	21	19.3		53.1
16	327	57.7	26	09.4		06.0	100	09.3		18.6	53	47.5		16.4	36	21.5		53.0
17	343	00.1	41	08.6	-22	05.3	115	10.0	-17	19.0	68	49.3	-23	16.3	51	23.7	-21	53.0
18	358	02.6	56	07.8	-22	04.7	130	10.8	-17	19.5	83	51.2	-23	16.3	66	25.8	-21	52.9
19	13	05.1	71	07.0		04.1	145	11.6		20.0	98	53.0		16.3	81	28.0		52.9
20	28	07.5	86	06.2		03.5	160	12.4		20.4	113	54.8		16.3	96	30.2		52.9
21	43	10.0	101	05.4		02.8	175	13.2		20.9	128	56.7		16.3	111	32.3		52.8
22	58	12.5	116	04.7		02.2	190	14.0		21.4	143	58.5		16.3	126	34.5		52.8
23	73	14.9	131	03.9		01.6	205	14.7		21.8	159	00.4		16.3	141	36.6		52.8
24	88	17.4	146	03.1	-22	00.9	220	15.5	-17	22.3	174	02.2	-23	16.3	156	38.8	-21	52.7
Dif.	—		-8 +6				+8 -5				+18 0				+22			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna														
	SD: 16'3 PMG: 11 ^h 57 ^m 4				SD: 16'1 Edad: 23 ^d 4 PMG: 06 ^h 59 ^m													PHE { 4 ^h : 59'2 12 ^h : 59'1 20 ^h : 59'1 Rº: 50 ^m												
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.		Civil	Náut.	Hora	Rº	Hora	Rº										
	h	°	'	°	'	°	'	°			'	°	'	h	m	h	m	h	m	m	h	m	m							
0	180	42.6	-23	25.0	258	39.1	110	+1	35.1	139	60 N	14 54	15 51	16 48	0 38	92	13 00	10												
1	195	42.3		25.1	273	09.1	110		21.2	139	58	15 11	16 03	16 56	39	88	01	13												
2	210	41.9		25.1	287	39.1	111	+1	07.3	139	56	26	13	17 03	39	86	02	15												
3	225	41.6		25.2	302	09.2	110	+0	53.4	139	54	39	23	09	40	83	03	17												
4	240	41.3		25.2	316	39.2	111		39.5	139	52	15 50	31	15	40	81	03	20												
5	255	41.0	-23	25.2	331	09.3	110	+0	25.6	139	50	16 00	16 38	17 20	0 41	78	13 04	22												
6	270	40.7	-23	25.3	345	39.3	110	+0	11.7	139	45	16 20	16 54	17 32	0 42	74	13 05	26												
7	285	40.4		25.3	0	09.3	111	-0	02.2	139	40	37	17 08	42	43	70	06	30												
8	300	40.1		25.4	14	39.4	111		16.1	139	35	16 51	20	17 51	44	66	07	33												
9	315	39.8		25.4	29	09.5	110		30.0	139	30	17 04	30	18 00	44	64	08	36												
10	330	39.5		25.4	43	39.5	111		43.9	139	20	25	17 49	17	45	59	09	41												
11	345	39.2	-23	25.5	58	09.6	110	-0	57.8	139	10 N	17 44	18 07	18 33	0 47	53	13 10	46												
12	0	38.9	-23	25.5	72	39.6	111	-1	11.7	138	0	18 01	18 24	18 50	0 48	49	13 11	50												
13	15	38.5		25.5	87	09.7	110		25.5	139	10 S	19	18 42	19 09	49	45	12	54												
14	30	38.2		25.6	101	39.7	111		39.4	139	20	18 38	19 02	19 32	50	41	13	59												
15	45	37.9		25.6	116	09.8	110	-1	53.3	138	30	19 00	27	20 01	51	36	15	63												
16	60	37.6		25.6	130	39.8	111	-2	07.1	138	35	13	19 43	19	52	33	15	67												
17	75	37.3	-23	25.6	145	09.9	110	-2	20.9	139	40	19 28	20 01	20 43	0 53	30	13 16	70												
18	90	37.0	-23	25.7	159	39.9	111	-2	34.8	138	45	19 46	20 23	21 13	0 54	26	13 17	74												
19	105	36.7		25.7	174	10.0	110	-2	48.6	137	50	20 09	20 53	21 59	55	22	18	79												
20	120	36.4		25.7	188	40.0	110	-3	02.3	138	52	19	21 08	22 27	55	20	19	80												
21	135	36.1		25.8	203	10.0	110		16.1	138	54	32	26	23 14	56	17	19	83												
22	150	35.7		25.8	217	40.0	110		29.9	137	56	20 46	21 49	** **	56	16	20	86												
23	165	35.4		25.8	232	10.0	110		43.6	137	58	21 03	22 19	** **	57	13	21	88												
24	180	35.1	-23	25.8	246	40.0		-3	57.3		60 S	21 23	23 10	** **	0 58	9	13 21	92												
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG 18 ^h 03 ^m 9		Mag: -3.9 PMG: 14 ^h 17 ^m				Mag: +1.6 PMG: 09 ^h 18 ^m				Mag: -1.8 PMG: 12 ^h 22 ^m				Mag: +0.6 PMG: 13 ^h 31 ^m															
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄															
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'										
0	88	17.4	146	03.1	-22	00.9	220	15.5	-17	22.3	174	02.2	-23	-16.3	156	38.8	-21	52.7												
1	103	19.8	161	02.3	-22	00.3	235	16.3		22.8	189	04.0		-16.2	171	41.0		52.7												
2	118	22.3	176	01.5	-21	59.7	250	17.1		23.2	204	05.9		-16.2	186	43.1		52.6												
3	133	24.8	191	00.7		59.0	265	17.9		23.7	219	07.7		-16.2	201	45.3		52.6												
4	148	27.2	205	59.9		58.4	280	18.7		24.2	234	09.6		-16.2	216	47.5		52.6												
5	163	29.7	220	59.2	-21	57.8	295	19.4	-17	24.6	249	11.4	-23	-16.2	231	49.6	-21	52.5												
6	178	32.2	235	58.4	-21	57.1	310	20.2	-17	25.1	264	13.2	-23	-16.2	246	51.8	-21	52.5												
7	193	34.6	250	57.6		56.5	325	21.0		25.6	279	15.1		-16.2	261	54.0		52.5												
8	208	37.1	265	56.8		55.8	340	21.8		26.0	294	16.9		-16.2	276	56.1		52.4												
9	223	39.6	280	56.0		55.2	355	22.6		26.5	309	18.7		-16.1	291	58.3		52.4												
10	238	42.0	295	55.2		54.5	10	23.3		27.0	324	20.6		-16.1	307	00.4		52.3												
11	253	44.5	310	54.5	-21	53.9	25	24.1	-17	27.4	339	22.4	-23	-16.1	322	02.6	-21	52.3												
12	268	46.9	325	53.7	-21	53.3	40	24.9	-17	27.9	354	24.3	-23	-16.1	337	04.8	-21	52.3												
13	283	49.4	340	52.9		52.6	55	25.7		28.3	9	26.1		-16.1	352	06.9		52.2												
14	298	51.9	355	52.1		52.0	70	26.5		28.8	24	27.9		-16.1	7	09.1		52.2												
15	313	54.3	10	51.3		51.3	85	27.2		29.3	39	29.8		-16.1	22	11.3		52.1												
16	328	56.8	25	50.6		50.7	100	28.0		29.7	54	31.6		-16.0	37	13.4		52.1												
17	343	59.3	40	49.8	-21	50.0	115	28.8	-17	30.2	69	33.5	-23	-16.0	52	15.6	-21	52.1												
18	359	01.7	55	49.0	-21	49.4	130	29.6	-17	30.7	84	35.3	-23	-16.0	67	17.7	-21	52.0												
19	14	04.2	70	48.2		48.7	145	30.4		31.1	99	37.1		-16.0	82	19.9		52.0												
20	29	06.7	85	47.5		48.0	160	31.1		31.6	114	39.0		-16.0	97	22.1		52.0												
21	44	09.1	100	46.7		47.4	175	31.9		32.0	129	40.8		-16.0	112	24.2		51.9												
22	59	11.6	115	45.9		46.7	190	32.7		32.5	144	42.7		-16.0	127	26.4		51.9												
23	74	14.1	130	45.1		46.1	205	33.5		33.0	159	44.5		-16.0	142	28.6		51.8												
24	89	16.5	145	44.4	-21	45.4	220	34.3	-17	33.4	174	46.3	-23	-15.9	157	30.7	-21	51.8												
Dif.	—		-8				+6				+8				-5				+18				0				+22			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 57 ^m 9				SD: 16'1 Edad: 24 ^d 4 PMG: 07 ^h 49 ^m PHE { 4 ^h : 59'0 12 ^h : 59'0 20 ^h : 58'9 Rº: 50 ^m					Náut.	Civil		Hora	Rº	Hora	Rº		
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.												
^h	°	'	°	'	°	'	°	'		^h	^m	^h	^m	^h	^m	^h	^m	
0	180	35.1	-23	25.8	246	40.0	109	-3	57.3	137	60 N	7 07	8 04	9 02	2 10	92	13 10	11
1	195	34.8		25.9	261	09.9	110	-4	11.0	136	58	6 59	7 52	8 44	07 89	14 14		
2	210	34.5		25.9	275	39.9	109		24.6	137	56	53	42	29	05 86	17 18		
3	225	34.2		25.9	290	09.8	109		38.3	136	54	47	33	17	03 83	20 20		
4	240	33.9		25.9	304	39.7	110	-4	51.9	135	52	41	25	8 06	2 01	81	23 22	
5	255	33.6	-23	25.9	319	09.7	108	-5	05.4	136	50	6 36	7 17	7 56	1 59	79	13 26	24
6	270	33.3	-23	26.0	333	39.5	109	-5	19.0	135	45	6 24	7 01	7 35	1 56	73	13 31	29
7	285	32.9		26.0	348	09.4	109		32.5	135	40	13	6 47	18	53 69	36 32		
8	300	32.6		26.0	2	39.3	108		46.0	134	35	6 04	36	7 04	50 67	40 35		
9	315	32.3		26.0	17	09.1	108	-5	59.4	134	30	5 55	25	6 51	48 63	44 38		
10	330	32.0		26.0	31	38.9	108	-6	12.8	134	20	39	6 06	30	44 58	50 43		
11	345	31.7	-23	26.0	46	08.7	108	-6	26.2	133	10 N	5 22	5 49	6 12	1 40	55	13 56	47
12	0	31.4	-23	26.1	60	38.5	107	-6	39.5	133	0	5 05	5 32	5 54	1 37	50	14 01	51
13	15	31.1		26.1	75	08.2	108	-6	52.8	133	10 S	4 46	5 13	37	34 46	06 55		
14	30	30.8		26.1	89	38.0	107	-7	06.1	132	20	4 24	4 53	5 18	31 42	12 59		
15	45	30.5		26.1	104	07.7	106		19.3	132	30	3 55	28	4 55	27 37	18 64		
16	60	30.1		26.1	118	37.3	107		32.5	131	35	36	4 13	42	25 34	22 66		
17	75	29.8	-23	26.1	133	07.0	106	-7	45.6	131	40	3 13	3 54	4 27	1 23	31	14 26	70
18	90	29.5	-23	26.1	147	36.6	106	-7	58.7	131	45	2 42	3 32	4 09	1 20	27	14 31	73
19	105	29.2		26.1	162	06.2	106	-8	11.8	130	50	1 56	3 02	3 47	17 22	37 78		
20	120	28.9		26.1	176	35.8	105		24.8	129	52	1 28	2 47	36	15 21	39 81		
21	135	28.6		26.1	191	05.3	105		37.7	129	54	0 41	29	23	13 19	42 83		
22	150	28.3		26.1	205	34.8	105	-8	50.6	129	56	** **	2 06	3 09	12 16	46 85		
23	165	28.0		26.1	220	04.3	105	-9	03.5	127	58	** **	1 36	2 52	1 10	13	14 49	89
24	180	27.7	-23	26.2	234	33.8		-9	16.2		60 S	** **	0 45	2 32	1 07	11	14 53	93
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: +1.6				Mag: -1.8				Mag: +0.6			
	17 ^h 59 ^m 9		PMG: 14 ^h 18 ^m				PMG: 09 ^h 17 ^m				PMG: 12 ^h 19 ^m				PMG: 13 ^h 28 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
^h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	89	16.5	145	44.4	-21	45.4	220	34.3	-17	33.4	174	46.3	-23	15.9	157	30.7	-21	51.8
1	104	19.0	160	43.6		44.8	235	35.0		33.9	189	48.2		15.9	172	32.9		51.8
2	119	21.4	175	42.8		44.1	250	35.8		34.3	204	50.0		15.9	187	35.0		51.7
3	134	23.9	190	42.0		43.4	265	36.6		34.8	219	51.9		15.9	202	37.2		51.7
4	149	26.4	205	41.3		42.8	280	37.4		35.3	234	53.7		15.9	217	39.4		51.6
5	164	28.8	220	40.5	-21	42.1	295	38.1	-17	35.7	249	55.5	-23	15.9	232	41.5	-21	51.6
6	179	31.3	235	39.7	-21	41.4	310	38.9	-17	36.2	264	57.4	-23	15.9	247	43.7	-21	51.6
7	194	33.8	250	39.0		40.8	325	39.7		36.6	279	59.2		15.8	262	45.9		51.5
8	209	36.2	265	38.2		40.1	340	40.5		37.1	295	01.0		15.8	277	48.0		51.5
9	224	38.7	280	37.4		39.4	355	41.3		37.6	310	02.9		15.8	292	50.2		51.4
10	239	41.2	295	36.7		38.8	10	42.0		38.0	325	04.7		15.8	307	52.3		51.4
11	254	43.6	310	35.9	-21	38.1	25	42.8	-17	38.5	340	06.6	-23	15.8	322	54.5	-21	51.4
12	269	46.1	325	35.1	-21	37.4	40	43.6	-17	38.9	355	08.4	-23	15.8	337	56.7	-21	51.3
13	284	48.6	340	34.4		36.8	55	44.4		39.4	10	10.2		15.8	352	58.8		51.3
14	299	51.0	355	33.6		36.1	70	45.1		39.9	25	12.1		15.7	8	01.0		51.3
15	314	53.5	10	32.8		35.4	85	45.9		40.3	40	13.9		15.7	23	03.2		51.2
16	329	55.9	25	32.1		34.7	100	46.7		40.8	55	15.8		15.7	38	05.3		51.2
17	344	58.4	40	31.3	-21	34.0	115	47.5	-17	41.2	70	17.6	-23	15.7	53	07.5	-21	51.1
18	0	00.9	55	30.5	-21	33.4	130	48.2	-17	41.7	85	19.4	-23	15.7	68	09.6	-21	51.1
19	15	03.3	70	29.8		32.7	145	49.0		42.1	100	21.3		15.7	83	11.8		51.1
20	30	05.8	85	29.0		32.0	160	49.8		42.6	115	23.1		15.6	98	14.0		51.0
21	45	08.3	100	28.2		31.3	175	50.6		43.1	130	25.0		15.6	113	16.1		51.0
22	60	10.7	115	27.5		30.6	190	51.3		43.5	145	26.8		15.6	128	18.3		50.9
23	75	13.2	130	26.7		30.0	205	52.1		44.0	160	28.6		15.6	143	20.4		50.9
24	90	15.7	145	26.0	-21	29.3	220	52.9	-17	44.4	175	30.5	-23	15.6	158	22.6	-21	50.9
Dif.	—		-8		+7		+8		-5		+18		0		+22			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'3				PHE {	4 ^h : 58'8 12 ^h : 58'7 20 ^h : 58'6														
	PMG: 11 ^h 58 ^m 4																			
	Edad: 25 ^d 4				SD: 16'0		Rº: 52 ^m													
PMG: 08 ^h 39 ^m				hG ☾		Dif.		Dec		Dif.		Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	180	27.7	-23	26.2	234	33.8	104	-9	16.2	128	60 N	14 55	15 52	16 49	3 42	93		13 21	15	
1	195	27.3		26.2	249	03.2	104		29.0	127	58	15 12	16 04	16 57	36	89		28 18		
2	210	27.0		26.2	263	32.6	103		41.7	126	56	27	14	17 04	31	85		35 20		
3	225	26.7		26.2	278	01.9	104	-9	54.3	126	54	40	23	10	26	83		40 24		
4	240	26.4		26.2	292	31.3	103	-10	06.9	125	52	15 51	32	15	22	80		45 26		
5	255	26.1	-23	26.2	307	00.6	102	-10	19.4	124	50	16 01	16 39	17 21	3 18	78		13 50	28	
6	270	25.8	-23	26.2	321	29.8	102	-10	31.8	124	45	16 21	16 55	17 33	3 09	74		14 00	32	
7	285	25.5		26.2	335	59.0	102		44.2	123	40	38	17 09	43	3 02	70		08 36		
8	300	25.2		26.2	350	28.2	102	-10	56.5	123	35	16 52	21	17 52	2 57	66		15 39		
9	315	24.9		26.2	4	57.4	101	-11	08.8	122	30	17 05	31	18 01	51	64		22 41		
10	330	24.5		26.1	19	26.5	100		21.0	121	20	26	17 50	18	42	60		33 45		
11	345	24.2	-23	26.1	33	55.5	101	-11	33.1	121	10 N	17 45	18 08	18 34	2 35	55		14 43	48	
12	0	23.9	-23	26.1	48	24.6	100	-11	45.2	120	0	18 02	18 25	18 51	2 27	52		14 52	52	
13	15	23.6		26.1	62	53.6	99	-11	57.2	119	10 S	20	18 43	19 10	20	48		15 01	56	
14	30	23.3		26.1	77	22.5	100	-12	09.1	119	20	18 39	19 03	19 33	13	43		11 59		
15	45	23.0		26.1	91	51.5	99		21.0	118	30	19 01	28	20 02	2 04	39		22 64		
16	60	22.7		26.1	106	20.4	98		32.8	117	35	14	19 44	20	1 59	37		28 67		
17	75	22.4	-23	26.1	120	49.2	98	-12	44.5	116	40	19 29	20 02	20 44	1 54	33		15 36	69	
18	90	22.0	-23	26.1	135	18.0	98	-12	56.1	116	45	19 47	20 24	21 14	1 47	30		15 44	74	
19	105	21.7		26.1	149	46.8	97	-13	07.7	114	50	20 10	20 54	22 00	39	26		15 55	78	
20	120	21.4		26.1	164	15.5	97		19.1	114	52	21	21 09	22 28	36	24		16 00	80	
21	135	21.1		26.0	178	44.2	96		30.5	114	54	33	27	23 15	32	21		05 82		
22	150	20.8		26.0	193	12.8	96		41.9	112	56	20 47	21 50	*** **	28	19		11 85		
23	165	20.5		26.0	207	41.4	96	-13	53.1	112	58	21 04	22 20	*** **	23	16		18 88		
24	180	20.2	-23	26.0	222	10.0		-14	04.3		60 S	21 25	23 11	*** **	1 18	13		16 26	91	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG		Mag: -3.9				Mag: +1.6				Mag: -1.8				Mag: +0.6					
	17 ^h 56 ^m 0		PMG: 14 ^h 19 ^m				PMG: 09 ^h 16 ^m				PMG: 12 ^h 16 ^m				PMG: 13 ^h 25 ^m					
	hG ♂		hG ♀				hG ♂				hG ♃				hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	90	15.7	145	26.0	-21	29.3	220	52.9	-17	44.4	175	30.5	-23	-15.6	158	22.6	-21	50.9		
1	105	18.1	160	25.2		28.6	235	53.7		44.9	190	32.3		-15.6	173	24.8		50.8		
2	120	20.6	175	24.4		27.9	250	54.4		45.3	205	34.1		-15.6	188	26.9		50.8		
3	135	23.0	190	23.7		27.2	265	55.2		45.8	220	36.0		-15.5	203	29.1		50.7		
4	150	25.5	205	22.9		26.5	280	56.0		46.2	235	37.8		-15.5	218	31.3		50.7		
5	165	28.0	220	22.2	-21	25.8	295	56.8	-17	46.7	250	39.7	-23	-15.5	233	33.4	-21	50.7		
6	180	30.4	235	21.4	-21	25.1	310	57.5	-17	47.1	265	41.5	-23	-15.5	248	35.6	-21	50.6		
7	195	32.9	250	20.7		24.5	325	58.3		47.6	280	43.3		-15.5	263	37.7		50.6		
8	210	35.4	265	19.9		23.8	340	59.1		48.1	295	45.2		-15.5	278	39.9		50.6		
9	225	37.8	280	19.1		23.1	355	59.8		48.5	310	47.0		-15.5	293	42.1		50.5		
10	240	40.3	295	18.4		22.4	11	00.6		49.0	325	48.9		-15.4	308	44.2		50.5		
11	255	42.8	310	17.6	-21	21.7	26	01.4	-17	49.4	340	50.7	-23	-15.4	323	46.4	-21	50.4		
12	270	45.2	325	16.9	-21	21.0	41	02.2	-17	49.9	355	52.5	-23	-15.4	338	48.5	-21	50.4		
13	285	47.7	340	16.1		20.3	56	02.9		50.3	10	54.4		-15.4	353	50.7		50.4		
14	300	50.2	355	15.4		19.6	71	03.7		50.8	25	56.2		-15.4	8	52.9		50.3		
15	315	52.6	10	14.6		18.9	86	04.5		51.2	40	58.0		-15.4	23	55.0		50.3		
16	330	55.1	25	13.9		18.2	101	05.2		51.7	55	59.9		-15.3	38	57.2		50.2		
17	345	57.5	40	13.1	-21	17.5	116	06.0	-17	52.1	71	01.7	-23	-15.3	53	59.3	-21	50.2		
18	1	00.0	55	12.4	-21	16.8	131	06.8	-17	52.6	86	03.6	-23	-15.3	69	01.5	-21	50.2		
19	16	02.5	70	11.6		16.1	146	07.6		53.0	101	05.4		-15.3	84	03.7		50.1		
20	31	04.9	85	10.9		15.4	161	08.3		53.5	116	07.2		-15.3	99	05.8		50.1		
21	46	07.4	100	10.1		14.6	176	09.1		53.9	131	09.1		-15.3	114	08.0		50.0		
22	61	09.9	115	09.4		13.9	191	09.9		54.4	146	10.9		-15.2	129	10.1		50.0		
23	76	12.3	130	08.6		13.2	206	10.6		54.8	161	12.7		-15.2	144	12.3		50.0		
24	91	14.8	145	07.9	-21	12.5	221	11.4	-17	55.3	176	14.6	-23	-15.2	159	14.5	-21	49.9		
Dif.	—		-8		+7		+8		-5		+18		0		+22					

