

**ALMANAQUE NÁUTICO
PERSEIS
2020**

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Imagen de portada: Percival Lowell observando Venus desde el Observatorio Lowell en 1914. Imagen de dominio público reconstruida a partir de diversas fuentes por Joe Haythornthwaite.

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Introducción

El Almanaque Náutico Perseis es un libro de validez anual que proporciona datos, efemérides astronómicas y tablas para la práctica de la navegación astronómica. La información se presenta en un formato similar al del *Almanaque Náutico* editado por el Real Observatorio de la Armada.

Su objetivo es didáctico: 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 información 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 vista y útiles para la navegación astronómica: Venus, Marte, Júpiter y Saturno; además de datos útiles para la planificación de las observaciones. Incluye tablas anuales de la posición de 99 estrellas, tabuladas para el día 15 de cada mes; la hora de paso por el meridiano de Greenwich, para el día 1 de cada mes, de 50 estrellas seleccionadas; 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 año, con el único fin de mantener la numeración de las páginas como en el Almanaque Náutico del R.O.A.

Se mantiene el orden y numeración de páginas idéntico al Almanaque Náutico del R.O.A. porque, a veces, en la literatura didáctica española sobre navegación astronómica, se hace referencia a la tabla de 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, tiene un precio asequible y además es el único permitido en los exámenes oficiales.

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

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.

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

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

Órbita terrestre

Los puntos extremos de la órbita terrestre en función de su distancia al Sol reciben el nombre de Ápsides.

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 fué 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 muy estrecha no superior a aproximadamente 270 km de anchura pero muy larga (hasta 15000 km) y durante unos pocos minutos (no más de 7). En los alrededores de esa franja, el eclipse se ve como parcial en una zona de varios miles de kilómetros de anchura, y si se está muy alejado no se ve. 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, 2020

Estaciones

<i>Estación</i>	<i>Inicio (hora UT)</i>	<i>Duración (días)</i>
Primavera	20 de marzo a las 03 ^h 50 ^m	92.75
Verano	20 de junio a las 21 ^h 44 ^m	93.66
Otoño	22 de septiembre a las 13 ^h 31 ^m	89.85
Invierno	21 de diciembre a las 10 ^h 02 ^m	88.99

Órbita terrestre

<i>Ápside</i>	<i>Fecha (hora UT)</i>	<i>Distancia (ua)</i>
Perihelio	5 de enero a las 07 ^h 48 ^m	0.983244
Afelio	4 de julio a las 11 ^h 35 ^m	1.016694

Fases de la Luna (hora UT)

<i>Luna Nueva</i>		<i>Cuarto Creciente</i>		<i>Luna Llena</i>		<i>Cuarto Menguante</i>	
		3 ene	04:45	10 ene	19:21	17 ene	12:58
24 ene	21:42	2 feb	01:42	9 feb	07:33	15 feb	22:17
23 feb	15:32	2 mar	19:57	9 mar	17:48	16 mar	09:34
24 mar	09:28	1 abr	10:21	8 abr	02:35	14 abr	22:56
23 abr	02:26	30 abr	20:38	7 may	10:45	14 may	14:03
22 may	17:39	30 may	03:30	5 jun	19:12	13 jun	06:24
21 jun	06:41	28 jun	08:16	5 jul	04:44	12 jul	23:29
20 jul	17:33	27 jul	12:32	3 ago	15:59	11 ago	16:45
19 ago	02:41	25 ago	17:58	2 sep	05:22	10 sep	09:26
17 sep	11:00	24 sep	01:55	1 oct	21:05	10 oct	00:39
16 oct	19:31	23 oct	13:23	31 oct	14:49	8 nov	13:46
15 nov	05:07	22 nov	04:45	30 nov	09:30	8 dic	00:37
14 dic	16:17	21 dic	23:41	30 dic	03:28		

Eclipses

- I. Eclipse penumbral de Luna, el viernes 10 de enero.
- II. Eclipse penumbral de Luna, el viernes 5 de junio.
- III. Eclipse anular de Sol, el domingo 21 de junio.
- IV. Eclipse penumbral de Luna, el domingo 5 de julio.
- V. Eclipse penumbral de Luna, el lunes 30 de noviembre.
- VI. Eclipse total de Sol, el lunes 14 de diciembre.

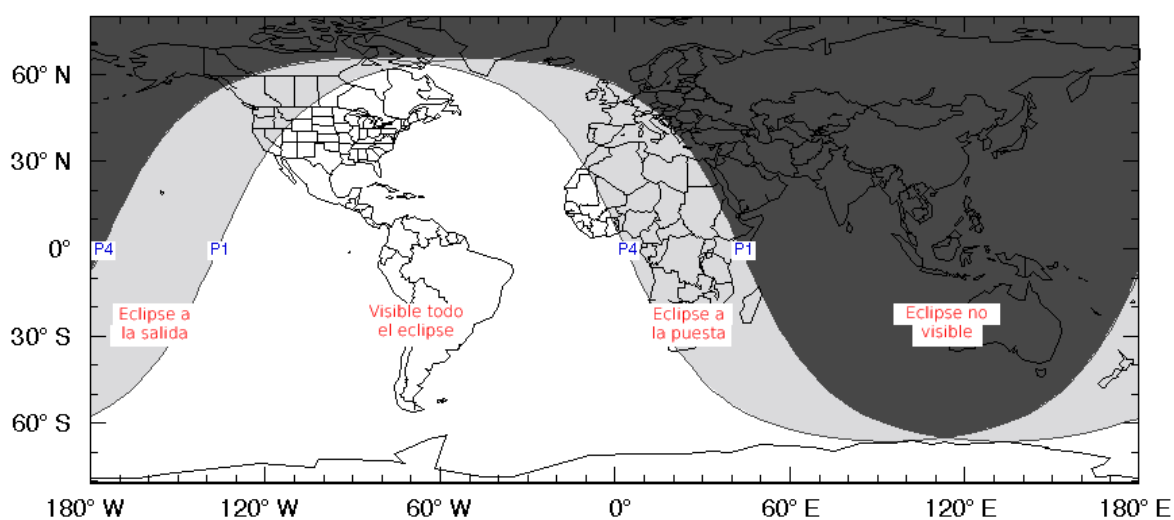
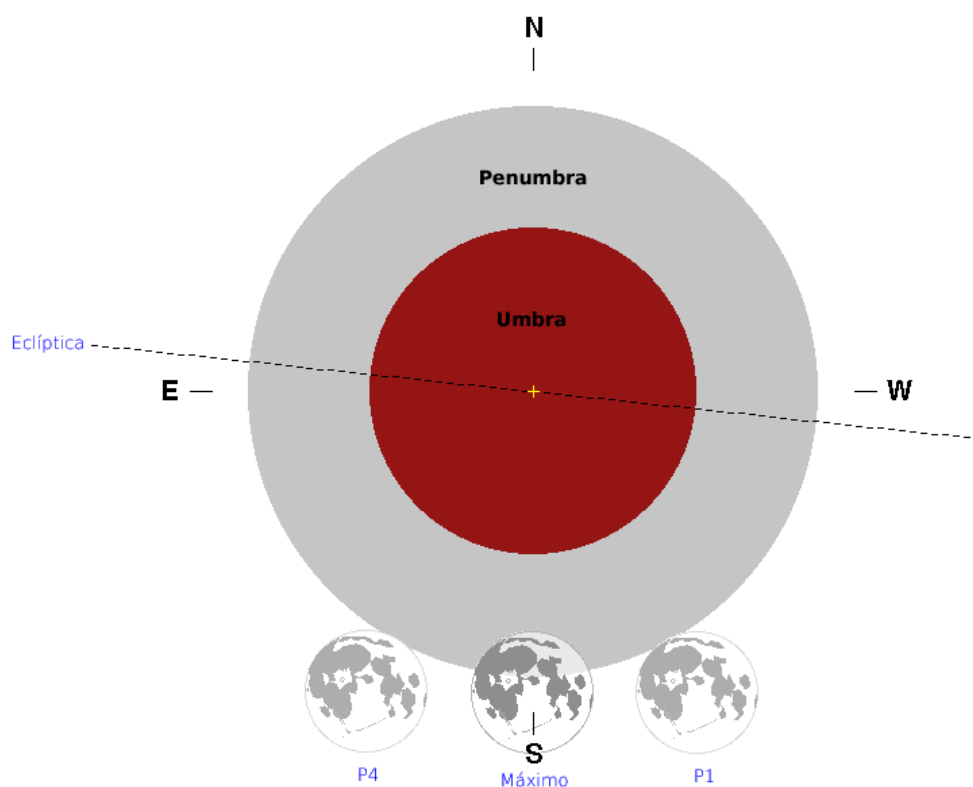
Eclipse penumbral de Luna viernes 10 de enero

Este eclipse será visible desde España.

El eclipse será visible en Europa, África, Asia y Australia.

El contacto con la penumbra empezará a las 17^h 08^m UT (P1) y terminará a las 21^h 12^m UT (P4). El máximo del eclipse tendrá lugar a la 19^h 10^m UT.

La duración total será de 4^h 04^m.



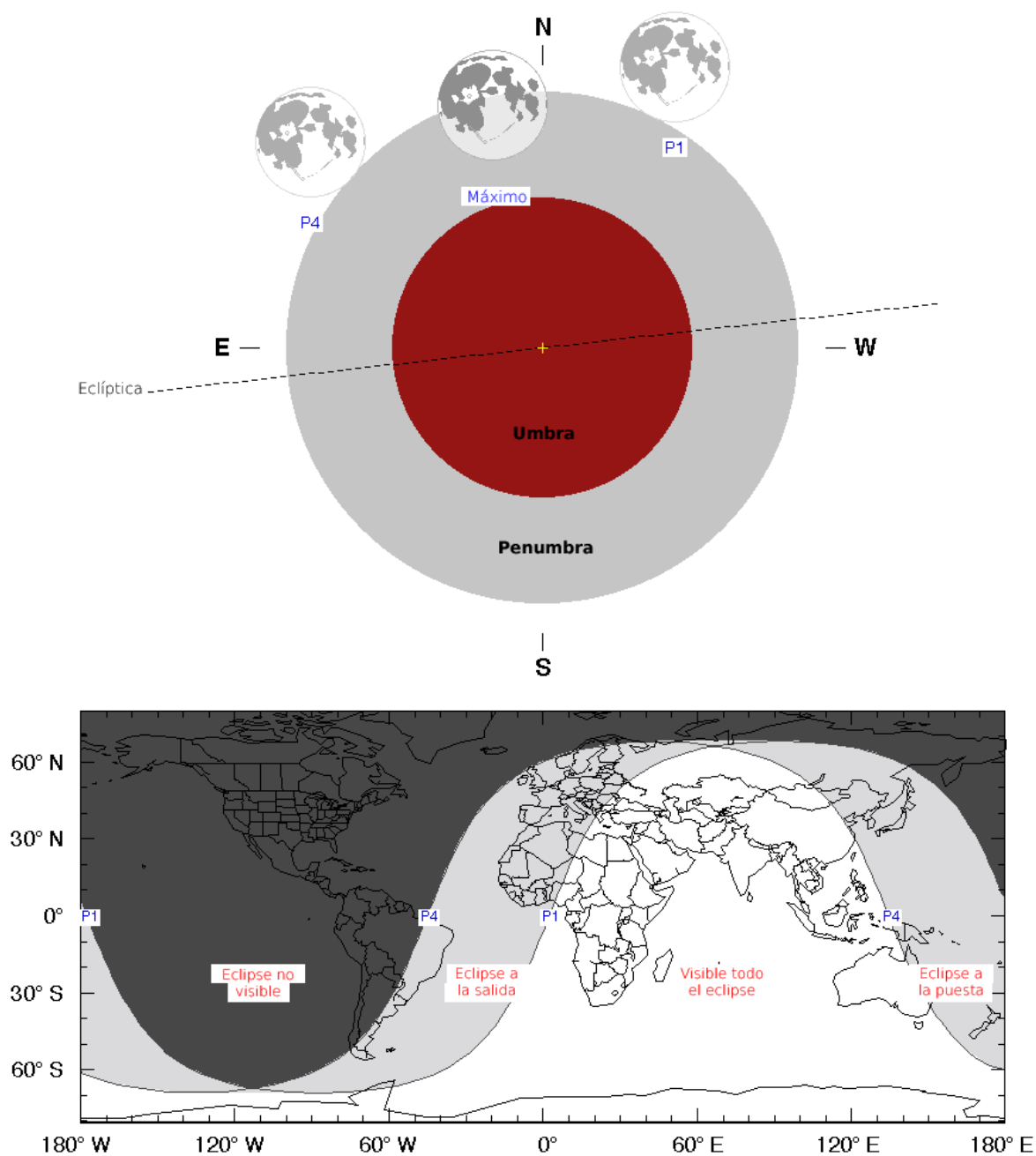
Eclipse penumbral de Luna viernes 5 de junio

Este eclipse será visible desde España parcialmente a la salida de la Luna.

El eclipse será visible en Europa, África, Asia y Australia.

El contacto con la penumbra empezará a las 17^h 46^m UT (P1) y terminará a las 21^h 04^m UT (P4). El máximo del eclipse tendrá lugar a la 19^h 25^m UT.

La duración total será de 3^h 18^m.



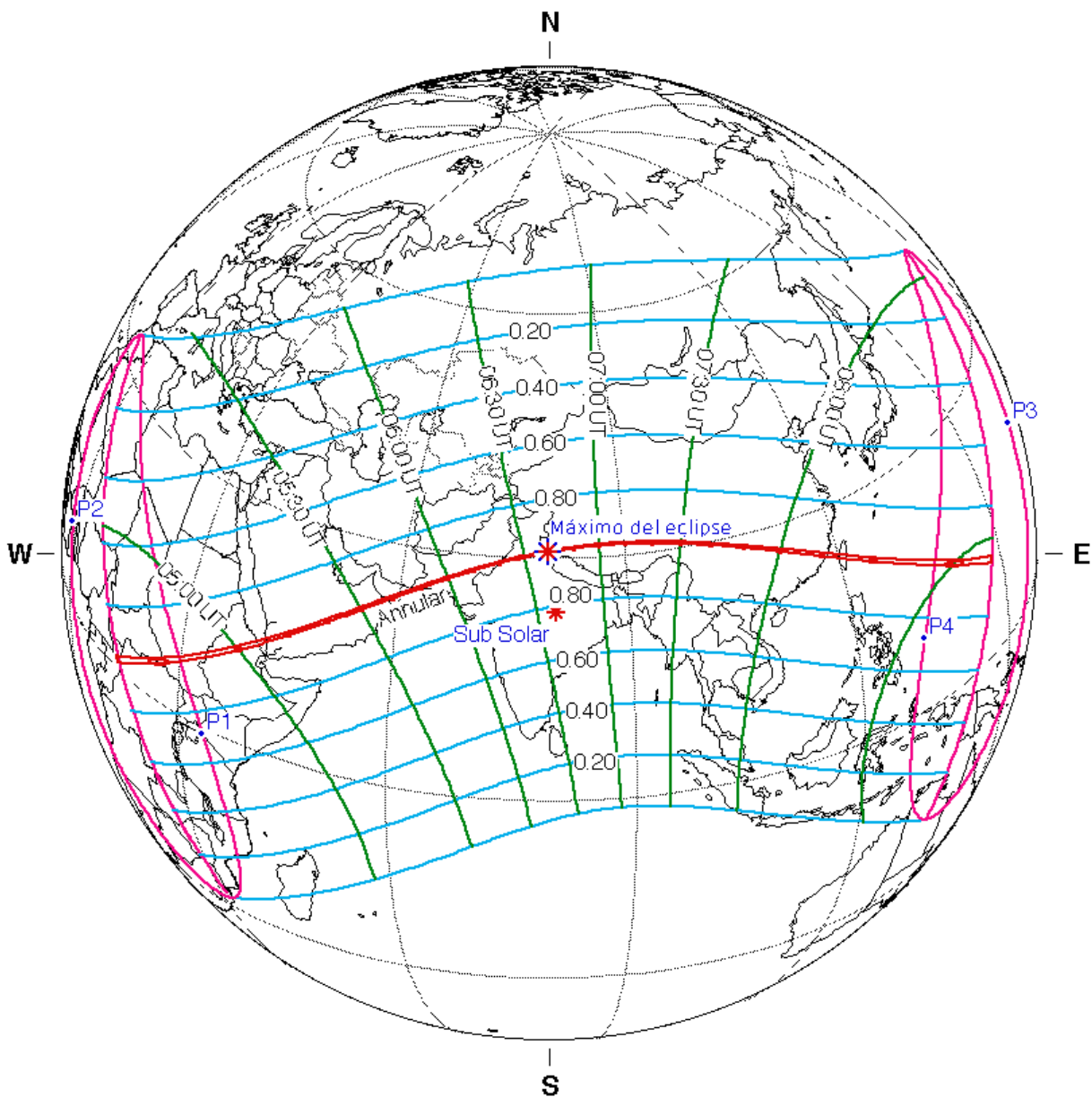
Eclipse anular de Sol domingo 21 de junio

Este eclipse no es visible desde España.

El eclipse será visible como parcial en Africa, sudeste de Europa y Asia. Será visible como anular en Africa central, sur de Asia, China y el Pacífico.

El contacto con la penumbra empezará a las 03^h 46^m UT (P1). El contacto con la umbra se producirá desde las 04^h 48^m UT (U1) hasta las 08^h 32^m UT (U4). El contacto con la penumbra terminará a las 09^h 34^m UT (P4). El máximo del eclipse tendrá lugar a la 06^h 40^m UT sobre el parque nacional Nanda Devi, al norte de India (30° 31'6 N; 079° 41'3 E).

La duración del eclipse anular será de 38^s sobre una franja de 21 km de anchura. La duración total del eclipse será de 5^h 48^m.



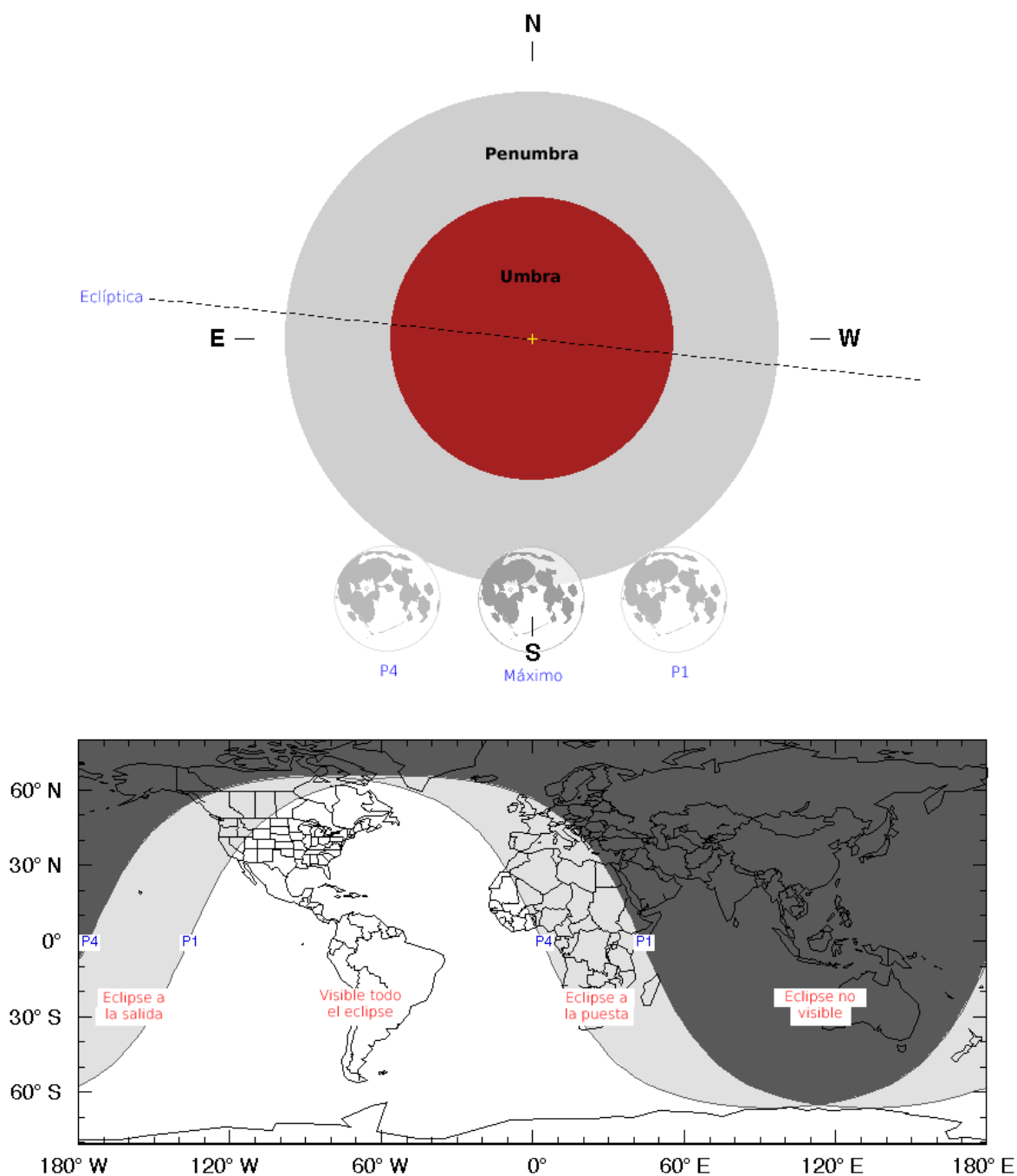
Eclipse penumbral de Luna domingo 5 de julio

Este eclipse será visible desde España parcialmente a la puesta de la Luna.

El eclipse será visible en prácticamente todo el continente Americano, sudoeste de Europa y Africa.

El contacto con la penumbra empezará a las 03^h 07^m UT (P1) y terminará a las 05^h 52^m UT (P4). El máximo del eclipse tendrá lugar a la 04^h 30^m UT.

La duración total será de 2^h 45^m.



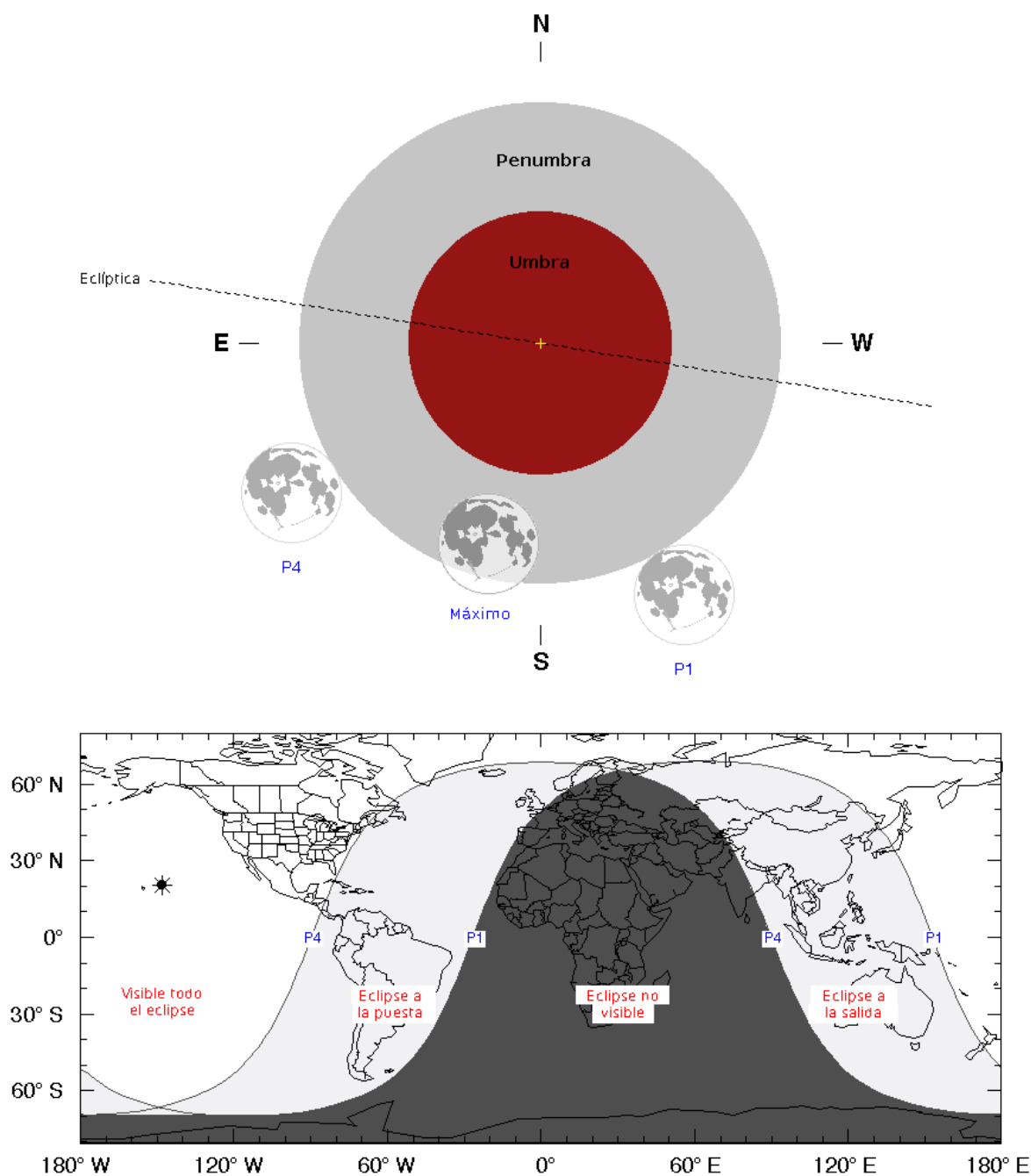
Eclipse penumbral de Luna lunes 30 de noviembre

Este eclipse no será visible desde España.

El eclipse será visible en Asia, Australia, Pacífico y continente Americano.

El contacto con la penumbra empezará a las 07^h 32^m UT (P1) y terminará a las 11^h 53^m UT (P4). El máximo del eclipse tendrá lugar a la 09^h 44^m UT.

La duración total será de 4^h 21^m.



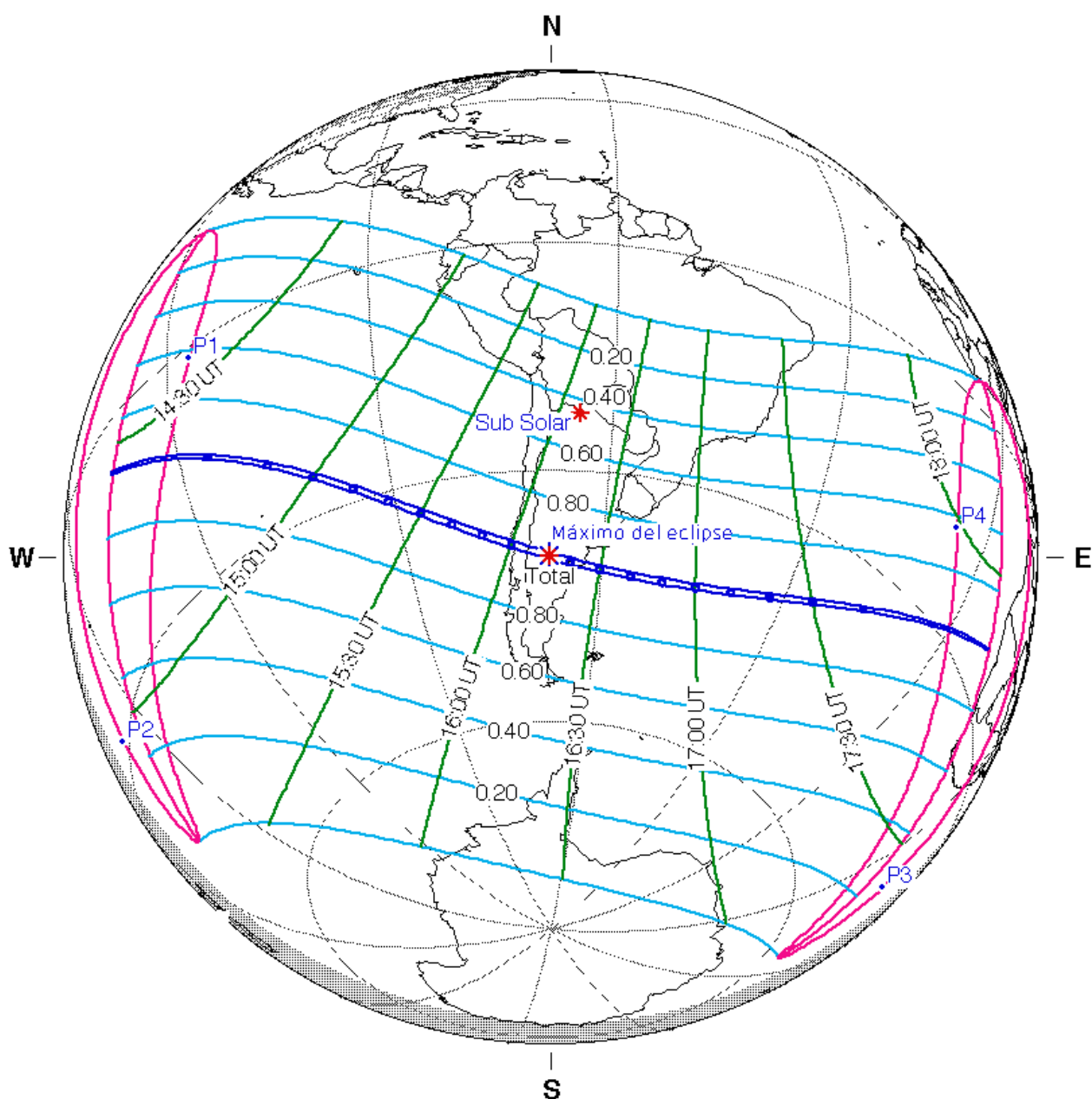
Eclipse total de Sol, el lunes 14 de diciembre

Este eclipse no es visible desde España.

El eclipse será visible como total en el Pacífico Sur, Chile, Argentina y el Atlántico Sur. Será visible como parcial en el Pacífico, el sur de América del Sur y la Antártida.

El contacto con la penumbra empezará a las 13^h 34^m UT (P1). El contacto con la umbra se producirá desde las 14^h 32^m UT (U1) hasta las 17^h 54^m UT (U4). El contacto con la penumbra terminará a las 18^h 53^m UT (P4). El máximo del eclipse tendrá lugar a las 16^h 13^m UT sobre el centro de la provincia de Río Negro, Argentina (40° 20' S; 067° 56' W).

La duración del eclipse total será de 2^m 10^s y la sombra tendrá una anchura de 90 km. La duración total del eclipse será de 5^h 19^m.



UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'3			SD: 14'8 Edad: 5 ^d 8																	
	PMG: 12 ^h 03 ^m 3			PMG: 17 ^h 05 ^m				PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2			R ^o : 41 ^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					
0	179	13.7	-23	03.5	110	56.9	154	-9	58.5	107	60 N	7 09	8 06	9 02	11 52	8	22 33 75				
1	194	13.4		03.3	125	31.3	154		47.8	107	58	7 02	7 54	8 46	48	10	36 73				
2	209	13.1		03.1	140	05.7	154		37.1	108	56	6 56	44	31	44	13	39 71				
3	224	12.8		03.0	154	40.1	155		26.3	108	54	50	36	19	40	15	42 68				
4	239	12.5		02.8	169	14.6	155		15.5	108	52	44	28	8 08	37	17	44 66				
5	254	12.2	-23	02.6	183	49.1	156	-9	04.7	109	50	6 39	7 20	7 59	11 34	19	22 46 65				
6	269	11.9	-23	02.4	198	23.7	156	-8	53.8	109	45	6 27	7 05	7 38	11 28	22	22 51 61				
7	284	11.6		02.2	212	58.3	156		42.9	109	40	17	6 51	22	23	25	55 57				
8	299	11.3		02.0	227	32.9	156		32.0	110	35	08	40	7 08	18	28	22 58 55				
9	314	11.0		01.8	242	07.5	157		21.0	110	30	6 00	29	6 56	14	30	23 01 52				
10	329	10.8		01.6	256	42.2	157	-8	10.0	110	20	5 44	6 11	35	07	34	06 48				
11	344	10.5	-23	01.4	271	16.9	158	-7	59.0	110	10 N	5 28	5 54	6 17	11 01	38	23 11 44				
12	359	10.2	-23	01.2	285	51.7	158	-7	48.0	111	0	5 11	5 37	6 00	10 55	41	23 15 41				
13	14	09.9		01.0	300	26.5	158		36.9	111	10 S	4 52	5 19	5 42	49	45	19 38				
14	29	09.6		00.8	315	01.3	158		25.8	111	20	30	4 59	24	43	48	24 33				
15	44	09.3		00.6	329	36.1	159		14.7	112	30	4 01	35	5 02	36	52	28 30				
16	59	09.0		00.4	344	11.0	159	-7	03.5	112	35	3 43	20	4 49	32	55	31 27				
17	74	08.7	-23	00.2	358	45.9	159	-6	52.3	112	40	3 20	4 02	4 34	10 27	58	23 34 25				
18	89	08.4	-23	00.0	13	20.8	159	-6	41.1	112	45	2 50	3 40	4 17	10 22	60	23 38 22				
19	104	08.1	-22	59.7	27	55.7	160		29.9	112	50	2 06	3 11	3 55	15	65	42 18				
20	119	07.8		59.5	42	30.7	160		18.7	113	52	1 40	2 56	44	12	67	44 17				
21	134	07.5		59.3	57	05.7	160	-6	07.4	113	54	0 59	38	32	09	68	47 14				
22	149	07.2		59.1	71	40.7	160	-5	56.1	113	56	** ** *	2 17	18	05	71	49 12				
23	164	06.9		58.9	86	15.7	161		44.8	114	58	** ** *	1 49	3 02	10 01	73	23 52 10				
24	179	06.6	-22	58.7	100	50.8		-5	33.4		60 S	** ** *	1 05	2 42	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	00.0		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			0			+22		

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'3			PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3														
	Edad: 6 ^d 8																	
	PMG: 12 ^h 03. ^m 8			PMG: 17 ^h 46. ^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		
0	179	06.6	-22	58.7	100	50.8	160	-5	33.4	113	60 N	15 06	16 02	16 59	12 00	7	23 48	77
1	194	06.3		58.5	115	25.8	161		22.1	114	58	23	14	17 06	11 58	10	49	73
2	209	06.0		58.3	130	00.9	161	-5	10.7	114	56	37	24	12	57	12	50	71
3	224	05.7		58.1	144	36.0	162	-4	59.3	114	54	15 49	32	18	55	14	50	69
4	239	05.4		57.9	159	11.2	161		47.9	114	52	16 00	40	24	54	16	50	67
5	254	05.1	-22	57.6	173	46.3	161	-4	36.5	115	50	16 09	16 47	17 29	11 53	17	23 51	65
6	269	04.8	-22	57.4	188	21.4	162	-4	25.0	115	45	16 29	17 03	17 40	11 50	21	23 52	61
7	284	04.6		57.2	202	56.6	162		13.5	114	40	16 46	16	50	48	24	52	58
8	299	04.3		57.0	217	31.8	162	-4	02.1	115	35	17 00	28	17 59	46	27	53	55
9	314	04.0		56.8	232	07.0	162	-3	50.6	116	30	12	38	18 08	44	30	53	53
10	329	03.7		56.6	246	42.2	162		39.0	115	20	32	17 56	24	41	34	54	49
11	344	03.4	-22	56.3	261	17.4	162	-3	27.5	115	10 N	17 50	18 13	18 40	11 39	37	23 55	45
12	359	03.1	-22	56.1	275	52.6	162	-3	16.0	116	0	18 08	18 30	18 56	11 36	41	23 56	41
13	14	02.8		55.9	290	27.8	163	-3	04.4	116	10 S	25	18 48	19 15	34	44	57	37
14	29	02.5		55.7	305	03.1	162	-2	52.8	115	20	18 43	19 08	19 37	31	48	57	34
15	44	02.2		55.5	319	38.3	162		41.3	116	30	19 05	32	20 05	28	53	58	30
16	59	01.9		55.2	334	13.5	163		29.7	116	35	17	19 47	23	27	54	58	28
17	74	01.6	-22	55.0	348	48.8	163	-2	18.1	116	40	19 32	20 05	20 46	11 25	57	23 59	24
18	89	01.3	-22	54.8	3	24.1	162	-2	06.5	117	45	19 50	20 27	21 15	11 22	61	***	***
19	104	01.0		54.6	17	59.3	163	-1	54.8	116	50	20 11	20 55	21 59	20	64	***	***
20	119	00.8		54.3	32	34.6	162		43.2	116	52	22	21 10	22 24	19	66	***	***
21	134	00.5		54.1	47	09.8	163		31.6	117	54	34	27	23 03	17	69	***	***
22	149	00.2		53.9	61	45.1	162		19.9	117	56	20 47	21 48	***	16	70	***	***
23	163	59.9		53.7	76	20.3	163	-1	08.2	116	58	21 04	22 16	***	14	73	***	***
24	178	59.6	-22	53.4	90	55.6		-0	56.6		60 S	21 23	22 58	***	11 12	76	***	***
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 12. ^m 8		Mag: -4.0 PMG: 14 ^h 31. ^m				Mag: +1.6 PMG: 09 ^h 03. ^m				Mag: -1.8 PMG: 11 ^h 44. ^m				Mag: +0.5 PMG: 12 ^h 47. ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	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
1	116	08.7	157	25.7		52.7	239	11.7		36.5	198	37.5		-10.1	182	54.0		40.0
2	131	11.1	172	25.1		51.8	254	12.4		36.9	213	39.3		-10.1	197	56.1		39.9
3	146	13.6	187	24.5		50.8	269	13.2		37.3	228	41.1		-10.1	212	58.3		39.9
4	161	16.1	202	23.9		49.9	284	13.9		37.7	243	43.0		-10.1	228	00.4		39.9
5	176	18.5	217	23.3	-17	49.0	299	14.6	-19	38.1	258	44.8	-23	-10.0	243	02.6	-21	39.8
6	191	21.0	232	22.7	-17	48.0	314	15.3	-19	38.5	273	46.7	-23	-10.0	258	04.7	-21	39.8
7	206	23.4	247	22.2		47.1	329	16.1		38.8	288	48.5		-10.0	273	06.9		39.7
8	221	25.9	262	21.6		46.1	344	16.8		39.2	303	50.3		-10.0	288	09.0		39.7
9	236	28.4	277	21.0		45.2	359	17.5		39.6	318	52.2		-09.9	303	11.2		39.6
10	251	30.8	292	20.4		44.2	14	18.2		40.0	333	54.0		-09.9	318	13.3		39.6
11	266	33.3	307	19.8	-17	43.3	29	19.0	-19	40.4	348	55.8	-23	-09.9	333	15.5	-21	39.5
12	281	35.8	322	19.2	-17	42.3	44	19.7	-19	40.8	3	57.7	-23	-09.9	348	17.6	-21	39.5
13	296	38.2	337	18.6		41.4	59	20.4		41.2	18	59.5		-09.8	3	19.8		39.5
14	311	40.7	352	18.0		40.4	74	21.1		41.6	34	01.4		-09.8	18	22.0		39.4
15	326	43.2	7	17.4		39.5	89	21.9		41.9	49	03.2		-09.8	33	24.1		39.4
16	341	45.6	22	16.8		38.5	104	22.6		42.3	64	05.0		-09.7	48	26.3		39.3
17	356	48.1	37	16.2	-17	37.6	119	23.3	-19	42.7	79	06.9	-23	-09.7	63	28.4	-21	39.3
18	11	50.5	52	15.7	-17	36.6	134	24.0	-19	43.1	94	08.7	-23	-09.7	78	30.6	-21	39.2
19	26	53.0	67	15.1		35.7	149	24.8		43.5	109	10.6		-09.7	93	32.7		39.2
20	41	55.5	82	14.5		34.7	164	25.5		43.9	124	12.4		-09.6	108	34.9		39.2
21	56	57.9	97	13.9		33.8	179	26.2		44.2	139	14.2		-09.6	123	37.0		39.1
22	72	00.4	112	13.3		32.8	194	26.9		44.6	154	16.1		-09.6	138	39.2		39.1
23	87	02.9	127	12.7		31.9	209	27.7		45.0	169	17.9		-09.6	153	41.3		39.0
24	102	05.3	142	12.2	-17	30.9	224	28.4	-19	45.4	184	19.8	-23	-09.5	168	43.5	-21	39.0
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 PMG: 12 ^h 04 ^m 3				SD: 14'8 Edad: 7 ^d 8 PMG: 18 ^h 27 ^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		
0	178	59.6	-22	53.4	90	55.6	162	-0	56.6	117	60 N	7 09	8 05	9 01	12 07	8	*** **	
1	193	59.3		53.2	105	30.8	163		44.9	117	58	7 02	7 54	8 45	08 10		*** **	
2	208	59.0		53.0	120	06.1	162		33.2	117	56	6 55	44	31	09 12		*** **	
3	223	58.7		52.7	134	41.3	162		21.5	116	54	49	35	19	09 15		*** **	
4	238	58.4		52.5	149	16.5	162	-0	09.9	117	52	44	27	8 08	10 16		*** **	
5	253	58.1	-22	52.3	163	51.7	163	+0	01.8	117	50	6 39	7 20	7 58	12 10	18	*** **	
6	268	57.8	-22	52.0	178	27.0	162	+0	13.5	117	45	6 28	7 05	7 38	12 11	22	*** **	
7	283	57.6		51.8	193	02.2	162		25.2	117	40	18	6 52	22	12 25		*** **	
8	298	57.3		51.6	207	37.4	161		36.9	117	35	09	40	7 08	13 28		*** **	
9	313	57.0		51.3	222	12.5	162	+0	48.6	117	30	6 00	30	6 56	14 30		*** **	
10	328	56.7		51.1	236	47.7	162	+1	00.3	117	20	5 44	6 12	36	15 34		*** **	
11	343	56.4	-22	50.8	251	22.9	161	+1	12.0	117	10 N	5 29	5 55	6 18	12 16	38	*** **	
12	358	56.1	-22	50.6	265	58.0	161	+1	23.7	117	0	5 12	5 38	6 01	12 17	41	*** **	
13	13	55.8		50.4	280	33.1	161		35.4	117	10 S	4 53	20	5 43	18 45		*** **	
14	28	55.5		50.1	295	08.2	161		47.1	117	20	31	5 00	25	19 49		*** **	
15	43	55.2		49.9	309	43.3	161	+1	58.8	117	30	4 03	4 36	5 03	21 52		*** **	
16	58	55.0		49.6	324	18.4	161	+2	10.5	117	35	3 45	21	4 51	21 56		*** **	
17	73	54.7	-22	49.4	338	53.5	160	+2	22.2	117	40	3 22	4 04	4 36	12 22	58	*** **	
18	88	54.4	-22	49.2	353	28.5	160	+2	33.9	117	45	2 53	3 42	4 19	12 23	62	*** **	
19	103	54.1		48.9	8	03.5	160		45.6	117	50	2 09	3 13	3 57	24 66		0 00 18	
20	118	53.8		48.7	22	38.5	160	+2	57.3	117	52	1 44	2 58	46	25 67		01 16	
21	133	53.5		48.4	37	13.5	159	+3	09.0	116	54	1 05	41	34	26 69		01 14	
22	148	53.2		48.2	51	48.4	159		20.6	117	56	** **	2 20	21	26 72		01 12	
23	163	52.9		47.9	66	23.3	159		32.3	117	58	** **	1 53	3 05	12 27	74	0 02 10	
24	178	52.7	-22	47.7	80	58.2		+3	44.0		60 S	** **	1 11	2 45	12 28	77	0 02 7	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 08 ^m 8		Mag: -4.0 PMG: 14 ^h 32 ^m				Mag: +1.6 PMG: 09 ^h 02 ^m				Mag: -1.8 PMG: 11 ^h 41 ^m				Mag: +0.5 PMG: 12 ^h 43 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	102	05.3	142	12.2	-17	30.9	224	28.4	-19	45.4	184	19.8	-23	09.5	168	43.5	-21	39.0
1	117	07.8	157	11.6		30.0	239	29.1		45.8	199	21.6		09.5	183	45.6		38.9
2	132	10.3	172	11.0		29.0	254	29.8		46.2	214	23.4		09.5	198	47.8		38.9
3	147	12.7	187	10.4		28.0	269	30.5		46.5	229	25.3		09.5	213	49.9		38.9
4	162	15.2	202	09.8		27.1	284	31.3		46.9	244	27.1		09.4	228	52.1		38.8
5	177	17.7	217	09.3	-17	26.1	299	32.0	-19	47.3	259	28.9	-23	09.4	243	54.2	-21	38.8
6	192	20.1	232	08.7	-17	25.1	314	32.7	-19	47.7	274	30.8	-23	09.4	258	56.4	-21	38.7
7	207	22.6	247	08.1		24.2	329	33.4		48.1	289	32.6		09.3	273	58.5		38.7
8	222	25.0	262	07.5		23.2	344	34.2		48.5	304	34.5		09.3	289	00.7		38.6
9	237	27.5	277	06.9		22.3	359	34.9		48.8	319	36.3		09.3	304	02.8		38.6
10	252	30.0	292	06.4		21.3	14	35.6		49.2	334	38.1		09.3	319	05.0		38.6
11	267	32.4	307	05.8	-17	20.3	29	36.3	-19	49.6	349	40.0	-23	09.2	334	07.1	-21	38.5
12	282	34.9	322	05.2	-17	19.4	44	37.0	-19	50.0	4	41.8	-23	09.2	349	09.3	-21	38.5
13	297	37.4	337	04.6		18.4	59	37.8		50.4	19	43.7		09.2	4	11.4		38.4
14	312	39.8	352	04.1		17.4	74	38.5		50.7	34	45.5		09.2	19	13.6		38.4
15	327	42.3	7	03.5		16.5	89	39.2		51.1	49	47.3		09.1	34	15.7		38.3
16	342	44.8	22	02.9		15.5	104	39.9		51.5	64	49.2		09.1	49	17.9		38.3
17	357	47.2	37	02.3	-17	14.5	119	40.6	-19	51.9	79	51.0	-23	09.1	64	20.0	-21	38.2
18	12	49.7	52	01.8	-17	13.5	134	41.4	-19	52.2	94	52.9	-23	09.0	79	22.2	-21	38.2
19	27	52.2	67	01.2		12.6	149	42.1		52.6	109	54.7		09.0	94	24.4		38.2
20	42	54.6	82	00.6		11.6	164	42.8		53.0	124	56.5		09.0	109	26.5		38.1
21	57	57.1	97	00.1		10.6	179	43.5		53.4	139	58.4		09.0	124	28.7		38.1
22	72	59.5	111	59.5		09.6	194	44.2		53.8	155	00.2		08.9	139	30.8		38.0
23	88	02.0	126	58.9		08.7	209	45.0		54.1	170	02.0		08.9	154	33.0		38.0
24	103	04.5	141	58.4	-17	07.7	224	45.7	-19	54.5	185	03.9	-23	08.9	169	35.1	-21	37.9
Dif.	—		-6 +10				+7 -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 : 54'6 12 ^h : 54'7 20 ^h : 54'9															
	PMG: 12 ^h 04 ^m 7			Edad: 8 ^d PMG: 19 ^h 09 ^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	178	52.7	-22	47.7	80	58.2	159	+3	44.0	116	60 N	15 09	16 05	17 01	12 15	9	1 05	77	
1	193	52.4		47.4	95	33.1	158	+3	55.6	117	58	25	16	08	18 12		02	75	
2	208	52.1		47.2	110	07.9	158	+4	07.3	116	56	39	26	15	21 14		1 01	72	
3	223	51.8		46.9	124	42.7	158		18.9	116	54	15 51	35	20	24 16		0 59	70	
4	238	51.5		46.7	139	17.5	157		30.5	116	52	16 02	42	26	26 18		57	68	
5	253	51.2	-22	46.4	153	52.2	157	+4	42.1	116	50	16 11	16 49	17 31	12 28	20	0 56	66	
6	268	50.9	-22	46.2	168	26.9	157	+4	53.7	116	45	16 31	17 05	17 42	12 33	24	0 53	62	
7	283	50.6		45.9	183	01.6	156	+5	05.3	116	40	16 48	18	17 52	37 27		50	59	
8	298	50.4		45.7	197	36.2	157		16.9	115	35	17 01	29	18 01	41 29		48	56	
9	313	50.1		45.4	212	10.9	155		28.4	116	30	13	39	09	44 32		46	54	
10	328	49.8		45.2	226	45.4	156		40.0	115	20	34	17 58	25	49 36		43	49	
11	343	49.5	-22	44.9	241	20.0	155	+5	51.5	115	10 N	17 52	18 14	18 41	12 54	40	0 40	45	
12	358	49.2	-22	44.6	255	54.5	154	+6	03.0	115	0	18 08	18 31	18 57	12 58	44	0 37	42	
13	13	48.9		44.4	270	28.9	154		14.5	115	10 S	25	18 48	19 15	13 03	47	34	39	
14	28	48.7		44.1	285	03.3	154		26.0	115	20	18 44	19 08	19 37	08 50		31	35	
15	43	48.4		43.9	299	37.7	153		37.5	115	30	19 05	32	20 05	13 55		28	30	
16	58	48.1		43.6	314	12.0	153	+6	49.0	114	35	18	19 47	23	17 57		26	28	
17	73	47.8	-22	43.3	328	46.3	153	+7	00.4	114	40	19 32	20 05	20 46	13 20	60	0 23	26	
18	88	47.5	-22	43.1	343	20.6	152	+7	11.8	114	45	19 49	20 26	21 15	13 25	63	0 21	22	
19	103	47.2		42.8	357	54.8	151		23.2	114	50	20 11	20 55	21 57	30 67		18	19	
20	118	47.0		42.6	12	28.9	151		34.6	113	52	21	21 09	22 22	32 69		17	17	
21	133	46.7		42.3	27	03.0	151		45.9	113	54	33	26	22 59	35 71		15	15	
22	148	46.4		42.0	41	37.1	150	+7	57.2	113	56	20 47	21 46	** **	38 73		13	13	
23	163	46.1		41.8	56	11.1	150	+8	08.5	113	58	21 02	22 13	** **	41 76		12	10	
24	178	45.8	-22	41.5	70	45.1		+8	19.8		60 S	21 21	22 53	** **	13 45	79	0 09	9	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 17 ^h 04 ^m 9		Mag: -4.0 PMG: 14 ^h 33 ^m				Mag: +1.6 PMG: 09 ^h 01 ^m				Mag: -1.8 PMG: 11 ^h 38 ^m				Mag: +0.5 PMG: 12 ^h 40 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	103	04.5	141	58.4	-17	07.7	224	45.7	-19	54.5	185	03.9	-23	-08.9	169	35.1	-21	37.9	
1	118	06.9	156	57.8		06.7	239	46.4		54.9	200	05.7		-08.8	184	37.3		37.9	
2	133	09.4	171	57.2		05.7	254	47.1		55.3	215	07.6		-08.8	199	39.4		37.9	
3	148	11.9	186	56.7		04.8	269	47.8		55.6	230	09.4		-08.8	214	41.6		37.8	
4	163	14.3	201	56.1		03.8	284	48.6		56.0	245	11.2		-08.8	229	43.7		37.8	
5	178	16.8	216	55.5	-17	02.8	299	49.3	-19	56.4	260	13.1	-23	-08.7	244	45.9	-21	37.7	
6	193	19.3	231	55.0	-17	01.8	314	50.0	-19	56.8	275	14.9	-23	-08.7	259	48.0	-21	37.7	
7	208	21.7	246	54.4	-17	00.8	329	50.7		57.1	290	16.8		-08.7	274	50.2		37.6	
8	223	24.2	261	53.8	-16	59.9	344	51.4		57.5	305	18.6		-08.6	289	52.3		37.6	
9	238	26.6	276	53.3		58.9	359	52.1		57.9	320	20.4		-08.6	304	54.5		37.6	
10	253	29.1	291	52.7		57.9	14	52.9		58.3	335	22.3		-08.6	319	56.6		37.5	
11	268	31.6	306	52.2	-16	56.9	29	53.6	-19	58.6	350	24.1	-23	-08.6	334	58.8	-21	37.5	
12	283	34.0	321	51.6	-16	55.9	44	54.3	-19	59.0	5	26.0	-23	-08.5	350	00.9	-21	37.4	
13	298	36.5	336	51.0		54.9	59	55.0		59.4	20	27.8		-08.5	5	03.1		37.4	
14	313	39.0	351	50.5		53.9	74	55.7	-19	59.8	35	29.6		-08.5	20	05.2		37.3	
15	328	41.4	6	49.9		53.0	89	56.4	-20	00.1	50	31.5		-08.4	35	07.4		37.3	
16	343	43.9	21	49.4		52.0	104	57.2		00.5	65	33.3		-08.4	50	09.5		37.2	
17	358	46.4	36	48.8	-16	51.0	119	57.9	-20	00.9	80	35.2	-23	-08.4	65	11.7	-21	37.2	
18	13	48.8	51	48.3	-16	50.0	134	58.6	-20	01.2	95	37.0	-23	-08.4	80	13.8	-21	37.2	
19	28	51.3	66	47.7		49.0	149	59.3		01.6	110	38.8		-08.3	95	16.0		37.1	
20	43	53.8	81	47.1		48.0	165	00.0		02.0	125	40.7		-08.3	110	18.1		37.1	
21	58	56.2	96	46.6		47.0	180	00.7		02.4	140	42.5		-08.3	125	20.3		37.0	
22	73	58.7	111	46.0		46.0	195	01.5		02.7	155	44.4		-08.2	140	22.4		37.0	
23	89	01.1	126	45.5		45.0	210	02.2		03.1	170	46.2		-08.2	155	24.6		36.9	
24	104	03.6	141	44.9	-16	44.0	225	02.9	-20	03.5	185	48.0	-23	-08.2	170	26.7	-21	36.9	
Dif.	—		-6		+10		+7		-4		+18		0		+22		0		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'3				PHE {	4 ^h : 55'0 12 ^h : 55'2 20 ^h : 55'4																
	PMG: 12 ^h 05 ^m 2																					
	Edad: 9 ^d 8				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	178	45.8	-22	41.5	70	45.1	149	+8	19.8	113	60 N	7 08	8 04	9 00	12 24	11	2 22	81				
1	193	45.5		41.2	85	19.0	148		31.1	112	58	7 01	7 53	8 44	30	14	17	77				
2	208	45.3		41.0	99	52.8	148		42.3	112	56	6 55	43	30	35	17	13	74				
3	223	45.0		40.7	114	26.6	148	+8	53.5	112	54	49	35	18	40	19	09	72				
4	238	44.7		40.4	129	00.4	147	+9	04.7	111	52	44	27	8 07	44	21	05	70				
5	253	44.4	-22	40.1	143	34.1	146	+9	15.8	111	50	6 39	7 20	7 58	12 48	23	2 02	68				
6	268	44.1	-22	39.9	158	07.7	146	+9	26.9	111	45	6 28	7 05	7 38	12 57	27	1 55	64				
7	283	43.8		39.6	172	41.3	145		38.0	111	40	18	6 52	22	13 04	30	49	61				
8	298	43.6		39.3	187	14.8	145	+9	49.1	110	35	09	41	7 08	10	33	44	58				
9	313	43.3		39.1	201	48.3	144	+10	00.1	110	30	6 01	30	6 57	16	35	40	55				
10	328	43.0		38.8	216	21.7	144		11.1	110	20	5 45	6 12	36	25	39	32	51				
11	343	42.7	-22	38.5	230	55.1	142	+10	22.1	109	10 N	5 29	5 56	6 18	13 34	42	1 25	48				
12	358	42.4	-22	38.2	245	28.3	143	+10	33.0	109	0	5 13	5 39	6 01	13 42	45	1 19	44				
13	13	42.2		37.9	260	01.6	141		43.9	109	10 S	4 55	22	5 44	50	49	13	41				
14	28	41.9		37.7	274	34.7	141	+10	54.8	108	20	33	5 02	26	13 58	53	1 06	37				
15	43	41.6		37.4	289	07.8	141	+11	05.6	108	30	4 05	4 38	5 05	14 08	57	0 58	34				
16	58	41.3		37.1	303	40.9	139		16.4	107	35	3 47	23	4 52	14	59	54	31				
17	73	41.0	-22	36.8	318	13.8	139	+11	27.1	108	40	3 24	4 05	4 38	14 20	62	0 49	28				
18	88	40.8	-22	36.6	332	46.7	139	+11	37.9	106	45	2 55	3 44	4 21	14 28	65	0 43	25				
19	103	40.5		36.3	347	19.6	137		48.5	107	50	2 13	15	3 59	37	69	37	21				
20	118	40.2		36.0	1	52.3	137	+11	59.2	105	52	1 48	3 01	49	41	72	34	19				
21	133	39.9		35.7	16	25.0	137	+12	09.7	106	54	1 11	2 44	37	46	74	30	17				
22	148	39.7		35.4	30	57.7	135		20.3	105	56	** **	2 24	24	51	76	26	15				
23	163	39.4		35.1	45	30.2	135		30.8	105	58	** **	1 57	3 08	14 57	79	0 22	13				
24	178	39.1	-22	34.8	60	02.7		+12	41.3		60 S	** **	1 17	2 49	15 04	82	0 18	9				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 17 ^h 01 ^m 0		Mag: -4.0 PMG: 14 ^h 34 ^m				Mag: +1.5 PMG: 08 ^h 59 ^m				Mag: -1.8 PMG: 11 ^h 35 ^m				Mag: +0.5 PMG: 12 ^h 36 ^m							
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	104	03.6	141	44.9	-16	44.0	225	02.9	-20	03.5	185	48.0	-23	08.2	170	26.7	-21	36.9				
1	119	06.1	156	44.4		43.0	240	03.6		03.8	200	49.9		08.2	185	28.9		36.8				
2	134	08.5	171	43.8		42.0	255	04.3		04.2	215	51.7		08.1	200	31.0		36.8				
3	149	11.0	186	43.3		41.0	270	05.0		04.6	230	53.6		08.1	215	33.2		36.8				
4	164	13.5	201	42.7		40.0	285	05.7		04.9	245	55.4		08.1	230	35.3		36.7				
5	179	15.9	216	42.2	-16	39.0	300	06.5	-20	05.3	260	57.2	-23	08.0	245	37.5	-21	36.7				
6	194	18.4	231	41.6	-16	38.0	315	07.2	-20	05.7	275	59.1	-23	08.0	260	39.6	-21	36.6				
7	209	20.9	246	41.1		37.0	330	07.9		06.1	291	00.9		08.0	275	41.8		36.6				
8	224	23.3	261	40.5		36.0	345	08.6		06.4	306	02.8		08.0	290	43.9		36.5				
9	239	25.8	276	40.0		35.0	0	09.3		06.8	321	04.6		07.9	305	46.1		36.5				
10	254	28.2	291	39.4		34.0	15	10.0		07.2	336	06.4		07.9	320	48.2		36.5				
11	269	30.7	306	38.9	-16	33.0	30	10.7	-20	07.5	351	08.3	-23	07.9	335	50.4	-21	36.4				
12	284	33.2	321	38.4	-16	32.0	45	11.4	-20	07.9	6	10.1	-23	07.8	350	52.5	-21	36.4				
13	299	35.6	336	37.8		31.0	60	12.2		08.3	21	12.0		07.8	5	54.7		36.3				
14	314	38.1	351	37.3		30.0	75	12.9		08.6	36	13.8		07.8	20	56.8		36.3				
15	329	40.6	6	36.7		29.0	90	13.6		09.0	51	15.6		07.7	35	59.0		36.2				
16	344	43.0	21	36.2		28.0	105	14.3		09.4	66	17.5		07.7	51	01.1		36.2				
17	359	45.5	36	35.6	-16	27.0	120	15.0	-20	09.7	81	19.3	-23	07.7	66	03.3	-21	36.1				
18	14	48.0	51	35.1	-16	26.0	135	15.7	-20	10.1	96	21.2	-23	07.7	81	05.4	-21	36.1				
19	29	50.4	66	34.6		25.0	150	16.4		10.5	111	23.0		07.6	96	07.6		36.1				
20	44	52.9	81	34.0		24.0	165	17.1		10.8	126	24.8		07.6	111	09.7		36.0				
21	59	55.4	96	33.5		23.0	180	17.9		11.2	141	26.7		07.6	126	11.9		36.0				
22	74	57.8	111	32.9		21.9	195	18.6		11.5	156	28.5		07.5	141	14.1		35.9				
23	90	00.3	126	32.4		20.9	210	19.3		11.9	171	30.4		07.5	156	16.2		35.9				
24	105	02.7	141	31.9	-16	19.9	225	20.0	-20	12.3	186	32.2	-23	07.5	171	18.4	-21	35.8				
Dif.	—		-5		+10		+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				SD: 15'1 Edad: 10 ^d 8																	PHE { 4 ^h : 55'6 12 ^h : 55'9 20 ^h : 56'1					
	PMG: 12 ^h 05 ^m 6				PMG: 20 ^h 39 ^m Rº: 50 ^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	39.1	-22	34.8	60	02.7	134	+12	41.3	104	60 N	15 12	16 08	17 04	12 35 16	3 43 82											
1	193	38.8		34.6	74	35.1	134	+12	51.7	103	58	28	19	11	44 19	34 80											
2	208	38.5		34.3	89	07.5	132	+13	02.0	104	56	42	28	17	52 22	27 77											
3	223	38.3		34.0	103	39.7	132		12.4	102	54	15 54	37	23	12 59 24	21 74											
4	238	38.0		33.7	118	11.9	131		22.6	103	52	16 04	45	28	13 05 27	15 72											
5	253	37.7	-22	33.4	132	44.0	131	+13	32.9	101	50	16 14	16 52	17 33	13 11 28	3 10 70											
6	268	37.4	-22	33.1	147	16.1	129	+13	43.0	101	45	16 33	17 07	17 44	13 24 32	2 59 66											
7	283	37.2		32.8	161	48.0	129	+13	53.1	101	40	16 49	20	17 53	34 35	50 63											
8	298	36.9		32.5	176	19.9	128	+14	03.2	100	35	17 03	31	18 02	43 37	42 60											
9	313	36.6		32.2	190	51.7	128		13.2	100	30	15	41	10	13 51 39	35 58											
10	328	36.3		31.9	205	23.5	126		23.2	99	20	35	17 59	26	14 04 43	23 54											
11	343	36.1	-22	31.7	219	55.1	126	+14	33.1	98	10 N	17 53	18 15	18 42	14 16 46	2 13 50											
12	358	35.8	-22	31.4	234	26.7	125	+14	42.9	98	0	18 09	18 32	18 58	14 27 50	2 03 48											
13	13	35.5		31.1	248	58.2	124	+14	52.7	98	10 S	26	18 49	19 16	39 52	1 54 44											
14	28	35.2		30.8	263	29.6	123	+15	02.5	96	20	18 44	19 09	19 38	14 51 55	43 41											
15	43	35.0		30.5	278	00.9	122		12.1	97	30	19 05	33	20 05	15 05 59	32 37											
16	58	34.7		30.2	292	32.1	122		21.8	95	35	18	19 47	23	13 61	25 35											
17	73	34.4	-22	29.9	307	03.3	121	+15	31.3	95	40	19 32	20 04	20 45	15 22 64	1 17 32											
18	88	34.1	-22	29.6	321	34.4	119	+15	40.8	94	45	19 49	20 26	21 14	15 33 67	1 08 29											
19	103	33.9		29.3	336	05.3	119		50.2	94	50	20 10	20 54	21 56	46 71	0 58 25											
20	118	33.6		29.0	350	36.2	119	+15	59.6	93	52	21	21 08	22 20	15 53 72	53 23											
21	133	33.3		28.7	5	07.1	117	+16	08.9	92	54	32	24	22 55	16 00 74	47 22											
22	148	33.0		28.4	19	37.8	116		18.1	92	56	20 45	21 44	** ** *	07 78	41 19											
23	163	32.8		28.1	34	08.4	116		27.3	91	58	21 01	22 10	** ** *	16 80	35 16											
24	178	32.5	-22	27.8	48	39.0		+16	36.4		60 S	21 19	22 48	** ** *	16 26 84	0 27 13											
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO												
	PMG 16 ^h 57 ^m 0		Mag: -4.0 PMG: 14 ^h 34 ^m				Mag: +1.5 PMG: 08 ^h 58 ^m				Mag: -1.8 PMG: 11 ^h 32 ^m				Mag: +0.5 PMG: 12 ^h 33 ^m												
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.											
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'									
0	105	02.7	141	31.9	-16	19.9	225	20.0	-20	12.3	186	32.2	-23	-07.5	171	18.4	-21	35.8									
1	120	05.2	156	31.3		18.9	240	20.7		12.6	201	34.0		-07.5	186	20.5		35.8									
2	135	07.7	171	30.8		17.9	255	21.4		13.0	216	35.9		-07.4	201	22.7		35.7									
3	150	10.1	186	30.3		16.9	270	22.1		13.4	231	37.7		-07.4	216	24.8		35.7									
4	165	12.6	201	29.7		15.9	285	22.8		13.7	246	39.6		-07.4	231	27.0		35.7									
5	180	15.1	216	29.2	-16	14.8	300	23.5	-20	14.1	261	41.4	-23	-07.3	246	29.1	-21	35.6									
6	195	17.5	231	28.7	-16	13.8	315	24.2	-20	14.4	276	43.2	-23	-07.3	261	31.3	-21	35.6									
7	210	20.0	246	28.1		12.8	330	25.0		14.8	291	45.1		-07.3	276	33.4		35.5									
8	225	22.5	261	27.6		11.8	345	25.7		15.2	306	46.9		-07.2	291	35.6		35.5									
9	240	24.9	276	27.1		10.8	0	26.4		15.5	321	48.8		-07.2	306	37.7		35.4									
10	255	27.4	291	26.5		09.7	15	27.1		15.9	336	50.6		-07.2	321	39.9		35.4									
11	270	29.9	306	26.0	-16	08.7	30	27.8	-20	16.2	351	52.4	-23	-07.1	336	42.0	-21	35.3									
12	285	32.3	321	25.5	-16	07.7	45	28.5	-20	16.6	6	54.3	-23	-07.1	351	44.2	-21	35.3									
13	300	34.8	336	25.0		06.7	60	29.2		17.0	21	56.1		-07.1	6	46.3		35.3									
14	315	37.2	351	24.4		05.6	75	29.9		17.3	36	58.0		-07.1	21	48.5		35.2									
15	330	39.7	6	23.9		04.6	90	30.6		17.7	51	59.8		-07.0	36	50.6		35.2									
16	345	42.2	21	23.4		03.6	105	31.3		18.0	67	01.6		-07.0	51	52.8		35.1									
17	0	44.6	36	22.8	-16	02.6	120	32.0	-20	18.4	82	03.5	-23	-07.0	66	54.9	-21	35.1									
18	15	47.1	51	22.3	-16	01.5	135	32.7	-20	18.8	97	05.3	-23	-06.9	81	57.1	-21	35.0									
19	30	49.6	66	21.8	-16	00.5	150	33.5		19.1	112	07.2		-06.9	96	59.2		35.0									
20	45	52.0	81	21.3	-15	59.5	165	34.2		19.5	127	09.0		-06.9	112	01.4		34.9									
21	60	54.5	96	20.7		58.5	180	34.9		19.8	142	10.8		-06.8	127	03.5		34.9									
22	75	57.0	111	20.2		57.4	195	35.6		20.2	157	12.7		-06.8	142	05.7		34.9									
23	90	59.4	126	19.7		56.4	210	36.3		20.6	172	14.5		-06.8	157	07.8		34.8									
24	106	01.9	141	19.2	-15	55.4	225	37.0	-20	20.9	187	16.4	-23	-06.7	172	10.0	-21	34.8									
Dif.	—		-5		+10		+7		-4		+18		0		+22		0										

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			SD: 15'3		PHE { 4 ^h : 56'3 12 ^h : 56'6 20 ^h : 56'9					Edad: 11 ^d 8			Salida de Luna		Puesta de Luna		
	PMG: 12 ^h 06 ^m 1			PMG: 21 ^h 29 ^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	178	32.5	-22	27.8	48	39.0	115	+16	36.4	90	60 N	7 07	8 03	8 58	12 51	24		
1	193	32.2		27.5	63	09.5	113		45.4	89	58	7 01	7 52	42	13 03	28		
2	208	31.9		27.1	77	39.8	113	+16	54.3	89	56	6 54	43	29	14 30	44		
3	223	31.7		26.8	92	10.1	112	+17	03.2	88	54	49	34	17	23 33	35		
4	238	31.4		26.5	106	40.3	111		12.0	87	52	43	27	8 07	32 34	27		
5	253	31.1	-22	26.2	121	10.4	110	+17	20.7	87	50	6 39	7 20	7 57	13 39	36		
6	268	30.9	-22	25.9	135	40.4	110	+17	29.4	85	45	6 28	7 05	7 38	13 56	39		
7	283	30.6		25.6	150	10.4	108		37.9	85	40	18	6 52	22	14 09	41		
8	298	30.3		25.3	164	40.2	108		46.4	84	35	09	41	7 09	20 44	42		
9	313	30.0		25.0	179	10.0	106	+17	54.8	84	30	6 01	31	6 57	30 46	33		
10	328	29.8		24.7	193	39.6	106	+18	03.2	82	20	5 45	6 13	37	14 47	49		
11	343	29.5	-22	24.4	208	09.2	105	+18	11.4	82	10 N	5 30	5 56	6 19	15 02	51		
12	358	29.2	-22	24.0	222	38.7	103	+18	19.6	81	0	5 14	5 40	6 02	15 17	53		
13	13	29.0		23.7	237	08.0	103		27.7	80	10 S	4 56	23	5 46	31 55	38		
14	28	28.7		23.4	251	37.3	102		35.7	79	20	34	5 03	27	15 46	58		
15	43	28.4		23.1	266	06.5	101		43.6	78	30	4 06	4 39	5 06	16 04	61		
16	58	28.1		22.8	280	35.6	100		51.4	77	35	3 49	25	4 54	14 63	2 00		
17	73	27.9	-22	22.5	295	04.6	100	+18	59.1	76	40	3 27	4 07	4 40	16 26	65		
18	88	27.6	-22	22.2	309	33.6	98	+19	06.7	76	45	2 58	3 46	4 23	16 40	67		
19	103	27.3		21.8	324	02.4	97		14.3	74	50	2 16	18	4 01	16 57	71		
20	118	27.1		21.5	338	31.1	97		21.7	74	52	1 52	3 04	3 51	17 05	72		
21	133	26.8		21.2	352	59.8	95		29.1	72	54	1 18	2 48	40	14 74	09		
22	148	26.5		20.9	7	28.3	95		36.3	72	56	** **	28	27	25 76	1 00		
23	163	26.3		20.5	21	56.8	93		43.5	71	58	** **	2 02	3 11	17 36	79		
24	178	26.0	-22	20.2	36	25.1		+19	50.6		60 S	** **	1 24	2 53	17 50	83		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 53 ^m 1		Mag: -4.0 PMG: 14 ^h 35 ^m				Mag: +1.5 PMG: 08 ^h 57 ^m				Mag: -1.8 PMG: 11 ^h 29 ^m				Mag: +0.5 PMG: 12 ^h 30 ^m			
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	106	01.9	141	19.2	-15	55.4	225	37.0	-20	20.9	187	16.4	-23	06.7	172	10.0	-21	
1	121	04.4	156	18.7		54.3	240	37.7		21.3	202	18.2		06.7	187	12.1		
2	136	06.8	171	18.1		53.3	255	38.4		21.6	217	20.1		06.7	202	14.3		
3	151	09.3	186	17.6		52.3	270	39.1		22.0	232	21.9		06.7	217	16.4		
4	166	11.7	201	17.1		51.2	285	39.8		22.3	247	23.7		06.6	232	18.6		
5	181	14.2	216	16.6	-15	50.2	300	40.5	-20	22.7	262	25.6	-23	06.6	247	20.7	-21	
6	196	16.7	231	16.1	-15	49.2	315	41.2	-20	23.0	277	27.4	-23	06.6	262	22.9	-21	
7	211	19.1	246	15.5		48.1	330	41.9		23.4	292	29.3		06.5	277	25.0		
8	226	21.6	261	15.0		47.1	345	42.6		23.8	307	31.1		06.5	292	27.2		
9	241	24.1	276	14.5		46.1	0	43.3		24.1	322	32.9		06.5	307	29.3		
10	256	26.5	291	14.0		45.0	15	44.0		24.5	337	34.8		06.4	322	31.5		
11	271	29.0	306	13.5	-15	44.0	30	44.8	-20	24.8	352	36.6	-23	06.4	337	33.6	-21	
12	286	31.5	321	13.0	-15	42.9	45	45.5	-20	25.2	7	38.5	-23	06.4	352	35.8	-21	
13	301	33.9	336	12.5		41.9	60	46.2		25.5	22	40.3		06.3	7	37.9		
14	316	36.4	351	11.9		40.9	75	46.9		25.9	37	42.1		06.3	22	40.1		
15	331	38.8	6	11.4		39.8	90	47.6		26.2	52	44.0		06.3	37	42.2		
16	346	41.3	21	10.9		38.8	105	48.3		26.6	67	45.8		06.2	52	44.4		
17	1	43.8	36	10.4	-15	37.7	120	49.0	-20	26.9	82	47.7	-23	06.2	67	46.5	-21	
18	16	46.2	51	09.9	-15	36.7	135	49.7	-20	27.3	97	49.5	-23	06.2	82	48.7	-21	
19	31	48.7	66	09.4		35.6	150	50.4		27.6	112	51.4		06.2	97	50.8		
20	46	51.2	81	08.9		34.6	165	51.1		28.0	127	53.2		06.1	112	53.0		
21	61	53.6	96	08.4		33.6	180	51.8		28.3	142	55.0		06.1	127	55.1		
22	76	56.1	111	07.9		32.5	195	52.5		28.7	157	56.9		06.1	142	57.3		
23	91	58.6	126	07.3		31.5	210	53.2		29.0	172	58.7		06.0	157	59.4		
24	107	01.0	141	06.8	-15	30.4	225	53.9	-20	29.4	188	00.6	-23	06.0	173	01.6	-21	
Dif.	—		-5				+10				+18				0			

UT	SOL				☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 06 ^m 5				SD: 15 ^h 5 Edad: 12 ^d 8 PHE { 4^h: 57^m1 12^h: 57^m4 20^h: 57^m6													
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.		Civil	Náut.	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	178	26.0	-22	20.2	36	25.1	93	+19	50.6	69	60 N	15 16	16 11	17 07	13 15	37	6 29	78
1	193	25.7		19.9	50	53.4	92	+19	57.5	69	58	32	22	13	31	39	14	75
2	208	25.5		19.6	65	21.6	91	+20	04.4	68	56	45	31	19	44	42	6 01	73
3	223	25.2		19.3	79	49.7	90		11.2	66	54	15 57	39	25	13 56	43	5 50	71
4	238	24.9		18.9	94	17.7	89		17.8	66	52	16 07	47	30	14 06	45	40	70
5	253	24.7	-22	18.6	108	45.6	88	+20	24.4	64	50	16 16	16 54	17 35	14 15	46	5 31	68
6	268	24.4	-22	18.3	123	13.4	87	+20	30.8	63	45	16 36	17 09	17 46	14 35	48	5 12	66
7	283	24.1		17.9	137	41.1	87		37.1	63	40	16 51	21	17 55	14 50	50	4 57	64
8	298	23.9		17.6	152	08.8	85		43.4	61	35	17 05	32	18 04	15 04	51	44	62
9	313	23.6		17.3	166	36.3	85		49.5	60	30	16	17 42	12	16	52	33	61
10	328	23.3		17.0	181	03.8	83	+20	55.5	59	20	36	18 00	27	36	54	4 14	59
11	343	23.1	-22	16.6	195	31.1	83	+21	01.4	58	10 N	17 54	18 16	18 42	15 53	56	3 57	57
12	358	22.8	-22	16.3	209	58.4	82	+21	07.2	57	0	18 10	18 33	18 59	16 10	57	3 42	55
13	13	22.5		16.0	224	25.6	81		12.9	55	10 S	27	18 50	19 16	26	58	26	53
14	28	22.3		15.6	238	52.7	80		18.4	55	20	18 45	19 09	19 38	16 44	60	3 10	51
15	43	22.0		15.3	253	19.7	79		23.9	53	30	19 05	33	20 05	17 05	61	2 51	48
16	58	21.7		15.0	267	46.6	79		29.2	52	35	18	19 47	23	17	62	40	47
17	73	21.5	-22	14.6	282	13.5	77	+21	34.4	51	40	19 32	20 04	20 45	17 31	63	2 27	45
18	88	21.2	-22	14.3	296	40.2	77	+21	39.5	49	45	19 49	20 25	21 13	17 47	65	2 12	43
19	103	21.0		14.0	311	06.9	76		44.4	48	50	20 10	20 53	21 54	18 08	66	1 54	40
20	118	20.7		13.6	325	33.5	75		49.2	48	52	20	21 06	22 17	17	68	46	38
21	133	20.4		13.3	340	00.0	74		54.0	45	54	31	23	22 50	28	69	36	37
22	148	20.2		12.9	354	26.4	74	+21	58.5	45	56	44	21 42	** **	41	70	26	34
23	163	19.9		12.6	8	52.8	73	+22	03.0	43	58	20 59	22 07	** **	18 55	72	1 13	33
24	178	19.6	-22	12.3	23	19.1		+22	07.3		60 S	21 17	22 42	** **	19 13	73	0 59	29
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 49 ^m 2		Mag: -4.0 PMG: 14 ^h 36 ^m				Mag: +1.5 PMG: 08 ^h 56 ^m				Mag: -1.8 PMG: 11 ^h 27 ^m				Mag: +0.5 PMG: 12 ^h 26 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	107	01.0	141	06.8	-15	30.4	225	53.9	-20	29.4	188	00.6	-23	-06.0	173	01.6	-21	33.7
1	122	03.5	156	06.3		29.4	240	54.6		29.7	203	02.4		-06.0	188	03.7		33.7
2	137	06.0	171	05.8		28.3	255	55.3		30.1	218	04.2		-05.9	203	05.9		33.6
3	152	08.4	186	05.3		27.3	270	56.0		30.4	233	06.1		-05.9	218	08.0		33.6
4	167	10.9	201	04.8		26.2	285	56.7		30.8	248	07.9		-05.9	233	10.2		33.5
5	182	13.3	216	04.3	-15	25.2	300	57.4	-20	31.1	263	09.8	-23	-05.8	248	12.3	-21	33.5
6	197	15.8	231	03.8	-15	24.1	315	58.1	-20	31.5	278	11.6	-23	-05.8	263	14.5	-21	33.4
7	212	18.3	246	03.3		23.1	330	58.8		31.8	293	13.5		-05.8	278	16.6		33.4
8	227	20.7	261	02.8		22.0	345	59.5		32.2	308	15.3		-05.7	293	18.8		33.3
9	242	23.2	276	02.3		21.0	1	00.2		32.5	323	17.1		-05.7	308	20.9		33.3
10	257	25.7	291	01.8		19.9	16	00.9		32.9	338	19.0		-05.7	323	23.1		33.2
11	272	28.1	306	01.3	-15	18.8	31	01.6	-20	33.2	353	20.8	-23	-05.6	338	25.2	-21	33.2
12	287	30.6	321	00.8	-15	17.8	46	02.3	-20	33.6	8	22.7	-23	-05.6	353	27.4	-21	33.2
13	302	33.1	336	00.3		16.7	61	03.0		33.9	23	24.5		-05.6	8	29.5		33.1
14	317	35.5	350	59.8		15.7	76	03.7		34.3	38	26.3		-05.5	23	31.7		33.1
15	332	38.0	5	59.3		14.6	91	04.4		34.6	53	28.2		-05.5	38	33.8		33.0
16	347	40.5	20	58.8		13.6	106	05.1		34.9	68	30.0		-05.5	53	36.0		33.0
17	2	42.9	35	58.3	-15	12.5	121	05.8	-20	35.3	83	31.9	-23	-05.4	68	38.1	-21	32.9
18	17	45.4	50	57.8	-15	11.4	136	06.5	-20	35.6	98	33.7	-23	-05.4	83	40.3	-21	32.9
19	32	47.8	65	57.3		10.4	151	07.2		36.0	113	35.6		-05.4	98	42.4		32.8
20	47	50.3	80	56.8		09.3	166	07.9		36.3	128	37.4		-05.4	113	44.6		32.8
21	62	52.8	95	56.3		08.2	181	08.6		36.7	143	39.2		-05.3	128	46.7		32.8
22	77	55.2	110	55.8		07.2	196	09.3		37.0	158	41.1		-05.3	143	48.9		32.7
23	92	57.7	125	55.4		06.1	211	10.0		37.4	173	42.9		-05.3	158	51.0		32.7
24	108	00.2	140	54.9	-15	05.1	226	10.7	-20	37.7	188	44.8	-23	-05.2	173	53.2	-21	32.6
Dif.	—		-5		+11		+7		-3		+18		0		+21		0	

UT	SOL				○ LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'3				SD: 15'7 Edad: 13 ^d 8								R ^o : 59 ^m			R ^o			R ^o		
	PMG: 12 ^h 06 ^m 9				PMG: 23 ^h 21 ^m																
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.		Náut.	Civil		Hora	R ^o		Hora	R ^o	
h	°	'	°	'	°	'			°	'			h	m	h	m	h	m	h	m	
0	178	19.6	-22	12.3	23	19.1	71	+22	07.3	42		60 N	7 06	8 01	8 56	13 52	56		7 47	66	
1	193	19.4		11.9	37	45.2	72		11.5	41		58	7 00	7 51	41	14 10	57		29	65	
2	208	19.1		11.6	52	11.4	70		15.6	40		56	6 54	42	27	26	57		14	64	
3	223	18.9		11.2	66	37.4	69		19.6	38		54	48	33	16	39	58		7 01	64	
4	238	18.6		10.9	81	03.3	69		23.4	37		52	43	26	8 06	14 51	58		6 50	63	
5	253	18.3	-22	10.5	95	29.2	68	+22	27.1	35		50	6 38	7 19	7 57	15 01	58		6 39	63	
6	268	18.1	-22	10.2	109	55.0	68	+22	30.6	34		45	6 27	7 04	7 37	15 23	58		6 18	62	
7	283	17.8		09.8	124	20.8	66		34.0	33		40	18	6 52	22	40	59		6 01	61	
8	298	17.5		09.5	138	46.4	66		37.3	31		35	09	41	7 09	15 55	59		5 46	61	
9	313	17.3		09.2	153	12.0	66		40.4	30		30	6 01	31	6 57	16 08	59		34	60	
10	328	17.0		08.8	167	37.6	64		43.4	29		20	5 46	6 13	37	30	59		5 13	59	
11	343	16.8	-22	08.5	182	03.0	64	+22	46.3	27		10 N	5 31	5 57	6 20	16 49	59		4 54	59	
12	358	16.5	-22	08.1	196	28.4	63	+22	49.0	26		0	5 15	5 41	6 03	17 07	59		4 37	58	
13	13	16.2		07.8	210	53.7	63		51.6	24		10 S	4 57	24	5 47	24	60		19	58	
14	28	16.0		07.4	225	19.0	62		54.0	23		20	36	5 04	29	17 44	59		4 01	56	
15	43	15.7		07.1	239	44.2	61		56.3	22		30	4 08	4 41	5 08	18 06	59		3 39	56	
16	58	15.5		06.7	254	09.3	61	+22	58.5	20		35	3 51	27	4 56	19	59		27	55	
17	73	15.2	-22	06.3	268	34.4	60	+23	00.5	19		40	3 29	4 10	4 42	18 34	59		3 12	55	
18	88	15.0	-22	06.0	282	59.4	60	+23	02.4	17		45	3 01	3 48	4 25	18 52	59		2 55	54	
19	103	14.7		05.6	297	24.4	59		04.1	16		50	2 20	21	4 04	19 14	59		34	52	
20	118	14.4		05.3	311	49.3	59		05.7	14		52	1 57	3 07	3 54	25	58		24	51	
21	133	14.2		04.9	326	14.2	58		07.1	13		54	1 24	2 51	43	37	58		13	50	
22	148	13.9		04.6	340	39.0	58		08.4	11		56	** **	32	30	19 51	58		2 00	49	
23	163	13.7		04.2	355	03.8	57		09.5	10		58	** **	2 07	3 15	20 07	57		1 46	47	
24	178	13.4	-22	03.9	9	28.5		+23	10.5			60 S	** **	1 32	2 57	20 26	57		1 28	46	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 45 ^m 2		Mag: -4.0 PMG: 14 ^h 37 ^m				Mag: +1.5 PMG: 08 ^h 55 ^m				Mag: -1.8 PMG: 11 ^h 24 ^m				Mag: +0.5 PMG: 12 ^h 23 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	108	00.2	140	54.9	-15	05.1	226	10.7	-20	37.7	188	44.8	-23	05.2	173	53.2	-21	32.6
1	123	02.6	155	54.4		04.0	241	11.4		38.0	203	46.6		05.2	188	55.3		32.6
2	138	05.1	170	53.9		02.9	256	12.1		38.4	218	48.5		05.2	203	57.5		32.5
3	153	07.6	185	53.4		01.9	271	12.8		38.7	233	50.3		05.1	218	59.6		32.5
4	168	10.0	200	52.9	-15	00.8	286	13.5		39.1	248	52.1		05.1	234	01.8		32.4
5	183	12.5	215	52.4	-14	59.7	301	14.2	-20	39.4	263	54.0	-23	05.1	249	03.9	-21	32.4
6	198	15.0	230	51.9	-14	58.7	316	14.9	-20	39.8	278	55.8	-23	05.0	264	06.1	-21	32.3
7	213	17.4	245	51.4		57.6	331	15.6		40.1	293	57.7		05.0	279	08.2		32.3
8	228	19.9	260	51.0		56.5	346	16.3		40.4	308	59.5		05.0	294	10.4		32.3
9	243	22.3	275	50.5		55.4	1	17.0		40.8	324	01.4		04.9	309	12.5		32.2
10	258	24.8	290	50.0		54.4	16	17.7		41.1	339	03.2		04.9	324	14.7		32.2
11	273	27.3	305	49.5	-14	53.3	31	18.4	-20	41.5	354	05.0	-23	04.9	339	16.8	-21	32.1
12	288	29.7	320	49.0	-14	52.2	46	19.1	-20	41.8	9	06.9	-23	04.8	354	19.0	-21	32.1
13	303	32.2	335	48.5		51.2	61	19.8		42.1	24	08.7		04.8	9	21.1		32.0
14	318	34.7	350	48.0		50.1	76	20.5		42.5	39	10.6		04.8	24	23.3		32.0
15	333	37.1	5	47.6		49.0	91	21.2		42.8	54	12.4		04.7	39	25.4		31.9
16	348	39.6	20	47.1		47.9	106	21.9		43.2	69	14.3		04.7	54	27.6		31.9
17	3	42.1	35	46.6	-14	46.9	121	22.5	-20	43.5	84	16.1	-23	04.7	69	29.7	-21	31.8
18	18	44.5	50	46.1	-14	45.8	136	23.2	-20	43.8	99	17.9	-23	04.6	84	31.9	-21	31.8
19	33	47.0	65	45.6		44.7	151	23.9		44.2	114	19.8		04.6	99	34.0		31.8
20	48	49.5	80	45.2		43.6	166	24.6		44.5	129	21.6		04.6	114	36.2		31.7
21	63	51.9	95	44.7		42.5	181	25.3		44.8	144	23.5		04.5	129	38.3		31.7
22	78	54.4	110	44.2		41.5	196	26.0		45.2	159	25.3		04.5	144	40.5		31.6
23	93	56.8	125	43.7		40.4	211	26.7		45.5	174	27.2		04.5	159	42.6		31.6
24	108	59.3	140	43.2	-14	39.3	226	27.4	-20	45.8	189	29.0	-23	04.4	174	44.8	-21	31.5
Dif.	—		-5		+11		+7		-3		+18		0		+21			