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 58 ^m 9				SD: 16'0 Edad: 26 ^d 4 PMG: 09 ^h 31 ^m PHE { 4 ^h : 58'5 12 ^h : 58'4 20 ^h : 58'3 Rº: 54 ^m													
	hG ☉		Dec		hG ☾		Dif. Dec Dif.			Náut.	Civil		Hora	Rº	Hora	Rº		
	°	'	°	'	°	'	°	'		h	m		h	m	h	m	h	m
h																		
0	180	20.2	-23	26.0	222	10.0	95	-14	04.3	110	60 N	7 08	8 05	9 03	5 15	90	13 36	20
1	195	19.9		26.0	236	38.5	95		15.3	110	58	7 00	7 53	8 45	5 05	87	46	24
2	210	19.6		26.0	251	07.0	94		26.3	109	56	6 54	43	30	4 56	84	13 55	27
3	225	19.2		26.0	265	35.4	94		37.2	109	54	48	34	18	49	81	14 04	29
4	240	18.9		25.9	280	03.8	93		48.1	107	52	42	26	8 07	42	79	11	31
5	255	18.6	-23	25.9	294	32.1	93	-14	58.8	106	50	6 37	7 18	7 57	4 36	77	14 18	33
6	270	18.3	-23	25.9	309	00.4	93	-15	09.4	106	45	6 25	7 02	7 36	4 23	72	14 32	37
7	285	18.0		25.9	323	28.7	92		20.0	104	40	14	6 48	19	12	69	44	40
8	300	17.7		25.8	337	56.9	92		30.4	104	35	6 05	37	7 05	4 03	67	14 54	42
9	315	17.4		25.8	352	25.1	91		40.8	103	30	5 56	26	6 52	3 55	64	15 03	44
10	330	17.1		25.8	6	53.2	91	-15	51.1	102	20	40	6 07	31	42	60	18	48
11	345	16.7	-23	25.8	21	21.3	91	-16	01.3	101	10 N	5 23	5 50	6 13	3 30	56	15 31	52
12	0	16.4	-23	25.8	35	49.4	90	-16	11.4	99	0	5 06	5 33	5 55	3 19	53	15 44	54
13	15	16.1		25.7	50	17.4	90		21.3	99	10 S	4 47	5 14	38	3 08	50	15 57	57
14	30	15.8		25.7	64	45.4	89		31.2	98	20	4 25	4 54	5 19	2 56	47	16 10	60
15	45	15.5		25.7	79	13.3	89		41.0	97	30	3 56	29	4 56	43	43	26	63
16	60	15.2		25.6	93	41.2	88	-16	50.7	96	35	37	4 14	43	36	40	35	66
17	75	14.9	-23	25.6	108	09.0	88	-17	00.3	95	40	3 14	3 55	4 28	2 27	38	16 45	69
18	90	14.6	-23	25.6	122	36.8	88	-17	09.8	94	45	2 43	3 33	4 10	2 17	34	16 58	71
19	105	14.2		25.5	137	04.6	87		19.2	92	50	1 57	3 03	3 48	05	30	17 13	74
20	120	13.9		25.5	151	32.3	87		28.4	92	52	1 29	2 48	37	2 00	28	20	76
21	135	13.6		25.5	166	00.0	86		37.6	91	54	0 42	30	24	1 53	27	27	79
22	150	13.3		25.5	180	27.6	86		46.7	89	56	** **	2 07	3 10	47	23	36	81
23	165	13.0		25.4	194	55.2	85	-17	55.6	89	58	** **	1 37	2 53	1 39	21	17 46	84
24	180	12.7	-23	25.4	209	22.7		-18	04.5		60 S	** **	0 46	2 33	1 31	17	17 57	89
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 52 ^m 1		Mag: -3.9 PMG: 14 ^h 20 ^m				Mag: +1.6 PMG: 09 ^h 15 ^m				Mag: -1.8 PMG: 12 ^h 14 ^m				Mag: +0.6 PMG: 13 ^h 21 ^m			
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	91	14.8	145	07.9	-21	12.5	221	11.4	-17	55.3	176	14.6	-23	15.2	159	14.5	-21	49.9
1	106	17.3	160	07.1		11.8	236	12.2		55.7	191	16.4		15.2	174	16.6		49.9
2	121	19.7	175	06.4		11.1	251	12.9		56.2	206	18.3		15.2	189	18.8		49.8
3	136	22.2	190	05.7		10.4	266	13.7		56.6	221	20.1		15.2	204	20.9		49.8
4	151	24.7	205	04.9		09.7	281	14.5		57.1	236	21.9		15.2	219	23.1		49.8
5	166	27.1	220	04.2	-21	09.0	296	15.2	-17	57.5	251	23.8	-23	15.1	234	25.3	-21	49.7
6	181	29.6	235	03.4	-21	08.2	311	16.0	-17	58.0	266	25.6	-23	15.1	249	27.4	-21	49.7
7	196	32.0	250	02.7		07.5	326	16.8		58.4	281	27.5		15.1	264	29.6		49.6
8	211	34.5	265	01.9		06.8	341	17.6		58.9	296	29.3		15.1	279	31.7		49.6
9	226	37.0	280	01.2		06.1	356	18.3		59.3	311	31.1		15.1	294	33.9		49.6
10	241	39.4	295	00.5		05.4	11	19.1	-17	59.8	326	33.0		15.1	309	36.1		49.5
11	256	41.9	309	59.7	-21	04.6	26	19.9	-18	00.2	341	34.8	-23	15.0	324	38.2	-21	49.5
12	271	44.4	324	59.0	-21	03.9	41	20.6	-18	00.7	356	36.6	-23	15.0	339	40.4	-21	49.4
13	286	46.8	339	58.2		03.2	56	21.4		01.1	11	38.5		15.0	354	42.5		49.4
14	301	49.3	354	57.5		02.5	71	22.2		01.5	26	40.3		15.0	9	44.7		49.4
15	316	51.8	9	56.8		01.7	86	22.9		02.0	41	42.2		15.0	24	46.9		49.3
16	331	54.2	24	56.0		01.0	101	23.7		02.4	56	44.0		15.0	39	49.0		49.3
17	346	56.7	39	55.3	-21	00.3	116	24.5	-18	02.9	71	45.8	-23	14.9	54	51.2	-21	49.2
18	1	59.2	54	54.6	-20	59.6	131	25.2	-18	03.3	86	47.7	-23	14.9	69	53.3	-21	49.2
19	17	01.6	69	53.8		58.8	146	26.0		03.8	101	49.5		14.9	84	55.5		49.2
20	32	04.1	84	53.1		58.1	161	26.8		04.2	116	51.3		14.9	99	57.7		49.1
21	47	06.5	99	52.3		57.4	176	27.5		04.7	131	53.2		14.9	114	59.8		49.1
22	62	09.0	114	51.6		56.6	191	28.3		05.1	146	55.0		14.9	130	02.0		49.1
23	77	11.5	129	50.9		55.9	206	29.1		05.6	161	56.9		14.8	145	04.1		49.0
24	92	13.9	144	50.1	-20	55.2	221	29.8	-18	06.0	176	58.7	-23	14.8	160	06.3	-21	49.0
Dif.	—		-7 +7				+8 -4				+18 0				+22			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16'3				PHE { 4 ^h : 58'1 12 ^h : 58'0 20 ^h : 57'8													
	Edad: 27 ^d 4				Rº: 55 ^m													
	PMG: 10 ^h 25 ^m																	
	hG ☉	Dec			hG ☾	Dif.		Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	12.7	-23	25.4	209	22.7	86	-18	04.5	87	60 N	14 56	15 54	16 50	6 45	85	13 56	29
1	195	12.4		25.3	223	50.3	84		13.2	87	58	15 13	16 05	16 58	32	81	14 10	33
2	210	12.1		25.3	238	17.7	85		21.9	85	56	28	16	17 05	20	78	22	36
3	225	11.7		25.3	252	45.2	84		30.4	84	54	41	25	11	10	76	33	37
4	240	11.4		25.2	267	12.6	83		38.8	83	52	15 52	33	17	6 01	74	42	40
5	255	11.1	-23	25.2	281	39.9	83	-18	47.1	82	50	16 02	16 40	17 22	5 53	72	14 51	41
6	270	10.8	-23	25.2	296	07.2	83	-18	55.3	80	45	16 23	16 56	17 34	5 35	70	15 09	44
7	285	10.5		25.1	310	34.5	83	-19	03.3	80	40	39	17 10	44	21	67	24	46
8	300	10.2		25.1	325	01.8	82		11.3	78	35	16 54	22	17 53	5 10	64	36	48
9	315	09.9		25.0	339	29.0	82		19.1	77	30	17 06	32	18 02	4 59	63	15 47	49
10	330	09.6		25.0	353	56.2	81		26.8	76	20	27	17 51	19	42	59	16 06	52
11	345	09.3	-23	24.9	8	23.3	81	-19	34.4	75	10 N	17 46	18 09	18 35	4 26	58	16 23	53
12	0	08.9	-23	24.9	22	50.4	81	-19	41.9	74	0	18 03	18 26	18 52	4 12	55	16 38	56
13	15	08.6		24.8	37	17.5	80		49.3	72	10 S	21	18 44	19 11	3 58	53	16 54	57
14	30	08.3		24.8	51	44.5	81	-19	56.5	71	20	18 40	19 04	19 34	43	50	17 10	60
15	45	08.0		24.8	66	11.6	79	-20	03.6	70	30	19 02	29	20 03	26	47	29	62
16	60	07.7		24.7	80	38.5	80		10.6	69	35	15	19 45	21	16	45	41	63
17	75	07.4	-23	24.7	95	05.5	79	-20	17.5	67	40	19 30	20 03	20 44	3 05	43	17 54	64
18	90	07.1	-23	24.6	109	32.4	79	-20	24.2	67	45	19 48	20 25	21 15	2 51	41	18 09	66
19	105	06.8		24.6	123	59.3	79		30.9	65	50	20 10	20 55	22 01	35	37	27	69
20	120	06.4		24.5	138	26.2	78		37.4	63	52	21	21 10	22 28	28	35	36	71
21	135	06.1		24.5	152	53.0	78		43.7	63	54	34	28	23 15	20	33	46	72
22	150	05.8		24.4	167	19.8	78		50.0	61	56	20 48	21 50	** **	10	31	18 57	74
23	165	05.5		24.3	181	46.6	78	-20	56.1	60	58	21 05	22 20	** **	2 00	28	19 10	76
24	180	05.2	-23	24.3	196	13.4		-21	02.1		60 S	21 25	23 11	** **	1 48	24	19 26	78
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 48 ^m 1		Mag: -3.9 PMG: 14 ^h 21 ^m				Mag: +1.6 PMG: 09 ^h 14 ^m				Mag: -1.8 PMG: 12 ^h 11 ^m				Mag: +0.6 PMG: 13 ^h 18 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	92	13.9	144	50.1	-20	55.2	221	29.8	-18	06.0	176	58.7	-23	-14.8	160	06.3	-21	49.0
1	107	16.4	159	49.4		54.4	236	30.6		06.4	192	00.5		-14.8	175	08.5		48.9
2	122	18.9	174	48.7		53.7	251	31.4		06.9	207	02.4		-14.8	190	10.6		48.9
3	137	21.3	189	48.0		52.9	266	32.1		07.3	222	04.2		-14.8	205	12.8		48.9
4	152	23.8	204	47.2		52.2	281	32.9		07.8	237	06.0		-14.8	220	14.9		48.8
5	167	26.3	219	46.5	-20	51.5	296	33.6	-18	08.2	252	07.9	-23	-14.7	235	17.1	-21	48.8
6	182	28.7	234	45.8	-20	50.7	311	34.4	-18	08.7	267	09.7	-23	-14.7	250	19.2	-21	48.7
7	197	31.2	249	45.0		50.0	326	35.2		09.1	282	11.6		-14.7	265	21.4		48.7
8	212	33.6	264	44.3		49.2	341	35.9		09.5	297	13.4		-14.7	280	23.6		48.7
9	227	36.1	279	43.6		48.5	356	36.7		10.0	312	15.2		-14.7	295	25.7		48.6
10	242	38.6	294	42.9		47.7	11	37.5		10.4	327	17.1		-14.6	310	27.9		48.6
11	257	41.0	309	42.1	-20	47.0	26	38.2	-18	10.9	342	18.9	-23	-14.6	325	30.0	-21	48.5
12	272	43.5	324	41.4	-20	46.3	41	39.0	-18	11.3	357	20.7	-23	-14.6	340	32.2	-21	48.5
13	287	46.0	339	40.7		45.5	56	39.8		11.7	12	22.6		-14.6	355	34.4		48.5
14	302	48.4	354	40.0		44.8	71	40.5		12.2	27	24.4		-14.6	10	36.5		48.4
15	317	50.9	9	39.2		44.0	86	41.3		12.6	42	26.3		-14.6	25	38.7		48.4
16	332	53.4	24	38.5		43.3	101	42.0		13.1	57	28.1		-14.5	40	40.8		48.3
17	347	55.8	39	37.8	-20	42.5	116	42.8	-18	13.5	72	29.9	-23	-14.5	55	43.0	-21	48.3
18	2	58.3	54	37.1	-20	41.7	131	43.6	-18	13.9	87	31.8	-23	-14.5	70	45.1	-21	48.3
19	18	00.8	69	36.3		41.0	146	44.3		14.4	102	33.6		-14.5	85	47.3		48.2
20	33	03.2	84	35.6		40.2	161	45.1		14.8	117	35.5		-14.5	100	49.5		48.2
21	48	05.7	99	34.9		39.5	176	45.9		15.3	132	37.3		-14.5	115	51.6		48.1
22	63	08.1	114	34.2		38.7	191	46.6		15.7	147	39.1		-14.4	130	53.8		48.1
23	78	10.6	129	33.5		38.0	206	47.4		16.1	162	41.0		-14.4	145	55.9		48.1
24	93	13.1	144	32.7	-20	37.2	221	48.1	-18	16.6	177	42.8	-23	-14.4	160	58.1	-21	48.0
Dif.	—		-7		+7		+8		-4		+18		0		+22			

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 59 ^m 9				SD: 15'7 Edad: 28 ^d 4 PHE 4^h: 57'6 12^h: 57'5 20^h: 57'3															
	hG ☉	Dec			hG ☾	Dif.		Dec		Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'		°	'		°	h	m	h	m	h	m	m		
0	180	05.2	-23	24.3	196	13.4	77	-21	02.1	58	60 N	7 09	8 06	9 03	8 10	72	14 25	44		
1	195	04.9		24.2	210	40.1	78		07.9	58	58	7 01	7 54	8 46	7 53	69	43	45		
2	210	04.6		24.2	225	06.9	77		13.7	56	56	6 54	44	31	38	68	14 58	46		
3	225	04.3		24.1	239	33.6	76		19.3	55	54	48	35	18	26	66	15 10	48		
4	240	04.0		24.1	254	00.2	77		24.8	53	52	43	26	8 07	15	65	22	48		
5	255	03.6	-23	24.0	268	26.9	77	-21	30.1	52	50	6 37	7 19	7 57	7 05	65	15 32	49		
6	270	03.3	-23	23.9	282	53.6	76	-21	35.3	51	45	6 26	7 03	7 37	6 45	63	15 53	50		
7	285	03.0		23.9	297	20.2	76		40.4	49	40	15	6 49	20	28	62	16 10	51		
8	300	02.7		23.8	311	46.8	76		45.3	49	35	6 06	38	7 06	14	61	24	52		
9	315	02.4		23.8	326	13.4	76		50.2	46	30	5 57	27	6 53	6 02	60	36	53		
10	330	02.1		23.7	340	40.0	76		54.8	46	20	41	6 08	32	5 41	59	16 58	54		
11	345	01.8	-23	23.6	355	06.6	75	-21	59.4	44	10 N	5 24	5 51	6 14	5 24	56	17 16	55		
12	0	01.5	-23	23.6	9	33.1	76	-22	03.8	43	0	5 07	5 34	5 56	5 07	56	17 34	55		
13	15	01.2		23.5	23	59.7	75		08.1	41	10 S	4 48	5 15	39	4 51	54	17 51	56		
14	30	00.8		23.4	38	26.2	76		12.2	41	20	4 26	4 55	5 20	33	53	18 10	56		
15	45	00.5		23.4	52	52.8	75		16.3	38	30	3 57	30	4 58	13	51	31	58		
16	60	00.2		23.3	67	19.3	75		20.1	38	35	38	4 15	45	4 01	50	44	58		
17	74	59.9	-23	23.2	81	45.8	75	-22	23.9	36	40	3 15	3 57	4 29	3 48	48	18 58	59		
18	89	59.6	-23	23.2	96	12.3	76	-22	27.5	35	45	2 44	3 34	4 11	3 32	47	19 15	59		
19	104	59.3		23.1	110	38.9	75		31.0	33	50	1 59	3 04	3 49	12	45	36	60		
20	119	59.0		23.0	125	05.4	75		34.3	32	52	1 31	2 49	38	3 03	44	47	60		
21	134	58.7		22.9	139	31.9	75		37.5	31	54	0 44	31	26	2 53	42	19 58	61		
22	149	58.4		22.9	153	58.4	75		40.6	29	56	** **	2 09	3 11	41	41	20 11	61		
23	164	58.0		22.8	168	24.9	76		43.5	28	58	** **	1 39	2 55	2 28	39	20 26	62		
24	179	57.7	-23	22.7	182	51.5		-22	46.3		60 S	** **	0 48	2 34	2 12	36	20 44	63		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 17 ^h 44 ^m 2		Mag: -3.9 PMG: 14 ^h 23 ^m				Mag: +1.6 PMG: 09 ^h 12 ^m				Mag: -1.8 PMG: 12 ^h 08 ^m				Mag: +0.6 PMG: 13 ^h 14 ^m					
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	93	13.1	144	32.7	-20	37.2	221	48.1	-18	16.6	177	42.8	-23	14.4	160	58.1	-21	48.0		
1	108	15.5	159	32.0		36.4	236	48.9		17.0	192	44.6		14.4	176	00.3		48.0		
2	123	18.0	174	31.3		35.7	251	49.7		17.5	207	46.5		14.4	191	02.4		47.9		
3	138	20.5	189	30.6		34.9	266	50.4		17.9	222	48.3		14.3	206	04.6		47.9		
4	153	22.9	204	29.9		34.2	281	51.2		18.3	237	50.2		14.3	221	06.7		47.8		
5	168	25.4	219	29.2	-20	33.4	296	51.9	-18	18.8	252	52.0	-23	14.3	236	08.9	-21	47.8		
6	183	27.9	234	28.5	-20	32.6	311	52.7	-18	19.2	267	53.8	-23	14.3	251	11.0	-21	47.8		
7	198	30.3	249	27.7		31.9	326	53.5		19.6	282	55.7		14.3	266	13.2		47.7		
8	213	32.8	264	27.0		31.1	341	54.2		20.1	297	57.5		14.3	281	15.4		47.7		
9	228	35.3	279	26.3		30.3	356	55.0		20.5	312	59.3		14.2	296	17.5		47.6		
10	243	37.7	294	25.6		29.6	11	55.7		21.0	328	01.2		14.2	311	19.7		47.6		
11	258	40.2	309	24.9	-20	28.8	26	56.5	-18	21.4	343	03.0	-23	14.2	326	21.8	-21	47.6		
12	273	42.6	324	24.2	-20	28.0	41	57.3	-18	21.8	358	04.9	-23	14.2	341	24.0	-21	47.5		
13	288	45.1	339	23.5		27.2	56	58.0		22.3	13	06.7		14.2	356	26.1		47.5		
14	303	47.6	354	22.8		26.5	71	58.8		22.7	28	08.5		14.1	11	28.3		47.4		
15	318	50.0	9	22.0		25.7	86	59.5		23.1	43	10.4		14.1	26	30.5		47.4		
16	333	52.5	24	21.3		24.9	102	00.3		23.6	58	12.2		14.1	41	32.6		47.4		
17	348	55.0	39	20.6	-20	24.1	117	01.0	-18	24.0	73	14.0	-23	14.1	56	34.8	-21	47.3		
18	3	57.4	54	19.9	-20	23.4	132	01.8	-18	24.4	88	15.9	-23	14.1	71	36.9	-21	47.3		
19	18	59.9	69	19.2		22.6	147	02.6		24.9	103	17.7		14.0	86	39.1		47.2		
20	34	02.4	84	18.5		21.8	162	03.3		25.3	118	19.6		14.0	101	41.3		47.2		
21	49	04.8	99	17.8		21.0	177	04.1		25.7	133	21.4		14.0	116	43.4		47.2		
22	64	07.3	114	17.1		20.2	192	04.8		26.2	148	23.2		14.0	131	45.6		47.1		
23	79	09.8	129	16.4		19.5	207	05.6		26.6	163	25.1		14.0	146	47.7		47.1		
24	94	12.2	144	15.7	-20	18.7	222	06.3	-18	27.0	178	26.9	-23	14.0	161	49.9	-21	47.0		
Dif.	—		-7		+8		+8		-4		+18		0		+22					