UT	SOL			○ LUNA							Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'3			SD: 15'9 Edad: 14 ^d 8															
	PMG: 12 ^h 07 ^m 3			PHE { 4 ^h : 58'6 12 ^h : 58'8 20 ^h : 59'0															
	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	178	13.4	-22	03.9		9	28.5	56	+23	10.5	9	60 N	15 20	16 14	17 09	14 48	77	8 53	48
1	193	13.2		03.5		23	53.1	56		11.4	7	58	35	25	16	15 07	75	34	50
2	208	12.9		03.1		38	17.7	56		12.1	5	56	15 48	34	22	23	73	18	51
3	223	12.6		02.8		52	42.3	56		12.6	4	54	16 00	42	27	37	71	8 05	52
4	238	12.4		02.4		67	06.9	54		13.0	2	52	10	50	32	49	70	7 53	53
5	253	12.1	-22	02.0		81	31.3	55	+23	13.2	1	50	16 19	16 56	17 37	15 59	70	7 42	54
6	268	11.9	-22	01.7		95	55.8	54	+23	13.3	1	45	16 38	17 11	17 48	16 21	68	7 20	55
7	283	11.6		01.3		110	20.2	54		13.2	2	40	16 53	23	17 57	39	66	7 02	56
8	298	11.4		01.0		124	44.6	54		13.0	4	35	17 06	34	18 05	16 54	65	6 47	57
9	313	11.1		00.6		139	09.0	53		12.6	5	30	18	17 44	13	17 07	64	34	57
10	328	10.9	-22	00.2		153	33.3	53		12.1	7	20	38	18 01	28	29	62	6 12	58
11	343	10.6	-21	59.9		167	57.6	52	+23	11.4	8	10 N	17 55	18 17	18 43	17 48	61	5 53	59
12	358	10.3	-21	59.5		182	21.8	53	+23	10.6	10	0	18 11	18 33	18 59	18 06	60	5 35	59
13	13	10.1		59.1		196	46.1	52		09.6	12	10 S	27	18 50	19 17	24	58	5 17	60
14	28	09.8		58.7		211	10.3	52		08.4	13	20	18 45	19 09	19 38	18 43	57	4 57	61
15	43	09.6		58.4		225	34.5	52		07.1	14	30	19 06	33	20 05	19 05	55	35	62
16	58	09.3		58.0		239	58.7	51		05.7	16	35	18	19 47	22	18	54	22	62
17	73	09.1	-21	57.6		254	22.8	52	+23	04.1	18	40	19 31	20 04	20 44	19 33	52	4 07	62
18	88	08.8	-21	57.3		268	47.0	51	+23	02.3	19	45	19 48	20 24	21 12	19 51	50	3 49	63
19	103	08.6		56.9		283	11.1	51	+23	00.4	21	50	20 09	20 51	21 51	20 13	48	26	64
20	118	08.3		56.5		297	35.2	51	+22	58.3	22	52	18	21 05	22 14	23	47	15	65
21	133	08.1		56.1		311	59.3	51		56.1	24	54	30	20	22 45	35	46	3 03	65
22	148	07.8		55.8		326	23.4	51		53.7	26	56	42	21 39	23 52	20 49	44	2 49	66
23	163	07.6		55.4		340	47.5	51		51.1	27	58	20 57	22 03	** ** *	21 04	42	33	66
24	178	07.3	-21	55.0		355	11.6		+22	48.4		60 S	21 15	22 37	** ** *	21 23	39	2 14	66

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.0				Mag: +1.5				Mag: -1.8				Mag: +0.5			
	16 ^h 41 ^m 3		PMG: 14 ^h 38 ^m				PMG: 08 ^h 54 ^m				PMG: 11 ^h 21 ^m				PMG: 12 ^h 19 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	108	59.3	140	43.2	-14	39.3	226	27.4	-20	45.8	189	29.0	-23	-04.4	174	44.8	-21	31.5
1	124	01.8	155	42.8		38.2	241	28.1		46.2	204	30.8		-04.4	189	46.9		31.5
2	139	04.2	170	42.3		37.1	256	28.8		46.5	219	32.7		-04.4	204	49.1		31.4
3	154	06.7	185	41.8		36.1	271	29.5		46.9	234	34.5		-04.3	219	51.2		31.4
4	169	09.2	200	41.3		35.0	286	30.2		47.2	249	36.4		-04.3	234	53.4		31.3
5	184	11.6	215	40.9	-14	33.9	301	30.9	-20	47.5	264	38.2	-23	-04.3	249	55.5	-21	31.3
6	199	14.1	230	40.4	-14	32.8	316	31.6	-20	47.9	279	40.1	-23	-04.2	264	57.7	-21	31.3
7	214	16.6	245	39.9		31.7	331	32.3		48.2	294	41.9		-04.2	279	59.8		31.2
8	229	19.0	260	39.4		30.6	346	33.0		48.5	309	43.7		-04.2	295	02.0		31.2
9	244	21.5	275	39.0		29.6	1	33.7		48.9	324	45.6		-04.1	310	04.1		31.1
10	259	24.0	290	38.5		28.5	16	34.3		49.2	339	47.4		-04.1	325	06.3		31.1
11	274	26.4	305	38.0	-14	27.4	31	35.0	-20	49.5	354	49.3	-23	-04.0	340	08.4	-21	31.0
12	289	28.9	320	37.6	-14	26.3	46	35.7	-20	49.9	9	51.1	-23	-04.0	355	10.6	-21	31.0
13	304	31.3	335	37.1		25.2	61	36.4		50.2	24	53.0		-04.0	10	12.7		30.9
14	319	33.8	350	36.6		24.1	76	37.1		50.5	39	54.8		-03.9	25	14.9		30.9
15	334	36.3	5	36.2		23.0	91	37.8		50.9	54	56.7		-03.9	40	17.0		30.8
16	349	38.7	20	35.7		21.9	106	38.5		51.2	69	58.5		-03.9	55	19.2		30.8
17	4	41.2	35	35.2	-14	20.8	121	39.2	-20	51.5	85	00.3	-23	-03.8	70	21.3	-21	30.8
18	19	43.7	50	34.8	-14	19.7	136	39.9	-20	51.9	100	02.2	-23	-03.8	85	23.5	-21	30.7
19	34	46.1	65	34.3		18.7	151	40.6		52.2	115	04.0		-03.8	100	25.6		30.7
20	49	48.6	80	33.8		17.6	166	41.3		52.5	130	05.9		-03.7	115	27.8		30.6
21	64	51.1	95	33.4		16.5	181	42.0		52.8	145	07.7		-03.7	130	29.9		30.6
22	79	53.5	110	32.9		15.4	196	42.6		53.2	160	09.6		-03.7	145	32.1		30.5
23	94	56.0	125	32.4		14.3	211	43.3		53.5	175	11.4		-03.6	160	34.2		30.5
24	109	58.5	140	32.0	-14	13.2	226	44.0	-20	53.8	190	13.3	-23	-03.6	175	36.4	-21	30.4
Dif.	—		-5	+11			+7	-3			+18		0		+21			

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 07 ^m 7				SD: 16'1 Edad: 15 ^d 8 PMG: 00 ^h 20 ^m PHE { 4^h: 59'2 12^h: 59'4 20^h: 59'5 R ^o : 60 ^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	h m m			
0	178	07.3	-21	55.0	355	11.6	50	+22	48.4	28	60 N	7 05	8 00	8 54	16 05	90	9 41	32		
1	193	07.1		54.6	9	35.6	51		45.6	30	58	6 58	7 49	39	22	86	24	35		
2	208	06.8		54.3	23	59.7	51		42.6	32	56	52	40	26	36	84	9 09	38		
3	223	06.6		53.9	38	23.8	51		39.4	33	54	47	32	14	48	82	8 57	40		
4	238	06.3		53.5	52	47.9	51		36.1	35	52	42	25	8 05	16 59	79	46	42		
5	253	06.1	-21	53.1	67	12.0	51	+22	32.6	36	50	6 37	7 18	7 56	17 09	77	8 36	43		
6	268	05.8	-21	52.7	81	36.1	51	+22	29.0	38	45	6 27	7 04	7 37	17 29	74	8 15	47		
7	283	05.6		52.4	96	00.2	51		25.2	40	40	18	6 51	21	45	71	7 58	49		
8	298	05.3		52.0	110	24.3	51		21.2	41	35	09	41	7 08	17 59	69	44	51		
9	313	05.1		51.6	124	48.4	51		17.1	42	30	6 01	31	6 57	18 11	67	31	53		
10	328	04.8		51.2	139	12.5	52		12.9	44	20	5 46	6 14	37	31	64	7 10	55		
11	343	04.6	-21	50.8	153	36.7	51	+22	08.5	45	10 N	5 32	5 58	6 20	18 49	61	6 52	57		
12	358	04.3	-21	50.4	168	00.8	52	+22	04.0	47	0	5 16	5 42	6 04	19 06	58	6 34	60		
13	13	04.1		50.0	182	25.0	52	+21	59.3	49	10 S	4 58	25	5 48	22	56	6 17	61		
14	28	03.8		49.7	196	49.2	52		54.4	50	20	37	5 06	30	19 40	53	5 58	64		
15	43	03.6		49.3	211	13.4	53		49.4	51	30	4 10	4 43	5 10	20 00	50	37	65		
16	58	03.3		48.9	225	37.7	52		44.3	53	35	3 53	29	4 58	12	48	24	67		
17	73	03.1	-21	48.5	240	01.9	53	+21	39.0	55	40	3 31	4 12	4 44	20 25	46	5 09	69		
18	88	02.8	-21	48.1	254	26.2	54	+21	33.5	56	45	3 04	3 51	4 27	20 41	43	4 52	71		
19	103	02.6		47.7	268	50.6	53		27.9	57	50	2 24	24	4 07	21 01	39	30	74		
20	118	02.3		47.3	283	14.9	54		22.2	59	52	2 02	3 11	3 57	10	37	20	75		
21	133	02.1		46.9	297	39.3	54		16.3	61	54	1 31	2 55	46	21	35	4 08	77		
22	148	01.9		46.5	312	03.7	55		10.2	61	56	0 26	36	33	33	32	3 55	79		
23	163	01.6		46.1	326	28.2	54	+21	04.1	64	58	** **	2 12	18	21 46	29	3 39	82		
24	178	01.4	-21	45.8	340	52.6		+20	57.7		60 S	** **	1 39	3 01	22 02	25	3 20	85		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 37 ^m 4		Mag: -4.0 PMG: 14 ^h 38 ^m				Mag: +1.5 PMG: 08 ^h 53 ^m				Mag: -1.8 PMG: 11 ^h 18 ^m				Mag: +0.5 PMG: 12 ^h 16 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	109	58.5	140	32.0	-14	13.2	226	44.0	-20	53.8	190	13.3	-23	03.6	175	36.4	-21	30.4
1	125	00.9	155	31.5		12.1	241	44.7		54.2	205	15.1		03.6	190	38.5		30.4
2	140	03.4	170	31.0		11.0	256	45.4		54.5	220	16.9		03.5	205	40.7		30.3
3	155	05.8	185	30.6		09.9	271	46.1		54.8	235	18.8		03.5	220	42.8		30.3
4	170	08.3	200	30.1		08.8	286	46.8		55.1	250	20.6		03.5	235	45.0		30.3
5	185	10.8	215	29.7	-14	07.7	301	47.5	-20	55.5	265	22.5	-23	03.4	250	47.1	-21	30.2
6	200	13.2	230	29.2	-14	06.6	316	48.2	-20	55.8	280	24.3	-23	03.4	265	49.2	-21	30.2
7	215	15.7	245	28.7		05.5	331	48.9		56.1	295	26.2		03.4	280	51.4		30.1
8	230	18.2	260	28.3		04.4	346	49.5		56.5	310	28.0		03.3	295	53.5		30.1
9	245	20.6	275	27.8		03.3	1	50.2		56.8	325	29.9		03.3	310	55.7		30.0
10	260	23.1	290	27.4		02.2	16	50.9		57.1	340	31.7		03.3	325	57.8		30.0
11	275	25.6	305	26.9	-14	01.1	31	51.6	-20	57.4	355	33.5	-23	03.2	341	00.0	-21	29.9
12	290	28.0	320	26.5	-14	00.0	46	52.3	-20	57.8	10	35.4	-23	03.2	356	02.1	-21	29.9
13	305	30.5	335	26.0	-13	58.9	61	53.0		58.1	25	37.2		03.1	11	04.3		29.8
14	320	32.9	350	25.6		57.8	76	53.7		58.4	40	39.1		03.1	26	06.4		29.8
15	335	35.4	5	25.1		56.7	91	54.4		58.7	55	40.9		03.1	41	08.6		29.8
16	350	37.9	20	24.6		55.6	106	55.0		59.1	70	42.8		03.0	56	10.7		29.7
17	5	40.3	35	24.2	-13	54.5	121	55.7	-20	59.4	85	44.6	-23	03.0	71	12.9	-21	29.7
18	20	42.8	50	23.7	-13	53.4	136	56.4	-20	59.7	100	46.5	-23	03.0	86	15.0	-21	29.6
19	35	45.3	65	23.3		52.2	151	57.1	-21	00.0	115	48.3		02.9	101	17.2		29.6
20	50	47.7	80	22.8		51.1	166	57.8		00.4	130	50.1		02.9	116	19.3		29.5
21	65	50.2	95	22.4		50.0	181	58.5		00.7	145	52.0		02.9	131	21.5		29.5
22	80	52.7	110	21.9		48.9	196	59.2		01.0	160	53.8		02.8	146	23.6		29.4
23	95	55.1	125	21.5		47.8	211	59.9		01.3	175	55.7		02.8	161	25.8		29.4
24	110	57.6	140	21.0	-13	46.7	227	00.5	-21	01.6	190	57.5	-23	02.8	176	27.9	-21	29.3
Dif.	—		-5	+11			+7	-3			+18	0			+21			

UT	SOL				LUNA								Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 08 ^m 1				PHE { 4 ^h : 59'6 12 ^h : 59'7 20 ^h : 59'8																		
	Edad: 16 ^d 8 PMG: 01 ^h 20 ^m				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					
0	178	01.4	-21	45.8	340	52.6	56	+20	57.7	64	60 N	15 24	16 18	17 13	17 35	97	10 13	21					
1	193	01.1		45.4	355	17.2	55		51.3	67	58	39	28	19	17 48	93	9 59	25					
2	208	00.9		45.0	9	41.7	56		44.6	67	56	15 52	37	25	18 00	88	47	28					
3	223	00.6		44.6	24	06.3	56		37.9	69	54	16 03	45	30	10 85		37	30					
4	238	00.4		44.2	38	30.9	57		31.0	70	52	13	52	35	18 84		28	33					
5	253	00.1	-21	43.8	52	55.6	57	+20	24.0	72	50	16 22	16 59	17 39	18 26	81	9 19	35					
6	267	59.9	-21	43.4	67	20.3	58	+20	16.8	73	45	16 40	17 13	17 50	18 43	77	9 02	39					
7	282	59.7		43.0	81	45.1	58		09.5	75	40	16 55	25	17 59	18 56	74	8 47	42					
8	297	59.4		42.6	96	09.9	59	+20	02.0	75	35	17 08	36	18 07	19 08	70	35	45					
9	312	59.2		42.2	110	34.8	59	+19	54.5	77	30	19	17 45	15	18 68		24	47					
10	327	58.9		41.8	124	59.7	59		46.8	79	20	39	18 03	30	35 63		8 05	51					
11	342	58.7	-21	41.4	139	24.6	60	+19	38.9	80	10 N	17 56	18 18	18 44	19 50	60	7 49	54					
12	357	58.4	-21	41.0	153	49.6	61	+19	30.9	81	0	18 12	18 34	19 00	20 04	56	7 34	57					
13	12	58.2		40.6	168	14.7	61		22.8	82	10 S	28	18 51	17	18 53		18	61					
14	27	58.0		40.2	182	39.8	61		14.6	84	20	18 45	19 09	19 38	33 49		7 02	63					
15	42	57.7		39.7	197	04.9	62	+19	06.2	85	30	19 05	32	20 05	20 50	44	6 42	68					
16	57	57.5		39.3	211	30.1	63	+18	57.7	86	35	17	19 46	22	21 00	42	31	70					
17	72	57.2	-21	38.9	225	55.4	63	+18	49.1	88	40	19 31	20 03	20 43	21 11	39	6 18	73					
18	87	57.0	-21	38.5	240	20.7	64	+18	40.3	88	45	19 47	20 23	21 10	21 24	36	6 03	76					
19	102	56.8		38.1	254	46.1	64		31.5	90	50	20 07	20 50	21 49	40 31		5 44	80					
20	117	56.5		37.7	269	11.5	65		22.5	91	52	17	21 03	22 10	47 30		35	82					
21	132	56.3		37.3	283	37.0	66		13.4	93	54	28	18 22	39	21 56	27	25	85					
22	147	56.0		36.9	298	02.6	66	+18	04.1	93	56	40	21 36	23 32	22 05	24	14	87					
23	162	55.8		36.5	312	28.2	66	+17	54.8	95	58	20 55	22 00	** **	15 21		5 01	90					
24	177	55.6	-21	36.1	326	53.8		+17	45.3		60 S	21 12	22 31	** **	22 27	18	4 45	95					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO								
	PMG: 16 ^h 33 ^m 4		Mag: -4.0 PMG: 14 ^h 39 ^m				Mag: +1.5 PMG: 08 ^h 52 ^m				Mag: -1.8 PMG: 11 ^h 15 ^m				Mag: +0.5 PMG: 12 ^h 12 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	110	57.6	140	21.0	-13	46.7	227	00.5	-21	01.6	190	57.5	-23	-02.8	176	27.9	-21	29.3					
1	126	00.1	155	20.6		45.6	242	01.2		02.0	205	59.4		-02.7	191	30.1		29.3					
2	141	02.5	170	20.1		44.5	257	01.9		02.3	221	01.2		-02.7	206	32.2		29.2					
3	156	05.0	185	19.7		43.4	272	02.6		02.6	236	03.1		-02.7	221	34.4		29.2					
4	171	07.4	200	19.3		42.2	287	03.3		02.9	251	04.9		-02.6	236	36.5		29.2					
5	186	09.9	215	18.8	-13	41.1	302	04.0	-21	03.3	266	06.7	-23	-02.6	251	38.7	-21	29.1					
6	201	12.4	230	18.4	-13	40.0	317	04.7	-21	03.6	281	08.6	-23	-02.5	266	40.8	-21	29.1					
7	216	14.8	245	17.9		38.9	332	05.3		03.9	296	10.4		-02.5	281	43.0		29.0					
8	231	17.3	260	17.5		37.8	347	06.0		04.2	311	12.3		-02.5	296	45.1		29.0					
9	246	19.8	275	17.0		36.7	2	06.7		04.5	326	14.1		-02.4	311	47.3		28.9					
10	261	22.2	290	16.6		35.6	17	07.4		04.9	341	16.0		-02.4	326	49.4		28.9					
11	276	24.7	305	16.1	-13	34.4	32	08.1	-21	05.2	356	17.8	-23	-02.4	341	51.6	-21	28.8					
12	291	27.2	320	15.7	-13	33.3	47	08.8	-21	05.5	11	19.7	-23	-02.3	356	53.7	-21	28.8					
13	306	29.6	335	15.3		32.2	62	09.4		05.8	26	21.5		-02.3	11	55.9		28.7					
14	321	32.1	350	14.8		31.1	77	10.1		06.1	41	23.4		-02.3	26	58.0		28.7					
15	336	34.6	5	14.4		30.0	92	10.8		06.4	56	25.2		-02.2	42	00.2		28.7					
16	351	37.0	20	13.9		28.8	107	11.5		06.8	71	27.0		-02.2	57	02.3		28.6					
17	6	39.5	35	13.5	-13	27.7	122	12.2	-21	07.1	86	28.9	-23	-02.1	72	04.5	-21	28.6					
18	21	41.9	50	13.1	-13	26.6	137	12.9	-21	07.4	101	30.7	-23	-02.1	87	06.6	-21	28.5					
19	36	44.4	65	12.6		25.5	152	13.5		07.7	116	32.6		-02.1	102	08.8		28.5					
20	51	46.9	80	12.2		24.4	167	14.2		08.0	131	34.4		-02.0	117	10.9		28.4					
21	66	49.3	95	11.8		23.2	182	14.9		08.3	146	36.3		-02.0	132	13.1		28.4					
22	81	51.8	110	11.3		22.1	197	15.6		08.7	161	38.1		-02.0	147	15.2		28.3					
23	96	54.3	125	10.9		21.0	212	16.3		09.0	176	40.0		-01.9	162	17.4		28.3					
24	111	56.7	140	10.5	-13	19.9	227	17.0	-21	09.3	191	41.8	-23	-01.9	177	19.5	-21	28.2					
Dif.	—		-4		+11		+7		-3		+18		0		+21								

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 08 ^m 5				SD: 16'3 Edad: 17 ^d 8 PMG: 02 ^h 18 ^m PHE { 4^h: 59'9 12^h: 59'9 20^h: 59'9 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	177	55.6	-21	36.1	326	53.8	67	+17	45.3	96	60 N	7 03	7 58	8 51	19 12	96	10 34	15	
1	192	55.3		35.7	341	19.5	68		35.7	97	58	6 57	48	37	21 92		24 18		
2	207	55.1		35.2	355	45.3	69		26.0	98	56	51	39	24	28 90		15 22		
3	222	54.9		34.8	10	11.2	68		16.2	99	54	46	31	13	35 87		07 25		
4	237	54.6		34.4	24	37.0	70	+17	06.3	101	52	41	24	8 03	42 84	10 01	26		
5	252	54.4	-21	34.0	39	03.0	70	+16	56.2	101	50	6 37	7 17	7 54	19 47	82	9 54	29	
6	267	54.1	-21	33.6	53	29.0	71	+16	46.1	103	45	6 27	7 03	7 36	20 00	76	9 41	33	
7	282	53.9		33.2	67	55.1	72		35.8	103	40	17	6 51	21	10 72		29 37		
8	297	53.7		32.7	82	21.3	72		25.5	105	35	09	40	7 08	18 70		20 39		
9	312	53.4		32.3	96	47.5	72		15.0	106	30	6 01	31	6 57	26 66		9 11	43	
10	327	53.2		31.9	111	13.7	74	+16	04.4	106	20	5 47	6 14	38	38 62		8 56	47	
11	342	53.0	-21	31.5	125	40.1	74	+15	53.8	108	10 N	5 32	5 58	6 21	20 50	57	8 43	51	
12	357	52.7	-21	31.1	140	06.5	74	+15	43.0	109	0	5 17	5 43	6 05	21 00	54	8 31	55	
13	12	52.5		30.6	154	32.9	76		32.1	109	10 S	4 59	26	5 49	11 49		19 58		
14	27	52.3		30.2	168	59.5	75		21.2	111	20	39	5 07	31	22 45		8 05	63	
15	42	52.0		29.8	183	26.0	77	+15	10.1	112	30	4 12	4 44	11	34 41		7 50	68	
16	57	51.8		29.4	197	52.7	77	+14	58.9	112	35	3 55	31	5 00	42 37		41 70		
17	72	51.5	-21	29.0	212	19.4	78	+14	47.7	113	40	3 34	4 14	4 46	21 50	35	7 31	73	
18	87	51.3	-21	28.5	226	46.2	78	+14	36.4	115	45	3 07	3 54	4 30	22 00	30	7 19	77	
19	102	51.1		28.1	241	13.0	79		24.9	115	50	2 28	27	10	11 26		7 04	82	
20	117	50.8		27.7	255	39.9	80		13.4	116	52	2 07	3 14	4 00	17 24		6 57	84	
21	132	50.6		27.2	270	06.9	80	+14	01.8	117	54	1 38	2 59	3 49	23 21		50 86		
22	147	50.4		26.8	284	33.9	81	+13	50.1	118	56	0 46	41	37	29 19		41 90		
23	162	50.1		26.4	299	01.0	82		38.3	118	58	** ** *	2 18	22	22 36	16	6 31	93	
24	177	49.9	-21	26.0	313	28.2		+13	26.5		60 S	** ** *	1 46	3 05	22 45	12	6 20	97	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 16 ^h 29 ^m 5		Mag: -4.0 PMG: 14 ^h 40 ^m			Mag: +1.5 PMG: 08 ^h 50 ^m			Mag: -1.8 PMG: 11 ^h 12 ^m			Mag: +0.5 PMG: 12 ^h 09 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	111	56.7	140	10.5	-13	19.9	227	17.0	-21	09.3	191	41.8	-23	01.9	177	19.5	-21	28.2
1	126	59.2	155	10.0		18.7	242	17.6		09.6	206	43.7		01.9	192	21.7		28.2
2	142	01.7	170	09.6		17.6	257	18.3		09.9	221	45.5		01.8	207	23.8		28.1
3	157	04.1	185	09.2		16.5	272	19.0		10.2	236	47.4		01.8	222	26.0		28.1
4	172	06.6	200	08.7		15.4	287	19.7		10.5	251	49.2		01.7	237	28.1		28.0
5	187	09.1	215	08.3	-13	14.2	302	20.4	-21	10.9	266	51.0	-23	01.7	252	30.3	-21	28.0
6	202	11.5	230	07.9	-13	13.1	317	21.0	-21	11.2	281	52.9	-23	01.7	267	32.4	-21	28.0
7	217	14.0	245	07.4		12.0	332	21.7		11.5	296	54.7		01.6	282	34.6		27.9
8	232	16.4	260	07.0		10.8	347	22.4		11.8	311	56.6		01.6	297	36.7		27.9
9	247	18.9	275	06.6		09.7	2	23.1		12.1	326	58.4		01.6	312	38.9		27.8
10	262	21.4	290	06.1		08.6	17	23.8		12.4	342	00.3		01.5	327	41.0		27.8
11	277	23.8	305	05.7	-13	07.4	32	24.4	-21	12.7	357	02.1	-23	01.5	342	43.1	-21	27.7
12	292	26.3	320	05.3	-13	06.3	47	25.1	-21	13.0	12	04.0	-23	01.5	357	45.3	-21	27.7
13	307	28.8	335	04.9		05.2	62	25.8		13.4	27	05.8		01.4	12	47.4		27.6
14	322	31.2	350	04.4		04.1	77	26.5		13.7	42	07.7		01.4	27	49.5		27.5
15	337	33.7	5	04.0		02.9	92	27.2		14.0	57	09.5		01.3	42	51.8		27.4
16	352	36.2	20	03.6		01.8	107	27.8		14.3	72	11.4		01.3	57	54.1		27.4
17	7	38.6	35	03.2	-13	00.6	122	28.5	-21	14.6	87	13.2	-23	01.3	72	56.2	-21	27.4
18	22	41.1	50	02.7	-12	59.5	137	29.2	-21	14.9	102	15.1	-23	01.2	87	58.3	-21	27.4
19	37	43.5	65	02.3		58.4	152	29.9		15.2	117	16.9		01.2	103	00.4		27.4
20	52	46.0	80	01.9		57.2	167	30.6		15.5	132	18.7		01.2	118	02.6		27.3
21	67	48.5	95	01.5		56.1	182	31.2		15.8	147	20.6		01.1	133	04.7		27.3
22	82	50.9	110	01.0		55.0	197	31.9		16.1	162	22.4		01.1	148	06.9		27.2
23	97	53.4	125	00.6		53.8	212	32.6		16.5	177	24.3		01.0	163	09.0		27.2
24	112	55.9	140	00.2	-12	52.7	227	33.3	-21	16.8	192	26.1	-23	01.0	178	11.2	-21	27.1
Dif.	—		-4		+11		+7		-3		+18		0		+21			

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 08 ^m 9				SD: 16'3 Edad: 18 ^d 8 PMG: 03 ^h 13 ^m															PHE { 4 ^h : 59'9 12 ^h : 59'9 20 ^h : 59'8 Rº: 53 ^m
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.							
	h	°	'	°	'	h	°	'			°	'	h	°	'	°	'	h	°	'
0	177	49.9	-21	26.0	313	28.2	82	+13	26.5	120	60 N	15 28	16 22	17 16	20 48	94	10 49	11		
1	192	49.7		25.5	327	55.4	83		14.5	120	58	43	31	22	53	91	42	15		
2	207	49.5		25.1	342	22.7	83	+13	02.5	121	56	15 55	40	28	20 58	88	37	17		
3	222	49.2		24.7	356	50.0	84	+12	50.4	121	54	16 06	48	33	21 02	85	32	20		
4	237	49.0		24.2	11	17.4	85		38.3	123	52	16	16 55	38	06	82	27	22		
5	252	48.8	-21	23.8	25	44.9	85	+12	26.0	123	50	16 24	17 01	17 42	21 09	81	10 23	24		
6	267	48.5	-21	23.4	40	12.4	86	+12	13.7	124	45	16 43	17 15	17 52	21 16	76	10 14	29		
7	282	48.3		22.9	54	40.0	86	+12	01.3	124	40	16 57	27	18 01	22	72	10 06	33		
8	297	48.1		22.5	69	07.6	88	+11	48.9	126	35	17 10	38	09	28	68	9 59	36		
9	312	47.8		22.1	83	35.4	87		36.3	125	30	21	17 47	16	32	66	54	39		
10	327	47.6		21.6	98	03.1	88		23.8	127	20	40	18 04	31	40	60	43	44		
11	342	47.4	-21	21.2	112	30.9	89	+11	11.1	127	10 N	17 57	18 19	18 45	21 47	56	9 34	49		
12	357	47.1	-21	20.8	126	58.8	90	+10	58.4	128	0	18 13	18 35	19 01	21 54	51	9 26	52		
13	12	46.9		20.3	141	26.8	90		45.6	128	10 S	28	18 51	18	22 00	47	17	57		
14	27	46.7		19.9	155	54.8	90		32.8	130	20	18 45	19 10	19 38	07	43	9 08	61		
15	42	46.5		19.4	170	22.8	91		19.8	129	30	19 05	32	20 04	15	38	8 58	66		
16	57	46.2		19.0	184	50.9	92	+10	06.9	130	35	17	19 46	21	19	35	51	69		
17	72	46.0	-21	18.6	199	19.1	92	+9	53.9	131	40	19 30	20 02	20 42	22 25	31	8 44	73		
18	87	45.8	-21	18.1	213	47.3	93	+9	40.8	131	45	19 46	20 22	21 08	22 30	28	8 36	76		
19	102	45.6		17.7	228	15.6	93		27.7	132	50	20 06	20 48	21 46	37	24	26	81		
20	117	45.3		17.2	242	43.9	94		14.5	132	52	15	21 01	22 07	41	21	21	84		
21	132	45.1		16.8	257	12.3	94	+9	01.3	133	54	26	16	22 34	44	19	16	86		
22	147	44.9		16.3	271	40.7	95	+8	48.0	133	56	38	33	23 19	48	16	11	89		
23	162	44.6		15.9	286	09.2	96		34.7	134	58	20 52	21 55	** **	52	14	8 04	92		
24	177	44.4	-21	15.4	300	37.8		+8	21.3		60 S	21 09	22 25	** **	22 57	11	7 57	96		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 16 ^h 25 ^m 6		Mag: -4.0 PMG: 14 ^h 40 ^m				Mag: +1.5 PMG: 08 ^h 49 ^m				Mag: -1.8 PMG: 11 ^h 09 ^m				Mag: +0.5 PMG: 12 ^h 06 ^m					
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	112	55.9	140	00.2	-12	52.7	227	33.3	-21	16.8	192	26.1	-23	-01.0	178	11.2	-21	27.1		
1	127	58.3	154	59.8		51.6	242	34.0		17.1	207	28.0		-01.0	193	13.3		27.1		
2	143	00.8	169	59.4		50.4	257	34.6		17.4	222	29.8		-00.9	208	15.4		27.0		
3	158	03.3	184	58.9		49.3	272	35.3		17.7	237	31.7		-00.9	223	17.6		27.0		
4	173	05.7	199	58.5		48.1	287	36.0		18.0	252	33.5		-00.9	238	19.7		26.9		
5	188	08.2	214	58.1	-12	47.0	302	36.7	-21	18.3	267	35.4	-23	-00.8	253	21.9	-21	26.9		
6	203	10.7	229	57.7	-12	45.8	317	37.3	-21	18.6	282	37.2	-23	-00.8	268	24.0	-21	26.9		
7	218	13.1	244	57.3		44.7	332	38.0		18.9	297	39.1		-00.7	283	26.2		26.8		
8	233	15.6	259	56.9		43.6	347	38.7		19.2	312	40.9		-00.7	298	28.3		26.8		
9	248	18.0	274	56.4		42.4	2	39.4		19.5	327	42.8		-00.7	313	30.5		26.7		
10	263	20.5	289	56.0		41.3	17	40.0		19.8	342	44.6		-00.6	328	32.6		26.7		
11	278	23.0	304	55.6	-12	40.1	32	40.7	-21	20.1	357	46.5	-23	-00.6	343	34.8	-21	26.6		
12	293	25.4	319	55.2	-12	39.0	47	41.4	-21	20.4	12	48.3	-23	-00.6	358	36.9	-21	26.6		
13	308	27.9	334	54.8		37.8	62	42.1		20.7	27	50.2		-00.5	13	39.1		26.5		
14	323	30.4	349	54.4		36.7	77	42.8		21.0	42	52.0		-00.5	28	41.2		26.5		
15	338	32.8	4	54.0		35.5	92	43.4		21.3	57	53.8		-00.4	43	43.4		26.4		
16	353	35.3	19	53.6		34.4	107	44.1		21.6	72	55.7		-00.4	58	45.5		26.4		
17	8	37.8	34	53.1	-12	33.2	122	44.8	-21	22.0	87	57.5	-23	-00.4	73	47.7	-21	26.3		
18	23	40.2	49	52.7	-12	32.1	137	45.5	-21	22.3	102	59.4	-23	-00.3	88	49.8	-21	26.3		
19	38	42.7	64	52.3		31.0	152	46.1		22.6	118	01.2		-00.3	103	52.0		26.2		
20	53	45.2	79	51.9		29.8	167	46.8		22.9	133	03.1		-00.3	118	54.1		26.2		
21	68	47.6	94	51.5		28.7	182	47.5		23.2	148	04.9		-00.2	133	56.3		26.2		
22	83	50.1	109	51.1		27.5	197	48.2		23.5	163	06.8		-00.2	148	58.4		26.1		
23	98	52.5	124	50.7		26.3	212	48.8		23.8	178	08.6		-00.1	164	00.6		26.1		
24	113	55.0	139	50.3	-12	25.2	227	49.5	-21	24.1	193	10.5	-23	-00.1	179	02.7	-21	26.0		
Dif.	—		-4		+11		+7		-3		+18		0		+21					

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3				SD: 16'3												PHE {		
	PMG: 12 ^h 09 ^m 2				Edad: 19 ^d 8														
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Rº: 51 ^m												
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	177	44.4	-21	15.4	300	37.8	96	+8 21.3	134	60 N	7 01	7 55	8 48	22 22	93	11 00	10		
1	192	44.2		15.0	315	06.4	96	+8 07.9	134	58	6 55	46	34	24	90	10 57	13		
2	207	44.0		14.5	329	35.0	97	+7 54.5	135	56	50	37	22	26	86	54	16		
3	222	43.7		14.1	344	03.7	97	41.0	135	54	45	29	11	27	84	52	18		
4	237	43.5		13.7	358	32.4	98	27.5	136	52	40	22	8 02	28	82	49	21		
5	252	43.3	-21	13.2	13	01.2	98	+7 13.9	136	50	6 36	7 16	7 53	22 30	79	10 47	23		
6	267	43.1	-21	12.8	27	30.0	99	+7 00.3	136	45	6 26	7 02	7 35	22 32	74	10 43	27		
7	282	42.8		12.3	41	58.9	99	+6 46.7	137	40	17	6 50	20	34	71	39	31		
8	297	42.6		11.8	56	27.8	100	33.0	137	35	09	40	7 08	36	67	35	34		
9	312	42.4		11.4	70	56.8	100	19.3	137	30	6 01	31	6 57	38	64	33	36		
10	327	42.2		10.9	85	25.8	100	+6 05.6	138	20	5 47	6 14	38	40	59	27	42		
11	342	42.0	-21	10.5	99	54.8	101	+5 51.8	138	10 N	5 33	5 59	6 21	22 43	54	10 23	46		
12	357	41.7	-21	10.0	114	23.9	101	+5 38.0	138	0	5 18	5 43	6 06	22 45	50	10 18	51		
13	12	41.5		09.6	128	53.0	102	24.2	138	10 S	5 00	27	5 50	47	46	14	55		
14	27	41.3		09.1	143	22.2	102	+5 10.4	139	20	4 40	5 09	33	50	41	09	59		
15	42	41.1		08.7	157	51.4	103	+4 56.5	139	30	4 14	4 46	13	53	36	04	64		
16	57	40.8		08.2	172	20.7	102	42.6	139	35	3 57	33	5 01	54	34	10 00	68		
17	72	40.6	-21	07.7	186	49.9	104	+4 28.7	139	40	3 37	4 16	4 48	22 56	30	9 57	71		
18	87	40.4	-21	07.3	201	19.3	103	+4 14.8	139	45	3 10	3 56	4 32	22 58	27	9 52	76		
19	102	40.2		06.8	215	48.6	104	+4 00.9	140	50	2 33	31	12	23 01	22	47	80		
20	117	40.0		06.4	230	18.0	104	+3 46.9	140	52	2 12	18	4 03	02	20	45	82		
21	132	39.7		05.9	244	47.4	105	32.9	140	54	1 45	3 03	3 53	03	18	42	85		
22	147	39.5		05.4	259	16.9	105	18.9	139	56	1 00	2 45	41	04	16	40	87		
23	162	39.3		05.0	273	46.4	105	+3 05.0	141	58	** **	2 23	27	23 06	12	9 36	91		
24	177	39.1	-21	04.5	288	15.9		+2 50.9		60 S	** **	1 54	3 10	23 08	9	9 33	93		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 16 ^h 21 ^m 6		Mag: -4.0 PMG: 14 ^h 41 ^m			Mag: +1.5 PMG: 08 ^h 48 ^m			Mag: -1.8 PMG: 11 ^h 06 ^m			Mag: +0.5 PMG: 12 ^h 02 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	113	55.0	139	50.3	-12	25.2	227	49.5	-21	24.1	193	10.5	-23	00.1	179	02.7	-21	26.0	
1	128	57.5	154	49.9		24.0	242	50.2		24.4	208	12.3		00.1	194	04.9		26.0	
2	143	59.9	169	49.5		22.9	257	50.8		24.7	223	14.2		00.0	209	07.0		25.9	
3	159	02.4	184	49.1		21.7	272	51.5		25.0	238	16.0	-23	00.0	224	09.2		25.9	
4	174	04.9	199	48.7		20.6	287	52.2		25.3	253	17.9	-22	59.9	239	11.3		25.8	
5	189	07.3	214	48.3	-12	19.4	302	52.9	-21	25.6	268	19.7	-22	59.9	254	13.5	-21	25.8	
6	204	09.8	229	47.8	-12	18.3	317	53.5	-21	25.9	283	21.6	-22	59.9	269	15.6	-21	25.7	
7	219	12.3	244	47.4		17.1	332	54.2		26.2	298	23.4		59.8	284	17.8		25.7	
8	234	14.7	259	47.0		16.0	347	54.9		26.5	313	25.3		59.8	299	19.9		25.6	
9	249	17.2	274	46.6		14.8	2	55.6		26.8	328	27.1		59.8	314	22.1		25.6	
10	264	19.6	289	46.2		13.6	17	56.2		27.1	343	29.0		59.7	329	24.2		25.5	
11	279	22.1	304	45.8	-12	12.5	32	56.9	-21	27.3	358	30.8	-22	59.7	344	26.4	-21	25.5	
12	294	24.6	319	45.4	-12	11.3	47	57.6	-21	27.6	13	32.7	-22	59.6	359	28.5	-21	25.5	
13	309	27.0	334	45.0		10.2	62	58.3		27.9	28	34.5		59.6	14	30.7		25.4	
14	324	29.5	349	44.6		09.0	77	58.9		28.2	43	36.4		59.6	29	32.8		25.4	
15	339	32.0	4	44.2		07.9	92	59.6		28.5	58	38.2		59.5	44	35.0		25.3	
16	354	34.4	19	43.8		06.7	108	00.3		28.8	73	40.1		59.5	59	37.1		25.3	
17	9	36.9	34	43.4	-12	05.5	123	00.9	-21	29.1	88	41.9	-22	59.4	74	39.3	-21	25.2	
18	24	39.4	49	43.0	-12	04.4	138	01.6	-21	29.4	103	43.8	-22	59.4	89	41.4	-21	25.2	
19	39	41.8	64	42.7		03.2	153	02.3		29.7	118	45.6		59.4	104	43.6		25.1	
20	54	44.3	79	42.3		02.0	168	03.0		30.0	133	47.5		59.3	119	45.7		25.1	
21	69	46.8	94	41.9	-12	00.9	183	03.6		30.3	148	49.3		59.3	134	47.9		25.0	
22	84	49.2	109	41.5	-11	59.7	198	04.3		30.6	163	51.2		59.3	149	50.0		25.0	
23	99	51.7	124	41.1		58.6	213	05.0		30.9	178	53.0		59.2	164	52.2		24.9	
24	114	54.1	139	40.7	-11	57.4	228	05.6	-21	31.2	193	54.9	-22	59.2	179	54.3	-21	24.9	
Dif.	—		-4			+12	+7			-3	+18			0	+21				

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16'3			SD: 16'2 Edad: 20 ^d 8														
	PMG: 12 ^h 09 ^m 6			PMG: 04 ^h 57 ^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	m	h	m	m	
0	177	39.1	-21	04.5	288	15.9	105	+2	50.9	140	60 N	15 33	16 25	17 19	23 55	92	11 10	10
1	192	38.9		04.1	302	45.4	106		36.9	140	58	47	35	25	54	88	10	13
2	207	38.6		03.6	317	15.0	106		22.9	140	56	15 59	43	31	52	86	10	15
3	222	38.4		03.1	331	44.6	106	+2	08.9	140	54	16 10	51	36	51	83	10	18
4	237	38.2		02.7	346	14.2	107	+1	54.9	141	52	19	16 58	40	50	80	10	20
5	252	38.0	-21	02.2	0	43.9	107	+1	40.8	140	50	16 27	17 04	17 44	23 49	78	11 10	22
6	267	37.8	-21	01.7	15	13.6	107	+1	26.8	140	45	16 45	17 18	17 54	23 46	74	11 10	26
7	282	37.6		01.3	29	43.3	107	+1	12.8	141	40	17 00	29	18 03	45	69	10	30
8	297	37.3		00.8	44	13.0	107	+0	58.7	140	35	12	39	11	43	66	09	34
9	312	37.1	-21	00.3	58	42.7	108		44.7	140	30	23	17 49	18	42	63	09	37
10	327	36.9	-20	59.8	73	12.5	108		30.7	141	20	41	18 05	32	39	58	09	41
11	342	36.7	-20	59.4	87	42.3	108	+0	16.6	140	10 N	17 58	18 20	18 46	23 37	54	11 09	46
12	357	36.5	-20	58.9	102	12.1	108	+0	02.6	140	0	18 13	18 35	19 01	23 35	50	11 09	50
13	12	36.3		58.4	116	41.9	109	-0	11.4	140	10 S	29	18 51	18	33	46	09	54
14	27	36.0		58.0	131	11.8	108		25.4	140	20	18 45	19 10	19 38	31	41	08	59
15	42	35.8		57.5	145	41.6	109		39.4	140	30	19 05	32	20 04	29	36	08	64
16	57	35.6		57.0	160	11.5	109	-0	53.4	140	35	16	19 45	20	28	33	08	67
17	72	35.4	-20	56.5	174	41.4	109	-1	07.4	139	40	19 29	20 01	20 40	23 26	31	11 08	70
18	87	35.2	-20	56.1	189	11.3	109	-1	21.3	140	45	19 45	20 21	21 06	23 25	26	11 08	74
19	102	35.0		55.6	203	41.2	109		35.3	139	50	20 04	46	21 43	23	22	07	79
20	117	34.8		55.1	218	11.1	109	-1	49.2	139	52	14	20 58	22 03	22	20	07	81
21	132	34.5		54.6	232	41.0	110	-2	03.1	139	54	24	21 13	22 29	21	18	07	83
22	147	34.3		54.1	247	11.0	109		17.0	138	56	36	30	23 08	20	15	07	86
23	162	34.1		53.7	261	40.9	110		30.8	139	58	20 49	21 51	** ** *	18	13	07	89
24	177	33.9	-20	53.2	276	10.9		-2	44.7		60 S	21 05	22 19	** ** *	23 17	10	11 06	93
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 17 ^m 7		Mag: -4.0 PMG: 14 ^h 42 ^m				Mag: +1.5 PMG: 08 ^h 47 ^m				Mag: -1.8 PMG: 11 ^h 03 ^m				Mag: +0.5 PMG: 11 ^h 59 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	114	54.1	139	40.7	-11	57.4	228	05.6	-21	31.2	193	54.9	-22	-59.2	179	54.3	-21	24.9
1	129	56.6	154	40.3		56.2	243	06.3		31.5	208	56.7		-59.1	194	56.5		24.8
2	144	59.1	169	39.9		55.1	258	07.0		31.8	223	58.6		-59.1	209	58.6		24.8
3	160	01.5	184	39.5		53.9	273	07.6		32.1	239	00.4		-59.1	225	00.8		24.8
4	175	04.0	199	39.1		52.7	288	08.3		32.4	254	02.3		-59.0	240	02.9		24.7
5	190	06.5	214	38.7	-11	51.6	303	09.0	-21	32.6	269	04.1	-22	-59.0	255	05.1	-21	24.7
6	205	08.9	229	38.3	-11	50.4	318	09.7	-21	32.9	284	06.0	-22	-58.9	270	07.2	-21	24.6
7	220	11.4	244	37.9		49.2	333	10.3		33.2	299	07.8		-58.9	285	09.4		24.6
8	235	13.9	259	37.5		48.1	348	11.0		33.5	314	09.7		-58.9	300	11.5		24.5
9	250	16.3	274	37.2		46.9	3	11.7		33.8	329	11.5		-58.8	315	13.7		24.5
10	265	18.8	289	36.8		45.7	18	12.3		34.1	344	13.4		-58.8	330	15.8		24.4
11	280	21.3	304	36.4	-11	44.5	33	13.0	-21	34.4	359	15.2	-22	-58.7	345	18.0	-21	24.4
12	295	23.7	319	36.0	-11	43.4	48	13.7	-21	34.7	14	17.1	-22	-58.7	0	20.1	-21	24.3
13	310	26.2	334	35.6		42.2	63	14.3		35.0	29	18.9		-58.7	15	22.3		24.3
14	325	28.6	349	35.2		41.0	78	15.0		35.3	44	20.8		-58.6	30	24.4		24.2
15	340	31.1	4	34.8		39.9	93	15.7		35.6	59	22.6		-58.6	45	26.6		24.2
16	355	33.6	19	34.4		38.7	108	16.3		35.8	74	24.5		-58.5	60	28.7		24.1
17	10	36.0	34	34.1	-11	37.5	123	17.0	-21	36.1	89	26.3	-22	-58.5	75	30.9	-21	24.1
18	25	38.5	49	33.7	-11	36.3	138	17.7	-21	36.4	104	28.2	-22	-58.5	90	33.0	-21	24.0
19	40	41.0	64	33.3		35.2	153	18.3		36.7	119	30.0		-58.4	105	35.2		24.0
20	55	43.4	79	32.9		34.0	168	19.0		37.0	134	31.9		-58.4	120	37.3		24.0
21	70	45.9	94	32.5		32.8	183	19.7		37.3	149	33.7		-58.3	135	39.5		23.9
22	85	48.4	109	32.1		31.6	198	20.3		37.6	164	35.6		-58.3	150	41.6		23.9
23	100	50.8	124	31.8		30.5	213	21.0		37.8	179	37.4		-58.3	165	43.8		23.8
24	115	53.3	139	31.4	-11	29.3	228	21.7	-21	38.1	194	39.3	-22	-58.2	180	45.9	-21	23.8
Dif.	—		-4		+12		+7		-3		+19		0		+21		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 09 ^m 9				SD: 16'1 Edad: 21'8 PMG: 05 ^h 47 ^m PHE { 4 ^h : 59'1 12 ^h : 59'0 20 ^h : 58'8 Rº: 50 ^m					Náut.	Civil		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		
0	177	33.9	-20	53.2	276	10.9	110	-2	44.7	138	60 N	6 59	7 53	8 45	** ** *	11 20	10	
1	192	33.7		52.7	290	40.9	109	-2	58.5	138	58	53	44	31	** ** *	23	13	
2	207	33.5		52.2	305	10.8	110	-3	12.3	138	56	48	35	19	** ** *	25	17	
3	222	33.3		51.7	319	40.8	110		26.1	137	54	43	28	09	** ** *	28	18	
4	237	33.1		51.3	334	10.8	110		39.8	138	52	39	21	8 00	** ** *	30	21	
5	252	32.9	-20	50.8	348	40.8	109	-3	53.6	136	50	6 35	7 15	7 51	** ** *	11 32	23	
6	267	32.6	-20	50.3	3	10.7	110	-4	07.2	137	45	6 25	7 01	7 34	** ** *	11 36	27	
7	282	32.4		49.8	17	40.7	110		20.9	136	40	16	6 50	19	** ** *	40	31	
8	297	32.2		49.3	32	10.7	110		34.5	136	35	09	40	7 07	** ** *	43	34	
9	312	32.0		48.8	46	40.7	110	-4	48.1	136	30	6 01	31	6 56	** ** *	46	37	
10	327	31.8		48.4	61	10.7	109	-5	01.7	135	20	5 47	6 14	38	** ** *	50	42	
11	342	31.6	-20	47.9	75	40.6	110	-5	15.2	135	10 N	5 33	5 59	6 22	** ** *	11 55	46	
12	357	31.4	-20	47.4	90	10.6	110	-5	28.7	135	0	5 18	5 44	6 06	** ** *	11 59	50	
13	12	31.2		46.9	104	40.6	109		42.2	134	10 S	5 02	28	5 51	** ** *	12 03	54	
14	27	31.0		46.4	119	10.5	110	-5	55.6	134	20	4 42	5 10	34	** ** *	07	58	
15	42	30.8		45.9	133	40.5	109	-6	09.0	133	30	4 16	4 48	15	** ** *	12	63	
16	57	30.6		45.4	148	10.4	110		22.3	133	35	3 59	35	5 03	** ** *	15	66	
17	72	30.3	-20	44.9	162	40.4	109	-6	35.6	133	40	3 39	4 19	4 50	23 57	32	12 18	69
18	87	30.1	-20	44.4	177	10.3	109	-6	48.9	132	45	3 13	3 59	4 35	23 51	29	12 22	73
19	102	29.9		43.9	191	40.2	109	-7	02.1	131	50	2 37	34	16	45 24		26	78
20	117	29.7		43.4	206	10.1	109		15.2	131	52	2 17	22	4 06	42 22		28	80
21	132	29.5		42.9	220	40.0	109		28.3	131	54	1 51	3 07	3 56	39 20		30	83
22	147	29.3		42.5	235	09.9	109		41.4	130	56	1 12	2 50	44	35 18		33	85
23	162	29.1		42.0	249	39.8	108	-7	54.4	130	58	** ** *	29	31	23 31	15	12 36	88
24	177	28.9	-20	41.5	264	09.6		-8	07.4		60 S	** ** *	2 01	3 15	23 27	12	12 39	91
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 13 ^m 8		Mag: -4.0 PMG: 14 ^h 42 ^m				Mag: +1.5 PMG: 08 ^h 46 ^m				Mag: -1.8 PMG: 11 ^h 00 ^m				Mag: +0.5 PMG: 11 ^h 55 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	115	53.3	139	31.4	-11	29.3	228	21.7	-21	38.1	194	39.3	-22	58.2	180	45.9	-21	23.8
1	130	55.7	154	31.0		28.1	243	22.3		38.4	209	41.1		58.2	195	48.1		23.7
2	145	58.2	169	30.6		26.9	258	23.0		38.7	224	43.0		58.1	210	50.2		23.7
3	161	00.7	184	30.2		25.8	273	23.7		39.0	239	44.8		58.1	225	52.4		23.6
4	176	03.1	199	29.9		24.6	288	24.3		39.3	254	46.7		58.1	240	54.5		23.6
5	191	05.6	214	29.5	-11	23.4	303	25.0	-21	39.6	269	48.5	-22	58.0	255	56.7	-21	23.5
6	206	08.1	229	29.1	-11	22.2	318	25.7	-21	39.8	284	50.4	-22	58.0	270	58.8	-21	23.5
7	221	10.5	244	28.7		21.0	333	26.3		40.1	299	52.2		57.9	286	01.0		23.4
8	236	13.0	259	28.4		19.9	348	27.0		40.4	314	54.1		57.9	301	03.1		23.4
9	251	15.5	274	28.0		18.7	3	27.7		40.7	329	55.9		57.9	316	05.3		23.3
10	266	17.9	289	27.6		17.5	18	28.3		41.0	344	57.8		57.8	331	07.4		23.3
11	281	20.4	304	27.2	-11	16.3	33	29.0	-21	41.3	359	59.6	-22	57.8	346	09.6	-21	23.2
12	296	22.9	319	26.9	-11	15.1	48	29.7	-21	41.5	15	01.5	-22	57.7	1	11.7	-21	23.2
13	311	25.3	334	26.5		13.9	63	30.3		41.8	30	03.3		57.7	16	13.9		23.2
14	326	27.8	349	26.1		12.8	78	31.0		42.1	45	05.2		57.7	31	16.0		23.1
15	341	30.2	4	25.7		11.6	93	31.6		42.4	60	07.0		57.6	46	18.2		23.1
16	356	32.7	19	25.4		10.4	108	32.3		42.7	75	08.9		57.6	61	20.3		23.0
17	11	35.2	34	25.0	-11	09.2	123	33.0	-21	42.9	90	10.7	-22	57.5	76	22.5	-21	23.0
18	26	37.6	49	24.6	-11	08.0	138	33.6	-21	43.2	105	12.6	-22	57.5	91	24.6	-21	22.9
19	41	40.1	64	24.3		06.8	153	34.3		43.5	120	14.4		57.5	106	26.8		22.9
20	56	42.6	79	23.9		05.6	168	35.0		43.8	135	16.3		57.4	121	28.9		22.8
21	71	45.0	94	23.5		04.5	183	35.6		44.1	150	18.1		57.4	136	31.1		22.8
22	86	47.5	109	23.1		03.3	198	36.3		44.3	165	20.0		57.3	151	33.2		22.7
23	101	50.0	124	22.8		02.1	213	37.0		44.6	180	21.8		57.3	166	35.4		22.7
24	116	52.4	139	22.4	-11	00.9	228	37.6	-21	44.9	195	23.7	-22	57.3	181	37.5	-21	22.6
Dif.	—		-4		+12		+7		-3		+19		0		+22			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'3			PHE { 4 ^h : 58'7 12 ^h : 58'5 20 ^h : 58'4																	
	PMG: 12 ^h 10 ^m 2			Edad: 22'8																	
	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	28.9	-20	41.5	264	09.6	108	-8	07.4	129	60 N	15 37	16 29	17 23	1	27	91	11	30	13	
1	192	28.7		41.0	278	39.4	109		20.3	129	58	15 51	39	29		22	88		36	16	
2	207	28.5		40.5	293	09.3	108		33.2	128	56	16 03	47	34		18	84		42	19	
3	222	28.3		40.0	307	39.1	108		46.0	127	54	13	16 54	39		14	82		46	22	
4	237	28.1		39.5	322	08.9	107	-8	58.7	128	52	22	17 01	43		10	80		51	24	
5	252	27.9	-20	39.0	336	38.6	108	-9	11.5	126	50	16 30	17 07	17 47		1	07	77	11	55	26
6	267	27.7	-20	38.5	351	08.4	107	-9	24.1	126	45	16 48	17 20	17 56		1	00	73	12	03	31
7	282	27.5		38.0	5	38.1	107		36.7	125	40	17 02	31	18 05		0	54	69		11	33
8	297	27.3		37.5	20	07.8	107	-9	49.2	125	35	14	41	12		49	66		17	37	
9	312	27.1		37.0	34	37.5	107	-10	01.7	124	30	25	17 50	20		45	63		23	39	
10	327	26.9		36.5	49	07.2	107		14.1	123	20	43	18 06	33		37	59		32	44	
11	342	26.7	-20	36.0	63	36.9	106	-10	26.4	123	10 N	17 59	18 21	18 47		0	31	54	12	41	47
12	357	26.5	-20	35.4	78	06.5	106	-10	38.7	122	0	18 14	18 36	19 02		0	25	50	12	49	51
13	12	26.3		34.9	92	36.1	106	-10	50.9	122	10 S	29	18 52	18		19	46		12	57	54
14	27	26.1		34.4	107	05.7	105	-11	03.1	120	20	18 45	19 09	19 38		12	43		13	05	59
15	42	25.9		33.9	121	35.2	105		15.1	121	30	19 04	31	20 03		05	38		15	63	
16	57	25.7		33.4	136	04.7	105		27.2	119	35	16	19 44	19		0	01	35	21	65	
17	72	25.5	-20	32.9	150	34.2	105	-11	39.1	119	40	19 28	20 00	20 39		** ** *	**		13	27	69
18	87	25.3	-20	32.4	165	03.7	105	-11	51.0	118	45	19 44	20 19	21 04		** ** *	**		13	35	72
19	102	25.1		31.9	179	33.2	104	-12	02.8	117	50	20 03	43	40		** ** *	**		44	76	
20	117	24.9		31.4	194	02.6	104		14.5	117	52	11	20 56	21 59		** ** *	**		48	79	
21	132	24.7		30.9	208	32.0	103		26.2	116	54	22	21 10	22 23		23	59	24	53	81	
22	147	24.5		30.4	223	01.3	104		37.8	115	56	33	26	22 59		53	21		13	58	84
23	162	24.3		29.9	237	30.7	103	-12	49.3	114	58	20 46	21 46	** ** *		46	19		14	04	86
24	177	24.1	-20	29.3	252	00.0		-13	00.7		60 S	21 01	22 13	** ** *		23	39	15	14	10	91
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG		Mag: -4.0				Mag: +1.5				Mag: -1.8				Mag: +0.5						
	16 ^h 09 ^m 8		PMG: 14 ^h 43 ^m				PMG: 08 ^h 45 ^m				PMG: 10 ^h 57 ^m				PMG: 11 ^h 52 ^m						
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	116	52.4	139	22.4	-11	00.9	228	37.6	-21	44.9	195	23.7	-22	-57.3	181	37.5	-21	22.6			
1	131	54.9	154	22.0	-10	59.7	243	38.3		45.2	210	25.5		-57.2	196	39.7		22.6			
2	146	57.4	169	21.7		58.5	258	38.9		45.5	225	27.4		-57.2	211	41.8		22.5			
3	161	59.8	184	21.3		57.3	273	39.6		45.7	240	29.2		-57.1	226	44.0		22.5			
4	177	02.3	199	20.9		56.1	288	40.3		46.0	255	31.1		-57.1	241	46.1		22.4			
5	192	04.7	214	20.6	-10	54.9	303	40.9	-21	46.3	270	32.9	-22	-57.0	256	48.3	-21	22.4			
6	207	07.2	229	20.2	-10	53.8	318	41.6	-21	46.6	285	34.8	-22	-57.0	271	50.4	-21	22.4			
7	222	09.7	244	19.8		52.6	333	42.3		46.8	300	36.7		-57.0	286	52.6		22.3			
8	237	12.1	259	19.5		51.4	348	42.9		47.1	315	38.5		-56.9	301	54.7		22.3			
9	252	14.6	274	19.1		50.2	3	43.6		47.4	330	40.4		-56.9	316	56.9		22.2			
10	267	17.1	289	18.8		49.0	18	44.2		47.7	345	42.2		-56.8	331	59.0		22.2			
11	282	19.5	304	18.4	-10	47.8	33	44.9	-21	47.9	0	44.1	-22	-56.8	347	01.2	-21	22.1			
12	297	22.0	319	18.0	-10	46.6	48	45.6	-21	48.2	15	45.9	-22	-56.8	2	03.3	-21	22.1			
13	312	24.5	334	17.7		45.4	63	46.2		48.5	30	47.8		-56.7	17	05.5		22.0			
14	327	26.9	349	17.3		44.2	78	46.9		48.8	45	49.6		-56.7	32	07.6		22.0			
15	342	29.4	4	16.9		43.0	93	47.5		49.0	60	51.5		-56.6	47	09.8		21.9			
16	357	31.8	19	16.6		41.8	108	48.2		49.3	75	53.3		-56.6	62	11.9		21.9			
17	12	34.3	34	16.2	-10	40.6	123	48.9	-21	49.6	90	55.2	-22	-56.6	77	14.1	-21	21.8			
18	27	36.8	49	15.9	-10	39.4	138	49.5	-21	49.9	105	57.0	-22	-56.5	92	16.2	-21	21.8			
19	42	39.2	64	15.5		38.2	153	50.2		50.1	120	58.9		-56.5	107	18.4		21.7			
20	57	41.7	79	15.2		37.0	168	50.8		50.4	136	00.7		-56.4	122	20.5		21.7			
21	72	44.2	94	14.8		35.8	183	51.5		50.7	151	02.6		-56.4	137	22.7		21.6			
22	87	46.6	109	14.4		34.6	198	52.2		51.0	166	04.4		-56.3	152	24.8		21.6			
23	102	49.1	124	14.1		33.4	213	52.8		51.2	181	06.3		-56.3	167	27.0		21.5			
24	117	51.6	139	13.7	-10	32.2	228	53.5	-21	51.5	196	08.2	-22	-56.3	182	29.1	-21	21.5			
Dif.	—		-4	+12			+7	-3			+19		0		+22						

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 10 ^m 6				SD: 15'9 Edad: 23 ^d 8 PHE { 4 ^h : 58'2 12 ^h : 58'1 20 ^h : 57'9 PMG: 07 ^h 27 ^m Rº: 52 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
	°	'	°	'	°	'	h m	h m		h m	h m m		h m m	h m m				
h																		
0	177	24.1	-20	29.3	252	00.0	102	-13	00.7	114	60 N	6 57	7 50	8 42	2 58	90	11 43	17
1	192	23.9		28.8	266	29.2	103		12.1	112	58	51	41	28	50	86	11 52	21
2	207	23.7		28.3	280	58.5	102		23.3	112	56	46	33	17	42	83	12 01	24
3	222	23.5		27.8	295	27.7	102		34.5	111	54	42	26	8 07	36	80	08	26
4	237	23.3		27.3	309	56.9	101		45.6	111	52	37	19	7 58	30	77	15	28
5	252	23.1	-20	26.8	324	26.0	101	-13	56.7	109	50	6 33	7 13	7 50	2 24	76	12 21	30
6	267	22.9	-20	26.2	338	55.1	101	-14	07.6	109	45	6 24	7 00	7 33	2 13	71	12 34	34
7	282	22.7		25.7	353	24.2	101		18.5	108	40	16	6 49	18	2 03	68	44	38
8	297	22.5		25.2	7	53.3	100		29.3	107	35	08	39	7 06	1 55	65	12 54	40
9	312	22.3		24.7	22	22.3	100		40.0	106	30	6 01	30	6 56	48	63	13 02	42
10	327	22.1		24.2	36	51.3	99	-14	50.6	105	20	5 47	14	38	36	58	16	46
11	342	21.9	-20	23.7	51	20.2	99	-15	01.1	105	10 N	5 34	6 00	6 22	1 25	55	13 28	49
12	357	21.7	-20	23.1	65	49.1	99	-15	11.6	103	0	5 19	5 45	6 07	1 15	52	13 40	52
13	12	21.5		22.6	80	18.0	99		21.9	103	10 S	5 03	29	5 52	1 05	49	13 51	56
14	27	21.3		22.1	94	46.9	98		32.2	101	20	4 43	5 12	35	0 55	45	14 04	58
15	42	21.1		21.6	109	15.7	98		42.3	101	30	18	4 50	17	43	41	18	62
16	57	20.9		21.0	123	44.5	97	-15	52.4	100	35	4 02	37	5 05	36	39	26	65
17	72	20.8	-20	20.5	138	13.2	97	-16	02.4	99	40	3 42	4 21	4 53	0 29	35	14 36	67
18	87	20.6	-20	20.0	152	41.9	97	-16	12.3	98	45	3 17	4 02	4 37	0 20	32	14 47	70
19	102	20.4		19.5	167	10.6	96		22.1	97	50	2 42	3 38	19	09	28	15 00	75
20	117	20.2		18.9	181	39.2	96		31.8	96	52	2 23	26	10	0 04	26	07	76
21	132	20.0		18.4	196	07.8	96		41.4	95	54	1 58	3 12	4 00	** ** *	**	14	78
22	147	19.8		17.9	210	36.4	95	-16	50.9	94	56	1 23	2 55	3 48	** ** *	**	22	81
23	162	19.6		17.4	225	04.9	95	-17	00.3	93	58	** ** *	35	35	** ** *	**	15 30	85
24	177	19.4	-20	16.8	239	33.4		-17	09.6		60 S	** ** *	2 09	3 20	23 54	21	15 41	88
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 16 ^h 05 ^m 9		Mag: -4.0 PMG: 14 ^h 43 ^m				Mag: +1.5 PMG: 08 ^h 44 ^m				Mag: -1.9 PMG: 10 ^h 54 ^m				Mag: +0.5 PMG: 11 ^h 48 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	117	51.6	139	13.7	-10	32.2	228	53.5	-21	51.5	196	08.2	-22	56.3	182	29.1	-21	21.5
1	132	54.0	154	13.4		31.0	243	54.1		51.8	211	10.0		56.2	197	31.3		21.5
2	147	56.5	169	13.0		29.8	258	54.8		52.0	226	11.9		56.2	212	33.4		21.4
3	162	59.0	184	12.7		28.6	273	55.5		52.3	241	13.7		56.1	227	35.6		21.4
4	178	01.4	199	12.3		27.4	288	56.1		52.6	256	15.6		56.1	242	37.7		21.3
5	193	03.9	214	12.0	-10	26.2	303	56.8	-21	52.8	271	17.4	-22	56.1	257	39.9	-21	21.3
6	208	06.3	229	11.6	-10	25.0	318	57.4	-21	53.1	286	19.3	-22	56.0	272	42.0	-21	21.2
7	223	08.8	244	11.2		23.8	333	58.1		53.4	301	21.1		56.0	287	44.2		21.2
8	238	11.3	259	10.9		22.6	348	58.7		53.7	316	23.0		55.9	302	46.3		21.1
9	253	13.7	274	10.5		21.4	3	59.4		53.9	331	24.8		55.9	317	48.5		21.1
10	268	16.2	289	10.2		20.2	19	00.1		54.2	346	26.7		55.8	332	50.7		21.0
11	283	18.7	304	09.8	-10	19.0	34	00.7	-21	54.5	1	28.5	-22	55.8	347	52.8	-21	21.0
12	298	21.1	319	09.5	-10	17.8	49	01.4	-21	54.7	16	30.4	-22	55.8	2	55.0	-21	20.9
13	313	23.6	334	09.1		16.6	64	02.0		55.0	31	32.2		55.7	17	57.1		20.9
14	328	26.1	349	08.8		15.4	79	02.7		55.3	46	34.1		55.7	32	59.3		20.8
15	343	28.5	4	08.4		14.2	94	03.3		55.5	61	36.0		55.6	48	01.4		20.8
16	358	31.0	19	08.1		13.0	109	04.0		55.8	76	37.8		55.6	63	03.6		20.7
17	13	33.5	34	07.8	-10	11.8	124	04.7	-21	56.1	91	39.7	-22	55.5	78	05.7	-21	20.7
18	28	35.9	49	07.4	-10	10.6	139	05.3	-21	56.3	106	41.5	-22	55.5	93	07.9	-21	20.6
19	43	38.4	64	07.1		09.4	154	06.0		56.6	121	43.4		55.5	108	10.0		20.6
20	58	40.8	79	06.7		08.2	169	06.6		56.8	136	45.2		55.4	123	12.2		20.5
21	73	43.3	94	06.4		06.9	184	07.3		57.1	151	47.1		55.4	138	14.3		20.5
22	88	45.8	109	06.0		05.7	199	07.9		57.4	166	48.9		55.3	153	16.5		20.5
23	103	48.2	124	05.7		04.5	214	08.6		57.6	181	50.8		55.3	168	18.6		20.4
24	118	50.7	139	05.3	-10	03.3	229	09.2	-21	57.9	196	52.6	-22	55.2	183	20.8	-21	20.4
Dif.	—		-3		+12		+7		-3		+19		0		+22			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'3			SD: 15'8 Edad: 24'8																
	PMG: 12 ^h 10 ^m 9			PMG: 08 ^h 19 ^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	
0	177	19.4	-20 16.8	239	33.4	95	-17 09.6	92	60 N	15 42	16 33	17 27	4 28	85	12 00	26				
1	192	19.2	16.3	254	01.9	94	18.8	91	58	15 55	42	32	16	81	13	29				
2	207	19.0	15.8	268	30.3	94	27.9	90	56	16 07	50	37	4 05	79	25	31				
3	222	18.8	15.2	282	58.7	93	36.9	89	54	17	16 57	42	3 56	76	34	34				
4	237	18.7	14.7	297	27.0	94	45.8	88	52	25	17 04	46	47	75	43	36				
5	252	18.5	-20 14.2	311	55.4	92	-17 54.6	86	50	16 33	17 10	17 50	3 40	72	12 51	37				
6	267	18.3	-20 13.6	326	23.6	93	-18 03.2	86	45	16 50	17 23	17 59	3 24	69	13 08	40				
7	282	18.1	13.1	340	51.9	92	11.8	85	40	17 04	34	18 07	11	66	22	43				
8	297	17.9	12.6	355	20.1	92	20.3	84	35	16	43	14	3 00	64	34	44				
9	312	17.7	12.0	9	48.3	91	28.7	82	30	26	17 52	21	2 51	61	13 44	46				
10	327	17.5	11.5	24	16.4	91	36.9	82	20	17 44	18 08	34	34	59	14 02	49				
11	342	17.3	-20 11.0	38	44.5	91	-18 45.1	80	10 N	18 00	18 22	18 48	2 20	56	14 17	52				
12	357	17.1	-20 10.4	53	12.6	91	-18 53.1	79	0	18 14	18 36	19 02	2 07	53	14 32	54				
13	12	17.0	09.9	67	40.7	90	-19 01.0	79	10 S	29	18 52	18	1 54	50	14 47	56				
14	27	16.8	09.4	82	08.7	90	08.9	77	20	18 45	19 09	19 38	40	47	15 02	59				
15	42	16.6	08.8	96	36.7	89	16.6	76	30	19 04	30	20 02	24	44	20	61				
16	57	16.4	08.3	111	04.6	89	24.2	74	35	15	43	18	15	42	31	62				
17	72	16.2	-20 07.7	125	32.5	89	-19 31.6	74	40	19 27	19 59	20 37	1 04	40	15 43	64				
18	87	16.0	-20 07.2	140	00.4	88	-19 39.0	73	45	19 42	20 17	21 02	0 52	37	15 57	67				
19	102	15.8	06.7	154	28.2	89	46.3	71	50	20 01	41	36	37	34	16 15	70				
20	117	15.7	06.1	168	56.1	88	-19 53.4	70	52	09	20 53	21 54	30	32	23	71				
21	132	15.5	05.6	183	23.9	87	-20 00.4	69	54	19	21 06	22 17	23	29	32	73				
22	147	15.3	05.0	197	51.6	87	07.3	68	56	30	22	22 50	14	28	43	75				
23	162	15.1	04.5	212	19.3	87	14.1	67	58	43	21 42	** ** *	0 05	24	16 55	77				
24	177	14.9	-20 03.9	226	47.0		-20 20.8		60 S	20 58	22 06	** ** *	** ** *	**	17 09	81				

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 16 ^h 02 ^m 0		Mag: -4.0 PMG: 14 ^h 44 ^m				Mag: +1.5 PMG: 08 ^h 43 ^m				Mag: -1.9 PMG: 10 ^h 51 ^m				Mag: +0.5 PMG: 11 ^h 45 ^m			
	hG ♂		hG ♀	dec.			hG ♂	dec.			hG ♀	dec.			hG ♀	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	118	50.7	139	05.3	-10	03.3	229	09.2	-21	57.9	196	52.6	-22	-55.2	183	20.8	-21	20.4
1	133	53.2	154	05.0		02.1	244	09.9		58.2	211	54.5		-55.2	198	22.9		20.3
2	148	55.6	169	04.7	-10	00.9	259	10.6		58.4	226	56.4		-55.2	213	25.1		20.3
3	163	58.1	184	04.3	-9	59.7	274	11.2		58.7	241	58.2		-55.1	228	27.2		20.2
4	179	00.6	199	04.0		58.5	289	11.9		59.0	257	00.1		-55.1	243	29.4		20.2
5	194	03.0	214	03.6	-9	57.3	304	12.5	-21	59.2	272	01.9	-22	-55.0	258	31.5	-21	20.1
6	209	05.5	229	03.3	-9	56.0	319	13.2	-21	59.5	287	03.8	-22	-55.0	273	33.7	-21	20.1
7	224	07.9	244	02.9		54.8	334	13.8	-21	59.7	302	05.6		-54.9	288	35.8		20.0
8	239	10.4	259	02.6		53.6	349	14.5	-22	00.0	317	07.5		-54.9	303	38.0		20.0
9	254	12.9	274	02.3		52.4	4	15.1		00.3	332	09.3		-54.9	318	40.1		19.9
10	269	15.3	289	01.9		51.2	19	15.8		00.5	347	11.2		-54.8	333	42.3		19.9
11	284	17.8	304	01.6	-9	50.0	34	16.4	-22	00.8	2	13.1	-22	-54.8	348	44.4	-21	19.8
12	299	20.3	319	01.3	-9	48.8	49	17.1	-22	01.0	17	14.9	-22	-54.7	3	46.6	-21	19.8
13	314	22.7	334	00.9		47.5	64	17.8		01.3	32	16.8		-54.7	18	48.7		19.7
14	329	25.2	349	00.6		46.3	79	18.4		01.6	47	18.6		-54.6	33	50.9		19.7
15	344	27.7	4	00.2		45.1	94	19.1		01.8	62	20.5		-54.6	48	53.0		19.6
16	359	30.1	18	59.9		43.9	109	19.7		02.1	77	22.3		-54.6	63	55.2		19.6
17	14	32.6	33	59.6	-9	42.7	124	20.4	-22	02.3	92	24.2	-22	-54.5	78	57.3	-21	19.5
18	29	35.1	48	59.2	-9	41.5	139	21.0	-22	02.6	107	26.0	-22	-54.5	93	59.5	-21	19.5
19	44	37.5	63	58.9		40.2	154	21.7		02.9	122	27.9		-54.4	109	01.6		19.4
20	59	40.0	78	58.6		39.0	169	22.3		03.1	137	29.8		-54.4	124	03.8		19.4
21	74	42.4	93	58.2		37.8	184	23.0		03.4	152	31.6		-54.3	139	05.9		19.4
22	89	44.9	108	57.9		36.6	199	23.6		03.6	167	33.5		-54.3	154	08.1		19.3
23	104	47.4	123	57.6		35.4	214	24.3		03.9	182	35.3		-54.3	169	10.2		19.3
24	119	49.8	138	57.2	-9	34.1	229	24.9	-22	04.1	197	37.2	-22	-54.2	184	12.4	-21	19.2
Dif.	—		-3		+12		+7		-3		+19		0		+22		0	

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3			SD: 15'6			PHE { 4 ^h : 57'3 12 ^h : 57'1 20 ^h : 56'9													
	PMG: 12 ^h 11 ^m 2			Edad: 25 ^d 8			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	177	14.9	-20	03.9		226	47.0	87	-20	20.8	65	60 N	6 54	7 47	8 38	5 53	76	12 26	37	
1	192	14.7		03.4		241	14.7	87		27.3	64	58	49	39	25	37	73	42	40	
2	207	14.6		02.8		255	42.4	86		33.7	63	56	44	31	14	24	70	12	56	41
3	222	14.4		02.3		270	10.0	86		40.0	62	54	40	24	8 04	12	69	13	08	43
4	237	14.2		01.7		284	37.6	86		46.2	61	52	36	17	7 56	5 02	67	19	44	
5	252	14.0	-20	01.2		299	05.2	85	-20	52.3	59	50	6 32	7 12	7 48	4 52	67	13	28	45
6	267	13.8	-20	00.7		313	32.7	85	-20	58.2	59	45	6 23	6 59	7 31	4 33	64	13	48	47
7	282	13.7	-20	00.1		328	00.2	85	-21	04.1	57	40	15	48	17	17	63	14	05	48
8	297	13.5	-19	59.6		342	27.7	85		09.8	55	35	08	38	7 06	4 04	61	18	50	
9	312	13.3		59.0		356	55.2	84		15.3	55	30	6 01	30	6 55	3 52	60	30	51	
10	327	13.1		58.5		11	22.6	85		20.8	53	20	5 47	14	38	33	57	14	51	52
11	342	12.9	-19	57.9		25	50.1	84	-21	26.1	52	10 N	5 34	6 00	6 22	3 16	56	15	09	53
12	357	12.8	-19	57.3		40	17.5	84	-21	31.3	51	0	5 20	5 46	6 08	3 00	54	15	26	54
13	12	12.6		56.8		54	44.9	84		36.4	49	10 S	5 04	30	5 53	2 44	53	15	43	55
14	27	12.4		56.2		69	12.3	83		41.3	49	20	4 45	5 13	37	27	51	16	01	56
15	42	12.2		55.7		83	39.6	83		46.2	47	30	20	4 52	18	2 08	49	21	58	
16	57	12.0		55.1		98	06.9	84		50.9	45	35	4 04	39	5 07	1 57	47	33	59	
17	72	11.9	-19	54.6		112	34.3	83	-21	55.4	45	40	3 45	4 24	4 55	1 44	46	16	47	60
18	87	11.7	-19	54.0		127	01.6	83	-21	59.9	43	45	3 20	4 05	4 40	1 29	44	17	04	61
19	102	11.5		53.5		141	28.9	83	-22	04.2	42	50	2 46	3 41	22	11	41	25	62	
20	117	11.3		52.9		155	56.2	82		08.4	40	52	28	30	13	1 02	40	34	63	
21	132	11.2		52.3		170	23.4	83		12.4	40	54	2 05	16	4 04	0 52	38	45	64	
22	147	11.0		51.8		184	50.7	82		16.4	38	56	1 33	3 00	3 53	42	36	17	58	65
23	162	10.8		51.2		199	17.9	83		20.2	36	58	** **	2 41	40	0 29	34	18	12	67
24	177	10.6	-19	50.7		213	45.2		-22	23.8		60 S	** **	2 16	3 25	0 15	30	18	30	68
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 15 ^h 58 ^m 1		Mag: -4.0 PMG: 14 ^h 45 ^m			Mag: +1.4 PMG: 08 ^h 42 ^m			Mag: -1.9 PMG: 10 ^h 48 ^m			Mag: +0.5 PMG: 11 ^h 41 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°					
0	119	49.8	138	57.2	-9	34.1	229	24.9	-22	04.1		197	37.2	-22	54.2	184	12.4	-21	19.2	
1	134	52.3	153	56.9		32.9	244	25.6		04.4		212	39.0		54.2	199	14.5		19.2	
2	149	54.8	168	56.6		31.7	259	26.2		04.6		227	40.9		54.1	214	16.7		19.1	
3	164	57.2	183	56.2		30.5	274	26.9		04.9		242	42.7		54.1	229	18.8		19.1	
4	179	59.7	198	55.9		29.3	289	27.5		05.2		257	44.6		54.0	244	21.0		19.0	
5	195	02.2	213	55.6	-9	28.0	304	28.2	-22	05.4		272	46.5	-22	54.0	259	23.2	-21	19.0	
6	210	04.6	228	55.3	-9	26.8	319	28.8	-22	05.7		287	48.3	-22	54.0	274	25.3	-21	18.9	
7	225	07.1	243	54.9		25.6	334	29.5		05.9		302	50.2		53.9	289	27.5		18.9	
8	240	09.6	258	54.6		24.4	349	30.1		06.2		317	52.0		53.9	304	29.6		18.8	
9	255	12.0	273	54.3		23.1	4	30.8		06.4		332	53.9		53.8	319	31.8		18.8	
10	270	14.5	288	53.9		21.9	19	31.4		06.7		347	55.7		53.8	334	33.9		18.7	
11	285	16.9	303	53.6	-9	20.7	34	32.1	-22	06.9		2	57.6	-22	53.7	349	36.1	-21	18.7	
12	300	19.4	318	53.3	-9	19.5	49	32.7	-22	07.2		17	59.5	-22	53.7	4	38.2	-21	18.6	
13	315	21.9	333	53.0		18.2	64	33.4		07.4		33	01.3		53.6	19	40.4		18.6	
14	330	24.3	348	52.6		17.0	79	34.0		07.7		48	03.2		53.6	34	42.5		18.5	
15	345	26.8	3	52.3		15.8	94	34.7		07.9		63	05.0		53.6	49	44.7		18.5	
16	0	29.3	18	52.0		14.6	109	35.3		08.2		78	06.9		53.5	64	46.8		18.4	
17	15	31.7	33	51.7	-9	13.3	124	36.0	-22	08.4		93	08.7	-22	53.5	79	49.0	-21	18.4	
18	30	34.2	48	51.3	-9	12.1	139	36.6	-22	08.7		108	10.6	-22	53.4	94	51.1	-21	18.3	
19	45	36.7	63	51.0		10.9	154	37.3		08.9		123	12.5		53.4	109	53.3		18.3	
20	60	39.1	78	50.7		09.7	169	37.9		09.2		138	14.3		53.3	124	55.4		18.3	
21	75	41.6	93	50.4		08.4	184	38.6		09.4		153	16.2		53.3	139	57.6		18.2	
22	90	44.1	108	50.1		07.2	199	39.2		09.7		168	18.0		53.3	154	59.7		18.2	
23	105	46.5	123	49.7		06.0	214	39.9		09.9		183	19.9		53.2	170	01.9		18.1	
24	120	49.0	138	49.4	-9	04.7	229	40.5	-22	10.2		198	21.7	-22	53.2	185	04.0	-21	18.1	
Dif.	—		-3		+12		+7		-3		+19		0		+22					

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'3			SD: 15'5 PHE { 4 ^h : 56'8 12 ^h : 56'6 20 ^h : 56'5														
	PMG: 12 ^h 11 ^m 4			Edad: 26 ^d 8 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	177	10.6	-19	50.7	213	45.2	82	-22	23.8	36	60 N	15 47	16 38	17 31	7 09	59	13 03	52
1	192	10.5		50.1	228	12.4	82		27.4	34	58	16 00	46	36	6 50	59	22	53
2	207	10.3		49.5	242	39.6	82		30.8	33	56	11	16 54	40	34	59	37	54
3	222	10.1		49.0	257	06.8	82		34.1	31	54	20	17 01	45	21	58	13 51	54
4	237	09.9		48.4	271	34.0	83		37.2	30	52	29	07	49	6 09	58	14 03	54
5	252	09.8	-19	47.9	286	01.3	82	-22	40.2	29	50	16 37	17 13	17 53	5 59	57	14 13	54
6	267	09.6	-19	47.3	300	28.5	82	-22	43.1	28	45	16 53	17 25	18 01	5 37	57	14 35	54
7	282	09.4		46.7	314	55.7	82		45.9	26	40	17 06	36	09	20	56	14 53	54
8	297	09.2		46.2	329	22.9	82		48.5	25	35	18	45	16	5 05	56	15 08	54
9	312	09.1		45.6	343	50.1	82		51.0	24	30	28	17 54	23	4 52	56	21	54
10	327	08.9		45.0	358	17.3	82		53.4	22	20	17 45	18 09	36	30	56	15 43	54
11	342	08.7	-19	44.5	12	44.5	82	-22	55.6	21	10 N	18 01	18 23	18 49	4 12	54	16 02	54
12	357	08.6	-19	43.9	27	11.7	82	-22	57.7	20	0	18 15	18 37	19 03	3 54	54	16 20	54
13	12	08.4		43.3	41	38.9	82	-22	59.7	18	10 S	30	18 52	18	37	53	38	54
14	27	08.2		42.8	56	06.1	83	-23	01.5	17	20	18 45	19 09	19 37	3 18	53	16 57	54
15	42	08.0		42.2	70	33.4	82		03.2	16	30	19 03	30	20 01	2 57	52	17 19	54
16	57	07.9		41.6	85	00.6	82		04.8	14	35	14	42	17	44	52	32	54
17	72	07.7	-19	41.0	99	27.8	83	-23	06.2	14	40	19 26	19 57	20 36	2 30	51	17 47	53
18	87	07.5	-19	40.5	113	55.1	83	-23	07.6	11	45	19 41	20 15	21 00	2 13	50	18 05	53
19	102	07.4		39.9	128	22.4	83		08.7	11	50	19 58	38	33	1 52	49	27	53
20	117	07.2		39.3	142	49.7	83		09.8	9	52	20 07	20 50	21 50	42	49	37	53
21	132	07.0		38.7	157	17.0	83		10.7	8	54	16	21 03	22 12	30	49	18 49	52
22	147	06.9		38.2	171	44.3	83		11.5	7	56	27	18	22 41	18	47	19 03	52
23	162	06.7		37.6	186	11.6	84		12.2	5	58	39	21 37	23 35	1 03	46	19	51
24	177	06.5	-19	37.0	200	39.0		-23	12.7		60 S	20 53	22 00	** **	0 45	45	19 38	51
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 54 ^m 1		Mag: -4.0 PMG: 14 ^h 45 ^m			Mag: +1.4 PMG: 08 ^h 41 ^m			Mag: -1.9 PMG: 10 ^h 45 ^m			Mag: +0.5 PMG: 11 ^h 38 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	120	49.0	138	49.4	-9	04.7	229	40.5	-22	10.2	198	21.7	-22	-53.2	185	04.0	-21	18.1
1	135	51.4	153	49.1		03.5	244	41.2		10.4	213	23.6		-53.1	200	06.2		18.0
2	150	53.9	168	48.8		02.3	259	41.8		10.7	228	25.5		-53.1	215	08.3		18.0
3	165	56.4	183	48.5	-9	01.1	274	42.5		10.9	243	27.3		-53.0	230	10.5		17.9
4	180	58.8	198	48.1	-8	59.8	289	43.1		11.2	258	29.2		-53.0	245	12.6		17.9
5	196	01.3	213	47.8	-8	58.6	304	43.8	-22	11.4	273	31.0	-22	-52.9	260	14.8	-21	17.8
6	211	03.8	228	47.5	-8	57.4	319	44.4	-22	11.7	288	32.9	-22	-52.9	275	16.9	-21	17.8
7	226	06.2	243	47.2		56.1	334	45.1		11.9	303	34.8		-52.9	290	19.1		17.7
8	241	08.7	258	46.9		54.9	349	45.7		12.1	318	36.6		-52.8	305	21.2		17.7
9	256	11.2	273	46.6		53.7	4	46.4		12.4	333	38.5		-52.8	320	23.4		17.6
10	271	13.6	288	46.2		52.4	19	47.0		12.6	348	40.3		-52.7	335	25.6		17.6
11	286	16.1	303	45.9	-8	51.2	34	47.7	-22	12.9	3	42.2	-22	-52.7	350	27.7	-21	17.5
12	301	18.6	318	45.6	-8	50.0	49	48.3	-22	13.1	18	44.0	-22	-52.6	5	29.9	-21	17.5
13	316	21.0	333	45.3		48.7	64	48.9		13.4	33	45.9		-52.6	20	32.0		17.4
14	331	23.5	348	45.0		47.5	79	49.6		13.6	48	47.8		-52.5	35	34.2		17.4
15	346	25.9	3	44.7		46.3	94	50.2		13.9	63	49.6		-52.5	50	36.3		17.3
16	1	28.4	18	44.4		45.0	109	50.9		14.1	78	51.5		-52.5	65	38.5		17.3
17	16	30.9	33	44.0	-8	43.8	124	51.5	-22	14.3	93	53.3	-22	-52.4	80	40.6	-21	17.2
18	31	33.3	48	43.7	-8	42.5	139	52.2	-22	14.6	108	55.2	-22	-52.4	95	42.8	-21	17.2
19	46	35.8	63	43.4		41.3	154	52.8		14.8	123	57.1		-52.3	110	44.9		17.1
20	61	38.3	78	43.1		40.1	169	53.5		15.1	138	58.9		-52.3	125	47.1		17.1
21	76	40.7	93	42.8		38.8	184	54.1		15.3	154	00.8		-52.2	140	49.2		17.1
22	91	43.2	108	42.5		37.6	199	54.8		15.6	169	02.6		-52.2	155	51.4		17.0
23	106	45.7	123	42.2		36.4	214	55.4		15.8	184	04.5		-52.1	170	53.5		17.0
24	121	48.1	138	41.9	-8	35.1	229	56.1	-22	16.0	199	06.4	-22	-52.1	185	55.7	-21	16.9
Dif.	—		-3		+12		+6		-2		+19		0		+22			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3			SD: 15'4 Edad: 27 ^d 8														
	PMG: 12 ^h 11 ^m 7			PMG: 11 ^h 01 ^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	06.5	-19	37.0	200	39.0	83	-23	12.7	4	60 N	6 52	7 44	8 34	8 08	42	13 55	68
1	192	06.4		36.4	215	06.3	84		13.1	3	58	47	36	22	7 49	44	14 15	65
2	207	06.2		35.9	229	33.7	84		13.4	1	56	42	28	11	33	45	31	64
3	222	06.0		35.3	244	01.1	84		13.5	0	54	38	21	8 02	19	46	45	62
4	237	05.9		34.7	258	28.5	85		13.5	1	52	34	15	7 53	7 07	47	14 57	61
5	252	05.7	-19	34.1	272	56.0	85	-23	13.4	3	50	6 30	7 10	7 46	6 56	48	15 07	61
6	267	05.5	-19	33.6	287	23.5	85	-23	13.1	3	45	6 22	6 57	7 29	6 34	49	15 29	60
7	282	05.4		33.0	301	51.0	85		12.8	5	40	14	47	16	16	50	15 47	58
8	297	05.2		32.4	316	18.5	86		12.3	7	35	07	38	7 05	6 01	50	16 02	57
9	312	05.0		31.8	330	46.1	86		11.6	7	30	6 00	29	6 55	5 48	51	15	56
10	327	04.9		31.2	345	13.7	86		10.9	9	20	5 47	14	38	26	52	37	55
11	342	04.7	-19	30.7	359	41.3	86	-23	10.0	10	10 N	5 34	6 00	6 22	5 06	53	16 56	54
12	357	04.5	-19	30.1	14	08.9	87	-23	09.0	12	0	5 21	5 46	6 08	4 48	54	17 14	53
13	12	04.4		29.5	28	36.6	87		07.8	13	10 S	5 05	31	5 54	30	54	32	51
14	27	04.2		28.9	43	04.3	88		06.5	14	20	4 46	5 14	38	4 11	55	17 51	50
15	42	04.1		28.3	57	32.1	88		05.1	15	30	22	4 54	20	3 49	55	18 13	48
16	57	03.9		27.7	71	59.9	88		03.6	16	35	4 07	41	5 10	36	56	26	47
17	72	03.7	-19	27.1	86	27.7	89	-23	02.0	18	40	3 48	4 26	4 57	3 21	56	18 40	47
18	87	03.6	-19	26.6	100	55.6	89	-23	00.2	19	45	3 24	4 08	4 43	3 03	57	18 58	45
19	102	03.4		26.0	115	23.5	89	-22	58.3	20	50	2 51	3 45	25	2 41	58	19 20	42
20	117	03.2		25.4	129	51.4	90		56.3	22	52	34	34	17	31	57	30	42
21	132	03.1		24.8	144	19.4	90		54.1	22	54	2 12	21	4 07	19	58	41	41
22	147	02.9		24.2	158	47.4	91		51.9	24	56	1 42	3 05	3 57	2 05	59	19 55	39
23	162	02.8		23.6	173	15.5	91		49.5	25	58	0 50	2 47	45	1 49	60	20 10	37
24	177	02.6	-19	23.0	187	43.6		-22	47.0		60 S	** **	2 24	3 30	1 30	60	20 29	34

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 50 ^m 2		Mag: -4.1 PMG: 14 ^h 46 ^m			Mag: +1.4 PMG: 08 ^h 40 ^m			Mag: -1.9 PMG: 10 ^h 42 ^m			Mag: +0.5 PMG: 11 ^h 35 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	121	48.1	138	41.9	-8	35.1	229	56.1	-22	16.0	199	06.4	-22	52.1	185	55.7	-21	16.9
1	136	50.6	153	41.6		33.9	244	56.7		16.3	214	08.2		52.1	200	57.8		16.9
2	151	53.1	168	41.2		32.6	259	57.3		16.5	229	10.1		52.0	216	00.0		16.8
3	166	55.5	183	40.9		31.4	274	58.0		16.8	244	11.9		52.0	231	02.1		16.8
4	181	58.0	198	40.6		30.2	289	58.6		17.0	259	13.8		51.9	246	04.3		16.7
5	197	00.4	213	40.3	-8	28.9	304	59.3	-22	17.2	274	15.7	-22	51.9	261	06.4	-21	16.7
6	212	02.9	228	40.0	-8	27.7	319	59.9	-22	17.5	289	17.5	-22	51.8	276	08.6	-21	16.6
7	227	05.4	243	39.7		26.4	335	00.6		17.7	304	19.4		51.8	291	10.8		16.6
8	242	07.8	258	39.4		25.2	350	01.2		17.9	319	21.2		51.7	306	12.9		16.5
9	257	10.3	273	39.1		24.0	5	01.9		18.2	334	23.1		51.7	321	15.1		16.5
10	272	12.8	288	38.8		22.7	20	02.5		18.4	349	25.0		51.6	336	17.2		16.4
11	287	15.2	303	38.5	-8	21.5	35	03.1	-22	18.7	4	26.8	-22	51.6	351	19.4	-21	16.4
12	302	17.7	318	38.2	-8	20.2	50	03.8	-22	18.9	19	28.7	-22	51.6	6	21.5	-21	16.3
13	317	20.2	333	37.9		19.0	65	04.4		19.1	34	30.5		51.5	21	23.7		16.3
14	332	22.6	348	37.6		17.7	80	05.1		19.4	49	32.4		51.5	36	25.8		16.2
15	347	25.1	3	37.3		16.5	95	05.7		19.6	64	34.3		51.4	51	28.0		16.2
16	2	27.5	18	37.0		15.3	110	06.4		19.8	79	36.1		51.4	66	30.1		16.1
17	17	30.0	33	36.7	-8	14.0	125	07.0	-22	20.1	94	38.0	-22	51.3	81	32.3	-21	16.1
18	32	32.5	48	36.4	-8	12.8	140	07.6	-22	20.3	109	39.8	-22	51.3	96	34.4	-21	16.0
19	47	34.9	63	36.1		11.5	155	08.3		20.5	124	41.7		51.2	111	36.6		16.0
20	62	37.4	78	35.8		10.3	170	08.9		20.8	139	43.6		51.2	126	38.7		15.9
21	77	39.9	93	35.5		09.0	185	09.6		21.0	154	45.4		51.1	141	40.9		15.9
22	92	42.3	108	35.2		07.8	200	10.2		21.2	169	47.3		51.1	156	43.0		15.8
23	107	44.8	123	34.9		06.5	215	10.9		21.5	184	49.1		51.1	171	45.2		15.8
24	122	47.3	138	34.6	-8	05.3	230	11.5	-22	21.7	199	51.0	-22	51.0	186	47.3	-21	15.7
Dif.	—		-3		+12		+6		-2		+19		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 0				SD: 15'2 Edad: 28 ^d 8 PHE { 4 ^h : 55'8 12 ^h : 55'7 20 ^h : 55'5 PMG: 11 ^h 54 ^m Rº: 51 ^m															
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.							
	h	°	'	°	'	°	'	°	'	°			'	h	m	h	m	h	m	m
0	177	02.6	-19	23.0	187	43.6	92	-22	47.0	26	60 N	15 52	16 42	17 34	8 50	28	15 03	76		
1	192	02.4		22.4	202	11.8	92		44.4	28	58	16 04	50	39	33	31	20	73		
2	207	02.3		21.8	216	40.0	92		41.6	29	56	15	16 58	44	18	33	35	70		
3	222	02.1		21.2	231	08.2	93		38.7	30	54	24	17 04	48	8 05	35	47	69		
4	237	02.0		20.7	245	36.5	93		35.7	31	52	32	10	52	7 54	37	15 58	67		
5	252	01.8	-19	20.1	260	04.8	94	-22	32.6	32	50	16 40	17 16	17 55	7 44	38	16 08	65		
6	267	01.7	-19	19.5	274	33.2	95	-22	29.4	33	45	16 56	17 28	18 04	7 23	41	16 29	62		
7	282	01.5		18.9	289	01.7	95		26.1	35	40	17 09	38	11	7 06	42	45	60		
8	297	01.3		18.3	303	30.2	95		22.6	36	35	20	47	18	6 51	45	16 59	58		
9	312	01.2		17.7	317	58.7	96		19.0	36	30	30	17 55	24	39	45	17 11	57		
10	327	01.0		17.1	332	27.3	97		15.4	39	20	17 47	18 10	37	6 18	47	32	54		
11	342	00.9	-19	16.5	346	56.0	97	-22	11.5	39	10 N	18 02	18 24	18 49	5 59	49	17 50	52		
12	357	00.7	-19	15.9	1	24.7	97	-22	07.6	40	0	18 16	18 37	19 03	5 42	51	18 07	49		
13	12	00.6		15.3	15	53.4	98	-22	03.6	41	10 S	30	18 52	18	24	53	23	48		
14	27	00.4		14.7	30	22.2	99	-21	59.5	43	20	18 45	19 09	19 37	5 06	54	18 41	46		
15	42	00.3		14.1	44	51.1	99		55.2	44	30	19 03	29	20 00	4 44	57	19 01	43		
16	57	00.1		13.5	59	20.0	100		50.8	44	35	13	41	15	32	57	13	41		
17	72	00.0	-19	12.9	73	49.0	101	-21	46.4	46	40	19 25	19 56	20 34	4 17	59	19 27	39		
18	86	59.8	-19	12.3	88	18.1	101	-21	41.8	47	45	19 39	20 13	20 57	4 00	61	19 43	37		
19	101	59.6		11.7	102	47.2	101		37.1	48	50	19 56	36	21 29	3 39	63	20 02	35		
20	116	59.5		11.1	117	16.3	103		32.3	49	52	20 04	47	21 46	28	65	12	32		
21	131	59.3		10.5	131	45.6	102		27.4	50	54	13	20 59	22 06	17	66	22	31		
22	146	59.2		09.9	146	14.8	104		22.4	52	56	24	21 14	22 33	3 04	67	34	29		
23	161	59.0		09.3	160	44.2	104		17.2	52	58	35	32	23 17	2 49	69	20 47	27		
24	176	58.9	-19	08.7	175	13.6		-21	12.0		60 S	20 49	21 54	** **	2 30	73	21 03	24		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 15 ^h 46 ^m 3		Mag: -4.1 PMG: 14 ^h 46 ^m			Mag: +1.4 PMG: 08 ^h 39 ^m			Mag: -1.9 PMG: 10 ^h 39 ^m			Mag: +0.6 PMG: 11 ^h 31 ^m								
	hG ♈		hG ♀ dec.			hG ♂ dec.			hG ♃ dec.			hG ♄ dec.								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	122	47.3	138	34.6	-8	05.3	230	11.5	-22	21.7	199	51.0	-22	-51.0	186	47.3	-21	15.7		
1	137	49.7	153	34.3		04.0	245	12.1		21.9	214	52.9		-51.0	201	49.5		15.7		
2	152	52.2	168	34.0		02.8	260	12.8		22.2	229	54.7		-50.9	216	51.7		15.7		
3	167	54.7	183	33.7		01.5	275	13.4		22.4	244	56.6		-50.9	231	53.8		15.6		
4	182	57.1	198	33.4	-8	00.3	290	14.1		22.6	259	58.5		-50.8	246	56.0		15.6		
5	197	59.6	213	33.1	-7	59.1	305	14.7	-22	22.9	275	00.3	-22	-50.8	261	58.1	-21	15.5		
6	213	02.0	228	32.8	-7	57.8	320	15.3	-22	23.1	290	02.2	-22	-50.7	277	00.3	-21	15.5		
7	228	04.5	243	32.5		56.6	335	16.0		23.3	305	04.0		-50.7	292	02.4		15.4		
8	243	07.0	258	32.2		55.3	350	16.6		23.6	320	05.9		-50.6	307	04.6		15.4		
9	258	09.4	273	31.9		54.1	5	17.3		23.8	335	07.8		-50.6	322	06.7		15.3		
10	273	11.9	288	31.6		52.8	20	17.9		24.0	350	09.6		-50.5	337	08.9		15.3		
11	288	14.4	303	31.3	-7	51.6	35	18.5	-22	24.2	5	11.5	-22	-50.5	352	11.0	-21	15.2		
12	303	16.8	318	31.0	-7	50.3	50	19.2	-22	24.5	20	13.3	-22	-50.5	7	13.2	-21	15.2		
13	318	19.3	333	30.7		49.0	65	19.8		24.7	35	15.2		-50.4	22	15.3		15.1		
14	333	21.8	348	30.5		47.8	80	20.5		24.9	50	17.1		-50.4	37	17.5		15.1		
15	348	24.2	3	30.2		46.5	95	21.1		25.2	65	18.9		-50.3	52	19.6		15.0		
16	3	26.7	18	29.9		45.3	110	21.7		25.4	80	20.8		-50.3	67	21.8		15.0		
17	18	29.2	33	29.6	-7	44.0	125	22.4	-22	25.6	95	22.7	-22	-50.2	82	24.0	-21	14.9		
18	33	31.6	48	29.3	-7	42.8	140	23.0	-22	25.8	110	24.5	-22	-50.2	97	26.1	-21	14.9		
19	48	34.1	63	29.0		41.5	155	23.7		26.1	125	26.4		-50.1	112	28.3		14.8		
20	63	36.5	78	28.7		40.3	170	24.3		26.3	140	28.2		-50.1	127	30.4		14.8		
21	78	39.0	93	28.4		39.0	185	24.9		26.5	155	30.1		-50.0	142	32.6		14.7		
22	93	41.5	108	28.1		37.8	200	25.6		26.7	170	32.0		-50.0	157	34.7		14.7		
23	108	43.9	123	27.8		36.5	215	26.2		27.0	185	33.8		-49.9	172	36.9		14.6		
24	123	46.4	138	27.6	-7	35.3	230	26.9	-22	27.2	200	35.7	-22	-49.9	187	39.0	-21	14.6		
Dif.	—		-3 +13			+6 -2			+19 0			+22								

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			SD: 15'1		PHE { 4 ^h : 55'4 12 ^h : 55'2 20 ^h : 55'1												
	PMG: 12 ^h 12 ^m 2			Edad: 0 ^d 1														
	PMG: 12 ^h 45 ^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	176	58.9	-19 08.7	175	13.6	105	-21 12.0	53	60 N	6 49	7 41	8 30	9 18	19	16 19	79		
1	191	58.7		189	43.1	105		06.7	54	58	44	33	19	9 04	22	33	76	
2	206	58.6		204	12.6	106	-21 01.3	56	56	40	26	8 08	8 51	25	45	73		
3	221	58.4		218	42.2	106	-20 55.7	56	54	36	19	7 59	40	27	16 56	70		
4	236	58.3		233	11.8	107		50.1	57	52	32	13	51	31	29	17 05	69	
5	251	58.1	-19 05.6	247	41.5	108	-20 44.4	59	50	6 28	7 08	7 43	8 22	31	17 13	67		
6	266	58.0	-19 05.0	262	11.3	109	-20 38.5	59	45	6 20	6 56	7 28	8 04	33	17 31	63		
7	281	57.8		276	41.2	109		32.6	60	40	13	46	15	7 48	37	45	61	
8	296	57.7		291	11.1	110		26.6	62	35	06	37	7 04	36	38	17 57	59	
9	311	57.5		305	41.1	110		20.4	62	30	6 00	29	6 54	24	41	18 08	56	
10	326	57.4		320	11.1	111		14.2	63	20	5 47	14	37	7 05	44	26	53	
11	341	57.2	-19 02.0	334	41.2	112	-20 07.9	64	10 N	5 35	6 00	6 23	6 48	47	18 42	50		
12	356	57.1	-19 01.3	349	11.4	112	-20 01.5	65	0	5 21	5 47	6 09	6 33	48	18 56	48		
13	11	57.0		3	41.6	113	-19 55.0	66	10 S	5 06	32	5 55	17	51	19 11	44		
14	26	56.8	-19 00.1	18	11.9	114		48.4	67	20	4 48	5 16	39	6 00	54	27	41	
15	41	56.7	-18 59.5	32	42.3	114		41.7	68	30	24	4 56	22	5 41	56	44	38	
16	56	56.5		47	12.7	115		34.9	68	35	4 09	43	12	29	59	19 54	37	
17	71	56.4	-18 58.3	61	43.2	116	-19 28.1	70	40	3 51	4 29	5 00	5 16	61	20 06	34		
18	86	56.2	-18 57.7	76	13.8	116	-19 21.1	70	45	3 28	4 11	4 46	5 01	63	20 20	31		
19	101	56.1		90	44.4	117		14.1	72	50	2 56	3 49	29	4 42	66	37	27	
20	116	55.9		105	15.1	118	-19 06.9	72	52	39	38	20	33	68	44	26		
21	131	55.8		119	45.9	118	-18 59.7	73	54	2 19	25	11	23	70	20 53	24		
22	146	55.6		134	16.7	119		52.4	74	56	1 51	3 11	4 01	4 11	72	21 03	22	
23	161	55.5		148	47.6	120		45.0	74	58	1 08	2 53	3 49	3 58	75	21 14	19	
24	176	55.4	-18 53.9	163	18.6		-18 37.6		60 S	** **	2 31	3 36	3 43	78	21 27	16		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 42 ^m 3		Mag: -4.1 PMG: 14 ^h 46 ^m			Mag: +1.4 PMG: 08 ^h 38 ^m			Mag: -1.9 PMG: 10 ^h 36 ^m			Mag: +0.6 PMG: 11 ^h 28 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	123	46.4	138	27.6	-7 35.3	230	26.9	-22 27.2	200	35.7	-22 49.9	187	39.0	-21 14.6				
1	138	48.9	153	27.3		245	27.5		215	37.6		202	41.2		14.5			
2	153	51.3	168	27.0		260	28.1		230	39.4		217	43.3		14.5			
3	168	53.8	183	26.7		275	28.8		245	41.3		232	45.5		14.4			
4	183	56.3	198	26.4		290	29.4		260	43.2		247	47.6		14.4			
5	198	58.7	213	26.1	-7 29.0	305	30.0	-22 28.3	275	45.0	-22 49.7	262	49.8	-21 14.3				
6	214	01.2	228	25.8	-7 27.7	320	30.7	-22 28.5	290	46.9	-22 49.6	277	52.0	-21 14.3				
7	229	03.7	243	25.6		335	31.3		305	48.7		292	54.1		14.2			
8	244	06.1	258	25.3		350	32.0		320	50.6		307	56.3		14.2			
9	259	08.6	273	25.0		5	32.6		335	52.5		322	58.4		14.2			
10	274	11.0	288	24.7		20	33.2		350	54.3		338	00.6		14.1			
11	289	13.5	303	24.4	-7 21.4	35	33.9	-22 29.6	5	56.2	-22 49.4	353	02.7	-21 14.1				
12	304	16.0	318	24.1	-7 20.2	50	34.5	-22 29.9	20	58.1	-22 49.3	8	04.9	-21 14.0				
13	319	18.4	333	23.9		65	35.1		35	59.9		23	07.0		14.0			
14	334	20.9	348	23.6		80	35.8		51	01.8		38	09.2		13.9			
15	349	23.4	3	23.3		95	36.4		66	03.7		53	11.3		13.9			
16	4	25.8	18	23.0		110	37.1		81	05.5		68	13.5		13.8			
17	19	28.3	33	22.7	-7 13.9	125	37.7	-22 31.0	96	07.4	-22 49.1	83	15.6	-21 13.8				
18	34	30.8	48	22.5	-7 12.6	140	38.3	-22 31.2	111	09.2	-22 49.1	98	17.8	-21 13.7				
19	49	33.2	63	22.2		155	39.0		126	11.1		113	20.0		13.7			
20	64	35.7	78	21.9		170	39.6		141	13.0		128	22.1		13.6			
21	79	38.1	93	21.6		185	40.2		156	14.8		143	24.3		13.6			
22	94	40.6	108	21.3		200	40.9		171	16.7		158	26.4		13.5			
23	109	43.1	123	21.1		215	41.5		186	18.6		173	28.6		13.5			
24	124	45.5	138	20.8	-7 05.1	230	42.1	-22 32.5	201	20.4	-22 48.8	188	30.7	-21 13.4				
Dif.	—		-3		+13	+6		-2	+19		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 0			PHE { 4 ^h : 54 ^m 9 12 ^h : 54 ^m 8 20 ^h : 54 ^m 7													
	PMG: 12 ^h 12 ^m 4			Edad: 1 ^d 1																
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.						Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	176	55.4	-18	53.9	163	18.6	121	-18	37.6	76	60 N	15 57	16 46	17 38	9 37	13	17 38 79			
1	191	55.2		53.3	177	49.7	121		30.0	76	58	16 09	16 54	17 43	26 16		49 76			
2	206	55.1		52.7	192	20.8	121		22.4	78	56	19	17 01	17 47	16 19		17 58 73			
3	221	54.9		52.1	206	51.9	123		14.6	77	54	28	08	51	07 22		18 06 71			
4	236	54.8		51.5	221	23.2	123	-18	06.9	79	52	36	14	55	9 00	23	14 68			
5	251	54.7	-18	50.8	235	54.5	123	-17	59.0	80	50	16 43	17 19	17 58	8 53	24	18 20 67			
6	266	54.5	-18	50.2	250	25.8	125	-17	51.0	80	45	16 58	17 30	18 06	8 37	29	18 34 63			
7	281	54.4		49.6	264	57.3	125		43.0	81	40	17 11	40	13	25 31		46 60			
8	296	54.2		49.0	279	28.8	126		34.9	82	35	22	49	20	14 34		18 56 57			
9	311	54.1		48.3	294	00.4	126		26.7	82	30	31	17 57	26	8 05	36	19 04 55			
10	326	54.0		47.7	308	32.0	127		18.5	84	20	17 48	18 11	38	7 49	39	19 51			
11	341	53.8	-18	47.1	323	03.7	128	-17	10.1	84	10 N	18 02	18 24	18 50	7 35	42	19 32 47			
12	356	53.7	-18	46.5	337	35.5	128	-17	01.7	84	0	18 16	18 38	19 03	7 21	46	19 44 44			
13	11	53.5		45.8	352	07.3	129	-16	53.3	86	10 S	30	18 52	18	7 08	49	19 55 42			
14	26	53.4		45.2	6	39.2	130		44.7	86	20	18 45	19 08	36	6 54	51	20 08 38			
15	41	53.3		44.6	21	11.2	130		36.1	87	30	19 02	28	19 59	37 56		22 35			
16	56	53.1		43.9	35	43.2	131		27.4	87	35	12	40	20 14	28 57		31 32			
17	71	53.0	-18	43.3	50	15.3	131	-16	18.7	88	40	19 23	19 54	20 32	6 17	60	20 40 30			
18	86	52.8	-18	42.7	64	47.4	132	-16	09.9	89	45	19 37	20 11	20 54	6 04	63	20 51 27			
19	101	52.7		42.0	79	19.6	133	-16	01.0	90	50	19 54	33	21 25	5 48	67	21 04 23			
20	116	52.6		41.4	93	51.9	134	-15	52.0	90	52	20 02	43	21 41	41 68		10 21			
21	131	52.4		40.8	108	24.3	134		43.0	90	54	10	20 56	22 00	33 70		17 19			
22	146	52.3		40.2	122	56.7	135		34.0	92	56	20	21 10	22 26	23 73		25 17			
23	161	52.2		39.5	137	29.2	135		24.8	92	58	32	27	23 03	13 76		33 14			
24	176	52.0	-18	38.9	152	01.7		-15	15.6		60 S	20 45	21 47	** **	5 01	79	21 43 11			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 38 ^m 4		Mag: -4.1 PMG: 14 ^h 47 ^m			Mag: +1.4 PMG: 08 ^h 37 ^m			Mag: -1.9 PMG: 10 ^h 33 ^m			Mag: +0.6 PMG: 11 ^h 24 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	124	45.5	138	20.8	-7	05.1	230	42.1	-22	32.5	201	20.4	-22	-48.8	188	30.7	-21	13.4
1	139	48.0	153	20.5		03.8	245	42.8		32.7	216	22.3		-48.7	203	32.9		13.4
2	154	50.5	168	20.2		02.5	260	43.4		32.9	231	24.2		-48.7	218	35.0		13.3
3	169	52.9	183	20.0		01.3	275	44.1		33.1	246	26.0		-48.6	233	37.2		13.3
4	184	55.4	198	19.7	-7	00.0	290	44.7		33.3	261	27.9		-48.6	248	39.3		13.2
5	199	57.9	213	19.4	-6	58.7	305	45.3	-22	33.6	276	29.8	-22	-48.5	263	41.5	-21	13.2
6	215	00.3	228	19.1	-6	57.5	320	46.0	-22	33.8	291	31.6	-22	-48.5	278	43.7	-21	13.1
7	230	02.8	243	18.9		56.2	335	46.6		34.0	306	33.5		-48.4	293	45.8		13.1
8	245	05.3	258	18.6		54.9	350	47.2		34.2	321	35.4		-48.4	308	48.0		13.0
9	260	07.7	273	18.3		53.7	5	47.9		34.4	336	37.2		-48.3	323	50.1		13.0
10	275	10.2	288	18.0		52.4	20	48.5		34.6	351	39.1		-48.3	338	52.3		12.9
11	290	12.6	303	17.8	-6	51.2	35	49.1	-22	34.8	6	41.0	-22	-48.3	353	54.4	-21	12.9
12	305	15.1	318	17.5	-6	49.9	50	49.8	-22	35.1	21	42.8	-22	-48.2	8	56.6	-21	12.8
13	320	17.6	333	17.2		48.6	65	50.4		35.3	36	44.7		-48.2	23	58.7		12.8
14	335	20.0	348	16.9		47.4	80	51.0		35.5	51	46.6		-48.1	39	00.9		12.7
15	350	22.5	3	16.7		46.1	95	51.7		35.7	66	48.4		-48.1	54	03.0		12.7
16	5	25.0	18	16.4		44.8	110	52.3		35.9	81	50.3		-48.0	69	05.2		12.6
17	20	27.4	33	16.1	-6	43.6	125	52.9	-22	36.1	96	52.2	-22	-48.0	84	07.4	-21	12.6
18	35	29.9	48	15.9	-6	42.3	140	53.6	-22	36.3	111	54.0	-22	-47.9	99	09.5	-21	12.6
19	50	32.4	63	15.6		41.0	155	54.2		36.5	126	55.9		-47.9	114	11.7		12.5
20	65	34.8	78	15.3		39.8	170	54.8		36.7	141	57.7		-47.8	129	13.8		12.5
21	80	37.3	93	15.1		38.5	185	55.5		37.0	156	59.6		-47.8	144	16.0		12.4
22	95	39.8	108	14.8		37.2	200	56.1		37.2	172	01.5		-47.7	159	18.1		12.4
23	110	42.2	123	14.5		35.9	215	56.7		37.4	187	03.3		-47.7	174	20.3		12.3
24	125	44.7	138	14.3	-6	34.7	230	57.4	-22	37.6	202	05.2	-22	-47.6	189	22.4	-21	12.3
Dif.	—		-3	+13			+6		-2		+19		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 12 ^m 6				SD: 14'9 Edad: 2 ^d 1 PHE 4^h: 54'6 12^h: 54'5 20^h: 54'4													
	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	52.0	-18	38.9	152	01.7	136	-15	15.6	92	60 N	6 46	7 37	8 26	9 50	10	18 57	78
1	191	51.9		38.2	166	34.3	136	-15	06.4	94	58	41	30	15	42	13	19 05	74
2	206	51.8		37.6	181	06.9	137	-14	57.0	93	56	37	23	8 05	35	15	11	72
3	221	51.6		37.0	195	39.6	138		47.7	95	54	33	16	7 56	29	17	17	70
4	236	51.5		36.3	210	12.4	139		38.2	95	52	30	11	48	23	19	22	68
5	251	51.4	-18	35.7	224	45.3	138	-14	28.7	95	50	6 26	7 06	7 41	9 17	21	19 27	66
6	266	51.2	-18	35.1	239	18.1	140	-14	19.2	96	45	6 19	6 54	7 26	9 06	25	19 37	62
7	281	51.1		34.4	253	51.1	140	-14	09.6	97	40	12	44	13	8 56	28	46	58
8	296	51.0		33.8	268	24.1	141	-13	59.9	97	35	6 05	36	7 03	48	31	53	56
9	311	50.8		33.1	282	57.2	141		50.2	98	30	5 59	28	6 53	41	33	19 59	53
10	326	50.7		32.5	297	30.3	142		40.4	98	20	47	14	37	28	37	20 10	49
11	341	50.6	-18	31.9	312	03.5	142	-13	30.6	99	10 N	5 35	6 01	6 23	8 17	40	20 19	46
12	356	50.4	-18	31.2	326	36.7	143	-13	20.7	99	0	5 22	5 47	6 09	8 07	43	20 28	43
13	11	50.3		30.6	341	10.0	144		10.8	100	10 S	5 07	33	5 55	7 57	46	37	39
14	26	50.2		29.9	355	43.4	144	-13	00.8	100	20	4 49	5 17	41	45	51	46	36
15	41	50.1		29.3	10	16.8	144	-12	50.8	101	30	26	4 58	24	33	54	20 57	31
16	56	49.9		28.7	24	50.2	145		40.7	101	35	4 12	46	14	25	57	21 03	29
17	71	49.8	-18	28.0	39	23.7	146	-12	30.6	101	40	3 54	4 32	5 02	7 17	59	21 10	26
18	86	49.7	-18	27.4	53	57.3	146	-12	20.5	103	45	3 31	4 15	4 49	7 07	62	21 18	23
19	101	49.5		26.7	68	30.9	147		10.2	102	50	3 01	3 53	32	6 55	66	27	20
20	116	49.4		26.1	83	04.6	147	-12	00.0	103	52	2 45	42	24	49	68	31	19
21	131	49.3		25.4	97	38.3	147	-11	49.7	104	54	25	30	15	43	70	36	16
22	146	49.2		24.8	112	12.0	149		39.3	103	56	2 00	3 16	4 05	36	73	42	14
23	161	49.0		24.1	126	45.9	148		29.0	105	58	1 23	2 59	3 54	6 29	75	21 47	12
24	176	48.9	-18	23.5	141	19.7		-11	18.5		60 S	** *	2 38	3 41	6 20	78	21 54	9

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 15 ^h 34 ^m 5		Mag: -4.1 PMG: 14 ^h 47 ^m			Mag: +1.4 PMG: 08 ^h 36 ^m			Mag: -1.9 PMG: 10 ^h 30 ^m			Mag: +0.6 PMG: 11 ^h 21 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'			
0	125	44.7	138	14.3	-6	34.7	230	57.4	-22	37.6	202	05.2	-22	47.6	189	22.4	-21	12.3
1	140	47.1	153	14.0		33.4	245	58.0		37.8	217	07.1		47.6	204	24.6		12.2
2	155	49.6	168	13.7		32.1	260	58.6		38.0	232	09.0		47.5	219	26.7		12.2
3	170	52.1	183	13.5		30.9	275	59.3		38.2	247	10.8		47.5	234	28.9		12.1
4	185	54.5	198	13.2		29.6	290	59.9		38.4	262	12.7		47.4	249	31.1		12.1
5	200	57.0	213	12.9	-6	28.3	306	00.5	-22	38.6	277	14.6	-22	47.4	264	33.2	-21	12.0
6	215	59.5	228	12.7	-6	27.1	321	01.2	-22	38.8	292	16.4	-22	47.3	279	35.4	-21	12.0
7	231	01.9	243	12.4		25.8	336	01.8		39.0	307	18.3		47.3	294	37.5		11.9
8	246	04.4	258	12.1		24.5	351	02.4		39.2	322	20.2		47.2	309	39.7		11.9
9	261	06.9	273	11.9		23.2	6	03.0		39.4	337	22.0		47.2	324	41.8		11.8
10	276	09.3	288	11.6		22.0	21	03.7		39.6	352	23.9		47.2	339	44.0		11.8
11	291	11.8	303	11.3	-6	20.7	36	04.3	-22	39.9	7	25.8	-22	47.1	354	46.1	-21	11.7
12	306	14.2	318	11.1	-6	19.4	51	04.9	-22	40.1	22	27.6	-22	47.1	9	48.3	-21	11.7
13	321	16.7	333	10.8		18.2	66	05.6		40.3	37	29.5		47.0	24	50.5		11.6
14	336	19.2	348	10.6		16.9	81	06.2		40.5	52	31.4		47.0	39	52.6		11.6
15	351	21.6	3	10.3		15.6	96	06.8		40.7	67	33.2		46.9	54	54.8		11.5
16	6	24.1	18	10.0		14.3	111	07.5		40.9	82	35.1		46.9	69	56.9		11.5
17	21	26.6	33	09.8	-6	13.1	126	08.1	-22	41.1	97	37.0	-22	46.8	84	59.1	-21	11.4
18	36	29.0	48	09.5	-6	11.8	141	08.7	-22	41.3	112	38.8	-22	46.8	100	01.2	-21	11.4
19	51	31.5	63	09.3		10.5	156	09.4		41.5	127	40.7		46.7	115	03.4		11.3
20	66	34.0	78	09.0		09.2	171	10.0		41.7	142	42.6		46.7	130	05.5		11.3
21	81	36.4	93	08.7		08.0	186	10.6		41.9	157	44.4		46.6	145	07.7		11.2
22	96	38.9	108	08.5		06.7	201	11.2		42.1	172	46.3		46.6	160	09.9		11.2
23	111	41.4	123	08.2		05.4	216	11.9		42.3	187	48.2		46.5	175	12.0		11.1
24	126	43.8	138	08.0	-6	04.1	231	12.5	-22	42.5	202	50.0	-22	46.5	190	14.2	-21	11.1
Dif.	—		-3	+13			+6	-2			+19	0			+22	0		

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2			SD: 14'8		PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2						Edad: 3'1		Rº: 42 ^m					
	PMG: 12 ^h 12 ^m 8			PMG: 15 ^h 00 ^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	48.9	-18 23.5	141	19.7	149	-11 18.5	104	60 N	16 02	16 51	17 43	10 00	8	20 15	76			
1	191	48.8	22.8	155	53.6	150	-11 08.1	105	58	13	16 59	47	9 55	11	19 73				
2	206	48.7	22.2	170	27.6	150	-10 57.6	106	56	23	17 05	51	50	13	23 71				
3	221	48.5	21.5	185	01.6	150	47.0	106	54	32	11	55	46	15	27 68				
4	236	48.4	20.9	199	35.6	151	36.4	106	52	40	17	17 58	42	17	30 66				
5	251	48.3	-18 20.2	214	09.7	152	-10 25.8	107	50	16 46	17 22	18 01	9 38	19	20 33	64			
6	266	48.2	-18 19.6	228	43.9	152	-10 15.1	107	45	17 01	17 33	18 09	9 31	22	20 39	61			
7	281	48.0	18.9	243	18.1	152	-10 04.4	107	40	14	42	15	24	26	44 58				
8	296	47.9	18.3	257	52.3	153	-9 53.7	108	35	24	51	21	19	28	49 54				
9	311	47.8	17.6	272	26.6	153	42.9	108	30	33	17 58	27	14	30	52 53				
10	326	47.7	17.0	287	00.9	153	32.1	108	20	17 49	18 12	39	9 05	35	20 59	48			
11	341	47.6	-18 16.3	301	35.2	154	-9 21.3	109	10 N	18 03	18 25	18 51	8 57	39	21 05	45			
12	356	47.4	-18 15.7	316	09.6	155	-9 10.4	109	0	18 16	18 38	19 03	8 50	42	21 11	41			
13	11	47.3	15.0	330	44.1	154	-8 59.5	109	10 S	30	18 52	18	43	45	16 38				
14	26	47.2	14.3	345	18.5	155	48.6	110	20	18 44	19 08	35	36	48	22 34				
15	41	47.1	13.7	359	53.0	156	37.6	110	30	19 01	27	19 58	27	53	28 30				
16	56	46.9	13.0	14	27.6	156	26.6	110	35	10	38	20 12	22	55	32 28				
17	71	46.8	-18 12.4	29	02.2	156	-8 15.6	110	40	19 22	19 52	20 29	8 16	58	21 36	25			
18	86	46.7	-18 11.7	43	36.8	156	-8 04.6	111	45	19 35	20 09	20 51	8 09	61	21 41	22			
19	101	46.6	11.1	58	11.4	157	-7 53.5	111	50	51	30	21 21	8 01	65	47 18				
20	116	46.5	10.4	72	46.1	157	42.4	112	52	19 59	40	36	7 57	67	50 16				
21	131	46.4	09.7	87	20.8	158	31.2	111	54	20 07	20 52	21 55	53	69	52 15				
22	146	46.2	09.1	101	55.6	158	20.1	112	56	17	21 05	22 18	49	71	56 12				
23	161	46.1	08.4	116	30.4	158	-7 08.9	112	58	27	21	22 51	44	73	21 59	10			
24	176	46.0	-18 07.8	131	05.2		-6 57.7		60 S	20 40	21 41	** **	7 38	76	22 03	8			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 15 ^h 30 ^m 5		Mag: -4.1 PMG: 14 ^h 48 ^m			Mag: +1.4 PMG: 08 ^h 35 ^m			Mag: -1.9 PMG: 10 ^h 27 ^m			Mag: +0.6 PMG: 11 ^h 17 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	'	°		
0	126	43.8	138	08.0	-6 04.1	231	12.5	-22 42.5	202	50.0	-22 -46.5	190	14.2	-21 11.1					
1	141	46.3	153	07.7	02.9	246	13.1	42.7	217	51.9	-46.4	205	16.3	11.0					
2	156	48.7	168	07.4	01.6	261	13.8	42.9	232	53.8	-46.4	220	18.5	11.0					
3	171	51.2	183	07.2	-6 00.3	276	14.4	43.1	247	55.7	-46.3	235	20.6	10.9					
4	186	53.7	198	06.9	-5 59.0	291	15.0	43.3	262	57.5	-46.3	250	22.8	10.9					
5	201	56.1	213	06.7	-5 57.8	306	15.7	-22 43.5	277	59.4	-22 -46.2	265	24.9	-21 10.8					
6	216	58.6	228	06.4	-5 56.5	321	16.3	-22 43.7	293	01.3	-22 -46.2	280	27.1	-21 10.8					
7	232	01.1	243	06.2	55.2	336	16.9	43.9	308	03.1	-46.1	295	29.3	10.7					
8	247	03.5	258	05.9	53.9	351	17.5	44.1	323	05.0	-46.1	310	31.4	10.7					
9	262	06.0	273	05.7	52.7	6	18.2	44.3	338	06.9	-46.0	325	33.6	10.7					
10	277	08.5	288	05.4	51.4	21	18.8	44.5	353	08.7	-46.0	340	35.7	10.6					
11	292	10.9	303	05.2	-5 50.1	36	19.4	-22 44.7	8	10.6	-22 -45.9	355	37.9	-21 10.6					
12	307	13.4	318	04.9	-5 48.8	51	20.1	-22 44.9	23	12.5	-22 -45.9	10	40.0	-21 10.5					
13	322	15.9	333	04.7	47.5	66	20.7	45.1	38	14.3	-45.8	25	42.2	10.5					
14	337	18.3	348	04.4	46.3	81	21.3	45.3	53	16.2	-45.8	40	44.4	10.4					
15	352	20.8	3	04.1	45.0	96	21.9	45.5	68	18.1	-45.7	55	46.5	10.4					
16	7	23.2	18	03.9	43.7	111	22.6	45.7	83	20.0	-45.7	70	48.7	10.3					
17	22	25.7	33	03.6	-5 42.4	126	23.2	-22 45.8	98	21.8	-22 -45.6	85	50.8	-21 10.3					
18	37	28.2	48	03.4	-5 41.1	141	23.8	-22 46.0	113	23.7	-22 -45.6	100	53.0	-21 10.2					
19	52	30.6	63	03.1	39.9	156	24.4	46.2	128	25.6	-45.5	115	55.1	10.2					
20	67	33.1	78	02.9	38.6	171	25.1	46.4	143	27.4	-45.5	130	57.3	10.1					
21	82	35.6	93	02.6	37.3	186	25.7	46.6	158	29.3	-45.4	145	59.4	10.1					
22	97	38.0	108	02.4	36.0	201	26.3	46.8	173	31.2	-45.4	161	01.6	10.0					
23	112	40.5	123	02.1	34.7	216	27.0	47.0	188	33.1	-45.3	176	03.8	10.0					
24	127	43.0	138	01.9	-5 33.5	231	27.6	-22 47.2	203	34.9	-22 -45.3	191	05.9	-21 09.9					
Dif.	—		-3		+13	+6		-2	+19		0	+22		0					

No usar para navegación

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'2			PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2														
	PMG: 12 ^h 13 ^m 2			SD: 14'7 Edad: 5 ^d 1 PMG: 16 ^h 22 ^m Rº: 41 ^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	43.3	-17	51.7	121	07.8	164	-2	23.1	116	60 N	16 07	16 56	17 47	10 16	7	22 46	76
1	191	43.2		51.0	135	43.2	163	-2	11.5	116	58	18	17 03	51	16	9	45	74
2	206	43.1		50.3	150	18.5	163	-1	59.9	116	56	27	09	54	15	12	44	71
3	221	43.0		49.7	164	53.8	163		48.3	116	54	36	15	17 58	15	14	43	69
4	236	42.9		49.0	179	29.1	164		36.7	117	52	43	20	18 01	15	16	43	66
5	251	42.7	-17	48.3	194	04.5	163	-1	25.0	116	50	16 50	17 25	18 04	10 15	17	22 42	65
6	266	42.6	-17	47.6	208	39.8	164	-1	13.4	117	45	17 04	17 36	18 11	10 14	22	22 40	61
7	281	42.5		47.0	223	15.2	163	-1	01.7	116	40	16	45	17	14	24	39	58
8	296	42.4		46.3	237	50.5	164	-0	50.1	117	35	26	17 53	23	14	27	38	55
9	311	42.3		45.6	252	25.9	163		38.4	116	30	35	18 00	29	14	29	37	52
10	326	42.2		44.9	267	01.2	164		26.8	117	20	17 50	13	40	13	34	35	48
11	341	42.1	-17	44.2	281	36.6	163	-0	15.1	116	10 N	18 04	18 26	18 51	10 13	37	22 34	44
12	356	42.0	-17	43.5	296	11.9	164	-0	03.5	117	0	18 17	18 38	19 04	10 13	40	22 32	41
13	11	41.9		42.9	310	47.3	163	+0	08.2	116	10 S	30	18 52	18	12	45	31	37
14	26	41.8		42.2	325	22.6	164		19.8	117	20	18 44	19 07	35	12	48	29	34
15	41	41.7		41.5	339	58.0	163		31.5	116	30	19 00	26	19 57	12	52	27	30
16	56	41.6		40.8	354	33.3	164		43.1	117	35	09	37	20 10	12	54	26	28
17	71	41.5	-17	40.1	9	08.7	163	+0	54.8	117	40	19 20	19 50	20 27	10 11	58	22 25	25
18	86	41.4	-17	39.4	23	44.0	163	+1	06.5	116	45	19 33	20 06	20 48	10 11	61	22 24	22
19	101	41.3		38.8	38	19.3	163		18.1	117	50	48	27	21 17	11	64	22	18
20	116	41.2		38.1	52	54.6	163		29.8	116	52	19 56	36	31	11	66	22	16
21	131	41.1		37.4	67	29.9	163		41.4	116	54	20 04	20 48	21 49	11	68	21	14
22	146	41.0		36.7	82	05.2	163	+1	53.0	117	56	13	21 01	22 11	10	71	20	12
23	161	40.9		36.0	96	40.5	163	+2	04.7	116	58	23	16	22 41	10	73	19	10
24	176	40.8	-17	35.3	111	15.8		+2	16.3		60 S	20 35	21 34	23 35	10 10	76	22 18	7
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 15 ^h 22 ^m 7		Mag: -4.1 PMG: 14 ^h 48 ^m			Mag: +1.4 PMG: 08 ^h 33 ^m			Mag: -1.9 PMG: 10 ^h 21 ^m				Mag: +0.6 PMG: 11 ^h 11 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	128	42.1	137	56.1	-5	02.7	231	42.6	-22	51.7	204	19.9	-22	-44.1	191	57.7	-21	08.7
1	143	44.6	152	55.8		01.4	246	43.2		51.9	219	21.7		-44.0	206	59.8		08.7
2	158	47.0	167	55.6	-5	00.1	261	43.8		52.1	234	23.6		-44.0	222	02.0		08.6
3	173	49.5	182	55.3	-4	58.8	276	44.5		52.3	249	25.5		-43.9	237	04.2		08.6
4	188	51.9	197	55.1		57.5	291	45.1		52.5	264	27.3		-43.9	252	06.3		08.6
5	203	54.4	212	54.9	-4	56.2	306	45.7	-22	52.6	279	29.2	-22	-43.8	267	08.5	-21	08.5
6	218	56.9	227	54.6	-4	54.9	321	46.3	-22	52.8	294	31.1	-22	-43.8	282	10.6	-21	08.5
7	233	59.3	242	54.4		53.6	336	47.0		53.0	309	33.0		-43.7	297	12.8		08.4
8	249	01.8	257	54.2		52.4	351	47.6		53.2	324	34.8		-43.7	312	15.0		08.4
9	264	04.3	272	53.9		51.1	6	48.2		53.4	339	36.7		-43.6	327	17.1		08.3
10	279	06.7	287	53.7		49.8	21	48.8		53.5	354	38.6		-43.6	342	19.3		08.3
11	294	09.2	302	53.5	-4	48.5	36	49.4	-22	53.7	9	40.5	-22	-43.5	357	21.4	-21	08.2
12	309	11.7	317	53.2	-4	47.2	51	50.1	-22	53.9	24	42.3	-22	-43.5	12	23.6	-21	08.2
13	324	14.1	332	53.0		45.9	66	50.7		54.1	39	44.2		-43.4	27	25.7		08.1
14	339	16.6	347	52.8		44.6	81	51.3		54.3	54	46.1		-43.4	42	27.9		08.1
15	354	19.1	2	52.5		43.3	96	51.9		54.4	69	48.0		-43.3	57	30.1		08.0
16	9	21.5	17	52.3		42.0	111	52.6		54.6	84	49.8		-43.3	72	32.2		08.0
17	24	24.0	32	52.1	-4	40.8	126	53.2	-22	54.8	99	51.7	-22	-43.2	87	34.4	-21	07.9
18	39	26.4	47	51.8	-4	39.5	141	53.8	-22	55.0	114	53.6	-22	-43.2	102	36.5	-21	07.9
19	54	28.9	62	51.6		38.2	156	54.4		55.2	129	55.5		-43.1	117	38.7		07.8
20	69	31.4	77	51.4		36.9	171	55.0		55.3	144	57.3		-43.1	132	40.8		07.8
21	84	33.8	92	51.1		35.6	186	55.7		55.5	159	59.2		-43.0	147	43.0		07.7
22	99	36.3	107	50.9		34.3	201	56.3		55.7	175	01.1		-43.0	162	45.2		07.7
23	114	38.8	122	50.7		33.0	216	56.9		55.9	190	03.0		-42.9	177	47.3		07.6
24	129	41.2	137	50.4	-4	31.7	231	57.5	-22	56.0	205	04.8	-22	-42.9	192	49.5	-21	07.6
Dif.	—		-2		+13		+6		-2		+19		+1		+22		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 16'2				SD: 14'8 Edad: 6 ^d 1					PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4										
	PMG: 12 ^h 13 ^m 4				PMG: 17 ^h 03 ^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	176	40.8	-17	35.3	111	15.8	163	+2	16.3	116	60 N	6 39	7 30	8 17	10 23	8	***	***	***	
1	191	40.7		34.6	125	51.1	162		27.9	116	58	35	23	8 07	25	11	23	59	74	
2	206	40.6		33.9	140	26.3	162		39.5	117	56	31	16	7 58	27	13	55	72		
3	221	40.5		33.2	155	01.5	163	+2	51.2	116	54	28	11	50	29	15	52	70		
4	236	40.4		32.6	169	36.8	162	+3	02.8	116	52	25	06	42	31	17	49	68		
5	251	40.3	-17	31.9	184	12.0	162	+3	14.4	115	50	6 22	7 01	7 36	10 32	19	23	47	66	
6	266	40.2	-17	31.2	198	47.2	161	+3	25.9	116	45	6 15	6 50	7 22	10 36	22	23	41	62	
7	281	40.1		30.5	213	22.3	162		37.5	116	40	09	41	10	38	26	37	59		
8	296	40.0		29.8	227	57.5	161	+3	49.1	115	35	6 03	33	7 00	41	28	33	56		
9	311	39.9		29.1	242	32.6	161	+4	00.6	116	30	5 57	26	6 51	43	31	29	54		
10	326	39.8		28.4	257	07.7	161		12.2	115	20	46	13	36	47	34	23	50		
11	341	39.7	-17	27.7	271	42.8	160	+4	23.7	115	10 N	5 35	6 01	6 23	10 50	38	23	18	46	
12	356	39.6	-17	27.0	286	17.8	161	+4	35.2	115	0	5 23	5 48	6 10	10 53	42	23	13	43	
13	11	39.5		26.3	300	52.9	160		46.7	115	10 S	5 09	35	5 57	10 57	45	08	39		
14	26	39.4		25.6	315	27.9	160	+4	58.2	115	20	4 52	20	43	11 00	49	23	03	36	
15	41	39.3		24.9	330	02.9	159	+5	09.7	115	30	30	5 01	27	04	53	22	57	32	
16	56	39.2		24.2	344	37.8	159		21.2	114	35	17	4 50	18	06	56	54	29		
17	71	39.1	-17	23.5	359	12.7	159	+5	32.6	114	40	4 00	4 37	5 07	11 09	58	22	50	26	
18	86	39.0	-17	22.8	13	47.6	159	+5	44.0	114	45	3 39	4 21	4 54	11 12	61	22	46	23	
19	101	39.0		22.1	28	22.5	158	+5	55.4	114	50	3 10	4 01	39	15	66	40	20		
20	116	38.9		21.4	42	57.3	159	+6	06.8	114	52	2 56	3 51	32	17	67	38	18		
21	131	38.8		20.7	57	32.2	157		18.2	114	54	38	40	24	19	69	35	16		
22	146	38.7		20.0	72	06.9	158		29.6	113	56	2 16	27	14	21	72	32	14		
23	161	38.6		19.3	86	41.7	157		40.9	113	58	1 47	3 11	4 04	11 23	74	22	29	11	
24	176	38.5	-17	18.6	101	16.4		+6	52.2		60 S	0 54	2 53	3 52	11 26	77	22	25	9	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 15 ^h 18 ^m 7		Mag: -4.1 PMG: 14 ^h 49 ^m				Mag: +1.4 PMG: 08 ^h 32 ^m				Mag: -1.9 PMG: 10 ^h 18 ^m				Mag: +0.6 PMG: 11 ^h 07 ^m					
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	129	41.2	137	50.4	-4	31.7	231	57.5	-22	56.0	205	04.8	-22	42.9	192	49.5	-21	07.6		
1	144	43.7	152	50.2		30.4	246	58.2		56.2	220	06.7		42.8	207	51.6		07.5		
2	159	46.2	167	50.0		29.1	261	58.8		56.4	235	08.6		42.8	222	53.8		07.5		
3	174	48.6	182	49.8		27.8	276	59.4		56.6	250	10.5		42.7	237	56.0		07.4		
4	189	51.1	197	49.5		26.6	292	00.0		56.7	265	12.3		42.7	252	58.1		07.4		
5	204	53.6	212	49.3	-4	25.3	307	00.6	-22	56.9	280	14.2	-22	42.6	268	00.3	-21	07.3		
6	219	56.0	227	49.1	-4	24.0	322	01.3	-22	57.1	295	16.1	-22	42.6	283	02.4	-21	07.3		
7	234	58.5	242	48.8		22.7	337	01.9		57.3	310	18.0		42.5	298	04.6		07.2		
8	250	00.9	257	48.6		21.4	352	02.5		57.4	325	19.8		42.5	313	06.8		07.2		
9	265	03.4	272	48.4		20.1	7	03.1		57.6	340	21.7		42.4	328	08.9		07.1		
10	280	05.9	287	48.2		18.8	22	03.7		57.8	355	23.6		42.4	343	11.1		07.1		
11	295	08.3	302	47.9	-4	17.5	37	04.4	-22	58.0	10	25.5	-22	42.3	358	13.2	-21	07.0		
12	310	10.8	317	47.7	-4	16.2	52	05.0	-22	58.1	25	27.3	-22	42.3	13	15.4	-21	07.0		
13	325	13.3	332	47.5		14.9	67	05.6		58.3	40	29.2		42.2	28	17.5		06.9		
14	340	15.7	347	47.3		13.6	82	06.2		58.5	55	31.1		42.2	43	19.7		06.9		
15	355	18.2	2	47.0		12.3	97	06.8		58.6	70	33.0		42.1	58	21.9		06.8		
16	10	20.7	17	46.8		11.0	112	07.5		58.8	85	34.9		42.1	73	24.0		06.8		
17	25	23.1	32	46.6	-4	09.8	127	08.1	-22	59.0	100	36.7	-22	42.0	88	26.2	-21	06.7		
18	40	25.6	47	46.4	-4	08.5	142	08.7	-22	59.2	115	38.6	-22	42.0	103	28.3	-21	06.7		
19	55	28.0	62	46.1		07.2	157	09.3		59.3	130	40.5		41.9	118	30.5		06.6		
20	70	30.5	77	45.9		05.9	172	09.9		59.5	145	42.4		41.9	133	32.7		06.6		
21	85	33.0	92	45.7		04.6	187	10.6		59.7	160	44.2		41.8	148	34.8		06.5		
22	100	35.4	107	45.5		03.3	202	11.2	-22	59.8	175	46.1		41.8	163	37.0		06.5		
23	115	37.9	122	45.2		02.0	217	11.8	-23	00.0	190	48.0		41.7	178	39.1		06.4		
24	130	40.4	137	45.0	-4	00.7	232	12.4	-23	00.2	205	49.9	-22	41.7	193	41.3	-21	06.4		
Dif.	—		-2		+13		+6		-2		+19		+1		+22		0			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2				SD: 14'8 Edad: 7 ^d 1												PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'8	
	PMG: 12 ^h 13 ^m 5				PMG: 17 ^h 45 ^m Rº: 45 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.												
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	176	38.5	-17	18.6	101	16.4	156	+6 52.2	113	60 N	16 13	17 00	17 51	10 31	10 02 78			
1	191	38.4		17.9	115	51.0	157	+7 03.5	113	58	23	07	55	36	13 *** **			
2	206	38.3		17.2	130	25.7	156		14.8	112	56	32	13	17 58	40 15 *** **			
3	221	38.2		16.5	145	00.3	155		26.0	113	54	40	19	18 01	44 18 *** **			
4	236	38.1		15.8	159	34.8	155		37.3	112	52	47	24	04	48 19 *** **			
5	251	38.0	-17	15.1	174	09.3	155	+7	48.5	111	50	16 53	17 28	18 07	10 51 21 *** **			
6	266	37.9	-17	14.4	188	43.8	155	+7	59.6	112	45	17 07	17 38	18 14	10 58 25 *** **			
7	281	37.9		13.7	203	18.3	154	+8	10.8	111	40	18	47	19	11 04 28 *** **			
8	296	37.8		13.0	217	52.7	153		21.9	111	35	28	17 55	25	09 31 *** **			
9	311	37.7		12.3	232	27.0	153		33.0	111	30	37	18 02	30	14 32 *** **			
10	326	37.6		11.6	247	01.3	153		44.1	110	20	17 52	15	41	21 37 *** **			
11	341	37.5	-17	10.9	261	35.6	152	+8	55.1	111	10 N	18 05	18 27	18 52	11 28 41 *** **			
12	356	37.4	-17	10.2	276	09.8	152	+9	06.2	109	0	18 17	18 39	19 04	11 35 44 23 56 45			
13	11	37.3		09.5	290	44.0	151		17.1	110	10 S	30	18 52	17	42 47 47 42			
14	26	37.2		08.8	305	18.1	150		28.1	109	20	43	19 06	34	49 50 39 38			
15	41	37.2		08.0	319	52.1	151		39.0	109	30	18 59	24	19 55	11 57 55 29 34			
16	56	37.1		07.3	334	26.2	149	+9	49.9	109	35	19 08	35	20 08	12 02 57 23 32			
17	71	37.0	-17	06.6	349	00.1	150	+10	00.8	108	40	19 18	19 48	20 25	12 07 60 23 16 30			
18	86	36.9	-17	05.9	3	34.1	148	+10	11.6	108	45	19 30	20 04	20 45	12 13 63 23 09 26			
19	101	36.8		05.2	18	07.9	148		22.4	108	50	45	23	21 13	21 67 23 00 22			
20	116	36.7		04.5	32	41.7	148		33.2	107	52	19 52	33	27	24 69 22 56 20			
21	131	36.7		03.8	47	15.5	147		43.9	107	54	20 00	44	21 43	28 71 51 19			
22	146	36.6		03.1	61	49.2	146	+10	54.6	107	56	09	20 56	22 04	33 73 46 17			
23	161	36.5		02.3	76	22.8	146	+11	05.3	106	58	19	21 10	22 31	37 76 40 14			
24	176	36.4	-17	01.6	90	56.4		+11	15.9		60 S	20 30	21 28	23 14	12 43 79 22 34 11			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 15 ^h 14 ^m 8		Mag: -4.1 PMG: 14 ^h 49 ^m			Mag: +1.4 PMG: 08 ^h 31 ^m			Mag: -1.9 PMG: 10 ^h 15 ^m			Mag: +0.6 PMG: 11 ^h 04 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	130	40.4	137	45.0	-4	00.7	232	12.4	-23	00.2	205	49.9	-22	-41.7	193	41.3	-21	06.4
1	145	42.8	152	44.8	-3	59.4	247	13.0		00.3	220	51.8		-41.6	208	43.5		06.3
2	160	45.3	167	44.6		58.1	262	13.6		00.5	235	53.6		-41.6	223	45.6		06.3
3	175	47.8	182	44.4		56.8	277	14.3		00.7	250	55.5		-41.5	238	47.8		06.2
4	190	50.2	197	44.1		55.5	292	14.9		00.8	265	57.4		-41.5	253	49.9		06.2
5	205	52.7	212	43.9	-3	54.2	307	15.5	-23	01.0	280	59.3	-22	-41.4	268	52.1	-21	06.1
6	220	55.2	227	43.7	-3	52.9	322	16.1	-23	01.2	296	01.1	-22	-41.4	283	54.3	-21	06.1
7	235	57.6	242	43.5		51.6	337	16.7		01.3	311	03.0		-41.3	298	56.4		06.0
8	251	00.1	257	43.3		50.3	352	17.4		01.5	326	04.9		-41.2	313	58.6		06.0
9	266	02.5	272	43.0		49.0	7	18.0		01.7	341	06.8		-41.2	329	00.7		06.0
10	281	05.0	287	42.8		47.7	22	18.6		01.8	356	08.7		-41.1	344	02.9		05.9
11	296	07.5	302	42.6	-3	46.4	37	19.2	-23	02.0	11	10.5	-22	-41.1	359	05.1	-21	05.9
12	311	09.9	317	42.4	-3	45.1	52	19.8	-23	02.2	26	12.4	-22	-41.0	14	07.2	-21	05.8
13	326	12.4	332	42.2		43.8	67	20.4		02.3	41	14.3		-41.0	29	09.4		05.8
14	341	14.9	347	42.0		42.5	82	21.1		02.5	56	16.2		-40.9	44	11.5		05.7
15	356	17.3	2	41.7		41.2	97	21.7		02.7	71	18.1		-40.9	59	13.7		05.7
16	11	19.8	17	41.5		39.9	112	22.3		02.8	86	19.9		-40.8	74	15.9		05.6
17	26	22.3	32	41.3	-3	38.6	127	22.9	-23	03.0	101	21.8	-22	-40.8	89	18.0	-21	05.6
18	41	24.7	47	41.1	-3	37.3	142	23.5	-23	03.1	116	23.7	-22	-40.7	104	20.2	-21	05.5
19	56	27.2	62	40.9		36.1	157	24.1		03.3	131	25.6		-40.7	119	22.3		05.5
20	71	29.7	77	40.7		34.8	172	24.8		03.5	146	27.4		-40.6	134	24.5		05.4
21	86	32.1	92	40.5		33.5	187	25.4		03.6	161	29.3		-40.6	149	26.7		05.4
22	101	34.6	107	40.2		32.2	202	26.0		03.8	176	31.2		-40.5	164	28.8		05.3
23	116	37.0	122	40.0		30.9	217	26.6		03.9	191	33.1		-40.5	179	31.0		05.3
24	131	39.5	137	39.8	-3	29.6	232	27.2	-23	04.1	206	35.0	-22	-40.4	194	33.1	-21	05.2
Dif.	—		-2		+13		+6		-2		+19		+1		+22			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'2			SD: 15'0 Edad: 8 ^d 1											PHE { 4 ^h : 55'0 12 ^h : 55'2 20 ^h : 55'4						
	PMG: 12 ^h 13 ^m 6			PMG: 18 ^h 30 ^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				
0	176	36.4	-17	01.6	90	56.4	146	+11	15.9	106	60 N	6 35	7 26	8 13	10 41	13	1 20	80			
1	191	36.3		00.9	105	30.0	144		26.5	105	58	31	19	8 03		49	16	13	77		
2	206	36.2	-17	00.2	120	03.4	144		37.0	105	56	28	13	7 54	10 55	19		07	75		
3	221	36.2	-16	59.5	134	36.8	144		47.5	105	54	25	08	46	11 02	21		1 02	72		
4	236	36.1		58.8	149	10.2	143	+11	58.0	104	52	22	7 03	39		07	23		0 57	70	
5	251	36.0	-16	58.1	163	43.5	142	+12	08.4	104	50	6 19	6 58	7 33	11 12	25		0 53	68		
6	266	35.9	-16	57.3	178	16.7	142	+12	18.8	103	45	6 13	6 48	7 19	11 23	28		0 43	64		
7	281	35.8		56.6	192	49.9	141		29.1	103	40	07	40	7 08		32	32		36	60	
8	296	35.8		55.9	207	23.0	140		39.4	102	35	6 02	32	6 59		40	34		29	58	
9	311	35.7		55.2	221	56.0	140		49.6	102	30	5 56	25	50		46	37		23	56	
10	326	35.6		54.5	236	29.0	139	+12	59.8	102	20	46	12	35	11 58	41		13	51		
11	341	35.5	-16	53.7	251	01.9	138	+13	10.0	101	10 N	5 35	6 00	6 22	12 09	43		0 04	48		
12	356	35.4	-16	53.0	265	34.7	138	+13	20.1	100	0	5 23	5 49	6 10	12 19	46	***	***	***		
13	11	35.4		52.3	280	07.5	137		30.1	101	10 S	5 10	36	5 58		29	49	***	***	***	
14	26	35.3		51.6	294	40.2	136		40.2	99	20	4 54	21	44		39	53	***	***	***	
15	41	35.2		50.9	309	12.8	136	+13	50.1	99	30	32	5 03	29		52	56	***	***	***	
16	56	35.1		50.1	323	45.4	134	+14	00.0	99	35	19	4 52	20	12 59	59		23	55	37	
17	71	35.1	-16	49.4	338	17.8	134	+14	09.9	98	40	4 03	4 40	5 10	13 07	61		23	46	34	
18	86	35.0	-16	48.7	352	50.2	134	+14	19.7	97	45	3 42	4 24	4 57	13 16	65		23	35	31	
19	101	34.9		48.0	7	22.6	132		29.4	97	50	15	4 05	42		28	69		22	28	
20	116	34.8		47.2	21	54.8	132		39.1	97	52	3 01	3 55	35		33	71		16	26	
21	131	34.8		46.5	36	27.0	131		48.8	95	54	2 45	44	28		39	73		10	24	
22	146	34.7		45.8	50	59.1	131	+14	58.3	96	56	2 24	32	19		46	75		23	03	21
23	161	34.6		45.1	65	31.2	129	+15	07.9	94	58	1 57	17	4 09	13 53	79		22	54	19	
24	176	34.5	-16	44.3	80	03.1		+15	17.3		60 S	1 15	3 00	3 58	14 02	82		22	45	15	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 15 ^h 10 ^m 9		Mag: -4.1 PMG: 14 ^h 50 ^m		Mag: +1.4 PMG: 08 ^h 30 ^m		Mag: -1.9 PMG: 10 ^h 12 ^m		Mag: +0.6 PMG: 11 ^h 00 ^m										
	hG ♈		hG ♀	dec.	hG ♂	dec.	hG ♃	dec.	hG ♄	dec.									
h	°	'	°	'	°	'	°	'	°	'									
0	131	39.5	137	39.8	-3	29.6	232	27.2	-23	04.1	206	35.0	-22	40.4	194	33.1	-21	05.2	
1	146	42.0	152	39.6		28.3	247	27.8		04.3	221	36.8		40.4	209	35.3		05.2	
2	161	44.4	167	39.4		27.0	262	28.5		04.4	236	38.7		40.3	224	37.5		05.1	
3	176	46.9	182	39.2		25.7	277	29.1		04.6	251	40.6		40.3	239	39.6		05.1	
4	191	49.4	197	39.0		24.4	292	29.7		04.7	266	42.5		40.2	254	41.8		05.0	
5	206	51.8	212	38.8	-3	23.1	307	30.3	-23	04.9	281	44.4	-22	40.2	269	43.9	-21	05.0	
6	221	54.3	227	38.5	-3	21.8	322	30.9	-23	05.1	296	46.2	-22	40.1	284	46.1	-21	04.9	
7	236	56.8	242	38.3		20.5	337	31.5		05.2	311	48.1		40.1	299	48.3		04.9	
8	251	59.2	257	38.1		19.2	352	32.2		05.4	326	50.0		40.0	314	50.4		04.8	
9	267	01.7	272	37.9		17.9	7	32.8		05.5	341	51.9		39.9	329	52.6		04.8	
10	282	04.1	287	37.7		16.6	22	33.4		05.7	356	53.8		39.9	344	54.8		04.7	
11	297	06.6	302	37.5	-3	15.3	37	34.0	-23	05.8	11	55.7	-22	39.8	359	56.9	-21	04.7	
12	312	09.1	317	37.3	-3	14.0	52	34.6	-23	06.0	26	57.5	-22	39.8	14	59.1	-21	04.6	
13	327	11.5	332	37.1		12.7	67	35.2		06.1	41	59.4		39.7	30	01.2		04.6	
14	342	14.0	347	36.9		11.4	82	35.8		06.3	57	01.3		39.7	45	03.4		04.5	
15	357	16.5	2	36.7		10.1	97	36.5		06.5	72	03.2		39.6	60	05.6		04.5	
16	12	18.9	17	36.4		08.8	112	37.1		06.6	87	05.1		39.6	75	07.7		04.4	
17	27	21.4	32	36.2	-3	07.5	127	37.7	-23	06.8	102	06.9	-22	39.5	90	09.9	-21	04.4	
18	42	23.9	47	36.0	-3	06.2	142	38.3	-23	06.9	117	08.8	-22	39.5	105	12.0	-21	04.3	
19	57	26.3	62	35.8		04.9	157	38.9		07.1	132	10.7		39.4	120	14.2		04.3	
20	72	28.8	77	35.6		03.6	172	39.5		07.2	147	12.6		39.4	135	16.4		04.2	
21	87	31.3	92	35.4		02.3	187	40.1		07.4	162	14.5		39.3	150	18.5		04.2	
22	102	33.7	107	35.2	-3	01.0	202	40.8		07.5	177	16.4		39.3	165	20.7		04.1	
23	117	36.2	122	35.0	-2	59.6	217	41.4		07.7	192	18.2		39.2	180	22.8		04.1	
24	132	38.6	137	34.8	-2	58.3	232	42.0	-23	07.8	207	20.1	-22	39.2	195	25.0	-21	04.0	
Dif.	—		-2	+13			+6	-2			+19		+1		+22				

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 : 55'6 12 ^h : 55'8 20 ^h : 56'1	
	PMG: 12 ^h 13 ^m 8				Edad: 9 ^d 1															
					PMG: 19 ^h 17 ^m								Rº: 51 ^m							
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.			Civil	Nút.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m		
0	176	34.5	-16	44.3	80	03.1	129	+15	17.3	94	60 N	16 18	17 05	17 55	10 54	19	2 40	82		
1	191	34.5		43.6	94	35.0	128		26.7	94	58	28	11	17 59	11 05	22	30	79		
2	206	34.4		42.9	109	06.8	127		36.1	93	56	36	17	18 02	14	25	22	75		
3	221	34.3		42.2	123	38.5	127		45.4	92	54	44	22	05	23	27	14	73		
4	236	34.2		41.4	138	10.2	125	+15	54.6	92	52	51	27	08	30	30	07	71		
5	251	34.2	-16	40.7	152	41.7	125	+16	03.8	91	50	16 57	17 31	18 10	11 37	31	2 01	69		
6	266	34.1	-16	40.0	167	13.2	124	+16	12.9	90	45	17 10	17 41	18 16	11 51	35	1 47	65		
7	281	34.0		39.2	181	44.6	123		21.9	90	40	21	49	22	12 04	37	36	62		
8	296	33.9		38.5	196	15.9	123		30.9	89	35	30	17 57	27	14	39	27	60		
9	311	33.9		37.8	210	47.2	121		39.8	88	30	38	18 03	32	23	41	19	57		
10	326	33.8		37.0	225	18.3	121		48.6	88	20	17 53	16	42	39	44	1 04	55		
11	341	33.7	-16	36.3	239	49.4	120	+16	57.4	87	10 N	18 05	18 27	18 52	12 52	48	0 52	51		
12	356	33.7	-16	35.6	254	20.4	119	+17	06.1	86	0	18 17	18 39	19 04	13 05	50	0 41	48		
13	11	33.6		34.9	268	51.3	118		14.7	85	10 S	29	18 51	17	18	53	29	45		
14	26	33.5		34.1	283	22.1	117		23.2	85	20	42	19 06	33	32	56	17	42		
15	41	33.5		33.4	297	52.8	116		31.7	84	30	18 57	23	19 53	48	59	0 03	39		
16	56	33.4		32.7	312	23.4	116		40.1	83	35	19 06	33	20 06	13 58	60	***	***		
17	71	33.3	-16	31.9	326	54.0	114	+17	48.4	83	40	19 16	19 46	20 22	14 08	63	***	***		
18	86	33.3	-16	31.2	341	24.4	114	+17	56.7	81	45	19 28	20 01	20 42	14 21	66	***	***		
19	101	33.2		30.4	355	54.8	113	+18	04.8	81	50	42	20	21 08	37	69	23 50	35		
20	116	33.1		29.7	10	25.1	112		12.9	80	52	49	29	22	44	71	42	33		
21	131	33.1		29.0	24	55.3	111		20.9	80	54	19 57	39	37	14 52	73	34	31		
22	146	33.0		28.2	39	25.4	110		28.9	78	56	20 05	20 51	21 57	15 01	76	24	29		
23	161	32.9		27.5	53	55.4	109		36.7	78	58	14	21 05	22 21	12	78	13	26		
24	176	32.9	-16	26.8	68	25.3		+18	44.5		60 S	20 25	21 21	22 58	15 24	82	23 00	23		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 15 ^h 06 ^m 9		Mag: -4.1 PMG: 14 ^h 50 ^m				Mag: +1.3 PMG: 08 ^h 29 ^m				Mag: -1.9 PMG: 10 ^h 09 ^m				Mag: +0.6 PMG: 10 ^h 57 ^m					
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	132	38.6	137	34.8	-2	58.3	232	42.0	-23	07.8	207	20.1	-22	-39.2	195	25.0	-21	04.0		
1	147	41.1	152	34.6		57.0	247	42.6		08.0	222	22.0		-39.1	210	27.2		04.0		
2	162	43.6	167	34.4		55.7	262	43.2		08.1	237	23.9		-39.1	225	29.3		03.9		
3	177	46.0	182	34.2		54.4	277	43.8		08.3	252	25.8		-39.0	240	31.5		03.9		
4	192	48.5	197	34.0		53.1	292	44.4		08.4	267	27.6		-38.9	255	33.7		03.8		
5	207	51.0	212	33.8	-2	51.8	307	45.0	-23	08.6	282	29.5	-22	-38.9	270	35.8	-21	03.8		
6	222	53.4	227	33.6	-2	50.5	322	45.7	-23	08.7	297	31.4	-22	-38.8	285	38.0	-21	03.7		
7	237	55.9	242	33.4		49.2	337	46.3		08.9	312	33.3		-38.8	300	40.1		03.7		
8	252	58.4	257	33.2		47.9	352	46.9		09.0	327	35.2		-38.7	315	42.3		03.6		
9	268	00.8	272	33.0		46.6	7	47.5		09.2	342	37.1		-38.7	330	44.5		03.6		
10	283	03.3	287	32.8		45.3	22	48.1		09.3	357	38.9		-38.6	345	46.6		03.5		
11	298	05.8	302	32.6	-2	44.0	37	48.7	-23	09.5	12	40.8	-22	-38.6	0	48.8	-21	03.5		
12	313	08.2	317	32.4	-2	42.7	52	49.3	-23	09.6	27	42.7	-22	-38.5	15	51.0	-21	03.4		
13	328	10.7	332	32.2		41.4	67	50.0		09.8	42	44.6		-38.5	30	53.1		03.4		
14	343	13.1	347	32.0		40.1	82	50.6		09.9	57	46.5		-38.4	45	55.3		03.3		
15	358	15.6	2	31.8		38.8	97	51.2		10.1	72	48.4		-38.4	60	57.4		03.3		
16	13	18.1	17	31.6		37.5	112	51.8		10.2	87	50.2		-38.3	75	59.6		03.2		
17	28	20.5	32	31.4	-2	36.2	127	52.4	-23	10.4	102	52.1	-22	-38.3	91	01.8	-21	03.2		
18	43	23.0	47	31.2	-2	34.9	142	53.0	-23	10.5	117	54.0	-22	-38.2	106	03.9	-21	03.1		
19	58	25.5	62	31.0		33.6	157	53.6		10.6	132	55.9		-38.2	121	06.1		03.1		
20	73	27.9	77	30.8		32.3	172	54.2		10.8	147	57.8		-38.1	136	08.3		03.0		
21	88	30.4	92	30.6		31.0	187	54.8		10.9	162	59.7		-38.0	151	10.4		03.0		
22	103	32.9	107	30.4		29.7	202	55.5		11.1	178	01.6		-38.0	166	12.6		03.0		
23	118	35.3	122	30.2		28.4	217	56.1		11.2	193	03.4		-37.9	181	14.7		02.9		
24	133	37.8	137	30.0	-2	27.1	232	56.7	-23	11.4	208	05.3	-22	-37.9	196	16.9	-21	02.9		
Dif.	—		-2		+13		+6		-1		+19		+1		+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: 15'3 Edad: 10 ^d 1 PHE { 4 ^h : 56'4 12 ^h : 56'6 20 ^h : 56'9 PMG: 20 ^h 08 ^m Rº: 55 ^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	32.9	-16	26.8	68	25.3	108	+18	44.5	77	60 N	6 31	7 21	8 08		11 13	30		4 02	80	
1	191	32.8		26.0	82	55.1	108		52.2	76	58	28	15	7 58		27 33		3 49	76		
2	206	32.7		25.3	97	24.9	106	+18	59.8	75	56	25	09	50		39 35		37 74			
3	221	32.7		24.5	111	54.5	106	+19	07.3	74	54	22	04	43		11 50	37		27 72		
4	236	32.6		23.8	126	24.1	104		14.7	73	52	19	7 00	36		12 00	38		18 70		
5	251	32.5	-16	23.1	140	53.5	104	+19	22.0	73	50	6 17	6 55	7 30		12 08	40		3 10	68	
6	266	32.5	-16	22.3	155	22.9	103	+19	29.3	71	45	6 11	6 46	7 17		12 26	43		2 52	66	
7	281	32.4		21.6	169	52.2	102		36.4	71	40	06	38	7 06		41 45		38 64			
8	296	32.4		20.8	184	21.4	101		43.5	70	35	6 00	30	6 57		12 53	47		27 61		
9	311	32.3		20.1	198	50.5	100		50.5	68	30	5 55	24	49		13 04	48		2 16	60	
10	326	32.2		19.3	213	19.5	99	+19	57.3	68	20	45	12	35		23 51		1 59	56		
11	341	32.2	-16	18.6	227	48.4	98	+20	04.1	67	10 N	5 35	6 00	6 22		13 40	52		1 43	54	
12	356	32.1	-16	17.9	242	17.2	97	+20	10.8	66	0	5 24	5 49	6 10		13 55	54		1 29	52	
13	11	32.0		17.1	256	45.9	97		17.4	64	10 S	5 11	36	5 58		14 11	56		1 14	50	
14	26	32.0		16.4	271	14.6	95		23.8	64	20	4 55	22	46		28 58		0 59	47		
15	41	31.9		15.6	285	43.1	94		30.2	63	30	34	5 05	31		47 60		42 44			
16	56	31.9		14.9	300	11.5	94		36.5	62	35	22	4 55	22		14 58	62		32 42		
17	71	31.8	-16	14.1	314	39.9	93	+20	42.7	60	40	4 06	4 42	5 12		15 11	64		0 20	41	
18	86	31.7	-16	13.4	329	08.2	91	+20	48.7	60	45	3 46	4 27	5 00		15 27	65		0 06	39	
19	101	31.7		12.6	343	36.3	91	+20	54.7	59	50	20	4 08	4 46		46 68		***	***	***	
20	116	31.6		11.9	358	04.4	90	+21	00.6	57	52	3 07	3 59	39		15 55	69		***	***	***
21	131	31.6		11.1	12	32.4	89		06.3	57	54	2 51	49	32		16 05	71		***	***	***
22	146	31.5		10.4	27	00.3	88		12.0	55	56	32	37	23		17 72		23 53	41		
23	161	31.5		09.6	41	28.1	87		17.5	54	58	2 07	23	14		16 30	75		23 39	39	
24	176	31.4	-16	08.9	55	55.8		+21	22.9		60 S	1 31	3 07	4 03		16 46	77		23 23	36	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 15 ^h 03 ^m 0		Mag: -4.1 PMG: 14 ^h 50 ^m			Mag: +1.3 PMG: 08 ^h 28 ^m			Mag: -1.9 PMG: 10 ^h 06 ^m			Mag: +0.6 PMG: 10 ^h 53 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	133	37.8	137	30.0	-2	27.1	232	56.7	-23	11.4	208	05.3	-22	37.9	196	16.9	-21	02.9	
1	148	40.2	152	29.8		25.8	247	57.3		11.5	223	07.2		37.8	211	19.1		02.8	
2	163	42.7	167	29.6		24.5	262	57.9		11.6	238	09.1		37.8	226	21.2		02.8	
3	178	45.2	182	29.4		23.2	277	58.5		11.8	253	11.0		37.7	241	23.4		02.7	
4	193	47.6	197	29.2		21.8	292	59.1		11.9	268	12.9		37.7	256	25.6		02.7	
5	208	50.1	212	29.0	-2	20.5	307	59.7	-23	12.1	283	14.8	-22	37.6	271	27.7	-21	02.6	
6	223	52.6	227	28.8	-2	19.2	323	00.3	-23	12.2	298	16.6	-22	37.6	286	29.9	-21	02.6	
7	238	55.0	242	28.6		17.9	338	01.0		12.4	313	18.5		37.5	301	32.0		02.5	
8	253	57.5	257	28.4		16.6	353	01.6		12.5	328	20.4		37.5	316	34.2		02.5	
9	269	00.0	272	28.2		15.3	8	02.2		12.6	343	22.3		37.4	331	36.4		02.4	
10	284	02.4	287	28.0		14.0	23	02.8		12.8	358	24.2		37.4	346	38.5		02.4	
11	299	04.9	302	27.8	-2	12.7	38	03.4	-23	12.9	13	26.1	-22	37.3	1	40.7	-21	02.3	
12	314	07.4	317	27.6	-2	11.4	53	04.0	-23	13.1	28	28.0	-22	37.2	16	42.9	-21	02.3	
13	329	09.8	332	27.4		10.1	68	04.6		13.2	43	29.8		37.2	31	45.0		02.2	
14	344	12.3	347	27.2		08.8	83	05.2		13.3	58	31.7		37.1	46	47.2		02.2	
15	359	14.7	2	27.0		07.5	98	05.8		13.5	73	33.6		37.1	61	49.4		02.1	
16	14	17.2	17	26.8		06.2	113	06.4		13.6	88	35.5		37.0	76	51.5		02.1	
17	29	19.7	32	26.6	-2	04.9	128	07.1	-23	13.7	103	37.4	-22	37.0	91	53.7	-21	02.0	
18	44	22.1	47	26.5	-2	03.6	143	07.7	-23	13.9	118	39.3	-22	36.9	106	55.8	-21	02.0	
19	59	24.6	62	26.3		02.3	158	08.3		14.0	133	41.2		36.9	121	58.0		01.9	
20	74	27.1	77	26.1	-2	01.0	173	08.9		14.2	148	43.0		36.8	137	00.2		01.9	
21	89	29.5	92	25.9	-1	59.6	188	09.5		14.3	163	44.9		36.8	152	02.3		01.8	
22	104	32.0	107	25.7		58.3	203	10.1		14.4	178	46.8		36.7	167	04.5		01.8	
23	119	34.5	122	25.5		57.0	218	10.7		14.6	193	48.7		36.7	182	06.7		01.7	
24	134	36.9	137	25.3	-1	55.7	233	11.3	-23	14.7	208	50.6	-22	36.6	197	08.8	-21	01.7	
Dif.	—		-2		+13		+6		-1		+19		+1		+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: 15'6 Edad: 11 ^d 1			PHE { 4 ^h : 57'2 12 ^h : 57'5 20 ^h : 57'8													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	Rº: 58 ^m	Civil			Náut.	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	176	31.4	-16	08.9	55	55.8	86	+21	22.9	53	60 N	16 23	17 10	18 00	11 43	45	5 22	72		
1	191	31.3		08.1	70	23.4	85		28.2	52	58	32	16	03	12 00	47	5 05	70		
2	206	31.3		07.4	84	50.9	85		33.4	51	56	41	21	06	14 49		4 51	68		
3	221	31.2		06.6	99	18.4	83		38.5	50	54	48	26	08	27 50		39	67		
4	236	31.2		05.9	113	45.7	83		43.5	48	52	16 54	30	11	38 51		28	66		
5	251	31.1	-16	05.1	128	13.0	81	+21	48.3	47	50	17 00	17 35	18 13	12 48	51	4 18	65		
6	266	31.1	-16	04.4	142	40.1	81	+21	53.0	47	45	17 13	17 44	18 19	13 09	52	3 58	63		
7	281	31.0		03.6	157	07.2	80	+21	57.7	44	40	23	52	24	26 53		42	62		
8	296	31.0		02.9	171	34.2	79	+22	02.1	44	35	32	17 59	29	40 54		28	61		
9	311	30.9		02.1	186	01.1	78		06.5	43	30	40	18 05	33	13 52	55	3 16	60		
10	326	30.9		01.4	200	27.9	78		10.8	41	20	17 54	17	43	14 14	56	2 55	59		
11	341	30.8	-16	00.6	214	54.7	76	+22	14.9	40	10 N	18 06	18 28	18 53	14 32	57	2 37	58		
12	356	30.7	-15	59.8	229	21.3	76	+22	18.9	39	0	18 17	18 39	19 04	14 49	58	2 21	56		
13	11	30.7		59.1	243	47.9	75		22.8	37	10 S	29	18 51	17	15 07	58	2 04	55		
14	26	30.6		58.3	258	14.4	74		26.5	36	20	42	19 05	32	26 59		1 46	54		
15	41	30.6		57.6	272	40.8	73		30.1	35	30	18 56	21	19 52	15 47	60	26	51		
16	56	30.5		56.8	287	07.1	72		33.6	34	35	19 04	32	20 04	16 00	60	14	50		
17	71	30.5	-15	56.1	301	33.3	72	+22	37.0	32	40	19 14	19 44	20 20	16 15	60	1 01	49		
18	86	30.4	-15	55.3	315	59.5	70	+22	40.2	31	45	19 25	19 58	20 39	16 32	61	0 45	47		
19	101	30.4		54.5	330	25.5	70		43.3	29	50	39	20 16	21 04	16 54	62	25	45		
20	116	30.3		53.8	344	51.5	70		46.2	29	52	46	25	17	17 04	63	15	44		
21	131	30.3		53.0	359	17.5	68		49.1	27	54	19 53	35	32	16 63		0 05	42		
22	146	30.2		52.3	13	43.3	68		51.8	25	56	20 01	46	21 50	29 64	***	***	***		
23	161	30.2		51.5	28	09.1	67		54.3	24	58	10	20 59	22 13	17 45	64	***	***		
24	176	30.1	-15	50.7	42	34.8		+22	56.7		60 S	20 20	21 15	22 44	18 03	66	23 59	56		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 14 ^h 59 ^m 1		Mag: -4.1 PMG: 14 ^h 50 ^m			Mag: +1.3 PMG: 08 ^h 27 ^m			Mag: -1.9 PMG: 10 ^h 03 ^m			Mag: +0.6 PMG: 10 ^h 50 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	134	36.9	137	25.3	-1	55.7	233	11.3	-23	14.7	208	50.6	-22	-36.6	197	08.8	-21	01.7		
1	149	39.4	152	25.1		54.4	248	11.9		14.8	223	52.5		-36.5	212	11.0		01.6		
2	164	41.9	167	24.9		53.1	263	12.5		15.0	238	54.4		-36.5	227	13.2		01.6		
3	179	44.3	182	24.7		51.8	278	13.1		15.1	253	56.3		-36.4	242	15.3		01.5		
4	194	46.8	197	24.5		50.5	293	13.8		15.2	268	58.1		-36.4	257	17.5		01.5		
5	209	49.2	212	24.4	-1	49.2	308	14.4	-23	15.4	284	00.0	-22	-36.3	272	19.6	-21	01.4		
6	224	51.7	227	24.2	-1	47.9	323	15.0	-23	15.5	299	01.9	-22	-36.3	287	21.8	-21	01.4		
7	239	54.2	242	24.0		46.6	338	15.6		15.6	314	03.8		-36.2	302	24.0		01.3		
8	254	56.6	257	23.8		45.3	353	16.2		15.8	329	05.7		-36.2	317	26.1		01.3		
9	269	59.1	272	23.6		44.0	8	16.8		15.9	344	07.6		-36.1	332	28.3		01.2		
10	285	01.6	287	23.4		42.7	23	17.4		16.0	359	09.5		-36.1	347	30.5		01.2		
11	300	04.0	302	23.2	-1	41.3	38	18.0	-23	16.2	14	11.4	-22	-36.0	2	32.6	-21	01.1		
12	315	06.5	317	23.0	-1	40.0	53	18.6	-23	16.3	29	13.2	-22	-35.9	17	34.8	-21	01.1		
13	330	09.0	332	22.9		38.7	68	19.2		16.4	44	15.1		-35.9	32	37.0		01.0		
14	345	11.4	347	22.7		37.4	83	19.8		16.5	59	17.0		-35.8	47	39.1		01.0		
15	0	13.9	2	22.5		36.1	98	20.4		16.7	74	18.9		-35.8	62	41.3		00.9		
16	15	16.4	17	22.3		34.8	113	21.1		16.8	89	20.8		-35.7	77	43.5		00.9		
17	30	18.8	32	22.1	-1	33.5	128	21.7	-23	16.9	104	22.7	-22	-35.7	92	45.6	-21	00.8		
18	45	21.3	47	21.9	-1	32.2	143	22.3	-23	17.1	119	24.6	-22	-35.6	107	47.8	-21	00.8		
19	60	23.7	62	21.7		30.9	158	22.9		17.2	134	26.5		-35.6	122	50.0		00.7		
20	75	26.2	77	21.6		29.6	173	23.5		17.3	149	28.4		-35.5	137	52.1		00.7		
21	90	28.7	92	21.4		28.3	188	24.1		17.4	164	30.3		-35.5	152	54.3		00.6		
22	105	31.1	107	21.2		27.0	203	24.7		17.6	179	32.1		-35.4	167	56.4		00.6		
23	120	33.6	122	21.0		25.7	218	25.3		17.7	194	34.0		-35.4	182	58.6		00.5		
24	135	36.1	137	20.8	-1	24.3	233	25.9	-23	17.8	209	35.9	-22	-35.3	198	00.8	-21	00.5		
Dif.	—		-2		+13		+6		-1		+19		+1		+22					