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 00 ^m 4				SD: 15'6 Edad: 29 ^d 4 PHE 4^h: 57'1 12^h: 56'9 20^h: 56'7 R ^o : 55 ^m													
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.					
	h	°	'	°	'	°	'	°	'	°			'	h	m	h	m	h
0	179	57.7	-23	22.7	182	51.5	75	-22	46.3	27	60 N	14 57	15 55	16 52	9 22	53	15 09	60
1	194	57.4		22.7	197	18.0	75		49.0	25	58	15 15	16 07	16 59	9 02	54	28 59	
2	209	57.1		22.6	211	44.5	76		51.5	24	56	30	17	17 06	8 46	54	44 59	
3	224	56.8		22.5	226	11.1	75		53.9	22	54	42	26	12	32	55	15 58	59
4	239	56.5		22.4	240	37.6	76		56.1	21	52	15 53	34	18	20	55	16 10	58
5	254	56.2	-23	22.3	255	04.2	76	-22	58.2	20	50	16 03	16 42	17 23	8 10	54	16 21	58
6	269	55.9	-23	22.3	269	30.8	76	-23	00.2	19	45	16 24	16 58	17 35	7 48	54	16 43	57
7	284	55.6		22.2	283	57.4	76		02.1	17	40	41	17 11	45	30	55	17 01	57
8	299	55.2		22.1	298	24.0	76		03.8	15	35	16 55	23	17 55	15	55	16	57
9	314	54.9		22.0	312	50.6	77		05.3	15	30	17 07	33	18 03	7 02	55	29	56
10	329	54.6		21.9	327	17.3	76		06.8	13	20	28	17 52	20	6 40	55	17 52	55
11	344	54.3	-23	21.9	341	43.9	77	-23	08.1	11	10 N	17 47	18 10	18 36	6 20	55	18 11	55
12	359	54.0	-23	21.8	356	10.6	77	-23	09.2	11	0	18 04	18 27	18 53	6 03	55	18 29	54
13	14	53.7		21.7	10	37.3	77		10.3	8	10 S	22	18 45	19 12	5 45	55	18 47	54
14	29	53.4		21.6	25	04.0	78		11.1	8	20	18 41	19 05	19 34	26	55	19 06	54
15	44	53.1		21.5	39	30.8	78		11.9	6	30	19 03	30	20 03	5 04	54	29	52
16	59	52.8		21.4	53	57.6	78		12.5	5	35	16	19 45	22	4 51	54	42	51
17	74	52.5	-23	21.3	68	24.4	78	-23	13.0	4	40	19 31	20 03	20 45	4 36	55	19 57	51
18	89	52.1	-23	21.2	82	51.2	78	-23	13.4	2	45	19 49	20 26	21 16	4 19	54	20 14	51
19	104	51.8		21.2	97	18.0	79		13.6	1	50	20 11	20 56	22 01	3 57	54	36	50
20	119	51.5		21.1	111	44.9	79		13.7	1	52	22	21 11	22 28	47	53	47	49
21	134	51.2		21.0	126	11.8	80		13.6	2	54	34	29	23 14	35	53	20 59	48
22	149	50.9		20.9	140	38.8	80		13.4	3	56	20 48	21 51	** **	22	53	21 12	48
23	164	50.6		20.8	155	05.8	80		13.1	4	58	21 05	22 20	** **	3 07	52	28	47
24	179	50.3	-23	20.7	169	32.8		-23	12.7		60 S	21 25	23 10	** **	2 48	52	21 47	45

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 40 ^m 3		Mag: -3.9 PMG: 14 ^h 24 ^m				Mag: +1.6 PMG: 09 ^h 11 ^m				Mag: -1.8 PMG: 12 ^h 05 ^m				Mag: +0.6 PMG: 13 ^h 11 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	94	12.2	144	15.7	-20	18.7	222	06.3	-18	27.0	178	26.9	-23	-14.0	161	49.9	-21	47.0
1	109	14.7	159	15.0		17.9	237	07.1		27.5	193	28.7		-13.9	176	52.0		47.0
2	124	17.1	174	14.3		17.1	252	07.9		27.9	208	30.6		-13.9	191	54.2		47.0
3	139	19.6	189	13.6		16.3	267	08.6		28.3	223	32.4		-13.9	206	56.4		46.9
4	154	22.1	204	12.9		15.5	282	09.4		28.8	238	34.2		-13.9	221	58.5		46.9
5	169	24.5	219	12.2	-20	14.7	297	10.1	-18	29.2	253	36.1	-23	-13.9	237	00.7	-21	46.8
6	184	27.0	234	11.5	-20	13.9	312	10.9	-18	29.6	268	37.9	-23	-13.8	252	02.8	-21	46.8
7	199	29.5	249	10.8		13.2	327	11.6		30.1	283	39.8		-13.8	267	05.0		46.8
8	214	31.9	264	10.1		12.4	342	12.4		30.5	298	41.6		-13.8	282	07.1		46.7
9	229	34.4	279	09.4		11.6	357	13.1		30.9	313	43.4		-13.8	297	09.3		46.7
10	244	36.9	294	08.7		10.8	12	13.9		31.3	328	45.3		-13.8	312	11.4		46.6
11	259	39.3	309	08.0	-20	10.0	27	14.7	-18	31.8	343	47.1	-23	-13.7	327	13.6	-21	46.6
12	274	41.8	324	07.3	-20	09.2	42	15.4	-18	32.2	358	48.9	-23	-13.7	342	15.8	-21	46.6
13	289	44.3	339	06.6		08.4	57	16.2		32.6	13	50.8		-13.7	357	17.9		46.5
14	304	46.7	354	05.9		07.6	72	16.9		33.1	28	52.6		-13.7	12	20.1		46.5
15	319	49.2	9	05.2		06.8	87	17.7		33.5	43	54.5		-13.7	27	22.2		46.4
16	334	51.6	24	04.5		06.0	102	18.4		33.9	58	56.3		-13.6	42	24.4		46.4
17	349	54.1	39	03.8	-20	05.2	117	19.2	-18	34.3	73	58.1	-23	-13.6	57	26.5	-21	46.4
18	4	56.6	54	03.1	-20	04.4	132	19.9	-18	34.8	89	00.0	-23	-13.6	72	28.7	-21	46.3
19	19	59.0	69	02.4		03.6	147	20.7		35.2	104	01.8		-13.6	87	30.9		46.3
20	35	01.5	84	01.7		02.8	162	21.4		35.6	119	03.6		-13.6	102	33.0		46.2
21	50	04.0	99	01.1		02.0	177	22.2		36.1	134	05.5		-13.5	117	35.2		46.2
22	65	06.4	114	00.4		01.2	192	22.9		36.5	149	07.3		-13.5	132	37.3		46.1
23	80	08.9	128	59.7	-20	00.4	207	23.7		36.9	164	09.2		-13.5	147	39.5		46.1
24	95	11.4	143	59.0	-19	59.6	222	24.5	-18	37.3	179	11.0	-23	-13.5	162	41.6	-21	46.1
Dif.	—		-7		+8		+8		-4		+18		0		+22			

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 00 ^m 9				SD: 15'4 Edad: 0 ^d 8		PHE { 4 ^h : 56'5 12 ^h : 56'3 20 ^h : 56'1		PMG: 13 ^h 11 ^m Rº: 52 ^m									
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº					
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	179	50.3	-23	20.7	169	32.8	81	-23	12.7	6	60 N	7 09	8 06	9 04	10 15	36	16 09 72	
1	194	50.0		20.6	183	59.9	81		12.1	7	58	7 02	7 54	8 46	9 56	39	27 70	
2	209	49.7		20.5	198	27.0	81		11.4	9	56	6 55	44	31	40	41	43 68	
3	224	49.4		20.4	212	54.1	82		10.5	9	54	49	35	19	27	42	16 57 65	
4	239	49.0		20.3	227	21.3	82		09.6	11	52	43	27	8 08	15	43	17 08 65	
5	254	48.7	-23	20.2	241	48.5	82	-23	08.5	13	50	6 38	7 20	7 58	9 04	45	17 19 63	
6	269	48.4	-23	20.1	256	15.7	83	-23	07.2	13	45	6 26	7 04	7 37	8 42	46	17 40 62	
7	284	48.1		20.0	270	43.0	84		05.9	15	40	16	6 50	21	25	47	17 58 59	
8	299	47.8		19.9	285	10.4	84		04.4	16	35	6 07	38	7 06	8 10	48	18 13 58	
9	314	47.5		19.8	299	37.8	84		02.8	18	30	5 58	28	6 54	7 57	49	25 57	
10	329	47.2		19.7	314	05.2	85	-23	01.0	18	20	41	6 09	33	35	50	18 47 55	
11	344	46.9	-23	19.6	328	32.7	86	-22	59.2	20	10 N	5 25	5 52	6 15	7 15	52	19 06 53	
12	359	46.6	-23	19.5	343	00.3	85	-22	57.2	21	0	5 08	5 35	5 57	6 58	53	19 23 52	
13	14	46.3		19.4	357	27.8	87		55.1	23	10 S	4 49	5 17	40	40	54	19 41 50	
14	29	46.0		19.3	11	55.5	87		52.8	24	20	4 27	4 56	5 21	6 21	55	20 00 48	
15	44	45.6		19.2	26	23.2	87		50.4	24	30	3 58	31	4 59	5 58	57	21 46	
16	59	45.3		19.1	40	50.9	88		48.0	27	35	39	4 16	46	45	58	33 46	
17	74	45.0	-23	19.0	55	18.7	89	-22	45.3	27	40	3 16	3 58	4 31	5 31	58	20 48 44	
18	89	44.7	-23	18.9	69	46.6	89	-22	42.6	29	45	2 46	3 35	4 13	5 13	59	21 05 42	
19	104	44.4		18.8	84	14.5	90		39.7	29	50	2 00	3 06	3 50	4 51	61	26 39	
20	119	44.1		18.6	98	42.5	90		36.8	31	52	1 33	2 51	39	40	62	36 38	
21	134	43.8		18.5	113	10.5	91		33.7	32	54	0 47	33	27	28	63	21 47 37	
22	149	43.5		18.4	127	38.6	91		30.5	34	56	** **	2 11	3 13	4 15	63	22 00 35	
23	164	43.2		18.3	142	06.7	92		27.1	34	58	** **	1 41	2 56	3 59	65	22 15 32	
24	179	42.9	-23	18.2	156	34.9		-22	23.7		60 S	** **	0 52	2 36	3 40	66	22 32 30	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 36 ^m 4		Mag: -3.9 PMG: 14 ^h 25 ^m				Mag: +1.6 PMG: 09 ^h 10 ^m				Mag: -1.8 PMG: 12 ^h 02 ^m				Mag: +0.6 PMG: 13 ^h 07 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	95	11.4	143	59.0	-19	59.6	222	24.5	-18	37.3	179	11.0	-23	13.5	162	41.6	-21	46.1
1	110	13.8	158	58.3		58.8	237	25.2		37.8	194	12.8		13.5	177	43.8		46.0
2	125	16.3	173	57.6		57.9	252	26.0		38.2	209	14.7		13.4	192	46.0		46.0
3	140	18.8	188	56.9		57.1	267	26.7		38.6	224	16.5		13.4	207	48.1		45.9
4	155	21.2	203	56.2		56.3	282	27.5		39.0	239	18.3		13.4	222	50.3		45.9
5	170	23.7	218	55.6	-19	55.5	297	28.2	-18	39.5	254	20.2	-23	13.4	237	52.4	-21	45.9
6	185	26.1	233	54.9	-19	54.7	312	29.0	-18	39.9	269	22.0	-23	13.4	252	54.6	-21	45.8
7	200	28.6	248	54.2		53.9	327	29.7		40.3	284	23.8		13.3	267	56.7		45.8
8	215	31.1	263	53.5		53.1	342	30.5		40.7	299	25.7		13.3	282	58.9		45.7
9	230	33.5	278	52.8		52.3	357	31.2		41.2	314	27.5		13.3	298	01.0		45.7
10	245	36.0	293	52.1		51.4	12	32.0		41.6	329	29.4		13.3	313	03.2		45.7
11	260	38.5	308	51.4	-19	50.6	27	32.7	-18	42.0	344	31.2	-23	13.3	328	05.4	-21	45.6
12	275	40.9	323	50.8	-19	49.8	42	33.5	-18	42.4	359	33.0	-23	13.2	343	07.5	-21	45.6
13	290	43.4	338	50.1		49.0	57	34.2		42.9	14	34.9		13.2	358	09.7		45.5
14	305	45.9	353	49.4		48.2	72	35.0		43.3	29	36.7		13.2	13	11.8		45.5
15	320	48.3	8	48.7		47.3	87	35.7		43.7	44	38.5		13.2	28	14.0		45.4
16	335	50.8	23	48.0		46.5	102	36.5		44.1	59	40.4		13.1	43	16.1		45.4
17	350	53.2	38	47.4	-19	45.7	117	37.2	-18	44.6	74	42.2	-23	13.1	58	18.3	-21	45.4
18	5	55.7	53	46.7	-19	44.9	132	38.0	-18	45.0	89	44.1	-23	13.1	73	20.4	-21	45.3
19	20	58.2	68	46.0		44.0	147	38.7		45.4	104	45.9		13.0	88	22.6		45.3
20	36	00.6	83	45.3		43.2	162	39.5		45.8	119	47.8		13.0	103	24.8		45.2
21	51	03.1	98	44.7		42.4	177	40.2		46.2	134	49.6		13.0	118	26.9		45.2
22	66	05.6	113	44.0		41.6	192	41.0		46.7	149	51.5		13.0	133	29.1		45.2
23	81	08.0	128	43.3		40.7	207	41.7		47.1	164	53.3		13.0	148	31.2		45.1
24	96	10.5	143	42.6	-19	39.9	222	42.5	-18	47.5	179	55.1	-23	13.0	163	33.4	-21	45.1
Dif.	—		-7		+8		+8		-4		+18		0		+22			

UT	SOL			 LUNA							Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3			PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'5														
	PMG: 12 ^h 01. ^m 4			Edad: 1 ^d 8														
	PMG: 14 ^h 03 ^m			R ^o : 50 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	R ^o	Hora	R ^o	
h	°	'	°	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	179	42.9	-23 18.2	156	34.9	93	-22 23.7	36	60 N	14 59	15 57	16 54	10 51	24	17 21	78		
1	194	42.6	18.1	171	03.2	93	20.1	37	58	15 17	16 08	17 01	35	27	37	75		
2	209	42.3	18.0	185	31.5	94	16.4	38	56	31	19	08	21	30	17 51	72		
3	224	41.9	17.9	199	59.9	94	12.6	39	54	44	28	14	10 09	31	18 02	70		
4	239	41.6	17.7	214	28.3	95	08.7	40	52	15 55	36	19	9 58	33	13	68		
5	254	41.3	-23 17.6	228	56.8	96	-22 04.7	42	50	16 05	16 43	17 25	9 49	34	18 22	66		
6	269	41.0	-23 17.5	243	25.4	97	-22 00.5	42	45	16 25	16 59	17 36	9 28	38	18 42	63		
7	284	40.7	17.4	257	54.1	97	-21 56.3	44	40	42	17 12	46	9 12	40	18 57	61		
8	299	40.4	17.3	272	22.8	97	51.9	45	35	16 56	24	17 56	8 58	42	19 11	58		
9	314	40.1	17.1	286	51.5	99	47.4	45	30	17 08	35	18 05	46	44	22	57		
10	329	39.8	17.0	301	20.4	99	42.9	47	20	29	17 53	21	25	47	42	54		
11	344	39.5	-23 16.9	315	49.3	100	-21 38.2	48	10 N	17 48	18 11	18 37	8 07	49	19 59	51		
12	359	39.2	-23 16.8	330	18.3	100	-21 33.4	49	0	18 05	18 28	18 54	7 51	50	20 15	49		
13	14	38.9	16.6	344	47.3	101	28.5	51	10 S	23	18 46	19 13	34	52	31	47		
14	29	38.6	16.5	359	16.4	102	23.4	51	20	18 41	19 06	19 35	7 16	54	20 48	44		
15	44	38.3	16.4	13	45.6	103	18.3	52	30	19 03	31	20 04	6 55	57	21 07	41		
16	59	37.9	16.3	28	14.9	103	13.1	53	35	16	19 46	23	43	58	19	39		
17	74	37.6	-23 16.1	42	44.2	104	-21 07.8	54	40	19 31	20 04	20 46	6 29	60	21 32	37		
18	89	37.3	-23 16.0	57	13.6	104	-21 02.4	56	45	19 49	20 26	21 16	6 12	62	21 47	34		
19	104	37.0	15.9	71	43.0	106	-20 56.8	56	50	20 11	20 56	22 01	5 52	65	22 05	32		
20	119	36.7	15.8	86	12.6	106	51.2	57	52	22	21 11	22 28	42	66	14	30		
21	134	36.4	15.6	100	42.2	107	45.5	59	54	34	29	23 12	31	68	24	28		
22	149	36.1	15.5	115	11.9	107	39.6	59	56	20 48	21 50	***	18	70	35	26		
23	164	35.8	15.4	129	41.6	108	33.7	60	58	21 05	22 20	***	5 04	72	22 47	24		
24	179	35.5	-23 15.2	144	11.4		-20 27.7		60 S	21 25	23 07	***	4 46	76	23 02	20		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 32. ^m 4		Mag: -3.9 PMG: 14 ^h 26 ^m				Mag: +1.6 PMG: 09 ^h 09 ^m				Mag: -1.8 PMG: 11 ^h 59 ^m				Mag: +0.5 PMG: 13 ^h 04 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	96	10.5	143	42.6	-19	39.9	222	42.5	-18	47.5	179	55.1	-23 -13.0	163	33.4	-21	45.1	
1	111	13.0	158	42.0		39.1	237	43.2		47.9	194	57.0	-13.0	178	35.5		45.0	
2	126	15.4	173	41.3		38.2	252	44.0		48.3	209	58.8	-12.9	193	37.7		45.0	
3	141	17.9	188	40.6		37.4	267	44.7		48.8	225	00.6	-12.9	208	39.8		45.0	
4	156	20.4	203	39.9		36.6	282	45.4		49.2	240	02.5	-12.9	223	42.0		44.9	
5	171	22.8	218	39.3	-19	35.7	297	46.2	-18	49.6	255	04.3	-23 -12.9	238	44.2	-21	44.9	
6	186	25.3	233	38.6	-19	34.9	312	46.9	-18	50.0	270	06.1	-23 -12.9	253	46.3	-21	44.8	
7	201	27.7	248	37.9		34.1	327	47.7		50.4	285	08.0	-12.8	268	48.5		44.8	
8	216	30.2	263	37.3		33.2	342	48.4		50.9	300	09.8	-12.8	283	50.6		44.7	
9	231	32.7	278	36.6		32.4	357	49.2		51.3	315	11.6	-12.8	298	52.8		44.7	
10	246	35.1	293	35.9		31.5	12	49.9		51.7	330	13.5	-12.8	313	54.9		44.7	
11	261	37.6	308	35.3	-19	30.7	27	50.7	-18	52.1	345	15.3	-23 -12.8	328	57.1	-21	44.6	
12	276	40.1	323	34.6	-19	29.9	42	51.4	-18	52.5	0	17.2	-23 -12.7	343	59.2	-21	44.6	
13	291	42.5	338	33.9		29.0	57	52.2		52.9	15	19.0	-12.7	359	01.4		44.5	
14	306	45.0	353	33.3		28.2	72	52.9		53.4	30	20.8	-12.7	14	03.6		44.5	
15	321	47.5	8	32.6		27.3	87	53.7		53.8	45	22.7	-12.7	29	05.7		44.5	
16	336	49.9	23	31.9		26.5	102	54.4		54.2	60	24.5	-12.7	44	07.9		44.4	
17	351	52.4	38	31.3	-19	25.6	117	55.2	-18	54.6	75	26.3	-23 -12.6	59	10.0	-21	44.4	
18	6	54.9	53	30.6	-19	24.8	132	55.9	-18	55.0	90	28.2	-23 -12.6	74	12.2	-21	44.3	
19	21	57.3	68	29.9		23.9	147	56.6		55.4	105	30.0	-12.6	89	14.3		44.3	
20	36	59.8	83	29.3		23.1	162	57.4		55.9	120	31.9	-12.6	104	16.5		44.2	
21	52	02.2	98	28.6		22.2	177	58.1		56.3	135	33.7	-12.5	119	18.6		44.2	
22	67	04.7	113	28.0		21.4	192	58.9		56.7	150	35.5	-12.5	134	20.8		44.2	
23	82	07.2	128	27.3		20.5	207	59.6		57.1	165	37.4	-12.5	149	22.9		44.1	
24	97	09.6	143	26.6	-19	19.7	223	00.4	-18	57.5	180	39.2	-23 -12.5	164	25.1	-21	44.1	
Dif.	—		-7		+8		+7		-4		+18		0		+22			