UT	SOL				☉ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 0				SD: 15 ^h 8 Edad: 12 ^d 1 PMG: 22 ^h 01 ^m PHE { 4^h: 58^m2 12^h: 58^m5 20^h: 58^m8 R ^o : 60 ^m													
	hG ☉		Dec		hG ☾	Dif.	Dec	Dif.				Náut.	Civil			Hora	R ^o	Hora
h	°	'	°	'	°	'	°	'			h m	h m	h m	h m m		h m m		
0	176	30.1	-15	50.7	42	34.8	66	+22 56.7	23	60 N	6 27	7 17	8 03	12 28 67		6 34 57		
1	191	30.1		50.0	57	00.4	65	+22 59.0	21	58	24	11	7 54	12 47 66		6 15 57		
2	206	30.1		49.2	71	25.9	65	+23 01.1	20	56	21	06	46	13 03 65		5 59 58		
3	221	30.0		48.5	85	51.4	64	03.1	19	54	19	7 01	39	17 65		46 57		
4	236	30.0		47.7	100	16.8	63	05.0	17	52	16	6 57	33	29 64		34 58		
5	251	29.9	-15	46.9	114	42.1	63	+23 06.7	16	50	6 14	6 53	7 27	13 39 64		5 23 58		
6	266	29.9	-15	46.2	129	07.4	62	+23 08.3	14	45	6 09	6 44	7 14	14 01 64		5 01 59		
7	281	29.8		45.4	143	32.6	62	09.7	13	40	6 04	36	7 04	19 63		4 44 58		
8	296	29.8		44.6	157	57.8	60	11.0	11	35	5 59	29	6 55	34 62		29 58		
9	311	29.7		43.9	172	22.8	60	12.1	10	30	54	23	47	14 47 62		4 16 58		
10	326	29.7		43.1	186	47.8	60	13.1	9	20	45	11	34	15 10 61		3 54 58		
11	341	29.6	-15	42.3	201	12.8	59	+23 14.0	7	10 N	5 35	6 00	6 22	15 29 60		3 35 58		
12	356	29.6	-15	41.6	215	37.7	58	+23 14.7	5	0	5 24	5 49	6 11	15 47 60		3 17 58		
13	11	29.6		40.8	230	02.5	58	15.2	4	10 S	5 12	37	5 59	16 05 59		2 59 58		
14	26	29.5		40.0	244	27.3	57	15.6	3	20	4 56	24	47	25 58		40 58		
15	41	29.5		39.3	258	52.0	57	15.9	1	30	36	5 07	32	16 47 57		17 59		
16	56	29.4		38.5	273	16.7	56	16.0	1	35	24	4 57	24	17 00 57		2 04 59		
17	71	29.4	-15	37.7	287	41.3	56	+23 15.9	2	40	4 09	4 45	5 14	17 15 56		1 50 58		
18	86	29.3	-15	37.0	302	05.9	55	+23 15.7	4	45	3 50	4 31	5 03	17 33 55		1 32 58		
19	101	29.3		36.2	316	30.4	55	15.3	5	50	25	12	4 50	17 56 54		1 10 57		
20	116	29.3		35.4	330	54.9	55	14.8	6	52	3 12	4 04	43	18 07 53		0 59 58		
21	131	29.2		34.6	345	19.4	53	14.2	8	54	2 57	3 54	36	19 52		47 57		
22	146	29.2		33.9	359	43.7	54	13.4	10	56	39	43	28	33 51		34 57		
23	161	29.1		33.1	14	08.1	53	12.4	11	58	2 16	29	19	18 49 50		0 18 56		
24	176	29.1	-15	32.3	28	32.4		+23 11.3		60 S	1 45	3 14	4 09	19 09 47	***	***	**	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 14 ^h 55 ^m 1		Mag: -4.1 PMG: 14 ^h 51 ^m			Mag: +1.3 PMG: 08 ^h 26 ^m			Mag: -1.9 PMG: 10 ^h 00 ^m			Mag: +0.6 PMG: 10 ^h 46 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	135	36.1	137	20.8	-1 24.3	233	25.9	-23 17.8	209	35.9	-22 35.3	198	00.8	-21 00.5
1	150	38.5	152	20.6	23.0	248	26.5	17.9	224	37.8	35.2	213	02.9	00.4
2	165	41.0	167	20.5	21.7	263	27.1	18.1	239	39.7	35.2	228	05.1	00.4
3	180	43.5	182	20.3	20.4	278	27.7	18.2	254	41.6	35.1	243	07.3	00.3
4	195	45.9	197	20.1	19.1	293	28.3	18.3	269	43.5	35.1	258	09.4	00.3
5	210	48.4	212	19.9	-1 17.8	308	28.9	-23 18.4	284	45.4	-22 35.0	273	11.6	-21 00.2
6	225	50.9	227	19.7	-1 16.5	323	29.5	-23 18.6	299	47.3	-22 35.0	288	13.8	-21 00.2
7	240	53.3	242	19.5	15.2	338	30.2	18.7	314	49.2	34.9	303	15.9	00.1
8	255	55.8	257	19.4	13.9	353	30.8	18.8	329	51.0	34.9	318	18.1	00.1
9	270	58.2	272	19.2	12.6	8 31.4	18.9	18.9	344	52.9	34.8	333	20.3	00.0
10	286	00.7	287	19.0	11.3	23 32.0	19.1	19.1	359	54.8	34.8	348	22.4	-21 00.0
11	301	03.2	302	18.8	-1 10.0	38 32.6	-23 19.2	19.2	14 56.7	-22 34.7	34.7	3 24.6	-20 59.9	
12	316	05.6	317	18.6	-1 08.6	53 33.2	-23 19.3	19.3	29 58.6	-22 34.6	34.6	18 26.8	-20 59.9	
13	331	08.1	332	18.5	07.3	68 33.8	19.4	19.4	45 00.5	34.6	34.6	33 28.9	59.8	
14	346	10.6	347	18.3	06.0	83 34.4	19.6	19.6	60 02.4	34.5	34.5	48 31.1	59.8	
15	1 13.0		2 18.1		04.7	98 35.0	19.7	19.7	75 04.3	34.5	34.5	63 33.3	59.8	
16	16 15.5		17 17.9		03.4	113 35.6	19.8	19.8	90 06.2	34.4	34.4	78 35.4	59.7	
17	31 18.0		32 17.7	-1 02.1		128 36.2	-23 19.9	19.9	105 08.1	-22 34.4	34.4	93 37.6	-20 59.7	
18	46 20.4		47 17.6	-1 00.8		143 36.8	-23 20.0	20.0	120 10.0	-22 34.3	34.3	108 39.8	-20 59.6	
19	61 22.9		62 17.4	-0 59.5		158 37.4	20.2	20.2	135 11.9	34.3	34.3	123 41.9	59.6	
20	76 25.3		77 17.2	58.2		173 38.0	20.3	20.3	150 13.7	34.2	34.2	138 44.1	59.5	
21	91 27.8		92 17.0	56.9		188 38.6	20.4	20.4	165 15.6	34.1	34.1	153 46.3	59.5	
22	106 30.3		107 16.9	55.6		203 39.2	20.5	20.5	180 17.5	34.1	34.1	168 48.4	59.4	
23	121 32.7		122 16.7	54.2		218 39.8	20.6	20.6	195 19.4	34.0	34.0	183 50.6	59.4	
24	136 35.2		137 16.5	-0 52.9		233 40.4	-23 20.7	20.7	210 21.3	-22 34.0	34.0	198 52.8	-20 59.3	
Dif.	—		-2	+13		+6	-1		+19	+1		+22		

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16°2			SD: 16°0		PHE { 4^h: 59°0 12^h: 59°3 20^h: 59°6						Edad: 13 ^d 1		R ^o : 60 ^m			R ^o		R ^o	
	PMG: 12 ^h 14 ^m 1			PMG: 23 ^h 01 ^m																
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.				Civil	Náut.	Hora	R ^o	Hora	R ^o		
h	°	'	°	°	'	°	'	°	'	°	h m	h m	h m	h m	h m m	h m m	h m m	m		
0	176	29.1	-15 32.3	28	32.4	53	+23 11.3	13		60 N	16 29	17 14	18 04	13 35	86	7 31	39			
1	191	29.1	31.5	42	56.7	52	10.0	15		58	37	20	07	13 53	83	7 12	42			
2	206	29.0	30.8	57	20.9	52	08.5	16		56	45	25	09	14 08	81	6 57	44			
3	221	29.0	30.0	71	45.1	52	06.9	17		54	52	30	12	22 78		43	47			
4	236	28.9	29.2	86	09.3	51	05.2	19		52	16 58	34	14	33 77		32	47			
5	251	28.9	-15 28.5	100	33.4	51	+23 03.3	21		50	17 04	17 38	18 16	14 43	75	6 21	49			
6	266	28.9	-15 27.7	114	57.5	51	+23 01.2	22		45	17 16	17 46	18 21	15 05	72	6 00	51			
7	281	28.8	26.9	129	21.6	50	+22 59.0	24		40	26	17 54	26	22 70		5 42	53			
8	296	28.8	26.1	143	45.6	51	56.6	25		35	34	18 00	31	36 69		27	54			
9	311	28.8	25.3	158	09.7	50	54.1	27		30	42	07	35	15 49	67	5 14	56			
10	326	28.7	24.6	172	33.7	50	51.4	28		20	17 55	18	44	16 11	64	4 52	58			
11	341	28.7	-15 23.8	186	57.7	49	+22 48.6	31		10 N	18 07	18 28	18 53	16 29	62	4 33	59			
12	356	28.6	-15 23.0	201	21.6	50	+22 45.5	31		0	18 18	18 39	19 04	16 47	60	4 15	60			
13	11	28.6	22.2	215	45.6	49	42.4	33		10 S	29	18 51	16	17 04	58	3 57	62			
14	26	28.6	21.5	230	09.5	49	39.1	35		20	41	19 04	31	23 56		38	63			
15	41	28.5	20.7	244	33.4	49	35.6	37		30	18 54	20	19 50	44 53		16	64			
16	56	28.5	19.9	258	57.3	49	31.9	38		35	19 03	30	20 02	17 57	51	3 03	65			
17	71	28.5	-15 19.1	273	21.2	49	+22 28.1	39		40	19 12	19 41	20 17	18 11	50	2 48	66			
18	86	28.4	-15 18.3	287	45.1	49	+22 24.2	41		45	19 23	19 55	20 35	18 28	48	2 30	68			
19	101	28.4	17.6	302	09.0	49	20.1	43		50	36	20 13	20 59	18 50	43	2 07	70			
20	116	28.4	16.8	316	32.9	48	15.8	44		52	42	21	21 12	19 00	42	1 57	70			
21	131	28.3	16.0	330	56.7	49	11.4	46		54	49	30	26	11 40		44	72			
22	146	28.3	15.2	345	20.6	49	06.8	48		56	19 56	41	21 43	24 38		31	73			
23	161	28.3	14.4	359	44.5	49	+22 02.0	48		58	20 05	20 54	22 04	39 35		1 14	75			
24	176	28.3	-15 13.6	14	08.4		+21 57.2			60 S	20 15	21 08	22 32	19 56	32	0 55	77			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 14 ^h 51 ^m 2		Mag: -4.1 PMG: 14 ^h 51 ^m			Mag: +1.3 PMG: 08 ^h 25 ^m			Mag: -1.9 PMG: 09 ^h 57 ^m			Mag: +0.6 PMG: 10 ^h 43 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	136	35.2	137	16.5	-0 52.9	233	40.4	-23 20.7	210	21.3	-22 -34.0	198	52.8	-20 59.3						
1	151	37.7	152	16.3	51.6	248	41.0	20.9	225	23.2	-33.9	213	54.9	59.3						
2	166	40.1	167	16.2	50.3	263	41.6	21.0	240	25.1	-33.9	228	57.1	59.2						
3	181	42.6	182	16.0	49.0	278	42.3	21.1	255	27.0	-33.8	243	59.3	59.2						
4	196	45.1	197	15.8	47.7	293	42.9	21.2	270	28.9	-33.8	259	01.4	59.1						
5	211	47.5	212	15.6	-0 46.4	308	43.5	-23 21.3	285	30.8	-22 -33.7	274	03.6	-20 59.1						
6	226	50.0	227	15.5	-0 45.1	323	44.1	-23 21.4	300	32.7	-22 -33.7	289	05.8	-20 59.0						
7	241	52.5	242	15.3	43.8	338	44.7	21.6	315	34.6	-33.6	304	07.9	59.0						
8	256	54.9	257	15.1	42.5	353	45.3	21.7	330	36.5	-33.5	319	10.1	58.9						
9	271	57.4	272	14.9	41.1	8	45.9	21.8	345	38.4	-33.5	334	12.3	58.9						
10	286	59.8	287	14.8	39.8	23	46.5	21.9	0	40.2	-33.4	349	14.4	58.8						
11	302	02.3	302	14.6	-0 38.5	38	47.1	-23 22.0	15	42.1	-22 -33.4	4	16.6	-20 58.8						
12	317	04.8	317	14.4	-0 37.2	53	47.7	-23 22.1	30	44.0	-22 -33.3	19	18.8	-20 58.7						
13	332	07.2	332	14.2	35.9	68	48.3	22.2	45	45.9	-33.3	34	20.9	58.7						
14	347	09.7	347	14.1	34.6	83	48.9	22.4	60	47.8	-33.2	49	23.1	58.6						
15	2	12.2	2	13.9	33.3	98	49.5	22.5	75	49.7	-33.2	64	25.3	58.6						
16	17	14.6	17	13.7	32.0	113	50.1	22.6	90	51.6	-33.1	79	27.4	58.5						
17	32	17.1	32	13.5	-0 30.7	128	50.7	-23 22.7	105	53.5	-22 -33.0	94	29.6	-20 58.5						
18	47	19.6	47	13.4	-0 29.4	143	51.3	-23 22.8	120	55.4	-22 -33.0	109	31.8	-20 58.4						
19	62	22.0	62	13.2	28.0	158	51.9	22.9	135	57.3	-32.9	124	33.9	58.4						
20	77	24.5	77	13.0	26.7	173	52.5	23.0	150	59.2	-32.9	139	36.1	58.3						
21	92	27.0	92	12.9	25.4	188	53.1	23.1	166	01.1	-32.8	154	38.3	58.3						
22	107	29.4	107	12.7	24.1	203	53.7	23.3	181	03.0	-32.8	169	40.4	58.2						
23	122	31.9	122	12.5	22.8	218	54.3	23.4	196	04.9	-32.7	184	42.6	58.2						
24	137	34.3	137	12.3	-0 21.5	233	54.9	-23 23.5	211	06.8	-22 -32.7	199	44.8	-20 58.1						
Dif.	—		-2 +13			+6 -1			+19 +1			+22 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: 14 ^d 1		PHE { 4 ^h : 59'8 12 ^h : 60'1 20 ^h : 60'3		R°: **												
	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	28.3	-15	13.6	14	08.4	48	+21	57.2	51	60 N	6 23	7 12	7 58	15 01	96	8 10	26			
1	191	28.2		12.9	28	32.2	49		52.1	52	58	20	07	49	16	92	7 54	30			
2	206	28.2		12.1	42	56.1	49		46.9	54	56	18	7 02	42	29	89	41	33			
3	221	28.2		11.3	57	20.0	49		41.5	55	54	16	6 57	35	40	86	30	35			
4	236	28.1		10.5	71	43.9	49		36.0	57	52	13	53	29	50	84	19	38			
5	251	28.1	-15	09.7	86	07.8	50	+21	30.3	58	50	6 11	6 50	7 24	15 58	82	7 10	40			
6	266	28.1	-15	08.9	100	31.8	49	+21	24.5	60	45	6 06	6 41	7 12	16 17	78	6 51	43			
7	281	28.0		08.1	114	55.7	49		18.5	61	40	6 02	34	7 02	32	75	35	46			
8	296	28.0		07.4	129	19.6	50		12.4	63	35	5 57	27	6 54	45	72	21	49			
9	311	28.0		06.6	143	43.6	50	+21	06.1	64	30	53	21	46	16 56	69	6 10	50			
10	326	28.0		05.8	158	07.6	50	+20	59.7	66	20	44	10	33	17 15	65	5 50	54			
11	341	27.9	-15	05.0	172	31.6	50	+20	53.1	67	10 N	5 35	6 00	6 22	17 31	62	5 32	57			
12	356	27.9	-15	04.2	186	55.6	51	+20	46.4	69	0	5 24	5 49	6 11	17 47	59	5 15	60			
13	11	27.9		03.4	201	19.7	51		39.5	70	10 S	5 12	38	6 00	18 02	56	4 59	62			
14	26	27.9		02.6	215	43.8	51		32.5	72	20	4 58	25	5 48	19	52	41	65			
15	41	27.8		01.8	230	07.9	51		25.3	73	30	38	5 09	34	37	49	20	69			
16	56	27.8		01.0	244	32.0	52		18.0	75	35	26	4 59	26	18 48	46	4 08	71			
17	71	27.8	-15	00.3	258	56.2	51	+20	10.5	76	40	4 12	4 48	5 17	19 01	43	3 54	73			
18	86	27.7	-14	59.5	273	20.3	53	+20	02.9	78	45	3 53	4 34	5 06	19 16	39	3 38	75			
19	101	27.7		58.7	287	44.6	52	+19	55.1	79	50	29	16	4 53	33	36	17	79			
20	116	27.7		57.9	302	08.8	53		47.2	80	52	17	4 08	47	42	33	3 07	81			
21	131	27.7		57.1	316	33.1	53		39.2	82	54	3 03	3 59	40	19 51	31	2 56	83			
22	146	27.7		56.3	330	57.4	54		31.0	83	56	2 46	48	33	20 02	28	44	85			
23	161	27.6		55.5	345	21.8	54		22.7	85	58	2 25	35	24	20 14	25	2 29	89			
24	176	27.6	-14	54.7	359	46.2		+19	14.2		60 S	1 57	3 21	4 14	20 28	21	2 12	93			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG 14 ^h 47 ^m 3		Mag: -4.1 PMG: 14 ^h 51 ^m				Mag: +1.3 PMG: 08 ^h 24 ^m				Mag: -1.9 PMG: 09 ^h 54 ^m				Mag: +0.6 PMG: 10 ^h 39 ^m						
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	137	34.3	137	12.3	-0	21.5	233	54.9	-23	23.5	211	06.8	-22	32.7	199	44.8	-20	58.1			
1	152	36.8	152	12.2		20.2	248	55.5		23.6	226	08.7		32.6	214	46.9		58.1			
2	167	39.3	167	12.0		18.9	263	56.1		23.7	241	10.6		32.5	229	49.1		58.0			
3	182	41.7	182	11.8		17.6	278	56.7		23.8	256	12.5		32.5	244	51.3		58.0			
4	197	44.2	197	11.7		16.3	293	57.3		23.9	271	14.4		32.4	259	53.4		57.9			
5	212	46.7	212	11.5	-0	14.9	308	57.9	-23	24.0	286	16.2	-22	32.4	274	55.6	-20	57.9			
6	227	49.1	227	11.3	-0	13.6	323	58.5	-23	24.1	301	18.1	-22	32.3	289	57.8	-20	57.8			
7	242	51.6	242	11.2		12.3	338	59.1		24.2	316	20.0		32.3	304	59.9		57.8			
8	257	54.1	257	11.0		11.0	353	59.7		24.3	331	21.9		32.2	320	02.1		57.7			
9	272	56.5	272	10.8		09.7	9	00.3		24.4	346	23.8		32.2	335	04.3		57.7			
10	287	59.0	287	10.7		08.4	24	00.9		24.5	1	25.7		32.1	350	06.5		57.6			
11	303	01.5	302	10.5	-0	07.1	39	01.5	-23	24.7	16	27.6	-22	32.0	5	08.6	-20	57.6			
12	318	03.9	317	10.3	-0	05.8	54	02.1	-23	24.8	31	29.5	-22	32.0	20	10.8	-20	57.5			
13	333	06.4	332	10.2		04.5	69	02.7		24.9	46	31.4		31.9	35	13.0		57.5			
14	348	08.8	347	10.0		03.2	84	03.3		25.0	61	33.3		31.9	50	15.1		57.4			
15	3	11.3	2	09.8		01.8	99	03.9		25.1	76	35.2		31.8	65	17.3		57.4			
16	18	13.8	17	09.7	-0	00.5	114	04.5		25.2	91	37.1		31.8	80	19.5		57.3			
17	33	16.2	32	09.5	+0	00.8	129	05.1	-23	25.3	106	39.0	-22	31.7	95	21.6	-20	57.3			
18	48	18.7	47	09.3	+0	02.1	144	05.7	-23	25.4	121	40.9	-22	31.7	110	23.8	-20	57.2			
19	63	21.2	62	09.2		03.4	159	06.3		25.5	136	42.8		31.6	125	26.0		57.2			
20	78	23.6	77	09.0		04.7	174	07.0		25.6	151	44.7		31.5	140	28.1		57.1			
21	93	26.1	92	08.8		06.0	189	07.6		25.7	166	46.6		31.5	155	30.3		57.1			
22	108	28.6	107	08.7		07.3	204	08.2		25.8	181	48.5		31.4	170	32.5		57.0			
23	123	31.0	122	08.5		08.6	219	08.8		25.9	196	50.4		31.4	185	34.6		57.0			
24	138	33.5	137	08.3	+0	09.9	234	09.4	-23	26.0	211	52.3	-22	31.3	200	36.8	-20	56.9			
Dif.	—		-2		+13		+6		-1		+19		+1		+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: 16'4 Edad: 15 ^d 1 PHE { 4^h: 60'4 12^h: 60'6 20^h: 60'7								PMG: 00 ^h 01 ^m Rº: 58^m			Civil			Náut.		Hora		Rº	
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.			Civil			Náut.		Hora		Rº				
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	176	27.6	-14	54.7	359	46.2	54	+19	14.2	86	60 N	16	34	17	19	18	09	16	37	101			
1	191	27.6		53.9	14	10.6	55	+19	05.6	87	58	42	24	11				48	96				
2	206	27.6		53.1	28	35.1	55	+18	56.9	89	56	49	29	13				16	58	92			
3	221	27.5		52.3	42	59.6	55		48.0	90	54	16	56	33	15			17	06	90			
4	236	27.5		51.5	57	24.1	56		39.0	91	52	17	02	37	17			14	87				
5	251	27.5	-14	50.7	71	48.7	57	+18	29.9	93	50	17	07	17	41	18	19	17	20	85			
6	266	27.5	-14	49.9	86	13.4	57	+18	20.6	94	45	17	18	17	49	18	24	17	35	79			
7	281	27.5		49.1	100	38.1	57		11.2	95	40	28	17	56	28			47	75				
8	296	27.4		48.3	115	02.8	58	+18	01.7	97	35	36	18	02	32			17	57	72			
9	311	27.4		47.5	129	27.6	58	+17	52.0	97	30	43	08	36				18	05	70			
10	326	27.4		46.7	143	52.4	59		42.3	100	20	17	56	19	45			20	65				
11	341	27.4	-14	45.9	158	17.3	59	+17	32.3	100	10 N	18	07	18	29	18	54	18	33	61			
12	356	27.4	-14	45.1	172	42.2	60	+17	22.3	101	0	18	18	18	39	19	04	18	46	56			
13	11	27.3		44.3	187	07.2	60		12.2	103	10 S	28	18	50	15			18	58	52			
14	26	27.3		43.5	201	32.2	61	+17	01.9	104	20	40	19	03	30			19	11	48			
15	41	27.3		42.7	215	57.3	61	+16	51.5	105	30	18	53	18	19	48		26	43				
16	56	27.3		41.9	230	22.4	61		41.0	106	35	19	01	28	20	00		34	41				
17	71	27.3	-14	41.1	244	47.5	63	+16	30.4	108	40	19	10	19	39	20	14	19	44	37			
18	86	27.3	-14	40.3	259	12.8	63	+16	19.6	108	45	19	20	19	52	20	32	19	55	34			
19	101	27.2		39.5	273	38.1	63	+16	08.8	110	50	32	20	09	20	55		20	09	29			
20	116	27.2		38.7	288	03.4	64	+15	57.8	111	52	38	17	21	07			15	27				
21	131	27.2		37.9	302	28.8	64		46.7	112	54	45	26	20				22	25				
22	146	27.2		37.1	316	54.2	65		35.5	113	56	19	52	36	36			30	22				
23	161	27.2		36.3	331	19.7	66		24.2	114	58	20	00	20	48	21	56	39	18				
24	176	27.2	-14	35.5	345	45.3		+15	12.8		60 S	20	10	21	02	22	21	20	49	15			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 14 ^h 43 ^m 3		Mag: -4.1 PMG: 14 ^h 52 ^m			Mag: +1.3 PMG: 08 ^h 23 ^m			Mag: -1.9 PMG: 09 ^h 51 ^m			Mag: +0.6 PMG: 10 ^h 36 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	138	33.5	137	08.3	+0	09.9	234	09.4	-23	26.0	211	52.3	-22	-31.3
1	153	35.9	152	08.2		11.3	249	10.0		26.1	226	54.2		-31.3
2	168	38.4	167	08.0		12.6	264	10.6		26.2	241	56.1		-31.2
3	183	40.9	182	07.8		13.9	279	11.2		26.3	256	58.0		-31.1
4	198	43.3	197	07.7		15.2	294	11.8		26.4	271	59.9		-31.1
5	213	45.8	212	07.5	+0	16.5	309	12.4	-23	26.5	287	01.8	-22	-31.0
6	228	48.3	227	07.4	+0	17.8	324	13.0	-23	26.6	302	03.7	-22	-31.0
7	243	50.7	242	07.2		19.1	339	13.6		26.7	317	05.6		-30.9
8	258	53.2	257	07.0		20.4	354	14.2		26.8	332	07.5		-30.9
9	273	55.7	272	06.9		21.7	9	14.8		26.9	347	09.4		-30.8
10	288	58.1	287	06.7		23.0	24	15.3		27.0	2	11.3		-30.8
11	304	00.6	302	06.5	+0	24.4	39	15.9	-23	27.1	17	13.2	-22	-30.7
12	319	03.1	317	06.4	+0	25.7	54	16.5	-23	27.2	32	15.1	-22	-30.6
13	334	05.5	332	06.2		27.0	69	17.1		27.3	47	17.0		-30.6
14	349	08.0	347	06.1		28.3	84	17.7		27.4	62	18.9		-30.5
15	4	10.4	2	05.9		29.6	99	18.3		27.5	77	20.8		-30.5
16	19	12.9	17	05.7		30.9	114	18.9		27.6	92	22.7		-30.4
17	34	15.4	32	05.6	+0	32.2	129	19.5	-23	27.7	107	24.6	-22	-30.4
18	49	17.8	47	05.4	+0	33.5	144	20.1	-23	27.8	122	26.5	-22	-30.3
19	64	20.3	62	05.3		34.8	159	20.7		27.8	137	28.4		-30.2
20	79	22.8	77	05.1		36.1	174	21.3		27.9	152	30.3		-30.2
21	94	25.2	92	04.9		37.5	189	21.9		28.0	167	32.2		-30.1
22	109	27.7	107	04.8		38.8	204	22.5		28.1	182	34.1		-30.1
23	124	30.2	122	04.6		40.1	219	23.1		28.2	197	36.0		-30.0
24	139	32.6	137	04.5	+0	41.4	234	23.7	-23	28.3	212	37.9	-22	-30.0
Dif.	—		-2	+13			+6	-1			+19	+1		+22

UT	SOL				○ LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16 ^h 2				SD: 16 ^h 5		PHE { 4 ^h : 60'8 12 ^h : 60'8 20 ^h : 60'8			Edad: 16 ^d 1			Rº: 56 ^m			PMG: 00 ^h 59 ^m			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	176	27.2	-14	35.5	345	45.3	66	+15	12.8	115	60 N	6 18	7 08	7 53	18 18	99	8 54	13				
1	191	27.1		34.7	0	10.9	66	+15	01.3	116	58	16	7 03	45	24	96	46	16				
2	206	27.1		33.9	14	36.5	68	+14	49.7	117	56	14	6 58	38	30	93	39	19				
3	221	27.1		33.1	29	02.3	67		38.0	118	54	12	54	31	36	89	32	23				
4	236	27.1		32.3	43	28.0	69		26.2	119	52	10	50	26	41	86	27	25				
5	251	27.1	-14	31.5	57	53.9	68	+14	14.3	120	50	6 08	6 46	7 20	18 45	84	8 22	27				
6	266	27.1	-14	30.7	72	19.7	70	+14	02.3	121	45	6 04	6 39	7 09	18 54	80	8 11	31				
7	281	27.1		29.9	86	45.7	70	+13	50.2	122	40	6 00	32	7 00	19 02	75	8 01	36				
8	296	27.1		29.1	101	11.7	70		38.0	123	35	5 56	26	6 52	09 72		7 53	39				
9	311	27.0		28.3	115	37.7	72		25.7	123	30	52	20	45	15 68		46	42				
10	326	27.0		27.4	130	03.9	71		13.4	125	20	43	09	32	25 63		34	47				
11	341	27.0	-14	26.6	144	30.0	73	+13	00.9	125	10 N	5 34	6 00	6 21	19 34	58	7 23	51				
12	356	27.0	-14	25.8	158	56.3	72	+12	48.4	126	0	5 25	5 49	6 11	19 42	54	7 13	55				
13	11	27.0		25.0	173	22.5	74		35.8	128	10 S	5 13	38	6 00	50 50		7 02	60				
14	26	27.0		24.2	187	48.9	74		23.0	127	20	4 59	26	5 49	19 59	46	6 51	64				
15	41	27.0		23.4	202	15.3	74	+12	10.3	129	30	40	11	36	20 09	40	38	70				
16	56	27.0		22.6	216	41.7	76	+11	57.4	129	35	29	5 01	28	15 37		31	72				
17	71	27.0	-14	21.8	231	08.3	75	+11	44.5	131	40	4 15	4 50	5 19	20 21	34	6 22	76				
18	86	26.9	-14	21.0	245	34.8	76	+11	31.4	131	45	3 57	4 37	5 09	20 29	30	6 12	80				
19	101	26.9		20.1	260	01.4	77		18.3	131	50	34	20	4 57	38 25		6 00	85				
20	116	26.9		19.3	274	28.1	78	+11	05.2	132	52	22	12	51	42 23		5 54	88				
21	131	26.9		18.5	288	54.9	77	+10	52.0	134	54	3 09	4 03	44	47 20		48	90				
22	146	26.9		17.7	303	21.6	79		38.6	133	56	2 53	3 53	37	52 17		41	93				
23	161	26.9		16.9	317	48.5	79		25.3	135	58	33	41	29	20 57	15	5 33	97				
24	176	26.9	-14	16.1	332	15.4		+10	11.8		60 S	2 08	3 27	4 20	21 04	11	5 24	100				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 14 ^h 39 ^m 4		Mag: -4.2 PMG: 14 ^h 52 ^m			Mag: +1.3 PMG: 08 ^h 22 ^m			Mag: -1.9 PMG: 09 ^h 48 ^m			Mag: +0.6 PMG: 10 ^h 33 ^m										
	hG ♈		hG ♀ dec.			hG ♂ dec.			hG ♃ dec.			hG ♄ dec.										
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	139	32.6	137	04.5	+0	41.4	234	23.7	-23	28.3	212	37.9	-22	30.0	201	28.9	-20	55.8				
1	154	35.1	152	04.3		42.7	249	24.3		28.4	227	39.8		29.9	216	31.1		55.7				
2	169	37.6	167	04.1		44.0	264	24.9		28.5	242	41.7		29.9	231	33.2		55.7				
3	184	40.0	182	04.0		45.3	279	25.5		28.6	257	43.6		29.8	246	35.4		55.6				
4	199	42.5	197	03.8		46.6	294	26.1		28.7	272	45.5		29.7	261	37.6		55.6				
5	214	44.9	212	03.7	+0	47.9	309	26.7	-23	28.8	287	47.4	-22	29.7	276	39.8	-20	55.5				
6	229	47.4	227	03.5	+0	49.2	324	27.3	-23	28.9	302	49.3	-22	29.6	291	41.9	-20	55.5				
7	244	49.9	242	03.4		50.6	339	27.9		29.0	317	51.2		29.6	306	44.1		55.4				
8	259	52.3	257	03.2		51.9	354	28.5		29.0	332	53.1		29.5	321	46.3		55.4				
9	274	54.8	272	03.0		53.2	9	29.1		29.1	347	55.0		29.5	336	48.4		55.3				
10	289	57.3	287	02.9		54.5	24	29.7		29.2	2	56.9		29.4	351	50.6		55.3				
11	304	59.7	302	02.7	+0	55.8	39	30.3	-23	29.3	17	58.8	-22	29.3	6	52.8	-20	55.2				
12	320	02.2	317	02.6	+0	57.1	54	30.9	-23	29.4	33	00.7	-22	29.3	21	54.9	-20	55.2				
13	335	04.7	332	02.4		58.4	69	31.5		29.5	48	02.6		29.2	36	57.1		55.1				
14	350	07.1	347	02.3	+0	59.7	84	32.1		29.6	63	04.5		29.2	51	59.3		55.1				
15	5	09.6	2	02.1	+1	01.0	99	32.7		29.7	78	06.4		29.1	67	01.5		55.0				
16	20	12.0	17	02.0		02.3	114	33.3		29.7	93	08.3		29.1	82	03.6		55.0				
17	35	14.5	32	01.8	+1	03.6	129	33.9	-23	29.8	108	10.2	-22	29.0	97	05.8	-20	54.9				
18	50	17.0	47	01.6	+1	05.0	144	34.5	-23	29.9	123	12.1	-22	28.9	112	08.0	-20	54.9				
19	65	19.4	62	01.5		06.3	159	35.1		30.0	138	14.0		28.9	127	10.1		54.8				
20	80	21.9	77	01.3		07.6	174	35.7		30.1	153	15.9		28.8	142	12.3		54.8				
21	95	24.4	92	01.2		08.9	189	36.3		30.2	168	17.8		28.8	157	14.5		54.7				
22	110	26.8	107	01.0		10.2	204	36.9		30.3	183	19.7		28.7	172	16.7		54.7				
23	125	29.3	122	00.9		11.5	219	37.5		30.3	198	21.6		28.7	187	18.8		54.6				
24	140	31.8	137	00.7	+1	12.8	234	38.1	-23	30.4	213	23.5	-22	28.6	202	21.0	-20	54.6				
Dif.	—		-2			+13	+6			-1	+19			+1	+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 2				SD: 16'6 Edad: 17 ^d 1 PMG: 01 ^h 55 ^m Rº: 54 ^m														
					PHE { 4 ^h : 60'8 12 ^h : 60'8 20 ^h : 60'7														
	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	26.9	-14	16.1	332	15.4	79	+10	11.8	134	60 N	16 39	17 24	18 13	19 57	97	9 07	10	
1	191	26.9		15.3	346	42.3	80	+9	58.4	136	58	47	29	15	20 00	94	9 02	14	
2	206	26.9		14.4	1	09.3	81		44.8	136	56	16 54	33	17	03 90		8 58	17	
3	221	26.9		13.6	15	36.4	81		31.2	137	54	17 00	37	19	05 88		55	19	
4	236	26.9		12.8	30	03.5	82		17.5	137	52	05	41	21	07 86		52	21	
5	251	26.9	-14	12.0	44	30.7	82	+9	03.8	138	50	17 10	17 44	18 22	20 09	83	8 49	24	
6	266	26.9	-14	11.2	58	57.9	83	+8	50.0	138	45	17 21	17 52	18 26	20 14	78	8 42	29	
7	281	26.9		10.4	73	25.2	83		36.2	139	40	30	17 58	30	17 74		37	32	
8	296	26.9		09.5	87	52.5	84		22.3	140	35	38	18 04	34	21 70		32	36	
9	311	26.9		08.7	102	19.9	84	+8	08.3	139	30	45	10	38	23 67		28	39	
10	326	26.9		07.9	116	47.3	85	+7	54.4	141	20	17 57	20	46	28 62		21	44	
11	341	26.9	-14	07.1	131	14.8	85	+7	40.3	140	10 N	18 08	18 29	18 54	20 32	57	8 14	49	
12	356	26.8	-14	06.3	145	42.3	85	+7	26.3	141	0	18 18	18 39	19 04	20 36	53	8 08	53	
13	11	26.8		05.5	160	09.8	87	+7	12.2	142	10 S	28	18 50	15	40 48		8 02	58	
14	26	26.8		04.6	174	37.5	86	+6	58.0	142	20	39	19 02	29	45 43		7 55	63	
15	41	26.8		03.8	189	05.1	87		43.8	142	30	51	16	46	49 38		48	67	
16	56	26.8		03.0	203	32.8	88		29.6	143	35	18 59	26	19 58	52 35		43	71	
17	71	26.8	-14	02.2	218	00.6	88	+6	15.3	142	40	19 07	19 36	20 11	20 55	32	7 38	75	
18	86	26.8	-14	01.3	232	28.4	88	+6	01.1	144	45	19 17	19 49	20 28	20 59	27	7 32	79	
19	101	26.8	-14	00.5	246	56.2	89	+5	46.7	143	50	29	20 05	20 50	21 03	23	25	84	
20	116	26.8	-13	59.7	261	24.1	89		32.4	144	52	35	13	21 01	05 21		22	86	
21	131	26.8		58.9	275	52.0	90		18.0	144	54	41	21	14	07 19		18	89	
22	146	26.8		58.1	290	20.0	90	+5	03.6	144	56	48	31	29	09 17		14	92	
23	161	26.8		57.2	304	48.0	91	+4	49.2	145	58	19 55	42	21 48	12 13		10	94	
24	176	26.8	-13	56.4	319	16.1		+4	34.7		60 S	20 04	20 55	22 11	21 15	10	7 04	99	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 14 ^h 35 ^m 5		Mag: -4.2 PMG: 14 ^h 52 ^m				Mag: +1.3 PMG: 08 ^h 21 ^m				Mag: -1.9 PMG: 09 ^h 45 ^m				Mag: +0.6 PMG: 10 ^h 29 ^m				
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	140	31.8	137	00.7	+1	12.8	234	38.1	-23	30.4	213	23.5	-22	-28.6	202	21.0	-20	54.6	
1	155	34.2	152	00.6		14.1	249	38.7		30.5	228	25.4		-28.5	217	23.2		54.5	
2	170	36.7	167	00.4		15.4	264	39.3		30.6	243	27.3		-28.5	232	25.4		54.5	
3	185	39.2	182	00.3		16.7	279	39.9		30.7	258	29.3		-28.4	247	27.5		54.4	
4	200	41.6	197	00.1		18.0	294	40.5		30.8	273	31.2		-28.4	262	29.7		54.4	
5	215	44.1	212	00.0	+1	19.4	309	41.0	-23	30.8	288	33.1	-22	-28.3	277	31.9	-20	54.3	
6	230	46.5	226	59.8	+1	20.7	324	41.6	-23	30.9	303	35.0	-22	-28.3	292	34.0	-20	54.3	
7	245	49.0	241	59.7		22.0	339	42.2		31.0	318	36.9		-28.2	307	36.2		54.2	
8	260	51.5	256	59.5		23.3	354	42.8		31.1	333	38.8		-28.1	322	38.4		54.2	
9	275	53.9	271	59.4		24.6	9	43.4		31.2	348	40.7		-28.1	337	40.6		54.1	
10	290	56.4	286	59.2		25.9	24	44.0		31.2	3	42.6		-28.0	352	42.7		54.1	
11	305	58.9	301	59.0	+1	27.2	39	44.6	-23	31.3	18	44.5	-22	-28.0	7	44.9	-20	54.1	
12	321	01.3	316	58.9	+1	28.5	54	45.2	-23	31.4	33	46.4	-22	-27.9	22	47.1	-20	54.0	
13	336	03.8	331	58.7		29.8	69	45.8		31.5	48	48.3		-27.9	37	49.3		54.0	
14	351	06.3	346	58.6		31.1	84	46.4		31.6	63	50.2		-27.8	52	51.4		53.9	
15	6	08.7	1	58.4		32.4	99	47.0		31.6	78	52.1		-27.7	67	53.6		53.9	
16	21	11.2	16	58.3		33.7	114	47.6		31.7	93	54.0		-27.7	82	55.8		53.8	
17	36	13.7	31	58.1	+1	35.0	129	48.2	-23	31.8	108	55.9	-22	-27.6	97	57.9	-20	53.8	
18	51	16.1	46	58.0	+1	36.4	144	48.8	-23	31.9	123	57.8	-22	-27.6	113	00.1	-20	53.7	
19	66	18.6	61	57.8		37.7	159	49.4		32.0	138	59.7		-27.5	128	02.3		53.7	
20	81	21.0	76	57.7		39.0	174	50.0		32.0	154	01.6		-27.5	143	04.5		53.6	
21	96	23.5	91	57.6		40.3	189	50.6		32.1	169	03.5		-27.4	158	06.6		53.6	
22	111	26.0	106	57.4		41.6	204	51.2		32.2	184	05.5		-27.3	173	08.8		53.5	
23	126	28.4	121	57.3		42.9	219	51.8		32.3	199	07.4		-27.3	188	11.0		53.5	
24	141	30.9	136	57.1	+1	44.2	234	52.4	-23	32.3	214	09.3	-22	-27.2	203	13.2	-20	53.4	
Dif.	—		-2				+6				+19				+22				
			+13				-1								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 2				SD: 16'5 Edad: 18 ^d 1 PHE { 4 ^h : 60'6 12 ^h : 60'5 20 ^h : 60'3 PMG: 02 ^h 49 ^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	176	26.8	-13	56.4	319	16.1	91	+4	34.7	144	60 N	6 14	7 03	7 48	21 34	96	9 17	10		
1	191	26.8		55.6	333	44.2	91		20.3	145	58	12	6 58	40	34	92	16	13		
2	206	26.8		54.8	348	12.3	92	+4	05.8	145	56	10	54	33	33	89	15	16		
3	221	26.8		53.9	2	40.5	92	+3	51.3	146	54	09	50	27	33	86	14	19		
4	236	26.8		53.1	17	08.7	92		36.7	145	52	07	47	22	33	83	13	21		
5	251	26.8	-13	52.3	31	36.9	93	+3	22.2	145	50	6 05	6 43	7 17	21 32	82	9 13	22		
6	266	26.9	-13	51.5	46	05.2	93	+3	07.7	146	45	6 01	6 36	7 06	21 32	76	9 11	27		
7	281	26.9		50.6	60	33.5	94	+2	53.1	146	40	5 58	29	6 57	31	72	09	32		
8	296	26.9		49.8	75	01.9	94		38.5	145	35	54	24	50	31	69	08	35		
9	311	26.9		49.0	89	30.3	94		24.0	146	30	50	18	43	30	66	07	38		
10	326	26.9		48.1	103	58.7	95	+2	09.4	146	20	42	6 09	31	30	60	05	43		
11	341	26.9	-13	47.3	118	27.2	94	+1	54.8	146	10 N	5 34	5 59	6 21	21 29	56	9 03	48		
12	356	26.9	-13	46.5	132	55.6	96	+1	40.2	146	0	5 25	5 49	6 11	21 29	51	9 01	52		
13	11	26.9		45.7	147	24.2	95		25.6	146	10 S	14	39	6 01	28	47	9 00	56		
14	26	26.9		44.8	161	52.7	96	+1	11.0	145	20	5 00	27	5 50	28	42	8 58	61		
15	41	26.9		44.0	176	21.3	96	+0	56.5	146	30	4 42	12	37	27	38	55	67		
16	56	26.9		43.2	190	49.9	96		41.9	146	35	31	5 03	30	27	35	54	70		
17	71	26.9	-13	42.3	205	18.5	97	+0	27.3	146	40	4 18	4 53	5 22	21 27	31	8 53	73		
18	86	26.9	-13	41.5	219	47.2	96	+0	12.7	145	45	4 01	4 40	5 12	21 26	28	8 51	77		
19	101	26.9		40.7	234	15.8	97	-0	01.8	146	50	3 39	24	5 00	26	23	49	82		
20	116	26.9		39.8	248	44.5	98		16.4	145	52	28	17	4 55	26	21	48	84		
21	131	26.9		39.0	263	13.3	97		30.9	145	54	15	4 08	48	26	18	47	87		
22	146	26.9		38.2	277	42.0	98		45.4	145	56	3 00	3 58	42	26	15	46	89		
23	161	27.0		37.3	292	10.8	98	-0	59.9	145	58	2 42	47	34	21 25	13	8 44	93		
24	176	27.0	-13	36.5	306	39.6		-1	14.4		60 S	2 18	3 34	4 25	21 25	10	8 43	96		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 14 ^h 31 ^m 6		Mag: -4.2 PMG: 14 ^h 52 ^m			Mag: +1.3 PMG: 08 ^h 20 ^m			Mag: -1.9 PMG: 09 ^h 42 ^m			Mag: +0.6 PMG: 10 ^h 26 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	141	30.9	136	57.1	+1 44.2	234	52.4	-23 32.3	214	09.3	-22 27.2	203	13.2	-20 53.4						
1	156	33.4	151	57.0	45.5	249	53.0	32.4	229	11.2	27.2	218	15.3	53.4						
2	171	35.8	166	56.8	46.8	264	53.5	32.5	244	13.1	27.1	233	17.5	53.3						
3	186	38.3	181	56.7	48.1	279	54.1	32.6	259	15.0	27.1	248	19.7	53.3						
4	201	40.8	196	56.5	49.4	294	54.7	32.6	274	16.9	27.0	263	21.9	53.2						
5	216	43.2	211	56.4	+1 50.7	309	55.3	-23 32.7	289	18.8	-22 26.9	278	24.0	-20 53.2						
6	231	45.7	226	56.2	+1 52.0	324	55.9	-23 32.8	304	20.7	-22 26.9	293	26.2	-20 53.1						
7	246	48.1	241	56.1	53.4	339	56.5	32.9	319	22.6	26.8	308	28.4	53.1						
8	261	50.6	256	55.9	54.7	354	57.1	32.9	334	24.5	26.8	323	30.5	53.0						
9	276	53.1	271	55.8	56.0	9	57.7	33.0	349	26.4	26.7	338	32.7	53.0						
10	291	55.5	286	55.6	57.3	24	58.3	33.1	4	28.3	26.7	353	34.9	52.9						
11	306	58.0	301	55.5	+1 58.6	39	58.9	-23 33.1	19	30.2	-22 26.6	8	37.1	-20 52.9						
12	322	00.5	316	55.3	+1 59.9	54	59.5	-23 33.2	34	32.2	-22 26.5	23	39.2	-20 52.8						
13	337	02.9	331	55.2	+2 01.2	70	00.1	33.3	49	34.1	26.5	38	41.4	52.8						
14	352	05.4	346	55.1	02.5	85	00.7	33.4	64	36.0	26.4	53	43.6	52.7						
15	7	07.9	1	54.9	03.8	100	01.3	33.4	79	37.9	26.4	68	45.8	52.7						
16	22	10.3	16	54.8	05.1	115	01.9	33.5	94	39.8	26.3	83	47.9	52.6						
17	37	12.8	31	54.6	+2 06.4	130	02.5	-23 33.6	109	41.7	-22 26.2	98	50.1	-20 52.6						
18	52	15.3	46	54.5	+2 07.7	145	03.0	-23 33.6	124	43.6	-22 26.2	113	52.3	-20 52.5						
19	67	17.7	61	54.3	09.0	160	03.6	33.7	139	45.5	26.1	128	54.5	52.5						
20	82	20.2	76	54.2	10.3	175	04.2	33.8	154	47.4	26.1	143	56.6	52.4						
21	97	22.6	91	54.0	11.6	190	04.8	33.8	169	49.3	26.0	158	58.8	52.4						
22	112	25.1	106	53.9	13.0	205	05.4	33.9	184	51.2	26.0	174	01.0	52.3						
23	127	27.6	121	53.8	14.3	220	06.0	34.0	199	53.2	25.9	189	03.2	52.3						
24	142	30.0	136	53.6	+2 15.6	235	06.6	-23 34.0	214	55.1	-22 25.8	204	05.3	-20 52.2						
Dif.	—		-1			+13			+19			+1			+22			0		

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'2			PHE { 4 ^h : 60'2 12 ^h : 60'0 20 ^h : 59'8																
	PMG: 12 ^h 14 ^m 2			Edad: 19 ^d 1																
	PMG: 03 ^h 41 ^m			R ^º : 51 ^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	176	27.0	-13 36.5	306	39.6	98	-1 14.4	145	60 N	16 44	17 29	18 18	23 10	93	9 27	11				
1	191	27.0		321	08.4	98		28.9	144	58	52	33	20	06	90	29	14			
2	206	27.0		335	37.2	99		43.3	145	56	16 58	37	21	23 02	87	31	16			
3	221	27.0		350	06.1	98	-1 57.8	144	54	17 04	41	23	22 59	84	33	18				
4	236	27.0		4	34.9	99	-2 12.2	143	52	09	44	24	56	82	34	21				
5	251	27.0	-13 32.3	19	03.8	99	-2 26.5	144	50	17 14	17 48	18 26	22 54	79	9 35	24				
6	266	27.0	-13 31.5	33	32.7	100	-2 40.9	143	45	17 24	17 55	18 29	22 48	75	9 38	28				
7	281	27.0		48	01.7	99	-2 55.2	143	40	33	18 01	33	43	71	41	31				
8	296	27.0		62	30.6	99	-3 09.5	143	35	40	06	36	40	67	43	35				
9	311	27.1		76	59.5	100		23.8	142	30	47	11	39	36	65	45	37			
10	326	27.1		91	28.5	100		38.0	142	20	17 58	21	47	30	60	48	42			
11	341	27.1	-13 27.3	105	57.5	99	-3 52.2	142	10 N	18 08	18 30	18 55	22 25	55	9 51	47				
12	356	27.1	-13 26.5	120	26.4	100	-4 06.4	142	0	18 18	18 39	19 04	22 20	52	9 53	52				
13	11	27.1		134	55.4	100		20.6	141	10 S	27	18 49	14	15	48	56	55			
14	26	27.1		149	24.4	100		34.7	140	20	38	19 00	27	10	44	9 59	60			
15	41	27.1		163	53.4	100	-4 48.7	140	30	50	15	44	05	38	10 02	65				
16	56	27.1		178	22.4	101	-5 02.7	140	35	18 57	23	19 55	22 02	35	04	68				
17	71	27.2	-13 22.3	192	51.5	100	-5 16.7	140	40	19 05	19 33	20 08	21 58	32	10 06	71				
18	86	27.2	-13 21.4	207	20.5	100	-5 30.7	138	45	19 14	19 46	20 25	21 54	28	10 08	76				
19	101	27.2		221	49.5	101		44.5	139	50	25	20 01	46	49	24	11	81			
20	116	27.2		236	18.6	100	-5 58.4	138	52	31	08	20 56	47	22	12	83				
21	131	27.2		250	47.6	100	-6 12.2	138	54	37	17	21 08	44	20	14	85				
22	146	27.2		265	16.6	101		26.0	137	56	43	26	23	41	17	15	88			
23	161	27.3		279	45.7	100		39.7	136	58	50	36	21 40	38	15	17	91			
24	176	27.3	-13 16.4	294	14.7		-6 53.3		60 S	19 59	20 49	22 01	21 35	11	10 19	95				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 14 ^h 27 ^m 6		Mag: -4.2 PMG: 14 ^h 53 ^m			Mag: +1.3 PMG: 08 ^h 19 ^m			Mag: -1.9 PMG: 09 ^h 39 ^m			Mag: +0.6 PMG: 10 ^h 22 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'						
0	142	30.0	136	53.6	+2 15.6	235	06.6	-23 34.0	214	55.1	-22 -25.8	204	05.3	-20 52.2						
1	157	32.5	151	53.5		250	07.2		229	57.0	-25.8	219	07.5							
2	172	35.0	166	53.3		265	07.8		244	58.9	-25.7	234	09.7							
3	187	37.4	181	53.2		280	08.4		260	00.8	-25.7	249	11.9							
4	202	39.9	196	53.0		295	09.0		275	02.7	-25.6	264	14.0							
5	217	42.4	211	52.9	+2 22.1	310	09.6	-23 34.4	290	04.6	-22 -25.6	279	16.2	-20 52.0						
6	232	44.8	226	52.8	+2 23.4	325	10.2	-23 34.4	305	06.5	-22 -25.5	294	18.4	-20 51.9						
7	247	47.3	241	52.6		340	10.8		320	08.4	-25.4	309	20.6							
8	262	49.7	256	52.5		355	11.3		335	10.3	-25.4	324	22.7							
9	277	52.2	271	52.3		10	11.9		350	12.3	-25.3	339	24.9							
10	292	54.7	286	52.2		25	12.5		5	14.2	-25.3	354	27.1							
11	307	57.1	301	52.0	+2 29.9	40	13.1	-23 34.7	20	16.1	-22 -25.2	9	29.3	-20 51.7						
12	322	59.6	316	51.9	+2 31.2	55	13.7	-23 34.8	35	18.0	-22 -25.1	24	31.4	-20 51.7						
13	338	02.1	331	51.8		70	14.3		50	19.9	-25.1	39	33.6							
14	353	04.5	346	51.6		85	14.9		65	21.8	-25.0	54	35.8							
15	8	07.0	1	51.5		100	15.5		80	23.7	-25.0	69	38.0							
16	23	09.5	16	51.3		115	16.1		95	25.6	-24.9	84	40.2							
17	38	11.9	31	51.2	+2 37.7	130	16.7	-23 35.1	110	27.5	-22 -24.9	99	42.3	-20 51.4						
18	53	14.4	46	51.1	+2 39.1	145	17.3	-23 35.2	125	29.5	-22 -24.8	114	44.5	-20 51.4						
19	68	16.9	61	50.9		160	17.9		140	31.4	-24.7	129	46.7							
20	83	19.3	76	50.8		175	18.4		155	33.3	-24.7	144	48.9							
21	98	21.8	91	50.6		190	19.0		170	35.2	-24.6	159	51.0							
22	113	24.2	106	50.5		205	19.6		185	37.1	-24.6	174	53.2							
23	128	26.7	121	50.4		220	20.2		200	39.0	-24.5	189	55.4							
24	143	29.2	136	50.2	+2 46.9	235	20.8	-23 35.5	215	40.9	-22 -24.4	204	57.6	-20 51.1						
Dif.	—		-1	+13		+6		-1	+19		+1	+22		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 2				SD: 16'3 Edad: 20 ^d 1 PHE { 4 ^h : 59'5 12 ^h : 59'3 20 ^h : 59'1													
	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	27.3	-13	16.4	294	14.7	101	-6	53.3	136	60 N	6 09	6 58	7 42	** ** *	9 38	12	
1	191	27.3		15.5	308	43.8	100	-7	06.9	136	58	08	54	35	** ** *		43 15	
2	206	27.3		14.7	323	12.8	101		20.5	135	56	06	50	29	** ** *		47 19	
3	221	27.3		13.9	337	41.9	100		34.0	134	54	05	46	23	** ** *		51 2	
4	236	27.3		13.0	352	10.9	100	-7	47.4	134	52	03	43	18	** ** *		55 23	
5	251	27.4	-13	12.2	6	39.9	101	-8	00.8	133	50	6 02	6 40	7 13	** ** *	9 59	25	
6	266	27.4	-13	11.3	21	09.0	100	-8	14.1	133	45	5 59	6 33	7 03	** ** *	10 06	30	
7	281	27.4		10.5	35	38.0	100		27.4	132	40	55	27	6 55	23 54	70	12 34	
8	296	27.4		09.6	50	07.0	100		40.6	131	35	52	22	48	47	67	18 36	
9	311	27.4		08.8	64	36.0	101	-8	53.7	131	30	49	17	41	41	64	22 39	
10	326	27.5		07.9	79	05.1	100	-9	06.8	130	20	42	6 08	30	30	59	30 44	
11	341	27.5	-13	07.1	93	34.1	100	-9	19.8	130	10 N	5 34	5 59	6 20	23 20	56	10 38 48	
12	356	27.5	-13	06.2	108	03.1	99	-9	32.8	129	0	5 25	5 50	6 11	23 12	52	10 45 51	
13	11	27.5		05.4	122	32.0	100		45.7	128	10 S	14	40	6 01	23 03	48	51 56	
14	26	27.5		04.5	137	01.0	100	-9	58.5	127	20	5 01	28	5 51	22 54	44	10 59 59	
15	41	27.6		03.7	151	30.0	100	-10	11.2	127	30	4 44	14	39	43	40	11 07 64	
16	56	27.6		02.8	165	59.0	99		23.9	126	35	34	5 05	32	37	38	12 67	
17	71	27.6	-13	02.0	180	27.9	100	-10	36.5	126	40	4 21	4 55	5 24	22 30	35	11 17 71	
18	86	27.6	-13	01.1	194	56.9	99	-10	49.1	124	45	4 04	4 43	5 15	22 22	32	11 24 74	
19	101	27.6	-13	00.3	209	25.8	99	-11	01.5	124	50	3 43	28	5 04	13	27	32 78	
20	116	27.7	-12	59.4	223	54.7	99		13.9	123	52	33	21	4 58	09	24	35 81	
21	131	27.7		58.6	238	23.6	99		26.2	123	54	21	13	53	22 04	22	39 83	
22	146	27.7		57.7	252	52.5	99		38.5	121	56	3 06	4 03	46	21 58	21	43 87	
23	161	27.7		56.9	267	21.4	98	-11	50.6	121	58	2 49	3 53	39	21 53	17	11 48 90	
24	176	27.8	-12	56.0	281	50.2		-12	02.7		60 S	2 28	3 40	4 31	21 46	14	11 54 93	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 23 ^m 7		Mag: -4.2 PMG: 14 ^h 53 ^m			Mag: +1.3 PMG: 08 ^h 18 ^m			Mag: -1.9 PMG: 09 ^h 36 ^m			Mag: +0.6 PMG: 10 ^h 19 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	143	29.2	136	50.2	+2	46.9	235	20.8	-23	35.5	215	40.9	-22	24.4	204	57.6	-20	51.1
1	158	31.6	151	50.1		48.2	250	21.4		35.6	230	42.8		24.4	219	59.7		51.0
2	173	34.1	166	49.9		49.5	265	22.0		35.6	245	44.8		24.3	235	01.9		51.0
3	188	36.6	181	49.8		50.8	280	22.6		35.7	260	46.7		24.3	250	04.1		50.9
4	203	39.0	196	49.7		52.1	295	23.2		35.8	275	48.6		24.2	265	06.3		50.9
5	218	41.5	211	49.5	+2	53.4	310	23.8	-23	35.8	290	50.5	-22	24.2	280	08.5	-20	50.8
6	233	44.0	226	49.4	+2	54.7	325	24.4	-23	35.9	305	52.4	-22	24.1	295	10.6	-20	50.8
7	248	46.4	241	49.3		56.0	340	25.0		35.9	320	54.3		24.0	310	12.8		50.7
8	263	48.9	256	49.1		57.3	355	25.5		36.0	335	56.2		24.0	325	15.0		50.7
9	278	51.4	271	49.0		58.6	10	26.1		36.0	350	58.2		23.9	340	17.2		50.6
10	293	53.8	286	48.8	+2	59.9	25	26.7		36.1	6	00.1		23.9	355	19.3		50.6
11	308	56.3	301	48.7	+3	01.2	40	27.3	-23	36.1	21	02.0	-22	23.8	10	21.5	-20	50.5
12	323	58.7	316	48.6	+3	02.5	55	27.9	-23	36.2	36	03.9	-22	23.7	25	23.7	-20	50.5
13	339	01.2	331	48.4		03.8	70	28.5		36.3	51	05.8		23.7	40	25.9		50.4
14	354	03.7	346	48.3		05.1	85	29.1		36.3	66	07.7		23.6	55	28.0		50.4
15	9	06.1	1	48.2		06.4	100	29.7		36.4	81	09.6		23.6	70	30.2		50.3
16	24	08.6	16	48.0		07.7	115	30.3		36.4	96	11.6		23.5	85	32.4		50.3
17	39	11.1	31	47.9	+3	09.0	130	30.9	-23	36.5	111	13.5	-22	23.5	100	34.6	-20	50.2
18	54	13.5	46	47.7	+3	10.3	145	31.4	-23	36.5	126	15.4	-22	23.4	115	36.8	-20	50.2
19	69	16.0	61	47.6		11.6	160	32.0		36.6	141	17.3		23.3	130	38.9		50.1
20	84	18.5	76	47.5		12.9	175	32.6		36.6	156	19.2		23.3	145	41.1		50.1
21	99	20.9	91	47.3		14.2	190	33.2		36.7	171	21.1		23.2	160	43.3		50.0
22	114	23.4	106	47.2		15.5	205	33.8		36.7	186	23.1		23.2	175	45.5		50.0
23	129	25.8	121	47.1		16.8	220	34.4		36.8	201	25.0		23.1	190	47.6		49.9
24	144	28.3	136	46.9	+3	18.1	235	35.0	-23	36.8	216	26.9	-22	23.0	205	49.8	-20	49.9
Dif.	—		-1		+13		+6		-1		+19		+1		+22			

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'2			SD: 16'1 Edad: 21 ^d 1														
	PMG: 12 ^h 14 ^m 1			PMG: 05 ^h 24 ^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	176	27.8	-12	56.0	281	50.2	99	-12	02.7	120	60 N	16 50	17 34	18 23	0 43	92	9 50	16
1	191	27.8		55.2	296	19.1	98		14.7	119	58	16 56	38	24	36	88	9 58	20
2	206	27.8		54.3	310	47.9	98		26.6	119	56	17 03	41	25	29	85	10 06	22
3	221	27.8		53.5	325	16.7	98		38.5	117	54	08	45	26	23	82	12	25
4	236	27.9		52.6	339	45.5	98	-12	50.2	117	52	13	48	28	18	80	18	28
5	251	27.9	-12	51.8	354	14.3	97	-13	01.9	116	50	17 17	17 51	18 29	0 13	78	10 24	29
6	266	27.9	-12	50.9	8	43.0	98	-13	13.5	115	45	17 27	17 57	18 32	0 03	73	10 36	33
7	281	27.9		50.1	23	11.8	97		25.0	114	40	35	18 03	35	** ** *	**	46	36
8	296	28.0		49.2	37	40.5	97		36.4	114	35	42	08	38	** ** *	**	10 54	39
9	311	28.0		48.4	52	09.2	97		47.8	112	30	48	13	41	** ** *	**	11 01	42
10	326	28.0		47.5	66	37.9	97	-13	59.0	112	20	17 59	21	47	** ** *	**	14	46
11	341	28.0	-12	46.6	81	06.6	96	-14	10.2	110	10 N	18 08	18 30	18 55	** ** *	**	11 26	49
12	356	28.1	-12	45.8	95	35.2	96	-14	21.2	110	0	18 18	18 39	19 03	** ** *	**	11 36	53
13	11	28.1		44.9	110	03.8	96		32.2	109	10 S	27	48	13	23 51	50	47	56
14	26	28.1		44.1	124	32.4	96		43.1	108	20	37	18 59	26	38	47	11 58	60
15	41	28.2		43.2	139	01.0	96	-14	53.9	106	30	48	19 13	42	23	44	12 11	64
16	56	28.2		42.4	153	29.6	95	-15	04.5	106	35	18 55	21	19 53	15	41	19	66
17	71	28.2	-12	41.5	167	58.1	96	-15	15.1	105	40	19 02	19 31	20 05	23 05	39	12 28	68
18	86	28.2	-12	40.6	182	26.7	95	-15	25.6	104	45	19 11	19 42	20 21	22 54	35	12 38	72
19	101	28.3		39.8	196	55.2	94		36.0	104	50	22	19 57	41	40	32	50	76
20	116	28.3		38.9	211	23.6	95		46.4	102	52	27	20 04	20 51	33	30	12 56	78
21	131	28.3		38.1	225	52.1	94	-15	56.6	101	54	32	12	21 03	26	28	13 02	81
22	146	28.4		37.2	240	20.5	94	-16	06.7	100	56	38	21	16	19	25	10	83
23	161	28.4		36.3	254	48.9	94		16.7	99	58	45	31	32	10	22	18	86
24	176	28.4	-12	35.5	269	17.3		-16	26.6		60 S	19 53	20 42	21 52	22 00	19	13 27	90
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 19 ^m 8		Mag: -4.2 PMG: 14 ^h 53 ^m			Mag: +1.3 PMG: 08 ^h 17 ^m			Mag: -1.9 PMG: 09 ^h 33 ^m			Mag: +0.6 PMG: 10 ^h 15 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	144	28.3	136	46.9	+3	18.1	235	35.0	-23	36.8	216	26.9	-22	-23.0	205	49.8	-20	49.9
1	159	30.8	151	46.8		19.4	250	35.6		36.9	231	28.8		-23.0	220	52.0		49.8
2	174	33.2	166	46.7		20.7	265	36.2		36.9	246	30.7		-22.9	235	54.2		49.8
3	189	35.7	181	46.5		22.0	280	36.8		37.0	261	32.6		-22.9	250	56.4		49.7
4	204	38.2	196	46.4		23.3	295	37.3		37.0	276	34.5		-22.8	265	58.5		49.7
5	219	40.6	211	46.3	+3	24.6	310	37.9	-23	37.1	291	36.5	-22	-22.7	281	00.7	-20	49.6
6	234	43.1	226	46.1	+3	25.9	325	38.5	-23	37.1	306	38.4	-22	-22.7	296	02.9	-20	49.6
7	249	45.6	241	46.0		27.2	340	39.1		37.2	321	40.3		-22.6	311	05.1		49.6
8	264	48.0	256	45.9		28.5	355	39.7		37.2	336	42.2		-22.6	326	07.3		49.5
9	279	50.5	271	45.7		29.8	10	40.3		37.2	351	44.1		-22.5	341	09.4		49.5
10	294	53.0	286	45.6		31.1	25	40.9		37.3	6	46.0		-22.5	356	11.6		49.4
11	309	55.4	301	45.5	+3	32.4	40	41.5	-23	37.3	21	48.0	-22	-22.4	11	13.8	-20	49.4
12	324	57.9	316	45.3	+3	33.7	55	42.1	-23	37.4	36	49.9	-22	-22.3	26	16.0	-20	49.3
13	340	00.3	331	45.2		35.0	70	42.6		37.4	51	51.8		-22.3	41	18.2		49.3
14	355	02.8	346	45.1		36.3	85	43.2		37.5	66	53.7		-22.2	56	20.3		49.2
15	10	05.3	1	44.9		37.6	100	43.8		37.5	81	55.6		-22.2	71	22.5		49.2
16	25	07.7	16	44.8		38.9	115	44.4		37.6	96	57.6		-22.1	86	24.7		49.1
17	40	10.2	31	44.7	+3	40.2	130	45.0	-23	37.6	111	59.5	-22	-22.0	101	26.9	-20	49.1
18	55	12.7	46	44.5	+3	41.5	145	45.6	-23	37.6	127	01.4	-22	-22.0	116	29.0	-20	49.0
19	70	15.1	61	44.4		42.8	160	46.2		37.7	142	03.3		-21.9	131	31.2		49.0
20	85	17.6	76	44.3		44.1	175	46.8		37.7	157	05.2		-21.9	146	33.4		48.9
21	100	20.1	91	44.1		45.4	190	47.4		37.8	172	07.1		-21.8	161	35.6		48.9
22	115	22.5	106	44.0		46.7	205	47.9		37.8	187	09.1		-21.7	176	37.8		48.8
23	130	25.0	121	43.9		48.0	220	48.5		37.9	202	11.0		-21.7	191	39.9		48.8
24	145	27.5	136	43.7	+3	49.3	235	49.1	-23	37.9	217	12.9	-22	-21.6	206	42.1	-20	48.7
Dif.	—		-1		+13		+6		0		+19		+1		+22			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2				SD: 15'9												PHE {	
	PMG: 12 ^h 14 ^m 1				Edad: 22 ^d 1					{ 4 ^h : 58'1 12 ^h : 57'9 20 ^h : 57'7								
	PMG: 06 ^h 16 ^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				
0	176	28.4	-12	269	17.3	94	-16	26.6	98	6 05	6 53	7 37	2 15 88	10 06 22				
1	191	28.5		283	45.7	93		36.4	97	03	49	30	2 04 84	18 26				
2	206	28.5		298	14.0	94		46.1	96	02	46	24	1 54 81	28 29				
3	221	28.5		312	42.4	93	-16	55.7	95	01	42	19	45 78	37 32				
4	236	28.6		327	10.7	92	-17	05.2	94	6 00	39	14	38 76	46 33				
5	251	28.6	-12	341	38.9	93	-17	14.6	92	5 59	6 36	7 10	1 31 74	10 53 35				
6	266	28.6	-12	356	07.2	92	-17	23.8	92	5 56	6 30	7 00	1 16 70	11 09 38				
7	281	28.7		10	35.4	92		33.0	91	53	25	6 52	1 04 67	22 41				
8	296	28.7		25	03.6	92		42.1	89	50	20	46	0 54 64	33 44				
9	311	28.7		39	31.8	92		51.0	89	47	15	40	45 62	11 43 45				
10	326	28.8		54	00.0	91	-17	59.9	87	41	6 06	29	29 59	12 00 48				
11	341	28.8	-12	68	28.1	92	-18	08.6	87	5 33	5 58	6 20	0 16 56	12 15 51				
12	356	28.8	-12	82	56.3	91	-18	17.3	85	5 25	5 50	6 11	0 04 52	12 29 53				
13	11	28.9		97	24.4	90		25.8	84	15	40	6 02	** ** *	43 55				
14	26	28.9		111	52.4	91		34.2	83	5 02	29	5 52	** ** *	12 58 58				
15	41	28.9		126	20.5	90		42.5	82	4 46	16	41	** ** *	13 15 61				
16	56	29.0		140	48.5	90		50.7	80	36	5 08	34	23 56 45	25 63				
17	71	29.0	-12	155	16.5	90	-18	58.7	80	4 23	4 58	5 27	23 44 43	13 36 66				
18	86	29.0	-12	169	44.5	90	-19	06.7	78	4 08	4 46	5 18	23 29 42	13 50 68				
19	101	29.1		184	12.5	89		14.5	78	3 48	32	07	12 38	14 06 72				
20	116	29.1		198	40.4	90		22.3	76	38	25	5 02	23 03 37	14 73				
21	131	29.2		213	08.4	89		29.9	75	26	17	4 57	22 54 35	23 75				
22	146	29.2		227	36.3	88		37.4	73	3 13	4 08	51	44 33	33 77				
23	161	29.2		242	04.1	89		44.7	73	2 57	3 58	44	22 32 31	14 44 80				
24	176	29.3	-12	256	32.0		-19	52.0		2 37	3 47	4 36	22 19 27	14 57 83				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG		Mag: -4.2			Mag: +1.2			Mag: -1.9			Mag: +0.6						
	14 ^h 15 ^m 8		PMG: 14 ^h 53 ^m			PMG: 08 ^h 16 ^m			PMG: 09 ^h 30 ^m			PMG: 10 ^h 12 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	145	27.5	136	43.7	+3	49.3	235	49.1	-23	37.9	217	12.9	-22	21.6	206	42.1	-20	48.7
1	160	29.9	151	43.6		50.6	250	49.7		37.9	232	14.8		21.6	221	44.3		48.7
2	175	32.4	166	43.5		51.9	265	50.3		38.0	247	16.7		21.5	236	46.5		48.6
3	190	34.8	181	43.3		53.2	280	50.9		38.0	262	18.7		21.4	251	48.7		48.6
4	205	37.3	196	43.2		54.5	295	51.5		38.1	277	20.6		21.4	266	50.8		48.5
5	220	39.8	211	43.1	+3	55.8	310	52.1	-23	38.1	292	22.5	-22	21.3	281	53.0	-20	48.5
6	235	42.2	226	43.0	+3	57.1	325	52.6	-23	38.1	307	24.4	-22	21.3	296	55.2	-20	48.4
7	250	44.7	241	42.8		58.4	340	53.2		38.2	322	26.3		21.2	311	57.4		48.4
8	265	47.2	256	42.7	+3	59.7	355	53.8		38.2	337	28.3		21.2	326	59.6		48.3
9	280	49.6	271	42.6	+4	01.0	10	54.4		38.2	352	30.2		21.1	342	01.8		48.3
10	295	52.1	286	42.4		02.3	25	55.0		38.3	7	32.1		21.0	357	03.9		48.2
11	310	54.6	301	42.3	+4	03.6	40	55.6	-23	38.3	22	34.0	-22	21.0	12	06.1	-20	48.2
12	325	57.0	316	42.2	+4	04.9	55	56.2	-23	38.4	37	35.9	-22	20.9	27	08.3	-20	48.1
13	340	59.5	331	42.0		06.2	70	56.8		38.4	52	37.9		20.9	42	10.5		48.1
14	356	01.9	346	41.9		07.5	85	57.4		38.4	67	39.8		20.8	57	12.7		48.0
15	11	04.4	1	41.8		08.8	100	57.9		38.5	82	41.7		20.7	72	14.8		48.0
16	26	06.9	16	41.7		10.1	115	58.5		38.5	97	43.6		20.7	87	17.0		47.9
17	41	09.3	31	41.5	+4	11.3	130	59.1	-23	38.5	112	45.5	-22	20.6	102	19.2	-20	47.9
18	56	11.8	46	41.4	+4	12.6	145	59.7	-23	38.6	127	47.5	-22	20.6	117	21.4	-20	47.8
19	71	14.3	61	41.3		13.9	161	00.3		38.6	142	49.4		20.5	132	23.6		47.8
20	86	16.7	76	41.1		15.2	176	00.9		38.6	157	51.3		20.4	147	25.7		47.8
21	101	19.2	91	41.0		16.5	191	01.5		38.7	172	53.2		20.4	162	27.9		47.7
22	116	21.7	106	40.9		17.8	206	02.1		38.7	187	55.2		20.3	177	30.1		47.7
23	131	24.1	121	40.8		19.1	221	02.6		38.7	202	57.1		20.3	192	32.3		47.6
24	146	26.6	136	40.6	+4	20.4	236	03.2	-23	38.8	217	59.0	-22	20.2	207	34.5	-20	47.6
Dif.	—		-1		+13		+6		0		+19		+1		+22			