UT	SOL				 LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16°3 PMG: 12 ^h 01 ^m 9				SD: 15°1 Edad: 2 ^d 8 PHE { 4 ^h : 55°4 12 ^h : 55°2 20 ^h : 55°0 PMG: 14 ^h 53 ^m R°: 46 ^m																	
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	R°	Hora		R°									
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m				
0	179	35.5	-23	15.2	144	11.4	109	-20	27.7	61	60 N	7 09	8 06	9 03	11 15	16	18 39	79				
1	194	35.2		15.1	158	41.3	110		21.6	62	58	7 02	7 55	8 46	11 02	19	18 52	75				
2	209	34.9		15.0	173	11.3	110		15.4	63	56	6 55	44	32	10 51	22	19 03	73				
3	224	34.6		14.8	187	41.3	111		09.1	64	54	49	35	19	40	25	12	71				
4	239	34.3		14.7	202	11.4	112	-20	02.7	65	52	44	27	8 08	31	27	21	68				
5	254	34.0	-23	14.6	216	41.6	113	-19	56.2	66	50	6 39	7 20	7 58	10 23	28	19 28	67				
6	269	33.7	-23	14.4	231	11.9	113	-19	49.6	67	45	6 27	7 04	7 38	10 06	32	19 45	63				
7	284	33.4		14.3	245	42.2	114		42.9	67	40	17	6 51	21	9 52	34	19 58	60				
8	299	33.0		14.1	260	12.6	115		36.2	69	35	6 07	39	7 07	40	37	20 09	58				
9	314	32.7		14.0	274	43.1	115		29.3	69	30	5 59	29	6 55	30	38	19	56				
10	329	32.4		13.9	289	13.6	116		22.4	71	20	42	6 10	34	9 12	41	36	52				
11	344	32.1	-23	13.7	303	44.2	117	-19	15.3	71	10 N	5 26	5 53	6 15	8 56	44	20 50	49				
12	359	31.8	-23	13.6	318	14.9	118	-19	08.2	72	0	5 09	5 36	5 58	8 41	47	21 04	46				
13	14	31.5		13.4	332	45.7	118	-19	01.0	72	10 S	4 51	5 18	41	26	50	18	43				
14	29	31.2		13.3	347	16.5	119	-18	53.8	74	20	4 28	4 57	22	8 10	53	32	40				
15	44	30.9		13.1	1	47.4	120		46.4	74	30	3 59	33	5 00	7 52	56	48	37				
16	59	30.6		13.0	16	18.4	121		39.0	76	35	41	4 17	4 47	41	58	21 58	34				
17	74	30.3	-23	12.8	30	49.5	121	-18	31.4	76	40	3 18	3 59	4 32	7 29	60	22 09	32				
18	89	30.0	-23	12.7	45	20.6	122	-18	23.8	77	45	2 47	3 37	4 14	7 14	64	22 21	29				
19	104	29.7		12.5	59	51.8	123		16.1	77	50	2 03	3 08	3 52	6 57	66	37	25				
20	119	29.4		12.4	74	23.1	123		08.4	79	52	1 35	2 53	41	48	69	44	24				
21	134	29.1		12.2	88	54.4	124	-18	00.5	79	54	0 52	35	29	39	70	22 52	21				
22	149	28.8		12.1	103	25.8	125	-17	52.6	80	56	** **	2 13	3 15	28	73	23 01	19				
23	164	28.5		11.9	117	57.3	126		44.6	80	58	** **	1 44	2 58	6 16	75	23 11	17				
24	179	28.2	-23	11.8	132	28.9		-17	36.6		60 S	** **	0 56	2 38	6 02	79	23 22	14				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 17 ^h 28 ^m 5		Mag: -3.9 PMG: 14 ^h 27 ^m				Mag: +1.6 PMG: 09 ^h 08 ^m				Mag: -1.8 PMG: 11 ^h 56 ^m				Mag: +0.5 PMG: 13 ^h 00 ^m							
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	97	09.6	143	26.6	-19	19.7	223	00.4	-18	57.5	180	39.2	-23	12.5	164	25.1	-21	44.1				
1	112	12.1	158	26.0		18.8	238	01.1		57.9	195	41.0		12.5	179	27.3		44.0				
2	127	14.6	173	25.3		18.0	253	01.9		58.4	210	42.9		12.4	194	29.4		44.0				
3	142	17.0	188	24.7		17.1	268	02.6		58.8	225	44.7		12.4	209	31.6		44.0				
4	157	19.5	203	24.0		16.3	283	03.3		59.2	240	46.6		12.4	224	33.7		43.9				
5	172	22.0	218	23.4	-19	15.4	298	04.1	-18	59.6	255	48.4	-23	12.4	239	35.9	-21	43.9				
6	187	24.4	233	22.7	-19	14.6	313	04.8	-19	00.0	270	50.2	-23	12.3	254	38.0	-21	43.8				
7	202	26.9	248	22.0		13.7	328	05.6		00.4	285	52.1		12.3	269	40.2		43.8				
8	217	29.4	263	21.4		12.8	343	06.3		00.8	300	53.9		12.3	284	42.3		43.8				
9	232	31.8	278	20.7		12.0	358	07.1		01.2	315	55.7		12.3	299	44.5		43.7				
10	247	34.3	293	20.1		11.1	13	07.8		01.7	330	57.6		12.3	314	46.6		43.7				
11	262	36.7	308	19.4	-19	10.2	28	08.5	-19	02.1	345	59.4	-23	12.2	329	48.8	-21	43.6				
12	277	39.2	323	18.8	-19	09.4	43	09.3	-19	02.5	1	01.2	-23	12.2	344	51.0	-21	43.6				
13	292	41.7	338	18.1		08.5	58	10.0		02.9	16	03.1		12.2	359	53.1		43.5				
14	307	44.1	353	17.5		07.7	73	10.8		03.3	31	04.9		12.2	14	55.3		43.5				
15	322	46.6	8	16.8		06.8	88	11.5		03.7	46	06.8		12.1	29	57.4		43.5				
16	337	49.1	23	16.2		05.9	103	12.2		04.1	61	08.6		12.1	44	59.6		43.4				
17	352	51.5	38	15.5	-19	05.1	118	13.0	-19	04.5	76	10.4	-23	12.1	60	01.7	-21	43.4				
18	7	54.0	53	14.9	-19	04.2	133	13.7	-19	04.9	91	12.3	-23	12.1	75	03.9	-21	43.3				
19	22	56.5	68	14.2		03.3	148	14.5		05.4	106	14.1		12.1	90	06.0		43.3				
20	37	58.9	83	13.6		02.4	163	15.2		05.8	121	15.9		12.0	105	08.2		43.2				
21	53	01.4	98	12.9		01.6	178	15.9		06.2	136	17.8		12.0	120	10.3		43.2				
22	68	03.9	113	12.3	-19	00.7	193	16.7		06.6	151	19.6		12.0	135	12.5		43.2				
23	83	06.3	128	11.7	-18	59.8	208	17.4		07.0	166	21.5		12.0	150	14.7		43.1				
24	98	08.8	143	11.0	-18	58.9	223	18.2	-19	07.4	181	23.3	-23	11.9	165	16.8	-21	43.1				
Dif.	—		-6				+7				-4				+18				0			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 02 ^m 4				SD: 15'0 Edad: 3 ^d 8 PHE { 4 ^h : 54'9 12 ^h : 54'7 20 ^h : 54'6 PMG: 15 ^h 39 ^m Rº: 44 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Civil	Náut.			Hora	Rº	Hora	Rº				
	°	'	°	'	°	'	h	m			h	m	h	m	h	m	m	
h																		
0	179	28.2	-23	11.8	132	28.9	126	-17	36.6	82	60 N	15 02	15 59	16 55	11 31	12	19 58	78
1	194	27.9		11.6	147	00.5	127		28.4	82	58	19	16 10	17 03	21 15		20 07	75
2	209	27.6		11.5	161	32.2	127		20.2	83	56	33	20	09	13 17		16 72	
3	224	27.3		11.3	176	03.9	129		11.9	83	54	46	29	15	11 05	19	23 70	
4	239	27.0		11.2	190	35.8	129	-17	03.6	84	52	15 57	37	21	10 58	21	29 68	
5	254	26.7	-23	11.0	205	07.7	129	-16	55.2	85	50	16 06	16 45	17 26	10 51	23	20 35	66
6	269	26.4	-23	10.9	219	39.6	131	-16	46.7	86	45	16 27	17 01	17 38	10 38	26	20 48	62
7	284	26.1		10.7	234	11.7	131		38.1	86	40	43	14	48	26 30		20 58	59
8	299	25.7		10.5	248	43.8	131		29.5	87	35	16 57	25	17 57	17 32		21 07	56
9	314	25.4		10.4	263	15.9	133		20.8	88	30	17 10	36	18 06	10 08	35	15 53	
10	329	25.1		10.2	277	48.2	133		12.0	88	20	31	17 55	22	9 53	39	28 50	
11	344	24.8	-23	10.1	292	20.5	134	-16	03.2	89	10 N	17 49	18 12	18 38	9 40	42	21 39	47
12	359	24.5	-23	09.9	306	52.9	134	-15	54.3	90	0	18 06	18 29	18 55	9 28	45	21 50	43
13	14	24.2		09.7	321	25.3	135		45.3	90	10 S	23	18 46	19 14	16 48		22 01	40
14	29	23.9		09.6	335	57.8	136		36.3	91	20	18 42	19 07	19 36	9 03	51	12 37	
15	44	23.6		09.4	350	30.4	136		27.2	91	30	19 04	31	20 05	8 48	55	25 33	
16	59	23.3		09.2	5	03.0	137		18.1	92	35	17	19 46	23	39 57		32 31	
17	74	23.0	-23	09.1	19	35.7	137	-15	08.9	92	40	19 32	20 04	20 46	8 29	60	22 41	28
18	89	22.7	-23	08.9	34	08.4	138	-14	59.7	94	45	19 49	20 27	21 16	8 18	62	22 50	25
19	104	22.4		08.7	48	41.2	139		50.3	93	50	20 12	20 56	22 00	8 03	67	23 02	22
20	119	22.1		08.6	63	14.1	140		41.0	95	52	22	21 11	22 27	7 57	68	08 19	
21	134	21.8		08.4	77	47.1	140		31.5	94	54	34	28	23 09	49 70		13 18	
22	149	21.5		08.2	92	20.1	140		22.1	96	56	20 48	21 50	** **	41 72		20 16	
23	164	21.2		08.1	106	53.1	141		12.5	96	58	21 05	22 18	** **	31 76		28 13	
24	179	20.9	-23	07.9	121	26.2		-14	02.9		60 S	21 25	23 04	** **	7 21	78	23 36	10
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 24 ^m 6		Mag: -4.0 PMG: 14 ^h 28 ^m				Mag: +1.6 PMG: 09 ^h 06 ^m				Mag: -1.8 PMG: 11 ^h 53 ^m				Mag: +0.5 PMG: 12 ^h 57 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	98	08.8	143	11.0	-18	58.9	223	18.2	-19	07.4	181	23.3	-23	-11.9	165	16.8	-21	43.1
1	113	11.2	158	10.4		58.1	238	18.9		07.8	196	25.1		-11.9	180	19.0		43.0
2	128	13.7	173	09.7		57.2	253	19.6		08.2	211	27.0		-11.9	195	21.1		43.0
3	143	16.2	188	09.1		56.3	268	20.4		08.6	226	28.8		-11.9	210	23.3		43.0
4	158	18.6	203	08.4		55.4	283	21.1		09.0	241	30.6		-11.8	225	25.4		42.9
5	173	21.1	218	07.8	-18	54.6	298	21.9	-19	09.4	256	32.5	-23	-11.8	240	27.6	-21	42.9
6	188	23.6	233	07.2	-18	53.7	313	22.6	-19	09.8	271	34.3	-23	-11.8	255	29.7	-21	42.8
7	203	26.0	248	06.5		52.8	328	23.3		10.3	286	36.2		-11.8	270	31.9		42.8
8	218	28.5	263	05.9		51.9	343	24.1		10.7	301	38.0		-11.8	285	34.0		42.7
9	233	31.0	278	05.2		51.0	358	24.8		11.1	316	39.8		-11.7	300	36.2		42.7
10	248	33.4	293	04.6		50.2	13	25.6		11.5	331	41.7		-11.7	315	38.3		42.7
11	263	35.9	308	04.0	-18	49.3	28	26.3	-19	11.9	346	43.5	-23	-11.7	330	40.5	-21	42.6
12	278	38.3	323	03.3	-18	48.4	43	27.0	-19	12.3	1	45.3	-23	-11.7	345	42.7	-21	42.6
13	293	40.8	338	02.7		47.5	58	27.8		12.7	16	47.2		-11.6	0	44.8		42.5
14	308	43.3	353	02.1		46.6	73	28.5		13.1	31	49.0		-11.6	15	47.0		42.5
15	323	45.7	8	01.4		45.7	88	29.2		13.5	46	50.9		-11.6	30	49.1		42.4
16	338	48.2	23	00.8		44.8	103	30.0		13.9	61	52.7		-11.6	45	51.3		42.4
17	353	50.7	38	00.2	-18	43.9	118	30.7	-19	14.3	76	54.5	-23	-11.5	60	53.4	-21	42.4
18	8	53.1	52	59.5	-18	43.1	133	31.5	-19	14.7	91	56.4	-23	-11.5	75	55.6	-21	42.3
19	23	55.6	67	58.9		42.2	148	32.2		15.1	106	58.2		-11.5	90	57.7		42.3
20	38	58.1	82	58.3		41.3	163	32.9		15.5	122	00.0		-11.5	105	59.9		42.2
21	54	00.5	97	57.6		40.4	178	33.7		15.9	137	01.9		-11.4	121	02.0		42.2
22	69	03.0	112	57.0		39.5	193	34.4		16.3	152	03.7		-11.4	136	04.2		42.2
23	84	05.5	127	56.4		38.6	208	35.1		16.7	167	05.6		-11.4	151	06.3		42.1
24	99	07.9	142	55.7	-18	37.7	223	35.9	-19	17.1	182	07.4	-23	-11.4	166	08.5	-21	42.1
Dif.	—		-6		+9		+7		-4		+18		0		+22			

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3				SD: 14'9		PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3		Edad: 4'8									
	PMG: 12 ^h 02 ^m 8				PMG: 16 ^h 23 ^m		Rº: 42 ^m											
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.												
h	°	'	°	'	°	'	°	'	°	'	° N	h m	h m	h m	h m m	h m m	h m m	
0	179	20.9	-23	07.9	121	26.2	142	-14	02.9	96	60 N	7 09	8 06	9 03	11 43	9	21 16	77
1	194	20.6		07.7	135	59.4	142	-13	53.3	97	58	7 02	7 54	8 46	36	12	22	74
2	209	20.3		07.5	150	32.6	143		43.6	98	56	6 56	44	31	30	14	28	71
3	224	20.0		07.4	165	05.9	144		33.8	98	54	50	36	19	24	16	33	69
4	239	19.7		07.2	179	39.3	144		24.0	98	52	44	28	8 08	19	18	37	67
5	254	19.4	-23	07.0	194	12.7	144	-13	14.2	99	50	6 39	7 20	7 59	11 14	20	21 41	65
6	269	19.1	-23	06.8	208	46.1	146	-13	04.3	100	45	6 27	7 04	7 38	11 04	24	21 50	61
7	284	18.8		06.7	223	19.7	145	-12	54.3	100	40	17	6 51	22	10 56	27	21 57	58
8	299	18.5		06.5	237	53.2	146		44.3	100	35	6 08	40	7 08	49	29	22 03	55
9	314	18.2		06.3	252	26.8	147		34.3	101	30	5 59	29	6 55	43	31	08	53
10	329	17.9		06.1	267	00.5	147		24.2	101	20	43	6 11	35	32	35	18	48
11	344	17.6	-23	06.0	281	34.2	148	-12	14.1	102	10 N	5 27	5 54	6 16	10 22	39	22 26	45
12	359	17.3	-23	05.8	296	08.0	148	-12	03.9	102	0	5 10	5 37	5 59	10 13	42	22 33	42
13	14	17.0		05.6	310	41.8	149	-11	53.7	103	10 S	4 52	5 19	42	10 04	45	41	38
14	29	16.7		05.4	325	15.7	149		43.4	103	20	29	4 59	23	9 54	49	49	35
15	44	16.4		05.2	339	49.6	150		33.1	104	30	4 01	34	5 01	43	53	22 58	30
16	59	16.1		05.0	354	23.6	150		22.7	104	35	3 42	19	4 48	36	56	23 03	28
17	74	15.8	-23	04.8	8	57.6	151	-11	12.3	104	40	3 19	4 01	4 34	9 29	58	23 09	25
18	89	15.5	-23	04.7	23	31.7	151	-11	01.9	105	45	2 49	3 39	4 16	9 20	62	23 15	23
19	104	15.2		04.5	38	05.8	151	-10	51.4	105	50	2 05	3 10	3 54	10	65	24	18
20	119	14.9		04.3	52	39.9	152		40.9	105	52	1 38	2 55	43	9 05	67	27	17
21	134	14.6		04.1	67	14.1	152		30.4	106	54	0 57	37	31	8 59	70	31	16
22	149	14.3		03.9	81	48.3	153		19.8	107	56	** **	2 16	17	53	72	36	13
23	164	14.0		03.7	96	22.6	153	-10	09.1	106	58	** **	1 47	3 01	8 47	74	23 41	11
24	179	13.7	-23	03.5	110	56.9		-9	58.5		60 S	** **	1 02	2 41	8 39	77	23 46	9
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 20 ^m 6		Mag: -4.0 PMG: 14 ^h 29 ^m				Mag: +1.6 PMG: 09 ^h 05 ^m				Mag: -1.8 PMG: 11 ^h 50 ^m				Mag: +0.5 PMG: 12 ^h 54 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	99	07.9	142	55.7	-18	37.7	223	35.9	-19	17.1	182	07.4	-23	11.4	166	08.5	-21	42.1
1	114	10.4	157	55.1		36.8	238	36.6		17.5	197	09.2		11.3	181	10.6		42.0
2	129	12.8	172	54.5		35.9	253	37.3		17.9	212	11.1		11.3	196	12.8		42.0
3	144	15.3	187	53.9		35.0	268	38.1		18.3	227	12.9		11.3	211	15.0		41.9
4	159	17.8	202	53.2		34.1	283	38.8		18.7	242	14.8		11.3	226	17.1		41.9
5	174	20.2	217	52.6	-18	33.2	298	39.5	-19	19.1	257	16.6	-23	11.3	241	19.3	-21	41.9
6	189	22.7	232	52.0	-18	32.3	313	40.3	-19	19.5	272	18.4	-23	11.2	256	21.4	-21	41.8
7	204	25.2	247	51.4		31.4	328	41.0		19.9	287	20.3		11.2	271	23.6		41.8
8	219	27.6	262	50.7		30.5	343	41.7		20.3	302	22.1		11.2	286	25.7		41.7
9	234	30.1	277	50.1		29.6	358	42.5		20.7	317	23.9		11.2	301	27.9		41.7
10	249	32.6	292	49.5		28.7	13	43.2		21.1	332	25.8		11.1	316	30.0		41.6
11	264	35.0	307	48.9	-18	27.8	28	43.9	-19	21.5	347	27.6	-23	11.1	331	32.2	-21	41.6
12	279	37.5	322	48.3	-18	26.9	43	44.7	-19	21.9	2	29.5	-23	11.1	346	34.3	-21	41.6
13	294	40.0	337	47.6		26.0	58	45.4		22.3	17	31.3		11.1	1	36.5		41.5
14	309	42.4	352	47.0		25.0	73	46.1		22.7	32	33.1		11.0	16	38.6		41.5
15	324	44.9	7	46.4		24.1	88	46.9		23.1	47	35.0		11.0	31	40.8		41.4
16	339	47.3	22	45.8		23.2	103	47.6		23.5	62	36.8		11.0	46	42.9		41.4
17	354	49.8	37	45.2	-18	22.3	118	48.3	-19	23.9	77	38.6	-23	11.0	61	45.1	-21	41.3
18	9	52.3	52	44.5	-18	21.4	133	49.1	-19	24.3	92	40.5	-23	10.9	76	47.2	-21	41.3
19	24	54.7	67	43.9		20.5	148	49.8		24.7	107	42.3		10.9	91	49.4		41.3
20	39	57.2	82	43.3		19.6	163	50.5		25.1	122	44.2		10.9	106	51.6		41.2
21	54	59.7	97	42.7		18.7	178	51.3		25.5	137	46.0		10.9	121	53.7		41.2
22	70	02.1	112	42.1		17.8	193	52.0		25.9	152	47.8		10.8	136	55.9		41.1
23	85	04.6	127	41.5		16.8	208	52.7		26.3	167	49.7		10.8	151	58.0		41.1
24	100	07.1	142	40.9	-18	15.9	223	53.5	-19	26.7	182	51.5	-23	10.8	167	00.2	-21	41.1
Dif.	—		-6		+9		+7		-4		+18		0		+22		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna						
	SD: 16'3				PHE {														
	PMG: 12 ^h 03. ^m 3				{														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº				
h	°	'	°	°	'	°	'	°		h m	h m	h m m		h m m					
0	179	13.7	-23	03.5	110	56.9	154	-9	58.5	107	60 N	15 04	16 01	16 58	11 52	8	22 33	75	
1	194	13.4		03.3	125	31.3	154		47.8	107	58	21	13	17 05	48	10	36	73	
2	209	13.1		03.1	140	05.7	154		37.1	108	56	36	22	11	44	13	39	71	
3	224	12.8		03.0	154	40.1	155		26.3	108	54	48	31	17	40	15	42	68	
4	239	12.5		02.8	169	14.6	155		15.5	108	52	15 59	39	23	37	17	44	66	
5	254	12.2	-23	02.6	183	49.1	156	-9	04.7	109	50	16 08	16 46	17 28	11 34	19	22 46	65	
6	269	11.9	-23	02.4	198	23.7	156	-8	53.8	109	45	16 29	17 02	17 39	11 28	22	22 51	61	
7	284	11.6		02.2	212	58.3	156		42.9	109	40	45	15	49	23	25	55	57	
8	299	11.3		02.0	227	32.9	156		32.0	110	35	16 59	27	17 59	18	28	22 58	55	
9	314	11.0		01.8	242	07.5	157		21.0	110	30	17 11	37	18 07	14	30	23 01	52	
10	329	10.8		01.6	256	42.2	157	-8	10.0	110	20	32	17 56	23	07	34	06	48	
11	344	10.5	-23	01.4	271	16.9	158	-7	59.0	110	10 N	17 50	18 13	18 39	11 01	38	23 11	44	
12	359	10.2	-23	01.2	285	51.7	158	-7	48.0	111	0	18 07	18 30	18 56	10 55	41	23 15	41	
13	14	09.9		01.0	300	26.5	158		36.9	111	10 S	24	18 47	19 14	49	45	19	38	
14	29	09.6		00.8	315	01.3	158		25.8	111	20	18 43	19 07	19 36	43	48	24	33	
15	44	09.3		00.6	329	36.1	159		14.7	112	30	19 05	32	20 05	36	52	28	30	
16	59	09.0		00.4	344	11.0	159	-7	03.5	112	35	17	19 47	23	32	55	31	27	
17	74	08.7	-23	00.2	358	45.9	159	-6	52.3	112	40	19 32	20 05	20 46	10 27	58	23 34	25	
18	89	08.4	-23	00.0	13	20.8	159	-6	41.1	112	45	19 50	20 27	21 16	10 22	60	23 38	22	
19	104	08.1	-22	59.7	27	55.7	160		29.9	112	50	20 12	20 56	21 59	15	65	42	18	
20	119	07.8		59.5	42	30.7	160		18.7	113	52	22	21 10	22 25	12	67	44	17	
21	134	07.5		59.3	57	05.7	160	-6	07.4	113	54	34	27	23 05	09	68	47	14	
22	149	07.2		59.1	71	40.7	160	-5	56.1	113	56	20 48	21 49	** ** *	05	71	49	12	
23	164	06.9		58.9	86	15.7	161		44.8	114	58	21 04	22 17	** ** *	10 01	73	52	10	
24	179	06.6	-22	58.7	100	50.8		-5	33.4		60 S	21 24	23 00	** ** *	9 56	76	23 55	7	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 17 ^h 16. ^m 7		Mag: -4.0 PMG: 14 ^h 30 ^m			Mag: +1.6 PMG: 09 ^h 04 ^m			Mag: -1.8 PMG: 11 ^h 47 ^m			Mag: +0.5 PMG: 12 ^h 50 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	100	07.1	142	40.9	-18	15.9	223	53.5	-19	26.7	182	51.5	-23	-10.8	167	00.2	-21	41.1	
1	115	09.5	157	40.2		15.0	238	54.2		27.1	197	53.3		-10.8	182	02.3		41.0	
2	130	12.0	172	39.6		14.1	253	54.9		27.5	212	55.2		-10.7	197	04.5		41.0	
3	145	14.4	187	39.0		13.2	268	55.7		27.9	227	57.0		-10.7	212	06.6		40.9	
4	160	16.9	202	38.4		12.2	283	56.4		28.3	242	58.9		-10.7	227	08.8		40.9	
5	175	19.4	217	37.8	-18	11.3	298	57.1	-19	28.7	258	00.7	-23	-10.7	242	10.9	-21	40.8	
6	190	21.8	232	37.2	-18	10.4	313	57.9	-19	29.1	273	02.5	-23	-10.6	257	13.1	-21	40.8	
7	205	24.3	247	36.6		09.5	328	58.6		29.5	288	04.4		-10.6	272	15.2		40.8	
8	220	26.8	262	36.0		08.6	343	59.3		29.9	303	06.2		-10.6	287	17.4		40.7	
9	235	29.2	277	35.4		07.6	359	59.0		30.3	318	08.1		-10.6	302	19.5		40.7	
10	250	31.7	292	34.8		06.7	14	00.8		30.6	333	09.9		-10.5	317	21.7		40.6	
11	265	34.2	307	34.1	-18	05.8	29	01.5	-19	31.0	348	11.7	-23	-10.5	332	23.8	-21	40.6	
12	280	36.6	322	33.5	-18	04.8	44	02.2	-19	31.4	3	13.6	-23	-10.5	347	26.0	-21	40.5	
13	295	39.1	337	32.9		03.9	59	03.0		31.8	18	15.4		-10.5	2	28.1		40.5	
14	310	41.6	352	32.3		03.0	74	03.7		32.2	33	17.2		-10.4	17	30.3		40.5	
15	325	44.0	7	31.7		02.1	89	04.4		32.6	48	19.1		-10.4	32	32.5		40.4	
16	340	46.5	22	31.1		01.1	104	05.2		33.0	63	20.9		-10.4	47	34.6		40.4	
17	355	48.9	37	30.5	-18	00.2	119	05.9	-19	33.4	78	22.8	-23	-10.4	62	36.8	-21	40.3	
18	10	51.4	52	29.9	-17	59.3	134	06.6	-19	33.8	93	24.6	-23	-10.3	77	38.9	-21	40.3	
19	25	53.9	67	29.3		58.3	149	07.3		34.2	108	26.4		-10.3	92	41.1		40.2	
20	40	56.3	82	28.7		57.4	164	08.1		34.6	123	28.3		-10.3	107	43.2		40.2	
21	55	58.8	97	28.1		56.5	179	08.8		35.0	138	30.1		-10.2	122	45.4		40.2	
22	71	01.3	112	27.5		55.5	194	09.5		35.3	153	31.9		-10.2	137	47.5		40.1	
23	86	03.7	127	26.9		54.6	209	10.2		35.7	168	33.8		-10.2	152	49.7		40.1	
24	101	06.2	142	26.3	-17	53.7	224	11.0	-19	36.1	183	35.6	-23	-10.2	167	51.8	-21	40.0	
Dif.	—		-6			+9	+7			-4			+18			+22			0

ESTRELLAS, 2019
POSICIONES APARENTES

A.S. ★

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	'	'	'	'	'	'	'	'	'	'	'	'
1 - α And	<i>Alpheratz</i>	2.1	357	39.7	39.8	39.8	39.7	39.6	39.3	39.1	38.9	38.7	38.7	38.8	38.8
2 - β Cas	<i>Caph</i>	2.3	357	27.3	27.5	27.5	27.5	27.2	26.8	26.5	26.2	26.0	26.0	26.1	26.3
3 - γ Peg	<i>Algenib</i>	2.8	356	27.0	27.1	27.1	27.1	26.9	26.7	26.5	26.3	26.1	26.1	26.1	26.2
4 - α Phe	<i>Ankaa</i>	2.4	353	12.1	12.2	12.3	12.2	12.0	11.8	11.5	11.2	11.1	11.0	11.1	11.2
5 - α Cas	<i>Schedar</i>	2.2	349	36.3	36.5	36.6	36.6	36.4	36.0	35.7	35.3	35.1	35.1	35.1	35.3
6 - β Cet	<i>Diphda</i>	2.0	348	52.2	52.2	52.3	52.2	52.1	51.9	51.7	51.4	51.3	51.2	51.2	51.3
7 - γ Cas	<i>Navi</i>	1.6	345	32.1	32.4	32.6	32.5	32.3	32.0	31.6	31.2	31.0	30.9	30.9	31.1
8 - β And	<i>Mirach</i>	2.1	342	18.2	18.3	18.4	18.4	18.2	18.0	17.7	17.5	17.3	17.2	17.2	17.3
9 - α Eri	<i>Achernar</i>	0.5	335	23.9	24.2	24.3	24.4	24.3	24.0	23.7	23.3	23.1	22.9	22.9	23.1
10 - γ ¹ And	<i>Almak</i>	2.3	328	44.0	44.2	44.3	44.3	44.2	44.0	43.7	43.4	43.2	43.1	43.0	43.0
12 - α Ari	<i>Hamal</i>	2.0	327	56.4	56.5	56.6	56.6	56.6	56.4	56.1	55.9	55.7	55.6	55.5	55.5
11 - α UMi	<i>Polaris</i>	2.0	315	54.5	68.9	81.1	88.9	88.9	81.0	68.2	52.8	38.6	28.2	23.4	26.2
13 - θ ¹ Eri	<i>Acamar</i>	3.3	315	15.3	15.5	15.6	15.7	15.7	15.6	15.3	15.1	14.8	14.7	14.6	14.6
14 - α Cet	<i>Menkar</i>	2.5	314	10.9	11.0	11.1	11.2	11.2	11.0	10.8	10.6	10.4	10.2	10.1	10.1
15 - β Per	<i>Algol</i>	2.1	312	38.8	39.0	39.1	39.2	39.2	39.0	38.8	38.5	38.2	38.0	37.9	37.8
16 - α Per	<i>Mirfak</i>	1.8	308	34.6	34.8	35.0	35.1	35.1	34.9	34.6	34.3	34.0	33.7	33.6	33.5
17 - η Tau	<i>Alcyone</i>	2.9	302	50.7	50.8	51.0	51.1	51.1	50.9	50.7	50.5	50.2	50.1	49.9	49.8
18 - γ Eri	<i>Zaurak</i>	3.0	300	16.2	16.3	16.5	16.6	16.6	16.5	16.3	16.1	15.9	15.7	15.6	15.5
19 - α Tau	<i>Aldebaran</i>	0.9	290	44.8	44.8	45.0	45.1	45.1	45.0	44.9	44.6	44.4	44.2	44.0	43.9
20 - β Ori	<i>Rigel</i>	0.1	281	8.1	8.2	8.3	8.5	8.5	8.5	8.3	8.2	7.9	7.7	7.6	7.4
21 - α Aur	<i>Capella</i>	0.1	280	28.4	28.5	28.7	28.9	29.0	28.9	28.7	28.4	28.1	27.8	27.6	27.4
22 - γ Ori	<i>Bellatrix</i>	1.6	278	27.6	27.7	27.8	28.0	28.0	28.0	27.8	27.6	27.4	27.2	27.0	26.9
23 - β Tau	<i>Elnath</i>	1.7	278	7.5	7.6	7.7	7.8	7.9	7.8	7.7	7.5	7.2	7.0	6.8	6.6
24 - δ Ori	<i>Mintaka</i>	2.2	276	45.2	45.3	45.4	45.5	45.6	45.6	45.5	45.3	45.0	44.8	44.6	44.5
25 - ε Ori	<i>Alnilam</i>	1.7	275	42.2	42.3	42.4	42.5	42.6	42.6	42.5	42.3	42.1	41.8	41.6	41.5
26 - ζ Ori	<i>Alnitak</i>	1.9	274	34.1	34.2	34.3	34.4	34.5	34.5	34.4	34.2	34.0	33.8	33.6	33.4
27 - κ Ori	<i>Saiph</i>	2.1	272	50.0	50.1	50.2	50.3	50.4	50.4	50.3	50.1	49.9	49.7	49.5	49.3
28 - α Ori	<i>Betelgeuse</i>	0.4	270	56.9	56.9	57.0	57.2	57.2	57.2	57.1	56.9	56.7	56.5	56.3	56.1
29 - β Aur	<i>Menkalinan</i>	1.9	269	46.0	46.1	46.2	46.4	46.5	46.5	46.3	46.1	45.8	45.5	45.2	45.0
30 - β CMa	<i>Mirzam</i>	2.0	264	6.8	6.8	6.9	7.1	7.2	7.2	7.1	7.0	6.8	6.6	6.4	6.2
31 - α Car	<i>Canopus</i>	-0.7	263	53.9	54.1	54.3	54.6	54.8	54.9	54.8	54.7	54.4	54.1	53.8	53.6
32 - γ Gem	<i>Alhena</i>	1.9	260	17.7	17.8	17.9	18.0	18.1	18.1	18.0	17.8	17.6	17.4	17.2	17.0
33 - α CMa	<i>Sirius</i>	-1.5	258	30.0	30.1	30.2	30.3	30.5	30.5	30.4	30.3	30.1	29.9	29.7	29.5
34 - ε CMa	<i>Adhara</i>	1.5	255	9.2	9.2	9.3	9.5	9.6	9.7	9.6	9.5	9.3	9.1	8.9	8.7
35 - δ CMa	<i>Wezen</i>	1.9	252	42.3	42.3	42.4	42.6	42.7	42.8	42.8	42.6	42.5	42.2	42.0	41.8
36 - η CMa	<i>Aludra</i>	2.5	248	47.0	47.1	47.2	47.3	47.5	47.6	47.5	47.4	47.2	47.0	46.8	46.6
37 - α ¹ Gem	<i>Castor</i>	2.0	246	2.7	2.7	2.8	2.9	3.0	3.1	3.0	2.9	2.7	2.4	2.2	1.9
38 - α CMi	<i>Procyon</i>	0.4	244	55.4	55.4	55.5	55.6	55.7	55.8	55.7	55.6	55.4	55.2	55.0	54.8
39 - β Gem	<i>Pollux</i>	1.1	243	22.7	22.7	22.8	22.9	23.0	23.1	23.0	22.9	22.7	22.5	22.2	22.0
40 - ζ Pup	<i>Naos</i>	2.3	238	55.9	55.9	56.0	56.2	56.4	56.5	56.5	56.4	56.3	56.0	55.8	55.5
41 - γ ² Vel	<i>Regor</i>	1.8	237	27.8	27.8	27.9	28.2	28.4	28.5	28.6	28.5	28.3	28.1	27.8	27.5
42 - ε Car	<i>Avior</i>	1.9	234	15.8	15.8	16.0	16.3	16.6	16.9	17.0	16.9	16.8	16.4	16.1	15.7
43 - δ Velorum		2.0	228	41.0	41.0	41.2	41.4	41.7	41.9	42.0	42.0	41.8	41.5	41.2	40.9
44 - ζ Hya	<i>Hydrobius</i>	3.1	225	53.9	53.9	53.9	54.0	54.1	54.2	54.2	54.1	54.0	53.8	53.6	53.3
45 - λ Vel	<i>Suhail</i>	2.2	222	49.2	49.2	49.2	49.4	49.6	49.7	49.8	49.8	49.7	49.5	49.2	48.9
46 - β Car	<i>Miaplacidus</i>	1.7	221	38.0	38.0	38.2	38.6	39.0	39.4	39.7	39.8	39.6	39.3	38.7	38.3
47 - ι Car	<i>Aspidiske</i>	2.3	220	35.4	35.4	35.5	35.7	36.0	36.3	36.4	36.5	36.4	36.1	35.7	35.4
48 - α Lyn	<i>Elvashak</i>	3.1	219	26.8	26.7	26.7	26.8	26.9	27.0	27.1	27.0	26.9	26.7	26.4	26.1
49 - α Hya	<i>Alphard</i>	2.0	217	52.1	52.0	52.0	52.1	52.2	52.3	52.3	52.3	52.2	52.0	51.8	51.5
50 - α Leo	<i>Regulus</i>	1.4	207	39.2	39.1	39.1	39.1	39.2	39.3	39.4	39.3	39.3	39.1	38.9	38.7

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	'	'	'	'	'	'	'	'	'	'	'	'
1 - α And	<i>Alpheratz</i>	2.1	+29	11.7	11.7	11.6	11.5	11.5	11.6	11.7	11.8	11.9	12.0	12.1	12.1
2 - β Cas	<i>Caph</i>	2.3	+59	15.4	15.3	15.2	15.1	15.0	15.0	15.1	15.2	15.4	15.6	15.7	15.8
3 - γ Peg	<i>Algenib</i>	2.8	+15	17.3	17.2	17.2	17.2	17.2	17.3	17.4	17.5	17.6	17.6	17.7	17.7
4 - α Phe	<i>Ankaa</i>	2.4	-42	12.5	12.5	12.4	12.2	12.1	11.9	11.9	11.9	11.9	12.0	12.1	12.2
5 - α Cas	<i>Schedar</i>	2.2	+56	38.6	38.5	38.4	38.3	38.2	38.2	38.3	38.4	38.6	38.7	38.9	39.0
6 - β Cet	<i>Diphda</i>	2.0	-17	53.2	53.2	53.2	53.1	53.0	52.8	52.7	52.7	52.7	52.7	52.8	52.8
7 - γ Cas	<i>Navi</i>	1.6	+60	49.3	49.2	49.1	49.0	48.9	48.9	48.9	49.1	49.2	49.4	49.5	49.6
8 - β And	<i>Mirach</i>	2.1	+35	43.3	43.2	43.2	43.1	43.1	43.1	43.1	43.3	43.4	43.5	43.6	43.6
9 - α Eri	<i>Achernar</i>	0.5	-57	8.9	8.8	8.7	8.5	8.4	8.2	8.1	8.1	8.1	8.3	8.4	8.5
10 - γ^1 And	<i>Almak</i>	2.3	+42	25.3	25.2	25.2	25.1	25.0	25.0	25.1	25.1	25.3	25.4	25.5	25.6
12 - α Ari	<i>Hamal</i>	2.0	+23	33.1	33.0	33.0	32.9	32.9	33.0	33.0	33.1	33.2	33.3	33.3	33.4
11 - α UMi	<i>Polaris</i>	2.0	+89	20.8	20.9	20.8	20.7	20.5	20.4	20.4	20.4	20.5	20.6	20.8	21.0
13 - θ^1 Eri	<i>Acamar</i>	3.3	-40	14.1	14.1	14.1	14.0	13.8	13.6	13.5	13.4	13.4	13.5	13.6	13.8
14 - α Cet	<i>Menkar</i>	2.5	+4	9.6	9.6	9.6	9.6	9.7	9.7	9.8	9.9	10.0	10.0	10.0	9.9
15 - β Per	<i>Algol</i>	2.1	+41	1.7	1.7	1.7	1.6	1.5	1.5	1.5	1.6	1.7	1.7	1.8	1.9
16 - α Per	<i>Mirfak</i>	1.8	+49	55.7	55.7	55.7	55.6	55.5	55.5	55.5	55.5	55.6	55.7	55.8	55.9
17 - η Tau	<i>Alcyone</i>	2.9	+24	9.7	9.7	9.7	9.7	9.6	9.6	9.7	9.7	9.8	9.8	9.9	9.9
18 - γ Eri	<i>Zaurak</i>	3.0	-13	27.6	27.6	27.6	27.6	27.5	27.4	27.2	27.1	27.1	27.1	27.2	27.3
19 - α Tau	<i>Aldebaran</i>	0.9	+16	32.7	32.7	32.7	32.6	32.7	32.7	32.7	32.8	32.8	32.8	32.8	32.8
20 - β Ori	<i>Rigel</i>	0.1	-8	11.0	11.1	11.1	11.1	11.0	10.9	10.8	10.7	10.7	10.7	10.8	10.8
21 - α Aur	<i>Capella</i>	0.1	+46	0.9	1.0	1.0	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.9
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.8	21.8	21.8	21.8	21.8	21.9	21.9	22.0	22.0	22.0	22.0	21.9
23 - β Tau	<i>Elnath</i>	1.7	+28	37.3	37.3	37.3	37.3	37.2	37.2	37.2	37.2	37.3	37.3	37.3	37.3
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.3	17.4	17.4	17.4	17.3	17.3	17.2	17.1	17.1	17.1	17.1	17.2
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.6	11.7	11.7	11.7	11.6	11.5	11.5	11.4	11.3	11.4	11.4	11.5
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.2	56.2	56.2	56.2	56.2	56.1	56.0	55.9	55.9	55.9	56.0	56.0
27 - κ Ori	<i>Saiph</i>	2.1	-9	40.0	40.1	40.1	40.1	40.0	39.9	39.8	39.7	39.7	39.7	39.8	39.9
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.4	24.4	24.4	24.4	24.4	24.5	24.5	24.6	24.6	24.6	24.6	24.5
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.8	56.9	56.9	56.9	56.9	56.8	56.7	56.7	56.7	56.7	56.7	56.8
30 - β CMa	<i>Mirzam</i>	2.0	-17	58.1	58.2	58.3	58.3	58.2	58.1	58.0	57.9	57.8	57.8	57.9	58.0
31 - α Car	<i>Canopus</i>	-0.7	-52	42.6	42.7	42.8	42.8	42.7	42.5	42.4	42.2	42.1	42.1	42.2	42.4
32 - γ Gem	<i>Alhena</i>	1.9	+16	22.8	22.8	22.8	22.8	22.8	22.8	22.9	22.9	22.9	22.9	22.8	22.8
33 - α CMa	<i>Sirius</i>	-1.5	-16	44.7	44.8	44.9	44.9	44.8	44.7	44.6	44.5	44.5	44.5	44.5	44.7
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	60.1	60.2	60.2	60.2	60.2	60.1	59.9	59.8	59.7	59.7	59.8	59.9
35 - δ CMa	<i>Wezen</i>	1.9	-26	25.6	25.7	25.8	25.8	25.7	25.6	25.5	25.4	25.3	25.3	25.4	25.5
36 - η CMa	<i>Aludra</i>	2.5	-29	20.6	20.7	20.8	20.8	20.7	20.6	20.5	20.4	20.3	20.3	20.4	20.5
37 - α^1 Gem	<i>Castor</i>	2.0	+31	50.6	50.7	50.7	50.7	50.7	50.7	50.7	50.7	50.6	50.6	50.5	50.5
38 - α CMi	<i>Procyon</i>	0.4	+5	10.4	10.4	10.4	10.4	10.4	10.4	10.5	10.5	10.5	10.5	10.4	10.4
39 - β Gem	<i>Pollux</i>	1.1	+27	58.6	58.7	58.7	58.7	58.7	58.7	58.7	58.7	58.6	58.6	58.6	58.5
40 - ζ Pup	<i>Naos</i>	2.3	-40	3.5	3.6	3.7	3.8	3.8	3.7	3.5	3.4	3.3	3.3	3.3	3.4
41 - γ^2 Vel	<i>Regor</i>	1.8	-47	23.6	23.8	23.9	24.0	23.9	23.8	23.7	23.5	23.4	23.4	23.4	23.6
42 - ϵ Car	<i>Avior</i>	1.9	-59	34.2	34.4	34.6	34.6	34.6	34.5	34.4	34.2	34.1	34.0	34.1	34.2
43 - δ Velorum		2.0	-54	46.7	46.9	47.0	47.1	47.1	47.0	46.9	46.7	46.6	46.5	46.6	46.7
44 - ζ Hya	<i>Hydrobius</i>	3.1	+5	52.3	52.2	52.2	52.2	52.2	52.3	52.3	52.3	52.3	52.3	52.2	52.2
45 - λ Vel	<i>Suhail</i>	2.2	-43	30.5	30.7	30.8	30.9	30.9	30.9	30.8	30.6	30.5	30.4	30.5	30.6
46 - β Car	<i>Miaplacidus</i>	1.7	-69	47.6	47.8	48.0	48.1	48.1	48.1	48.0	47.8	47.6	47.5	47.5	47.6
47 - ι Car	<i>Aspidiske</i>	2.3	-59	21.2	21.4	21.6	21.7	21.7	21.6	21.5	21.4	21.2	21.1	21.1	21.2
48 - α Lyn	<i>Elvashak</i>	3.1	+34	18.5	18.6	18.6	18.7	18.7	18.7	18.7	18.7	18.6	18.5	18.4	18.3
49 - α Hya	<i>Alphard</i>	2.0	-8	44.5	44.6	44.7	44.7	44.7	44.6	44.6	44.5	44.5	44.5	44.5	44.6
50 - α Leo	<i>Regulus</i>	1.4	+11	52.4	52.3	52.3	52.3	52.4	52.4	52.4	52.4	52.4	52.4	52.3	52.2