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'2			SD: 15'7 Edad: 23 ^d 1														
	PMG: 12 ^h 14 ^m 0			PMG: 07 ^h 09 ^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	176	29.3	-12	256	32.0	89	-19	52.0	71	60 N	16 55	17 39	18 27	3 43 78	10 28 33			
1	191	29.3		270	59.9	88	-19	59.1	71	58	17 01	42	28	28 75	44 35			
2	206	29.3		285	27.7	88	-20	06.2	69	56	07	46	29	15 73	10 57 38			
3	221	29.4		299	55.5	88		13.1	67	54	12	49	30	3 03 71	11 09 39			
4	236	29.4		314	23.3	88		19.8	67	52	17	51	31	2 54 69	19 41			
5	251	29.5	-12	328	51.1	87	-20	26.5	65	50	17 21	17 54	18 32	2 45 68	11 28 42			
6	266	29.5	-12	343	18.8	88	-20	33.0	65	45	17 30	18 00	18 34	2 26 65	11 47 45			
7	281	29.5		357	46.6	87		39.5	63	40	37	05	37	2 11 63	12 03 47			
8	296	29.6		12	14.3	87		45.8	61	35	44	10	39	1 58 62	17 47			
9	311	29.6		26	42.0	87		51.9	61	30	17 50	14	42	47 60	28 49			
10	326	29.7		41	09.7	87	-20	58.0	59	20	18 00	22	48	28 58	12 48 51			
11	341	29.7	-12	55	37.4	87	-21	03.9	58	10 N	18 09	18 30	18 55	1 12 55	13 06 52			
12	356	29.8	-12	70	05.1	86	-21	09.7	57	0	18 17	18 39	19 03	0 56 54	13 22 54			
13	11	29.8		84	32.7	87		15.4	56	10 S	26	48	13	41 52	38 56			
14	26	29.8		99	00.4	86		21.0	54	20	35	18 58	25	25 50	13 56 57			
15	41	29.9		113	28.0	86		26.4	53	30	46	19 11	40	0 07 47	14 16 59			
16	56	29.9	-12	127	55.6	86		31.7	52	35	18 52	19	19 50	*** **	28 60			
17	71	30.0	-11	142	23.2	86	-21	36.9	50	40	19 00	19 28	20 02	*** **	14 42 60			
18	86	30.0	-11	156	50.8	86	-21	41.9	50	45	19 08	19 39	20 17	*** **	14 58 62			
19	101	30.1		171	18.4	86		46.9	48	50	18	19 53	37	23 50 47	15 18 64			
20	116	30.1		185	46.0	86		51.7	46	52	23	20 00	46	40 46	27 65			
21	131	30.1		200	13.6	86	-21	56.3	46	54	28	07	20 57	29 45	38 66			
22	146	30.2		214	41.2	85	-22	00.9	44	56	34	15	21 10	17 44	15 50 68			
23	161	30.2		229	08.7	86		05.3	43	58	40	25	25	23 03 42	16 04 69			
24	176	30.3	-11	243	36.3		-22	09.6		60 S	19 47	20 36	21 43	22 46 40	16 20 72			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 14 ^h 11 ^m 9		Mag: -4.2 PMG: 14 ^h 53 ^m			Mag: +1.2 PMG: 08 ^h 15 ^m			Mag: -1.9 PMG: 09 ^h 27 ^m			Mag: +0.6 PMG: 10 ^h 08 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	146	26.6	136	40.6	+4	20.4	236	03.2	-23	38.8	217	59.0	-22	-20.2	207	34.5	-20	47.6
1	161	29.1	151	40.5		21.7	251	03.8		38.8	233	00.9		-20.1	222	36.7		47.5
2	176	31.5	166	40.4		23.0	266	04.4		38.8	248	02.8		-20.1	237	38.8		47.5
3	191	34.0	181	40.2		24.3	281	05.0		38.9	263	04.8		-20.0	252	41.0		47.4
4	206	36.4	196	40.1		25.6	296	05.6		38.9	278	06.7		-20.0	267	43.2		47.4
5	221	38.9	211	40.0	+4	26.9	311	06.2	-23	38.9	293	08.6	-22	-19.9	282	45.4	-20	47.3
6	236	41.4	226	39.9	+4	28.2	326	06.7	-23	39.0	308	10.5	-22	-19.8	297	47.6	-20	47.3
7	251	43.8	241	39.7		29.5	341	07.3		39.0	323	12.5		-19.8	312	49.7		47.2
8	266	46.3	256	39.6		30.8	356	07.9		39.0	338	14.4		-19.7	327	51.9		47.2
9	281	48.8	271	39.5		32.0	11	08.5		39.0	353	16.3		-19.7	342	54.1		47.1
10	296	51.2	286	39.4		33.3	26	09.1		39.1	8	18.2		-19.6	357	56.3		47.1
11	311	53.7	301	39.2	+4	34.6	41	09.7	-23	39.1	23	20.2	-22	-19.5	12	58.5	-20	47.0
12	326	56.2	316	39.1	+4	35.9	56	10.3	-23	39.1	38	22.1	-22	-19.5	28	00.7	-20	47.0
13	341	58.6	331	39.0		37.2	71	10.9		39.2	53	24.0		-19.4	43	02.8		46.9
14	357	01.1	346	38.9		38.5	86	11.4		39.2	68	25.9		-19.4	58	05.0		46.9
15	12	03.6	1	38.7		39.8	101	12.0		39.2	83	27.9		-19.3	73	07.2		46.8
16	27	06.0	16	38.6		41.1	116	12.6		39.2	98	29.8		-19.2	88	09.4		46.8
17	42	08.5	31	38.5	+4	42.4	131	13.2	-23	39.3	113	31.7	-22	-19.2	103	11.6	-20	46.7
18	57	10.9	46	38.4	+4	43.7	146	13.8	-23	39.3	128	33.6	-22	-19.1	118	13.8	-20	46.7
19	72	13.4	61	38.2		45.0	161	14.4		39.3	143	35.6		-19.1	133	15.9		46.6
20	87	15.9	76	38.1		46.3	176	15.0		39.3	158	37.5		-19.0	148	18.1		46.6
21	102	18.3	91	38.0		47.5	191	15.5		39.4	173	39.4		-18.9	163	20.3		46.5
22	117	20.8	106	37.9		48.8	206	16.1		39.4	188	41.3		-18.9	178	22.5		46.5
23	132	23.3	121	37.7		50.1	221	16.7		39.4	203	43.3		-18.8	193	24.7		46.4
24	147	25.7	136	37.6	+4	51.4	236	17.3	-23	39.4	218	45.2	-22	-18.8	208	26.9	-20	46.4
Dif.	—		-1	+13		+6	0			+19		+1		+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: 15'5 Edad: 24 ^d 1			PHE { 4 ^h : 56'8 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	m	h	m	m
0	176	30.3	-11	53.8	243	36.3	85	-22	09.6	42	60 N	6 00	6 48	7 31	5 01	64	11 01	47	
1	191	30.3		52.9	258	03.8	86		13.8	40	58	5 59	44	25	4 43	62	19	49	
2	206	30.4		52.0	272	31.4	85		17.8	39	56	58	41	20	28	61	35	49	
3	221	30.4		51.1	286	58.9	86		21.7	38	54	57	38	15	14	61	11 48	50	
4	236	30.5		50.3	301	26.5	85		25.5	36	52	56	36	10	4 03	60	12 00	50	
5	251	30.5	-11	49.4	315	54.0	85	-22	29.1	36	50	5 55	6 33	7 06	3 53	59	12 10	51	
6	266	30.6	-11	48.5	330	21.5	86	-22	32.7	34	45	5 53	6 27	6 57	3 31	59	12 32	51	
7	281	30.6		47.6	344	49.1	85		36.1	32	40	51	22	50	14	58	12 50	51	
8	296	30.7		46.7	359	16.6	86		39.3	32	35	48	18	43	3 00	57	13 04	53	
9	311	30.7		45.9	13	44.2	85		42.5	30	30	45	13	38	2 47	57	17	53	
10	326	30.8		45.0	28	11.7	85		45.5	29	20	39	6 05	28	26	55	39	53	
11	341	30.8	-11	44.1	42	39.2	86	-22	48.4	27	10 N	5 33	5 58	6 19	2 07	55	13 58	53	
12	356	30.9	-11	43.2	57	06.8	86	-22	51.1	26	0	5 25	5 49	6 11	1 50	54	14 16	53	
13	11	30.9		42.3	71	34.4	85		53.7	25	10 S	15	41	6 02	33	53	34	53	
14	26	31.0		41.5	86	01.9	86		56.2	24	20	5 04	30	5 53	1 15	52	14 53	54	
15	41	31.0		40.6	100	29.5	86	-22	58.6	22	30	4 48	17	42	0 54	50	15 15	54	
16	56	31.1		39.7	114	57.1	86	-23	00.8	21	35	38	10	36	41	50	28	54	
17	71	31.1	-11	38.8	129	24.7	86	-23	02.9	20	40	4 26	5 01	5 29	0 27	49	15 42	55	
18	86	31.2	-11	37.9	143	52.3	86	-23	04.9	19	45	4 11	4 49	5 21	0 11	48	16 00	55	
19	101	31.2		37.0	158	19.9	86		06.8	17	50	3 52	36	11	***	**	22	55	
20	116	31.3		36.2	172	47.5	86		08.5	16	52	43	29	06	***	**	32	55	
21	131	31.3		35.3	187	15.1	87		10.1	14	54	32	22	5 01	***	**	44	55	
22	146	31.4		34.4	201	42.8	86		11.5	14	56	19	14	4 55	***	**	16 58	55	
23	161	31.4		33.5	216	10.4	87		12.9	12	58	3 04	4 04	49	23 45	55	17 13	56	
24	176	31.5	-11	32.6	230	38.1		-23	14.1		60 S	2 46	3 53	4 42	23 26	55	17 32	56	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 14 ^h 08 ^m 0		Mag: -4.2 PMG: 14 ^h 54 ^m			Mag: +1.2 PMG: 08 ^h 15 ^m			Mag: -1.9 PMG: 09 ^h 24 ^m			Mag: +0.6 PMG: 10 ^h 05 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	147	25.7	136	37.6	+4 51.4	236	17.3	-23 39.4	218	45.2	-22 18.8	208	26.9	-20 46.4	
1	162	28.2	151	37.5	52.7	251	17.9	39.5	233	47.1	18.7	223	29.0	46.3	
2	177	30.7	166	37.4	54.0	266	18.5	39.5	248	49.0	18.7	238	31.2	46.3	
3	192	33.1	181	37.2	55.3	281	19.1	39.5	263	51.0	18.6	253	33.4	46.2	
4	207	35.6	196	37.1	56.6	296	19.6	39.5	278	52.9	18.5	268	35.6	46.2	
5	222	38.1	211	37.0	+4 57.9	311	20.2	-23 39.5	293	54.8	-22 18.5	283	37.8	-20 46.2	
6	237	40.5	226	36.9	+4 59.2	326	20.8	-23 39.6	308	56.7	-22 18.4	298	40.0	-20 46.1	
7	252	43.0	241	36.7	+5 00.4	341	21.4	39.6	323	58.7	18.4	313	42.1	46.1	
8	267	45.4	256	36.6	01.7	356	22.0	39.6	339	00.6	18.3	328	44.3	46.0	
9	282	47.9	271	36.5	03.0	11	22.6	39.6	354	02.5	18.2	343	46.5	46.0	
10	297	50.4	286	36.4	04.3	26	23.2	39.7	9	04.4	18.2	358	48.7	45.9	
11	312	52.8	301	36.2	+5 05.6	41	23.7	-23 39.7	24	06.4	-22 18.1	13	50.9	-20 45.9	
12	327	55.3	316	36.1	+5 06.9	56	24.3	-23 39.7	39	08.3	-22 18.1	28	53.1	-20 45.8	
13	342	57.8	331	36.0	08.2	71	24.9	39.7	54	10.2	18.0	43	55.2	45.8	
14	358	00.2	346	35.9	09.5	86	25.5	39.7	69	12.2	17.9	58	57.4	45.7	
15	13	02.7	1	35.7	10.7	101	26.1	39.7	84	14.1	17.9	73	59.6	45.7	
16	28	05.2	16	35.6	12.0	116	26.7	39.8	99	16.0	17.8	89	01.8	45.6	
17	43	07.6	31	35.5	+5 13.3	131	27.3	-23 39.8	114	17.9	-22 17.8	104	04.0	-20 45.6	
18	58	10.1	46	35.4	+5 14.6	146	27.8	-23 39.8	129	19.9	-22 17.7	119	06.2	-20 45.5	
19	73	12.5	61	35.3	15.9	161	28.4	39.8	144	21.8	17.6	134	08.4	45.5	
20	88	15.0	76	35.1	17.2	176	29.0	39.8	159	23.7	17.6	149	10.5	45.4	
21	103	17.5	91	35.0	18.5	191	29.6	39.8	174	25.7	17.5	164	12.7	45.4	
22	118	19.9	106	34.9	19.7	206	30.2	39.9	189	27.6	17.5	179	14.9	45.3	
23	133	22.4	121	34.8	21.0	221	30.8	39.9	204	29.5	17.4	194	17.1	45.3	
24	148	24.9	136	34.6	+5 22.3	236	31.4	-23 39.9	219	31.4	-22 17.3	209	19.3	-20 45.2	
Dif.	—		-1		+13	+6		0	+19		+1	+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 9				SD: 15°3 Edad: 25 ^d 1 PHE { 4 ^h : 56°2 12 ^h : 56°0 20 ^h : 55°8 PMG: 08 ^h 57 ^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	176	31.5	-11	32.6	230	38.1	87	-23	14.1	10	60 N	17 00	17 43	18 32	6 05	47	11 48	63			
1	191	31.5		31.7	245	05.8	87		15.1	10	58	06	47	32	5 45	48	12 08	61			
2	206	31.6		30.8	259	33.5	87		16.1	8	56	11	50	33	29	49	24	60			
3	221	31.6		30.0	274	01.2	88		16.9	7	54	16	52	34	15	49	38	59			
4	236	31.7		29.1	288	29.0	88		17.6	5	52	20	55	34	5 03	50	12 50	59			
5	251	31.7	-11	28.2	302	56.8	88	-23	18.1	5	50	17 24	17 57	18 35	4 52	50	13 01	58			
6	266	31.8	-11	27.3	317	24.6	88	-23	18.6	3	45	17 33	18 03	18 37	4 30	51	13 23	57			
7	281	31.8		26.4	331	52.4	88		18.9	2	40	40	07	39	4 12	51	41	57			
8	296	31.9		25.5	346	20.2	89		19.1	0	35	46	12	41	3 57	51	13 57	55			
9	311	32.0		24.6	0	48.1	89		19.1	1	30	17 51	16	44	44	51	14 10	55			
10	326	32.0		23.8	15	16.0	89		19.0	2	20	18 01	23	49	21	53	32	54			
11	341	32.1	-11	22.9	29	43.9	89	-23	18.8	3	10 N	18 09	18 31	18 55	3 02	53	14 51	53			
12	356	32.1	-11	22.0	44	11.8	90	-23	18.5	5	0	18 17	18 38	19 03	2 44	53	15 09	53			
13	11	32.2		21.1	58	39.8	90		18.0	5	10 S	25	47	12	26	53	27	52			
14	26	32.2		20.2	73	07.8	90		17.5	7	20	34	18 57	23	2 07	53	15 47	50			
15	41	32.3		19.3	87	35.8	90		16.8	9	30	44	19 09	38	1 44	54	16 09	49			
16	56	32.3		18.4	102	03.8	91		15.9	9	35	50	16	48	31	54	22	49			
17	71	32.4	-11	17.5	116	31.9	91	-23	15.0	11	40	18 57	19 25	19 59	1 16	54	16 37	48			
18	86	32.5	-11	16.6	131	00.0	92	-23	13.9	12	45	19 05	19 36	20 13	0 59	54	16 55	46			
19	101	32.5		15.7	145	28.2	92		12.7	13	50	14	49	32	37	54	17 17	45			
20	116	32.6		14.9	159	56.4	92		11.4	15	52	19	19 55	41	26	55	27	45			
21	131	32.6		14.0	174	24.6	93		09.9	16	54	23	20 02	20 51	14	55	39	44			
22	146	32.7		13.1	188	52.9	93		08.3	17	56	29	10	21 03	0 01	54	17 53	42			
23	161	32.8		12.2	203	21.2	93		06.6	18	58	35	19	17	** ** *	**	18 09	40			
24	176	32.8	-11	11.3	217	49.5		-23	04.8		60 S	19 42	20 29	21 34	** ** *	**	18 28	38			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 14 ^h 04 ^m 0		Mag: -4.2 PMG: 14 ^h 54 ^m			Mag: +1.2 PMG: 08 ^h 14 ^m			Mag: -1.9 PMG: 09 ^h 21 ^m			Mag: +0.6 PMG: 10 ^h 01 ^m									
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	148	24.9	136	34.6	+5	22.3	236	31.4	-23	39.9	219	31.4	-22	-17.3	209	19.3	-20	45.2			
1	163	27.3	151	34.5		23.6	251	31.9		39.9	234	33.4		-17.3	224	21.5		45.2			
2	178	29.8	166	34.4		24.9	266	32.5		39.9	249	35.3		-17.2	239	23.7		45.1			
3	193	32.3	181	34.3		26.2	281	33.1		39.9	264	37.2		-17.2	254	25.8		45.1			
4	208	34.7	196	34.2		27.5	296	33.7		39.9	279	39.2		-17.1	269	28.0		45.0			
5	223	37.2	211	34.0	+5	28.7	311	34.3	-23	40.0	294	41.1	-22	-17.0	284	30.2	-20	45.0			
6	238	39.7	226	33.9	+5	30.0	326	34.9	-23	40.0	309	43.0	-22	-17.0	299	32.4	-20	44.9			
7	253	42.1	241	33.8		31.3	341	35.4		40.0	324	44.9		-16.9	314	34.6		44.9			
8	268	44.6	256	33.7		32.6	356	36.0		40.0	339	46.9		-16.8	329	36.8		44.8			
9	283	47.0	271	33.6		33.9	11	36.6		40.0	354	48.8		-16.8	344	39.0		44.8			
10	298	49.5	286	33.4		35.2	26	37.2		40.0	9	50.7		-16.7	359	41.1		44.8			
11	313	52.0	301	33.3	+5	36.4	41	37.8	-23	40.0	24	52.7	-22	-16.7	14	43.3	-20	44.7			
12	328	54.4	316	33.2	+5	37.7	56	38.4	-23	40.0	39	54.6	-22	-16.6	29	45.5	-20	44.7			
13	343	56.9	331	33.1		39.0	71	39.0		40.1	54	56.5		-16.5	44	47.7		44.6			
14	358	59.4	346	33.0		40.3	86	39.5		40.1	69	58.5		-16.5	59	49.9		44.6			
15	14	01.8	1	32.8		41.6	101	40.1		40.1	85	00.4		-16.4	74	52.1		44.5			
16	29	04.3	16	32.7		42.9	116	40.7		40.1	100	02.3		-16.4	89	54.3		44.5			
17	44	06.8	31	32.6	+5	44.1	131	41.3	-23	40.1	115	04.3	-22	-16.3	104	56.4	-20	44.4			
18	59	09.2	46	32.5	+5	45.4	146	41.9	-23	40.1	130	06.2	-22	-16.2	119	58.6	-20	44.4			
19	74	11.7	61	32.4		46.7	161	42.5		40.1	145	08.1		-16.2	135	00.8		44.3			
20	89	14.2	76	32.2		48.0	176	43.0		40.1	160	10.1		-16.1	150	03.0		44.3			
21	104	16.6	91	32.1		49.3	191	43.6		40.1	175	12.0		-16.1	165	05.2		44.2			
22	119	19.1	106	32.0		50.5	206	44.2		40.1	190	13.9		-16.0	180	07.4		44.2			
23	134	21.5	121	31.9		51.8	221	44.8		40.1	205	15.8		-15.9	195	09.6		44.1			
24	149	24.0	136	31.8	+5	53.1	236	45.4	-23	40.1	220	17.8	-22	-15.9	210	11.8	-20	44.1			
Dif.	—		-1		+13		+6		0		+19		+1		+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 8				SD: 15'2 Edad: 26 ^d 1		PHE { 4 ^h : 55'7 12 ^h : 55'5 20 ^h : 55'3		PMG: 09 ^h 49 ^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	176	32.8	-11	11.3	217	49.5	94	-23	04.8	19	60 N	5 55	6 43	7 26	6 52	31	12 51	73		
1	191	32.9		10.4	232	17.9	94		02.9	21	58	54	40	20	33	34	13 09	70		
2	206	32.9		09.5	246	46.3	94	-23	00.8	21	56	54	37	15	18	36	24	68		
3	221	33.0		08.6	261	14.7	95	-22	58.7	23	54	53	34	10	6 04	38	37	67		
4	236	33.1		07.7	275	43.2	95		56.4	25	52	52	32	06	5 53	39	49	65		
5	251	33.1	-11	06.8	290	11.7	96	-22	53.9	25	50	5 52	6 29	7 02	5 42	41	13 59	64		
6	266	33.2	-11	05.9	304	40.3	96	-22	51.4	26	45	5 50	6 24	6 54	5 21	42	14 20	61		
7	281	33.2		05.0	319	08.9	97		48.8	28	40	48	20	47	5 03	44	38	59		
8	296	33.3		04.1	333	37.6	97		46.0	29	35	46	15	41	4 48	46	14 52	58		
9	311	33.4		03.2	348	06.3	97		43.1	30	30	44	12	36	35	47	15 05	56		
10	326	33.4		02.4	2	35.0	98		40.1	31	20	38	6 04	27	4 14	48	26	54		
11	341	33.5	-11	01.5	17	03.8	99	-22	37.0	33	10 N	5 32	5 57	6 18	3 55	49	15 44	52		
12	356	33.6	-11	00.6	31	32.7	99	-22	33.7	33	0	5 25	5 49	6 10	3 37	51	16 02	50		
13	11	33.6	-10	59.7	46	01.6	99		30.4	35	10 S	16	41	6 02	19	53	19	48		
14	26	33.7		58.8	60	30.5	100		26.9	36	20	5 05	31	5 54	3 00	54	37	47		
15	41	33.7		57.9	74	59.5	100		23.3	36	30	4 50	19	44	2 38	56	16 58	44		
16	56	33.8		57.0	89	28.5	101		19.7	38	35	40	12	38	25	57	17 11	42		
17	71	33.9	-10	56.1	103	57.6	102	-22	15.9	40	40	4 29	5 03	5 31	2 10	58	17 25	41		
18	86	33.9	-10	55.2	118	26.8	102	-22	11.9	40	45	4 15	4 53	5 24	1 53	59	17 41	39		
19	101	34.0		54.3	132	56.0	102		07.9	41	50	3 56	39	14	31	61	18 02	36		
20	116	34.1		53.4	147	25.2	103	-22	03.8	43	52	47	33	10	21	61	12	34		
21	131	34.1		52.5	161	54.5	103	-21	59.5	43	54	37	26	05	1 09	63	23	33		
22	146	34.2		51.6	176	23.8	104		55.2	45	56	25	19	5 00	0 55	65	35	31		
23	161	34.3		50.7	190	53.2	105		50.7	45	58	3 11	4 10	4 54	0 40	66	18 49	29		
24	176	34.3	-10	49.8	205	22.7		-21	46.2		60 S	2 54	3 59	4 47	0 21	68	19 06	26		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 14 ^h 00 ^m 1		Mag: -4.2 PMG: 14 ^h 54 ^m				Mag: +1.2 PMG: 08 ^h 13 ^m				Mag: -1.9 PMG: 09 ^h 18 ^m				Mag: +0.6 PMG: 09 ^h 58 ^m					
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	149	24.0	136	31.8	+5	53.1	236	45.4	-23	40.1	220	17.8	-22	15.9	210	11.8	-20	44.1		
1	164	26.5	151	31.6		54.4	251	46.0		40.1	235	19.7		15.8	225	13.9		44.0		
2	179	28.9	166	31.5		55.7	266	46.6		40.2	250	21.6		15.8	240	16.1		44.0		
3	194	31.4	181	31.4		56.9	281	47.1		40.2	265	23.6		15.7	255	18.3		43.9		
4	209	33.9	196	31.3		58.2	296	47.7		40.2	280	25.5		15.6	270	20.5		43.9		
5	224	36.3	211	31.2	+5	59.5	311	48.3	-23	40.2	295	27.4	-22	15.6	285	22.7	-20	43.8		
6	239	38.8	226	31.1	+6	00.8	326	48.9	-23	40.2	310	29.4	-22	15.5	300	24.9	-20	43.8		
7	254	41.3	241	30.9		02.1	341	49.5		40.2	325	31.3		15.5	315	27.1		43.7		
8	269	43.7	256	30.8		03.3	356	50.1		40.2	340	33.2		15.4	330	29.3		43.7		
9	284	46.2	271	30.7		04.6	11	50.6		40.2	355	35.2		15.3	345	31.4		43.6		
10	299	48.7	286	30.6		05.9	26	51.2		40.2	10	37.1		15.3	0	33.6		43.6		
11	314	51.1	301	30.5	+6	07.2	41	51.8	-23	40.2	25	39.0	-22	15.2	15	35.8	-20	43.5		
12	329	53.6	316	30.3	+6	08.5	56	52.4	-23	40.2	40	41.0	-22	15.2	30	38.0	-20	43.5		
13	344	56.0	331	30.2		09.7	71	53.0		40.2	55	42.9		15.1	45	40.2		43.5		
14	359	58.5	346	30.1		11.0	86	53.6		40.2	70	44.9		15.0	60	42.4		43.4		
15	15	01.0	1	30.0		12.3	101	54.1		40.2	85	46.8		15.0	75	44.6		43.4		
16	30	03.4	16	29.9		13.6	116	54.7		40.2	100	48.7		14.9	90	46.8		43.3		
17	45	05.9	31	29.8	+6	14.8	131	55.3	-23	40.2	115	50.7	-22	14.9	105	48.9	-20	43.3		
18	60	08.4	46	29.6	+6	16.1	146	55.9	-23	40.2	130	52.6	-22	14.8	120	51.1	-20	43.2		
19	75	10.8	61	29.5		17.4	161	56.5		40.2	145	54.5		14.7	135	53.3		43.2		
20	90	13.3	76	29.4		18.7	176	57.1		40.2	160	56.5		14.7	150	55.5		43.1		
21	105	15.8	91	29.3		19.9	191	57.6		40.2	175	58.4		14.6	165	57.7		43.1		
22	120	18.2	106	29.2		21.2	206	58.2		40.2	191	00.3		14.6	180	59.9		43.0		
23	135	20.7	121	29.1		22.5	221	58.8		40.2	206	02.3		14.5	196	02.1		43.0		
24	150	23.1	136	28.9	+6	23.8	236	59.4	-23	40.2	221	04.2	-22	14.4	211	04.3	-20	42.9		
Dif.	—		-1		+13		+6		0		+19		+1		+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 7				SD: 15'1 Edad: 27'1 PMG: 10 ^h 40 ^m PHE { 4 ^h : 55'2 12 ^h : 55'1 20 ^h : 54'9 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	h m m			
0	176	34.3	-10	49.8	205	22.7	105	-21	46.2	47	60 N	17 05	17 48	18 37	7 23	21	14 04	78			
1	191	34.4		48.9	219	52.2	106		41.5	48	58	11	51	37	7 07	24	19	75			
2	206	34.5		48.0	234	21.8	106		36.7	49	56	16	54	37	6 54	26	32	72			
3	221	34.5		47.1	248	51.4	107		31.8	50	54	20	56	37	42	29	44	69			
4	236	34.6		46.2	263	21.1	107		26.8	51	52	24	17 59	38	32	30	14 54	67			
5	251	34.7	-10	45.3	277	50.8	108	-21	21.7	52	50	17 28	18 01	18 38	6 23	32	15 03	66			
6	266	34.7	-10	44.4	292	20.6	108	-21	16.5	53	45	17 36	18 05	18 40	6 03	35	15 21	63			
7	281	34.8		43.5	306	50.4	109		11.2	54	40	42	10	41	5 47	38	37	60			
8	296	34.9		42.6	321	20.3	110		05.8	55	35	48	13	43	34	40	15 50	57			
9	311	34.9		41.7	335	50.3	110	-21	00.3	56	30	17 53	17	45	22	41	16 01	56			
10	326	35.0		40.8	350	20.3	111	-20	54.7	57	20	18 02	24	50	5 02	44	20	53			
11	341	35.1	-10	39.9	4	50.4	111	-20	49.0	58	10 N	18 10	18 31	18 56	4 44	47	16 36	51			
12	356	35.2	-10	39.0	19	20.5	112	-20	43.2	59	0	18 17	18 38	19 02	4 28	49	16 52	47			
13	11	35.2		38.1	33	50.7	113		37.3	60	10 S	25	46	11	4 12	51	17 07	45			
14	26	35.3		37.2	48	21.0	113		31.3	61	20	33	18 55	22	3 54	53	24	42			
15	41	35.4		36.3	62	51.3	113		25.2	61	30	42	19 07	36	34	56	42	40			
16	56	35.4		35.4	77	21.6	115		19.1	63	35	48	14	45	22	58	17 53	38			
17	71	35.5	-10	34.4	91	52.1	115	-20	12.8	64	40	18 54	19 22	19 56	3 08	60	18 06	35			
18	86	35.6	-10	33.5	106	22.6	115	-20	06.4	65	45	19 01	19 32	20 10	2 52	62	18 20	33			
19	101	35.6		32.6	120	53.1	116	-19	59.9	65	50	10	45	27	32	65	38	29			
20	116	35.7		31.7	135	23.7	117		53.4	67	52	14	51	36	22	67	46	28			
21	131	35.8		30.8	149	54.4	117		46.7	67	54	19	19 57	45	12	68	18 56	25			
22	146	35.9		29.9	164	25.1	118		40.0	68	56	24	20 05	20 57	2 00	70	19 06	24			
23	161	35.9		29.0	178	55.9	119		33.2	70	58	30	13	21 10	1 46	72	18	21			
24	176	36.0	-10	28.1	193	26.8		-19	26.2		60 S	19 36	20 23	21 26	1 29	76	19 32	18			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG 13 ^h 56 ^m 2		Mag: -4.2 PMG: 14 ^h 54 ^m				Mag: +1.2 PMG: 08 ^h 12 ^m				Mag: -1.9 PMG: 09 ^h 15 ^m				Mag: +0.6 PMG: 09 ^h 54 ^m						
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	150	23.1	136	28.9	+6	23.8	236	59.4	-23	40.2	221	04.2	-22	-14.4	211	04.3	-20	42.9			
1	165	25.6	151	28.8		25.0	252	00.0		40.2	236	06.1		-14.4	226	06.5		42.9			
2	180	28.1	166	28.7		26.3	267	00.6		40.2	251	08.1		-14.3	241	08.6		42.8			
3	195	30.5	181	28.6		27.6	282	01.1		40.2	266	10.0		-14.3	256	10.8		42.8			
4	210	33.0	196	28.5		28.9	297	01.7		40.2	281	12.0		-14.2	271	13.0		42.7			
5	225	35.5	211	28.4	+6	30.1	312	02.3	-23	40.2	296	13.9	-22	-14.1	286	15.2	-20	42.7			
6	240	37.9	226	28.2	+6	31.4	327	02.9	-23	40.2	311	15.8	-22	-14.1	301	17.4	-20	42.6			
7	255	40.4	241	28.1		32.7	342	03.5		40.2	326	17.8		-14.0	316	19.6		42.6			
8	270	42.9	256	28.0		34.0	357	04.1		40.1	341	19.7		-13.9	331	21.8		42.5			
9	285	45.3	271	27.9		35.2	12	04.6		40.1	356	21.6		-13.9	346	24.0		42.5			
10	300	47.8	286	27.8		36.5	27	05.2		40.1	11	23.6		-13.8	1	26.2		42.4			
11	315	50.3	301	27.7	+6	37.8	42	05.8	-23	40.1	26	25.5	-22	-13.8	16	28.4	-20	42.4			
12	330	52.7	316	27.6	+6	39.0	57	06.4	-23	40.1	41	27.5	-22	-13.7	31	30.5	-20	42.4			
13	345	55.2	331	27.4		40.3	72	07.0		40.1	56	29.4		-13.6	46	32.7		42.3			
14	0	57.6	346	27.3		41.6	87	07.6		40.1	71	31.3		-13.6	61	34.9		42.3			
15	16	00.1	1	27.2		42.9	102	08.1		40.1	86	33.3		-13.5	76	37.1		42.2			
16	31	02.6	16	27.1		44.1	117	08.7		40.1	101	35.2		-13.5	91	39.3		42.2			
17	46	05.0	31	27.0	+6	45.4	132	09.3	-23	40.1	116	37.1	-22	-13.4	106	41.5	-20	42.1			
18	61	07.5	46	26.9	+6	46.7	147	09.9	-23	40.1	131	39.1	-22	-13.3	121	43.7	-20	42.1			
19	76	10.0	61	26.8		47.9	162	10.5		40.1	146	41.0		-13.3	136	45.9		42.0			
20	91	12.4	76	26.6		49.2	177	11.1		40.1	161	43.0		-13.2	151	48.1		42.0			
21	106	14.9	91	26.5		50.5	192	11.6		40.0	176	44.9		-13.2	166	50.3		41.9			
22	121	17.4	106	26.4		51.8	207	12.2		40.0	191	46.8		-13.1	181	52.5		41.9			
23	136	19.8	121	26.3		53.0	222	12.8		40.0	206	48.8		-13.0	196	54.6		41.8			
24	151	22.3	136	26.2	+6	54.3	237	13.4	-23	40.0	221	50.7	-22	-13.0	211	56.8	-20	41.8			
Dif.	—		-1		+13		+6		0		+19		+1		+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: 15:0 Edad: 28 ^d 1 PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6 PMG: 11 ^h 28 ^m 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	176	36.0	-10	28.1	193	26.8	119	-19	26.2	70	5 49	6 38	7 20	7 44	14	15 22	79			
1	191	36.1		27.2	207	57.7	120		19.2	71	49	35	15	31	18	34	76			
2	206	36.2		26.3	222	28.7	120		12.1	71	49	32	10	20	21	44	73			
3	221	36.2		25.4	236	59.7	121	-19	05.0	73	49	30	06	11	22	15 53	71			
4	236	36.3		24.5	251	30.8	122	-18	57.7	73	49	28	7 02	7 02	25	16 01	69			
5	251	36.4	-10	23.6	266	02.0	122	-18	50.4	75	5 48	6 26	6 59	6 55	26	16 09	66			
6	266	36.5	-10	22.7	280	33.2	123	-18	42.9	75	5 47	6 21	6 51	6 38	30	16 24	63			
7	281	36.5		21.8	295	04.5	124		35.4	76	46	17	44	25	33	37	59			
8	296	36.6		20.8	309	35.9	124		27.8	77	44	13	39	14	35	47	58			
9	311	36.7		19.9	324	07.3	124		20.1	77	42	10	34	6 03	38	16 57	55			
10	326	36.8		19.0	338	38.7	126		12.4	79	37	6 03	25	5 46	41	17 13	51			
11	341	36.8	-10	18.1	353	10.3	126	-18	04.5	79	5 32	5 56	6 18	5 31	44	17 27	48			
12	356	36.9	-10	17.2	7	41.9	126	-17	56.6	80	5 25	5 49	6 10	5 17	46	17 39	46			
13	11	37.0		16.3	22	13.5	127		48.6	81	16	41	6 03	5 03	49	17 52	42			
14	26	37.1		15.4	36	45.2	128		40.5	81	5 06	32	5 55	4 47	52	18 06	39			
15	41	37.1		14.5	51	17.0	128		32.4	82	4 52	21	45	30	55	22	35			
16	56	37.2		13.6	65	48.8	129		24.2	83	43	14	40	20	57	31	33			
17	71	37.3	-10	12.7	80	20.7	130	-17	15.9	84	4 32	5 06	5 34	4 08	60	18 41	30			
18	86	37.4	-10	11.7	94	52.7	130	-17	07.5	84	4 18	4 56	5 26	3 54	63	18 53	27			
19	101	37.4		10.8	109	24.7	131	-16	59.1	86	4 01	43	18	37	66	19 07	24			
20	116	37.5		09.9	123	56.8	131		50.5	85	3 52	37	14	29	68	14	22			
21	131	37.6		09.0	138	28.9	132		42.0	87	42	31	09	20	70	21	21			
22	146	37.7		08.1	153	01.1	132		33.3	87	31	23	5 04	3 10	73	30	18			
23	161	37.8		07.2	167	33.3	133		24.6	88	18	15	4 59	2 58	76	19 39	15			
24	176	37.8	-10	06.3	182	05.6		-16	15.8		3 02	4 05	4 52	2 45	79	19 50	12			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 13 ^h 52 ^m 2		Mag: -4.2 PMG: 14 ^h 54 ^m			Mag: +1.2 PMG: 08 ^h 11 ^m			Mag: -1.9 PMG: 09 ^h 11 ^m			Mag: +0.6 PMG: 09 ^h 51 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'	
0	151	22.3	136	26.2	+6	54.3	237	13.4	-23	40.0	221	50.7	-22	13.0	211	56.8
1	166	24.8	151	26.1		55.6	252	14.0		40.0	236	52.7		12.9	226	59.0
2	181	27.2	166	26.0		56.8	267	14.6		40.0	251	54.6		12.9	242	01.2
3	196	29.7	181	25.8		58.1	282	15.1		40.0	266	56.5		12.8	257	03.4
4	211	32.1	196	25.7	+6	59.4	297	15.7		40.0	281	58.5		12.7	272	05.6
5	226	34.6	211	25.6	+7	00.6	312	16.3	-23	40.0	297	00.4	-22	12.7	287	07.8
6	241	37.1	226	25.5	+7	01.9	327	16.9	-23	39.9	312	02.4	-22	12.6	302	10.0
7	256	39.5	241	25.4		03.2	342	17.5		39.9	327	04.3		12.5	317	12.2
8	271	42.0	256	25.3		04.4	357	18.1		39.9	342	06.2		12.5	332	14.4
9	286	44.5	271	25.2		05.7	12	18.6		39.9	357	08.2		12.4	347	16.6
10	301	46.9	286	25.0		07.0	27	19.2		39.9	12	10.1		12.4	2	18.8
11	316	49.4	301	24.9	+7	08.2	42	19.8	-23	39.9	27	12.1	-22	12.3	17	20.9
12	331	51.9	316	24.8	+7	09.5	57	20.4	-23	39.8	42	14.0	-22	12.2	32	23.1
13	346	54.3	331	24.7		10.8	72	21.0		39.8	57	16.0		12.2	47	25.3
14	1	56.8	346	24.6		12.0	87	21.5		39.8	72	17.9		12.1	62	27.5
15	16	59.2	1	24.5		13.3	102	22.1		39.8	87	19.8		12.1	77	29.7
16	32	01.7	16	24.4		14.6	117	22.7		39.8	102	21.8		12.0	92	31.9
17	47	04.2	31	24.3	+7	15.8	132	23.3	-23	39.8	117	23.7	-22	11.9	107	34.1
18	62	06.6	46	24.1	+7	17.1	147	23.9	-23	39.7	132	25.7	-22	11.9	122	36.3
19	77	09.1	61	24.0		18.4	162	24.5		39.7	147	27.6		11.8	137	38.5
20	92	11.6	76	23.9		19.6	177	25.0		39.7	162	29.6		11.8	152	40.7
21	107	14.0	91	23.8		20.9	192	25.6		39.7	177	31.5		11.7	167	42.9
22	122	16.5	106	23.7		22.1	207	26.2		39.7	192	33.4		11.6	182	45.1
23	137	19.0	121	23.6		23.4	222	26.8		39.7	207	35.4		11.6	197	47.3
24	152	21.4	136	23.5	+7	24.7	237	27.4	-23	39.6	222	37.3	-22	11.5	212	49.5
Dif.	—		-1	+13			+6	0			+19	+1			+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 4			SD: 14'9 Edad: 29 ^d 1														
	PMG: 12 ^h 14 ^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	176	37.8	-10	06.3	182	05.6	134	-16	15.8	89	60 N	17 10	17 53	18 41	7 58 11	16 41 79		
1	191	37.9		05.4	196	38.0	134	-16	06.9	89	58	16	56	41	49 13	50 75		
2	206	38.0		04.4	211	10.4	135	-15	58.0	90	56	20	17 58	41	41 16	16 57 73		
3	221	38.1		03.5	225	42.9	136		49.0	91	54	24	18 00	41	33 19	17 04 70		
4	236	38.2		02.6	240	15.5	136		39.9	91	52	28	02	41	27 20	10 68		
5	251	38.2	-10	01.7	254	48.1	136	-15	30.8	92	50	17 31	18 04	18 41	7 21 22	17 15 66		
6	266	38.3	-10	00.8	269	20.7	137	-15	21.6	92	45	17 38	18 08	18 42	7 08 26	17 27 62		
7	281	38.4	-9	59.9	283	53.4	138		12.4	93	40	44	12	43	6 58 28	36 59		
8	296	38.5		59.0	298	26.2	138	-15	03.1	94	35	50	15	45	49 31	45 56		
9	311	38.6		58.0	312	59.0	139	-14	53.7	94	30	17 54	19	46	41 33	17 52 54		
10	326	38.7		57.1	327	31.9	139		44.3	95	20	18 03	25	51	27 37	18 04 50		
11	341	38.7	-9	56.2	342	04.8	140	-14	34.8	96	10 N	18 10	18 31	18 56	6 15 40	18 15 46		
12	356	38.8	-9	55.3	356	37.8	141	-14	25.2	96	0	18 17	18 38	19 02	6 03 44	18 25 43		
13	11	38.9		54.4	11	10.9	141		15.6	96	10 S	24	45	10	5 52 47	34 40		
14	26	39.0		53.5	25	44.0	141	-14	06.0	98	20	31	18 54	20	39 51	45 36		
15	41	39.1		52.5	40	17.1	142	-13	56.2	97	30	40	19 05	34	25 55	18 57 32		
16	56	39.2		51.6	54	50.3	143		46.5	99	35	45	11	42	17 57	19 04 30		
17	71	39.2	-9	50.7	69	23.6	143	-13	36.6	98	40	18 51	19 19	19 53	5 08 59	19 11 28		
18	86	39.3	-9	49.8	83	56.9	143	-13	26.8	100	45	18 58	19 29	20 06	4 57 62	19 20 25		
19	101	39.4		48.9	98	30.2	144		16.8	99	50	19 06	40	22	43 67	31 21		
20	116	39.5		48.0	113	03.6	145	-13	06.9	101	52	10	46	31	37 68	36 19		
21	131	39.6		47.0	127	37.1	145	-12	56.8	101	54	14	52	40	30 71	42 17		
22	146	39.7		46.1	142	10.6	146		46.7	101	56	19	19 59	20 50	23 72	48 14		
23	161	39.7		45.2	156	44.2	146		36.6	102	58	24	20 07	21 03	14 75	19 54 13		
24	176	39.8	-9	44.3	171	17.8		-12	26.4		60 S	19 30	20 16	21 18	4 04 78	20 02 10		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 48 ^m 3		Mag: -4.2 PMG: 14 ^h 55 ^m			Mag: +1.2 PMG: 08 ^h 10 ^m			Mag: -1.9 PMG: 09 ^h 08 ^m			Mag: +0.6 PMG: 09 ^h 47 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	152	21.4	136	23.5	+7	24.7	237	27.4	-23	39.6	222	37.3	-22	-11.5	212	49.5	-20	40.6
1	167	23.9	151	23.4		25.9	252	28.0		39.6	237	39.3		-11.5	227	51.6		40.6
2	182	26.4	166	23.3		27.2	267	28.5		39.6	252	41.2		-11.4	242	53.8		40.5
3	197	28.8	181	23.1		28.5	282	29.1		39.6	267	43.2		-11.3	257	56.0		40.5
4	212	31.3	196	23.0		29.7	297	29.7		39.6	282	45.1		-11.3	272	58.2		40.4
5	227	33.7	211	22.9	+7	31.0	312	30.3	-23	39.5	297	47.0	-22	-11.2	288	00.4	-20	40.4
6	242	36.2	226	22.8	+7	32.2	327	30.9	-23	39.5	312	49.0	-22	-11.1	303	02.6	-20	40.4
7	257	38.7	241	22.7		33.5	342	31.5		39.5	327	50.9		-11.1	318	04.8		40.3
8	272	41.1	256	22.6		34.8	357	32.0		39.5	342	52.9		-11.0	333	07.0		40.3
9	287	43.6	271	22.5		36.0	12	32.6		39.4	357	54.8		-11.0	348	09.2		40.2
10	302	46.1	286	22.4		37.3	27	33.2		39.4	12	56.8		-10.9	3	11.4		40.2
11	317	48.5	301	22.3	+7	38.5	42	33.8	-23	39.4	27	58.7	-22	-10.8	18	13.6	-20	40.1
12	332	51.0	316	22.1	+7	39.8	57	34.4	-23	39.4	43	00.7	-22	-10.8	33	15.8	-20	40.1
13	347	53.5	331	22.0		41.1	72	34.9		39.3	58	02.6		-10.7	48	18.0		40.0
14	2	55.9	346	21.9		42.3	87	35.5		39.3	73	04.6		-10.7	63	20.2		40.0
15	17	58.4	1	21.8		43.6	102	36.1		39.3	88	06.5		-10.6	78	22.4		39.9
16	33	00.9	16	21.7		44.8	117	36.7		39.3	103	08.4		-10.5	93	24.6		39.9
17	48	03.3	31	21.6	+7	46.1	132	37.3	-23	39.2	118	10.4	-22	-10.5	108	26.7	-20	39.8
18	63	05.8	46	21.5	+7	47.3	147	37.9	-23	39.2	133	12.3	-22	-10.4	123	28.9	-20	39.8
19	78	08.2	61	21.4		48.6	162	38.4		39.2	148	14.3		-10.4	138	31.1		39.7
20	93	10.7	76	21.3		49.9	177	39.0		39.2	163	16.2		-10.3	153	33.3		39.7
21	108	13.2	91	21.1		51.1	192	39.6		39.1	178	18.2		-10.2	168	35.5		39.6
22	123	15.6	106	21.0		52.4	207	40.2		39.1	193	20.1		-10.2	183	37.7		39.6
23	138	18.1	121	20.9		53.6	222	40.8		39.1	208	22.1		-10.1	198	39.9		39.5
24	153	20.6	136	20.8	+7	54.9	237	41.3	-23	39.0	223	24.0	-22	-10.0	213	42.1	-20	39.5
Dif.	—		-1			+13	+6			0	+19			+1		+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 3			SD: 14'8 Edad: 0 ^d 4			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	h	m	
0	176	39.8	-9 44.3	171	17.8	146	-12 26.4	102	60 N	5 44	6 32	7 15	8 09	8	18 00	76	
1	191	39.9	43.4	185	51.4	147	16.2	103	58	44	30	10	8 02	12	05	74	
2	206	40.0	42.4	200	25.1	148	-12 05.9	103	56	45	28	05	7 57	13	10	71	
3	221	40.1	41.5	214	58.9	148	-11 55.6	104	54	45	26	7 01	52	15	14	69	
4	236	40.2	40.6	229	32.7	148	45.2	104	52	45	24	6 58	47	18	18	67	
5	251	40.3	-9 39.7	244	06.5	149	-11 34.8	104	50	5 45	6 22	6 55	7 43	19	18 21	66	
6	266	40.4	-9 38.8	258	40.4	149	-11 24.4	105	45	5 44	6 18	6 48	7 34	23	18 29	61	
7	281	40.4	37.8	273	14.3	150	13.9	106	40	43	14	42	26	26	35	58	
8	296	40.5	36.9	287	48.3	150	-11 03.3	106	35	42	11	36	20	29	41	55	
9	311	40.6	36.0	302	22.3	151	-10 52.7	106	30	40	08	32	14	31	46	52	
10	326	40.7	35.1	316	56.4	151	42.1	107	20	36	6 02	24	7 04	35	18 54	48	
11	341	40.8	-9 34.2	331	30.5	152	-10 31.4	107	10 N	5 31	5 55	6 17	6 55	39	19 01	45	
12	356	40.9	-9 33.2	346	04.7	152	-10 20.7	107	0	5 25	5 49	6 10	6 47	42	19 08	41	
13	11	41.0	32.3	0	38.9	152	-10 10.0	108	10 S	17	42	6 03	39	45	14	38	
14	26	41.1	31.4	15	13.1	153	-9 59.2	108	20	5 07	33	5 56	30	49	21	35	
15	41	41.2	30.5	29	47.4	153	48.4	108	30	4 53	22	47	20	53	29	30	
16	56	41.2	29.5	44	21.7	153	37.6	109	35	45	16	42	14	55	34	27	
17	71	41.3	-9 28.6	58	56.0	154	-9 26.7	109	40	4 34	5 08	5 36	6 07	58	19 39	25	
18	86	41.4	-9 27.7	73	30.4	155	-9 15.8	110	45	4 22	4 59	5 29	5 59	62	19 45	22	
19	101	41.5	26.8	88	04.9	154	-9 04.8	110	50	4 05	47	21	50	65	52	18	
20	116	41.6	25.8	102	39.3	155	-8 53.8	110	52	3 57	41	17	45	68	55	17	
21	131	41.7	24.9	117	13.8	156	42.8	110	54	48	35	13	41	69	19 59	14	
22	146	41.8	24.0	131	48.4	155	31.8	111	56	37	28	09	35	72	20 02	13	
23	161	41.9	23.1	146	22.9	156	20.7	111	58	25	20	5 03	5 29	74	20 07	10	
24	176	42.0	-9 22.1	160	57.5		-8 09.6		60 S	3 10	4 11	4 58	5 22	78	20 12	7	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 13 ^h 44 ^m 4		Mag: -4.2 PMG: 14 ^h 55 ^m			Mag: +1.2 PMG: 08 ^h 09 ^m			Mag: -1.9 PMG: 09 ^h 05 ^m			Mag: +0.6 PMG: 09 ^h 44 ^m					
	hG ♈		hG ♊	dec.		hG ♋	dec.		hG ♏	dec.		hG ♑	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	153	20.6	136	20.8	+7 54.9	237	41.3	-23 39.0	223	24.0	-22 10.0	213	42.1	-20 39.5			
1	168	23.0	151	20.7	56.1	252	41.9	39.0	238	26.0	10.0	228	44.3	39.5			
2	183	25.5	166	20.6	57.4	267	42.5	39.0	253	27.9	09.9	243	46.5	39.4			
3	198	28.0	181	20.5	58.7	282	43.1	39.0	268	29.9	09.9	258	48.7	39.4			
4	213	30.4	196	20.4	+7 59.9	297	43.7	38.9	283	31.8	09.8	273	50.9	39.3			
5	228	32.9	211	20.3	+8 01.2	312	44.3	-23 38.9	298	33.8	-22 09.7	288	53.1	-20 39.3			
6	243	35.3	226	20.2	+8 02.4	327	44.8	-23 38.9	313	35.7	-22 09.7	303	55.3	-20 39.2			
7	258	37.8	241	20.1	03.7	342	45.4	38.8	328	37.7	09.6	318	57.5	39.2			
8	273	40.3	256	19.9	04.9	357	46.0	38.8	343	39.6	09.6	333	59.7	39.1			
9	288	42.7	271	19.8	06.2	12	46.6	38.8	358	41.6	09.5	349	01.9	39.1			
10	303	45.2	286	19.7	07.4	27	47.2	38.7	13	43.5	09.4	4	04.1	39.0			
11	318	47.7	301	19.6	+8 08.7	42	47.8	-23 38.7	28	45.4	-22 09.4	19	06.3	-20 39.0			
12	333	50.1	316	19.5	+8 09.9	57	48.3	-23 38.7	43	47.4	-22 09.3	34	08.5	-20 38.9			
13	348	52.6	331	19.4	11.2	72	48.9	38.6	58	49.3	09.2	49	10.7	38.9			
14	3	55.1	346	19.3	12.4	87	49.5	38.6	73	51.3	09.2	64	12.9	38.8			
15	18	57.5	1	19.2	13.7	102	50.1	38.6	88	53.2	09.1	79	15.1	38.8			
16	34	00.0	16	19.1	14.9	117	50.7	38.5	103	55.2	09.1	94	17.3	38.7			
17	49	02.5	31	19.0	+8 16.2	132	51.2	-23 38.5	118	57.1	-22 09.0	109	19.4	-20 38.7			
18	64	04.9	46	18.9	+8 17.4	147	51.8	-23 38.5	133	59.1	-22 08.9	124	21.6	-20 38.7			
19	79	07.4	61	18.7	18.7	162	52.4	38.4	149	01.0	08.9	139	23.8	38.6			
20	94	09.8	76	18.6	19.9	177	53.0	38.4	164	03.0	08.8	154	26.0	38.6			
21	109	12.3	91	18.5	21.2	192	53.6	38.4	179	04.9	08.8	169	28.2	38.5			
22	124	14.8	106	18.4	22.4	207	54.2	38.3	194	06.9	08.7	184	30.4	38.5			
23	139	17.2	121	18.3	23.7	222	54.7	38.3	209	08.9	08.6	199	32.6	38.4			
24	154	19.7	136	18.2	+8 24.9	237	55.3	-23 38.3	224	10.8	-22 08.6	214	34.8	-20 38.4			
Dif.	—		-1		+13	+6		0	+19		+1	+22				0	

UT	SOL			 LUNA				Latitud	Puesta de Sol											
	SD: 16'2			PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'0																
	PMG: 12 ^h 13 ^m 1			Edad: 1 ^d 4						PMG: 13 ^h 39 ^m			Rº: 41 ^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	42.0	-9	22.1	160	57.5	157	-8	09.6	111	60 N	17 16	17 58	18 46	8	17	7	19	16	76
1	191	42.1		21.2	175	32.2	156	-7	58.5	112	58	20	18 00	46		14	9		19	73
2	206	42.2		20.3	190	06.8	157		47.3	112	56	24	02	45		10	12		21	71
3	221	42.3		19.4	204	41.5	158		36.1	112	54	28	04	45		07	14		23	69
4	236	42.3		18.4	219	16.3	157		24.9	113	52	31	06	45		05	16		25	66
5	251	42.4	-9	17.5	233	51.0	158	-7	13.6	112	50	17 34	18 07	18 45	8	02	18	19	27	64
6	266	42.5	-9	16.6	248	25.8	159	-7	02.4	113	45	17 41	18 11	18 45	7	57	21	19	30	61
7	281	42.6		15.7	263	00.7	158	-6	51.1	114	40	47	14	45		52	25		33	58
8	296	42.7		14.7	277	35.5	159		39.7	113	35	51	17	46		49	27		36	55
9	311	42.8		13.8	292	10.4	159		28.4	114	30	17 56	20	48		45	30		38	52
10	326	42.9		12.9	306	45.3	160		17.0	113	20	18 03	26	51		39	34		42	48
11	341	43.0	-9	11.9	321	20.3	159	-6	05.7	115	10 N	18 10	18 31	18 56	7	34	38	19	46	44
12	356	43.1	-9	11.0	335	55.2	160	-5	54.2	114	0	18 16	18 37	19 02	7	29	41	19	49	41
13	11	43.2		10.1	350	30.2	160		42.8	114	10 S	23	44	09		24	45		52	37
14	26	43.3		09.2	5	05.2	160		31.4	115	20	30	18 52	19		19	48		56	33
15	41	43.4		08.2	19	40.2	161		19.9	115	30	38	19 03	31		13	52	19	59	30
16	56	43.5		07.3	34	15.3	161	-5	08.4	115	35	43	09	40		09	55	20	01	27
17	71	43.6	-9	06.4	48	50.4	161	-4	56.9	115	40	18 48	19 16	19 50	7	05	58	20	04	24
18	86	43.7	-9	05.4	63	25.5	161	-4	45.4	115	45	18 55	19 25	20 02	7	01	61	20	07	21
19	101	43.8		04.5	78	00.6	161		33.9	116	50	19 02	36	18		6	55	65	10	17
20	116	43.9		03.6	92	35.7	162		22.3	116	52	06	41	25		53	66		12	15
21	131	44.0		02.7	107	10.9	162	-4	10.7	115	54	10	47	34		50	69		13	14
22	146	44.1		01.7	121	46.1	162	-3	59.2	116	56	14	19 54	44		47	71		15	12
23	161	44.2	-9	00.8	136	21.3	162		47.6	116	58	19	20 01	20 56		43	74		17	10
24	176	44.3	-8	59.9	150	56.5		-3	36.0		60 S	19 24	20 10	21 10	6	40	76	20	19	7
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 13 ^h 40 ^m 4		Mag: -4.3 PMG: 14 ^h 55 ^m				Mag: +1.2 PMG: 08 ^h 08 ^m				Mag: -1.9 PMG: 09 ^h 02 ^m				Mag: +0.6 PMG: 09 ^h 40 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	154	19.7	136	18.2	+8	24.9	237	55.3	-23	38.3	224	10.8	-22	-08.6	214	34.8	-20	38.4		
1	169	22.2	151	18.1		26.2	252	55.9		38.2	239	12.8		-08.5	229	37.0		38.3		
2	184	24.6	166	18.0		27.4	267	56.5		38.2	254	14.7		-08.5	244	39.2		38.3		
3	199	27.1	181	17.9		28.7	282	57.1		38.1	269	16.7		-08.4	259	41.4		38.2		
4	214	29.6	196	17.8		29.9	297	57.6		38.1	284	18.6		-08.3	274	43.6		38.2		
5	229	32.0	211	17.7	+8	31.2	312	58.2	-23	38.1	299	20.6	-22	-08.3	289	45.8	-20	38.1		
6	244	34.5	226	17.6	+8	32.4	327	58.8	-23	38.0	314	22.5	-22	-08.2	304	48.0	-20	38.1		
7	259	36.9	241	17.5		33.7	342	59.4		38.0	329	24.5		-08.1	319	50.2		38.0		
8	274	39.4	256	17.3		34.9	358	00.0		37.9	344	26.4		-08.1	334	52.4		38.0		
9	289	41.9	271	17.2		36.2	13	00.6		37.9	359	28.4		-08.0	349	54.6		37.9		
10	304	44.3	286	17.1		37.4	28	01.1		37.9	14	30.3		-08.0	4	56.8		37.9		
11	319	46.8	301	17.0	+8	38.6	43	01.7	-23	37.8	29	32.3	-22	-07.9	19	59.0	-20	37.9		
12	334	49.3	316	16.9	+8	39.9	58	02.3	-23	37.8	44	34.2	-22	-07.8	35	01.2	-20	37.8		
13	349	51.7	331	16.8		41.1	73	02.9		37.7	59	36.2		-07.8	50	03.4		37.8		
14	4	54.2	346	16.7		42.4	88	03.5		37.7	74	38.1		-07.7	65	05.6		37.7		
15	19	56.7	1	16.6		43.6	103	04.0		37.6	89	40.1		-07.7	80	07.8		37.7		
16	34	59.1	16	16.5		44.9	118	04.6		37.6	104	42.0		-07.6	95	10.0		37.6		
17	50	01.6	31	16.4	+8	46.1	133	05.2	-23	37.6	119	44.0	-22	-07.5	110	12.2	-20	37.6		
18	65	04.1	46	16.3	+8	47.3	148	05.8	-23	37.5	134	46.0	-22	-07.5	125	14.4	-20	37.5		
19	80	06.5	61	16.2		48.6	163	06.4		37.5	149	47.9		-07.4	140	16.6		37.5		
20	95	09.0	76	16.1		49.8	178	07.0		37.4	164	49.9		-07.3	155	18.8		37.4		
21	110	11.4	91	16.0		51.1	193	07.5		37.4	179	51.8		-07.3	170	21.0		37.4		
22	125	13.9	106	15.9		52.3	208	08.1		37.3	194	53.8		-07.2	185	23.2		37.3		
23	140	16.4	121	15.7		53.6	223	08.7		37.3	209	55.7		-07.2	200	25.4		37.3		
24	155	18.8	136	15.6	+8	54.8	238	09.3	-23	37.2	224	57.7	-22	-07.1	215	27.6	-20	37.2		
Dif.	—		-1		+12		+6		0		+20		+1		+22					

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 16'2				PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0			Náut.		Civil	Hora		Rº	Hora	Rº				
	PMG: 12 ^h 13 ^m 0				PMG: 14 ^h 20 ^m Rº: 40 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.												
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	176	44.3	-8	59.9	150	56.5	162	-3	36.0	117	60 N	5 39	6 27	7 09	8 24	7	20 32	76	
1	191	44.4		58.9	165	31.7	163		24.3	116	58	39	25	04	23	10	32	73	
2	206	44.5		58.0	180	07.0	162		12.7	116	56	40	23	7 00	22	12	32	70	
3	221	44.6		57.1	194	42.2	163	-3	01.1	117	54	40	21	6 57	21	14	32	68	
4	236	44.7		56.1	209	17.5	163	-2	49.4	116	52	41	20	54	21	15	31	67	
5	251	44.8	-8	55.2	223	52.8	163	-2	37.8	117	50	5 41	6 18	6 51	8 20	17	20 31	65	
6	266	44.9	-8	54.3	238	28.1	163	-2	26.1	117	45	5 41	6 15	6 44	8 18	21	20 31	61	
7	281	45.0		53.3	253	03.4	163		14.4	117	40	40	11	39	17	24	31	57	
8	296	45.1		52.4	267	38.7	163	-2	02.7	117	35	39	09	34	16	27	31	54	
9	311	45.2		51.5	282	14.0	164	-1	51.0	117	30	38	06	30	15	29	30	53	
10	326	45.3		50.5	296	49.4	163		39.3	117	20	35	6 00	22	13	33	30	48	
11	341	45.4	-8	49.6	311	24.7	164	-1	27.6	117	10 N	5 30	5 55	6 16	8 12	37	20 30	44	
12	356	45.5	-8	48.7	326	00.1	163	-1	15.9	117	0	5 24	5 49	6 10	8 10	41	20 30	40	
13	11	45.6		47.7	340	35.4	164	-1	04.2	117	10 S	17	42	6 03	09	44	29	37	
14	26	45.7		46.8	355	10.8	163	-0	52.5	117	20	5 08	34	5 56	07	48	29	33	
15	41	45.8		45.9	9	46.1	164		40.8	117	30	4 55	24	48	05	52	29	29	
16	56	45.9		44.9	24	21.5	164		29.1	117	35	47	18	44	04	55	28	27	
17	71	46.0	-8	44.0	38	56.9	164	-0	17.4	118	40	4 37	5 10	5 38	8 03	57	20 28	24	
18	86	46.1	-8	43.1	53	32.3	163	-0	05.6	117	45	4 25	5 02	5 32	8 02	60	20 28	21	
19	101	46.2		42.1	68	07.6	164	+0	06.1	117	50	09	4 51	25	8 00	65	27	18	
20	116	46.3		41.2	82	43.0	164		17.8	117	52	4 01	45	21	7 59	67	27	16	
21	131	46.4		40.3	97	18.4	164		29.5	118	54	3 53	40	17	59	68	27	14	
22	146	46.5		39.3	111	53.8	163		41.3	117	56	43	33	13	58	70	27	12	
23	161	46.6		38.4	126	29.1	164	+0	53.0	117	58	31	26	08	7 57	73	20 27	9	
24	176	46.7	-8	37.4	141	04.5		+1	04.7		60 S	3 17	4 17	5 03	7 56	75	20 26	8	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 13 ^h 36 ^m 5		Mag: -4.3 PMG: 14 ^h 55 ^m			Mag: +1.2 PMG: 08 ^h 07 ^m			Mag: -2.0 PMG: 08 ^h 59 ^m			Mag: +0.7 PMG: 09 ^h 37 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	155	18.8		136	15.6	+8	54.8	238	09.3	-23	37.2	224	57.7	-22	07.1	215	27.6	-20	37.2
1	170	21.3		151	15.5		56.0	253	09.9		37.2	239	59.6		07.0	230	29.8		37.2
2	185	23.8		166	15.4		57.3	268	10.4		37.2	255	01.6		07.0	245	32.0		37.1
3	200	26.2		181	15.3		58.5	283	11.0		37.1	270	03.5		06.9	260	34.2		37.1
4	215	28.7		196	15.2	+8	59.8	298	11.6		37.1	285	05.5		06.9	275	36.4		37.1
5	230	31.2		211	15.1	+9	01.0	313	12.2	-23	37.0	300	07.5	-22	06.8	290	38.6	-20	37.0
6	245	33.6		226	15.0	+9	02.2	328	12.8	-23	37.0	315	09.4	-22	06.7	305	40.8	-20	37.0
7	260	36.1		241	14.9		03.5	343	13.4		36.9	330	11.4		06.7	320	43.0		36.9
8	275	38.5		256	14.8		04.7	358	13.9		36.9	345	13.3		06.6	335	45.2		36.9
9	290	41.0		271	14.7		05.9	13	14.5		36.8	0	15.3		06.5	350	47.4		36.8
10	305	43.5		286	14.6		07.2	28	15.1		36.8	15	17.2		06.5	5	49.6		36.8
11	320	45.9		301	14.5	+9	08.4	43	15.7	-23	36.7	30	19.2	-22	06.4	20	51.8	-20	36.7
12	335	48.4		316	14.4	+9	09.7	58	16.3	-23	36.7	45	21.2	-22	06.4	35	54.0	-20	36.7
13	350	50.9		331	14.3		10.9	73	16.8		36.6	60	23.1		06.3	50	56.2		36.6
14	5	53.3		346	14.2		12.1	88	17.4		36.6	75	25.1		06.2	65	58.4		36.6
15	20	55.8		1	14.1		13.4	103	18.0		36.5	90	27.0		06.2	81	00.6		36.5
16	35	58.3		16	14.0		14.6	118	18.6		36.5	105	29.0		06.1	96	02.8		36.5
17	51	00.7		31	13.9	+9	15.8	133	19.2	-23	36.4	120	30.9	-22	06.0	111	05.0	-20	36.4
18	66	03.2		46	13.7	+9	17.1	148	19.8	-23	36.4	135	32.9	-22	06.0	126	07.2	-20	36.4
19	81	05.7		61	13.6		18.3	163	20.3		36.3	150	34.9		05.9	141	09.4		36.4
20	96	08.1		76	13.5		19.5	178	20.9		36.2	165	36.8		05.9	156	11.6		36.3
21	111	10.6		91	13.4		20.8	193	21.5		36.2	180	38.8		05.8	171	13.8		36.3
22	126	13.0		106	13.3		22.0	208	22.1		36.1	195	40.7		05.7	186	16.0		36.2
23	141	15.5		121	13.2		23.2	223	22.7		36.1	210	42.7		05.7	201	18.2		36.2
24	156	18.0		136	13.1	+9	24.5	238	23.2	-23	36.0	225	44.7	-22	05.6	216	20.4	-20	36.1
Dif.	—		-1		+12		+6		+1		+20		+1		+22		0		

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 12 ^m 8				SD: 14'7 Edad: 3 ^d 4 PMG: 15 ^h 00 ^m													
					PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1													
	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	46.7	-8	37.4	141	04.5	164	+1	04.7	117	60 N	17 21	18 03	18 51	8 31	8	21 48	77
1	191	46.8		36.5	155	39.9	164		16.4	117	58	25	05	50	33	10	45	74
2	206	46.9		35.6	170	15.3	163		28.1	117	56	29	06	49	34	12	42	72
3	221	47.0		34.6	184	50.6	164		39.8	117	54	32	08	49	35	15	40	69
4	236	47.1		33.7	199	26.0	163	+1	51.5	117	52	35	09	48	36	16	38	67
5	251	47.2	-8	32.8	214	01.3	164	+2	03.2	117	50	17 38	18 10	18 48	8 37	18	21 36	65
6	266	47.3	-8	31.8	228	36.7	163	+2	14.9	116	45	17 44	18 13	18 47	8 39	22	21 32	61
7	281	47.4		30.9	243	12.0	163		26.5	117	40	49	16	48	41	25	28	58
8	296	47.5		29.9	257	47.3	163		38.2	117	35	53	19	48	43	27	25	56
9	311	47.7		29.0	272	22.6	163	+2	49.9	116	30	17 57	21	49	44	30	23	52
10	326	47.8		28.1	286	57.9	163	+3	01.5	117	20	18 04	26	52	46	34	18	49
11	341	47.9	-8	27.1	301	33.2	163	+3	13.2	116	10 N	18 10	18 31	18 56	8 49	37	21 14	45
12	356	48.0	-8	26.2	316	08.5	163	+3	24.8	116	0	18 16	18 37	19 01	8 51	41	21 10	42
13	11	48.1		25.2	330	43.8	162		36.4	116	10 S	22	43	08	53	44	06	39
14	26	48.2		24.3	345	19.0	162		48.0	116	20	29	18 51	17	55	48	21 02	35
15	41	48.3		23.4	359	54.2	163	+3	59.6	116	30	36	19 00	29	57	53	20 58	30
16	56	48.4		22.4	14	29.5	162	+4	11.2	115	35	40	06	37	8 59	55	55	28
17	71	48.5	-8	21.5	29	04.7	161	+4	22.7	116	40	18 45	19 13	19 46	9 00	58	20 52	26
18	86	48.6	-8	20.5	43	39.8	162	+4	34.3	115	45	18 51	19 22	19 58	9 02	61	20 49	22
19	101	48.7		19.6	58	15.0	161		45.8	115	50	18 58	32	20 13	05	65	45	18
20	116	48.8		18.7	72	50.1	162	+4	57.3	115	52	19 02	37	20	06	67	43	17
21	131	49.0		17.7	87	25.3	161	+5	08.8	115	54	05	42	28	07	69	41	15
22	146	49.1		16.8	102	00.4	161		20.3	115	56	09	48	38	08	71	39	13
23	161	49.2		15.8	116	35.5	160		31.8	114	58	13	19 55	20 49	10	73	36	11
24	176	49.3	-8	14.9	131	10.5		+5	43.2		60 S	19 18	20 03	21 02	9 11	77	20 34	7
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 32 ^m 6		Mag: -4.3 PMG: 14 ^h 55 ^m			Mag: +1.1 PMG: 08 ^h 06 ^m			Mag: -2.0 PMG: 08 ^h 56 ^m			Mag: +0.7 PMG: 09 ^h 33 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	156	18.0	136	13.1	+9	24.5	238	23.2	-23	36.0	225	44.7	-22	-05.6	216	20.4	-20	36.1
1	171	20.4	151	13.0		25.7	253	23.8		36.0	240	46.6		-05.6	231	22.6		36.1
2	186	22.9	166	12.9		26.9	268	24.4		35.9	255	48.6		-05.5	246	24.8		36.0
3	201	25.4	181	12.8		28.2	283	25.0		35.9	270	50.5		-05.4	261	27.0		36.0
4	216	27.8	196	12.7		29.4	298	25.6		35.8	285	52.5		-05.4	276	29.2		35.9
5	231	30.3	211	12.6	+9	30.6	313	26.2	-23	35.8	300	54.5	-22	-05.3	291	31.4	-20	35.9
6	246	32.8	226	12.5	+9	31.8	328	26.7	-23	35.7	315	56.4	-22	-05.2	306	33.6	-20	35.8
7	261	35.2	241	12.4		33.1	343	27.3		35.6	330	58.4		-05.2	321	35.8		35.8
8	276	37.7	256	12.3		34.3	358	27.9		35.6	346	00.3		-05.1	336	38.0		35.7
9	291	40.2	271	12.2		35.5	13	28.5		35.5	1	02.3		-05.1	351	40.2		35.7
10	306	42.6	286	12.1		36.8	28	29.1		35.5	16	04.3		-05.0	6	42.4		35.7
11	321	45.1	301	12.0	+9	38.0	43	29.6	-23	35.4	31	06.2	-22	-04.9	21	44.6	-20	35.6
12	336	47.5	316	11.9	+9	39.2	58	30.2	-23	35.3	46	08.2	-22	-04.9	36	46.8	-20	35.6
13	351	50.0	331	11.8		40.4	73	30.8		35.3	61	10.1		-04.8	51	49.0		35.5
14	6	52.5	346	11.7		41.7	88	31.4		35.2	76	12.1		-04.8	66	51.2		35.5
15	21	54.9	1	11.6		42.9	103	32.0		35.2	91	14.1		-04.7	81	53.5		35.4
16	36	57.4	16	11.5		44.1	118	32.6		35.1	106	16.0		-04.6	96	55.7		35.4
17	51	59.9	31	11.4	+9	45.4	133	33.1	-23	35.0	121	18.0	-22	-04.6	111	57.9	-20	35.3
18	67	02.3	46	11.3	+9	46.6	148	33.7	-23	35.0	136	19.9	-22	-04.5	127	00.1	-20	35.3
19	82	04.8	61	11.2		47.8	163	34.3		34.9	151	21.9		-04.4	142	02.3		35.2
20	97	07.3	76	11.1		49.0	178	34.9		34.9	166	23.9		-04.4	157	04.5		35.2
21	112	09.7	91	10.9		50.3	193	35.5		34.8	181	25.8		-04.3	172	06.7		35.1
22	127	12.2	106	10.8		51.5	208	36.0		34.7	196	27.8		-04.3	187	08.9		35.1
23	142	14.6	121	10.7		52.7	223	36.6		34.7	211	29.8		-04.2	202	11.1		35.1
24	157	17.1	136	10.6	+9	53.9	238	37.2	-23	34.6	226	31.7	-22	-04.1	217	13.3	-20	35.0
Dif.	—		-1	+12			+6	+1			+20	+1			+22			

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 16'1 PMG: 12 ^h 12 ^m 6			SD: 14'7 Edad: 4 ^d 4 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'3 PMG: 15 ^h 42 ^m 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	176	49.3	-8	131	10.5	161	+5	43.2	115	60 N	5	33	6	21	7	03	8	39	9	23	05	78	
1	191	49.4		145	45.6	160	+5	54.7	114	58		34		20	6	59	43	11		22	59	75	
2	206	49.5		160	20.6	160	+6	06.1	114	56		35		18		55	46	14		54	72		
3	221	49.6		174	55.6	159		17.5	113	54		36		17		52	50	15		49	70		
4	236	49.7		189	30.5	159		28.8	114	52		36		15		49	52	18		45	68		
5	251	49.8	-8	204	05.4	159	+6	40.2	113	50		5	37	6	14	6	47	8	55	20	22	41	66
6	266	49.9	-8	218	40.3	159	+6	51.5	113	45		5	37	6	11	6	41	9	01	23	22	33	62
7	281	50.1		233	15.2	159	+7	02.8	113	40			37		09	36	06	26		26	59		
8	296	50.2		247	50.1	158		14.1	112	35			37		06	32	10	29		21	56		
9	311	50.3		262	24.9	158		25.3	113	30			36		6	04	14	31		15	55		
10	326	50.4		276	59.7	157		36.6	112	20			33		5	59	20	36		22	07	50	
11	341	50.5	-8	291	34.4	157	+7	47.8	112	10 N		5	29	5	54	6	15	9	26	39	21	59	46
12	356	50.6	-8	306	09.1	157	+7	59.0	111	0		5	24	5	48	6	09	9	32	42	21	52	43
13	11	50.7		320	43.8	157	+8	10.1	111	10 S			17		42	6	03	37	46		45	40	
14	26	50.8		335	18.5	156		21.2	111	20		5	09	35	5	57	43	49		37	37		
15	41	51.0	-8	349	53.1	156		32.3	111	30		4	57	25	50		50	53		28	33		
16	56	51.1	-7	4	27.7	155		43.4	110	35		49	20	45			54	56		23	31		
17	71	51.2	-7	19	02.2	155	+8	54.4	110	40		4	40	5	13	5	41	9	58	59	21	18	27
18	86	51.3	-7	33	36.7	155	+9	05.4	110	45		4	28	5	05	5	35	10	03	62	21	11	25
19	101	51.4		48	11.2	154		16.4	109	50			13	4	54	28	10	66		03	21		
20	116	51.5		62	45.6	154		27.3	109	52		4	06	49	25		13	67		21	00	19	
21	131	51.7		77	20.0	153		38.2	109	54		3	58	44	21		16	70		20	56	17	
22	146	51.8		91	54.3	153		49.1	108	56		48	38	17			19	72		52	14		
23	161	51.9		106	28.6	153	+9	59.9	108	58		37	31	13			10	23	75	20	47	12	
24	176	52.0	-7	121	02.9		+10	10.7		60 S		3	25	4	23	5	08	10	28	77	20	41	10

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 13 ^h 28 ^m 6		Mag: -4.3 PMG: 14 ^h 55 ^m				Mag: +1.1 PMG: 08 ^h 05 ^m				Mag: -2.0 PMG: 08 ^h 53 ^m				Mag: +0.7 PMG: 09 ^h 30 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	157	17.1	136	10.6	+9	53.9	238	37.2	-23	34.6	226	31.7	-22	04.1	217	13.3	-20	35.0
1	172	19.6	151	10.5		55.2	253	37.8		34.5	241	33.7		04.1	232	15.5		35.0
2	187	22.0	166	10.4		56.4	268	38.4		34.5	256	35.7		04.0	247	17.7		34.9
3	202	24.5	181	10.3		57.6	283	39.0		34.4	271	37.6		04.0	262	19.9		34.9
4	217	27.0	196	10.2	+9	58.8	298	39.5		34.4	286	39.6		03.9	277	22.1		34.8
5	232	29.4	211	10.1	+10	00.0	313	40.1	-23	34.3	301	41.5	-22	03.8	292	24.3	-20	34.8
6	247	31.9	226	10.0	+10	01.3	328	40.7	-23	34.2	316	43.5	-22	03.8	307	26.5	-20	34.7
7	262	34.4	241	09.9		02.5	343	41.3		34.2	331	45.5		03.7	322	28.7		34.7
8	277	36.8	256	09.8		03.7	358	41.9		34.1	346	47.4		03.6	337	30.9		34.6
9	292	39.3	271	09.7		04.9	13	42.4		34.0	1	49.4		03.6	352	33.1		34.6
10	307	41.8	286	09.6		06.1	28	43.0		34.0	16	51.4		03.5	7	35.3		34.5
11	322	44.2	301	09.5	+10	07.4	43	43.6	-23	33.9	31	53.3	-22	03.5	22	37.5	-20	34.5
12	337	46.7	316	09.4	+10	08.6	58	44.2	-23	33.8	46	55.3	-22	03.4	37	39.7	-20	34.5
13	352	49.1	331	09.3		09.8	73	44.8		33.8	61	57.3		03.3	52	41.9		34.4
14	7	51.6	346	09.2		11.0	88	45.4		33.7	76	59.2		03.3	67	44.2		34.4
15	22	54.1	1	09.1		12.2	103	45.9		33.6	92	01.2		03.2	82	46.4		34.3
16	37	56.5	16	09.0		13.5	118	46.5		33.5	107	03.2		03.1	97	48.6		34.3
17	52	59.0	31	08.9	+10	14.7	133	47.1	-23	33.5	122	05.1	-22	03.1	112	50.8	-20	34.2
18	68	01.5	46	08.8	+10	15.9	148	47.7	-23	33.4	137	07.1	-22	03.0	127	53.0	-20	34.2
19	83	03.9	61	08.7		17.1	163	48.3		33.3	152	09.1		03.0	142	55.2		34.1
20	98	06.4	76	08.6		18.3	178	48.9		33.3	167	11.0		02.9	157	57.4		34.1
21	113	08.9	91	08.5		19.5	193	49.4		33.2	182	13.0		02.8	172	59.6		34.0
22	128	11.3	106	08.4		20.7	208	50.0		33.1	197	15.0		02.8	188	01.8		34.0
23	143	13.8	121	08.3		22.0	223	50.6		33.1	212	16.9		02.7	203	04.0		33.9
24	158	16.2	136	08.2	+10	23.2	238	51.2	-23	33.0	227	18.9	-22	02.7	218	06.2	-20	33.9
Dif.	—		-1		+12		+6		+1		+20		+1		+22		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 : 54'4											
	PMG: 12 ^h 12 ^m 4			Edad: 5 ^d 4			{ 12 ^h : 54'6											
							{ 20 ^h : 54'7											
	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	52.0	-7	52.2	121	02.9	152	+10	10.7	108	60 N	17 26	18 08	18 56	8 48	11	*** **	
1	191	52.1		51.3	135	37.1	152		21.5	107	58	30	09	55	8 54	14	*** **	
2	206	52.2		50.3	150	11.3	151		32.2	107	56	33	10	53	9 00	17	*** **	
3	221	52.3		49.4	164	45.4	151		42.9	107	54	36	12	52	05	19	23 59 72	
4	236	52.5		48.5	179	19.5	150	+10	53.6	106	52	39	13	52	10	21	53 69	
5	251	52.6	-7	47.5	193	53.5	150	+11	04.2	106	50	17 41	18 14	18 51	9 15	22	23 47 68	
6	266	52.7	-7	46.6	208	27.5	149	+11	14.8	105	45	17 47	18 16	18 50	9 24	27	23 35 64	
7	281	52.8		45.6	223	01.4	149		25.3	105	40	51	18	50	32	30	25 61	
8	296	52.9		44.7	237	35.3	149		35.8	105	35	55	21	50	39	32	17 58	
9	311	53.1		43.7	252	09.2	148		46.3	104	30	17 59	23	50	45	34	23 10 55	
10	326	53.2		42.8	266	43.0	147	+11	56.7	104	20	18 05	27	53	9 56	38	22 57 52	
11	341	53.3	-7	41.8	281	16.7	147	+12	07.1	103	10 N	18 10	18 32	18 56	10 05	42	22 45 49	
12	356	53.4	-7	40.9	295	50.4	146	+12	17.4	103	0	18 16	18 37	19 01	10 14	44	22 35 46	
13	11	53.5		39.9	310	24.0	146		27.7	102	10 S	21	42	07	23	47	25 42	
14	26	53.6		39.0	324	57.6	145		37.9	102	20	27	49	15	32	51	14 39	
15	41	53.8		38.0	339	31.1	144		48.1	102	30	34	18 58	27	43	55	22 01 36	
16	56	53.9		37.1	354	04.5	144	+12	58.3	101	35	38	19 04	34	50	57	21 54 33	
17	71	54.0	-7	36.1	8	37.9	144	+13	08.4	100	40	18 42	19 10	19 43	10 57	60	21 45 32	
18	86	54.1	-7	35.2	23	11.3	143	+13	18.4	100	45	18 48	19 18	19 54	11 05	63	21 36 28	
19	101	54.2		34.2	37	44.6	142		28.4	100	50	54	28	20 08	16	67	24 25	
20	116	54.4		33.3	52	17.8	142		38.4	99	52	18 57	32	15	20	69	19 23	
21	131	54.5		32.3	66	51.0	141		48.3	99	54	19 00	37	23	26	71	13 21	
22	146	54.6		31.4	81	24.1	140	+13	58.2	98	56	04	43	32	31	74	21 06 19	
23	161	54.7		30.4	95	57.1	140	+14	08.0	97	58	08	50	42	38	76	20 59 16	
24	176	54.8	-7	29.5	110	30.1		+14	17.7		60 S	19 13	19 57	20 54	11 45	80	20 51 13	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.3				Mag: +1.1				Mag: -2.0				Mag: +0.7			
	13 ^h 24 ^m 7		PMG: 14 ^h 56 ^m				PMG: 08 ^h 04 ^m				PMG: 08 ^h 50 ^m				PMG: 09 ^h 26 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	158	16.2	136	08.2	+10	23.2	238	51.2	-23	33.0	227	18.9	-22	-02.7	218	06.2	-20	33.9
1	173	18.7	151	08.1		24.4	253	51.8		32.9	242	20.9		-02.6	233	08.4		33.9
2	188	21.2	166	08.0		25.6	268	52.3		32.8	257	22.8		-02.5	248	10.6		33.8
3	203	23.6	181	07.9		26.8	283	52.9		32.8	272	24.8		-02.5	263	12.8		33.8
4	218	26.1	196	07.8		28.0	298	53.5		32.7	287	26.8		-02.4	278	15.0		33.7
5	233	28.6	211	07.7	+10	29.2	313	54.1	-23	32.6	302	28.7	-22	-02.3	293	17.2	-20	33.7
6	248	31.0	226	07.6	+10	30.5	328	54.7	-23	32.5	317	30.7	-22	-02.3	308	19.5	-20	33.6
7	263	33.5	241	07.5		31.7	343	55.3		32.5	332	32.7		-02.2	323	21.7		33.6
8	278	36.0	256	07.4		32.9	358	55.8		32.4	347	34.6		-02.2	338	23.9		33.5
9	293	38.4	271	07.3		34.1	13	56.4		32.3	2	36.6		-02.1	353	26.1		33.5
10	308	40.9	286	07.2		35.3	28	57.0		32.2	17	38.6		-02.0	8	28.3		33.4
11	323	43.4	301	07.1	+10	36.5	43	57.6	-23	32.2	32	40.5	-22	-02.0	23	30.5	-20	33.4
12	338	45.8	316	07.0	+10	37.7	58	58.2	-23	32.1	47	42.5	-22	-01.9	38	32.7	-20	33.3
13	353	48.3	331	06.9		38.9	73	58.7		32.0	62	44.5		-01.8	53	34.9		33.3
14	8	50.7	346	06.8		40.1	88	59.3		31.9	77	46.5		-01.8	68	37.1		33.3
15	23	53.2	1	06.7		41.3	103	59.9		31.9	92	48.4		-01.7	83	39.3		33.2
16	38	55.7	16	06.6		42.6	119	00.5		31.8	107	50.4		-01.7	98	41.5		33.2
17	53	58.1	31	06.5	+10	43.8	134	01.1	-23	31.7	122	52.4	-22	-01.6	113	43.7	-20	33.1
18	69	00.6	46	06.4	+10	45.0	149	01.7	-23	31.6	137	54.3	-22	-01.5	128	45.9	-20	33.1
19	84	03.1	61	06.3		46.2	164	02.2		31.5	152	56.3		-01.5	143	48.2		33.0
20	99	05.5	76	06.2		47.4	179	02.8		31.5	167	58.3		-01.4	158	50.4		33.0
21	114	08.0	91	06.1		48.6	194	03.4		31.4	183	00.3		-01.4	173	52.6		32.9
22	129	10.5	106	06.0		49.8	209	04.0		31.3	198	02.2		-01.3	188	54.8		32.9
23	144	12.9	121	05.9		51.0	224	04.6		31.2	213	04.2		-01.2	203	57.0		32.8
24	159	15.4	136	05.8	+10	52.2	239	05.2	-23	31.1	228	06.2	-22	-01.2	218	59.2	-20	32.8
Dif.	—		-1	+12			+6	+1			+20	+1			+22			