ESTRELLAS, 2019
POSICIONES APARENTES

A.S. ★

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	'	'	'	'	'	'	'	'	'	'	'	'
51 - μ Velorum		2.7	198	5.9	5.7	5.7	5.8	5.9	6.1	6.3	6.3	6.3	6.2	5.9	5.6
52 - ν Hydrae		3.1	197	21.5	21.3	21.3	21.3	21.4	21.5	21.6	21.6	21.6	21.5	21.3	21.0
53 - β UMa <i>Merak</i>		2.4	194	15.3	15.1	15.0	15.0	15.2	15.4	15.6	15.7	15.6	15.5	15.2	14.8
54 - α UMa <i>Dubhe</i>		1.8	193	46.7	46.4	46.3	46.3	46.6	46.8	47.0	47.1	47.1	46.9	46.6	46.1
55 - β Leo <i>Denebola</i>		2.1	182	29.7	29.5	29.4	29.4	29.4	29.5	29.6	29.6	29.6	29.6	29.4	29.2
56 - γ Crv <i>Gienah</i>		2.6	175	48.3	48.1	48.0	47.9	48.0	48.0	48.1	48.2	48.2	48.2	48.0	47.8
57 - α ¹ Cru <i>Acrux</i>		1.4	173	4.8	4.5	4.3	4.2	4.4	4.6	4.9	5.1	5.3	5.2	5.0	4.6
58 - γ Cru <i>Gacrux</i>		1.6	171	56.5	56.2	56.0	55.9	56.0	56.2	56.4	56.6	56.7	56.7	56.5	56.1
59 - γ Cen <i>Muhlifain</i>		2.2	169	21.4	21.1	21.0	20.9	21.0	21.1	21.2	21.4	21.5	21.5	21.3	21.0
60 - β Cru <i>Mimosa</i>		1.3	167	47.3	47.0	46.8	46.7	46.8	46.9	47.2	47.4	47.5	47.5	47.3	47.0
61 - ε UMa <i>Alioth</i>		1.8	166	17.3	16.9	16.7	16.7	16.7	16.9	17.1	17.3	17.4	17.4	17.3	17.0
62 - α ² CVn <i>Cor Caroli</i>		2.9	165	46.5	46.2	46.0	46.0	46.0	46.1	46.2	46.3	46.4	46.4	46.3	46.1
63 - ε Vir <i>Vindemiatrix</i>		2.8	164	13.3	13.1	13.0	12.9	12.9	13.0	13.0	13.1	13.2	13.2	13.1	12.8
64 - ζ UMa <i>Mizar</i>		2.3	158	49.9	49.6	49.3	49.2	49.3	49.4	49.6	49.8	50.0	50.0	49.9	49.6
65 - α Vir <i>Spica</i>		1.0	158	27.2	27.0	26.8	26.8	26.7	26.8	26.9	27.0	27.0	27.0	26.9	26.7
66 - η UMa <i>Alkaid</i>		1.9	152	56.0	55.6	55.4	55.3	55.3	55.4	55.6	55.7	55.9	56.0	55.9	55.7
67 - β Cen <i>Hadar</i>		0.6	148	42.6	42.1	41.8	41.6	41.6	41.7	41.8	42.1	42.3	42.4	42.3	42.0
68 - θ Cen <i>Menkent</i>		2.1	148	3.1	2.9	2.7	2.5	2.5	2.5	2.6	2.7	2.8	2.9	2.8	2.6
69 - α Boo <i>Arcturus</i>		-0.0	145	52.3	52.1	51.9	51.8	51.8	51.8	51.9	52.0	52.1	52.1	52.1	51.9
70 - α ¹ Cen <i>Rigil Kent</i>		0.0	139	46.9	46.4	46.1	45.8	45.8	45.8	46.0	46.3	46.5	46.7	46.6	46.3
71 - α ² Lib <i>Zubenelgenubi</i>		2.8	137	1.3	1.1	0.9	0.7	0.6	0.6	0.7	0.8	0.9	1.0	0.9	0.8
72 - β UMi <i>Kochab</i>		2.1	137	20.6	19.9	19.4	19.0	18.9	19.2	19.7	20.2	20.8	21.1	21.2	21.0
73 - β Lib <i>Zubeneschamali</i>		2.6	130	29.9	29.6	29.4	29.3	29.2	29.1	29.2	29.3	29.4	29.5	29.4	29.3
74 - α CrB <i>Alphecca</i>		2.2	126	8.0	7.7	7.5	7.3	7.2	7.2	7.3	7.4	7.5	7.7	7.7	7.6
75 - α Ser <i>Unukalhai</i>		2.7	123	42.3	42.1	41.9	41.7	41.6	41.5	41.6	41.7	41.8	41.9	41.9	41.8
76 - α Sco <i>Antares</i>		0.9	112	21.9	21.6	21.4	21.1	21.0	20.9	20.9	21.0	21.1	21.2	21.3	21.2
77 - α TrA <i>Atria</i>		1.9	107	20.7	20.1	19.6	19.1	18.7	18.5	18.5	18.7	19.1	19.5	19.7	19.6
78 - ε Scorpii		2.3	107	9.6	9.3	9.1	8.8	8.6	8.5	8.5	8.6	8.7	8.9	8.9	8.9
79 - η Oph <i>Sabik</i>		2.4	102	8.5	8.2	8.0	7.8	7.6	7.5	7.5	7.5	7.7	7.8	7.8	7.8
80 - α ¹ Her <i>Rasalgethi</i>		3.1	101	7.8	7.5	7.3	7.1	7.0	6.9	6.8	6.9	7.0	7.2	7.3	7.2
81 - λ Sco <i>Shaula</i>		1.6	96	17.1	16.9	16.6	16.3	16.1	15.9	15.9	15.9	16.1	16.3	16.3	16.3
82 - α Oph <i>Rasalhague</i>		2.1	96	3.2	3.0	2.8	2.6	2.4	2.3	2.3	2.3	2.5	2.6	2.7	2.7
83 - θ Sco <i>Sargas</i>		1.9	95	20.4	20.1	19.8	19.5	19.3	19.1	19.1	19.1	19.3	19.5	19.6	19.5
84 - γ Dra <i>Eltanin</i>		2.2	90	44.9	44.6	44.4	44.1	43.8	43.7	43.7	43.8	44.1	44.3	44.6	44.6
85 - ε Sgr <i>Kaus Australis</i>		1.9	83	39.2	39.0	38.7	38.4	38.2	38.0	37.9	37.9	38.0	38.2	38.3	38.3
86 - α Lyr <i>Vega</i>		0.0	80	36.8	36.6	36.4	36.2	35.9	35.8	35.7	35.8	36.0	36.1	36.3	36.4
87 - σ Sgr <i>Nunki</i>		2.0	75	54.0	53.8	53.6	53.3	53.1	52.9	52.8	52.8	52.9	53.0	53.2	53.2
88 - α Aql <i>Altair</i>		0.8	62	4.9	4.8	4.6	4.4	4.2	4.0	3.8	3.8	3.9	4.0	4.1	4.2
89 - γ Cyg <i>Sadr</i>		2.2	54	16.9	16.8	16.7	16.4	16.2	15.9	15.8	15.7	15.8	16.0	16.2	16.3
90 - α Pav <i>Peacock</i>		1.9	53	13.9	13.7	13.5	13.1	12.8	12.4	12.1	12.0	12.1	12.3	12.6	12.7
91 - α Cyg <i>Deneb</i>		1.3	49	29.3	29.3	29.2	28.9	28.6	28.4	28.2	28.2	28.3	28.4	28.6	28.8
92 - α Cep <i>Alderamin</i>		2.4	40	15.2	15.2	15.1	14.7	14.4	14.0	13.7	13.7	13.8	14.0	14.4	14.7
93 - ε Peg <i>Enif</i>		0.7	33	43.7	43.7	43.6	43.4	43.2	43.0	42.8	42.7	42.6	42.7	42.8	42.9
94 - δ Cap <i>Deneb Algedi</i>		2.9	32	59.2	59.2	59.1	58.9	58.7	58.5	58.2	58.1	58.1	58.2	58.3	58.4
95 - α Gru <i>Al Na'ir</i>		1.7	27	39.4	39.4	39.3	39.0	38.8	38.4	38.1	38.0	37.9	38.0	38.2	38.3
96 - β Gruis		2.1	19	3.7	3.8	3.7	3.5	3.3	2.9	2.6	2.4	2.3	2.4	2.5	2.7
97 - α PsA <i>Fomalhaut</i>		1.2	15	20.0	20.1	20.0	19.9	19.7	19.4	19.2	19.0	18.9	18.9	19.0	19.1
98 - β Peg <i>Scheat</i>		2.4	13	49.9	50.0	49.9	49.8	49.6	49.4	49.1	49.0	48.9	48.9	49.0	49.1
99 - α Peg <i>Markab</i>		2.5	13	34.7	34.8	34.8	34.6	34.5	34.2	34.0	33.8	33.8	33.8	33.9	33.9

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	'	'	'	'	'	'	'	'	'	'	'	'
51 - μ Velorum		2.7	-49	31.0	31.2	31.4	31.5	31.6	31.6	31.5	31.4	31.3	31.2	31.1	31.2
52 - ν Hydrae		3.1	-16	17.5	17.7	17.7	17.8	17.8	17.8	17.7	17.7	17.6	17.6	17.6	17.7
53 - β UMa	<i>Merak</i>	2.4	+56	16.6	16.7	16.8	16.9	17.0	17.0	17.0	16.9	16.7	16.6	16.4	16.3
54 - α UMa	<i>Dubhe</i>	1.8	+61	38.7	38.7	38.9	39.0	39.1	39.1	39.1	38.9	38.8	38.6	38.5	38.4
55 - β Leo	<i>Denebola</i>	2.1	+14	27.9	27.8	27.8	27.9	27.9	28.0	28.0	28.0	28.0	27.9	27.8	27.7
56 - γ Crv	<i>Gienah</i>	2.6	-17	38.7	38.8	38.9	39.0	39.0	39.0	39.0	38.9	38.9	38.8	38.8	38.9
57 - α^1 Cru	<i>Acrux</i>	1.4	-63	11.9	12.0	12.2	12.4	12.5	12.6	12.6	12.5	12.4	12.2	12.2	12.1
58 - γ Cru	<i>Gacrux</i>	1.6	-57	12.8	13.0	13.1	13.3	13.4	13.5	13.5	13.4	13.3	13.2	13.1	13.1
59 - γ Cen	<i>Muhlifain</i>	2.2	-49	3.5	3.7	3.8	3.9	4.1	4.1	4.1	4.0	3.9	3.8	3.8	3.8
60 - β Cru	<i>Mimosa</i>	1.3	-59	47.2	47.3	47.5	47.6	47.8	47.8	47.9	47.8	47.7	47.5	47.5	47.4
61 - ϵ UMa	<i>Alioth</i>	1.8	+55	51.2	51.2	51.3	51.4	51.6	51.6	51.7	51.6	51.5	51.3	51.1	51.0
62 - α^2 CVn	<i>Cor Caroli</i>	2.9	+38	12.8	12.8	12.8	12.9	13.0	13.1	13.2	13.1	13.0	12.9	12.7	12.6
63 - ϵ Vir	<i>Vindemiatrix</i>	2.8	+10	51.4	51.4	51.3	51.4	51.4	51.5	51.5	51.5	51.5	51.4	51.3	51.2
64 - ζ UMa	<i>Mizar</i>	2.3	+54	49.4	49.4	49.4	49.6	49.7	49.8	49.8	49.8	49.7	49.5	49.3	49.2
65 - α Vir	<i>Spica</i>	1.0	-11	15.5	15.6	15.6	15.7	15.7	15.7	15.7	15.6	15.6	15.6	15.6	15.7
66 - η UMa	<i>Alkaid</i>	1.9	+49	13.0	12.9	13.0	13.1	13.2	13.3	13.4	13.4	13.3	13.1	12.9	12.8
67 - β Cen	<i>Hadar</i>	0.6	-60	27.4	27.5	27.7	27.8	28.0	28.1	28.1	28.1	28.0	27.9	27.8	27.7
68 - θ Cen	<i>Menkent</i>	2.1	-36	27.5	27.6	27.7	27.8	27.9	27.9	28.0	27.9	27.9	27.8	27.7	27.7
69 - α Boo	<i>Arcturus</i>	-0.0	+19	5.0	4.9	4.9	5.0	5.0	5.1	5.2	5.2	5.1	5.1	4.9	4.8
70 - α^1 Cen	<i>Rigil Kent</i>	0.0	-60	54.4	54.5	54.6	54.7	54.9	55.0	55.0	55.0	55.0	54.9	54.7	54.7
71 - α^2 Lib	<i>Zubenelgenubi</i>	2.8	-16	7.0	7.1	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
72 - β UMi	<i>Kochab</i>	2.1	+74	4.5	4.4	4.5	4.6	4.7	4.9	5.0	4.9	4.9	4.7	4.5	4.3
73 - β Lib	<i>Zubeneschamali</i>	2.6	-9	27.0	27.1	27.1	27.2	27.2	27.1	27.1	27.1	27.1	27.1	27.1	27.2
74 - α CrB	<i>Alphecca</i>	2.2	+26	39.0	38.9	38.9	39.0	39.1	39.2	39.3	39.3	39.3	39.2	39.1	38.9
75 - α Ser	<i>Unukalhai</i>	2.7	+6	22.0	22.0	21.9	21.9	22.0	22.1	22.1	22.1	22.1	22.1	22.0	21.9
76 - α Sco	<i>Antares</i>	0.9	-26	28.2	28.2	28.3	28.3	28.3	28.4	28.4	28.4	28.4	28.4	28.3	28.3
77 - α TrA	<i>Atria</i>	1.9	-69	3.3	3.3	3.3	3.4	3.5	3.6	3.7	3.8	3.8	3.8	3.7	3.6
78 - ϵ Scorpii		2.3	-34	19.4	19.4	19.4	19.5	19.5	19.6	19.6	19.6	19.6	19.6	19.6	19.5
79 - η Oph	<i>Sabik</i>	2.4	-15	44.7	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8
80 - α^1 Her	<i>Rasalgethi</i>	3.1	+14	22.2	22.1	22.0	22.1	22.1	22.2	22.3	22.4	22.4	22.4	22.3	22.2
81 - λ Sco	<i>Shaula</i>	1.6	-37	6.8	6.8	6.8	6.8	6.9	6.9	7.0	7.0	7.0	7.0	7.0	6.9
82 - α Oph	<i>Rasalhague</i>	2.1	+12	32.8	32.7	32.7	32.7	32.8	32.9	33.0	33.0	33.1	33.0	33.0	32.9
83 - θ Sco	<i>Sargas</i>	1.9	-43	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.6	0.6	0.6	0.5	0.5
84 - γ Dra	<i>Eltanin</i>	2.2	+51	29.2	29.0	29.0	29.0	29.1	29.3	29.4	29.5	29.6	29.6	29.5	29.3
85 - ϵ Sgr	<i>Kaus Australis</i>	1.9	-34	22.4	22.3	22.3	22.3	22.3	22.3	22.4	22.4	22.5	22.5	22.4	22.4
86 - α Lyr	<i>Vega</i>	0.0	+38	48.1	48.0	47.9	47.9	48.0	48.1	48.3	48.4	48.5	48.5	48.4	48.3
87 - σ Sgr	<i>Nunki</i>	2.0	-26	16.3	16.3	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.3	16.3	16.2
88 - α Aql	<i>Altair</i>	0.8	+8	55.2	55.1	55.0	55.1	55.1	55.2	55.3	55.4	55.4	55.4	55.4	55.4
89 - γ Cyg	<i>Sadr</i>	2.2	+40	19.1	19.0	18.9	18.8	18.9	19.0	19.2	19.3	19.4	19.5	19.5	19.4
90 - α Pav	<i>Peacock</i>	1.9	-56	40.4	40.3	40.2	40.1	40.1	40.1	40.2	40.3	40.4	40.4	40.4	40.4
91 - α Cyg	<i>Deneb</i>	1.3	+45	21.0	20.8	20.7	20.7	20.7	20.8	21.0	21.1	21.3	21.4	21.4	21.3
92 - α Cep	<i>Alderamin</i>	2.4	+62	40.1	39.9	39.8	39.7	39.7	39.8	40.0	40.1	40.3	40.4	40.5	40.4
93 - ϵ Peg	<i>Enif</i>	0.7	+9	57.7	57.7	57.6	57.6	57.7	57.8	57.9	58.0	58.0	58.1	58.1	58.0
94 - δ Cap	<i>Deneb Algedi</i>	2.9	-16	2.6	2.5	2.5	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.3	2.3
95 - α Gru	<i>Al Na'ir</i>	1.7	-46	52.3	52.2	52.1	52.0	51.9	51.8	51.8	51.9	52.0	52.1	52.1	52.1
96 - β Gruis		2.1	-46	47.4	47.3	47.2	47.0	46.9	46.8	46.8	46.8	46.9	47.0	47.1	47.1
97 - α PsA	<i>Fomalhaut</i>	1.2	-29	31.5	31.5	31.4	31.3	31.2	31.1	31.0	31.0	31.0	31.1	31.2	31.2
98 - β Peg	<i>Scheat</i>	2.4	+28	11.2	11.1	11.0	11.0	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.6
99 - α Peg	<i>Markab</i>	2.5	+15	18.4	18.4	18.3	18.3	18.3	18.4	18.5	18.6	18.7	18.8	18.8	18.8

Horas UT de paso por el meridiano origen el primer día de cada mes

Nº	NOMBRE	Mag	Ene	Feb	Mar	Abr	May	Jun	Jul
			h m	h m	h m	h m	h m	h m	h m
1 - α Andromedae	Alpheratz	2.1	17 25	15 23	13 33	11 31	9 33	7 31	5 33
2 - β Cassiopeae	Caph	2.3	17 26	15 24	13 34	11 32	9 34	7 32	5 34
6 - β Ceti	Diphda	2.0	18 00	15 58	14 08	12 06	10 08	8 06	6 09
9 - α Eridani	Achernar	0.5	18 54	16 52	15 02	13 00	11 02	9 00	7 02
11 - α Arietis	Hamal	2.0	19 24	17 22	15 32	13 30	11 32	9 30	7 32
13 - θ^1 Eridani	Acamar	3.3	20 14	18 12	16 22	14 20	12 22	10 21	8 23
16 - α Persei	Mirfak	1.8	20 41	18 39	16 49	14 47	12 49	10 47	8 49
19 - α Tauri	Aldebaran	0.9	21 52	19 50	18 00	15 58	14 00	11 58	10 00
20 - β Orionis	Rigel	0.1	22 30	20 28	18 38	16 36	14 38	12 37	10 39
21 - α Aurigae	Capella	0.1	22 33	20 31	18 41	16 39	14 41	12 39	10 41
22 - γ Orionis	Bellatrix	1.6	22 41	20 39	18 49	16 47	14 49	12 47	10 49
28 - α Orionis	Betelgeuse	0.4	23 11	21 09	19 19	17 17	15 19	13 17	11 19
31 - α Carinae	Canopus	-0.7	23 39	21 37	19 47	17 45	15 47	13 45	11 47
33 - α Canis Majoris	Sirius	-1.5	0 05	21 59	20 09	18 07	16 09	14 07	12 09
34 - ϵ Canis Majoris	Adhara	1.5	0 18	22 12	20 22	18 20	16 22	14 20	12 22
38 - α Canis Minoris	Procyon	0.4	0 59	22 53	21 03	19 01	17 03	15 01	13 03
39 - β Geminorum	Pollux	1.1	1 05	22 59	21 09	19 07	17 09	15 07	13 09
42 - ϵ Carinae	Avior	1.9	1 41	23 35	21 45	19 43	17 45	15 44	13 46
45 - λ Velorum	Suhail	2.2	2 27	0 25	22 31	20 29	18 31	16 29	14 31
46 - β Carinae	Miaplacidus	1.7	2 32	0 30	22 36	20 34	18 36	16 34	14 36
49 - α Hydrae	Alphard	2.0	2 47	0 45	22 51	20 49	18 51	16 49	14 51
50 - α Leonis	Regulus	1.4	3 27	1 26	23 31	21 30	19 32	17 30	15 32
54 - α Ursae Majoris	Dubhe	1.8	4 23	2 21	0 31	22 25	20 27	18 25	16 27
55 - β Leonis	Denebola	2.1	5 08	3 06	1 16	23 10	21 12	19 10	17 12
57 - α^1 Crucis	Acrux	1.4	5 45	3 43	1 53	23 48	21 50	19 48	17 50
58 - γ Crucis	Gacrux	1.6	5 50	3 48	1 58	23 52	21 54	19 52	17 54
60 - β Crucis	Mimosa	1.3	6 06	4 05	2 14	0 13	22 11	20 09	18 11
61 - ϵ Ursae Majoris	Alioth	1.8	6 12	4 11	2 20	0 19	22 17	20 15	18 17
64 - ζ Ursae Majoris	Mizar	2.3	6 42	4 40	2 50	0 48	22 46	20 45	18 47
65 - α Virginis	Spica	1.0	6 44	4 42	2 52	0 50	22 48	20 46	18 48
68 - θ Centauri	Menkent	2.1	7 25	5 23	3 33	1 31	23 29	21 28	19 30
69 - α Bootis	Arcturus	-0.0	7 34	5 32	3 42	1 40	23 38	21 36	19 38
70 - α^1 Centauri	Rigil Kent	0.0	7 58	5 56	4 06	2 04	0 06	22 01	20 03
72 - β Ursae Minoris	Kochab	2.1	8 08	6 06	4 16	2 14	0 16	22 10	20 12
74 - α Coronae Borealis	Alphecca	2.2	8 53	6 51	5 01	2 59	1 01	22 55	20 57
76 - α Scorpii	Antares	0.9	9 48	7 46	5 56	3 54	1 56	23 50	21 52
77 - α Triangulis Australis	Atria	1.9	10 08	8 06	6 16	4 14	2 16	0 14	22 12
81 - λ Scorpii	Shaula	1.6	10 52	8 50	7 00	4 58	3 00	0 58	22 56
82 - α Ophiuci	Rasalhague	2.1	10 53	8 51	7 01	4 59	3 01	0 59	22 57
84 - γ Draconis	Eltanin	2.2	11 14	9 12	7 22	5 20	3 22	1 20	23 18
85 - ϵ Sagittarii	Kaus Australis	1.9	11 42	9 40	7 50	5 48	3 50	1 48	23 47
86 - α Lyrae	Vega	0.0	11 54	9 52	8 02	6 00	4 02	2 01	0 03
87 - σ Sagittarii	Nunki	2.0	12 13	10 11	8 21	6 19	4 21	2 19	0 21
88 - α Aquilae	Altair	0.8	13 08	11 06	9 16	7 14	5 16	3 14	1 16
90 - α Pavonis	Peacock	1.9	13 43	11 42	9 51	7 50	5 52	3 50	1 52
91 - α Cigni	Deneb	1.3	13 58	11 56	10 06	8 04	6 07	4 05	2 07
93 - ϵ Pegasi	Enif	0.7	15 01	12 59	11 09	9 07	7 09	5 08	3 10
95 - α Gruis	Al Na'ir	1.7	15 25	13 24	11 33	9 32	7 34	5 32	3 34
97 - α Piscis Austrini	Fomalhaut	1.2	16 15	14 13	12 23	10 21	8 23	6 21	4 23
99 - α Pegasi	Markab	2.5	16 22	14 20	12 30	10 28	8 30	6 28	4 30

Horas UT de paso por el meridiano origen el primer día de cada mes

Nº	NOMBRE	Mag	Ago	Sep	Oct	Nov	Dic	1ª CORRECCIÓN																																																																		
1 - α Andromedae	<i>Alpheratz</i>	2.1	h m 3 32	h m 1 30	h m 23 28	h m 21 26	h m 19 28	Restar para obtener la hora de paso en otro día del mismo mes.																																																																		
2 - β Cassiopeae	<i>Caph</i>	2.3	3 32	1 31	23 29	21 27	19 29																																																																			
6 - β Ceti	<i>Diphda</i>	2.0	4 07	2 05	0 07	22 01	20 03																																																																			
9 - α Eridani	<i>Achernar</i>	0.5	5 00	2 59	1 01	22 55	20 57	<table><tr><th>Día</th><th>Corr.</th></tr><tr><td></td><td>h m</td></tr><tr><td>1</td><td>0 00</td></tr><tr><td>2</td><td>0 04</td></tr><tr><td>3</td><td>0 08</td></tr><tr><td>4</td><td>0 12</td></tr><tr><td>5</td><td>0 16</td></tr><tr><td>6</td><td>0 20</td></tr><tr><td>7</td><td>0 24</td></tr><tr><td>8</td><td>0 28</td></tr><tr><td>9</td><td>0 31</td></tr><tr><td>10</td><td>0 35</td></tr><tr><td>11</td><td>0 39</td></tr><tr><td>12</td><td>0 43</td></tr><tr><td>13</td><td>0 47</td></tr><tr><td>14</td><td>0 51</td></tr><tr><td>15</td><td>0 55</td></tr><tr><td>16</td><td>0 59</td></tr><tr><td>17</td><td>1 03</td></tr><tr><td>18</td><td>1 07</td></tr><tr><td>19</td><td>1 11</td></tr><tr><td>20</td><td>1 15</td></tr><tr><td>21</td><td>1 19</td></tr><tr><td>22</td><td>1 23</td></tr><tr><td>23</td><td>1 27</td></tr><tr><td>24</td><td>1 30</td></tr><tr><td>25</td><td>1 34</td></tr><tr><td>26</td><td>1 38</td></tr><tr><td>27</td><td>1 42</td></tr><tr><td>28</td><td>1 46</td></tr><tr><td>29</td><td>1 50</td></tr><tr><td>30</td><td>1 54</td></tr><tr><td>31</td><td>1 58</td></tr></table>	Día	Corr.		h m	1	0 00	2	0 04	3	0 08	4	0 12	5	0 16	6	0 20	7	0 24	8	0 28	9	0 31	10	0 35	11	0 39	12	0 43	13	0 47	14	0 51	15	0 55	16	0 59	17	1 03	18	1 07	19	1 11	20	1 15	21	1 19	22	1 23	23	1 27	24	1 30	25	1 34	26	1 38	27	1 42	28	1 46	29	1 50	30	1 54	31	1 58
Día	Corr.																																																																									
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29	1 50																																																																									
30	1 54																																																																									
31	1 58																																																																									
11 - α Arietis	<i>Hamal</i>	2.0	5 30	3 28	1 30	23 24	21 27																																																																			
13 - θ^1 Eridani	<i>Acamar</i>	3.3	6 21	4 19	2 21	0 19	22 17																																																																			
16 - α Persei	<i>Mirfak</i>	1.8	6 47	4 45	2 48	0 46	22 44																																																																			
19 - α Tauri	<i>Aldebaran</i>	0.9	7 58	5 57	3 59	1 57	23 55																																																																			
20 - β Orionis	<i>Rigel</i>	0.1	8 37	6 35	4 37	2 35	0 37																																																																			
21 - α Aurigae	<i>Capella</i>	0.1	8 39	6 38	4 40	2 38	0 40																																																																			
22 - γ Orionis	<i>Bellatrix</i>	1.6	8 47	6 46	4 48	2 46	0 48																																																																			
28 - α Orionis	<i>Betelgeuse</i>	0.4	9 17	7 16	5 18	3 16	1 18																																																																			
31 - α Carinae	<i>Canopus</i>	-0.7	9 45	7 44	5 46	3 44	1 46																																																																			
33 - α Canis Majoris	<i>Sirius</i>	-1.5	10 07	8 05	6 07	4 05	2 07																																																																			
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	10 20	8 19	6 21	4 19	2 21																																																																			
38 - α Canis Minoris	<i>Procyon</i>	0.4	11 01	8 59	7 01	5 00	3 02																																																																			
39 - β Geminorum	<i>Pollux</i>	1.1	11 07	9 06	7 08	5 06	3 08																																																																			
42 - ϵ Carinae	<i>Avior</i>	1.9	11 44	9 42	7 44	5 42	3 44																																																																			
45 - λ Velorum	<i>Suhail</i>	2.2	12 29	10 27	8 30	6 28	4 30																																																																			
46 - β Carinae	<i>Miaplacidus</i>	1.7	12 34	10 32	8 34	6 32	4 34																																																																			
49 - α Hydrae	<i>Alphard</i>	2.0	12 49	10 47	8 49	6 47	4 50																																																																			
50 - α Leonis	<i>Regulus</i>	1.4	13 30	11 28	9 30	7 28	5 30																																																																			
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	14 25	12 23	10 25	8 24	6 26																																																																			
55 - β Leonis	<i>Denebola</i>	2.1	15 10	13 08	11 10	9 09	7 11																																																																			
57 - α^1 Crucis	<i>Acrux</i>	1.4	15 48	13 46	11 48	9 46	7 48																																																																			
58 - γ Crucis	<i>Gacrux</i>	1.6	15 52	13 50	11 53	9 51	7 53																																																																			
60 - β Crucis	<i>Mimosa</i>	1.3	16 09	14 07	12 09	10 07	8 09																																																																			
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	16 15	14 13	12 15	10 13	8 15																																																																			
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	16 45	14 43	12 45	10 43	8 45																																																																			
65 - α Virginis	<i>Spica</i>	1.0	16 46	14 44	12 46	10 44	8 47																																																																			
68 - θ Centauri	<i>Menkent</i>	2.1	17 28	15 26	13 28	11 26	9 28																																																																			
69 - α Bootis	<i>Arcturus</i>	-0.0	17 36	15 34	13 37	11 35	9 37																																																																			
70 - α^1 Centauri	<i>Rigil Kent</i>	0.0	18 01	15 59	14 01	11 59	10 01																																																																			
72 - β Ursae Minoris	<i>Kochab</i>	2.1	18 10	16 08	14 11	12 09	10 11																																																																			
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	18 55	16 53	14 55	12 53	10 55																																																																			
76 - α Scorpii	<i>Antares</i>	0.9	19 50	17 48	15 50	13 48	11 50																																																																			
77 - α Triangulis Australis	<i>Atria</i>	1.9	20 10	18 08	16 10	14 08	12 10																																																																			
81 - λ Scorpii	<i>Shaula</i>	1.6	20 54	18 52	16 54	14 52	12 55																																																																			
82 - α Ophiuci	<i>Rasalhague</i>	2.1	20 55	18 53	16 55	14 53	12 55																																																																			
84 - γ Draconis	<i>Eltanin</i>	2.2	21 16	19 14	17 16	15 15	13 17																																																																			
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	21 45	19 43	17 45	15 43	13 45																																																																			
86 - α Lyrae	<i>Vega</i>	0.0	21 57	19 55	17 57	15 55	13 57																																																																			
87 - σ Sagittarii	<i>Nunki</i>	2.0	22 16	20 14	18 16	16 14	14 16																																																																			
88 - α Aquilae	<i>Altair</i>	0.8	23 11	21 09	19 11	17 09	15 11																																																																			
90 - α Pavonis	<i>Peacock</i>	1.9	23 46	21 44	19 46	17 44	15 46																																																																			
91 - α Cigni	<i>Deneb</i>	1.3	0 05	21 59	20 01	17 59	16 01																																																																			
93 - ϵ Pegasi	<i>Enif</i>	0.7	1 08	23 02	21 04	19 02	17 04																																																																			
95 - α Gruis	<i>Al Na'ir</i>	1.7	1 32	23 26	21 28	19 26	17 28																																																																			
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	2 21	0 19	22 17	20 15	18 17																																																																			
99 - α Pegasi	<i>Markab</i>	2.5	2 28	0 26	22 24	20 22	18 24																																																																			

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2019

TABLA I

hL [°] , '	Corr., '	hL [°] , '	Corr., '	hL [°] , '	Corr., '	hL [°] , '	Corr., '	hL [°] , '	Corr., '	hL [°] , '	Corr., '	hL [°] , '	Corr., '
0 00	-28.3	26 00	-37.4	52 00	-39.0	78 00	-32.6	104 00	-19.7	130 00	-2.8	156 00	+14.7
0 30	-28.5	26 30	-37.5	52 30	-38.9	78 30	-32.4	104 30	-19.4	130 30	-2.4	156 30	+15.0
1 00	-28.7	27 00	-37.6	53 00	-38.8	79 00	-32.2	105 00	-19.1	131 00	-2.1	157 00	+15.3
1 30	-29.0	27 30	-37.7	53 30	-38.8	79 30	-32.0	105 30	-18.8	131 30	-1.8	157 30	+15.6
2 00	-29.2	28 00	-37.8	54 00	-38.7	80 00	-31.8	106 00	-18.5	132 00	-1.4	158 00	+16.0
2 30	-29.4	28 30	-37.9	54 30	-38.7	80 30	-31.6	106 30	-18.2	132 30	-1.1	158 30	+16.3
3 00	-29.7	29 00	-38.0	55 00	-38.6	81 00	-31.4	107 00	-17.9	133 00	-0.7	159 00	+16.6
3 30	-29.9	29 30	-38.1	55 30	-38.5	81 30	-31.2	107 30	-17.6	133 30	-0.4	159 30	+16.9
4 00	-30.1	30 00	-38.2	56 00	-38.5	82 00	-31.0	108 00	-17.3	134 00	-0.0	160 00	+17.2
4 30	-30.3	30 30	-38.2	56 30	-38.4	82 30	-30.8	108 30	-17.0	134 30	+0.3	160 30	+17.5
5 00	-30.5	31 00	-38.3	57 00	-38.3	83 00	-30.6	109 00	-16.7	135 00	+0.7	161 00	+17.8
5 30	-30.8	31 30	-38.4	57 30	-38.3	83 30	-30.4	109 30	-16.3	135 30	+1.0	161 30	+18.1
6 00	-31.0	32 00	-38.5	58 00	-38.2	84 00	-30.2	110 00	-16.0	136 00	+1.3	162 00	+18.4
6 30	-31.2	32 30	-38.5	58 30	-38.1	84 30	-29.9	110 30	-15.7	136 30	+1.7	162 30	+18.7
7 00	-31.4	33 00	-38.6	59 00	-38.0	85 00	-29.7	111 00	-15.4	137 00	+2.0	163 00	+19.0
7 30	-31.6	33 30	-38.7	59 30	-37.9	85 30	-29.5	111 30	-15.1	137 30	+2.4	163 30	+19.3
8 00	-31.8	34 00	-38.7	60 00	-37.8	86 00	-29.3	112 00	-14.8	138 00	+2.7	164 00	+19.6
8 30	-32.0	34 30	-38.8	60 30	-37.7	86 30	-29.0	112 30	-14.4	138 30	+3.0	164 30	+19.9
9 00	-32.2	35 00	-38.8	61 00	-37.6	87 00	-28.8	113 00	-14.1	139 00	+3.4	165 00	+20.2
9 30	-32.4	35 30	-38.9	61 30	-37.5	87 30	-28.6	113 30	-13.8	139 30	+3.7	165 30	+20.5
10 00	-32.6	36 00	-38.9	62 00	-37.4	88 00	-28.3	114 00	-13.5	140 00	+4.1	166 00	+20.8
10 30	-32.8	36 30	-39.0	62 30	-37.3	88 30	-28.1	114 30	-13.2	140 30	+4.4	166 30	+21.1
11 00	-33.0	37 00	-39.0	63 00	-37.2	89 00	-27.8	115 00	-12.8	141 00	+4.8	167 00	+21.4
11 30	-33.1	37 30	-39.1	63 30	-37.1	89 30	-27.6	115 30	-12.5	141 30	+5.1	167 30	+21.7
12 00	-33.3	38 00	-39.1	64 00	-37.0	90 00	-27.3	116 00	-12.2	142 00	+5.4	168 00	+22.0
12 30	-33.5	38 30	-39.1	64 30	-36.9	90 30	-27.1	116 30	-11.9	142 30	+5.8	168 30	+22.2
13 00	-33.7	39 00	-39.2	65 00	-36.7	91 00	-26.8	117 00	-11.5	143 00	+6.1	169 00	+22.5
13 30	-33.9	39 30	-39.2	65 30	-36.6	91 30	-26.6	117 30	-11.2	143 30	+6.5	169 30	+22.8
14 00	-34.0	40 00	-39.2	66 00	-36.5	92 00	-26.3	118 00	-10.9	144 00	+6.8	170 00	+23.1
14 30	-34.2	40 30	-39.3	66 30	-36.3	92 30	-26.1	118 30	-10.5	144 30	+7.1	170 30	+23.4
15 00	-34.4	41 00	-39.3	67 00	-36.2	93 00	-25.8	119 00	-10.2	145 00	+7.5	171 00	+23.6
15 30	-34.5	41 30	-39.3	67 30	-36.1	93 30	-25.6	119 30	-9.9	145 30	+7.8	171 30	+23.9
16 00	-34.7	42 00	-39.3	68 00	-35.9	94 00	-25.3	120 00	-9.5	146 00	+8.1	172 00	+24.2
16 30	-34.9	42 30	-39.3	68 30	-35.8	94 30	-25.0	120 30	-9.2	146 30	+8.5	172 30	+24.5
17 00	-35.0	43 00	-39.3	69 00	-35.7	95 00	-24.8	121 00	-8.9	147 00	+8.8	173 00	+24.7
17 30	-35.2	43 30	-39.3	69 30	-35.5	95 30	-24.5	121 30	-8.5	147 30	+9.1	173 30	+25.0
18 00	-35.3	44 00	-39.3	70 00	-35.4	96 00	-24.2	122 00	-8.2	148 00	+9.5	174 00	+25.3
18 30	-35.5	44 30	-39.3	70 30	-35.2	96 30	-24.0	122 30	-7.9	148 30	+9.8	174 30	+25.5
19 00	-35.6	45 00	-39.3	71 00	-35.1	97 00	-23.7	123 00	-7.5	149 00	+10.1	175 00	+25.8
19 30	-35.8	45 30	-39.3	71 30	-34.9	97 30	-23.4	123 30	-7.2	149 30	+10.5	175 30	+26.0
20 00	-35.9	46 00	-39.3	72 00	-34.7	98 00	-23.1	124 00	-6.9	150 00	+10.8	176 00	+26.3
20 30	-36.1	46 30	-39.3	72 30	-34.6	98 30	-22.9	124 30	-6.5	150 30	+11.1	176 30	+26.5
21 00	-36.2	47 00	-39.3	73 00	-34.4	99 00	-22.6	125 00	-6.2	151 00	+11.5	177 00	+26.8
21 30	-36.3	47 30	-39.3	73 30	-34.2	99 30	-22.3	125 30	-5.8	151 30	+11.8	177 30	+27.0
22 00	-36.5	48 00	-39.2	74 00	-34.1	100 00	-22.0	126 00	-5.5	152 00	+12.1	178 00	+27.3
22 30	-36.6	48 30	-39.2	74 30	-33.9	100 30	-21.7	126 30	-5.2	152 30	+12.4	178 30	+27.5
23 00	-36.7	49 00	-39.2	75 00	-33.7	101 00	-21.4	127 00	-4.8	153 00	+12.8	179 00	+27.8
23 30	-36.8	49 30	-39.2	75 30	-33.6	101 30	-21.2	127 30	-4.5	153 30	+13.1	179 30	+28.0
24 00	-36.9	50 00	-39.1	76 00	-33.4	102 00	-20.9	128 00	-4.1	154 00	+13.4	180 00	+28.3
24 30	-37.1	50 30	-39.1	76 30	-33.2	102 30	-20.6	128 30	-3.8	154 30	+13.7	180 30	+28.5
25 00	-37.2	51 00	-39.0	77 00	-33.0	103 00	-20.3	129 00	-3.5	155 00	+14.1	181 00	+28.7
25 30	-37.3	51 30	-39.0	77 30	-32.8	103 30	-20.0	129 30	-3.1	155 30	+14.4	181 30	+29.0
26 00	-37.4	52 00	-39.0	78 00	-32.6	104 00	-19.7	130 00	-2.8	156 00	+14.7	182 00	+29.2