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1			SD: 14'9 Edad: 6 ^d 4											PHE { 4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'2			
	PMG: 12 ^h 12 ^m 2			PMG: 17 ^h 10 ^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		
0	176	54.8	-7	29.5	110	30.1	140	+14	17.7	97	60 N	5 28	6 15	6 57	8 59	15	0 23 80	
1	191	55.0		28.5	125	03.1	138		27.4	96	58	29	14	54	9 08	19	14 77	
2	206	55.1		27.6	139	35.9	138		37.0	96	56	30	13	50	17	21	0 06 74	
3	221	55.2		26.6	154	08.7	137		46.6	95	54	31	12	48	24	24	*** ** *	
4	236	55.3		25.7	168	41.4	137	+14	56.1	95	52	32	11	45	31	26	*** ** *	
5	251	55.5	-7	24.7	183	14.1	136	+15	05.6	94	50	5 33	6 10	6 43	9 37	28	*** ** *	
6	266	55.6	-7	23.8	197	46.7	135	+15	15.0	94	45	5 34	6 08	6 37	9 51	31	*** ** *	
7	281	55.7		22.8	212	19.2	135		24.4	93	40	34	06	33	10 02	34	*** ** *	
8	296	55.8		21.8	226	51.7	134		33.7	92	35	34	04	29	11	36	*** ** *	
9	311	56.0		20.9	241	24.1	133		42.9	92	30	34	6 02	26	19	39	*** ** *	
10	326	56.1		19.9	255	56.4	133	+15	52.1	91	20	32	5 57	20	34	42	23 49 54	
11	341	56.2	-7	19.0	270	28.7	132	+16	01.2	90	10 N	5 28	5 53	6 14	10 47	44	23 34 52	
12	356	56.3	-7	18.0	285	00.9	131	+16	10.2	90	0	5 24	5 48	6 09	10 58	48	23 21 49	
13	11	56.4		17.1	299	33.0	131		19.2	89	10 S	18	42	6 04	11 10	51	23 07 47	
14	26	56.6		16.1	314	05.1	129		28.1	89	20	5 10	36	5 58	23	54	22 53 44	
15	41	56.7		15.2	328	37.0	129		37.0	88	30	4 58	27	51	38	57	37 41	
16	56	56.8		14.2	343	08.9	129		45.8	87	35	51	22	47	47	59	27 39	
17	71	56.9	-7	13.3	357	40.8	127	+16	54.5	86	40	4 42	5 15	5 43	11 57	61	22 17 36	
18	86	57.1	-7	12.3	12	12.5	127	+17	03.1	86	45	4 31	5 07	5 38	12 08	64	22 04 34	
19	101	57.2		11.4	26	44.2	126		11.7	85	50	17	4 58	31	23	67	21 49 30	
20	116	57.3		10.4	41	15.8	126		20.2	84	52	10	53	28	29	70	42 29	
21	131	57.4		09.4	55	47.4	124		28.6	84	54	4 03	48	25	37	71	34 27	
22	146	57.6		08.5	70	18.8	124		37.0	83	56	3 54	43	22	45	74	25 25	
23	161	57.7		07.5	84	50.2	123		45.3	82	58	44	36	18	12 54	77	21 15 22	
24	176	57.8	-7	06.6	99	21.5		+17	53.5		60 S	3 32	4 29	5 13	13 05	80	21 04 18	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 13 ^h 20 ^m 8		Mag: -4.3 PMG: 14 ^h 56 ^m				Mag: +1.1 PMG: 08 ^h 03 ^m				Mag: -2.0 PMG: 08 ^h 46 ^m				Mag: +0.7 PMG: 09 ^h 23 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	159	15.4	136	05.8	+10	52.2	239	05.2	-23	31.1	228	06.2	-22	01.2	218	59.2	-20	32.8
1	174	17.9	151	05.7		53.4	254	05.7		31.1	243	08.1		01.1	234	01.4		32.8
2	189	20.3	166	05.6		54.6	269	06.3		31.0	258	10.1		01.0	249	03.6		32.7
3	204	22.8	181	05.5		55.8	284	06.9		30.9	273	12.1		01.0	264	05.8		32.7
4	219	25.2	196	05.4		57.0	299	07.5		30.8	288	14.1		00.9	279	08.0		32.6
5	234	27.7	211	05.3	+10	58.2	314	08.1	-23	30.7	303	16.0	-22	00.9	294	10.2	-20	32.6
6	249	30.2	226	05.2	+10	59.4	329	08.7	-23	30.6	318	18.0	-22	00.8	309	12.5	-20	32.5
7	264	32.6	241	05.1	+11	00.6	344	09.2		30.6	333	20.0		00.7	324	14.7		32.5
8	279	35.1	256	05.0		01.8	359	09.8		30.5	348	21.9		00.7	339	16.9		32.4
9	294	37.6	271	04.9		03.0	14	10.4		30.4	3	23.9		00.6	354	19.1		32.4
10	309	40.0	286	04.8		04.2	29	11.0		30.3	18	25.9		00.5	9	21.3		32.3
11	324	42.5	301	04.7	+11	05.4	44	11.6	-23	30.2	33	27.9	-22	00.5	24	23.5	-20	32.3
12	339	45.0	316	04.6	+11	06.6	59	12.1	-23	30.1	48	29.8	-22	00.4	39	25.7	-20	32.3
13	354	47.4	331	04.5		07.8	74	12.7		30.1	63	31.8		00.4	54	27.9		32.2
14	9	49.9	346	04.4		09.0	89	13.3		30.0	78	33.8		00.3	69	30.1		32.2
15	24	52.3	1	04.3		10.2	104	13.9		29.9	93	35.8		00.2	84	32.3		32.1
16	39	54.8	16	04.2		11.4	119	14.5		29.8	108	37.7		00.2	99	34.6		32.1
17	54	57.3	31	04.1	+11	12.6	134	15.1	-23	29.7	123	39.7	-22	00.1	114	36.8	-20	32.0
18	69	59.7	46	04.0	+11	13.8	149	15.6	-23	29.6	138	41.7	-22	00.1	129	39.0	-20	32.0
19	85	02.2	61	03.9		15.0	164	16.2		29.5	153	43.7	-22	00.0	144	41.2		31.9
20	100	04.7	76	03.8		16.2	179	16.8		29.4	168	45.6	-21	59.9	159	43.4		31.9
21	115	07.1	91	03.7		17.4	194	17.4		29.4	183	47.6		59.9	174	45.6		31.8
22	130	09.6	106	03.6		18.6	209	18.0		29.3	198	49.6		59.8	189	47.8		31.8
23	145	12.1	121	03.5		19.8	224	18.6		29.2	213	51.6		59.7	204	50.0		31.8
24	160	14.5	136	03.4	+11	21.0	239	19.1	-23	29.1	228	53.5	-21	59.7	219	52.2	-20	31.7
Dif.	—		-1		+12		+6		+1		+20		+1		+22			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'1			SD: 15'1 Edad: 7 ^d 4																
	PMG: 12 ^h 12 ^m 0			PMG: 17 ^h 58 ^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	176	57.8	-7	06.6	99	21.5	122	+17	53.5	81	60 N	17 31	18 13	19 01	9 14	24	1 43	79		
1	191	58.0		05.6	113	52.7	122	+18	01.6	81	58	34	14	18 59	27	27	31	76		
2	206	58.1		04.7	128	23.9	121		09.7	80	56	37	15	58	38	30	20	73		
3	221	58.2		03.7	142	55.0	120		17.7	79	54	40	15	56	48	31	11	71		
4	236	58.3		02.8	157	26.0	119		25.6	78	52	42	16	55	9 57	33	1 02	69		
5	251	58.5	-7	01.8	171	56.9	118	+18	33.4	78	50	17 44	18 17	18 54	10 05	35	0 55	67		
6	266	58.6	-7	00.8	186	27.7	118	+18	41.2	77	45	17 49	18 19	18 53	10 22	37	0 39	64		
7	281	58.7	-6	59.9	200	58.5	116		48.9	76	40	53	21	52	36	40	26	61		
8	296	58.9		58.9	215	29.1	116	+18	56.5	75	35	17 57	22	52	47	42	15	59		
9	311	59.0		58.0	229	59.7	116	+19	04.0	74	30	18 00	24	52	10 58	43	0 05	58		
10	326	59.1		57.0	244	30.3	114		11.4	73	20	06	28	53	11 16	46	***	**		
11	341	59.2	-6	56.1	259	00.7	113	+19	18.7	73	10 N	18 11	18 32	18 56	11 31	49	***	**		
12	356	59.4	-6	55.1	273	31.0	113	+19	26.0	71	0	18 15	18 36	19 00	11 46	51	***	**		
13	11	59.5		54.1	288	01.3	112		33.1	71	10 S	20	41	06	12 01	53	23 54	51		
14	26	59.6		53.2	302	31.5	111		40.2	70	20	26	48	14	17	55	37	49		
15	41	59.8		52.2	317	01.6	110		47.2	69	30	32	18 56	24	35	58	18	46		
16	56	59.9		51.3	331	31.6	110	+19	54.1	68	35	35	19 01	31	46	59	23 06	46		
17	72	00.0	-6	50.3	346	01.6	108	+20	00.9	67	40	18 39	19 07	19 40	12 58	61	22 53	44		
18	87	00.1	-6	49.4	0	31.4	108	+20	07.6	67	45	18 44	19 14	19 50	13 12	64	22 38	42		
19	102	00.3		48.4	15	01.2	107		14.3	65	50	50	23	20 03	30	67	19	39		
20	117	00.4		47.4	29	30.9	106		20.8	64	52	53	27	10	39	68	11	37		
21	132	00.5		46.5	44	00.5	105		27.2	64	54	56	32	17	48	70	22 01	36		
22	147	00.7		45.5	58	30.0	105		33.6	62	56	18 59	38	26	13 59	72	21 50	34		
23	162	00.8		44.6	72	59.5	103		39.8	62	58	19 02	44	35	14 11	75	37	31		
24	177	00.9	-6	43.6	87	28.8		+20	46.0		60 S	19 07	19 51	20 47	14 25	79	21 22	28		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 13 ^h 16 ^m 8		Mag: -4.3 PMG: 14 ^h 56 ^m				Mag: +1.1 PMG: 08 ^h 02 ^m				Mag: -2.0 PMG: 08 ^h 43 ^m				Mag: +0.7 PMG: 09 ^h 19 ^m					
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	160	14.5	136	03.4	+11	21.0	239	19.1	-23	29.1	228	53.5	-21	-59.7	219	52.2	-20	31.7		
1	175	17.0	151	03.3		22.2	254	19.7		29.0	243	55.5		-59.6	234	54.5		31.7		
2	190	19.5	166	03.2		23.4	269	20.3		28.9	258	57.5		-59.6	249	56.7		31.6		
3	205	21.9	181	03.1		24.6	284	20.9		28.8	273	59.5		-59.5	264	58.9		31.6		
4	220	24.4	196	03.0		25.8	299	21.5		28.7	289	01.4		-59.4	280	01.1		31.5		
5	235	26.8	211	02.9	+11	27.0	314	22.1	-23	28.6	304	03.4	-21	-59.4	295	03.3	-20	31.5		
6	250	29.3	226	02.8	+11	28.1	329	22.6	-23	28.5	319	05.4	-21	-59.3	310	05.5	-20	31.4		
7	265	31.8	241	02.7		29.3	344	23.2		28.5	334	07.4		-59.2	325	07.7		31.4		
8	280	34.2	256	02.6		30.5	359	23.8		28.4	349	09.4		-59.2	340	09.9		31.3		
9	295	36.7	271	02.5		31.7	14	24.4		28.3	4	11.3		-59.1	355	12.1		31.3		
10	310	39.2	286	02.4		32.9	29	25.0		28.2	19	13.3		-59.1	10	14.4		31.3		
11	325	41.6	301	02.3	+11	34.1	44	25.6	-23	28.1	34	15.3	-21	-59.0	25	16.6	-20	31.2		
12	340	44.1	316	02.2	+11	35.3	59	26.1	-23	28.0	49	17.3	-21	-58.9	40	18.8	-20	31.2		
13	355	46.6	331	02.1		36.5	74	26.7		27.9	64	19.2		-58.9	55	21.0		31.1		
14	10	49.0	346	02.1		37.7	89	27.3		27.8	79	21.2		-58.8	70	23.2		31.1		
15	25	51.5	1	02.0		38.9	104	27.9		27.7	94	23.2		-58.8	85	25.4		31.0		
16	40	54.0	16	01.9		40.0	119	28.5		27.6	109	25.2		-58.7	100	27.6		31.0		
17	55	56.4	31	01.8	+11	41.2	134	29.1	-23	27.5	124	27.2	-21	-58.6	115	29.8	-20	30.9		
18	70	58.9	46	01.7	+11	42.4	149	29.6	-23	27.4	139	29.1	-21	-58.6	130	32.1	-20	30.9		
19	86	01.3	61	01.6		43.6	164	30.2		27.3	154	31.1		-58.5	145	34.3		30.8		
20	101	03.8	76	01.5		44.8	179	30.8		27.2	169	33.1		-58.4	160	36.5		30.8		
21	116	06.3	91	01.4		46.0	194	31.4		27.1	184	35.1		-58.4	175	38.7		30.8		
22	131	08.7	106	01.3		47.2	209	32.0		27.0	199	37.1		-58.3	190	40.9		30.7		
23	146	11.2	121	01.2		48.3	224	32.6		26.9	214	39.0		-58.3	205	43.1		30.7		
24	161	13.7	136	01.1	+11	49.5	239	33.1	-23	26.8	229	41.0	-21	-58.2	220	45.3	-20	30.6		
Dif.	—		-1		+12		+6		+1		+20		+1		+22					

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 : 56'2 12 ^h : 56'5 20 ^h : 56'8													
	PMG: 12 ^h 11 ^m 8			Edad: 8 ^d 4																
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		R°	Hora	R°				
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	177	00.9	-6	87	28.8	103	+20	46.0	60	5	22	6	10	6	51	9	38	36		
1	192	01.1		101	58.1	102		52.0	60	58	24	09	48			9	54	38		
2	207	01.2		116	27.3	101	+20	58.0	58	56	25	08	45	10	08	40				
3	222	01.3		130	56.4	101	+21	03.8	58	54	27	08	43		19	43				
4	237	01.5		145	25.5	99		09.6	56	52	28	07	41		30	43				
5	252	01.6	-6	159	54.4	99	+21	15.2	55	50	5	29	6	06	6	38	10	40	44	
6	267	01.7	-6	174	23.3	97	+21	20.7	55	45	5	31	6	04	6	34	10	59	47	
7	282	01.9		188	52.0	97		26.2	53	40	31	03	30		11	16	48			
8	297	02.0		203	20.7	96		31.5	52	35	32	6	01	26		29	50			
9	312	02.1		217	49.3	96		36.7	51	30	32	5	59	23	11	41	51			
10	327	02.3		232	17.9	94		41.8	50	20	30	56	18		12	02	52			
11	342	02.4	-6	246	46.3	94	+21	46.8	49	10 N	5	28	5	52	6	13	12	20	53	
12	357	02.5	-6	261	14.7	92	+21	51.7	48	0	5	24	5	48	6	09	12	37	54	
13	12	02.7		275	42.9	92	+21	56.5	47	10 S	18	43	6	04		12	54	55	*** ** *	
14	27	02.8		290	11.1	92	+22	01.2	45	20	10	36	5	59		13	12	57	*** ** *	
15	42	02.9		304	39.3	90		05.7	45	30	5	00	28	53		33	58		*** ** *	
16	57	03.1		319	07.3	89		10.2	43	35	4	53	23	49		45	59		23 52 53	
17	72	03.2	-6	333	35.2	89	+22	14.5	42	40	4	45	5	18	5	45	13	59	61	
18	87	03.3	-6	348	03.1	88	+22	18.7	41	45	4	34	5	10	5	40	14	16	62	
19	102	03.5		2	30.9	87		22.8	40	50	21	5	01	35		37	63		22 58 50	
20	117	03.6		16	58.6	86		26.8	38	52	15	4	57	32		47	64		48 50	
21	132	03.8		31	26.2	86		30.6	38	54	4	07	53	29		14	58	65	37 48	
22	147	03.9		45	53.8	85		34.4	36	56	3	59	47	26		15	11	66	24 47	
23	162	04.0		60	21.3	84		38.0	35	58	50	41	22			15	26	68	22 08 47	
24	177	04.2	-6	74	48.7		+22	41.5		60 S	3	38	4	34	5	18	15	44	70	21 50 45
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 13 ^h 12 ^m 9		Mag: -4.3 PMG: 14 ^h 56 ^m				Mag: +1.1 PMG: 08 ^h 01 ^m				Mag: -2.0 PMG: 08 ^h 40 ^m				Mag: +0.7 PMG: 09 ^h 16 ^m					
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	161	13.7	136	01.1	+11	49.5	239	33.1	-23	26.8	229	41.0	-21	58.2	220	45.3	-20	30.6		
1	176	16.1	151	01.0		50.7	254	33.7		26.7	244	43.0		58.1	235	47.6		30.6		
2	191	18.6	166	00.9		51.9	269	34.3		26.6	259	45.0		58.1	250	49.8		30.5		
3	206	21.1	181	00.8		53.1	284	34.9		26.5	274	47.0		58.0	265	52.0		30.5		
4	221	23.5	196	00.7		54.3	299	35.5		26.4	289	48.9		57.9	280	54.2		30.4		
5	236	26.0	211	00.6	+11	55.4	314	36.1	-23	26.3	304	50.9	-21	57.9	295	56.4	-20	30.4		
6	251	28.4	226	00.5	+11	56.6	329	36.6	-23	26.2	319	52.9	-21	57.8	310	58.6	-20	30.3		
7	266	30.9	241	00.4		57.8	344	37.2		26.1	334	54.9		57.8	326	00.8		30.3		
8	281	33.4	256	00.3	+11	59.0	359	37.8		26.0	349	56.9		57.7	341	03.1		30.3		
9	296	35.8	271	00.2	+12	00.2	14	38.4		25.9	4	58.8		57.6	356	05.3		30.2		
10	311	38.3	286	00.1		01.3	29	39.0		25.8	20	00.8		57.6	11	07.5		30.2		
11	326	40.8	301	00.0	+12	02.5	44	39.6	-23	25.7	35	02.8	-21	57.5	26	09.7	-20	30.1		
12	341	43.2	315	59.9	+12	03.7	59	40.1	-23	25.6	50	04.8	-21	57.5	41	11.9	-20	30.1		
13	356	45.7	330	59.8		04.9	74	40.7		25.5	65	06.8		57.4	56	14.1		30.0		
14	11	48.2	345	59.7		06.1	89	41.3		25.4	80	08.8		57.3	71	16.3		30.0		
15	26	50.6	0	59.6		07.2	104	41.9		25.3	95	10.7		57.3	86	18.6		29.9		
16	41	53.1	15	59.5		08.4	119	42.5		25.2	110	12.7		57.2	101	20.8		29.9		
17	56	55.6	30	59.5	+12	09.6	134	43.1	-23	25.1	125	14.7	-21	57.1	116	23.0	-20	29.9		
18	71	58.0	45	59.4	+12	10.8	149	43.6	-23	25.0	140	16.7	-21	57.1	131	25.2	-20	29.8		
19	87	00.5	60	59.3		11.9	164	44.2		24.9	155	18.7		57.0	146	27.4		29.8		
20	102	02.9	75	59.2		13.1	179	44.8		24.8	170	20.7		57.0	161	29.6		29.7		
21	117	05.4	90	59.1		14.3	194	45.4		24.7	185	22.6		56.9	176	31.9		29.7		
22	132	07.9	105	59.0		15.5	209	46.0		24.6	200	24.6		56.8	191	34.1		29.6		
23	147	10.3	120	58.9		16.6	224	46.6		24.5	215	26.6		56.8	206	36.3		29.6		
24	162	12.8	135	58.8	+12	17.8	239	47.1	-23	24.4	230	28.6	-21	56.7	221	38.5	-20	29.5		
Dif.	—		-1		+12		+6		+1		+20		+1		+22					

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1				SD: 15'5		PHE { 4 ^h : 57'1 12 ^h : 57'4 20 ^h : 57'7												
	PMG: 12 ^h 11 ^m 6				Edad: 9 ^d 4														
	PMG: 19 ^h 45 ^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 m	h m m	h m m			
0	177	04.2	-6	20.5	74	48.7	83	+22	41.5	34	60 N	17 36	18 18	19 06	10 14	54	4 17	62	
1	192	04.3		19.6	89	16.0	82		44.9	32	58	39	18	04	32	56	3 58	62	
2	207	04.4		18.6	103	43.2	82		48.1	31	56	41	19	02	10 48	56	43	61	
3	222	04.6		17.6	118	10.4	81		51.2	30	54	44	19	00	11 02	56	29	61	
4	237	04.7		16.7	132	37.5	80		54.2	29	52	46	20	18 59	13	57	18	60	
5	252	04.8	-6	15.7	147	04.5	80	+22	57.1	27	50	17 48	18 20	18 58	11 24	56	3 07	60	
6	267	05.0	-6	14.7	161	31.5	78	+22	59.8	27	45	17 52	18 21	18 55	11 46	57	2 46	59	
7	282	05.1		13.8	175	58.3	78	+23	02.5	24	40	56	23	54	12 04	57	28	59	
8	297	05.3		12.8	190	25.1	78		04.9	24	35	17 59	24	53	19	57	13	59	
9	312	05.4		11.8	204	51.9	76		07.3	22	30	18 01	25	53	32	57	2 01	57	
10	327	05.5		10.9	219	18.5	76		09.5	21	20	06	28	54	12 54	57	1 39	57	
11	342	05.7	-6	09.9	233	45.1	75	+23	11.6	20	10 N	18 11	18 32	18 56	13 13	57	1 20	56	
12	357	05.8	-6	08.9	248	11.6	75	+23	13.6	18	0	18 15	18 36	19 00	13 31	57	1 02	56	
13	12	06.0		08.0	262	38.1	74		15.4	17	10 S	19	40	05	13 49	57	0 45	55	
14	27	06.1		07.0	277	04.5	73		17.1	15	20	24	46	12	14 09	57	26	54	
15	42	06.2		06.1	291	30.8	72		18.6	14	30	29	54	22	31	57	0 04	54	
16	57	06.4		05.1	305	57.0	72		20.0	13	35	33	18 58	28	14 44	57	***	***	
17	72	06.5	-6	04.1	320	23.2	71	+23	21.3	12	40	18 36	19 04	19 36	15 00	56	***	***	
18	87	06.7	-6	03.2	334	49.3	71	+23	22.5	10	45	18 41	19 10	19 46	15 18	56	***	***	
19	102	06.8		02.2	349	15.4	70		23.5	8	50	46	19	19 59	40	56	23 48	63	
20	117	06.9		01.2	3	41.4	69		24.3	7	52	48	23	20 05	15 51	56	38	62	
21	132	07.1	-6	00.3	18	07.3	69		25.0	6	54	51	27	12	16 03	56	25	63	
22	147	07.2	-5	59.3	32	33.2	68		25.6	5	56	54	32	20	17	56	23 11	64	
23	162	07.4		58.3	46	59.0	68		26.1	3	58	18 57	38	29	34	55	22 55	64	
24	177	07.5	-5	57.4	61	24.8		+23	26.4		60 S	19 01	19 44	20 39	16 54	54	22 35	65	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG		Mag: -4.3				Mag: +1.1				Mag: -2.0				Mag: +0.7				
	13 ^h 09 ^m 0		PMG: 14 ^h 56 ^m				PMG: 08 ^h 01 ^m				PMG: 08 ^h 37 ^m				PMG: 09 ^h 12 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	162	12.8	135	58.8	+12	17.8	239	47.1	-23	24.4	230	28.6	-21	-56.7	221	38.5	-20	29.5	
1	177	15.3	150	58.7		19.0	254	47.7		24.3	245	30.6		-56.6	236	40.7		29.5	
2	192	17.7	165	58.6		20.1	269	48.3		24.2	260	32.6		-56.6	251	42.9		29.5	
3	207	20.2	180	58.5		21.3	284	48.9		24.1	275	34.5		-56.5	266	45.2		29.4	
4	222	22.7	195	58.4		22.5	299	49.5		24.0	290	36.5		-56.5	281	47.4		29.4	
5	237	25.1	210	58.3	+12	23.7	314	50.1	-23	23.8	305	38.5	-21	-56.4	296	49.6	-20	29.3	
6	252	27.6	225	58.2	+12	24.8	329	50.6	-23	23.7	320	40.5	-21	-56.3	311	51.8	-20	29.3	
7	267	30.1	240	58.1		26.0	344	51.2		23.6	335	42.5		-56.3	326	54.0		29.2	
8	282	32.5	255	58.0		27.2	359	51.8		23.5	350	44.5		-56.2	341	56.2		29.2	
9	297	35.0	270	57.9		28.3	14	52.4		23.4	5	46.5		-56.2	356	58.5		29.1	
10	312	37.4	285	57.8		29.5	29	53.0		23.3	20	48.4		-56.1	12	00.7		29.1	
11	327	39.9	300	57.7	+12	30.7	44	53.6	-23	23.2	35	50.4	-21	-56.0	27	02.9	-20	29.0	
12	342	42.4	315	57.7	+12	31.8	59	54.2	-23	23.1	50	52.4	-21	-56.0	42	05.1	-20	29.0	
13	357	44.8	330	57.6		33.0	74	54.7		23.0	65	54.4		-55.9	57	07.3		29.0	
14	12	47.3	345	57.5		34.2	89	55.3		22.9	80	56.4		-55.8	72	09.5		28.9	
15	27	49.8	0	57.4		35.3	104	55.9		22.7	95	58.4		-55.8	87	11.8		28.9	
16	42	52.2	15	57.3		36.5	119	56.5		22.6	111	00.4		-55.7	102	14.0		28.8	
17	57	54.7	30	57.2	+12	37.7	134	57.1	-23	22.5	126	02.4	-21	-55.7	117	16.2	-20	28.8	
18	72	57.2	45	57.1	+12	38.8	149	57.7	-23	22.4	141	04.3	-21	-55.6	132	18.4	-20	28.7	
19	87	59.6	60	57.0		40.0	164	58.2		22.3	156	06.3		-55.5	147	20.6		28.7	
20	103	02.1	75	56.9		41.2	179	58.8		22.2	171	08.3		-55.5	162	22.8		28.6	
21	118	04.6	90	56.8		42.3	194	59.4		22.1	186	10.3		-55.4	177	25.1		28.6	
22	133	07.0	105	56.7		43.5	210	00.0		21.9	201	12.3		-55.4	192	27.3		28.6	
23	148	09.5	120	56.6		44.7	225	00.6		21.8	216	14.3		-55.3	207	29.5		28.5	
24	163	11.9	135	56.5	+12	45.8	240	01.2	-23	21.7	231	16.3	-21	-55.2	222	31.7	-20	28.5	
Dif.	—		-1	+12			+6	+1			+20		+1		+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 4			SD: 15'8 Edad: 10 ^d 4		PHE { 4 ^h : 58'0 12 ^h : 58'3 20 ^h : 58'7			Rº: 59 ^m									
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº		Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	177	07.5	-5	57.4	61	24.8	67	+23	26.4	1	60 N	5	16	6	04	6	46	11 08 76
1	192	07.6		56.4	75	50.5	67		26.5	0	58	18	04	43		28	73	5 00 48
2	207	07.8		55.4	90	16.2	66		26.5	1	56	20	03	40		44	72	4 44 49
3	222	07.9		54.5	104	41.8	65		26.4	3	54	22	03	38		11 58	70	30 50
4	237	08.1		53.5	119	07.3	65		26.1	4	52	23	02	36		12 10	69	18 51
5	252	08.2	-5	52.5	133	32.8	64	+23	25.7	6	50	5	25	6	02	6	34	12 20 69
6	267	08.4	-5	51.6	147	58.2	64	+23	25.1	7	45	5	27	6	01	6	30	12 43 66
7	282	08.5		50.6	162	23.6	64		24.4	9	40	28	6	00	27		13 01	65
8	297	08.6		49.6	176	49.0	63		23.5	10	35	29	5	59	24		16	64
9	312	08.8		48.7	191	14.3	62		22.5	11	30	30	57	21		29	63	2 58 56
10	327	08.9		47.7	205	39.5	63		21.4	14	20	29	54	16		13 51	62	36 57
11	342	09.1	-5	46.7	220	04.8	61	+23	20.0	14	10 N	5	27	5	51	6	12	14 10 60
12	357	09.2	-5	45.7	234	29.9	62	+23	18.6	16	0	5	23	5	47	6	08	14 28 59
13	12	09.4		44.8	248	55.1	61		17.0	18	10 S	18	43	6	04		14 46	58
14	27	09.5		43.8	263	20.2	60		15.2	19	20	11	37	5	59		15 06	56
15	42	09.7		42.8	277	45.2	60		13.3	20	30	5	01	30	54		28	54
16	57	09.8		41.9	292	10.2	60		11.3	23	35	4	55	25	51		41	53
17	72	09.9	-5	40.9	306	35.2	60	+23	09.0	23	40	4	47	5	20	5	47	15 56 52
18	87	10.1	-5	39.9	321	00.2	59	+23	06.7	25	45	4	37	5	13	5	43	16 14 50
19	102	10.2		39.0	335	25.1	59		04.2	27	50	25	05	38		36	48	*** **
20	117	10.4		38.0	349	50.0	58	+23	01.5	28	52	19	5	01	36		47	46
21	132	10.5		37.0	4	14.8	59	+22	58.7	30	54	12	4	57	33		16	59
22	147	10.7		36.1	18	39.7	58		55.7	31	56	4	04	52	30		17	13
23	162	10.8		35.1	33	04.5	57		52.6	33	58	3	55	46	27		17	29
24	177	11.0	-5	34.1	47	29.2		+22	49.3		60 S	3	45	4	40	5	24	17 48 38
																		23 40 85
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 13 ^h 05 ^m 1		Mag: -4.3 PMG: 14 ^h 56 ^m				Mag: +1.1 PMG: 08 ^h 00 ^m				Mag: -2.0 PMG: 08 ^h 34 ^m				Mag: +0.7 PMG: 09 ^h 09 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	163	11.9	135	56.5	+12	45.8	240	01.2	-23	21.7	231	16.3	-21	55.2	222	31.7	-20	28.5
1	178	14.4	150	56.4		47.0	255	01.8		21.6	246	18.3		55.2	237	33.9		28.4
2	193	16.9	165	56.3		48.1	270	02.3		21.5	261	20.3		55.1	252	36.2		28.4
3	208	19.3	180	56.2		49.3	285	02.9		21.4	276	22.2		55.0	267	38.4		28.3
4	223	21.8	195	56.2		50.5	300	03.5		21.3	291	24.2		55.0	282	40.6		28.3
5	238	24.3	210	56.1	+12	51.6	315	04.1	-23	21.1	306	26.2	-21	54.9	297	42.8	-20	28.2
6	253	26.7	225	56.0	+12	52.8	330	04.7	-23	21.0	321	28.2	-21	54.9	312	45.0	-20	28.2
7	268	29.2	240	55.9		53.9	345	05.3		20.9	336	30.2		54.8	327	47.3		28.2
8	283	31.7	255	55.8		55.1	0	05.8		20.8	351	32.2		54.7	342	49.5		28.1
9	298	34.1	270	55.7		56.2	15	06.4		20.7	6	34.2		54.7	357	51.7		28.1
10	313	36.6	285	55.6		57.4	30	07.0		20.5	21	36.2		54.6	12	53.9		28.0
11	328	39.0	300	55.5	+12	58.6	45	07.6	-23	20.4	36	38.2	-21	54.5	27	56.1	-20	28.0
12	343	41.5	315	55.4	+12	59.7	60	08.2	-23	20.3	51	40.2	-21	54.5	42	58.4	-20	27.9
13	358	44.0	330	55.3	+13	00.9	75	08.8		20.2	66	42.2		54.4	58	00.6		27.9
14	13	46.4	345	55.2		02.0	90	09.4		20.1	81	44.1		54.4	73	02.8		27.8
15	28	48.9	0	55.1		03.2	105	09.9		19.9	96	46.1		54.3	88	05.0		27.8
16	43	51.4	15	55.0		04.3	120	10.5		19.8	111	48.1		54.2	103	07.2		27.8
17	58	53.8	30	55.0	+13	05.5	135	11.1	-23	19.7	126	50.1	-21	54.2	118	09.5	-20	27.7
18	73	56.3	45	54.9	+13	06.6	150	11.7	-23	19.6	141	52.1	-21	54.1	133	11.7	-20	27.7
19	88	58.8	60	54.8		07.8	165	12.3		19.5	156	54.1		54.1	148	13.9		27.6
20	104	01.2	75	54.7		08.9	180	12.9		19.3	171	56.1		54.0	163	16.1		27.6
21	119	03.7	90	54.6		10.1	195	13.5		19.2	186	58.1		53.9	178	18.3		27.5
22	134	06.2	105	54.5		11.2	210	14.0		19.1	202	00.1		53.9	193	20.6		27.5
23	149	08.6	120	54.4		12.4	225	14.6		19.0	217	02.1		53.8	208	22.8		27.5
24	164	11.1	135	54.3	+13	13.5	240	15.2	-23	18.8	232	04.1	-21	53.7	223	25.0	-20	27.4
Dif.	—		-1		+12		+6		+1		+20		+1		+22		0	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'1				PHE { 4 ^h : 59'0 12 ^h : 59'3 20 ^h : 59'6																
	PMG: 12 ^h 11 ^m 1				Edad: 11 ^d 4																
	PMG: 21 ^h 41 ^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	177	11.0	-5	34.1	47	29.2	58	+22	49.3	34	60 N	17 41	18 23	19 11	12 24	92	6 05	31			
1	192	11.1		33.1	61	54.0	57		45.9	36	58	43	23	08	41	88	5 48	34			
2	207	11.3		32.2	76	18.7	57		42.3	37	56	46	23	06	12 56	84	33	37			
3	222	11.4		31.2	90	43.4	57		38.6	39	54	48	23	04	13 08	82	20	40			
4	237	11.5		30.2	105	08.1	57		34.7	41	52	49	23	02	19	80	5 09	41			
5	252	11.7	-5	29.3	119	32.8	56	+22	30.6	42	50	17 51	18 23	19 01	13 29	78	4 59	43			
6	267	11.8	-5	28.3	133	57.4	57	+22	26.4	43	45	17 55	18 24	18 58	13 49	75	4 38	46			
7	282	12.0		27.3	148	22.1	56		22.1	45	40	17 58	25	56	14 06	72	21	48			
8	297	12.1		26.4	162	46.7	56		17.6	47	35	18 00	26	55	20	69	4 07	50			
9	312	12.3		25.4	177	11.3	56		12.9	48	30	03	27	54	32	67	3 54	52			
10	327	12.4		24.4	191	35.9	56		08.1	49	20	07	29	55	14 53	64	33	54			
11	342	12.6	-5	23.4	206	00.5	56	+22	03.2	52	10 N	18 11	18 32	18 56	15 10	62	3 14	57			
12	357	12.7	-5	22.5	220	25.1	56	+21	58.0	52	0	18 14	18 35	18 59	15 27	59	2 56	59			
13	12	12.9		21.5	234	49.7	56		52.8	54	10 S	18	39	19 04	15 44	56	39	61			
14	27	13.0		20.5	249	14.3	55		47.4	56	20	22	44	10	16 02	53	2 20	63			
15	42	13.2		19.6	263	38.8	56		41.8	57	30	27	51	20	22	50	1 58	66			
16	57	13.3		18.6	278	03.4	56		36.1	59	35	30	18 56	26	34	48	45	67			
17	72	13.5	-5	17.6	292	28.0	55	+21	30.2	60	40	18 33	19 01	19 33	16 48	45	1 30	69			
18	87	13.6	-5	16.6	306	52.5	56	+21	24.2	62	45	18 37	19 07	19 42	17 04	43	1 13	71			
19	102	13.8		15.7	321	17.1	56		18.0	63	50	42	14	19 54	24	39	0 51	74			
20	117	13.9		14.7	335	41.7	55		11.7	65	52	44	18	20 00	33	37	40	75			
21	132	14.1		13.7	350	06.2	56	+21	05.2	66	54	46	22	06	44	35	28	77			
22	147	14.2		12.7	4	30.8	56	+20	58.6	68	56	49	27	14	17 56	32	0 15	79			
23	162	14.4		11.8	18	55.4	56		51.8	69	58	51	32	22	18 10	29	***	***			
24	177	14.5	-5	10.8	33	20.0		+20	44.9		60 S	18 55	19 38	20 32	18 26	25	***	***			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG		Mag: -4.3				Mag: +1.1				Mag: -2.0				Mag: +0.7						
	13 ^h 01 ^m 1		PMG: 14 ^h 56 ^m				PMG: 07 ^h 59 ^m				PMG: 08 ^h 31 ^m				PMG: 09 ^h 05 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♎	dec.		hG ♎	dec.								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	164	11.1	135	54.3	+13	13.5	240	15.2	-23	18.8	232	04.1	-21	-53.7	223	25.0	-20	27.4			
1	179	13.5	150	54.2		14.7	255	15.8		18.7	247	06.1		-53.7	238	27.2		27.4			
2	194	16.0	165	54.1		15.8	270	16.4		18.6	262	08.1		-53.6	253	29.4		27.3			
3	209	18.5	180	54.0		17.0	285	17.0		18.5	277	10.1		-53.6	268	31.7		27.3			
4	224	20.9	195	53.9		18.1	300	17.5		18.3	292	12.0		-53.5	283	33.9		27.2			
5	239	23.4	210	53.9	+13	19.3	315	18.1	-23	18.2	307	14.0	-21	-53.4	298	36.1	-20	27.2			
6	254	25.9	225	53.8	+13	20.4	330	18.7	-23	18.1	322	16.0	-21	-53.4	313	38.3	-20	27.1			
7	269	28.3	240	53.7		21.6	345	19.3		18.0	337	18.0		-53.3	328	40.6		27.1			
8	284	30.8	255	53.6		22.7	0	19.9		17.8	352	20.0		-53.3	343	42.8		27.1			
9	299	33.3	270	53.5		23.9	15	20.5		17.7	7	22.0		-53.2	358	45.0		27.0			
10	314	35.7	285	53.4		25.0	30	21.1		17.6	22	24.0		-53.1	13	47.2		27.0			
11	329	38.2	300	53.3	+13	26.2	45	21.6	-23	17.5	37	26.0	-21	-53.1	28	49.4	-20	26.9			
12	344	40.7	315	53.2	+13	27.3	60	22.2	-23	17.3	52	28.0	-21	-53.0	43	51.7	-20	26.9			
13	359	43.1	330	53.1		28.4	75	22.8		17.2	67	30.0		-52.9	58	53.9		26.8			
14	14	45.6	345	53.0		29.6	90	23.4		17.1	82	32.0		-52.9	73	56.1		26.8			
15	29	48.0	0	52.9		30.7	105	24.0		16.9	97	34.0		-52.8	88	58.3		26.8			
16	44	50.5	15	52.9		31.9	120	24.6		16.8	112	36.0		-52.8	104	00.6		26.7			
17	59	53.0	30	52.8	+13	33.0	135	25.2	-23	16.7	127	38.0	-21	-52.7	119	02.8	-20	26.7			
18	74	55.4	45	52.7	+13	34.1	150	25.7	-23	16.6	142	40.0	-21	-52.6	134	05.0	-20	26.6			
19	89	57.9	60	52.6		35.3	165	26.3		16.4	157	42.0		-52.6	149	07.2		26.6			
20	105	00.4	75	52.5		36.4	180	26.9		16.3	172	44.0		-52.5	164	09.5		26.5			
21	120	02.8	90	52.4		37.6	195	27.5		16.2	187	46.0		-52.5	179	11.7		26.5			
22	135	05.3	105	52.3		38.7	210	28.1		16.0	202	48.0		-52.4	194	13.9		26.4			
23	150	07.8	120	52.2		39.8	225	28.7		15.9	217	50.0		-52.3	209	16.1		26.4			
24	165	10.2	135	52.1	+13	41.0	240	29.3	-23	15.8	232	52.0	-21	-52.3	224	18.3	-20	26.4			
Dif.	—		-1		+11	+6		+1	+20		+1		+22								

UT	SOL			☉ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1			SD: 16'3			PHE { 4^h: 59'9 12^h: 60'2 20^h: 60'4				Edad: 12 ^d 4			PMG: 22 ^h 40 ^m		R ^o : 57 ^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	177	14.5	-5	10.8	33	20.0	56	+20	44.9	71	60 N	5 10	5 58	6 40	13 56	99	6 36	21			
1	192	14.7		09.8	47	44.6	56		37.8	72	58	13	58	37	14 09	95	22	25			
2	207	14.8		08.9	62	09.2	56		30.6	74	56	15	58	35	20 92		10	28			
3	222	15.0		07.9	76	33.8	57		23.2	75	54	17	58	33	30 89		6 00	30			
4	237	15.1		06.9	90	58.5	56		15.7	76	52	19	58	32	39 86		5 50	33			
5	252	15.3	-5	05.9	105	23.1	57	+20	08.1	78	50	5 21	5 58	6 30	14 47	84	5 42	35			
6	267	15.4	-5	05.0	119	47.8	57	+20	00.3	80	45	5 23	5 57	6 27	15 04	79	5 24	39			
7	282	15.6		04.0	134	12.5	57	+19	52.3	80	40	25	57	24	18 75		5 09	43			
8	297	15.7		03.0	148	37.2	57		44.3	83	35	27	56	21	29 73		4 57	45			
9	312	15.9		02.0	163	01.9	57		36.0	83	30	27	55	19	39 70		46	48			
10	327	16.0		01.1	177	26.6	58		27.7	85	20	27	53	15	15 57	65	27	52			
11	342	16.2	-5	00.1	191	51.4	57	+19	19.2	87	10 N	5 26	5 50	6 11	16 12	61	4 11	55			
12	357	16.3	-4	59.1	206	16.1	58	+19	10.5	88	0	5 23	5 47	6 08	16 26	58	3 55	59			
13	12	16.5		58.1	220	40.9	59	+19	01.7	89	10 S	18	43	04	40 54		40	61			
14	27	16.6		57.2	235	05.8	58	+18	52.8	90	20	12	38	6 00	16 55	50	23	65			
15	42	16.8		56.2	249	30.6	59		43.8	92	30	5 03	31	5 55	17 12	46	3 04	68			
16	57	16.9		55.2	263	55.5	59		34.6	94	35	4 57	27	53	22 43		2 52	71			
17	72	17.1	-4	54.2	278	20.4	59	+18	25.2	94	40	4 50	5 22	5 49	17 33	41	2 39	74			
18	87	17.3	-4	53.3	292	45.3	60	+18	15.8	96	45	4 41	5 16	5 46	17 47	36	2 24	77			
19	102	17.4		52.3	307	10.3	60	+18	06.2	98	50	29	08	41	18 03	32	2 05	81			
20	117	17.6		51.3	321	35.3	60	+17	56.4	98	52	23	05	39	10 30		1 55	84			
21	132	17.7		50.3	336	00.3	60		46.6	100	54	17	5 01	37	19 27		45	86			
22	147	17.9		49.4	350	25.3	61		36.6	101	56	09	4 56	35	28 24		34	89			
23	162	18.0		48.4	4	50.4	61		26.5	103	58	4 01	51	32	18 39	21	1 20	93			
24	177	18.2	-4	47.4	19	15.5		+17	16.2		60 S	3 51	4 45	5 29	18 51	17	1 05	96			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.3				Mag: +1.1				Mag: -2.0				Mag: +0.7			
	12 ^h 57 ^m 2		PMG: 14 ^h 57 ^m				PMG: 07 ^h 58 ^m				PMG: 08 ^h 27 ^m				PMG: 09 ^h 01 ^m			
h	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	165	10.2	135	52.1	+13	41.0	240	29.3	-23	15.8	232	52.0	-21	52.3	224	18.3	-20	26.4
1	180	12.7	150	52.0		42.1	255	29.9		15.6	247	54.0		52.2	239	20.6		26.3
2	195	15.2	165	52.0		43.3	270	30.4		15.5	262	56.0		52.1	254	22.8		26.3
3	210	17.6	180	51.9		44.4	285	31.0		15.4	277	58.0		52.1	269	25.0		26.2
4	225	20.1	195	51.8		45.5	300	31.6		15.2	293	00.0		52.0	284	27.2		26.2
5	240	22.5	210	51.7	+13	46.7	315	32.2	-23	15.1	308	02.0	-21	52.0	299	29.5	-20	26.1
6	255	25.0	225	51.6	+13	47.8	330	32.8	-23	15.0	323	04.0	-21	51.9	314	31.7	-20	26.1
7	270	27.5	240	51.5		48.9	345	33.4		14.8	338	06.0		51.8	329	33.9		26.1
8	285	29.9	255	51.4		50.1	0	34.0		14.7	353	08.0		51.8	344	36.1		26.0
9	300	32.4	270	51.3		51.2	15	34.5		14.6	8	10.0		51.7	359	38.4		26.0
10	315	34.9	285	51.2		52.3	30	35.1		14.4	23	12.0		51.7	14	40.6		25.9
11	330	37.3	300	51.1	+13	53.5	45	35.7	-23	14.3	38	14.0	-21	51.6	29	42.8	-20	25.9
12	345	39.8	315	51.1	+13	54.6	60	36.3	-23	14.2	53	16.0	-21	51.5	44	45.0	-20	25.8
13	0	42.3	330	51.0		55.7	75	36.9		14.0	68	18.0		51.5	59	47.3		25.8
14	15	44.7	345	50.9		56.8	90	37.5		13.9	83	20.0		51.4	74	49.5		25.7
15	30	47.2	0	50.8		58.0	105	38.1		13.7	98	22.0		51.3	89	51.7		25.7
16	45	49.6	15	50.7	+13	59.1	120	38.6		13.6	113	24.0		51.3	104	53.9		25.7
17	60	52.1	30	50.6	+14	00.2	135	39.2	-23	13.5	128	26.0	-21	51.2	119	56.2	-20	25.6
18	75	54.6	45	50.5	+14	01.4	150	39.8	-23	13.3	143	28.0	-21	51.2	134	58.4	-20	25.6
19	90	57.0	60	50.4		02.5	165	40.4		13.2	158	30.0		51.1	150	00.6		25.5
20	105	59.5	75	50.3		03.6	180	41.0		13.1	173	32.0		51.0	165	02.8		25.5
21	121	02.0	90	50.3		04.7	195	41.6		12.9	188	34.0		51.0	180	05.1		25.4
22	136	04.4	105	50.2		05.9	210	42.2		12.8	203	36.0		50.9	195	07.3		25.4
23	151	06.9	120	50.1		07.0	225	42.8		12.6	218	38.0		50.9	210	09.5		25.4
24	166	09.4	135	50.0	+14	08.1	240	43.3	-23	12.5	233	40.0	-21	50.8	225	11.8	-20	25.3
Dif.	—		-1	+11			+6	+1			+20		+1		+22			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 12 ^h 10 ^m 7			PHE { 4 ^h : 60'7 12 ^h : 60'9 20 ^h : 61'1																
	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	18.2	-4	47.4	19	15.5	61	+17	16.2	103	60 N	17 46	18 28	19 16	15 35	102	6 57	15		
1	192	18.3		46.4	33	40.6	62	+17	05.9	105	58	48	27	13	44	98	47	18		
2	207	18.5		45.5	48	05.8	62	+16	55.4	107	56	50	27	10	52	94	38	22		
3	222	18.6		44.5	62	31.0	62		44.7	107	54	51	27	08	15	59	30	25		
4	237	18.8		43.5	76	56.2	63		34.0	109	52	53	27	06	16	05	23	27		
5	252	19.0	-4	42.5	91	21.5	63	+16	23.1	109	50	17 54	18 27	19 04	16 11	86	6 17	29		
6	267	19.1	-4	41.6	105	46.8	63	+16	12.2	111	45	17 57	18 27	19 01	16 23	81	6 03	34		
7	282	19.3		40.6	120	12.1	64	+16	01.1	112	40	18 00	27	18 58	33	77	5 52	38		
8	297	19.4		39.6	134	37.5	64	+15	49.9	114	35	02	27	57	42	73	42	41		
9	312	19.6		38.6	149	02.9	65		38.5	114	30	04	28	56	16	49	70	34	44	
10	327	19.7		37.7	163	28.4	64		27.1	116	20	08	30	55	17	02	65	19	49	
11	342	19.9	-4	36.7	177	53.8	66	+15	15.5	116	10 N	18 11	18 32	18 56	17 13	61	5 06	53		
12	357	20.0	-4	35.7	192	19.4	65	+15	03.9	118	0	18 14	18 35	18 59	17 24	56	4 54	57		
13	12	20.2		34.7	206	44.9	66	+14	52.1	119	10 S	17	38	19 03	34	52	41	61		
14	27	20.4		33.8	221	10.5	67		40.2	120	20	21	43	09	45	48	28	65		
15	42	20.5		32.8	235	36.2	66		28.2	121	30	25	49	17	17	58	42	12	71	
16	57	20.7		31.8	250	01.8	67		16.1	122	35	27	53	23	18	05	40	4	03	74
17	72	20.8	-4	30.8	264	27.5	68	+14	03.9	123	40	18 30	18 57	19 30	18 14	35	3 53	77		
18	87	21.0	-4	29.8	278	53.3	68	+13	51.6	124	45	18 33	19 03	19 38	18 23	32	3 41	80		
19	102	21.1		28.9	293	19.1	68		39.2	125	50	37	10	49	35	27	26	86		
20	117	21.3		27.9	307	44.9	69		26.7	126	52	39	13	19 55	40	25	19	88		
21	132	21.5		26.9	322	10.8	69		14.1	127	54	41	17	20 01	46	22	11	91		
22	147	21.6		25.9	336	36.7	69	+13	01.4	128	56	43	21	08	18	52	20	3	03	93
23	162	21.8		25.0	351	02.6	70	+12	48.6	128	58	46	26	15	19	00	16	2	53	97
24	177	21.9	-4	24.0	5	28.6		+12	35.8		60 S	18 49	19 31	20 25	19 08	13	2 41	102		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 12 ^h 53 ^m 3		Mag: -4.3 PMG: 14 ^h 57 ^m				Mag: +1.0 PMG: 07 ^h 57 ^m				Mag: -2.0 PMG: 08 ^h 24 ^m				Mag: +0.7 PMG: 08 ^h 58 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	166	09.4	135	50.0	+14	08.1	240	43.3	-23	12.5	233	40.0	-21	-50.8	225	11.8	-20	25.3		
1	181	11.8	150	49.9		09.2	255	43.9		12.4	248	42.0		-50.7	240	14.0		25.3		
2	196	14.3	165	49.8		10.4	270	44.5		12.2	263	44.0		-50.7	255	16.2		25.2		
3	211	16.8	180	49.7		11.5	285	45.1		12.1	278	46.0		-50.6	270	18.4		25.2		
4	226	19.2	195	49.6		12.6	300	45.7		11.9	293	48.0		-50.5	285	20.7		25.1		
5	241	21.7	210	49.6	+14	13.7	315	46.3	-23	11.8	308	50.0	-21	-50.5	300	22.9	-20	25.1		
6	256	24.1	225	49.5	+14	14.9	330	46.9	-23	11.6	323	52.0	-21	-50.4	315	25.1	-20	25.1		
7	271	26.6	240	49.4		16.0	345	47.5		11.5	338	54.0		-50.4	330	27.3		25.0		
8	286	29.1	255	49.3		17.1	0	48.0		11.4	353	56.0		-50.3	345	29.6		25.0		
9	301	31.5	270	49.2		18.2	15	48.6		11.2	8	58.0		-50.2	0	31.8		24.9		
10	316	34.0	285	49.1		19.3	30	49.2		11.1	24	00.0		-50.2	15	34.0		24.9		
11	331	36.5	300	49.0	+14	20.4	45	49.8	-23	10.9	39	02.0	-21	-50.1	30	36.3	-20	24.8		
12	346	38.9	315	48.9	+14	21.6	60	50.4	-23	10.8	54	04.0	-21	-50.1	45	38.5	-20	24.8		
13	1	41.4	330	48.9		22.7	75	51.0		10.6	69	06.0		-50.0	60	40.7		24.8		
14	16	43.9	345	48.8		23.8	90	51.6		10.5	84	08.0		-49.9	75	42.9		24.7		
15	31	46.3	0	48.7		24.9	105	52.2		10.3	99	10.1		-49.9	90	45.2		24.7		
16	46	48.8	15	48.6		26.0	120	52.7		10.2	114	12.1		-49.8	105	47.4		24.6		
17	61	51.3	30	48.5	+14	27.1	135	53.3	-23	10.1	129	14.1	-21	-49.8	120	49.6	-20	24.6		
18	76	53.7	45	48.4	+14	28.3	150	53.9	-23	09.9	144	16.1	-21	-49.7	135	51.9	-20	24.5		
19	91	56.2	60	48.3		29.4	165	54.5		09.8	159	18.1		-49.6	150	54.1		24.5		
20	106	58.6	75	48.3		30.5	180	55.1		09.6	174	20.1		-49.6	165	56.3		24.5		
21	122	01.1	90	48.2		31.6	195	55.7		09.5	189	22.1		-49.5	180	58.5		24.4		
22	137	03.6	105	48.1		32.7	210	56.3		09.3	204	24.1		-49.4	196	00.8		24.4		
23	152	06.0	120	48.0		33.8	225	56.9		09.2	219	26.1		-49.4	211	03.0		24.3		
24	167	08.5	135	47.9	+14	34.9	240	57.4	-23	09.0	234	28.1	-21	-49.3	226	05.2	-20	24.3		
Dif.	—		-1		+11		+6		+1		+20		+1		+22					

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: 16'7 Edad: 14 ^d 4 PHE { 4^h: 61'2 12^h: 61'3 20^h: 61'4															
	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	177	21.9	-4	24.0	5	28.6	71	+12	35.8	130	60 N	5 04	5 52	6 34	17 17	101	7 12	11	
1	192	22.1		23.0	19	54.7	70		22.8	131	58	07	53	32	22	98	05	15	
2	207	22.3		22.0	34	20.7	71	+12	09.7	131	56	10	53	30	26	95	7 00	18	
3	222	22.4		21.0	48	46.8	72	+11	56.6	132	54	12	53	28	30	92	6 55	21	
4	237	22.6		20.1	63	13.0	72		43.4	134	52	14	54	27	34	89	50	24	
5	252	22.7	-4	19.1	77	39.2	72	+11	30.0	134	50	5 16	5 54	6 26	17 37	86	6 46	26	
6	267	22.9	-4	18.1	92	05.4	73	+11	16.6	134	45	5 20	5 54	6 23	17 44	81	6 37	31	
7	282	23.0		17.1	106	31.7	73	+11	03.2	136	40	22	54	21	50	77	30	34	
8	297	23.2		16.2	120	58.0	73	+10	49.6	136	35	24	53	18	55	73	23	38	
9	312	23.4		15.2	135	24.3	74		36.0	137	30	25	53	17	17 59	70	18	41	
10	327	23.5		14.2	149	50.7	74		22.3	138	20	26	51	13	18 07	64	6 08	46	
11	342	23.7	-4	13.2	164	17.1	75	+10	08.5	139	10 N	5 25	5 49	6 10	18 14	59	5 59	51	
12	357	23.8	-4	12.2	178	43.6	75	+9	54.6	139	0	5 22	5 46	6 07	18 20	55	5 51	55	
13	12	24.0		11.3	193	10.1	75		40.7	140	10 S	18	43	04	26	50	42	60	
14	27	24.2		10.3	207	36.6	76		26.7	140	20	13	39	6 01	33	45	33	65	
15	42	24.3		09.3	222	03.2	76	+9	12.7	141	30	5 04	33	5 57	40	40	23	70	
16	57	24.5		08.3	236	29.8	76	+8	58.6	142	35	4 59	29	54	45	36	17	73	
17	72	24.6	-4	07.3	250	56.4	77	+8	44.4	142	40	4 52	5 24	5 52	18 49	34	5 10	77	
18	87	24.8	-4	06.4	265	23.1	77	+8	30.2	143	45	4 43	5 19	5 48	18 55	29	5 01	82	
19	102	25.0		05.4	279	49.8	78		15.9	144	50	33	12	45	19 02	24	4 52	86	
20	117	25.1		04.4	294	16.6	77	+8	01.5	144	52	27	09	43	05	22	47	89	
21	132	25.3		03.4	308	43.3	79	+7	47.1	145	54	21	05	41	08	20	42	92	
22	147	25.5		02.4	323	10.2	78		32.6	145	56	14	5 01	39	12	17	36	95	
23	162	25.6		01.5	337	37.0	79		18.1	145	58	4 07	4 56	36	19 16	14	4 30	98	
24	177	25.8	-4	00.5	352	03.9		+7	03.6		60 S	3 57	4 51	5 34	19 21	10	4 23	102	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 12 ^h 49 ^m 3		Mag: -4.4 PMG: 14 ^h 57 ^m				Mag: +1.0 PMG: 07 ^h 56 ^m				Mag: -2.0 PMG: 08 ^h 21 ^m				Mag: +0.7 PMG: 08 ^h 54 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'		°	'		°	'		°	'		°	'		°	'
0	167	08.5	135	47.9	+14	34.9	240	57.4	-23	09.0	234	28.1	-21	49.3	226	05.2	-20	24.3	
1	182	11.0	150	47.8		36.0	255	58.0		08.9	249	30.1		49.3	241	07.5		24.2	
2	197	13.4	165	47.7		37.2	270	58.6		08.7	264	32.1		49.2	256	09.7		24.2	
3	212	15.9	180	47.7		38.3	285	59.2		08.6	279	34.1		49.1	271	11.9		24.2	
4	227	18.4	195	47.6		39.4	300	59.8		08.4	294	36.1		49.1	286	14.1		24.1	
5	242	20.8	210	47.5	+14	40.5	316	00.4	-23	08.3	309	38.2	-21	49.0	301	16.4	-20	24.1	
6	257	23.3	225	47.4	+14	41.6	331	01.0	-23	08.1	324	40.2	-21	49.0	316	18.6	-20	24.0	
7	272	25.7	240	47.3		42.7	346	01.6		08.0	339	42.2		48.9	331	20.8		24.0	
8	287	28.2	255	47.2		43.8	1	02.2		07.8	354	44.2		48.8	346	23.1		23.9	
9	302	30.7	270	47.1		44.9	16	02.7		07.7	9	46.2		48.8	1	25.3		23.9	
10	317	33.1	285	47.1		46.0	31	03.3		07.5	24	48.2		48.7	16	27.5		23.9	
11	332	35.6	300	47.0	+14	47.1	46	03.9	-23	07.4	39	50.2	-21	48.6	31	29.8	-20	23.8	
12	347	38.1	315	46.9	+14	48.2	61	04.5	-23	07.2	54	52.2	-21	48.6	46	32.0	-20	23.8	
13	2	40.5	330	46.8		49.3	76	05.1		07.0	69	54.2		48.5	61	34.2		23.7	
14	17	43.0	345	46.7		50.4	91	05.7		06.9	84	56.2		48.5	76	36.4		23.7	
15	32	45.5	0	46.6		51.5	106	06.3		06.7	99	58.2		48.4	91	38.7		23.6	
16	47	47.9	15	46.5		52.6	121	06.9		06.6	115	00.3		48.3	106	40.9		23.6	
17	62	50.4	30	46.5	+14	53.7	136	07.4	-23	06.4	130	02.3	-21	48.3	121	43.1	-20	23.6	
18	77	52.9	45	46.4	+14	54.8	151	08.0	-23	06.3	145	04.3	-21	48.2	136	45.4	-20	23.5	
19	92	55.3	60	46.3		55.9	166	08.6		06.1	160	06.3		48.2	151	47.6		23.5	
20	107	57.8	75	46.2		57.0	181	09.2		06.0	175	08.3		48.1	166	49.8		23.4	
21	123	00.2	90	46.1		58.1	196	09.8		05.8	190	10.3		48.0	181	52.1		23.4	
22	138	02.7	105	46.0	+14	59.2	211	10.4		05.6	205	12.3		48.0	196	54.3		23.3	
23	153	05.2	120	46.0	+15	00.3	226	11.0		05.5	220	14.3		47.9	211	56.5		23.3	
24	168	07.6	135	45.9	+15	01.4	241	11.6	-23	05.3	235	16.4	-21	47.9	226	58.8	-20	23.3	
Dif.	—		-1		+11		+6		+2		+20		+1		+22				

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 10 ^m 1			SD: 16'7 Edad: 15 ^d 4 PHE { 4^h: 61'4 12^h: 61'4 20^h: 61'3														
	PMG: 00 ^h 33 ^m			R ^o : 54 ^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	25.8	-4	00.5	352	03.9	79	+7	03.6	146	60 N	17 51	18 32	19 21	18 58	101	7 23	10
1	192	25.9	-3	59.5	6	30.8	80	+6	49.0	147	58	53	32	18	19 00	96	20	14
2	207	26.1		58.5	20	57.8	80		34.3	147	56	54	31	14	01	93	18	16
3	222	26.3		57.5	35	24.8	80		19.6	147	54	55	31	12	02	90	16	19
4	237	26.4		56.6	49	51.8	81	+6	04.9	148	52	56	30	09	03	87	14	21
5	252	26.6	-3	55.6	64	18.9	80	+5	50.1	148	50	17 58	18 30	19 07	19 03	86	7 12	23
6	267	26.8	-3	54.6	78	45.9	81	+5	35.3	149	45	18 00	18 29	19 03	19 05	80	7 08	28
7	282	26.9		53.6	93	13.0	82		20.4	148	40	02	29	19 00	07	76	04	33
8	297	27.1		52.6	107	40.2	82	+5	05.6	149	35	04	29	18 58	08	72	7 01	36
9	312	27.2		51.7	122	07.4	82	+4	50.7	150	30	05	29	57	09	69	6 59	39
10	327	27.4		50.7	136	34.6	82		35.7	150	20	08	30	56	11	63	54	45
11	342	27.6	-3	49.7	151	01.8	82	+4	20.7	150	10 N	18 11	18 32	18 56	19 13	58	6 50	49
12	357	27.7	-3	48.7	165	29.0	83	+4	05.7	150	0	18 13	18 34	18 58	19 15	53	6 46	54
13	12	27.9		47.7	179	56.3	83	+3	50.7	150	10 S	16	37	19 02	16	49	42	59
14	27	28.1		46.8	194	23.6	84		35.7	151	20	19	41	07	18	44	38	63
15	42	28.2		45.8	208	51.0	83		20.6	151	30	23	47	15	20	39	33	69
16	57	28.4		44.8	223	18.3	84	+3	05.5	151	35	25	50	20	21	36	30	72
17	72	28.6	-3	43.8	237	45.7	84	+2	50.4	151	40	18 27	18 54	19 26	19 23	32	6 27	76
18	87	28.7	-3	42.8	252	13.1	85	+2	35.3	151	45	18 30	18 59	19 34	19 24	28	6 23	80
19	102	28.9		41.8	266	40.6	84		20.2	151	50	33	19 06	45	26	23	18	86
20	117	29.0		40.9	281	08.0	85	+2	05.1	152	52	35	09	50	27	21	16	88
21	132	29.2		39.9	295	35.5	85	+1	49.9	151	54	36	12	19 55	28	18	14	91
22	147	29.4		38.9	310	03.0	85		34.8	152	56	38	16	20 02	29	16	11	94
23	162	29.5		37.9	324	30.5	85		19.6	152	58	40	20	09	30	13	08	97
24	177	29.7	-3	36.9	338	58.0		+1	04.4		60 S	18 43	19 25	20 17	19 31	10	6 05	101

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 12 ^h 45 ^m 4		Mag: -4.4 PMG: 14 ^h 57 ^m				Mag: +1.0 PMG: 07 ^h 55 ^m				Mag: -2.0 PMG: 08 ^h 18 ^m				Mag: +0.7 PMG: 08 ^h 51 ^m			
	hG ♂		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	168	07.6	135	45.9	+15	01.4	241	11.6	-23	05.3	235	16.4	-21	-47.9	226	58.8	-20	23.3
1	183	10.1	150	45.8		02.5	256	12.2		05.2	250	18.4		-47.8	242	01.0		23.2
2	198	12.6	165	45.7		03.6	271	12.7		05.0	265	20.4		-47.7	257	03.2		23.2
3	213	15.0	180	45.6		04.7	286	13.3		04.9	280	22.4		-47.7	272	05.5		23.1
4	228	17.5	195	45.5		05.8	301	13.9		04.7	295	24.4		-47.6	287	07.7		23.1
5	243	20.0	210	45.4	+15	06.9	316	14.5	-23	04.5	310	26.4	-21	-47.6	302	09.9	-20	23.0
6	258	22.4	225	45.4	+15	08.0	331	15.1	-23	04.4	325	28.4	-21	-47.5	317	12.2	-20	23.0
7	273	24.9	240	45.3		09.1	346	15.7		04.2	340	30.4		-47.4	332	14.4		23.0
8	288	27.3	255	45.2		10.2	1	16.3		04.1	355	32.5		-47.4	347	16.6		22.9
9	303	29.8	270	45.1		11.3	16	16.9		03.9	10	34.5		-47.3	2	18.9		22.9
10	318	32.3	285	45.0		12.4	31	17.5		03.7	25	36.5		-47.2	17	21.1		22.8
11	333	34.7	300	44.9	+15	13.5	46	18.1	-23	03.6	40	38.5	-21	-47.2	32	23.3	-20	22.8
12	348	37.2	315	44.9	+15	14.6	61	18.6	-23	03.4	55	40.5	-21	-47.1	47	25.6	-20	22.8
13	3	39.7	330	44.8		15.7	76	19.2		03.3	70	42.5		-47.1	62	27.8		22.7
14	18	42.1	345	44.7		16.7	91	19.8		03.1	85	44.5		-47.0	77	30.0		22.7
15	33	44.6	0	44.6		17.8	106	20.4		02.9	100	46.6		-46.9	92	32.3		22.6
16	48	47.1	15	44.5		18.9	121	21.0		02.8	115	48.6		-46.9	107	34.5		22.6
17	63	49.5	30	44.5	+15	20.0	136	21.6	-23	02.6	130	50.6	-21	-46.8	122	36.7	-20	22.5
18	78	52.0	45	44.4	+15	21.1	151	22.2	-23	02.4	145	52.6	-21	-46.8	137	39.0	-20	22.5
19	93	54.5	60	44.3		22.2	166	22.8		02.3	160	54.6		-46.7	152	41.2		22.5
20	108	56.9	75	44.2		23.3	181	23.4		02.1	175	56.6		-46.6	167	43.4		22.4
21	123	59.4	90	44.1		24.4	196	23.9		01.9	190	58.7		-46.6	182	45.7		22.4
22	139	01.8	105	44.0		25.4	211	24.5		01.8	206	00.7		-46.5	197	47.9		22.3
23	154	04.3	120	44.0		26.5	226	25.1		01.6	221	02.7		-46.5	212	50.1		22.3
24	169	06.8	135	43.9	+15	27.6	241	25.7	-23	01.4	236	04.7	-21	-46.4	227	52.4	-20	22.2
Dif.	—		-1	+11			+6	+2			+20	+1			+22			

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 09 ^m 9			SD: 16'7 Edad: 16 ^d 4 PMG: 01 ^h 27 ^m			PHE { 4 ^h : 61'3 12 ^h : 61'2 20 ^h : 61'0 Rº: 54 ^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	' 29.7 ' 29.9 ' 30.0 ' 30.2 ' 30.4 ' 30.5 ' 30.7 ' 30.9 ' 31.0 ' 31.2 ' 31.4 ' 31.5 ' 31.7 ' 31.9 ' 32.0 ' 32.2 ' 32.4 ' 32.5 ' 32.7 ' 32.9 ' 33.0 ' 33.2 ' 33.4 ' 33.5 ' 33.7	° 338 ° 353 ° 7 ° 22 ° 36 ° 51 ° 65 ° 80 ° 94 ° 109 ° 123 ° 138 ° 152 ° 166 ° 181 ° 195 ° 210 ° 224 ° 239 ° 253 ° 268 ° 282 ° 297 ° 311 ° 326	' 58.0 ' 25.6 ' 53.2 ' 20.7 ' 48.4 ' 16.0 ' 43.6 ' 11.3 ' 38.9 ' 06.6 ' 34.3 ' 02.0 ' 29.7 ' 57.5 ' 25.2 ' 52.9 ' 20.7 ' 48.5 ' 16.2 ' 44.0 ' 11.8 ' 39.6 ' 07.4 ' 35.1 ' 02.9	° +1 ° +0 ° ° -0 ° +0 ° -0 ° -0 ° -1 ° -0 ° -1 ° -1 ° -1 ° -1 ° -1 ° -2 ° -3 ° -2 ° -3 ° -3 ° -4 ° -3 ° -4 ° -4	' 04.4 ' 49.3 ' 34.1 ' 18.9 ' 03.8 ' 11.4 ' 26.5 ' 41.6 ' 56.8 ' 11.9 ' 27.0 ' 42.0 ' 57.1 ' 12.1 ' 27.1 ' 42.1 ' 57.1 ' 12.0 ' 26.9 ' 41.8 ' 56.6 ' 11.5 ' 26.2 ' 41.0 ' 55.7	° 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 4 58 h m 5 02 h m 05 48 h m 07 49 h m 10 49 h m 5 12 h m 5 16 h m 19 50 h m 21 51 h m 23 50 h m 24 50 h m 5 24 h m 5 22 h m 19 43 h m 13 39 h m 06 34 h m 5 01 h m 4 54 h m 4 46 h m 36 15 h m 31 12 h m 26 09 h m 19 05 h m 12 5 01 h m 4 04	h m 5 46 h m 47 26 h m 48 25 h m 49 24 h m 49 23 h m 5 49 h m 5 50 h m 50 17 h m 51 16 h m 50 14 h m 50 12 h m 6 09 h m 5 46 h m 43 04 h m 39 6 01 h m 34 5 58 h m 31 56 h m 5 27 h m 5 22 h m 15 48 h m 12 46 h m 09 45 h m 05 43 h m 5 01 h m 4 56	h m 6 28 h m 26 26 h m 25 25 h m 24 24 h m 23 23 h m 6 22 h m 6 19 h m 17 17 h m 16 16 h m 14 14 h m 12 12 h m 6 09 h m 6 07 h m 04 04 h m 6 01 h m 5 58 h m 56 56 h m 5 54 h m 5 51 h m 48 48 h m 46 46 h m 45 45 h m 43 43 h m 41 41 h m 39 39	h m m 20 39 98 h m m 36 95 h m m 34 92 h m m 32 89 h m m 30 87 h m m 20 29 84 h m m 20 25 79 h m m 23 74 h m m 20 71 h m m 18 68 h m m 14 63 h m m 20 11 58 h m m 20 08 54 h m m 05 49 h m m 20 02 45 h m m 19 59 39 h m m 57 36 h m m 19 55 32 h m m 19 52 29 h m m 49 24 h m m 48 22 h m m 46 20 h m m 45 17 h m m 19 43 14 h m m 19 41 11	h m m 7 33 10 h m m 34 13 h m m 34 17 h m m 35 19 h m m 35 21 h m m 7 35 24 h m m 7 36 28 h m m 37 32 h m m 37 36 h m m 38 39 h m m 39 44 h m m 7 39 49 h m m 7 40 53 h m m 41 58 h m m 41 63 h m m 42 68 h m m 42 72 h m m 7 43 75 h m m 7 43 80 h m m 44 85 h m m 44 87 h m m 45 89 h m m 45 92 h m m 7 45 96 h m m 7 46 99					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 12 ^h 41 ^m 5		Mag: -4.4 PMG: 14 ^h 57 ^m			Mag: +1.0 PMG: 07 ^h 54 ^m			Mag: -2.0 PMG: 08 ^h 15 ^m			Mag: +0.7 PMG: 08 ^h 47 ^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	° 169 ° 184 ° 199 ° 214 ° 229 ° 244 ° 259 ° 274 ° 289 ° 304 ° 319 ° 334 ° 349 ° 4 ° 19 ° 34 ° 49 ° 64 ° 79 ° 94 ° 109 ° 124 ° 140 ° 155 ° 170	' 06.8 ' 09.2 ' 11.7 ' 14.2 ' 16.6 ' 19.1 ' 21.6 ' 24.0 ' 26.5 ' 28.9 ' 31.4 ' 33.9 ' 36.3 ' 38.8 ' 41.3 ' 43.7 ' 46.2 ' 48.7 ' 51.1 ' 53.6 ' 56.1 ' 58.5 ' 01.0 ' 03.4 ' 05.9	° 135 ° 150 ° 165 ° 180 ° 195 ° 210 ° 225 ° 240 ° 255 ° 270 ° 285 ° 300 ° 315 ° 330 ° 345 ° 0 ° 15 ° 30 ° 45 ° 60 ° 75 ° 90 ° 105 ° 120 ° 135	' 27.6 ' 28.7 ' 29.8 ' 30.9 ' 31.9 ' 33.0 ' 34.1 ' 35.2 ' 36.3 ' 37.3 ' 38.4 ' 39.5 ' 40.6 ' 41.6 ' 42.7 ' 43.8 ' 44.9 ' 45.9 ' 47.0 ' 48.1 ' 49.2 ' 50.2 ' 51.3 ' 52.4 ' 53.4	° 241 ° 256 ° 271 ° 286 ° 301 ° 316 ° 331 ° 346 ° 1 ° 16 ° 31 ° 46 ° 61 ° 76 ° 91 ° 106 ° 121 ° 136 ° 151 ° 166 ° 181 ° 196 ° 211 ° 226 ° 241	' 25.7 ' 26.3 ' 26.9 ' 27.5 ' 28.1 ' 28.7 ' 29.3 ' 29.9 ' 30.4 ' 31.0 ' 31.6 ' 32.2 ' 32.8 ' 33.4 ' 34.0 ' 34.6 ' 35.2 ' 35.8 ' 36.3 ' 36.9 ' 37.5 ' 38.1 ' 38.7 ' 39.3 ' 39.9	° -23 ° 01.3 ° 01.1 ° 00.9 ° 00.8 ° 00.6 ° 00.4 ° 00.3 ° 00.1 ° 59.9 ° 59.8 ° 59.6 ° 59.4 ° 59.3 ° 59.1 ° 58.9 ° 58.7 ° 58.6 ° 58.4 ° 58.2 ° 58.1 ° 57.9 ° 57.7 ° 57.5 ° 57.4	° 236 ° 251 ° 266 ° 281 ° 296 ° 311 ° 326 ° 341 ° 356 ° 11 ° 26 ° 41 ° 56 ° 71 ° 86 ° 101 ° 116 ° 131 ° 146 ° 161 ° 176 ° 191 ° 206 ° 221 ° 236	' 04.7 ' 06.7 ' 08.7 ' 10.8 ' 12.8 ' 14.8 ' 16.8 ' 18.8 ' 20.8 ' 22.9 ' 24.9 ' 26.9 ' 28.9 ' 30.9 ' 33.0 ' 35.0 ' 37.0 ' 39.0 ' 41.0 ' 43.1 ' 45.1 ' 47.1 ' 49.1 ' 51.2 ' 53.2	° -21 ° 46.3 ° 46.3 ° 46.2 ° 46.2 ° 46.1 ° 46.0 ° 46.0 ° 45.9 ° 45.8 ° 45.8 ° 45.7 ° 45.7 ° 45.6 ° 45.5 ° 45.5 ° 45.4 ° 45.4 ° 45.3 ° 45.2 ° 45.2 ° 45.1 ° 45.1 ° 45.0 ° 44.9	h m 52.4 h m 54.6 h m 56.8 h m 59.1 h m 01.3 h m 03.5 h m 05.8 h m 08.0 h m 10.2 h m 12.5 h m 14.7 h m 17.0 h m 19.2 h m 21.4 h m 23.7 h m 25.9 h m 28.1 h m 30.4 h m 32.6 h m 34.8 h m 37.1 h m 39.3 h m 41.6 h m 43.8 h m 46.0	° -20 ° 22.2 ° 22.2 ° 22.2 ° 22.1 ° 22.0 ° 22.0 ° 22.0 ° 21.9 ° 21.9 ° 21.8 ° 21.8 ° 21.7 ° 21.7 ° 21.7 ° 21.6 ° 21.6 ° 21.5 ° 21.5 ° 21.4 ° 21.4 ° 21.3 ° 21.3 ° 21.2					
Dif.	—		-1	+11	+6			+2	+20			+1	+22			0	

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'1			SD: 16'6		PHE {		Rº: 53 ^m										
	PMG: 12 ^h 09 ^m 6			Edad: 17 ^d 4		{ 4 ^h : 60'8 12 ^h : 60'6 20 ^h : 60'4												
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.											
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	
0	177	33.7	-3	13.4	326	02.9	88	-4	55.7	146	60 N	17 56	18 37	19 26	22 17	98	7 43	12
1	192	33.9		12.4	340	30.7	88	-5	10.3	146	58	57	36	22	11	93	47	15
2	207	34.0		11.4	354	58.5	88		24.9	146	56	58	35	19	06	90	51	17
3	222	34.2		10.4	9	26.3	88		39.5	145	54	17 59	34	16	22 01	87	54	20
4	237	34.4		09.4	23	54.1	89	-5	54.0	145	52	18 00	34	13	21 57	84	56	23
5	252	34.5	-3	08.4	38	22.0	88	-6	08.5	144	50	18 01	18 33	19 11	21 53	82	7 59	25
6	267	34.7	-3	07.4	52	49.8	87	-6	22.9	144	45	18 03	18 32	19 06	21 44	77	8 04	30
7	282	34.9		06.5	67	17.5	88		37.3	143	40	04	31	03	37	73	09	34
8	297	35.1		05.5	81	45.3	88	-6	51.6	143	35	05	31	19 00	31	70	13	37
9	312	35.2		04.5	96	13.1	88	-7	05.9	142	30	07	31	18 58	26	67	17	40
10	327	35.4		03.5	110	40.9	88		20.1	141	20	09	31	56	17	62	23	45
11	342	35.6	-3	02.5	125	08.7	88	-7	34.2	141	10 N	18 11	18 32	18 56	21 09	58	8 28	50
12	357	35.7	-3	01.5	139	36.5	88	-7	48.3	140	0	18 13	18 34	18 58	21 02	53	8 33	54
13	12	35.9	-3	00.6	154	04.3	87	-8	02.3	140	10 S	15	36	19 00	20 54	50	39	57
14	27	36.1	-2	59.6	168	32.0	88		16.3	139	20	17	39	05	47	45	44	62
15	42	36.2		58.6	182	59.8	88		30.2	139	30	20	44	12	38	41	50	68
16	57	36.4		57.6	197	27.6	87		44.1	137	35	22	47	17	33	38	54	71
17	72	36.6	-2	56.6	211	55.3	88	-8	57.8	137	40	18 24	18 51	19 23	20 27	35	8 58	74
18	87	36.8	-2	55.6	226	23.1	87	-9	11.5	137	45	18 26	18 55	19 30	20 21	31	9 03	78
19	102	36.9		54.7	240	50.8	87		25.2	135	50	29	19 01	40	13	27	09	83
20	117	37.1		53.7	255	18.5	87		38.7	135	52	30	04	45	10	24	11	86
21	132	37.3		52.7	269	46.2	88	-9	52.2	135	54	31	07	50	06	22	14	88
22	147	37.4		51.7	284	14.0	87	-10	05.7	133	56	33	10	19 56	20 02	19	17	91
23	162	37.6		50.7	298	41.7	86		19.0	133	58	35	14	20 03	19 57	16	21	94
24	177	37.8	-2	49.7	313	09.3		-10	32.3		60 S	18 37	19 19	20 11	19 52	12	9 25	98
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 12 ^h 37 ^m 5		Mag: -4.4 PMG: 14 ^h 57 ^m				Mag: +1.0 PMG: 07 ^h 53 ^m				Mag: -2.0 PMG: 08 ^h 11 ^m				Mag: +0.7 PMG: 08 ^h 44 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	170	05.9	135	41.9	+15	53.4	241	39.9	-22	57.4	236	53.2	-21	-44.9	228	46.0	-20	21.2
1	185	08.4	150	41.9		54.5	256	40.5		57.2	251	55.2		-44.9	243	48.3		21.2
2	200	10.8	165	41.8		55.6	271	41.1		57.0	266	57.2		-44.8	258	50.5		21.2
3	215	13.3	180	41.7		56.6	286	41.7		56.8	281	59.2		-44.8	273	52.7		21.1
4	230	15.8	195	41.6		57.7	301	42.3		56.7	297	01.3		-44.7	288	55.0		21.1
5	245	18.2	210	41.5	+15	58.8	316	42.9	-22	56.5	312	03.3	-21	-44.6	303	57.2	-20	21.0
6	260	20.7	225	41.5	+15	59.8	331	43.4	-22	56.3	327	05.3	-21	-44.6	318	59.5	-20	21.0
7	275	23.2	240	41.4	+16	00.9	346	44.0		56.1	342	07.3		-44.5	334	01.7		21.0
8	290	25.6	255	41.3		02.0	1	44.6		56.0	357	09.4		-44.5	349	03.9		20.9
9	305	28.1	270	41.2		03.0	16	45.2		55.8	12	11.4		-44.4	4	06.2		20.9
10	320	30.5	285	41.1		04.1	31	45.8		55.6	27	13.4		-44.3	19	08.4		20.8
11	335	33.0	300	41.1	+16	05.2	46	46.4	-22	55.4	42	15.4	-21	-44.3	34	10.6	-20	20.8
12	350	35.5	315	41.0	+16	06.2	61	47.0	-22	55.2	57	17.5	-21	-44.2	49	12.9	-20	20.7
13	5	37.9	330	40.9		07.3	76	47.6		55.1	72	19.5		-44.1	64	15.1		20.7
14	20	40.4	345	40.8		08.3	91	48.2		54.9	87	21.5		-44.1	79	17.4		20.7
15	35	42.9	0	40.8		09.4	106	48.8		54.7	102	23.5		-44.0	94	19.6		20.6
16	50	45.3	15	40.7		10.5	121	49.4		54.5	117	25.5		-44.0	109	21.8		20.6
17	65	47.8	30	40.6	+16	11.5	136	50.0	-22	54.3	132	27.6	-21	-43.9	124	24.1	-20	20.5
18	80	50.3	45	40.5	+16	12.6	151	50.5	-22	54.2	147	29.6	-21	-43.8	139	26.3	-20	20.5
19	95	52.7	60	40.4		13.6	166	51.1		54.0	162	31.6		-43.8	154	28.6		20.5
20	110	55.2	75	40.4		14.7	181	51.7		53.8	177	33.7		-43.7	169	30.8		20.4
21	125	57.7	90	40.3		15.8	196	52.3		53.6	192	35.7		-43.7	184	33.0		20.4
22	141	00.1	105	40.2		16.8	211	52.9		53.4	207	37.7		-43.6	199	35.3		20.3
23	156	02.6	120	40.1		17.9	226	53.5		53.3	222	39.7		-43.5	214	37.5		20.3
24	171	05.0	135	40.1	+16	18.9	241	54.1	-22	53.1	237	41.8	-21	-43.5	229	39.8	-20	20.2
Dif.	—		-1		+11		+6		+2		+20		+1		+22			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'1			SD: 16'4			PHE { 4 ^h : 60'1 12 ^h : 59'9 20 ^h : 59'6												
	PMG: 12 ^h 09 ^m 3			Edad: 18 ^d 4															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº		Hora	Rº			
h	°	'	°	°	'	°	'	°				h m	m		h m	m			
0	177	37.8	-2	49.7	313	09.3	87	-10	32.3	132	60 N	4 52	5 40	6 22	23 55	93	7 55	14	
1	192	37.9		48.7	327	37.0	87		45.5	131	58	56	42	21	44	90	8 02	18	
2	207	38.1		47.8	342	04.7	86	-10	58.6	130	56	4 59	43	20	36	85	08	22	
3	222	38.3		46.8	356	32.3	87	-11	11.6	130	54	5 02	44	19	28	83	14	24	
4	237	38.5		45.8	11	00.0	86		24.6	128	52	05	44	18	21	81	19	27	
5	252	38.6	-2	44.8	25	27.6	86	-11	37.4	128	50	5 08	5 45	6 17	23 15	78	8 24	28	
6	267	38.8	-2	43.8	39	55.2	86	-11	50.2	127	45	5 12	5 46	6 16	23 01	74	8 34	33	
7	282	39.0		42.8	54	22.8	86	-12	02.9	126	40	16	47	14	22 50	71	43	36	
8	297	39.1		41.8	68	50.4	86		15.5	126	35	18	48	13	41	68	50	40	
9	312	39.3		40.9	83	18.0	85		28.1	124	30	20	48	12	33	65	8 57	42	
10	327	39.5		39.9	97	45.5	86		40.5	123	20	22	48	10	19	61	9 08	47	
11	342	39.7	-2	38.9	112	13.1	85	-12	52.8	123	10 N	5 23	5 47	6 08	22 07	58	9 18	50	
12	357	39.8	-2	37.9	126	40.6	85	-13	05.1	122	0	5 21	5 45	6 06	21 55	55	9 27	54	
13	12	40.0		36.9	141	08.1	85		17.3	120	10 S	19	43	04	44	51	36	58	
14	27	40.2		35.9	155	35.6	85		29.3	120	20	14	40	6 02	32	48	46	62	
15	42	40.4		34.9	170	03.1	85		41.3	119	30	07	35	5 59	19	43	9 58	66	
16	57	40.5		34.0	184	30.6	84	-13	53.2	117	35	5 03	32	58	11	41	10 05	69	
17	72	40.7	-2	33.0	198	58.0	85	-14	04.9	117	40	4 57	5 29	5 56	21 02	39	10 12	72	
18	87	40.9	-2	32.0	213	25.5	84	-14	16.6	116	45	4 49	5 24	5 54	20 52	35	10 21	76	
19	102	41.0		31.0	227	52.9	84		28.2	115	50	40	19	51	40	31	32	80	
20	117	41.2		30.0	242	20.3	84		39.7	113	52	35	16	50	34	29	37	83	
21	132	41.4		29.0	256	47.7	84	-14	51.0	113	54	30	13	49	28	26	42	86	
22	147	41.6		28.0	271	15.1	83	-15	02.3	112	56	24	10	47	21	24	48	89	
23	162	41.7		27.1	285	42.4	84		13.5	111	58	17	06	46	20 13	21	10 55	92	
24	177	41.9	-2	26.1	300	09.8		-15	24.6		60 S	4 09	5 01	5 44	20 04	17	11 03	96	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG		Mag: -4.4				Mag: +1.0				Mag: -2.0				Mag: +0.7				
	12 ^h 33 ^m 6		PMG: 14 ^h 57 ^m				PMG: 07 ^h 52 ^m				PMG: 08 ^h 08 ^m				PMG: 08 ^h 40 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	171	05.0	135	40.1	+16	18.9	241	54.1	-22	53.1	237	41.8	-21	43.5	229	39.8	-20	20.2	
1	186	07.5	150	40.0		20.0	256	54.7		52.9	252	43.8		43.4	244	42.0		20.2	
2	201	10.0	165	39.9		21.0	271	55.3		52.7	267	45.8		43.4	259	44.2		20.2	
3	216	12.4	180	39.8		22.1	286	55.9		52.5	282	47.8		43.3	274	46.5		20.1	
4	231	14.9	195	39.8		23.1	301	56.5		52.3	297	49.9		43.2	289	48.7		20.1	
5	246	17.4	210	39.7	+16	24.2	316	57.1	-22	52.2	312	51.9	-21	43.2	304	51.0	-20	20.0	
6	261	19.8	225	39.6	+16	25.2	331	57.7	-22	52.0	327	53.9	-21	43.1	319	53.2	-20	20.0	
7	276	22.3	240	39.5		26.3	346	58.3		51.8	342	56.0		43.1	334	55.4		20.0	
8	291	24.8	255	39.4		27.3	1	58.8		51.6	357	58.0		43.0	349	57.7		19.9	
9	306	27.2	270	39.4		28.4	16	59.4		51.4	13	00.0		42.9	4	59.9		19.9	
10	321	29.7	285	39.3		29.4	32	00.0		51.2	28	02.0		42.9	20	02.2		19.8	
11	336	32.2	300	39.2	+16	30.5	47	00.6	-22	51.0	43	04.1	-21	42.8	35	04.4	-20	19.8	
12	351	34.6	315	39.1	+16	31.5	62	01.2	-22	50.9	58	06.1	-21	42.8	50	06.7	-20	19.8	
13	6	37.1	330	39.1		32.6	77	01.8		50.7	73	08.1		42.7	65	08.9		19.7	
14	21	39.5	345	39.0		33.6	92	02.4		50.5	88	10.2		42.6	80	11.1		19.7	
15	36	42.0	0	38.9		34.7	107	03.0		50.3	103	12.2		42.6	95	13.4		19.6	
16	51	44.5	15	38.8		35.7	122	03.6		50.1	118	14.2		42.5	110	15.6		19.6	
17	66	46.9	30	38.8	+16	36.8	137	04.2	-22	49.9	133	16.2	-21	42.5	125	17.9	-20	19.6	
18	81	49.4	45	38.7	+16	37.8	152	04.8	-22	49.7	148	18.3	-21	42.4	140	20.1	-20	19.5	
19	96	51.9	60	38.6		38.8	167	05.4		49.5	163	20.3		42.3	155	22.4		19.5	
20	111	54.3	75	38.5		39.9	182	06.0		49.3	178	22.3		42.3	170	24.6		19.4	
21	126	56.8	90	38.5		40.9	197	06.6		49.2	193	24.4		42.2	185	26.8		19.4	
22	141	59.3	105	38.4		42.0	212	07.2		49.0	208	26.4		42.2	200	29.1		19.3	
23	157	01.7	120	38.3		43.0	227	07.7		48.8	223	28.4		42.1	215	31.3		19.3	
24	172	04.2	135	38.2	+16	44.0	242	08.3	-22	48.6	238	30.5	-21	42.0	230	33.6	-20	19.3	
Dif.	—		-1	+10			+6	+2			+20	+1			+22				

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:1 PMG: 12 ^h 09 ^m 1			SD: 16:2 Edad: 19 ^d 4 PHE { 4 ^h : 59:3 12 ^h : 59:0 20 ^h : 58:7 PMG: 04 ^h 08 ^m Rº: 55 ^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	177	41.9	-2	26.1	300	09.8	83	-15	24.6	109	60 N	18 01	18 42	19 32	** ** *	8 09	20		
1	192	42.1		25.1	314	37.1	83		35.5	109	58	02	41	27	** ** *	20	24		
2	207	42.3		24.1	329	04.4	83		46.4	107	56	02	39	23	** ** *	30	26		
3	222	42.4		23.1	343	31.7	82	-15	57.1	106	54	03	38	20	** ** *	38	29		
4	237	42.6		22.1	357	58.9	83	-16	07.7	106	52	03	37	17	** ** *	46	31		
5	252	42.8	-2	21.1	12	26.2	82	-16	18.3	104	50	18 04	18 36	19 14	** ** *	8 52	34		
6	267	43.0	-2	20.1	26	53.4	83	-16	28.7	103	45	18 05	18 34	19 09	** ** *	9 07	38		
7	282	43.1		19.2	41	20.7	82		39.0	102	40	06	33	05	** ** *	19	41		
8	297	43.3		18.2	55	47.9	82		49.2	100	35	07	32	02	23 49	64	30		
9	312	43.5		17.2	70	15.1	81	-16	59.2	100	30	08	32	19 00	38 63	39	45		
10	327	43.6		16.2	84	42.2	82	-17	09.2	98	20	09	31	18 57	20 60	9 55	48		
11	342	43.8	-2	15.2	99	09.4	81	-17	19.0	98	10 N	18 11	18 32	18 56	23 05	57	10 08		
12	357	44.0	-2	14.2	113	36.5	82	-17	28.8	96	0	18 12	18 33	18 57	22 50	55	10 21		
13	12	44.2		13.2	128	03.7	81		38.4	95	10 S	14	35	18 59	35 53	34	58		
14	27	44.3		12.3	142	30.8	81		47.9	94	20	16	38	19 03	20 50	10 48	61		
15	42	44.5		11.3	156	57.9	81	-17	57.3	92	30	18	42	10	22 02	47	11 04		
16	57	44.7		10.3	171	25.0	80	-18	06.5	92	35	19	44	14	21 52	45	14 66		
17	72	44.9	-2	09.3	185	52.0	81	-18	15.7	90	40	18 21	18 48	19 19	21 41	43	11 24		
18	87	45.0	-2	08.3	200	19.1	80	-18	24.7	89	45	18 22	18 52	19 26	21 27	40	11 37		
19	102	45.2		07.3	214	46.1	80		33.6	88	50	24	57	35	11 37	11 52	76		
20	117	45.4		06.3	229	13.1	81		42.4	86	52	25	18 59	40	21 03	35	12 00		
21	132	45.6		05.3	243	40.2	80		51.0	85	54	26	19 02	44	20 54	34	08 79		
22	147	45.7		04.4	258	07.2	79	-18	59.5	84	56	28	05	50	45 31	17	82		
23	162	45.9		03.4	272	34.1	80	-19	07.9	83	58	29	08	19 56	34 28	27	85		
24	177	46.1	-2	02.4	287	01.1		-19	16.2		60 S	18 30	19 12	20 04	20 21	25	12 39		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 12 ^h 29 ^m 7		Mag: -4.4 PMG: 14 ^h 58 ^m			Mag: +1.0 PMG: 07 ^h 51 ^m			Mag: -2.0 PMG: 08 ^h 05 ^m			Mag: +0.7 PMG: 08 ^h 36 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	172	04.2	135	38.2	+16	44.0	242	08.3	-22	48.6	238	30.5	-21	-42.0	230	33.6			
1	187	06.6	150	38.2		45.1	257	08.9		48.4	253	32.5		-42.0	245	35.8			
2	202	09.1	165	38.1		46.1	272	09.5		48.2	268	34.5		-41.9	260	38.1			
3	217	11.6	180	38.0		47.2	287	10.1		48.0	283	36.6		-41.9	275	40.3			
4	232	14.0	195	37.9		48.2	302	10.7		47.8	298	38.6		-41.8	290	42.5			
5	247	16.5	210	37.9	+16	49.2	317	11.3	-22	47.6	313	40.6	-21	-41.7	305	44.8			
6	262	19.0	225	37.8	+16	50.3	332	11.9	-22	47.4	328	42.7	-21	-41.7	320	47.0			
7	277	21.4	240	37.7		51.3	347	12.5		47.2	343	44.7		-41.6	335	49.3			
8	292	23.9	255	37.7		52.3	2	13.1		47.0	358	46.7		-41.6	350	51.5			
9	307	26.4	270	37.6		53.4	17	13.7		46.9	13	48.8		-41.5	5	53.8			
10	322	28.8	285	37.5		54.4	32	14.3		46.7	28	50.8		-41.4	20	56.0			
11	337	31.3	300	37.4	+16	55.4	47	14.9	-22	46.5	43	52.8	-21	-41.4	35	58.3			
12	352	33.8	315	37.4	+16	56.5	62	15.5	-22	46.3	58	54.9	-21	-41.3	51	00.5			
13	7	36.2	330	37.3		57.5	77	16.1		46.1	73	56.9		-41.3	66	02.7			
14	22	38.7	345	37.2		58.5	92	16.7		45.9	88	58.9		-41.2	81	05.0			
15	37	41.1	0	37.1	+16	59.6	107	17.3		45.7	104	01.0		-41.1	96	07.2			
16	52	43.6	15	37.1	+17	00.6	122	17.9		45.5	119	03.0		-41.1	111	09.5			
17	67	46.1	30	37.0	+17	01.6	137	18.4	-22	45.3	134	05.0	-21	-41.0	126	11.7			
18	82	48.5	45	36.9	+17	02.6	152	19.0	-22	45.1	149	07.1	-21	-41.0	141	14.0			
19	97	51.0	60	36.9		03.7	167	19.6		44.9	164	09.1		-40.9	156	16.2			
20	112	53.5	75	36.8		04.7	182	20.2		44.7	179	11.1		-40.8	171	18.5			
21	127	55.9	90	36.7		05.7	197	20.8		44.5	194	13.2		-40.8	186	20.7			
22	142	58.4	105	36.6		06.8	212	21.4		44.3	209	15.2		-40.7	201	22.9			
23	158	00.9	120	36.6		07.8	227	22.0		44.1	224	17.3		-40.7	216	25.2			
24	173	03.3	135	36.5	+17	08.8	242	22.6	-22	43.9	239	19.3	-21	-40.6	231	27.4			
Dif.	—	—	-1	+10			+6	+2			+20	+1			+22	0			

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			SD: 16'0															
	PMG: 12 ^h 08 ^m 8			Edad: 20 ^d 4															
	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	46.1	-2	02.4		287	01.1	80	-19	16.2	82	60 N	4 45	5 34	6 16	1 28	84	8 29	29
1	192	46.3		01.4		301	28.1	79		24.4	80	58	50	36	15	14	81	44	33
2	207	46.5	-2	00.4		315	55.0	80		32.4	79	56	54	37	14	1 01	79	8 56	36
3	222	46.6	-1	59.4		330	22.0	79		40.3	78	54	4 57	39	14	0 51	76	9 07	38
4	237	46.8		58.4		344	48.9	79		48.1	76	52	5 00	40	13	42	73	17	40
5	252	47.0	-1	57.4		359	15.8	79	-19	55.7	76	50	5 03	5 41	6 13	0 33	72	9 26	41
6	267	47.2	-1	56.5		13	42.7	80	-20	03.3	74	45	5 09	5 43	6 12	0 15	70	9 45	43
7	282	47.3		55.5		28	09.7	78		10.7	72	40	13	44	11	0 01	67	10 00	46
8	297	47.5		54.5		42	36.5	79		17.9	72	35	16	45	10	** ** *	**	13	47
9	312	47.7		53.5		57	03.4	79		25.1	70	30	18	46	09	** ** *	**	24	49
10	327	47.9		52.5		71	30.3	79		32.1	69	20	21	46	08	** ** *	**	10 43	52
11	342	48.0	-1	51.5		85	57.2	79	-20	39.0	67	10 N	5 21	5 46	6 07	** ** *	**	11 00	54
12	357	48.2	-1	50.5		100	24.1	78	-20	45.7	66	0	5 21	5 45	6 06	23 45	55	11 16	55
13	12	48.4		49.5		114	50.9	79		52.3	65	10 S	19	43	04	28	54	32	57
14	27	48.6		48.6		129	17.8	78	-20	58.8	63	20	15	40	02	23 10	52	11 49	59
15	42	48.7		47.6		143	44.6	79	-21	05.1	63	30	09	37	6 01	22 49	51	12 09	61
16	57	48.9		46.6		158	11.5	78		11.4	61	35	5 04	34	5 59	37	50	20	62
17	72	49.1	-1	45.6		172	38.3	79	-21	17.5	59	40	4 59	5 31	5 58	22 24	48	12 33	64
18	87	49.3	-1	44.6		187	05.2	78	-21	23.4	58	45	4 52	5 27	5 56	22 07	47	12 49	66
19	102	49.5		43.6		201	32.0	79		29.2	57	50	43	22	54	21 48	44	13 08	68
20	117	49.6		42.6		215	58.9	78		34.9	56	52	39	20	53	38	44	17	70
21	132	49.8		41.6		230	25.7	79		40.5	54	54	34	17	52	28	42	29	72
22	147	50.0		40.7		244	52.6	78		45.9	53	56	29	14	51	16	40	37	73
23	162	50.2		39.7		259	19.4	78		51.2	51	58	22	10	50	21 02	38	13 52	76
24	177	50.3	-1	38.7		273	46.2		-21	56.3		60 S	4 15	5 07	5 49	20 46	35	14 08	78
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 12 ^h 25 ^m 7		Mag: -4.4 PMG: 14 ^h 58 ^m				Mag: +1.0 PMG: 07 ^h 50 ^m				Mag: -2.0 PMG: 08 ^h 02 ^m				Mag: +0.7 PMG: 08 ^h 33 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°
0	173	03.3	135	36.5	+17	08.8	242	22.6	-22	43.9	239	19.3	-21	40.6	231	27.4	-20	18.3	
1	188	05.8	150	36.4		09.8	257	23.2		43.7	254	21.3		40.5	246	29.7		18.3	
2	203	08.3	165	36.4		10.8	272	23.8		43.5	269	23.4		40.5	261	31.9		18.2	
3	218	10.7	180	36.3		11.9	287	24.4		43.3	284	25.4		40.4	276	34.2		18.2	
4	233	13.2	195	36.2		12.9	302	25.0		43.1	299	27.4		40.4	291	36.4		18.1	
5	248	15.6	210	36.1	+17	13.9	317	25.6	-22	42.9	314	29.5	-21	40.3	306	38.7	-20	18.1	
6	263	18.1	225	36.1	+17	14.9	332	26.2	-22	42.7	329	31.5	-21	40.2	321	40.9	-20	18.1	
7	278	20.6	240	36.0		15.9	347	26.8		42.5	344	33.6		40.2	336	43.2		18.0	
8	293	23.0	255	35.9		17.0	2	27.4		42.3	359	35.6		40.1	351	45.4		18.0	
9	308	25.5	270	35.9		18.0	17	28.0		42.1	14	37.6		40.1	6	47.7		17.9	
10	323	28.0	285	35.8		19.0	32	28.6		41.9	29	39.7		40.0	21	49.9		17.9	
11	338	30.4	300	35.7	+17	20.0	47	29.2	-22	41.7	44	41.7	-21	39.9	36	52.2	-20	17.9	
12	353	32.9	315	35.6	+17	21.0	62	29.8	-22	41.5	59	43.8	-21	39.9	51	54.4	-20	17.8	
13	8	35.4	330	35.6		22.1	77	30.4		41.3	74	45.8		39.8	66	56.7		17.8	
14	23	37.8	345	35.5		23.1	92	31.0		41.1	89	47.8		39.8	81	58.9		17.7	
15	38	40.3	0	35.4		24.1	107	31.6		40.9	104	49.9		39.7	97	01.1		17.7	
16	53	42.8	15	35.4		25.1	122	32.1		40.7	119	51.9		39.6	112	03.4		17.7	
17	68	45.2	30	35.3	+17	26.1	137	32.7	-22	40.5	134	54.0	-21	39.6	127	05.6	-20	17.6	
18	83	47.7	45	35.2	+17	27.1	152	33.3	-22	40.3	149	56.0	-21	39.5	142	07.9	-20	17.6	
19	98	50.1	60	35.2		28.1	167	33.9		40.1	164	58.0		39.5	157	10.1		17.5	
20	113	52.6	75	35.1		29.1	182	34.5		39.8	180	00.1		39.4	172	12.4		17.5	
21	128	55.1	90	35.0		30.2	197	35.1		39.6	195	02.1		39.4	187	14.6		17.5	
22	143	57.5	105	35.0		31.2	212	35.7		39.4	210	04.2		39.3	202	16.9		17.4	
23	159	00.0	120	34.9		32.2	227	36.3		39.2	225	06.2		39.2	217	19.1		17.4	
24	174	02.5	135	34.8	+17	33.2	242	36.9	-22	39.0	240	08.2	-21	39.2	232	21.4	-20	17.3	
Dif.	—		-1		+10		+6		+2		+20		+1		+22				

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna					
	SD: 16'1 PMG: 12 ^h 08 ^m 5			SD: 15'7 Edad: 21 ^d 4 PHE 4^h: 57'5 12^h: 57'2 20^h: 56'9								PMG: 05 ^h 58 ^m			R ^o : 55 ^m								
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.				Civil			Náut.			Hora		R ^o		Hora	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	h	m	
0	177	50.3	-1	38.7	273	46.2	79	-21	56.3	51	60 N	18 06	18 47	19 37	2 52	71	8 58	44					
1	192	50.5		37.7	288	13.1	79	-22	01.4	48	58	06	45	32	35	68	9 17	45					
2	207	50.7		36.7	302	40.0	78		06.2	48	56	06	43	27	20	66	32	46					
3	222	50.9		35.7	317	06.8	79		11.0	46	54	07	42	24	2 07	65	45	47					
4	237	51.1		34.7	331	33.7	79		15.6	45	52	07	41	20	1 55	65	9 57	48					
5	252	51.2	-1	33.7	346	00.6	78	-22	20.1	43	50	18 07	18 39	19 17	1 45	64	10 07	49					
6	267	51.4	-1	32.7	0	27.4	79	-22	24.4	42	45	18 08	18 37	19 11	1 25	61	10 28	50					
7	282	51.6		31.8	14	54.3	79		28.6	41	40	08	35	07	1 08	60	10 46	51					
8	297	51.8		30.8	29	21.2	79		32.7	40	35	09	34	03	0 53	60	11 00	52					
9	312	51.9		29.8	43	48.1	80		36.7	38	30	09	33	19 01	41	59	13	52					
10	327	52.1		28.8	58	15.1	79		40.5	36	20	10	32	18 58	20	57	35	53					
11	342	52.3	-1	27.8	72	42.0	79	-22	44.1	36	10 N	18 11	18 32	18 56	0 02	56	11 54	53					
12	357	52.5	-1	26.8	87	08.9	80	-22	47.7	34	0	18 12	18 32	18 56	***	***	12 11	55					
13	12	52.7		25.8	101	35.9	80		51.1	32	10 S	13	34	18 58	***	***	29	55					
14	27	52.8		24.8	116	02.9	79		54.3	32	20	14	36	19 02	***	***	12 48	56					
15	42	53.0		23.9	130	29.8	80	-22	57.5	29	30	15	39	07	23 40	54	13 10	56					
16	57	53.2		22.9	144	56.8	81	-23	00.4	29	35	16	42	11	27	53	22	57					
17	72	53.4	-1	21.9	159	23.9	80	-23	03.3	27	40	18 17	18 44	19 16	23 12	53	13 37	58					
18	87	53.6	-1	20.9	173	50.9	81	-23	06.0	26	45	18 19	18 48	19 22	22 54	53	13 55	58					
19	102	53.7		19.9	188	18.0	80		08.6	25	50	20	52	31	32	53	14 16	59					
20	117	53.9		18.9	202	45.0	81		11.1	23	52	21	54	35	22	52	27	59					
21	132	54.1		17.9	217	12.1	81		13.4	22	54	21	18 57	39	22 10	52	39	59					
22	147	54.3		16.9	231	39.2	82		15.6	20	56	22	19 00	44	21 56	52	14 52	60					
23	162	54.5		15.9	246	06.4	81		17.6	19	58	23	03	50	40	52	15 08	60					
24	177	54.6	-1	15.0	260	33.5		-23	19.5		60 S	18 24	19 06	19 57	21 21	51	15 26	62					

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.4				Mag: +1.0				Mag: -2.0				Mag: +0.7			
	12 ^h 21 ^m 8		PMG: 14 ^h 58 ^m				PMG: 07 ^h 49 ^m				PMG: 07 ^h 58 ^m				PMG: 08 ^h 29 ^m			
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	174	02.5	135	34.8	+17	33.2	242	36.9	-22	39.0	240	08.2	-21	-39.2	232	21.4	-20	17.3
1	189	04.9	150	34.7		34.2	257	37.5		38.8	255	10.3		-39.1	247	23.6		17.3
2	204	07.4	165	34.7		35.2	272	38.1		38.6	270	12.3		-39.1	262	25.9		17.3
3	219	09.9	180	34.6		36.2	287	38.7		38.4	285	14.4		-39.0	277	28.1		17.2
4	234	12.3	195	34.5		37.2	302	39.3		38.2	300	16.4		-38.9	292	30.4		17.2
5	249	14.8	210	34.5	+17	38.2	317	39.9	-22	38.0	315	18.5	-21	-38.9	307	32.6	-20	17.1
6	264	17.2	225	34.4	+17	39.2	332	40.5	-22	37.8	330	20.5	-21	-38.8	322	34.9	-20	17.1
7	279	19.7	240	34.3		40.2	347	41.1		37.6	345	22.5		-38.8	337	37.1		17.1
8	294	22.2	255	34.3		41.2	2	41.7		37.4	0	24.6		-38.7	352	39.4		17.0
9	309	24.6	270	34.2		42.2	17	42.3		37.1	15	26.6		-38.6	7	41.6		17.0
10	324	27.1	285	34.1		43.2	32	42.9		36.9	30	28.7		-38.6	22	43.9		16.9
11	339	29.6	300	34.1	+17	44.2	47	43.5	-22	36.7	45	30.7	-21	-38.5	37	46.1	-20	16.9
12	354	32.0	315	34.0	+17	45.2	62	44.1	-22	36.5	60	32.8	-21	-38.5	52	48.4	-20	16.9
13	9	34.5	330	33.9		46.2	77	44.7		36.3	75	34.8		-38.4	67	50.6		16.8
14	24	37.0	345	33.9		47.2	92	45.3		36.1	90	36.9		-38.3	82	52.9		16.8
15	39	39.4	0	33.8		48.2	107	45.9		35.9	105	38.9		-38.3	97	55.1		16.7
16	54	41.9	15	33.7		49.2	122	46.5		35.7	120	40.9		-38.2	112	57.4		16.7
17	69	44.4	30	33.7	+17	50.2	137	47.1	-22	35.4	135	43.0	-21	-38.2	127	59.6	-20	16.7
18	84	46.8	45	33.6	+17	51.2	152	47.7	-22	35.2	150	45.0	-21	-38.1	143	01.9	-20	16.6
19	99	49.3	60	33.5		52.2	167	48.3		35.0	165	47.1		-38.0	158	04.1		16.6
20	114	51.7	75	33.5		53.2	182	48.9		34.8	180	49.1		-38.0	173	06.4		16.5
21	129	54.2	90	33.4		54.2	197	49.5		34.6	195	51.2		-37.9	188	08.6		16.5
22	144	56.7	105	33.4		55.2	212	50.1		34.4	210	53.2		-37.9	203	10.9		16.5
23	159	59.1	120	33.3		56.2	227	50.7		34.2	225	55.3		-37.8	218	13.1		16.4
24	175	01.6	135	33.2	+17	57.2	242	51.3	-22	33.9	240	57.3	-21	-37.8	233	15.4	-20	16.4
Dif.	—		-1	+10			+6	+2			+20	+1		+23		0		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1				SD: 15'5													
	PMG: 12 ^h 08 ^m 2				Edad: 22 ^d 4													
	PMG: 06 ^h 53 ^m				Rº: 53 ^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	54.6	-1	15.0	260	33.5	82	-23	19.5	18	60 N	4 39	5 28	6 10	4 03	52	9 42	58
1	192	54.8		14.0	275	00.7	82		21.3	17	58	44	30	09	3 43	52	10 02	58
2	207	55.0		13.0	289	27.9	83		23.0	15	56	48	32	09	26	53	18	58
3	222	55.2		12.0	303	55.2	82		24.5	14	54	52	34	09	12	53	32	58
4	237	55.4		11.0	318	22.4	83		25.9	12	52	56	35	09	3 00	53	45	57
5	252	55.5	-1	10.0	332	49.7	84	-23	27.1	11	50	4 59	5 36	6 09	2 49	53	10 56	56
6	267	55.7	-1	09.0	347	17.1	83	-23	28.2	10	45	5 05	5 39	6 08	2 26	54	11 18	56
7	282	55.9		08.0	1	44.4	84		29.2	9	40	09	41	08	2 08	54	37	55
8	297	56.1		07.1	16	11.8	84		30.1	7	35	13	42	07	1 53	54	11 52	55
9	312	56.3		06.1	30	39.2	85		30.8	6	30	15	43	07	40	54	12 05	55
10	327	56.4		05.1	45	06.7	84		31.4	4	20	19	44	06	1 17	54	28	54
11	342	56.6	-1	04.1	59	34.1	85	-23	31.8	4	10 N	5 20	5 45	6 06	0 58	54	12 47	54
12	357	56.8	-1	03.1	74	01.6	86	-23	32.2	2	0	5 20	5 44	6 05	0 40	53	13 06	53
13	12	57.0		02.1	88	29.2	86		32.4	0	10 S	19	43	04	22	53	24	52
14	27	57.2		01.1	102	56.8	86		32.4	0	20	15	41	03	0 02	54	13 44	51
15	42	57.3	-1	00.1	117	24.4	87		32.4	2	30	10	38	02	** ** *	**	14 06	51
16	57	57.5	-0	59.1	131	52.1	87		32.2	4	35	06	36	01	** ** *	**	19	51
17	72	57.7	-0	58.2	146	19.8	87	-23	31.8	4	40	5 01	5 33	6 00	** ** *	**	14 35	49
18	87	57.9	-0	57.2	160	47.5	88	-23	31.4	6	45	4 55	5 30	5 59	23 47	58	14 53	49
19	102	58.1		56.2	175	15.3	88		30.8	7	50	47	25	58	25	59	15 15	48
20	117	58.2		55.2	189	43.1	88		30.1	8	52	43	23	57	14	60	26	47
21	132	58.4		54.2	204	10.9	89		29.3	10	54	38	21	56	23 02	61	38	47
22	147	58.6		53.2	218	38.8	90		28.3	11	56	33	18	55	22 48	62	15 52	46
23	162	58.8		52.2	233	06.8	90		27.2	12	58	28	15	55	22 32	63	16 08	45
24	177	59.0	-0	51.2	247	34.8		-23	26.0		60 S	4 21	5 12	5 54	22 12	66	16 28	43
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.4				Mag: +1.0				Mag: -2.0				Mag: +0.7			
	12 ^h 17 ^m 9		PMG: 14 ^h 58 ^m				PMG: 07 ^h 48 ^m				PMG: 07 ^h 55 ^m				PMG: 08 ^h 26 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	175	01.6	135	33.2	+17	57.2	242	51.3	-22	33.9	240	57.3	-21	37.8	233	15.4	-20	16.4
1	190	04.1	150	33.2		58.2	257	51.9		33.7	255	59.4		37.7	248	17.7		16.3
2	205	06.5	165	33.1	+17	59.2	272	52.5		33.5	271	01.4		37.6	263	19.9		16.3
3	220	09.0	180	33.0	+18	00.2	287	53.1		33.3	286	03.5		37.6	278	22.2		16.3
4	235	11.5	195	33.0		01.1	302	53.7		33.1	301	05.5		37.5	293	24.4		16.2
5	250	13.9	210	32.9	+18	02.1	317	54.3	-22	32.9	316	07.6	-21	37.5	308	26.7	-20	16.2
6	265	16.4	225	32.8	+18	03.1	332	54.9	-22	32.6	331	09.6	-21	37.4	323	28.9	-20	16.1
7	280	18.9	240	32.8		04.1	347	55.5		32.4	346	11.7		37.3	338	31.2		16.1
8	295	21.3	255	32.7		05.1	2	56.1		32.2	1	13.7		37.3	353	33.4		16.1
9	310	23.8	270	32.6		06.1	17	56.7		32.0	16	15.8		37.2	8	35.7		16.0
10	325	26.2	285	32.6		07.1	32	57.3		31.8	31	17.8		37.2	23	37.9		16.0
11	340	28.7	300	32.5	+18	08.0	47	57.9	-22	31.6	46	19.9	-21	37.1	38	40.2	-20	16.0
12	355	31.2	315	32.5	+18	09.0	62	58.5	-22	31.3	61	21.9	-21	37.0	53	42.4	-20	15.9
13	10	33.6	330	32.4		10.0	77	59.1		31.1	76	24.0		37.0	68	44.7		15.9
14	25	36.1	345	32.3		11.0	92	59.7		30.9	91	26.0		36.9	83	46.9		15.8
15	40	38.6	0	32.3		12.0	108	00.3		30.7	106	28.1		36.9	98	49.2		15.8
16	55	41.0	15	32.2		13.0	123	00.9		30.5	121	30.1		36.8	113	51.4		15.8
17	70	43.5	30	32.1	+18	13.9	138	01.5	-22	30.2	136	32.2	-21	36.8	128	53.7	-20	15.7
18	85	46.0	45	32.1	+18	14.9	153	02.1	-22	30.0	151	34.2	-21	36.7	143	56.0	-20	15.7
19	100	48.4	60	32.0		15.9	168	02.7		29.8	166	36.3		36.6	158	58.2		15.6
20	115	50.9	75	32.0		16.9	183	03.3		29.6	181	38.3		36.6	174	00.5		15.6
21	130	53.4	90	31.9		17.9	198	03.9		29.3	196	40.4		36.5	189	02.7		15.6
22	145	55.8	105	31.8		18.8	213	04.5		29.1	211	42.4		36.5	204	05.0		15.5
23	160	58.3	120	31.8		19.8	228	05.1		28.9	226	44.5		36.4	219	07.2		15.5
24	176	00.7	135	31.7	+18	20.8	243	05.7	-22	28.7	241	46.5	-21	36.3	234	09.5	-20	15.4
Dif.	—		-1		+10		+6		+2		+20		+1		+23			
0																		

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'1			SD: 15'3		PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'5														
	PMG: 12 ^h 07 ^m 9			Edad: 23 ^d 4								PMG: 07 ^h 46 ^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	m			
0	177	59.0	-0	51.2	247	34.8	90	-23	26.0	13	60 N	18 11	18 52	19 42	4 55	34	10 40	72		
1	192	59.1		50.2	262	02.8	91		24.7	15	58	11	50	37	35	37	11 00	68		
2	207	59.3		49.3	276	30.9	91		23.2	16	56	11	48	32	19	39	16	66		
3	222	59.5		48.3	290	59.0	92		21.6	17	54	10	46	28	4 05	41	30	64		
4	237	59.7		47.3	305	27.2	92		19.9	18	52	10	44	24	3 53	42	42	63		
5	252	59.9	-0	46.3	319	55.4	93	-23	18.1	19	50	18 10	18 43	19 21	3 42	43	11 52	62		
6	268	00.1	-0	45.3	334	23.7	93	-23	16.2	21	45	18 10	18 40	19 14	3 20	45	12 14	60		
7	283	00.2		44.3	348	52.0	93		14.1	22	40	10	37	09	3 02	46	32	58		
8	298	00.4		43.3	3	20.3	95		11.9	23	35	10	36	05	2 47	47	12 47	57		
9	313	00.6		42.3	17	48.8	94		09.6	24	30	10	34	19 02	34	48	13 00	56		
10	328	00.8		41.3	32	17.2	95		07.2	26	20	11	33	18 58	2 11	50	22	54		
11	343	01.0	-0	40.4	46	45.7	96	-23	04.6	27	10 N	18 11	18 32	18 56	1 52	50	13 41	52		
12	358	01.1	-0	39.4	61	14.3	96	-23	01.9	28	0	18 11	18 32	18 56	1 33	52	13 59	50		
13	13	01.3		38.4	75	42.9	97	-22	59.1	29	10 S	12	33	18 57	1 15	53	14 16	50		
14	28	01.5		37.4	90	11.6	97		56.2	30	20	12	34	19 00	0 56	54	35	48		
15	43	01.7		36.4	104	40.3	98		53.2	31	30	13	37	05	34	55	14 57	45		
16	58	01.9		35.4	119	09.1	99		50.1	33	35	13	39	08	20	56	15 10	44		
17	73	02.1	-0	34.4	133	38.0	98	-22	46.8	34	40	18 14	18 41	19 13	0 05	57	15 24	43		
18	88	02.2	-0	33.4	148	06.8	100	-22	43.4	34	45	18 15	18 44	19 18	***	***	15 42	41		
19	103	02.4		32.4	162	35.8	100		40.0	36	50	16	48	26	***	***	16 03	38		
20	118	02.6		31.5	177	04.8	101		36.4	37	52	16	50	30	***	***	13	37		
21	133	02.8		30.5	191	33.9	101		32.7	39	54	17	52	34	***	***	25	35		
22	148	03.0		29.5	206	03.0	102		28.8	39	56	17	54	38	23 50	69	38	34		
23	163	03.2		28.5	220	32.2	102		24.9	40	58	18	18 57	44	35	72	16 53	32		
24	178	03.3	-0	27.5	235	01.4		-22	20.9		60 S	18 18	19 00	19 50	23 18	74	17 11	29		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG		Mag: -4.4				Mag: +0.9				Mag: -2.1				Mag: +0.7					
	12 ^h 13 ^m 9		PMG: 14 ^h 58 ^m				PMG: 07 ^h 47 ^m				PMG: 07 ^h 52 ^m				PMG: 08 ^h 22 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.				
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	176	00.7	135	31.7	+18	20.8	243	05.7	-22	28.7	241	46.5	-21	-36.3	234	09.5	-20	15.4		
1	191	03.2	150	31.7		21.8	258	06.3		28.5	256	48.6		-36.3	249	11.7		15.4		
2	206	05.7	165	31.6		22.7	273	06.9		28.2	271	50.6		-36.2	264	14.0		15.4		
3	221	08.1	180	31.5		23.7	288	07.5		28.0	286	52.7		-36.2	279	16.3		15.3		
4	236	10.6	195	31.5		24.7	303	08.1		27.8	301	54.7		-36.1	294	18.5		15.3		
5	251	13.1	210	31.4	+18	25.7	318	08.7	-22	27.6	316	56.8	-21	-36.1	309	20.8	-20	15.3		
6	266	15.5	225	31.4	+18	26.6	333	09.3	-22	27.3	331	58.8	-21	-36.0	324	23.0	-20	15.2		
7	281	18.0	240	31.3		27.6	348	09.9		27.1	347	00.9		-35.9	339	25.3		15.2		
8	296	20.5	255	31.2		28.6	3	10.5		26.9	2	02.9		-35.9	354	27.5		15.1		
9	311	22.9	270	31.2		29.5	18	11.1		26.6	17	05.0		-35.8	9	29.8		15.1		
10	326	25.4	285	31.1		30.5	33	11.7		26.4	32	07.1		-35.8	24	32.0		15.1		
11	341	27.8	300	31.1	+18	31.5	48	12.3	-22	26.2	47	09.1	-21	-35.7	39	34.3	-20	15.0		
12	356	30.3	315	31.0	+18	32.4	63	12.9	-22	26.0	62	11.2	-21	-35.6	54	36.6	-20	15.0		
13	11	32.8	330	30.9		33.4	78	13.5		25.7	77	13.2		-35.6	69	38.8		14.9		
14	26	35.2	345	30.9		34.4	93	14.1		25.5	92	15.3		-35.5	84	41.1		14.9		
15	41	37.7	0	30.8		35.3	108	14.7		25.3	107	17.3		-35.5	99	43.3		14.9		
16	56	40.2	15	30.8		36.3	123	15.3		25.1	122	19.4		-35.4	114	45.6		14.8		
17	71	42.6	30	30.7	+18	37.3	138	15.9	-22	24.8	137	21.4	-21	-35.4	129	47.8	-20	14.8		
18	86	45.1	45	30.6	+18	38.2	153	16.5	-22	24.6	152	23.5	-21	-35.3	144	50.1	-20	14.8		
19	101	47.6	60	30.6		39.2	168	17.1		24.4	167	25.6		-35.2	159	52.4		14.7		
20	116	50.0	75	30.5		40.2	183	17.7		24.1	182	27.6		-35.2	174	54.6		14.7		
21	131	52.5	90	30.5		41.1	198	18.3		23.9	197	29.7		-35.1	189	56.9		14.6		
22	146	55.0	105	30.4		42.1	213	18.9		23.7	212	31.7		-35.1	204	59.1		14.6		
23	161	57.4	120	30.4		43.0	228	19.5		23.4	227	33.8		-35.0	220	01.4		14.6		
24	176	59.9	135	30.3	+18	44.0	243	20.1	-22	23.2	242	35.8	-21	-34.9	235	03.6	-20	14.5		
Dif.	—		-1	+10			+6	+2			+21	+1			+23					

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			SD: 15'1		PHE {		4 ^h : 55'3										
	PMG: 12 ^h 07 ^m 6			Edad: 24 ^d 4				12 ^h : 55'2										
								20 ^h : 55'0										
				PMG: 08 ^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 m	m	h m m	m		
0	178	03.3	-0	27.5	235	01.4	103	-22	20.9	42	60 N	4 32	5 22	6 04	5 29	23	11 52	77
1	193	03.5		26.5	249	30.7	104		16.7	43	58	38	25	04	5 12	27	12 08	74
2	208	03.7		25.5	264	00.1	104		12.4	43	56	43	27	04	4 58	29	22	71
3	223	03.9		24.5	278	29.5	104		08.1	45	54	47	29	04	46	30	34	69
4	238	04.1		23.6	292	58.9	106	-22	03.6	46	52	51	31	04	35	32	45	67
5	253	04.3	-0	22.6	307	28.5	106	-21	59.0	47	50	4 54	5 32	6 04	4 25	34	12 54	66
6	268	04.4	-0	21.6	321	58.1	106	-21	54.3	48	45	5 01	5 35	6 04	4 05	36	13 14	62
7	283	04.6		20.6	336	27.7	107		49.5	49	40	06	38	05	3 48	39	30	60
8	298	04.8		19.6	350	57.4	108		44.6	50	35	10	39	05	34	41	44	58
9	313	05.0		18.6	5	27.2	109		39.6	51	30	13	41	05	22	42	13 56	56
10	328	05.2		17.6	19	57.1	109		34.5	52	20	17	43	05	3 01	45	14 16	53
11	343	05.4	-0	16.6	34	27.0	109	-21	29.3	53	10 N	5 19	5 44	6 05	2 42	48	14 33	51
12	358	05.5	-0	15.6	48	56.9	110	-21	24.0	54	0	5 20	5 44	6 04	2 25	50	14 49	48
13	13	05.7		14.7	63	26.9	111		18.6	55	10 S	19	43	04	2 08	52	15 06	45
14	28	05.9		13.7	77	57.0	112		13.1	56	20	16	42	04	1 50	53	23	43
15	43	06.1		12.7	92	27.2	112		07.5	57	30	11	39	03	29	56	42	41
16	58	06.3		11.7	106	57.4	113	-21	01.8	59	35	08	37	03	16	58	15 54	38
17	73	06.5	-0	10.7	121	27.7	113	-20	55.9	59	40	5 03	5 35	6 02	1 02	59	16 07	36
18	88	06.6	-0	09.7	135	58.0	114	-20	50.0	60	45	4 58	5 32	6 02	0 45	62	16 23	33
19	103	06.8		08.7	150	28.4	115		44.0	61	50	50	28	01	24	64	41	31
20	118	07.0		07.7	164	58.9	115		37.9	61	52	47	27	00	14	66	16 50	29
21	133	07.2		06.7	179	29.4	116		31.8	63	54	43	25	00	0 03	67	17 00	27
22	148	07.4		05.8	194	00.0	116		25.5	64	56	38	22	6 00	** ** *	**	12	25
23	163	07.6		04.8	208	30.6	118		19.1	65	58	33	20	5 59	** ** *	**	17 25	22
24	178	07.7	-0	03.8	223	01.4		-20	12.6		60 S	4 26	5 17	5 59	** ** *	**	17 40	19
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.4				Mag: +0.9				Mag: -2.1				Mag: +0.7			
	12 ^h 10 ^m 0		PMG: 14 ^h 58 ^m				PMG: 07 ^h 46 ^m				PMG: 07 ^h 49 ^m				PMG: 08 ^h 19 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	'		
0	176	59.9	135	30.3	+18 44.0	243	20.1	-22 23.2	242	35.8	-21 34.9	235	03.6	-20 14.5				
1	192	02.3	150	30.2	45.0	258	20.7	23.0	257	37.9	34.9	250	05.9	14.5				
2	207	04.8	165	30.2	45.9	273	21.3	22.7	272	40.0	34.8	265	08.2	14.5				
3	222	07.3	180	30.1	46.9	288	21.9	22.5	287	42.0	34.8	280	10.4	14.4				
4	237	09.7	195	30.1	47.8	303	22.5	22.3	302	44.1	34.7	295	12.7	14.4				
5	252	12.2	210	30.0	+18 48.8	318	23.1	-22 22.0	317	46.1	-21 34.7	310	14.9	-20 14.3				
6	267	14.7	225	30.0	+18 49.7	333	23.7	-22 21.8	332	48.2	-21 34.6	325	17.2	-20 14.3				
7	282	17.1	240	29.9	50.7	348	24.3	21.6	347	50.3	34.5	340	19.5	14.3				
8	297	19.6	255	29.9	51.6	3	24.9	21.3	2	52.3	34.5	355	21.7	14.2				
9	312	22.1	270	29.8	52.6	18	25.5	21.1	17	54.4	34.4	10	24.0	14.2				
10	327	24.5	285	29.7	53.5	33	26.1	20.9	32	56.4	34.4	25	26.2	14.1				
11	342	27.0	300	29.7	+18 54.5	48	26.7	-22 20.6	47	58.5	-21 34.3	40	28.5	-20 14.1				
12	357	29.5	315	29.6	+18 55.4	63	27.4	-22 20.4	63	00.6	-21 34.2	55	30.8	-20 14.1				
13	12	31.9	330	29.6	56.4	78	28.0	20.2	78	02.6	34.2	70	33.0	14.0				
14	27	34.4	345	29.5	57.3	93	28.6	19.9	93	04.7	34.1	85	35.3	14.0				
15	42	36.8	0	29.5	58.3	108	29.2	19.7	108	06.7	34.1	100	37.5	14.0				
16	57	39.3	15	29.4	+18 59.2	123	29.8	19.5	123	08.8	34.0	115	39.8	13.9				
17	72	41.8	30	29.4	+19 00.2	138	30.4	-22 19.2	138	10.9	-21 34.0	130	42.1	-20 13.9				
18	87	44.2	45	29.3	+19 01.1	153	31.0	-22 19.0	153	12.9	-21 33.9	145	44.3	-20 13.8				
19	102	46.7	60	29.3	02.1	168	31.6	18.7	168	15.0	33.8	160	46.6	13.8				
20	117	49.2	75	29.2	03.0	183	32.2	18.5	183	17.1	33.8	175	48.8	13.8				
21	132	51.6	90	29.2	04.0	198	32.8	18.3	198	19.1	33.7	190	51.1	13.7				
22	147	54.1	105	29.1	04.9	213	33.4	18.0	213	21.2	33.7	205	53.4	13.7				
23	162	56.6	120	29.1	05.9	228	34.0	17.8	228	23.2	33.6	220	55.6	13.7				
24	177	59.0	135	29.0	+19 06.8	243	34.6	-22 17.6	243	25.3	-21 33.6	235	57.9	-20 13.6				
Dif.	—		-1		+9	+6		+2	+21		+1	+23		0				

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'1			SD: 15'0 PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6														
	PMG: 12 ^h 07 ^m 3			Edad: 25 ^d 4														
	PMG: 09 ^h 26 ^m			R ^o : 46 ^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	07.7	-0	03.8		223	01.4	117	-20	12.6	65	60 N	18 16	18 57	19 48	5 52 15	13 09 79	
1	193	07.9		02.8		237	32.1	119	-20	06.1	67	58	15	54	42	39 18	22 76	
2	208	08.1		01.8		252	03.0	119	-19	59.4	67	56	15	52	36	27 21	33 73	
3	223	08.3	-0	00.8		266	33.9	120		52.7	68	54	14	50	32	16 24	43 7	
4	238	08.5	+0	00.2		281	04.9	120		45.9	70	52	14	48	28	5 07 26	13 52 68	
5	253	08.7	+0	01.2		295	35.9	121	-19	38.9	70	50	18 14	18 46	19 24	4 59 27	14 00 66	
6	268	08.9	+0	02.1		310	07.0	122	-19	31.9	71	45	18 13	18 42	19 17	4 41 31	14 16 63	
7	283	09.0		03.1		324	38.2	122		24.8	71	40	12	39	11	27 34	30 60	
8	298	09.2		04.1		339	09.4	123		17.7	73	35	12	37	07	15 36	42 57	
9	313	09.4		05.1		353	40.7	123		10.4	73	30	12	36	19 03	4 04 38	14 52 55	
10	328	09.6		06.1		8	12.0	124	-19	03.1	75	20	11	33	18 59	3 46 41	15 09 51	
11	343	09.8	+0	07.1		22	43.4	125	-18	55.6	75	10 N	18 11	18 32	18 56	3 30 44	15 24 48	
12	358	10.0	+0	08.1		37	14.9	125	-18	48.1	76	0	18 11	18 31	18 55	3 15 46	15 37 46	
13	13	10.1		09.1		51	46.4	126		40.5	76	10 S	10	31	56	3 00 49	15 51 43	
14	28	10.3		10.1		66	18.0	127		32.9	78	20	10	32	18 58	2 43 52	16 06 39	
15	43	10.5		11.0		80	49.7	127		25.1	78	30	11	34	19 02	25 55	23 36	
16	58	10.7		12.0		95	21.4	128		17.3	79	35	11	36	05	14 57	32 34	
17	73	10.9	+0	13.0		109	53.2	129	-18	09.4	80	40	18 11	18 38	19 09	2 01 60	16 43 32	
18	88	11.1	+0	14.0		124	25.1	129	-18	01.4	81	45	18 11	18 40	19 15	1 47 62	16 56 29	
19	103	11.3		15.0		138	57.0	129	-17	53.3	81	50	11	44	21	28 66	17 12 25	
20	118	11.4		16.0		153	28.9	131		45.2	82	52	11	45	25	20 68	19 23	
21	133	11.6		17.0		168	01.0	131		37.0	83	54	12	47	29	1 10 70	27 22	
22	148	11.8		18.0		182	33.1	131		28.7	84	56	12	49	33	0 59 72	37 18	
23	163	12.0		18.9		197	05.2	132		20.3	84	58	12	51	38	47 75	47 16	
24	178	12.2	+0	19.9		211	37.4		-17	11.9		60 S	18 12	18 54	19 43	0 32 78	17 59 13	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 12 ^h 06 ^m 1		Mag: -4.4 PMG: 14 ^h 58 ^m				Mag: +0.9 PMG: 07 ^h 45 ^m				Mag: -2.1 PMG: 07 ^h 45 ^m				Mag: +0.7 PMG: 08 ^h 15 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	177	59.0	135	29.0	+19	06.8	243	34.6	-22	17.6	243	25.3	-21	-33.6	235	57.9	-20	13.6
1	193	01.5	150	29.0		07.7	258	35.2		17.3	258	27.4		-33.5	251	00.1		13.6
2	208	03.9	165	28.9		08.7	273	35.8		17.1	273	29.4		-33.4	266	02.4		13.5
3	223	06.4	180	28.8		09.6	288	36.4		16.8	288	31.5		-33.4	281	04.7		13.5
4	238	08.9	195	28.8		10.6	303	37.0		16.6	303	33.6		-33.3	296	06.9		13.5
5	253	11.3	210	28.7	+19	11.5	318	37.6	-22	16.4	318	35.6	-21	-33.3	311	09.2	-20	13.4
6	268	13.8	225	28.7	+19	12.4	333	38.2	-22	16.1	333	37.7	-21	-33.2	326	11.5	-20	13.4
7	283	16.3	240	28.6		13.4	348	38.8		15.9	348	39.8		-33.2	341	13.7		13.4
8	298	18.7	255	28.6		14.3	3	39.4		15.6	3	41.8		-33.1	356	16.0		13.3
9	313	21.2	270	28.5		15.2	18	40.1		15.4	18	43.9		-33.0	11	18.2		13.3
10	328	23.7	285	28.5		16.2	33	40.7		15.1	33	46.0		-33.0	26	20.5		13.2
11	343	26.1	300	28.4	+19	17.1	48	41.3	-22	14.9	48	48.0	-21	-32.9	41	22.8	-20	13.2
12	358	28.6	315	28.4	+19	18.0	63	41.9	-22	14.7	63	50.1	-21	-32.9	56	25.0	-20	13.2
13	13	31.1	330	28.3		19.0	78	42.5		14.4	78	52.2		-32.8	71	27.3		13.1
14	28	33.5	345	28.3		19.9	93	43.1		14.2	93	54.2		-32.8	86	29.6		13.1
15	43	36.0	0	28.3		20.8	108	43.7		13.9	108	56.3		-32.7	101	31.8		13.1
16	58	38.4	15	28.2		21.8	123	44.3		13.7	123	58.4		-32.6	116	34.1		13.0
17	73	40.9	30	28.2	+19	22.7	138	44.9	-22	13.4	139	00.4	-21	-32.6	131	36.3	-20	13.0
18	88	43.4	45	28.1	+19	23.6	153	45.5	-22	13.2	154	02.5	-21	-32.5	146	38.6	-20	12.9
19	103	45.8	60	28.1		24.5	168	46.1		12.9	169	04.6		-32.5	161	40.9		12.9
20	118	48.3	75	28.0		25.5	183	46.7		12.7	184	06.6		-32.4	176	43.1		12.9
21	133	50.8	90	28.0		26.4	198	47.3		12.4	199	08.7		-32.4	191	45.4		12.8
22	148	53.2	105	27.9		27.3	213	47.9		12.2	214	10.8		-32.3	206	47.7		12.8
23	163	55.7	120	27.9		28.3	228	48.5		12.0	229	12.8		-32.2	221	49.9		12.8
24	178	58.2	135	27.8	+19	29.2	243	49.1	-22	11.7	244	14.9	-21	-32.2	236	52.2	-20	12.7
Dif.	—		0		+9		+6		+2		+21		+1		+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: 14'9 Edad: 26 ^d 4			PHE { 4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3										
	PMG: 10 ^h 12 ^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	178	12.2	+0	19.9	211	37.4	133	-17	11.9	85	60 N	4 26	5 16	5 57	6 07	11	14 28 78
1	193	12.4		20.9	226	09.7	133	-17	03.4	86	58	32	19	58	5 57	14	38 75
2	208	12.5		21.9	240	42.0	134	-16	54.8	86	56	37	21	59	48	17	46 73
3	223	12.7		22.9	255	14.4	134		46.2	87	54	42	24	5 59	40	19	14 54 70
4	238	12.9		23.9	269	46.8	135		37.5	88	52	46	26	6 00	33	21	15 00 68
5	253	13.1	+0	24.9	284	19.3	136	-16	28.7	89	50	4 50	5 28	6 00	5 26	23	15 06 66
6	268	13.3	+0	25.9	298	51.9	136	-16	19.8	89	45	4 57	5 31	6 01	5 12	27	15 19 62
7	283	13.5		26.8	313	24.5	137		10.9	90	40	5 03	34	01	5 01	29	30 59
8	298	13.7		27.8	327	57.2	137	-16	01.9	90	35	07	37	02	4 51	32	39 56
9	313	13.8		28.8	342	29.9	138	-15	52.9	92	30	11	38	02	42	34	15 47 54
10	328	14.0		29.8	357	02.7	139		43.7	91	20	15	41	03	27	38	16 00 50
11	343	14.2	+0	30.8	11	35.6	139	-15	34.6	93	10 N	5 18	5 42	6 03	4 14	41	16 12 46
12	358	14.4	+0	31.8	26	08.5	139	-15	25.3	93	0	5 19	5 43	6 04	4 01	45	16 23 43
13	13	14.6		32.8	40	41.4	140		16.0	93	10 S	19	43	04	3 49	47	34 40
14	28	14.8		33.8	55	14.4	141	-15	06.7	95	20	17	42	04	35	51	45 37
15	43	15.0		34.7	69	47.5	141	-14	57.2	94	30	13	40	04	20	55	16 59 32
16	58	15.1		35.7	84	20.6	142		47.8	96	35	10	39	04	11	57	17 06 31
17	73	15.3	+0	36.7	98	53.8	142	-14	38.2	96	40	5 06	5 37	6 04	3 01	59	17 15 28
18	88	15.5	+0	37.7	113	27.0	143	-14	28.6	96	45	5 00	5 35	6 04	2 49	62	17 25 25
19	103	15.7		38.7	128	00.3	143		19.0	98	50	4 54	32	04	34	67	37 21
20	118	15.9		39.7	142	33.6	144	-14	09.2	97	52	50	30	04	28	68	42 20
21	133	16.1		40.7	157	07.0	144	-13	59.5	99	54	47	29	04	20	70	49 17
22	148	16.3		41.6	171	40.4	145		49.6	98	56	42	27	04	11	73	17 55 16
23	163	16.4		42.6	186	13.9	145		39.8	100	58	38	24	04	2 02	75	18 03 13
24	178	16.6	+0	43.6	200	47.4		-13	29.8		60 S	4 32	5 22	6 03	1 50	79	18 12 9

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 12 ^h 02 ^m 1		Mag: -4.4 PMG: 14 ^h 58 ^m			Mag: +0.9 PMG: 07 ^h 44 ^m			Mag: -2.1 PMG: 07 ^h 42 ^m			Mag: +0.7 PMG: 08 ^h 11 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	178	58.2	135	27.8	+19	29.2	243	49.1	-22	11.7	244	14.9	-21	32.2	236	52.2	-20	12.7	
1	194	00.6	150	27.8		30.1	258	49.8		11.5	259	17.0		32.1	251	54.5		12.7	
2	209	03.1	165	27.7		31.0	273	50.4		11.2	274	19.0		32.1	266	56.7		12.6	
3	224	05.6	180	27.7		31.9	288	51.0		11.0	289	21.1		32.0	281	59.0		12.6	
4	239	08.0	195	27.6		32.9	303	51.6		10.7	304	23.2		32.0	297	01.3		12.6	
5	254	10.5	210	27.6	+19	33.8	318	52.2	-22	10.5	319	25.3	-21	31.9	312	03.5	-20	12.5	
6	269	12.9	225	27.5	+19	34.7	333	52.8	-22	10.2	334	27.3	-21	31.8	327	05.8	-20	12.5	
7	284	15.4	240	27.5		35.6	348	53.4		10.0	349	29.4		31.8	342	08.0		12.5	
8	299	17.9	255	27.5		36.5	3	54.0		09.7	4	31.5		31.7	357	10.3		12.4	
9	314	20.3	270	27.4		37.5	18	54.6		09.5	19	33.5		31.7	12	12.6		12.4	
10	329	22.8	285	27.4		38.4	33	55.2		09.2	34	35.6		31.6	27	14.8		12.4	
11	344	25.3	300	27.3	+19	39.3	48	55.8	-22	09.0	49	37.7	-21	31.6	42	17.1	-20	12.3	
12	359	27.7	315	27.3	+19	40.2	63	56.4	-22	08.7	64	39.7	-21	31.5	57	19.4	-20	12.3	
13	14	30.2	330	27.2		41.1	78	57.0		08.5	79	41.8		31.4	72	21.6		12.2	
14	29	32.7	345	27.2		42.0	93	57.7		08.2	94	43.9		31.4	87	23.9		12.2	
15	44	35.1	0	27.2		42.9	108	58.3		08.0	109	46.0		31.3	102	26.2		12.2	
16	59	37.6	15	27.1		43.9	123	58.9		07.7	124	48.0		31.3	117	28.4		12.1	
17	74	40.0	30	27.1	+19	44.8	138	59.5	-22	07.5	139	50.1	-21	31.2	132	30.7	-20	12.1	
18	89	42.5	45	27.0	+19	45.7	154	00.1	-22	07.2	154	52.2	-21	31.2	147	33.0	-20	12.1	
19	104	45.0	60	27.0		46.6	169	00.7		06.9	169	54.3		31.1	162	35.2		12.0	
20	119	47.4	75	26.9		47.5	184	01.3		06.7	184	56.3		31.0	177	37.5		12.0	
21	134	49.9	90	26.9		48.4	199	01.9		06.4	199	58.4		31.0	192	39.8		11.9	
22	149	52.4	105	26.9		49.3	214	02.5		06.2	215	00.5		30.9	207	42.0		11.9	
23	164	54.8	120	26.8		50.2	229	03.1		05.9	230	02.6		30.9	222	44.3		11.9	
24	179	57.3	135	26.8	+19	51.1	244	03.7	-22	05.7	245	04.6	-21	30.8	237	46.6	-20	11.8	
Dif.	—		0			+9	+6			+3	+21			+1	+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 : 54'1 20 ^h : 54'1											
	PMG: 12 ^h 06 ^m 7			Edad: 27 ^d 4													
	PMG: 10 ^h 56 ^m			Rº: 42 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº		
h	° ' ° '																

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0			SD: 14'7		PHE {		4 ^h : 54'0										
	PMG: 12 ^h 06 ^m 4			Edad: 28 ^d 4				12 ^h : 54'0										
								20 ^h : 53'9										
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	178	21.1	+1	07.3	190	25.4	155	-9	17.4	110	60 N	4 19	5 10	5 51	6 27	7		
1	193	21.3		08.3	204	59.9	156	-9	06.4	111	58	26	13	52	22	10		
2	208	21.5		09.3	219	34.5	157	-8	55.3	111	56	32	16	53	18	13		
3	223	21.7		10.3	234	09.2	157		44.2	111	54	37	19	54	15	14		
4	238	21.9		11.2	248	43.9	157		33.1	111	52	41	21	55	12	16		
5	253	22.0	+1	12.2	263	18.6	157	-8	22.0	112	50	4 45	5 23	5 56	6 09	17		
6	268	22.2	+1	13.2	277	53.3	158	-8	10.8	112	45	4 53	5 28	5 57	6 02	22		
7	283	22.4		14.2	292	28.1	158	-7	59.6	113	40	4 59	31	58	5 57	24		
8	298	22.6		15.2	307	02.9	158		48.3	112	35	5 04	34	5 59	52	27		
9	313	22.8		16.2	321	37.7	158		37.1	113	30	08	36	6 00	48	29		
10	328	23.0		17.1	336	12.5	159		25.8	114	20	14	39	01	40	34		
11	343	23.2	+1	18.1	350	47.4	159	-7	14.4	113	10 N	5 17	5 41	6 02	5 34	38		
12	358	23.4	+1	19.1	5	22.3	160	-7	03.1	114	0	5 19	5 43	6 03	5 28	41		
13	13	23.5		20.1	19	57.3	159	-6	51.7	114	10 S	19	43	04	22	44		
14	28	23.7		21.1	34	32.2	160		40.3	114	20	17	43	05	15	49		
15	43	23.9		22.1	49	07.2	160		28.9	115	30	14	42	05	08	53		
16	58	24.1		23.1	63	42.2	160		17.4	115	35	11	41	06	5 04	55		
17	73	24.3	+1	24.0	78	17.2	161	-6	05.9	115	40	5 08	5 39	6 06	4 59	58		
18	88	24.5	+1	25.0	92	52.3	161	-5	54.4	115	45	5 03	5 37	6 07	4 53	61		
19	103	24.7		26.0	107	27.4	161		42.9	115	50	4 57	35	07	46	65		
20	118	24.9		27.0	122	02.5	161		31.4	116	52	54	34	07	43	67		
21	133	25.0		28.0	136	37.6	161		19.8	116	54	51	32	08	40	69		
22	148	25.2		29.0	151	12.7	162	-5	08.2	116	56	47	31	08	36	71		
23	163	25.4		30.0	165	47.9	161	-4	56.6	116	58	42	29	08	4 32	73		
24	178	25.6	+1	30.9	180	23.0		-4	45.0		60 S	4 37	5 27	6 08	4 27	76		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.5				Mag: +0.9				Mag: -2.1				Mag: +0.7			
	11 ^h 54 ^m 3		PMG: 14 ^h 58 ^m				PMG: 07 ^h 42 ^m				PMG: 07 ^h 35 ^m				PMG: 08 ^h 04 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	180	56.4	135	25.9	+20	12.7	244	18.4	-21	59.4	245	54.5	-21	29.5	238	41.0	-20	11.0
1	195	58.9	150	25.8		13.5	259	19.0		59.2	260	56.6		29.4	253	43.3		10.9
2	211	01.4	165	25.8		14.4	274	19.6		58.9	275	58.7		29.4	268	45.6		10.9
3	226	03.8	180	25.8		15.3	289	20.2		58.7	291	00.7		29.3	283	47.9		10.9
4	241	06.3	195	25.7		16.2	304	20.8		58.4	306	02.8		29.2	298	50.1		10.8
5	256	08.8	210	25.7	+20	17.1	319	21.5	-21	58.1	321	04.9	-21	29.2	313	52.4	-20	10.8
6	271	11.2	225	25.7	+20	18.0	334	22.1	-21	57.9	336	07.0	-21	29.1	328	54.7	-20	10.8
7	286	13.7	240	25.6		18.9	349	22.7		57.6	351	09.1		29.1	343	56.9		10.7
8	301	16.1	255	25.6		19.7	4	23.3		57.3	6	11.1		29.0	358	59.2		10.7
9	316	18.6	270	25.6		20.6	19	23.9		57.1	21	13.2		29.0	14	01.5		10.6
10	331	21.1	285	25.5		21.5	34	24.5		56.8	36	15.3		28.9	29	03.8		10.6
11	346	23.5	300	25.5	+20	22.4	49	25.1	-21	56.5	51	17.4	-21	28.9	44	06.0	-20	10.6
12	1	26.0	315	25.5	+20	23.3	64	25.7	-21	56.3	66	19.5	-21	28.8	59	08.3	-20	10.5
13	16	28.5	330	25.5		24.1	79	26.4		56.0	81	21.6		28.7	74	10.6		10.5
14	31	30.9	345	25.4		25.0	94	27.0		55.7	96	23.6		28.7	89	12.9		10.5
15	46	33.4	0	25.4		25.9	109	27.6		55.5	111	25.7		28.6	104	15.1		10.4
16	61	35.9	15	25.4		26.8	124	28.2		55.2	126	27.8		28.6	119	17.4		10.4
17	76	38.3	30	25.3	+20	27.6	139	28.8	-21	54.9	141	29.9	-21	28.5	134	19.7	-20	10.4
18	91	40.8	45	25.3	+20	28.5	154	29.4	-21	54.7	156	32.0	-21	28.5	149	22.0	-20	10.3
19	106	43.2	60	25.3		29.4	169	30.0		54.4	171	34.1		28.4	164	24.2		10.3
20	121	45.7	75	25.2		30.3	184	30.7		54.1	186	36.1		28.3	179	26.5		10.3
21	136	48.2	90	25.2		31.1	199	31.3		53.8	201	38.2		28.3	194	28.8		10.2
22	151	50.6	105	25.2		32.0	214	31.9		53.6	216	40.3		28.2	209	31.0		10.2
23	166	53.1	120	25.2		32.9	229	32.5		53.3	231	42.4		28.2	224	33.3		10.1
24	181	55.6	135	25.1	+20	33.8	244	33.1	-21	53.0	246	44.5	-21	28.1	239	35.6	-20	10.1
Dif.	—		0		+9		+6		+3		+21		+1		+23		0	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'0			SD: 14'7			PHE { 4 ^h : 53'9 12 ^h : 53'9 20 ^h : 53'9					Edad: 29 ^d 4			PMG: 12 ^h 06 ^m 1			Rº: 40 ^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	25.6	+1	30.9	180	23.0	162	-4	45.0	116	60 N	18 25	19 07	19 59	6 34	7	18 20	76		
1	193	25.8		31.9	194	58.2	162		33.4	117	58	24	04	52	32	9	21	73		
2	208	26.0		32.9	209	33.4	163		21.7	116	56	23	19 00	45	31	11	21	71		
3	223	26.2		33.9	224	08.7	162	-4	10.1	117	54	22	18 57	40	29	14	22	68		
4	238	26.4		34.9	238	43.9	162	-3	58.4	117	52	21	55	35	28	15	22	67		
5	253	26.5	+1	35.9	253	19.1	163	-3	46.7	117	50	18 20	18 52	19 31	6 26	17	18 23	64		
6	268	26.7	+1	36.8	267	54.4	163	-3	35.0	117	45	18 18	18 47	19 22	6 24	20	18 24	61		
7	283	26.9		37.8	282	29.7	163		23.3	118	40	17	44	16	21	24	24	58		
8	298	27.1		38.8	297	05.0	163	-3	11.5	117	35	15	41	10	19	27	25	55		
9	313	27.3		39.8	311	40.3	163	-2	59.8	118	30	14	38	06	17	29	26	52		
10	328	27.5		40.8	326	15.6	163		48.0	118	20	12	34	19 00	14	34	27	48		
11	343	27.7	+1	41.8	340	50.9	164	-2	36.2	117	10 N	18 11	18 32	18 56	6 12	37	18 28	44		
12	358	27.9	+1	42.7	355	26.3	163	-2	24.5	118	0	18 09	18 30	18 54	6 09	41	18 29	40		
13	13	28.0		43.7	10	01.6	164		12.7	118	10 S	08	29	54	06	44	29	37		
14	28	28.2		44.7	24	37.0	163	-2	00.9	118	20	07	29	54	04	47	30	34		
15	43	28.4		45.7	39	12.3	164	-1	49.1	118	30	06	30	18 57	6 01	52	31	29		
16	58	28.6		46.7	53	47.7	164		37.3	119	35	05	30	19 00	5 59	54	32	26		
17	73	28.8	+1	47.7	68	23.1	163	-1	25.4	118	40	18 04	18 31	19 03	5 57	57	18 32	24		
18	88	29.0	+1	48.6	82	58.4	164	-1	13.6	118	45	18 04	18 33	19 07	5 54	61	18 33	21		
19	103	29.2		49.6	97	33.8	164	-1	01.8	119	50	03	35	12	51	65	34	17		
20	118	29.4		50.6	112	09.2	164	-0	49.9	118	52	02	36	15	50	67	34	16		
21	133	29.5		51.6	126	44.6	164		38.1	118	54	02	37	18	49	68	35	13		
22	148	29.7		52.6	141	20.0	163		26.3	119	56	01	38	22	47	71	35	11		
23	163	29.9		53.6	155	55.3	164		14.4	118	58	01	40	26	45	74	36	9		
24	178	30.1	+1	54.5	170	30.7		-0	02.6		60 S	18 00	18 42	19 31	5 43	76	18 36	7		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG: 11 ^h 50 ^m 4		Mag: -4.5 PMG: 14 ^h 58 ^m				Mag: +0.9 PMG: 07 ^h 41 ^m				Mag: -2.1 PMG: 07 ^h 32 ^m				Mag: +0.7 PMG: 08 ^h 00 ^m															
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'												
0	181	55.6	135	25.1	+20	33.8	244	33.1	-21	53.0	246	44.5	-21	-28.1	239	35.6	-20	10.1												
1	196	58.0	150	25.1		34.6	259	33.7		52.8	261	46.6		-28.1	254	37.9		10.1												
2	212	00.5	165	25.1		35.5	274	34.3		52.5	276	48.7		-28.0	269	40.1		10.0												
3	227	03.0	180	25.1		36.4	289	35.0		52.2	291	50.8		-28.0	284	42.4		10.0												
4	242	05.4	195	25.0		37.2	304	35.6		51.9	306	52.8		-27.9	299	44.7		10.0												
5	257	07.9	210	25.0	+20	38.1	319	36.2	-21	51.7	321	54.9	-21	-27.9	314	47.0	-20	09.9												
6	272	10.4	225	25.0	+20	39.0	334	36.8	-21	51.4	336	57.0	-21	-27.8	329	49.2	-20	09.9												
7	287	12.8	240	25.0		39.8	349	37.4		51.1	351	59.1		-27.7	344	51.5		09.9												
8	302	15.3	255	24.9		40.7	4	38.0		50.9	7	01.2		-27.7	359	53.8		09.8												
9	317	17.7	270	24.9		41.5	19	38.6		50.6	22	03.3		-27.6	14	56.1		09.8												
10	332	20.2	285	24.9		42.4	34	39.3		50.3	37	05.4		-27.6	29	58.3		09.8												
11	347	22.7	300	24.9	+20	43.3	49	39.9	-21	50.0	52	07.5	-21	-27.5	45	00.6	-20	09.7												
12	2	25.1	315	24.8	+20	44.1	64	40.5	-21	49.8	67	09.5	-21	-27.5	60	02.9	-20	09.7												
13	17	27.6	330	24.8		45.0	79	41.1		49.5	82	11.6		-27.4	75	05.2		09.7												
14	32	30.1	345	24.8		45.8	94	41.7		49.2	97	13.7		-27.4	90	07.4		09.6												
15	47	32.5	0	24.8		46.7	109	42.3		48.9	112	15.8		-27.3	105	09.7		09.6												
16	62	35.0	15	24.7		47.6	124	43.0		48.7	127	17.9		-27.2	120	12.0		09.6												
17	77	37.5	30	24.7	+20	48.4	139	43.6	-21	48.4	142	20.0	-21	-27.2	135	14.3	-20	09.5												
18	92	39.9	45	24.7	+20	49.3	154	44.2	-21	48.1	157	22.1	-21	-27.1	150	16.6	-20	09.5												
19	107	42.4	60	24.7		50.1	169	44.8		47.8	172	24.2		-27.1	165	18.8		09.4												
20	122	44.9	75	24.7		51.0	184	45.4		47.6	187	26.3		-27.0	180	21.1		09.4												
21	137	47.3	90	24.6		51.8	199	46.0		47.3	202	28.4		-27.0	195	23.4		09.4												
22	152	49.8	105	24.6		52.7	214	46.7		47.0	217	30.4		-26.9	210	25.7		09.3												
23	167	52.2	120	24.6		53.5	229	47.3		46.7	232	32.5		-26.9	225	27.9		09.3												
24	182	54.7	135	24.6	+20	54.4	244	47.9	-21	46.4	247	34.6	-21	-26.8	240	30.2	-20	09.3												
Dif.	—		0				+9				+6				+3				+21				+1				+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 8			SD: 14'7 Edad: 0 ^d 6 PHE { 4 ^h : 53'9 12 ^h : 53'9 20 ^h : 54'0 PMG: 12 ^h 59 ^m Rº: 41 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
	°	'	°	'	°	'	°		'	h		m	h	m	h	m	h	m
h																		
0	178	30.1	+1	54.5	170	30.7	164	-0	02.6	119	60 N	4 12	5 03	5 45	6 41	7	19 36	77
1	193	30.3		55.5	185	06.1	164	+0	09.3	118	58	20	07	47	41	10	34	74
2	208	30.5		56.5	199	41.5	164		21.1	119	56	26	11	48	42	12	32	7
3	223	30.7		57.5	214	16.9	164		33.0	118	54	31	14	49	43	13	30	70
4	238	30.9		58.5	228	52.3	164		44.8	119	52	36	16	50	43	16	29	67
5	253	31.1	+1	59.5	243	27.7	163	+0	56.7	118	50	4 40	5 19	5 51	6 43	18	19 27	66
6	268	31.2	+2	00.4	258	03.0	164	+1	08.5	118	45	4 49	5 24	5 53	6 44	21	19 25	61
7	283	31.4		01.4	272	38.4	164		20.3	119	40	4 56	28	55	45	24	22	58
8	298	31.6		02.4	287	13.8	163		32.2	118	35	5 01	31	56	46	27	20	55
9	313	31.8		03.4	301	49.1	164		44.0	118	30	06	34	57	46	30	18	53
10	328	32.0		04.4	316	24.5	163	+1	55.8	118	20	12	37	5 59	48	33	15	48
11	343	32.2	+2	05.3	330	59.8	163	+2	07.6	118	10 N	5 16	5 40	6 01	6 49	37	19 12	44
12	358	32.4	+2	06.3	345	35.1	164	+2	19.4	118	0	5 18	5 42	6 03	6 50	40	19 09	41
13	13	32.6		07.3	0	10.5	163		31.2	118	10 S	19	43	04	50	45	06	38
14	28	32.7		08.3	14	45.8	163		43.0	118	20	18	43	05	51	49	04	34
15	43	32.9		09.3	29	21.1	163	+2	54.8	118	30	15	43	07	53	52	19 00	30
16	58	33.1		10.3	43	56.4	162	+3	06.6	118	35	13	42	07	53	55	18 58	28
17	73	33.3	+2	11.2	58	31.6	163	+3	18.4	117	40	5 10	5 41	6 08	6 54	58	18 56	25
18	88	33.5	+2	12.2	73	06.9	163	+3	30.1	118	45	5 06	5 40	6 09	6 55	61	18 54	21
19	103	33.7		13.2	87	42.2	162		41.9	117	50	5 00	38	10	56	65	51	18
20	118	33.9		14.2	102	17.4	162	+3	53.6	117	52	4 58	37	11	57	67	50	16
21	133	34.1		15.2	116	52.6	162	+4	05.3	117	54	55	36	11	57	69	48	14
22	148	34.2		16.1	131	27.8	162		17.0	117	56	51	35	12	58	71	46	13
23	163	34.4		17.1	146	03.0	162		28.7	117	58	47	33	13	6 59	73	18 45	9
24	178	34.6	+2	18.1	160	38.2		+4	40.4		60 S	4 42	5 32	6 13	6 59	77	18 43	7
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 11 ^h 46 ^m 4		Mag: -4.5 PMG: 14 ^h 58 ^m				Mag: +0.9 PMG: 07 ^h 40 ^m				Mag: -2.1 PMG: 07 ^h 29 ^m				Mag: +0.7 PMG: 07 ^h 57 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	182	54.7	135	24.6	+20	54.4	244	47.9	-21	46.4	247	34.6	-21	26.8	240	30.2	-20	09.3
1	197	57.2	150	24.6		55.2	259	48.5		46.2	262	36.7		26.7	255	32.5		09.2
2	212	59.6	165	24.5		56.1	274	49.1		45.9	277	38.8		26.7	270	34.8		09.2
3	228	02.1	180	24.5		56.9	289	49.7		45.6	292	40.9		26.6	285	37.1		09.2
4	243	04.6	195	24.5		57.8	304	50.4		45.3	307	43.0		26.6	300	39.3		09.1
5	258	07.0	210	24.5	+20	58.6	319	51.0	-21	45.0	322	45.1	-21	26.5	315	41.6	-20	09.1
6	273	09.5	225	24.5	+20	59.5	334	51.6	-21	44.8	337	47.2	-21	26.5	330	43.9	-20	09.1
7	288	12.0	240	24.4	+21	00.3	349	52.2		44.5	352	49.3		26.4	345	46.2		09.0
8	303	14.4	255	24.4		01.2	4	52.8		44.2	7	51.4		26.4	0	48.4		09.0
9	318	16.9	270	24.4		02.0	19	53.4		43.9	22	53.5		26.3	15	50.7		09.0
10	333	19.3	285	24.4		02.9	34	54.1		43.6	37	55.6		26.3	30	53.0		08.9
11	348	21.8	300	24.4	+21	03.7	49	54.7	-21	43.4	52	57.7	-21	26.2	45	55.3	-20	08.9
12	3	24.3	315	24.4	+21	04.5	64	55.3	-21	43.1	67	59.8	-21	26.1	60	57.6	-20	08.9
13	18	26.7	330	24.4		05.4	79	55.9		42.8	83	01.9		26.1	75	59.8		08.8
14	33	29.2	345	24.3		06.2	94	56.5		42.5	98	03.9		26.0	91	02.1		08.8
15	48	31.7	0	24.3		07.1	109	57.2		42.2	113	06.0		26.0	106	04.4		08.8
16	63	34.1	15	24.3		07.9	124	57.8		41.9	128	08.1		25.9	121	06.7		08.7
17	78	36.6	30	24.3	+21	08.7	139	58.4	-21	41.7	143	10.2	-21	25.9	136	09.0	-20	08.7
18	93	39.1	45	24.3	+21	09.6	154	59.0	-21	41.4	158	12.3	-21	25.8	151	11.2	-20	08.7
19	108	41.5	60	24.3		10.4	169	59.6		41.1	173	14.4		25.8	166	13.5		08.6
20	123	44.0	75	24.3		11.2	185	00.3		40.8	188	16.5		25.7	181	15.8		08.6
21	138	46.5	90	24.2		12.1	200	00.9		40.5	203	18.6		25.7	196	18.1		08.5
22	153	48.9	105	24.2		12.9	215	01.5		40.2	218	20.7		25.6	211	20.4		08.5
23	168	51.4	120	24.2		13.8	230	02.1		39.9	233	22.8		25.5	226	22.6		08.5
24	183	53.8	135	24.2	+21	14.6	245	02.7	-21	39.7	248	24.9	-21	25.5	241	24.9	-20	08.4
Dif.	—		0		+8		+6		+3		+21		+1		+23			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'0			PHE { 4 ^h : 54'0 12 ^h : 54'1 20 ^h : 54'1																
	PMG: 12 ^h 05 ^m 5			Edad: 1 ^d 6 PMG: 13 ^h 40 ^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	h m m					
0	178	34.6	+2	18.1	160	38.2	161	+4	40.4	117	60 N	18 30	19 13	20 04	6 48	7	20 53	78		
1	193	34.8		19.1	175	13.3	161	+4	52.1	116	58	28	08	19 57	51	10	48	75		
2	208	35.0		20.1	189	48.4	162	+5	03.7	116	56	27	05	50	54	12	43	73		
3	223	35.2		21.0	204	23.6	160		15.3	117	54	26	19 01	44	56	15	40	70		
4	238	35.4		22.0	218	58.6	161		27.0	116	52	24	18 58	39	6 59	16	36	68		
5	253	35.6	+2	23.0	233	33.7	160	+5	38.6	115	50	18 23	18 56	19 34	7 01	18	20 33	66		
6	268	35.8	+2	24.0	248	08.7	161	+5	50.1	116	45	18 21	18 50	19 25	7 05	23	20 26	62		
7	283	35.9		25.0	262	43.8	160	+6	01.7	115	40	19	46	18	09	26	20	59		
8	298	36.1		25.9	277	18.8	159		13.2	115	35	17	42	12	13	28	15	56		
9	313	36.3		26.9	291	53.7	160		24.7	115	30	15	39	07	16	30	11	53		
10	328	36.5		27.9	306	28.7	159		36.2	115	20	13	35	19 01	21	35	20 03	50		
11	343	36.7	+2	28.9	321	03.6	159	+6	47.7	114	10 N	18 11	18 32	18 56	7 26	38	19 56	46		
12	358	36.9	+2	29.9	335	38.5	159	+6	59.1	114	0	18 09	18 29	18 54	7 30	42	19 50	43		
13	13	37.1		30.8	350	13.4	158	+7	10.5	114	10 S	07	28	52	35	45	44	39		
14	28	37.3		31.8	4	48.2	158		21.9	114	20	05	27	53	40	48	38	35		
15	43	37.4		32.8	19	23.0	158		33.3	114	30	03	27	55	45	53	30	32		
16	58	37.6		33.8	33	57.8	157		44.7	113	35	02	27	57	48	56	26	29		
17	73	37.8	+2	34.8	48	32.5	157	+7	56.0	113	40	18 01	18 28	18 59	7 52	58	19 21	27		
18	88	38.0	+2	35.7	63	07.2	157	+8	07.3	112	45	18 00	18 29	19 03	7 56	62	19 15	24		
19	103	38.2		36.7	77	41.9	157		18.5	113	50	17 58	30	08	8 01	66	09	19		
20	118	38.4		37.7	92	16.6	156		29.8	112	52	58	31	10	04	67	06	17		
21	133	38.6		38.7	106	51.2	156		41.0	111	54	57	32	13	06	70	19 02	16		
22	148	38.8		39.7	121	25.8	155	+8	52.1	112	56	56	33	16	09	72	18 59	13		
23	163	38.9		40.6	136	00.3	155	+9	03.3	111	58	55	34	20	12	75	54	12		
24	178	39.1	+2	41.6	150	34.8		+9	14.4		60 S	17 54	18 35	19 24	8 16	77	18 50	8		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 11 ^h 42 ^m 5		Mag: -4.5 PMG: 14 ^h 58 ^m				Mag: +0.9 PMG: 07 ^h 40 ^m				Mag: -2.1 PMG: 07 ^h 25 ^m				Mag: +0.7 PMG: 07 ^h 53 ^m					
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	183	53.8	135	24.2	+21	14.6	245	02.7	-21	39.7	248	24.9	-21	-25.5	241	24.9	-20	08.4		
1	198	56.3	150	24.2		15.4	260	03.3		39.4	263	27.0		-25.4	256	27.2		08.4		
2	213	58.8	165	24.2		16.2	275	04.0		39.1	278	29.1		-25.4	271	29.5		08.4		
3	229	01.2	180	24.2		17.1	290	04.6		38.8	293	31.2		-25.3	286	31.8		08.3		
4	244	03.7	195	24.2		17.9	305	05.2		38.5	308	33.3		-25.3	301	34.0		08.3		
5	259	06.2	210	24.2	+21	18.7	320	05.8	-21	38.2	323	35.4	-21	-25.2	316	36.3	-20	08.3		
6	274	08.6	225	24.2	+21	19.6	335	06.4	-21	37.9	338	37.5	-21	-25.2	331	38.6	-20	08.2		
7	289	11.1	240	24.1		20.4	350	07.1		37.6	353	39.6		-25.1	346	40.9		08.2		
8	304	13.6	255	24.1		21.2	5	07.7		37.4	8	41.7		-25.1	1	43.2		08.2		
9	319	16.0	270	24.1		22.0	20	08.3		37.1	23	43.8		-25.0	16	45.5		08.1		
10	334	18.5	285	24.1		22.9	35	08.9		36.8	38	45.9		-25.0	31	47.7		08.1		
11	349	20.9	300	24.1	+21	23.7	50	09.6	-21	36.5	53	48.0	-21	-24.9	46	50.0	-20	08.1		
12	4	23.4	315	24.1	+21	24.5	65	10.2	-21	36.2	68	50.1	-21	-24.8	61	52.3	-20	08.0		
13	19	25.9	330	24.1		25.3	80	10.8		35.9	83	52.2		-24.8	76	54.6		08.0		
14	34	28.3	345	24.1		26.1	95	11.4		35.6	98	54.3		-24.7	91	56.9		08.0		
15	49	30.8	0	24.1		27.0	110	12.0		35.3	113	56.4		-24.7	106	59.2		07.9		
16	64	33.3	15	24.1		27.8	125	12.7		35.0	128	58.5		-24.6	122	01.4		07.9		
17	79	35.7	30	24.1	+21	28.6	140	13.3	-21	34.7	144	00.6	-21	-24.6	137	03.7	-20	07.9		
18	94	38.2	45	24.1	+21	29.4	155	13.9	-21	34.5	159	02.7	-21	-24.5	152	06.0	-20	07.8		
19	109	40.7	60	24.1		30.2	170	14.5		34.2	174	04.8		-24.5	167	08.3		07.8		
20	124	43.1	75	24.1		31.1	185	15.1		33.9	189	06.9		-24.4	182	10.6		07.8		
21	139	45.6	90	24.1		31.9	200	15.8		33.6	204	09.0		-24.4	197	12.9		07.7		
22	154	48.1	105	24.1		32.7	215	16.4		33.3	219	11.1		-24.3	212	15.1		07.7		
23	169	50.5	120	24.1		33.5	230	17.0		33.0	234	13.2		-24.3	227	17.4		07.7		
24	184	53.0	135	24.1	+21	34.3	245	17.6	-21	32.7	249	15.3	-21	-24.2	242	19.7	-20	07.6		
Dif.	—		0		+8		+6		+3		+21		+1		+23		0			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna															
	SD: 16'0				SD: 14'8 Edad: 2 ^d 6												PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4													
	PMG: 12 ^h 05 ^m 2				PMG: 14 ^h 22 ^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												
0	178	39.1	+2	41.6	150	34.8	155	+9	14.4	111	60 N	4 05	4 57	5 39	6 55	10	22 11	80												
1	193	39.3		42.6	165	09.3	154		25.5	110	58	13	5 01	41	7 01	13	22 03	76												
2	208	39.5		43.6	179	43.7	154		36.5	110	56	20	05	43	06	16	21 56	73												
3	223	39.7		44.6	194	18.1	154		47.5	110	54	26	09	44	11	18	50	71												
4	238	39.9		45.5	208	52.5	153	+9	58.5	109	52	31	12	46	15	20	44	69												
5	253	40.1	+2	46.5	223	26.8	153	+10	09.4	109	50	4 36	5 14	5 47	7 19	21	21 39	67												
6	268	40.3	+2	47.5	238	01.1	152	+10	20.3	109	45	4 45	5 20	5 49	7 28	25	21 28	63												
7	283	40.5		48.5	252	35.3	152		31.2	108	40	53	24	52	35	28	19	60												
8	298	40.6		49.4	267	09.5	152		42.0	108	35	4 58	28	53	41	31	11	57												
9	313	40.8		50.4	281	43.7	151	+10	52.8	107	30	5 03	31	55	46	33	21 04	55												
10	328	41.0		51.4	296	17.8	150	+11	03.5	107	20	10	36	5 58	7 56	37	20 53	51												
11	343	41.2	+2	52.4	310	51.8	151	+11	14.2	107	10 N	5 15	5 39	6 00	8 04	41	20 42	48												
12	358	41.4	+2	53.4	325	25.9	149	+11	24.9	106	0	5 17	5 41	6 02	8 12	44	20 33	45												
13	13	41.6		54.3	339	59.8	150		35.5	106	10 S	19	43	04	20	47	23	42												
14	28	41.8		55.3	354	33.8	149		46.1	106	20	18	44	06	28	51	13	38												
15	43	42.0		56.3	9	07.7	148	+11	56.7	105	30	16	44	08	38	55	20 02	34												
16	58	42.1		57.3	23	41.5	148	+12	07.2	104	35	14	44	09	44	57	19 55	32												
17	73	42.3	+2	58.2	38	15.3	147	+12	17.6	104	40	5 12	5 43	6 10	8 50	60	19 48	29												
18	88	42.5	+2	59.2	52	49.0	147	+12	28.0	104	45	5 08	5 43	6 12	8 58	63	19 39	26												
19	103	42.7	+3	00.2	67	22.7	147		38.4	103	50	04	41	13	9 07	67	28	23												
20	118	42.9		01.2	81	56.4	146		48.7	102	52	5 01	41	14	11	69	23	21												
21	133	43.1		02.1	96	30.0	145	+12	58.9	103	54	4 58	40	15	16	71	18	19												
22	148	43.3		03.1	111	03.5	145	+13	09.2	101	56	55	39	16	21	73	12	17												
23	163	43.5		04.1	125	37.0	144		19.3	101	58	52	38	17	9 27	76	19 06	14												
24	178	43.6	+3	05.1	140	10.4		+13	29.4		60 S	4 48	5 37	6 18	9 33	80	18 58	11												
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG 11 ^h 38 ^m 6		Mag: -4.5 PMG: 14 ^h 58 ^m				Mag: +0.8 PMG: 07 ^h 39 ^m				Mag: -2.1 PMG: 07 ^h 22 ^m				Mag: +0.7 PMG: 07 ^h 49 ^m															
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.														
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'												
0	184	53.0			135	24.1	+21	34.3	245	17.6	-21	32.7	249	15.3	-21	24.2	242	19.7	-20	07.6										
1	199	55.4			150	24.1		35.1	260	18.3		32.4	264	17.4		24.1	257	22.0		07.6										
2	214	57.9			165	24.1		35.9	275	18.9		32.1	279	19.5		24.1	272	24.3		07.6										
3	230	00.4			180	24.1		36.7	290	19.5		31.8	294	21.7		24.0	287	26.6		07.5										
4	245	02.8			195	24.1		37.6	305	20.1		31.5	309	23.8		24.0	302	28.8		07.5										
5	260	05.3			210	24.1	+21	38.4	320	20.7	-21	31.2	324	25.9	-21	23.9	317	31.1	-20	07.5										
6	275	07.8			225	24.1	+21	39.2	335	21.4	-21	30.9	339	28.0	-21	23.9	332	33.4	-20	07.4										
7	290	10.2			240	24.1		40.0	350	22.0		30.6	354	30.1		23.8	347	35.7		07.4										
8	305	12.7			255	24.1		40.8	5	22.6		30.3	9	32.2		23.8	2	38.0		07.4										
9	320	15.2			270	24.1		41.6	20	23.2		30.0	24	34.3		23.7	17	40.3		07.3										
10	335	17.6			285	24.1		42.4	35	23.9		29.7	39	36.4		23.7	32	42.6		07.3										
11	350	20.1			300	24.1	+21	43.2	50	24.5	-21	29.5	54	38.5	-21	23.6	47	44.8	-20	07.3										
12	5	22.5			315	24.1	+21	44.0	65	25.1	-21	29.2	69	40.6	-21	23.6	62	47.1	-20	07.2										
13	20	25.0			330	24.1		44.8	80	25.7		28.9	84	42.7		23.5	77	49.4		07.2										
14	35	27.5			345	24.1		45.6	95	26.4		28.6	99	44.8		23.5	92	51.7		07.2										
15	50	29.9			0	24.1		46.4	110	27.0		28.3	114	46.9		23.4	107	54.0		07.1										
16	65	32.4			15	24.1		47.2	125	27.6		28.0	129	49.0		23.3	122	56.3		07.1										
17	80	34.9			30	24.1	+21	48.0	140	28.2	-21	27.7	144	51.1	-21	23.3	137	58.6	-20	07.1										
18	95	37.3			45	24.1	+21	48.8	155	28.9	-21	27.4	159	53.3	-21	23.2	153	00.9	-20	07.0										
19	110	39.8			60	24.1		49.6	170	29.5		27.1	174	55.4		23.2	168	03.1		07.0										
20	125	42.3			75	24.1		50.4	185	30.1		26.8	189	57.5		23.1	183	05.4		07.0										
21	140	44.7			90	24.1		51.2	200	30.7		26.5	204	59.6		23.1	198	07.7		06.9										
22	155	47.2			105	24.1		52.0	215	31.4		26.2	220	01.7		23.0	213	10.0		06.9										
23	170	49.7			120	24.1		52.8	230	32.0		25.9	235	03.8		23.0	228	12.3		06.9										
24	185	52.1			135	24.2	+21	53.6	245	32.6	-21	25.6	250	05.9	-21	22.9	243	14.6	-20	06.8										
Dif.	—		0				+8				+6				+3				+21				+1				+23			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°0 PMG: 12 ^h 04 ^m 9			SD: 14°8 Edad: 3 ^d 6			PHE { 4^h: 54°5 12^h: 54°6 20^h: 54°8										
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	Rº: 46 ^m									
h	°	'	°	°	'	°	'		°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	43.6	+3 05.1	140	10.4	144	+13 29.4	101	60 N	18 35	19 18	20 10	7 05	13	23 31	79	
1	193	43.8	06.1	154	43.8	143	39.5	100	58	33	13	20 02	14	16	19	76	
2	208	44.0	07.0	169	17.1	143	49.5	100	56	31	09	19 55	22	19	09	73	
3	223	44.2	08.0	183	50.4	142	+13 59.5	99	54	29	05	48	29	21	23 01	70	
4	238	44.4	09.0	198	23.6	142	+14 09.4	98	52	28	19 02	43	35	23	22 53	69	
5	253	44.6	+3 10.0	212	56.8	141	+14 19.2	98	50	18 26	18 59	19 38	7 40	26	22 46	67	
6	268	44.8	+3 10.9	227	29.9	141	+14 29.0	97	45	18 23	18 53	19 28	7 53	29	22 31	63	
7	283	45.0	11.9	242	03.0	140	38.7	97	40	21	48	20	8 03	32	19	60	
8	298	45.2	12.9	256	36.0	139	48.4	97	35	18	44	14	12	34	22 08	59	
9	313	45.3	13.9	271	08.9	139	+14 58.1	95	30	17	41	09	19	37	21 59	57	
10	328	45.5	14.8	285	41.8	138	+15 07.6	95	20	13	35	19 01	33	40	44	53	
11	343	45.7	+3 15.8	300	14.6	138	+15 17.1	95	10 N	18 11	18 32	18 56	8 45	43	21 30	50	
12	358	45.9	+3 16.8	314	47.4	137	+15 26.6	94	0	18 08	18 29	18 53	8 56	46	21 18	47	
13	13	46.1	17.8	329	20.1	136	36.0	93	10 S	06	27	51	9 07	49	21 05	45	
14	28	46.3	18.7	343	52.7	136	45.3	92	20	03	25	51	19	52	20 51	42	
15	43	46.5	19.7	358	25.3	135	+15 54.5	92	30	18 01	25	52	33	55	36	39	
16	58	46.7	20.7	12	57.8	135	+16 03.7	92	35	17 59	25	54	41	57	27	37	
17	73	46.8	+3 21.7	27	30.3	134	+16 12.9	90	40	17 58	18 25	18 56	9 50	60	20 17	34	
18	88	47.0	+3 22.6	42	02.7	133	+16 21.9	90	45	17 56	18 25	18 59	10 01	63	20 05	32	
19	103	47.2	23.6	56	35.0	133	30.9	90	50	54	26	19 04	14	67	19 51	28	
20	118	47.4	24.6	71	07.3	132	39.9	89	52	53	27	06	20	69	44	26	
21	133	47.6	25.6	85	39.5	131	48.8	88	54	52	27	08	27	71	37	24	
22	148	47.8	26.5	100	11.6	131	+16 57.6	87	56	51	28	11	34	74	29	22	
23	163	48.0	27.5	114	43.7	130	+17 06.3	86	58	50	28	14	43	76	20	19	
24	178	48.2	+3 28.5	129	15.7		+17 14.9		60 S	17 48	18 29	19 18	10 53	80	19 09	16	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 11 ^h 34 ^m 6		Mag: -4.5 PMG: 14 ^h 58 ^m			Mag: +0.8 PMG: 07 ^h 38 ^m			Mag: -2.1 PMG: 07 ^h 19 ^m			Mag: +0.7 PMG: 07 ^h 46 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	185	52.1	135 24.2	+21 53.6		245 32.6	-21 25.6		250 05.9	-21 -22.9		243 14.6	-20 06.8				
1	200	54.6	150 24.2	54.4		260 33.2	25.3		265 08.0	-22.9		258 16.9	06.8				
2	215	57.0	165 24.2	55.2		275 33.9	25.0		280 10.1	-22.8		273 19.2	06.8				
3	230	59.5	180 24.2	56.0		290 34.5	24.7		295 12.2	-22.8		288 21.4	06.7				
4	246	02.0	195 24.2	56.7		305 35.1	24.4		310 14.4	-22.7		303 23.7	06.7				
5	261	04.4	210 24.2	+21 57.5		320 35.7	-21 24.0		325 16.5	-21 -22.7		318 26.0	-20 06.7				
6	276	06.9	225 24.2	+21 58.3		335 36.4	-21 23.7		340 18.6	-21 -22.6		333 28.3	-20 06.6				
7	291	09.4	240 24.2	59.1		350 37.0	23.4		355 20.7	-22.6		348 30.6	06.6				
8	306	11.8	255 24.2	+21 59.9		5 37.6	23.1		10 22.8	-22.5		3 32.9	06.6				
9	321	14.3	270 24.2	+22 00.7		20 38.2	22.8		25 24.9	-22.4		18 35.2	06.5				
10	336	16.8	285 24.3	01.5		35 38.9	22.5		40 27.0	-22.4		33 37.5	06.5				
11	351	19.2	300 24.3	+22 02.2		50 39.5	-21 22.2		55 29.1	-21 -22.3		48 39.8	-20 06.5				
12	6	21.7	315 24.3	+22 03.0		65 40.1	-21 21.9		70 31.2	-21 -22.3		63 42.0	-20 06.4				
13	21	24.2	330 24.3	03.8		80 40.7	21.6		85 33.4	-22.2		78 44.3	06.4				
14	36	26.6	345 24.3	04.6		95 41.4	21.3		100 35.5	-22.2		93 46.6	06.4				
15	51	29.1	0 24.3	05.4		110 42.0	21.0		115 37.6	-22.1		108 48.9	06.3				
16	66	31.5	15 24.4	06.2		125 42.6	20.7		130 39.7	-22.1		123 51.2	06.3				
17	81	34.0	30 24.4	+22 06.9		140 43.3	-21 20.4		145 41.8	-21 -22.0		138 53.5	-20 06.3				
18	96	36.5	45 24.4	+22 07.7		155 43.9	-21 20.1		160 43.9	-21 -22.0		153 55.8	-20 06.3				
19	111	38.9	60 24.4	08.5		170 44.5	19.8		175 46.0	-21.9		168 58.1	06.2				
20	126	41.4	75 24.4	09.3		185 45.1	19.5		190 48.2	-21.9		184 00.4	06.2				
21	141	43.9	90 24.4	10.0		200 45.8	19.2		205 50.3	-21.8		199 02.7	06.2				
22	156	46.3	105 24.5	10.8		215 46.4	18.9		220 52.4	-21.8		214 04.9	06.1				
23	171	48.8	120 24.5	11.6		230 47.0	18.5		235 54.5	-21.7		229 07.2	06.1				
24	186	51.3	135 24.5	+22 12.4		245 47.6	-21 18.2		250 56.6	-21 -21.7		244 09.5	-20 06.1				
Dif.	—		0	+8		+6	+3		+21	+1		+23	0				