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2019

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TABLA I

hL [°] _° , ,	Corr. ,	hL [°] _° , ,	Corr. ,	hL [°] _° , ,	Corr. ,	hL [°] _° , ,	Corr. ,	hL [°] _° , ,	Corr. ,	hL [°] _° , ,	Corr. ,	hL [°] _° , ,	Corr. ,
182 00	+29.2	208 00	+37.8	234 00	+38.7	260 00	+31.8	286 00	+18.5	312 00	+1.4	338 00	-16.0
182 30	+29.4	208 30	+37.9	234 30	+38.7	260 30	+31.6	286 30	+18.2	312 30	+1.1	338 30	-16.3
183 00	+29.7	209 00	+38.0	235 00	+38.6	261 00	+31.4	287 00	+17.9	313 00	+0.7	339 00	-16.6
183 30	+29.9	209 30	+38.1	235 30	+38.5	261 30	+31.2	287 30	+17.6	313 30	+0.4	339 30	-16.9
184 00	+30.1	210 00	+38.2	236 00	+38.5	262 00	+31.0	288 00	+17.3	314 00	+0.0	340 00	-17.2
184 30	+30.3	210 30	+38.2	236 30	+38.4	262 30	+30.8	288 30	+17.0	314 30	-0.3	340 30	-17.5
185 00	+30.5	211 00	+38.3	237 00	+38.3	263 00	+30.6	289 00	+16.7	315 00	-0.7	341 00	-17.8
185 30	+30.8	211 30	+38.4	237 30	+38.3	263 30	+30.4	289 30	+16.3	315 30	-1.0	341 30	-18.1
186 00	+31.0	212 00	+38.5	238 00	+38.2	264 00	+30.2	290 00	+16.0	316 00	-1.3	342 00	-18.4
186 30	+31.2	212 30	+38.5	238 30	+38.1	264 30	+29.9	290 30	+15.7	316 30	-1.7	342 30	-18.7
187 00	+31.4	213 00	+38.6	239 00	+38.0	265 00	+29.7	291 00	+15.4	317 00	-2.0	343 00	-19.0
187 30	+31.6	213 30	+38.7	239 30	+37.9	265 30	+29.5	291 30	+15.1	317 30	-2.4	343 30	-19.3
188 00	+31.8	214 00	+38.7	240 00	+37.8	266 00	+29.3	292 00	+14.8	318 00	-2.7	344 00	-19.6
188 30	+32.0	214 30	+38.8	240 30	+37.7	266 30	+29.0	292 30	+14.4	318 30	-3.0	344 30	-19.9
189 00	+32.2	215 00	+38.8	241 00	+37.6	267 00	+28.8	293 00	+14.1	319 00	-3.4	345 00	-20.2
189 30	+32.4	215 30	+38.9	241 30	+37.5	267 30	+28.6	293 30	+13.8	319 30	-3.7	345 30	-20.5
190 00	+32.6	216 00	+38.9	242 00	+37.4	268 00	+28.3	294 00	+13.5	320 00	-4.1	346 00	-20.8
190 30	+32.8	216 30	+39.0	242 30	+37.3	268 30	+28.1	294 30	+13.2	320 30	-4.4	346 30	-21.1
191 00	+33.0	217 00	+39.0	243 00	+37.2	269 00	+27.8	295 00	+12.8	321 00	-4.8	347 00	-21.4
191 30	+33.1	217 30	+39.1	243 30	+37.1	269 30	+27.6	295 30	+12.5	321 30	-5.1	347 30	-21.7
192 00	+33.3	218 00	+39.1	244 00	+37.0	270 00	+27.3	296 00	+12.2	322 00	-5.4	348 00	-22.0
192 30	+33.5	218 30	+39.1	244 30	+36.9	270 30	+27.1	296 30	+11.9	322 30	-5.8	348 30	-22.2
193 00	+33.7	219 00	+39.2	245 00	+36.7	271 00	+26.8	297 00	+11.5	323 00	-6.1	349 00	-22.5
193 30	+33.9	219 30	+39.2	245 30	+36.6	271 30	+26.6	297 30	+11.2	323 30	-6.5	349 30	-22.8
194 00	+34.0	220 00	+39.2	246 00	+36.5	272 00	+26.3	298 00	+10.9	324 00	-6.8	350 00	-23.1
194 30	+34.2	220 30	+39.3	246 30	+36.3	272 30	+26.1	298 30	+10.5	324 30	-7.1	350 30	-23.4
195 00	+34.4	221 00	+39.3	247 00	+36.2	273 00	+25.8	299 00	+10.2	325 00	-7.5	351 00	-23.6
195 30	+34.5	221 30	+39.3	247 30	+36.1	273 30	+25.6	299 30	+9.9	325 30	-7.8	351 30	-23.9
196 00	+34.7	222 00	+39.3	248 00	+35.9	274 00	+25.3	300 00	+9.5	326 00	-8.1	352 00	-24.2
196 30	+34.9	222 30	+39.3	248 30	+35.8	274 30	+25.0	300 30	+9.2	326 30	-8.5	352 30	-24.5
197 00	+35.0	223 00	+39.3	249 00	+35.7	275 00	+24.8	301 00	+8.9	327 00	-8.8	353 00	-24.7
197 30	+35.2	223 30	+39.3	249 30	+35.5	275 30	+24.5	301 30	+8.5	327 30	-9.1	353 30	-25.0
198 00	+35.3	224 00	+39.3	250 00	+35.4	276 00	+24.2	302 00	+8.2	328 00	-9.5	354 00	-25.3
198 30	+35.5	224 30	+39.3	250 30	+35.2	276 30	+24.0	302 30	+7.9	328 30	-9.8	354 30	-25.5
199 00	+35.6	225 00	+39.3	251 00	+35.1	277 00	+23.7	303 00	+7.5	329 00	-10.1	355 00	-25.8
199 30	+35.8	225 30	+39.3	251 30	+34.9	277 30	+23.4	303 30	+7.2	329 30	-10.5	355 30	-26.0
200 00	+35.9	226 00	+39.3	252 00	+34.7	278 00	+23.1	304 00	+6.9	330 00	-10.8	356 00	-26.3
200 30	+36.1	226 30	+39.3	252 30	+34.6	278 30	+22.9	304 30	+6.5	330 30	-11.1	356 30	-26.5
201 00	+36.2	227 00	+39.3	253 00	+34.4	279 00	+22.6	305 00	+6.2	331 00	-11.5	357 00	-26.8
201 30	+36.3	227 30	+39.3	253 30	+34.2	279 30	+22.3	305 30	+5.8	331 30	-11.8	357 30	-27.0
202 00	+36.5	228 00	+39.2	254 00	+34.1	280 00	+22.0	306 00	+5.5	332 00	-12.1	358 00	-27.3
202 30	+36.6	228 30	+39.2	254 30	+33.9	280 30	+21.7	306 30	+5.2	332 30	-12.4	358 30	-27.5
203 00	+36.7	229 00	+39.2	255 00	+33.7	281 00	+21.4	307 00	+4.8	333 00	-12.8	359 00	-27.8
203 30	+36.8	229 30	+39.2	255 30	+33.6	281 30	+21.2	307 30	+4.5	333 30	-13.1	359 30	-28.0
204 00	+36.9	230 00	+39.1	256 00	+33.4	282 00	+20.9	308 00	+4.1	334 00	-13.4	360 00	-28.3
204 30	+37.1	230 30	+39.1	256 30	+33.2	282 30	+20.6	308 30	+3.8	334 30	-13.7		
205 00	+37.2	231 00	+39.0	257 00	+33.0	283 00	+20.3	309 00	+3.5	335 00	-14.1		
205 30	+37.3	231 30	+39.0	257 30	+32.8	283 30	+20.0	309 30	+3.1	335 30	-14.4		
206 00	+37.4	232 00	+39.0	258 00	+32.6	284 00	+19.7	310 00	+2.8	336 00	-14.7		
206 30	+37.5	232 30	+38.9	258 30	+32.4	284 30	+19.4	310 30	+2.4	336 30	-15.0		
207 00	+37.6	233 00	+38.8	259 00	+32.2	285 00	+19.1	311 00	+2.1	337 00	-15.3		
207 30	+37.7	233 30	+38.8	259 30	+32.0	285 30	+18.8	311 30	+1.8	337 30	-15.6		
208 00	+37.8	234 00	+38.7	260 00	+31.8	286 00	+18.5	312 00	+1.4	338 00	-16.0		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2019

TABLA II

(SIEMPRE POSITIVA)

ALTURA													
hL [°]	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	hL [°]
0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	20
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60
80	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	80
100	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	100
120	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	120
140	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	140
160	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	160
180	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	180
200	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	200
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	220
240	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	240
260	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	260
280	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	280
300	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	300
320	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5	320
340	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	340
360	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	360

TABLA III

hL [°]	1 Ene	1 Feb	1 Mar	1 Abr	1 May	1 Jun	1 Jul	1 Ago	1 Sep	1 Oct	1 Nov	1 Dic	1 Ene
0	+0.2	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.3	-0.1	+0.1	+0.3	+0.4	+0.5
20	+0.2	+0.2	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.5
40	+0.1	+0.2	+0.2	+0.1	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3	+0.4
60	+0.1	+0.2	+0.2	+0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	-0.1	+0.1	+0.3
80	0.0	+0.2	+0.3	+0.3	+0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	0.0	+0.1
100	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0
120	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.1	0.0	-0.2	-0.3	-0.3	-0.3	-0.2
140	-0.1	0.0	+0.2	+0.3	+0.4	+0.3	+0.2	+0.1	-0.1	-0.3	-0.4	-0.4	-0.3
160	-0.1	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.4	-0.4
180	-0.2	-0.1	0.0	+0.2	+0.3	+0.4	+0.4	+0.3	+0.1	-0.1	-0.3	-0.4	-0.5
200	-0.2	-0.2	-0.1	+0.1	+0.2	+0.3	+0.4	+0.3	+0.2	0.0	-0.2	-0.4	-0.5
220	-0.1	-0.2	-0.2	-0.1	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3	-0.4
240	-0.1	-0.2	-0.2	-0.2	0.0	+0.1	+0.2	+0.3	+0.3	+0.2	+0.1	-0.1	-0.3
260	0.0	-0.2	-0.3	-0.3	-0.2	0.0	+0.1	+0.2	+0.3	+0.3	+0.2	0.0	-0.1
280	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0
300	+0.1	-0.1	-0.2	-0.3	-0.4	-0.3	-0.1	0.0	+0.2	+0.3	+0.3	+0.3	+0.2
320	+0.1	0.0	-0.2	-0.3	-0.4	-0.3	-0.2	-0.1	+0.1	+0.3	+0.4	+0.4	+0.3
340	+0.1	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.2	0.0	+0.2	+0.4	+0.4	+0.4
360	+0.2	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.3	-0.1	+0.1	+0.3	+0.4	+0.5

hL $\cap$	LATITUD												hL $\cap$
	10	15	20	25	30	35	40	45	50	55	60	65	
0	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	0
10	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.6	+0.6	+0.7	+0.9	10
20	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	20
30	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.4	30
40	0.0	0.0	0.0	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	40
50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	50
60	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.4	-0.4	60
70	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.7	70
80	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.6	-0.7	-0.8	-0.9	80
90	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.7	-0.7	-0.8	-1.0	-1.1	90
100	-0.6	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.0	-1.1	-1.3	100
110	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.9	-0.9	-1.1	-1.2	-1.4	110
120	-0.6	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	120
130	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.3	-1.5	130
140	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.1	-1.3	-1.5	140
150	-0.6	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	150
160	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	160
170	-0.5	-0.5	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.0	-1.2	170
180	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9	-1.1	180
190	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.6	-0.7	-0.9	190
200	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	-0.5	-0.6	200
210	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.4	210
220	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	220
230	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	230
240	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.4	+0.4	240
250	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.4	+0.5	+0.6	+0.7	250
260	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.6	+0.7	+0.8	+0.9	260
270	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.1	270
280	+0.6	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.1	+1.3	280
290	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.2	+1.4	290
300	+0.6	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	300
310	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.3	+1.5	310
320	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.1	+1.3	+1.5	320
330	+0.6	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	330
340	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.2	+1.4	340
350	+0.5	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.1	+1.3	350
360	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	360

Cuando el signo es +, la Polar está al E del meridiano

Cuando el signo es -, la Polar está al W del meridiano

CORRECCIÓN POR RETARDO Y LONGITUD

Long.	RETARDO DIARIO																	
	5 ^m	10 ^m	15 ^m	20 ^m	25 ^m	30 ^m	35 ^m	40 ^m	45 ^m	50 ^m	55 ^m	60 ^m	65 ^m	70 ^m	75 ^m	80 ^m	85 ^m	90 ^m
°	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
10	0	0	0	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3
15	0	0	1	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4
20	0	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	5	5
25	0	1	1	1	2	2	2	3	3	3	4	4	5	5	5	6	6	6
30	0	1	1	2	2	3	3	3	4	4	5	5	5	6	6	7	7	8
35	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
40	1	1	2	2	3	3	4	4	5	6	6	7	7	8	8	9	9	10
45	1	1	2	3	3	4	4	5	6	6	7	8	8	9	9	10	11	11
50	1	1	2	3	3	4	5	6	6	7	8	8	9	10	10	11	12	13
55	1	2	2	3	4	5	5	6	7	8	8	9	10	11	11	12	13	14
60	1	2	3	3	4	5	6	7	8	8	9	10	11	12	13	13	14	15
65	1	2	3	4	5	5	6	7	8	9	10	11	12	13	14	14	15	16
70	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
75	1	2	3	4	5	6	7	8	9	10	11	13	14	15	16	17	18	19
80	1	2	3	4	6	7	8	9	10	11	12	13	14	16	17	18	19	20
85	1	2	4	5	6	7	8	9	11	12	13	14	15	17	18	19	20	21
90	1	3	4	5	6	8	9	10	11	13	14	15	16	18	19	20	21	23
95	1	3	4	5	7	8	9	11	12	13	15	16	17	18	20	21	22	24
100	1	3	4	6	7	8	10	11	13	14	15	17	18	19	21	22	24	25
105	1	3	4	6	7	9	10	12	13	15	16	18	19	20	22	23	25	26
110	2	3	5	6	8	9	11	12	14	15	17	18	20	21	23	24	26	28
115	2	3	5	6	8	10	11	13	14	16	18	19	21	22	24	26	27	29
120	2	3	5	7	8	10	12	13	15	17	18	20	22	23	25	27	28	30
125	2	3	5	7	9	10	12	14	16	17	19	21	23	24	26	28	30	31
130	2	4	5	7	9	11	13	14	16	18	20	22	23	25	27	29	31	33
135	2	4	6	8	9	11	13	15	17	19	21	23	24	26	28	30	32	34
140	2	4	6	8	10	12	14	16	18	19	21	23	25	27	29	31	33	35
145	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
150	2	4	6	8	10	13	15	17	19	21	23	25	27	29	31	33	35	38
155	2	4	6	9	11	13	15	17	19	22	24	26	28	30	32	34	37	39
160	2	4	7	9	11	13	16	18	20	22	24	27	29	31	33	36	38	40
165	2	5	7	9	11	14	16	18	21	23	25	28	30	32	34	37	39	41
170	2	5	7	9	12	14	17	19	21	24	26	28	31	33	35	38	40	43
175	2	5	7	10	12	15	17	19	22	24	27	29	32	34	36	39	41	44
180	3	5	8	10	13	15	18	20	23	25	28	30	33	35	38	40	43	45

**CORRECCIONES PARA OBTENER LA ALTURA VERDADERA
DEL SOL (LIMBO INFERIOR), PLANETA O ESTRELLA, 2019**

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TABLA A				TABLA B: SOL (LIMBO INFERIOR)									
DEPRESIÓN DE HORIZONTE				SEMIDIÁMETRO, REFRACCIÓN Y PARALAJE								Corrección adicional (2019)	
Elevación del observador en metros	Corrección	Elevación del observador en metros	Corrección	Altura aparente	Correc	Altura aparente	Correc	Altura aparente	Correc	Altura aparente	Correc		
				° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "		
				6 15	+8.2	8 45	+10.2	13 23	+12.2	25 59	+14.2	ene 1	+0.3
				6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3	ene 24	+0.2
1.9	-2.5	13.6	-6.6	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4	feb 27	+0.1
2.0	-2.6	14.0	-6.7	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5		
2.2	-2.7	14.4	-6.8	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6	mar 22	0.0
2.3	-2.8	14.8	-6.9	6 46	+8.7	9 37	+10.7	15 18	+12.7	33 19	+14.7		
2.5	-2.9	15.3	-7.0	6 53	+8.8	9 47	+10.8	15 45	+12.8	35 16	+14.8	abr 13	-0.1
2.7	-3.0	15.7	-7.1	7 00	+8.9	10 00	+10.9	16 13	+12.9	37 25	+14.9	may 6	-0.2
2.9	-3.1	16.2	-7.2	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0		
3.1	-3.2	16.6	-7.3	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1	jun 11	-0.3
3.3	-3.3	17.1	-7.4	7 21	+9.2	10 38	+11.2	17 47	+13.2	45 30	+15.2	jul 27	-0.2
3.5	-3.4	17.6	-7.5	7 28	+9.3	10 52	+11.3	18 23	+13.3	48 53	+15.3		
3.7	-3.5	18.0	-7.6	7 36	+9.4	11 06	+11.4	19 01	+13.4	52 43	+15.4	sep 1	-0.1
3.9	-3.6	18.5	-7.7	7 44	+9.5	11 21	+11.5	19 41	+13.5	57 01	+15.5	sep 25	0.0
4.2	-3.7	19.0	-7.8	7 52	+9.6	11 36	+11.6	20 24	+13.6	61 51	+15.6		
4.4	-3.8	19.5	-7.9	8 00	+9.7	11 52	+11.7	21 10	+13.7	67 16	+15.7	oct 17	+0.1
4.7	-3.9	20.0	-8.0	8 08	+9.8	12 09	+11.8	21 59	+13.8	73 14	+15.8		
4.9	-4.0	20.5	-8.1	8 17	+9.9	12 26	+11.9	22 53	+13.9	79 42	+15.9	nov 9	+0.2
5.2	-4.1	21.0	-8.2	8 26	+10.0	12 44	+12.0	23 50	+14.0	86 30	+16.0	dic 14	+0.3
5.4	-4.2	21.5	-8.3	8 35	+10.1	13 03	+12.1	24 52	+14.1	90 00		dic 31	
5.7	-4.3	22.1	-8.4	8 45		13 23		25 59					
6.0	-4.3	22.6	-8.4	TABLA C: PLANETAS Y ESTRELLAS									
6.2	-4.4	23.1	-8.5	REFRACCIÓN				PARALAJE (2019)					
6.5	-4.5	23.7	-8.6	Altura aparente	Correc	Altura aparente	Correc	Fechas	Venus para cualquier altura	Marte			
6.6	-4.6	24.1	-8.7	° ' "	' "	° ' "	' "			Altura aparente			
6.8	-4.7	24.2	-8.7	6 30	-7.8	14 00	-3.8			a < 30°	30° < a < 60°	a > 60°	
7.1	-4.8	24.8	-8.8	6 40	-7.6	15 00	-3.6	ene 1	+0.2	+0.1	+0.1	0.0	
7.4	-4.8	25.4	-8.9	6 50	-7.5	16 00	-3.3	feb 3	+0.1	+0.1	+0.1	0.0	
7.7	-4.9	25.9	-9.0	7 00	-7.3	17 00	-3.1	abr 7	+0.1	+0.1	+0.1	0.0	
8.0	-5.0	26.5	-9.1	7 15	-7.1	18 00	-3.0	dic 31					
8.4	-5.1	27.1	-9.2	7 30	-6.9	19 00	-2.8						
8.7	-5.2	27.7	-9.3	7 45	-6.7	20 00	-2.6						
8.8	-5.3	28.1	-9.4	8 00	-6.5	21 00	-2.5						
9.0	-5.4	28.3	-9.5	8 15	-6.3	22 00	-2.4						
9.4	-5.5	28.9	-9.6	8 30	-6.2	24 00	-2.2						
9.7	-5.6	29.5	-9.7	8 45	-6.0	26 00	-2.0						
10.1	-5.7	30.1	-9.8	9 00	-5.9	28 00	-1.8						
10.4	-5.8	30.7	-9.9	9 20	-5.7	32 00	-1.6						
10.8	-5.9	31.3	-10.0	9 40	-5.5	36 00	-1.3						
11.2	-6.0	32.0	-10.1	10 00	-5.3	40 00	-1.2						
11.6	-6.1	32.6	-10.2	10 30	-5.1	45 00	-1.0						
11.9	-6.2	33.3	-10.3	11 00	-4.8	50 00	-0.8						
12.3	-6.3	33.9	-10.4	11 30	-4.6	60 00	-0.6						
12.7	-6.4	34.6	-10.5	12 00	-4.5	70 00	-0.4						
13.1	-6.5	35.2	-10.6	12 30	-4.3	80 00	-0.2						
13.6		35.9		13 00	-4.1	90 00	0.0						

En los valores explícitos tomar el valor de corrección superior. Por ejemplo: para una elevación del observador de 6,0 m tomar -4,3' de corrección.
La altura aparente es la observada corregida por depresión del horizonte