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 16'0			SD: 14'9			PHE { 4 ^h : 54'9 12 ^h : 55'1 20 ^h : 55'2				Edad: 4 ^d 6			Rº: 50 ^m			Rº			Rº		
	PMG: 12 ^h 04 ^m 6			PMG: 15 ^h 53 ^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	48.2	+3	28.5	129	15.7	130	+17	14.9	86	60 N	3 58	4 51	5 33	7 18	20	***	***	***			
1	193	48.3		29.5	143	47.7	128		23.5	85	58	4 07	4 56	35	30	23	***	***	***			
2	208	48.5		30.4	158	19.5	129		32.0	85	56	14	5 00	38	41	25	***	***	***			
3	223	48.7		31.4	172	51.4	127		40.5	84	54	20	04	39	50	28	***	***	***			
4	238	48.9		32.4	187	23.1	127		48.9	83	52	26	07	41	7 58	30	***	***	***			
5	253	49.1	+3	33.3	201	54.8	126	+17	57.2	82	50	4 31	5 10	5 42	8 06	31	23 53	65				
6	268	49.3	+3	34.3	216	26.4	125	+18	05.4	81	45	4 41	5 16	5 46	8 22	34	23 34	63				
7	283	49.5		35.3	230	57.9	125		13.5	81	40	49	21	48	35	37		19 60				
8	298	49.7		36.3	245	29.4	124		21.6	80	35	4 55	25	51	46	39	23 07	58				
9	313	49.8		37.2	260	00.8	124		29.6	79	30	5 01	29	53	8 56	41	22 56	56				
10	328	50.0		38.2	274	32.2	122		37.5	78	20	08	34	56	9 13	44		37 54				
11	343	50.2	+3	39.2	289	03.4	122	+18	45.3	78	10 N	5 13	5 38	5 59	9 28	46	22 20	53				
12	358	50.4	+3	40.2	303	34.6	122	+18	53.1	76	0	5 17	5 41	6 01	9 42	49	22 05	50				
13	13	50.6		41.1	318	05.8	120	+19	00.7	76	10 S	18	43	04	9 56	51	21 50	48				
14	28	50.8		42.1	332	36.8	120		08.3	75	20	19	44	06	10 11	54		33 46				
15	43	51.0		43.1	347	07.8	120		15.8	74	30	17	45	09	28	57		15 43				
16	58	51.2		44.0	1	38.8	118		23.2	74	35	16	45	11	38	59	21 04	42				
17	73	51.3	+3	45.0	16	09.6	118	+19	30.6	72	40	5 14	5 45	6 12	10 50	61	20 51	40				
18	88	51.5	+3	46.0	30	40.4	117	+19	37.8	72	45	5 11	5 45	6 14	11 04	63	20 37	38				
19	103	51.7		47.0	45	11.1	116		45.0	70	50	07	44	17	21	66		19 35				
20	118	51.9		47.9	59	41.7	116		52.0	70	52	05	44	18	29	68		10 34				
21	133	52.1		48.9	74	12.3	115	+19	59.0	69	54	02	44	19	38	70	20 01	32				
22	148	52.3		49.9	88	42.8	114	+20	05.9	68	56	5 00	43	20	48	72	19 51	29				
23	163	52.5		50.8	103	13.2	114		12.7	67	58	4 56	42	21	11 59	76	19 39	26				
24	178	52.6	+3	51.8	117	43.6		+20	19.4		60 S	4 53	5 41	6 23	12 13	79	19 25	23				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG 11 ^h 30 ^m 7		Mag: -4.5 PMG: 14 ^h 58 ^m				Mag: +0.8 PMG: 07 ^h 37 ^m				Mag: -2.1 PMG: 07 ^h 15 ^m				Mag: +0.7 PMG: 07 ^h 42 ^m							
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	°	°	°	'	°			
0	186	51.3	135	24.5	+22	12.4	245	47.6	-21	18.2	250	56.6	-21	21.7	244	09.5	-20	06.1				
1	201	53.7	150	24.5		13.1	260	48.3		17.9	265	58.7		21.6	259	11.8		06.0				
2	216	56.2	165	24.5		13.9	275	48.9		17.6	281	00.9		21.6	274	14.1		06.0				
3	231	58.6	180	24.6		14.7	290	49.5		17.3	296	03.0		21.5	289	16.4		06.0				
4	247	01.1	195	24.6		15.5	305	50.2		17.0	311	05.1		21.5	304	18.7		05.9				
5	262	03.6	210	24.6	+22	16.2	320	50.8	-21	16.7	326	07.2	-21	21.4	319	21.0	-20	05.9				
6	277	06.0	225	24.6	+22	17.0	335	51.4	-21	16.4	341	09.3	-21	21.4	334	23.3	-20	05.9				
7	292	08.5	240	24.6		17.8	350	52.1		16.1	356	11.4		21.3	349	25.6		05.8				
8	307	11.0	255	24.7		18.5	5	52.7		15.8	11	13.6		21.2	4	27.9		05.8				
9	322	13.4	270	24.7		19.3	20	53.3		15.5	26	15.7		21.2	19	30.2		05.8				
10	337	15.9	285	24.7		20.1	35	53.9		15.1	41	17.8		21.1	34	32.5		05.7				
11	352	18.4	300	24.7	+22	20.8	50	54.6	-21	14.8	56	19.9	-21	21.1	49	34.7	-20	05.7				
12	7	20.8	315	24.8	+22	21.6	65	55.2	-21	14.5	71	22.0	-21	21.0	64	37.0	-20	05.7				
13	22	23.3	330	24.8		22.3	80	55.8		14.2	86	24.2		21.0	79	39.3		05.6				
14	37	25.8	345	24.8		23.1	95	56.5		13.9	101	26.3		20.9	94	41.6		05.6				
15	52	28.2	0	24.9		23.9	110	57.1		13.6	116	28.4		20.9	109	43.9		05.6				
16	67	30.7	15	24.9		24.6	125	57.7		13.3	131	30.5		20.8	124	46.2		05.5				
17	82	33.1	30	24.9	+22	25.4	140	58.3	-21	12.9	146	32.6	-21	20.8	139	48.5	-20	05.5				
18	97	35.6	45	24.9	+22	26.1	155	59.0	-21	12.6	161	34.8	-21	20.7	154	50.8	-20	05.5				
19	112	38.1	60	25.0		26.9	170	59.6		12.3	176	36.9		20.7	169	53.1		05.4				
20	127	40.5	75	25.0		27.7	186	00.2		12.0	191	39.0		20.6	184	55.4		05.4				
21	142	43.0	90	25.0		28.4	201	00.9		11.7	206	41.1		20.6	199	57.7		05.4				
22	157	45.5	105	25.1		29.2	216	01.5		11.4	221	43.2		20.5	215	00.0		05.4				
23	172	47.9	120	25.1		29.9	231	02.1		11.1	236	45.4		20.5	230	02.3		05.3				
24	187	50.4	135	25.1	+22	30.7	246	02.8	-21	10.7	251	47.5	-21	20.4	245	04.6	-20	05.3				
Dif.	—		0		+8		+6		+3		+21		+1		+23							

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0				SD: 15'3												PHE {	
	PMG: 12 ^h 04 ^m 0				Edad: 6 ^d 6													
	PMG: 17 ^h 35 ^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	178	57.1	+4	15.1	105	30.7	96	+22	30.7	41	60 N	3 51	4 44	5 27	8 07	46	2 06	66
1	193	57.3		16.0	119	59.3	95		34.8	40	58	4 00	50	30	26	47	1 48	64
2	208	57.5		17.0	134	27.8	95		38.8	39	56	08	54	32	41	48	33	63
3	223	57.7		18.0	148	56.3	94		42.7	38	54	15	4 58	34	8 54	49	20	62
4	238	57.9		18.9	163	24.7	93		46.5	37	52	21	5 02	36	9 06	50	1 08	61
5	253	58.1	+4	19.9	177	53.0	92	+22	50.2	35	50	4 26	5 05	5 38	9 16	50	0 58	61
6	268	58.2	+4	20.9	192	21.2	92	+22	53.7	35	45	4 37	5 12	5 42	9 38	51	0 37	59
7	283	58.4		21.8	206	49.4	92	+22	57.2	33	40	46	18	45	9 56	51	19	59
8	298	58.6		22.8	221	17.6	90	+23	00.5	32	35	53	22	48	10 11	52	0 05	57
9	313	58.8		23.8	235	45.6	90		03.7	30	30	4 58	26	50	23	53	***	***
10	328	59.0		24.7	250	13.6	90		06.7	30	20	5 06	32	54	10 45	54	***	***
11	343	59.2	+4	25.7	264	41.6	88	+23	09.7	28	10 N	5 12	5 37	5 58	11 05	54	***	***
12	358	59.4	+4	26.7	279	09.4	89	+23	12.5	27	0	5 16	5 40	6 01	11 23	54	23 48	56
13	13	59.5		27.6	293	37.3	87		15.2	26	10 S	18	43	04	11 41	55	30	56
14	28	59.7		28.6	308	05.0	87		17.8	25	20	19	45	07	12 00	55	23 10	56
15	43	59.9		29.6	322	32.7	86		20.3	23	30	19	46	10	22	56	22 48	55
16	59	00.1		30.5	337	00.3	86		22.6	22	35	18	47	12	35	57	34	56
17	74	00.3	+4	31.5	351	27.9	85	+23	24.8	21	40	5 16	5 47	6 14	12 50	57	22 19	56
18	89	00.5	+4	32.5	5	55.4	85	+23	26.9	19	45	5 14	5 48	6 17	13 08	57	22 01	55
19	104	00.7		33.4	20	22.9	84		28.8	19	50	10	47	20	31	57	21 38	56
20	119	00.8		34.4	34	50.3	83		30.7	17	52	08	47	21	42	57	27	56
21	134	01.0		35.4	49	17.6	83		32.4	15	54	06	47	22	13 54	58	15	55
22	149	01.2		36.3	63	44.9	83		33.9	15	56	04	47	24	14 08	58	21 01	55
23	164	01.4		37.3	78	12.2	81		35.4	13	58	5 01	47	26	14 24	59	20 44	55
24	179	01.6	+4	38.3	92	39.3		+23	36.7		60 S	4 58	5 46	6 28	14 44	59	20 24	55
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.5				Mag: +0.8				Mag: -2.1				Mag: +0.7			
	11 ^h 22 ^m 8		PMG: 14 ^h 58 ^m				PMG: 07 ^h 34 ^m				PMG: 07 ^h 08 ^m				PMG: 07 ^h 35 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	188	49.5	135	26.0	+22	48.5	246	17.9	-21	03.1	252	38.5	-21	19.2	245	59.7	-20	04.5
1	203	52.0	150	26.1		49.2	261	18.6		02.8	267	40.6		19.1	261	02.0		04.5
2	218	54.5	165	26.1		50.0	276	19.2		02.4	282	42.8		19.1	276	04.3		04.5
3	233	56.9	180	26.2		50.7	291	19.9		02.1	297	44.9		19.0	291	06.6		04.4
4	248	59.4	195	26.2		51.4	306	20.5		01.8	312	47.0		19.0	306	08.9		04.4
5	264	01.9	210	26.3	+22	52.2	321	21.1	-21	01.5	327	49.1	-21	18.9	321	11.2	-20	04.4
6	279	04.3	225	26.3	+22	52.9	336	21.8	-21	01.1	342	51.3	-21	18.9	336	13.5	-20	04.4
7	294	06.8	240	26.4		53.6	351	22.4		00.8	357	53.4		18.8	351	15.8		04.3
8	309	09.2	255	26.4		54.3	6	23.0		00.5	12	55.5		18.8	6	18.1		04.3
9	324	11.7	270	26.5		55.1	21	23.7	-21	00.2	27	57.7		18.7	21	20.4		04.3
10	339	14.2	285	26.5		55.8	36	24.3	-20	59.8	42	59.8		18.7	36	22.7		04.2
11	354	16.6	300	26.6	+22	56.5	51	24.9	-20	59.5	58	01.9	-21	18.6	51	25.0	-20	04.2
12	9	19.1	315	26.6	+22	57.2	66	25.6	-20	59.2	73	04.1	-21	18.6	66	27.3	-20	04.2
13	24	21.6	330	26.7		58.0	81	26.2		58.8	88	06.2		18.5	81	29.6		04.1
14	39	24.0	345	26.7		58.7	96	26.8		58.5	103	08.3		18.5	96	31.9		04.1
15	54	26.5	0	26.8	+22	59.4	111	27.5		58.2	118	10.5		18.4	111	34.2		04.1
16	69	29.0	15	26.9	+23	00.1	126	28.1		57.9	133	12.6		18.4	126	36.5		04.1
17	84	31.4	30	26.9	+23	00.8	141	28.7	-20	57.5	148	14.7	-21	18.3	141	38.8	-20	04.0
18	99	33.9	45	27.0	+23	01.6	156	29.4	-20	57.2	163	16.9	-21	18.3	156	41.1	-20	04.0
19	114	36.4	60	27.0		02.3	171	30.0		56.9	178	19.0		18.2	171	43.4		04.0
20	129	38.8	75	27.1		03.0	186	30.7		56.6	193	21.1		18.2	186	45.7		03.9
21	144	41.3	90	27.1		03.7	201	31.3		56.2	208	23.3		18.1	201	48.0		03.9
22	159	43.7	105	27.2		04.4	216	31.9		55.9	223	25.4		18.1	216	50.3		03.9
23	174	46.2	120	27.2		05.1	231	32.6		55.6	238	27.5		18.0	231	52.6		03.8
24	189	48.7	135	27.3	+23	05.9	246	33.2	-20	55.2	253	29.7	-21	18.0	246	54.9	-20	03.8
Dif.	—		+1		+7		+6		+3		+21		+1		+23			

UT	SOL			LUNA							Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0			SD: 15'5			PHE { 4^h: 56'9 12^h: 57'2 20^h: 57'4												
	PMG: 12 ^h 03 ^m 7			Edad: 7 ^d 6			R ^o : 57 ^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	m			
0	179	01.6	+4	92	39.3	82	+23	36.7	11	60 N	18 45	19 28	20 22	8 53	65	3 12	51		
1	194	01.8		107	06.5	81		37.8	11	58	42	22	12	9 13	64	2 52	52		
2	209	02.0		121	33.6	80		38.9	9	56	39	17	20 04	29	63	36	52		
3	224	02.1		136	00.6	80		39.8	8	54	37	13	19 57	43	63	22	53		
4	239	02.3		150	27.6	79		40.6	6	52	35	09	51	9 56	62	2 09	54		
5	254	02.5	+4	164	54.5	79	+23	41.2	5	50	18 33	19 05	19 45	10 06	62	1 59	53		
6	269	02.7	+4	179	21.4	78	+23	41.7	4	45	18 28	18 58	19 33	10 29	61	1 36	54		
7	284	02.9		193	48.2	78		42.1	2	40	25	52	24	10 47	60	18	54		
8	299	03.1		208	15.0	77		42.3	1	35	22	47	17	11 03	59	1 02	55		
9	314	03.3		222	41.7	77		42.4	0	30	19	43	11	16	59	0 49	55		
10	329	03.4		237	08.4	77		42.4	2	20	14	37	19 02	39	58	26	55		
11	344	03.6	+4	251	35.1	76	+23	42.2	3	10 N	18 11	18 32	18 56	11 59	57	0 07	55		
12	359	03.8	+4	266	01.7	76	+23	41.9	5	0	18 07	18 28	18 52	12 17	56	***	***		
13	14	04.0		280	28.3	75		41.4	6	10 S	04	25	49	36	55	***	***		
14	29	04.2		294	54.8	75		40.8	7	20	18 00	22	48	12 55	55	***	***		
15	44	04.4		309	21.3	74		40.1	9	30	17 56	20	48	13 18	54	23 43	62		
16	59	04.6		323	47.7	75		39.2	10	35	54	19	48	32	52	30	62		
17	74	04.7	+4	338	14.2	73	+23	38.2	11	40	17 51	18 18	18 50	13 47	52	23 15	63		
18	89	04.9	+4	352	40.5	74	+23	37.1	13	45	17 49	18 18	18 52	14 05	51	22 56	65		
19	104	05.1		7	06.9	73		35.8	15	50	45	18	55	28	50	34	67		
20	119	05.3		21	33.2	73		34.3	15	52	44	17	56	39	49	23	68		
21	134	05.5		35	59.5	72		32.8	17	54	42	17	18 58	14 52	48	22 10	69		
22	149	05.7	+4	50	25.7	72		31.1	19	56	40	17	19 00	15 06	47	21 56	71		
23	164	05.8	+5	64	51.9	72		29.2	20	58	38	17	03	23	45	39	73		
24	179	06.0	+5	79	18.1		+23	27.2		60 S	17 36	18 18	19 06	15 43	43	21 19	75		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG		Mag: -4.5			Mag: +0.8			Mag: -2.1			Mag: +0.7							
	11 ^h 18 ^m 9		PMG: 14 ^h 58 ^m			PMG: 07 ^h 33 ^m			PMG: 07 ^h 05 ^m			PMG: 07 ^h 31 ^m							
	hG ♀		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'					
0	189	48.7	135	27.3	+23 05.9	246	33.2	-20 55.2	253	29.7	-21 -18.0	246	54.9	-20 03.8					
1	204	51.1	150	27.4	06.6	261	33.8	54.9	268	31.8	-17.9	261	57.2	03.8					
2	219	53.6	165	27.4	07.3	276	34.5	54.6	283	33.9	-17.9	276	59.5	03.7					
3	234	56.1	180	27.5	08.0	291	35.1	54.2	298	36.1	-17.8	292	01.8	03.7					
4	249	58.5	195	27.6	08.7	306	35.8	53.9	313	38.2	-17.8	307	04.1	03.7					
5	265	01.0	210	27.6	+23 09.4	321	36.4	-20 53.6	328	40.3	-21 -17.7	322	06.4	-20 03.7					
6	280	03.5	225	27.7	+23 10.1	336	37.0	-20 53.2	343	42.5	-21 -17.7	337	08.7	-20 03.6					
7	295	05.9	240	27.7	10.8	351	37.7	52.9	358	44.6	-17.6	352	11.0	03.6					
8	310	08.4	255	27.8	11.5	6	38.3	52.6	13	46.7	-17.6	7	13.3	03.6					
9	325	10.9	270	27.9	12.2	21	38.9	52.2	28	48.9	-17.5	22	15.6	03.5					
10	340	13.3	285	27.9	12.9	36	39.6	51.9	43	51.0	-17.5	37	17.9	03.5					
11	355	15.8	300	28.0	+23 13.6	51	40.2	-20 51.6	58	53.2	-21 -17.4	52	20.2	-20 03.5					
12	10	18.2	315	28.1	+23 14.3	66	40.9	-20 51.2	73	55.3	-21 -17.4	67	22.5	-20 03.4					
13	25	20.7	330	28.1	15.0	81	41.5	50.9	88	57.4	-17.3	82	24.8	03.4					
14	40	23.2	345	28.2	15.7	96	42.1	50.6	103	59.6	-17.3	97	27.1	03.4					
15	55	25.6	0	28.3	16.4	111	42.8	50.2	119	01.7	-17.2	112	29.4	03.4					
16	70	28.1	15	28.3	17.1	126	43.4	49.9	134	03.9	-17.2	127	31.7	03.3					
17	85	30.6	30	28.4	+23 17.8	141	44.1	-20 49.6	149	06.0	-21 -17.1	142	34.0	-20 03.3					
18	100	33.0	45	28.5	+23 18.5	156	44.7	-20 49.2	164	08.1	-21 -17.1	157	36.4	-20 03.3					
19	115	35.5	60	28.6	19.2	171	45.3	48.9	179	10.3	-17.1	172	38.7	03.2					
20	130	38.0	75	28.6	19.9	186	46.0	48.6	194	12.4	-17.0	187	41.0	03.2					
21	145	40.4	90	28.7	20.6	201	46.6	48.2	209	14.5	-17.0	202	43.3	03.2					
22	160	42.9	105	28.8	21.3	216	47.3	47.9	224	16.7	-16.9	217	45.6	03.2					
23	175	45.3	120	28.9	22.0	231	47.9	47.6	239	18.8	-16.9	232	47.9	03.1					
24	190	47.8	135	28.9	+23 22.7	246	48.5	-20 47.2	254	21.0	-21 -16.8	247	50.2	-20 03.1					
Dif.	—		+1	+7		+6	+3		+21	0		+23	0						

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0			SD: 15'7			PHE { 4 ^h : 57'7 12 ^h : 58'0 20 ^h : 58'4										
	PMG: 12 ^h 03 ^m 5			Edad: 8 ^d 6													
	PMG: 19 ^h 27 ^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	
0	179	06.0	+5	79	18.1	72	+23	27.2	21	60 N	3	44	5	21	9	58	
1	194	06.2		93	44.3	71		25.1	23	58	3	54	44	24	10	17	
2	209	06.4		108	10.4	71		22.8	25	56	4	02	49	27	32	77	
3	224	06.6		122	36.5	71		20.3	25	54	09	53	30	46	75	15	
4	239	06.8		137	02.6	70		17.8	27	52	16	4	57	32	10	58	
5	254	07.0	+5	151	28.6	70	+23	15.1	29	50	4	21	5	34	11	08	
6	269	07.1	+5	165	54.6	70	+23	12.2	30	45	4	33	5	38	11	30	
7	284	07.3		180	20.6	70		09.2	31	40	42	15	42	11	47	67	
8	299	07.5		194	46.6	70		06.1	33	35	50	20	45	12	02	65	
9	314	07.7		209	12.6	69	+23	02.8	35	30	4	56	24	48	15	64	
10	329	07.9		223	38.5	70	+22	59.3	36	20	5	05	30	53	37	61	
11	344	08.1	+5	238	04.5	69	+22	55.7	37	10 N	5	11	5	57	12	56	
12	359	08.2	+5	252	30.4	69	+22	52.0	38	0	5	15	5	39	6	00	
13	14	08.4		266	56.3	69		48.2	41	10 S	18	43	04	31	55	26	
14	29	08.6		281	22.2	68		44.1	41	20	20	45	07	13	50	53	
15	44	08.8		295	48.0	69		40.0	43	30	20	48	12	14	12	50	
16	59	09.0		310	13.9	68		35.7	45	35	19	49	14	24	49	***	
17	74	09.2	+5	324	39.7	69	+22	31.2	46	40	5	18	5	49	14	39	
18	89	09.3	+5	339	05.6	68	+22	26.6	47	45	5	16	5	50	6	19	
19	104	09.5		353	31.4	68		21.9	49	50	13	51	23	15	18	41	
20	119	09.7		7	57.2	68		17.0	50	52	12	51	24	28	39	31	
21	134	09.9		22	23.0	68		12.0	52	54	10	51	26	40	37	19	
22	149	10.1		36	48.8	68		06.8	53	56	08	51	28	15	53	35	
23	164	10.3		51	14.6	68	+22	01.5	54	58	05	51	30	16	08	32	
24	179	10.4	+5	65	40.4		+21	56.1		60 S	5	03	5	51	6	33	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 11 ^h 15 ^m 0		Mag: -4.6 PMG: 14 ^h 58 ^m			Mag: +0.8 PMG: 07 ^h 32 ^m			Mag: -2.1 PMG: 07 ^h 02 ^m			Mag: +0.7 PMG: 07 ^h 28 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	190	47.8	135	28.9	+23	22.7	246	48.5	-20	47.2	254	21.0	-21	16.8		
1	205	50.3	150	29.0		23.4	261	49.2		46.9	269	23.1		16.8		
2	220	52.7	165	29.1		24.1	276	49.8		46.5	284	25.3		16.7		
3	235	55.2	180	29.2		24.8	291	50.5		46.2	299	27.4		16.7		
4	250	57.7	195	29.2		25.5	306	51.1		45.9	314	29.5		16.6		
5	266	00.1	210	29.3	+23	26.1	321	51.7	-20	45.5	329	31.7	-21	16.6		
6	281	02.6	225	29.4	+23	26.8	336	52.4	-20	45.2	344	33.8	-21	16.5		
7	296	05.1	240	29.5		27.5	351	53.0		44.8	359	36.0		16.5		
8	311	07.5	255	29.5		28.2	6	53.7		44.5	14	38.1		16.4		
9	326	10.0	270	29.6		28.9	21	54.3		44.2	29	40.3		16.4		
10	341	12.5	285	29.7		29.6	36	54.9		43.8	44	42.4		16.3		
11	356	14.9	300	29.8	+23	30.3	51	55.6	-20	43.5	59	44.5	-21	16.3		
12	11	17.4	315	29.9	+23	30.9	66	56.2	-20	43.1	74	46.7	-21	16.2		
13	26	19.8	330	30.0		31.6	81	56.9		42.8	89	48.8		16.2		
14	41	22.3	345	30.0		32.3	96	57.5		42.5	104	51.0		16.1		
15	56	24.8	0	30.1		33.0	111	58.2		42.1	119	53.1		16.1		
16	71	27.2	15	30.2		33.7	126	58.8		41.8	134	55.3		16.0		
17	86	29.7	30	30.3	+23	34.3	141	59.4	-20	41.4	149	57.4	-21	16.0		
18	101	32.2	45	30.4	+23	35.0	157	00.1	-20	41.1	164	59.6	-21	15.9		
19	116	34.6	60	30.5		35.7	172	00.7		40.8	180	01.7		15.9		
20	131	37.1	75	30.6		36.4	187	01.4		40.4	195	03.9		15.8		
21	146	39.6	90	30.7		37.0	202	02.0		40.1	210	06.0		15.8		
22	161	42.0	105	30.7		37.7	217	02.7		39.7	225	08.1		15.7		
23	176	44.5	120	30.8		38.4	232	03.3		39.4	240	10.3		15.7		
24	191	47.0	135	30.9	+23	39.0	247	03.9	-20	39.0	255	12.4	-21	15.6		
Dif.	—		+1		+7		+6		+3		+21		0		+23	

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: 58'7 12^h: 59'0 20^h: 59'3						Edad: 9 ^d 6		Rº: 56 ^m		Rº: 56 ^m		Rº: 56 ^m		
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.				Dec		Dif.		Civil	Náut.	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	179	10.4	+5	24.4	65	40.4	68	+21	56.1	56	60 N	18 50	19 33	20 28	11 21	94	4 38	23	23	
1	194	10.6		25.3	80	06.2	68		50.5	58	58	46	27	18	36	90	22	27	27	
2	209	10.8		26.3	94	32.0	68		44.7	59	56	43	22	09	11 49	87	4 09	30	30	
3	224	11.0		27.2	108	57.8	68		38.8	60	54	40	17	20 01	12 01	84	3 57	33	33	
4	239	11.2		28.2	123	23.6	68		32.8	62	52	38	13	19 55	11	81	46	35	35	
5	254	11.4	+5	29.1	137	49.4	68	+21	26.6	63	50	18 36	19 09	19 49	12 20	79	3 37	37	37	
6	269	11.5	+5	30.1	152	15.2	68	+21	20.3	64	45	18 31	19 01	19 36	12 39	75	3 17	41	41	
7	284	11.7		31.0	166	41.0	68		13.9	66	40	27	18 54	27	12 54	72	3 01	44	44	
8	299	11.9		32.0	181	06.8	68		07.3	67	35	23	49	19	13 07	69	2 47	46	46	
9	314	12.1		33.0	195	32.6	68	+21	00.6	69	30	20	44	13	19	66	36	48	48	
10	329	12.3		33.9	209	58.4	68	+20	53.7	70	20	15	37	19 03	38	63	2 15	51	51	
11	344	12.4	+5	34.9	224	24.2	68	+20	46.7	72	10 N	18 11	18 32	18 56	13 55	59	1 57	54	54	
12	359	12.6	+5	35.8	238	50.0	69	+20	39.5	73	0	18 06	18 27	18 51	14 10	57	1 41	56	56	
13	14	12.8		36.8	253	15.9	68		32.2	74	10 S	18 02	24	48	26	53	24	59	59	
14	29	13.0		37.7	267	41.7	69		24.8	76	20	17 58	20	46	14 43	50	1 06	62	62	
15	44	13.2		38.7	282	07.6	68		17.2	77	30	54	18	45	15 02	46	0 45	65	65	
16	59	13.4		39.6	296	33.4	69		09.5	78	35	51	16	46	13	43	32	68	68	
17	74	13.5	+5	40.6	310	59.3	69	+20	01.7	80	40	17 48	18 15	18 47	15 25	41	0 18	70	70	
18	89	13.7	+5	41.5	325	25.2	69	+19	53.7	81	45	17 45	18 14	18 48	15 40	38	0 01	73	73	
19	104	13.9		42.5	339	51.1	69		45.6	83	50	41	13	51	15 59	33	***	***	***	
20	119	14.1		43.4	354	17.0	69		37.3	83	52	39	13	52	16 07	32	***	***	***	
21	134	14.3		44.4	8	42.9	70		29.0	86	54	37	13	53	17	29	***	***	***	
22	149	14.5		45.4	23	08.9	69		20.4	86	56	35	12	55	28	26	***	***	***	
23	164	14.6		46.3	37	34.8	70		11.8	88	58	33	12	18 57	40	23	***	***	***	
24	179	14.8	+5	47.3	52	00.8		+19	03.0		60 S	17 30	18 12	19 00	16 54	19	***	***	***	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 11 ^h 11 ^m 0		Mag: -4.6 PMG: 14 ^h 58 ^m			Mag: +0.8 PMG: 07 ^h 31 ^m			Mag: -2.2 PMG: 06 ^h 58 ^m			Mag: +0.7 PMG: 07 ^h 24 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	191	47.0	135	30.9	+23	39.0	247	03.9	-20	39.0	255	12.4	-21	-15.6	248	45.6	-20	02.4		
1	206	49.4	150	31.0		39.7	262	04.6		38.7	270	14.6		-15.6	263	47.9		02.4		
2	221	51.9	165	31.1		40.4	277	05.2		38.3	285	16.7		-15.5	278	50.2		02.3		
3	236	54.3	180	31.2		41.1	292	05.9		38.0	300	18.9		-15.5	293	52.5		02.3		
4	251	56.8	195	31.3		41.7	307	06.5		37.7	315	21.0		-15.4	308	54.8		02.3		
5	266	59.3	210	31.4	+23	42.4	322	07.2	-20	37.3	330	23.2	-21	-15.4	323	57.1	-20	02.2		
6	282	01.7	225	31.5	+23	43.1	337	07.8	-20	37.0	345	25.3	-21	-15.4	338	59.4	-20	02.2		
7	297	04.2	240	31.6		43.7	352	08.5		36.6	0	27.5		-15.3	354	01.7		02.2		
8	312	06.7	255	31.7		44.4	7	09.1		36.3	15	29.6		-15.3	9	04.0		02.2		
9	327	09.1	270	31.8		45.0	22	09.7		35.9	30	31.8		-15.2	24	06.4		02.1		
10	342	11.6	285	31.9		45.7	37	10.4		35.6	45	33.9		-15.2	39	08.7		02.1		
11	357	14.1	300	32.0	+23	46.4	52	11.0	-20	35.2	60	36.1	-21	-15.1	54	11.0	-20	02.1		
12	12	16.5	315	32.1	+23	47.0	67	11.7	-20	34.9	75	38.2	-21	-15.1	69	13.3	-20	02.1		
13	27	19.0	330	32.2		47.7	82	12.3		34.5	90	40.4		-15.0	84	15.6		02.0		
14	42	21.5	345	32.3		48.3	97	13.0		34.2	105	42.5		-15.0	99	17.9		02.0		
15	57	23.9	0	32.4		49.0	112	13.6		33.8	120	44.7		-14.9	114	20.2		02.0		
16	72	26.4	15	32.5		49.7	127	14.3		33.5	135	46.8		-14.9	129	22.5		01.9		
17	87	28.8	30	32.6	+23	50.3	142	14.9	-20	33.1	150	49.0	-21	-14.8	144	24.8	-20	01.9		
18	102	31.3	45	32.7	+23	51.0	157	15.6	-20	32.8	165	51.1	-21	-14.8	159	27.2	-20	01.9		
19	117	33.8	60	32.8		51.6	172	16.2		32.4	180	53.3		-14.7	174	29.5		01.9		
20	132	36.2	75	32.9		52.3	187	16.8		32.1	195	55.4		-14.7	189	31.8		01.8		
21	147	38.7	90	33.0		52.9	202	17.5		31.7	210	57.6		-14.6	204	34.1		01.8		
22	162	41.2	105	33.1		53.6	217	18.1		31.4	225	59.8		-14.6	219	36.4		01.8		
23	177	43.6	120	33.2		54.2	232	18.8		31.0	241	01.9		-14.5	234	38.7		01.7		
24	192	46.1	135	33.3	+23	54.9	247	19.4	-20	30.7	256	04.1	-21	-14.5	249	41.0	-20	01.7		
Dif.	—		+1		+7		+6		+3		+21		0		+23		0			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0			SD: 16'2 Edad: 10 ^d 6	PHE { 4 ^h : 59'6 12 ^h : 59'9 20 ^h : 60'1			Rº: 55 ^m			Náut.	Civil		Hora	Rº	Hora	Rº	
	PMG: 12 ^h 02 ^m 9				PMG: 21 ^h 20 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.											
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m	
0	179	14.8	+5	47.3	52	00.8	70	+19	03.0	89	60 N	3 37	4 32	5 15	12 55	99	5 01 16	
1	194	15.0		48.2	66	26.8	70	+18	54.1	90	58	47	38	19	13 06	95	4 49 20	
2	209	15.2		49.2	80	52.8	70		45.1	92	56	3 56	43	22	16 92		39 23	
3	224	15.4		50.1	95	18.8	71		35.9	93	54	4 04	48	25	25 88		30 26	
4	239	15.5		51.1	109	44.9	70		26.6	94	52	11	53	27	32 86		21 29	
5	254	15.7	+5	52.0	124	10.9	71	+18	17.2	96	50	4 17	4 57	5 30	13 39	84	4 14 30	
6	269	15.9	+5	53.0	138	37.0	71	+18	07.6	97	45	4 29	5 05	5 35	13 54	79	3 58 35	
7	284	16.1		53.9	153	03.1	71	+17	57.9	98	40	39	11	39	14 06	75	45 38	
8	299	16.3		54.9	167	29.2	72		48.1	99	35	47	17	42	16 72		33 42	
9	314	16.4		55.8	181	55.4	71		38.2	101	30	4 53	21	45	25 69		24 44	
10	329	16.6		56.8	196	21.5	72		28.1	102	20	5 03	29	51	41 63		3 06 49	
11	344	16.8	+5	57.7	210	47.7	72	+17	17.9	103	10 N	5 10	5 34	5 55	14 54	60	2 51 53	
12	359	17.0	+5	58.7	225	13.9	73	+17	07.6	104	0	5 15	5 39	6 00	15 07	55	2 37 56	
13	14	17.2	+5	59.6	239	40.2	72	+16	57.2	105	10 S	18	43	04	19 52		23 60	
14	29	17.4	+6	00.6	254	06.4	73		46.7	107	20	20	46	08	33 47		2 08 63	
15	44	17.5		01.5	268	32.7	73		36.0	108	30	21	49	13	48 42		1 50 68	
16	59	17.7		02.5	282	59.0	73		25.2	109	35	21	50	15	15 56	40	40 70	
17	74	17.9	+6	03.4	297	25.3	74	+16	14.3	110	40	5 20	5 51	6 18	16 06	37	1 28 73	
18	89	18.1	+6	04.4	311	51.7	73	+16	03.3	111	45	5 18	5 52	6 22	16 18	33	1 14 77	
19	104	18.3		05.3	326	18.0	74	+15	52.2	112	50	16	54	26	32 28		0 57 81	
20	119	18.4		06.3	340	44.4	75		41.0	114	52	15	54	28	39 25		48 85	
21	134	18.6		07.2	355	10.9	74		29.6	115	54	13	54	30	46 23		39 87	
22	149	18.8		08.2	9	37.3	75		18.1	115	56	12	55	32	16 54	20	29 90	
23	164	19.0		09.1	24	03.8	75	+15	06.6	117	58	10	55	35	17 03	17	0 17 93	
24	179	19.2	+6	10.1	38	30.3		+14	54.9		60 S	5 07	5 56	6 37	17 13	14	0 04 97	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 11 ^h 07 ^m 1		Mag: -4.6 PMG: 14 ^h 58 ^m				Mag: +0.7 PMG: 07 ^h 30 ^m				Mag: -2.2 PMG: 06 ^h 55 ^m				Mag: +0.7 PMG: 07 ^h 20 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	192	46.1	135	33.3	+23	54.9	247	19.4	-20	30.7	256	04.1	-21	14.5	249	41.0	-20	01.7
1	207	48.6	150	33.5		55.5	262	20.1		30.3	271	06.2		14.4	264	43.3		01.7
2	222	51.0	165	33.6		56.2	277	20.7		30.0	286	08.4		14.4	279	45.7		01.7
3	237	53.5	180	33.7		56.8	292	21.4		29.6	301	10.5		14.4	294	48.0		01.6
4	252	55.9	195	33.8		57.5	307	22.0		29.3	316	12.7		14.3	309	50.3		01.6
5	267	58.4	210	33.9	+23	58.1	322	22.7	-20	28.9	331	14.8	-21	14.3	324	52.6	-20	01.6
6	283	00.9	225	34.0	+23	58.8	337	23.3	-20	28.6	346	17.0	-21	14.2	339	54.9	-20	01.5
7	298	03.3	240	34.1	+23	59.4	352	24.0		28.2	1	19.1		14.2	354	57.2		01.5
8	313	05.8	255	34.3	+24	00.1	7	24.6		27.9	16	21.3		14.1	9	59.5		01.5
9	328	08.3	270	34.4		00.7	22	25.3		27.5	31	23.5		14.1	25	01.8		01.5
10	343	10.7	285	34.5		01.3	37	25.9		27.2	46	25.6		14.0	40	04.2		01.4
11	358	13.2	300	34.6	+24	02.0	52	26.6	-20	26.8	61	27.8	-21	14.0	55	06.5	-20	01.4
12	13	15.7	315	34.7	+24	02.6	67	27.2	-20	26.4	76	29.9	-21	13.9	70	08.8	-20	01.4
13	28	18.1	330	34.8		03.3	82	27.8		26.1	91	32.1		13.9	85	11.1		01.3
14	43	20.6	345	35.0		03.9	97	28.5		25.7	106	34.2		13.8	100	13.4		01.3
15	58	23.1	0	35.1		04.5	112	29.1		25.4	121	36.4		13.8	115	15.7		01.3
16	73	25.5	15	35.2		05.2	127	29.8		25.0	136	38.6		13.7	130	18.1		01.3
17	88	28.0	30	35.3	+24	05.8	142	30.4	-20	24.7	151	40.7	-21	13.7	145	20.4	-20	01.2
18	103	30.4	45	35.5	+24	06.4	157	31.1	-20	24.3	166	42.9	-21	13.7	160	22.7	-20	01.2
19	118	32.9	60	35.6		07.1	172	31.7		24.0	181	45.0		13.6	175	25.0		01.2
20	133	35.4	75	35.7		07.7	187	32.4		23.6	196	47.2		13.6	190	27.3		01.2
21	148	37.8	90	35.8		08.3	202	33.0		23.2	211	49.4		13.5	205	29.6		01.1
22	163	40.3	105	36.0		09.0	217	33.7		22.9	226	51.5		13.5	220	31.9		01.1
23	178	42.8	120	36.1		09.6	232	34.3		22.5	241	53.7		13.4	235	34.3		01.1
24	193	45.2	135	36.2	+24	10.2	247	35.0	-20	22.2	256	55.8	-21	13.4	250	36.6	-20	01.0
Dif.	—		+1		+6		+6		+4		+22		0		+23			

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 02 ^m 6			SD: 16'4 Edad: 11 ^d 6 PHE { 4 ^h : 60'4 12 ^h : 60'6 20 ^h : 60'8 PMG: 22 ^h 15 ^m Rº: 55 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº	
	h	°	'	°	'	°	'	°	'			h	m	h	m	h	m	h
0	179	19.2	+6	10.1	38	30.3	75	+14	54.9	118	60 N	18 55	19 39	20 34	14 34	101	5 17	12
1	194	19.3		11.0	52	56.8	75		43.1	119	58	51	32	23	41	97	09	16
2	209	19.5		12.0	67	23.3	76		31.2	120	56	47	26	14	48	93	5 02	19
3	224	19.7		12.9	81	49.9	76		19.2	121	54	44	21	20 06	53	91	4 56	2
4	239	19.9		13.9	96	16.5	76	+14	07.1	122	52	41	16	19 59	14 58	88	50	24
5	254	20.1	+6	14.8	110	43.1	76	+13	54.9	123	50	18 39	19 12	19 52	15 03	85	4 44	27
6	269	20.2	+6	15.7	125	09.7	77	+13	42.6	124	45	18 33	19 03	19 39	15 13	80	4 33	31
7	284	20.4		16.7	139	36.4	77		30.2	125	40	29	18 56	29	21	76	23	35
8	299	20.6		17.6	154	03.1	77		17.7	126	35	25	50	21	28	72	15	38
9	314	20.8		18.6	168	29.8	77	+13	05.1	127	30	21	46	14	34	69	4 08	41
10	329	20.9		19.5	182	56.5	78	+12	52.4	128	20	16	38	19 04	44	64	3 55	46
11	344	21.1	+6	20.5	197	23.3	78	+12	39.6	128	10 N	18 10	18 32	18 56	15 54	59	3 44	51
12	359	21.3	+6	21.4	211	50.1	78	+12	26.8	130	0	18 06	18 27	18 51	16 02	55	3 33	55
13	14	21.5		22.4	226	16.9	78		13.8	131	10 S	18 01	22	47	11	50	23	59
14	29	21.7		23.3	240	43.7	79	+12	00.7	131	20	17 57	19	44	20	45	3 11	64
15	44	21.8		24.3	255	10.6	79	+11	47.6	133	30	51	15	43	30	40	2 58	69
16	59	22.0		25.2	269	37.5	79		34.3	133	35	48	14	43	36	37	50	72
17	74	22.2	+6	26.1	284	04.4	79	+11	21.0	134	40	17 45	18 12	18 44	16 43	34	2 41	76
18	89	22.4	+6	27.1	298	31.3	80	+11	07.6	135	45	17 41	18 11	18 45	16 51	29	2 31	80
19	104	22.6		28.0	312	58.3	79	+10	54.1	135	50	37	09	46	17 00	25	18	85
20	119	22.7		29.0	327	25.2	80		40.6	137	52	35	08	47	04	23	13	87
21	134	22.9		29.9	341	52.2	81		26.9	137	54	33	08	49	09	20	2 06	90
22	149	23.1		30.9	356	19.3	80	+10	13.2	138	56	30	07	50	14	18	1 59	93
23	164	23.3		31.8	10	46.3	81	+9	59.4	139	58	27	07	52	20	14	50	97
24	179	23.4	+6	32.8	25	13.4		+9	45.5		60 S	17 24	18 06	18 54	17 27	11	1 41	101
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 11 ^h 03 ^m 2		Mag: -4.6 PMG: 14 ^h 57 ^m				Mag: +0.7 PMG: 07 ^h 29 ^m				Mag: -2.2 PMG: 06 ^h 51 ^m				Mag: +0.7 PMG: 07 ^h 16 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	193	45.2	135	36.2	+24	10.2	247	35.0	-20	22.2	256	55.8	-21	-13.4	250	36.6	-20	01.0
1	208	47.7	150	36.3		10.9	262	35.6		21.8	271	58.0		-13.3	265	38.9		01.0
2	223	50.2	165	36.5		11.5	277	36.3		21.5	287	00.2		-13.3	280	41.2		01.0
3	238	52.6	180	36.6		12.1	292	36.9		21.1	302	02.3		-13.2	295	43.5		01.0
4	253	55.1	195	36.7		12.7	307	37.6		20.7	317	04.5		-13.2	310	45.8		00.9
5	268	57.6	210	36.9	+24	13.4	322	38.2	-20	20.4	332	06.6	-21	-13.1	325	48.2	-20	00.9
6	284	00.0	225	37.0	+24	14.0	337	38.9	-20	20.0	347	08.8	-21	-13.1	340	50.5	-20	00.9
7	299	02.5	240	37.1		14.6	352	39.5		19.7	2	11.0		-13.1	355	52.8		00.9
8	314	04.9	255	37.3		15.2	7	40.2		19.3	17	13.1		-13.0	10	55.1		00.8
9	329	07.4	270	37.4		15.8	22	40.8		18.9	32	15.3		-13.0	25	57.4		00.8
10	344	09.9	285	37.5		16.5	37	41.5		18.6	47	17.5		-12.9	40	59.8		00.8
11	359	12.3	300	37.7	+24	17.1	52	42.1	-20	18.2	62	19.6	-21	-12.9	56	02.1	-20	00.7
12	14	14.8	315	37.8	+24	17.7	67	42.8	-20	17.9	77	21.8	-21	-12.8	71	04.4	-20	00.7
13	29	17.3	330	38.0		18.3	82	43.4		17.5	92	23.9		-12.8	86	06.7		00.7
14	44	19.7	345	38.1		18.9	97	44.1		17.1	107	26.1		-12.7	101	09.0		00.7
15	59	22.2	0	38.2		19.5	112	44.8		16.8	122	28.3		-12.7	116	11.3		00.6
16	74	24.7	15	38.4		20.2	127	45.4		16.4	137	30.4		-12.6	131	13.7		00.6
17	89	27.1	30	38.5	+24	20.8	142	46.1	-20	16.0	152	32.6	-21	-12.6	146	16.0	-20	00.6
18	104	29.6	45	38.7	+24	21.4	157	46.7	-20	15.7	167	34.8	-21	-12.5	161	18.3	-20	00.6
19	119	32.0	60	38.8		22.0	172	47.4		15.3	182	36.9		-12.5	176	20.6		00.5
20	134	34.5	75	39.0		22.6	187	48.0		15.0	197	39.1		-12.5	191	22.9		00.5
21	149	37.0	90	39.1		23.2	202	48.7		14.6	212	41.3		-12.4	206	25.3		00.5
22	164	39.4	105	39.3		23.8	217	49.3		14.2	227	43.4		-12.4	221	27.6		00.5
23	179	41.9	120	39.4		24.4	232	50.0		13.9	242	45.6		-12.3	236	29.9		00.4
24	194	44.4	135	39.6	+24	25.0	247	50.6	-20	13.5	257	47.8	-21	-12.3	251	32.2	-20	00.4
Dif.	—		+1		+6		+7		+4		+22		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 02 ^m 3			SD: 16'6 Edad: 12 ^d 6 PHE { 4 ^h : 61'0 12 ^h : 61'2 20 ^h : 61'3 PMG: 23 ^h 10 ^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	179	23.4	+6 32.8	25	13.4	80	+9 45.5	139	60 N	3 29	4 25	5 09	16 15	101	5 29	11	
1	194	23.6		39	40.4	81		31.6	140	58	41	32	13	18 98	25	13	
2	209	23.8		54	07.5	82		17.6	141	56	50	38	17	21 95	21	16	
3	224	24.0		68	34.7	81	+9 03.5	141	54	3 58	43	20	24 91	17	19		
4	239	24.2		83	01.8	82	+8 49.4	143	52	4 06	48	23	26 89	14	21		
5	254	24.3	+6 37.5	97	29.0	81	+8 35.1	142	50	4 12	4 52	5 25	16 28	87	5 11	23	
6	269	24.5	+6 38.4	111	56.1	82	+8 20.9	144	45	4 25	5 01	5 31	16 33	81	5 04	29	
7	284	24.7		126	23.3	83	+8 06.5	144	40	35	08	36	37 76		4 58	33	
8	299	24.9		140	50.6	82	+7 52.1	145	35	44	14	40	40 73		53	37	
9	314	25.0		155	17.8	82		37.6	145	30	4 50	19	43	43 70	49	39	
10	329	25.2		169	45.0	83		23.1	146	20	5 01	27	49	48 64	41	45	
11	344	25.4	+6 43.1	184	12.3	83	+7 08.5	146	10 N	5 08	5 33	5 54	16 53	58	4 35	49	
12	359	25.6	+6 44.1	198	39.6	83	+6 53.9	147	0	5 14	5 38	5 59	16 57	54	4 28	54	
13	14	25.8		213	06.9	83		39.2	147	10 S	18	43	6 04	17 01	49	22 59	
14	29	25.9		227	34.2	83		24.5	148	20	21	46	09	05 45	15	63	
15	44	26.1		242	01.5	83	+6 09.7	148	30	22	50	14	10 39		07	69	
16	59	26.3		256	28.8	84	+5 54.9	149	35	22	52	17	13 36		4 02	73	
17	74	26.5	+6 48.8	270	56.2	83	+5 40.0	149	40	5 22	5 53	6 20	17 17	32	3 57	76	
18	89	26.6	+6 49.7	285	23.5	84	+5 25.1	150	45	5 21	5 55	6 24	17 20	29	3 51	80	
19	104	26.8		299	50.9	84	+5 10.1	150	50	19	57	29	25 23		43	86	
20	119	27.0		314	18.3	84	+4 55.1	150	52	18	57	31	27 21		40	88	
21	134	27.2		328	45.7	84		40.1	151	54	17	58	34	29 19		36	91
22	149	27.3		343	13.1	84		25.0	151	56	16	5 59	36	32 16		32	94
23	164	27.5		357	40.5	84	+4 09.9	151	58	14	6 00	39	17 34	13	3 27	97	
24	179	27.7	+6 55.3	12	07.9		+3 54.8		60 S	5 12	6 00	6 42	17 38	9	3 22	101	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 10 ^h 59 ^m 2		Mag: -4.6 PMG: 14 ^h 57 ^m			Mag: +0.7 PMG: 07 ^h 28 ^m			Mag: -2.2 PMG: 06 ^h 48 ^m			Mag: +0.6 PMG: 07 ^h 13 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	194	44.4	135 39.6	+24 25.0		247 50.6	-20 13.5		257 47.8	-21 12.3		251 32.2	-20 00.4				
1	209	46.8	150 39.7		25.7	262 51.3		13.1	272 49.9		12.2	266 34.5		00.4			
2	224	49.3	165 39.9		26.3	277 51.9		12.8	287 52.1		12.2	281 36.9		00.3			
3	239	51.8	180 40.0		26.9	292 52.6		12.4	302 54.3		12.1	296 39.2		00.3			
4	254	54.2	195 40.2		27.5	307 53.2		12.0	317 56.4		12.1	311 41.5		00.3			
5	269	56.7	210 40.3	+24 28.1		322 53.9	-20 11.7		332 58.6	-21 12.0		326 43.8	-20 00.3				
6	284	59.2	225 40.5	+24 28.7		337 54.5	-20 11.3		348 00.8	-21 12.0		341 46.1	-20 00.2				
7	300	01.6	240 40.6		29.3	352 55.2		10.9	3 02.9		12.0	356 48.5		00.2			
8	315	04.1	255 40.8		29.9	7 55.9		10.6	18 05.1		11.9	11 50.8		00.2			
9	330	06.5	270 40.9		30.5	22 56.5		10.2	33 07.3		11.9	26 53.1		00.2			
10	345	09.0	285 41.1		31.1	37 57.2		09.8	48 09.5		11.8	41 55.4		00.1			
11	0	11.5	300 41.3	+24 31.7		52 57.8	-20 09.5		63 11.6	-21 11.8		56 57.8	-20 00.1				
12	15	13.9	315 41.4	+24 32.3		67 58.5	-20 09.1		78 13.8	-21 11.7		72 00.1	-20 00.1				
13	30	16.4	330 41.6		32.9	82 59.1		08.7	93 16.0		11.7	87 02.4		00.1			
14	45	18.9	345 41.7		33.5	97 59.8		08.4	108 18.1		11.6	102 04.7		00.0			
15	60	21.3	0 41.9		34.1	113 00.4		08.0	123 20.3		11.6	117 07.0		00.0			
16	75	23.8	15 42.1		34.6	128 01.1		07.6	138 22.5		11.6	132 09.4		00.0			
17	90	26.3	30 42.2	+24 35.2		143 01.7	-20 07.2		153 24.7	-21 11.5		147 11.7	-20 00.0				
18	105	28.7	45 42.4	+24 35.8		158 02.4	-20 06.9		168 26.8	-21 11.5		162 14.0	-19 59.9				
19	120	31.2	60 42.6		36.4	173 03.1		06.5	183 29.0		11.4	177 16.3		59.9			
20	135	33.6	75 42.7		37.0	188 03.7		06.1	198 31.2		11.4	192 18.7		59.9			
21	150	36.1	90 42.9		37.6	203 04.4		05.8	213 33.3		11.3	207 21.0		59.9			
22	165	38.6	105 43.1		38.2	218 05.0		05.4	228 35.5		11.3	222 23.3		59.8			
23	180	41.0	120 43.2		38.8	233 05.7		05.0	243 37.7		11.2	237 25.6		59.8			
24	195	43.5	135 43.4	+24 39.4		248 06.3	-20 04.7		258 39.9	-21 11.2		252 28.0	-19 59.8				
Dif.	—		+2		+6	+7		+4	+22		0		+23		0		

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 02 ^m 0			SD: 16'7 Edad: 13 ^d 6 PHE { 4^h: 61'4 12^h: 61'4 20^h: 61'4																
	PMG: ** **			R ^o : **																
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Civil			Náut.	Hora	R ^o	Hora	R ^o				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m		
0	179	27.7	+6	55.3	12	07.9	85	+3	54.8	152	60 N	19 00	19 44	20 41	17 56	102	5 40	9		
1	194	27.9		56.3	26	35.4	84		39.6	152	58	18 55	37	29	56	98	38	13		
2	209	28.0		57.2	41	02.8	84		24.4	152	56	51	30	19	56	94	37	16		
3	224	28.2		58.2	55	30.2	85	+3	09.2	153	54	48	25	10	55	92	36	19		
4	239	28.4	+6	59.1	69	57.7	84	+2	53.9	152	52	45	20	20 03	55	89	35	21		
5	254	28.6	+7	00.0	84	25.1	85	+2	38.7	153	50	18 42	19 15	19 56	17 55	86	5 34	24		
6	269	28.7	+7	01.0	98	52.6	85	+2	23.4	153	45	18 36	19 06	19 42	17 54	81	5 33	28		
7	284	28.9		01.9	113	20.1	84	+2	08.1	154	40	31	18 58	31	53	77	31	32		
8	299	29.1		02.8	127	47.5	85	+1	52.7	153	35	26	52	23	53	73	30	35		
9	314	29.3		03.8	142	15.0	85		37.4	154	30	23	47	15	53	69	28	39		
10	329	29.4		04.7	156	42.5	84		22.0	154	20	16	38	19 04	52	64	26	45		
11	344	29.6	+7	05.6	171	09.9	85	+1	06.6	153	10 N	18 10	18 32	18 56	17 51	59	5 24	50		
12	359	29.8	+7	06.6	185	37.4	85	+0	51.3	154	0	18 05	18 26	18 50	17 51	54	5 22	54		
13	14	30.0		07.5	200	04.9	85		35.9	154	10 S	18 00	21	46	50	50	21	58		
14	29	30.1		08.5	214	32.4	84		20.5	154	20	17 55	17	43	50	45	18	64		
15	44	30.3		09.4	228	59.8	85	+0	05.1	154	30	49	13	41	49	40	16	70		
16	59	30.5		10.3	243	27.3	85	-0	10.3	154	35	46	11	40	49	36	15	73		
17	74	30.7	+7	11.3	257	54.8	84	-0	25.7	154	40	17 42	18 09	18 40	17 49	32	5 13	77		
18	89	30.8	+7	12.2	272	22.2	85	-0	41.1	154	45	17 38	18 07	18 41	17 49	28	5 11	81		
19	104	31.0		13.1	286	49.7	84	-0	56.5	154	50	33	05	42	48	24	09	86		
20	119	31.2		14.1	301	17.1	85	-1	11.9	154	52	30	04	43	48	21	08	89		
21	134	31.4		15.0	315	44.6	84		27.3	154	54	28	03	44	48	19	07	91		
22	149	31.5		15.9	330	12.0	85		42.7	153	56	25	02	45	48	16	06	94		
23	164	31.7		16.9	344	39.5	84	-1	58.0	154	58	22	01	46	47	13	04	98		
24	179	31.9	+7	17.8	359	06.9		-2	13.4		60 S	17 18	18 00	18 48	17 47	10	5 03	101		

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 10 ^h 55 ^m 3			Mag: -4.6 PMG: 14 ^h 57 ^m			Mag: +0.7 PMG: 07 ^h 27 ^m			Mag: -2.2 PMG: 06 ^h 44 ^m			Mag: +0.6 PMG: 07 ^h 09 ^m			
	hG ♈	hG ♀	dec.	hG ♂	hG ♀	dec.	hG ♃	hG ♀	dec.	hG ♄	hG ♀	dec.	hG ♅	hG ♀	dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	195	43.5	135 43.4	+24 39.4	248	06.3	-20 04.7	258	39.9	-21 -11.2	252	28.0	-19 59.8			
1	210	46.0	150 43.6	39.9	263	07.0	04.3	273	42.0	-11.2	267	30.3	59.7			
2	225	48.4	165 43.8	40.5	278	07.6	03.9	288	44.2	-11.1	282	32.6	59.7			
3	240	50.9	180 43.9	41.1	293	08.3	03.5	303	46.4	-11.1	297	34.9	59.7			
4	255	53.4	195 44.1	41.7	308	09.0	03.2	318	48.6	-11.0	312	37.2	59.7			
5	270	55.8	210 44.3	+24 42.3	323	09.6	-20 02.8	333	50.7	-21 -11.0	327	39.6	-19 59.6			
6	285	58.3	225 44.5	+24 42.9	338	10.3	-20 02.4	348	52.9	-21 -10.9	342	41.9	-19 59.6			
7	301	00.8	240 44.6	43.4	353	10.9	02.0	3	55.1	-10.9	357	44.2	59.6			
8	316	03.2	255 44.8	44.0	8	11.6	01.7	18	57.3	-10.8	12	46.5	59.6			
9	331	05.7	270 45.0	44.6	23	12.2	01.3	33	59.4	-10.8	27	48.9	59.5			
10	346	08.1	285 45.2	45.2	38	12.9	00.9	49	01.6	-10.8	42	51.2	59.5			
11	1	10.6	300 45.4	+24 45.7	53	13.6	-20 00.5	64	03.8	-21 -10.7	57	53.5	-19 59.5			
12	16	13.1	315 45.6	+24 46.3	68	14.2	-20 00.2	79	06.0	-21 -10.7	72	55.9	-19 59.5			
13	31	15.5	330 45.7	46.9	83	14.9	-19 59.8	94	08.1	-10.6	87	58.2	59.4			
14	46	18.0	345 45.9	47.5	98	15.5	59.4	109	10.3	-10.6	103	00.5	59.4			
15	61	20.5	0 46.1	48.0	113	16.2	59.0	124	12.5	-10.5	118	02.8	59.4			
16	76	22.9	15 46.3	48.6	128	16.9	58.7	139	14.7	-10.5	133	05.2	59.4			
17	91	25.4	30 46.5	+24 49.2	143	17.5	-19 58.3	154	16.9	-21 -10.4	148	07.5	-19 59.3			
18	106	27.9	45 46.7	+24 49.7	158	18.2	-19 57.9	169	19.0	-21 -10.4	163	09.8	-19 59.3			
19	121	30.3	60 46.9	50.3	173	18.8	57.5	184	21.2	-10.4	178	12.1	59.3			
20	136	32.8	75 47.0	50.9	188	19.5	57.2	199	23.4	-10.3	193	14.5	59.3			
21	151	35.2	90 47.2	51.4	203	20.1	56.8	214	25.6	-10.3	208	16.8	59.2			
22	166	37.7	105 47.4	52.0	218	20.8	56.4	229	27.8	-10.2	223	19.1	59.2			
23	181	40.2	120 47.6	52.6	233	21.5	56.0	244	29.9	-10.2	238	21.4	59.2			
24	196	42.6	135 47.8	+24 53.1	248	22.1	-19 55.6	259	32.1	-21 -10.1	253	23.8	-19 59.2			
Dif.	—		+2	+6		+7	+4		+22	0		+23	0			

UT	SOL			☉ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0			SD: 16'7		PHE {		4 ^h : 61'4										
	PMG: 12 ^h 01 ^m 7			Edad: 14 ^d 6				12 ^h : 61'3										
								20 ^h : 61'2										
	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	31.9	+7 17.8	359	06.9	84	-2 13.4	153	60 N	3 22	4 19	5 03	19 38	102	5 49	10		
1	194	32.1	18.7	13	34.3	84	28.7	153	58	34	26	07	34	97	51	14		
2	209	32.2	19.7	28	01.7	84	44.0	153	56	44	32	11	30	94	53	17		
3	224	32.4	20.6	42	29.1	84	-2 59.3	153	54	3 53	38	15	27	91	55	19		
4	239	32.6	21.5	56	56.5	84	-3 14.6	153	52	4 00	43	18	24	88	56	22		
5	254	32.7	+7 22.5	71	23.9	84	-3 29.9	152	50	4 07	4 48	5 21	19 21	86	5 58	24		
6	269	32.9	+7 23.4	85	51.3	83	-3 45.1	152	45	4 21	4 57	5 27	19 15	81	6 01	29		
7	284	33.1	24.3	100	18.6	84	-4 00.3	152	40	32	5 05	32	10	76	03	33		
8	299	33.3	25.3	114	46.0	83	15.5	151	35	41	11	37	06	72	05	37		
9	314	33.4	26.2	129	13.3	83	30.6	151	30	48	16	41	19 02	70	07	40		
10	329	33.6	27.1	143	40.6	83	-4 45.7	151	20	4 59	25	47	18 56	64	11	45		
11	344	33.8	+7 28.1	158	07.9	83	-5 00.8	150	10 N	5 07	5 32	5 53	18 50	60	6 14	50		
12	359	34.0	+7 29.0	172	35.2	83	-5 15.8	150	0	5 13	5 38	5 58	18 45	55	6 16	55		
13	14	34.1	29.9	187	02.5	82	30.8	150	10 S	18	43	6 04	40	51	19	59		
14	29	34.3	30.8	201	29.7	83	-5 45.8	149	20	21	47	09	35	46	22	64		
15	44	34.5	31.8	215	57.0	82	-6 00.7	149	30	23	51	15	29	40	26	69		
16	59	34.6	32.7	230	24.2	82	15.6	148	35	24	53	19	25	38	28	72		
17	74	34.8	+7 33.6	244	51.4	82	-6 30.4	148	40	5 24	5 55	6 22	18 21	35	6 30	76		
18	89	35.0	+7 34.6	259	18.6	82	-6 45.2	148	45	5 23	5 57	6 27	18 17	30	6 32	81		
19	104	35.2	35.5	273	45.8	81	-7 00.0	147	50	22	6 00	32	12	25	35	87		
20	119	35.3	36.4	288	12.9	81	14.7	146	52	22	01	35	09	23	37	88		
21	134	35.5	37.4	302	40.0	81	29.3	146	54	21	02	37	07	20	38	92		
22	149	35.7	38.3	317	07.1	81	43.9	145	56	20	03	40	04	18	40	94		
23	164	35.8	39.2	331	34.2	81	-7 58.4	145	58	18	04	43	18 00	15	6 42	98		
24	179	36.0	+7 40.1	346	01.3		-8 12.9		60 S	5 17	6 05	6 47	17 57	11	6 44	102		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.6				Mag: +0.7				Mag: -2.2				Mag: +0.6			
	10 ^h 51 ^m 4		PMG: 14 ^h 57 ^m				PMG: 07 ^h 26 ^m				PMG: 06 ^h 41 ^m				PMG: 07 ^h 05 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	196	42.6	135	47.8	+24 53.1	248	22.1	-19 55.6	259	32.1	-21 10.1	253	23.8	-19 59.2				
1	211	45.1	150	48.0	53.7	263	22.8	55.3	274	34.3	10.1	268	26.1	59.1				
2	226	47.6	165	48.2	54.3	278	23.4	54.9	289	36.5	10.1	283	28.4	59.1				
3	241	50.0	180	48.4	54.8	293	24.1	54.5	304	38.7	10.0	298	30.8	59.1				
4	256	52.5	195	48.6	55.4	308	24.8	54.1	319	40.8	10.0	313	33.1	59.1				
5	271	55.0	210	48.8	+24 56.0	323	25.4	-19 53.8	334	43.0	-21 09.9	328	35.4	-19 59.0				
6	286	57.4	225	49.0	+24 56.5	338	26.1	-19 53.4	349	45.2	-21 09.9	343	37.7	-19 59.0				
7	301	59.9	240	49.2	57.1	353	26.7	53.0	4	47.4	09.8	358	40.1	59.0				
8	317	02.4	255	49.4	57.6	8	27.4	52.6	19	49.6	09.8	13	42.4	59.0				
9	332	04.8	270	49.6	58.2	23	28.1	52.2	34	51.8	09.8	28	44.7	58.9				
10	347	07.3	285	49.8	58.7	38	28.7	51.9	49	53.9	09.7	43	47.1	58.9				
11	2	09.7	300	50.0	+24 59.3	53	29.4	-19 51.5	64	56.1	-21 09.7	58	49.4	-19 58.9				
12	17	12.2	315	50.2	+24 59.8	68	30.1	-19 51.1	79	58.3	-21 09.6	73	51.7	-19 58.9				
13	32	14.7	330	50.4	+25 00.4	83	30.7	50.7	95	00.5	09.6	88	54.0	58.8				
14	47	17.1	345	50.7	00.9	98	31.4	50.3	110	02.7	09.5	103	56.4	58.8				
15	62	19.6	0	50.9	01.5	113	32.0	49.9	125	04.9	09.5	118	58.7	58.8				
16	77	22.1	15	51.1	02.0	128	32.7	49.6	140	07.0	09.5	134	01.0	58.8				
17	92	24.5	30	51.3	+25 02.6	143	33.4	-19 49.2	155	09.2	-21 09.4	149	03.4	-19 58.7				
18	107	27.0	45	51.5	+25 03.1	158	34.0	-19 48.8	170	11.4	-21 09.4	164	05.7	-19 58.7				
19	122	29.5	60	51.7	03.7	173	34.7	48.4	185	13.6	09.3	179	08.0	58.7				
20	137	31.9	75	51.9	04.2	188	35.3	48.0	200	15.8	09.3	194	10.4	58.7				
21	152	34.4	90	52.1	04.8	203	36.0	47.6	215	18.0	09.2	209	12.7	58.6				
22	167	36.8	105	52.4	05.3	218	36.7	47.3	230	20.2	09.2	224	15.0	58.6				
23	182	39.3	120	52.6	05.9	233	37.3	46.9	245	22.3	09.2	239	17.4	58.6				
24	197	41.8	135	52.8	+25 06.4	248	38.0	-19 46.5	260	24.5	-21 09.1	254	19.7	-19 58.6				
Dif.	—		+2	+6		+7	+4		+22		0		+23					

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0			SD: 16'7 Edad: 15 ^d 6														
	PMG: 12 ^h 01. ^m 5			PMG: 00 ^h 58 ^m R ^o : 55 ^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	36.0	+7	40.1	346	01.3	80	-8	12.9	144	60 N	19 04	19 49	20 48	21 20	99	5 59	13
1	194	36.2		41.1	0	28.3	81		27.3	143	58	19 00	42	35	11	96	6 05	16
2	209	36.4		42.0	14	55.4	80		41.6	143	56	18 55	35	24	21 04	92	10	19
3	224	36.5		42.9	29	22.4	79	-8	55.9	142	54	52	29	15	20 58	88	14	22
4	239	36.7		43.8	43	49.3	80	-9	10.1	142	52	48	23	07	52	86	18	25
5	254	36.9	+7	44.8	58	16.3	79	-9	24.3	141	50	18 45	19 19	20 00	20 47	83	6 22	27
6	269	37.0	+7	45.7	72	43.2	79	-9	38.4	140	45	18 38	19 09	19 45	20 36	78	6 30	31
7	284	37.2		46.6	87	10.1	79	-9	52.4	139	40	33	19 01	34	26	75	36	36
8	299	37.4		47.6	101	37.0	79	-10	06.3	139	35	28	18 54	24	18	72	42	39
9	314	37.5		48.5	116	03.9	78		20.2	138	30	24	48	17	12	68	47	42
10	329	37.7		49.4	130	30.7	78		34.0	137	20	17	39	19 05	20 00	64	6 56	47
11	344	37.9	+7	50.3	144	57.5	78	-10	47.7	136	10 N	18 10	18 32	18 56	19 50	60	7 04	51
12	359	38.1	+7	51.3	159	24.3	77	-11	01.3	136	0	18 05	18 26	18 50	19 40	56	7 11	56
13	14	38.2		52.2	173	51.0	78		14.9	134	10 S	17 59	20	45	31	52	18	60
14	29	38.4		53.1	188	17.8	77		28.3	134	20	53	15	41	21	48	26	64
15	44	38.6		54.0	202	44.5	76		41.7	133	30	47	11	39	09	44	35	70
16	59	38.7		55.0	217	11.1	77	-11	55.0	133	35	43	09	38	19 03	41	40	73
17	74	38.9	+7	55.9	231	37.8	76	-12	08.3	131	40	17 39	18 06	18 37	18 56	37	7 46	76
18	89	39.1	+7	56.8	246	04.4	76	-12	21.4	130	45	17 34	18 04	18 38	18 47	34	7 53	80
19	104	39.2		57.7	260	31.0	76		34.4	130	50	28	01	38	37	29	8 02	85
20	119	39.4		58.7	274	57.6	75	-12	47.4	128	52	26	18 00	39	32	27	05	88
21	134	39.6	+7	59.6	289	24.1	75	-13	00.2	128	54	23	17 59	39	27	25	10	90
22	149	39.7	+8	00.5	303	50.6	75		13.0	127	56	20	57	40	22	21	14	94
23	164	39.9		01.4	318	17.1	75		25.7	125	58	16	56	41	15	19	20	96
24	179	40.1	+8	02.3	332	43.6		-13	38.2		60 S	17 12	17 54	18 42	18 08	15	8 26	100

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 47. ^m 4		Mag: -4.6 PMG: 14 ^h 56 ^m			Mag: +0.7 PMG: 07 ^h 25 ^m			Mag: -2.2 PMG: 06 ^h 37 ^m			Mag: +0.6 PMG: 07 ^h 02 ^m						
	hG ♂	dec.	hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	197	41.8	135	52.8	+25	06.4	248	38.0	-19	46.5	260	24.5	-21	-09.1	254	19.7	-19	58.6
1	212	44.2	150	53.0		07.0	263	38.7		46.1	275	26.7		-09.1	269	22.0		58.5
2	227	46.7	165	53.2		07.5	278	39.3		45.7	290	28.9		-09.0	284	24.3		58.5
3	242	49.2	180	53.5		08.0	293	40.0		45.3	305	31.1		-09.0	299	26.7		58.5
4	257	51.6	195	53.7		08.6	308	40.6		44.9	320	33.3		-08.9	314	29.0		58.5
5	272	54.1	210	53.9	+25	09.1	323	41.3	-19	44.6	335	35.5	-21	-08.9	329	31.3	-19	58.4
6	287	56.6	225	54.1	+25	09.7	338	42.0	-19	44.2	350	37.7	-21	-08.9	344	33.7	-19	58.4
7	302	59.0	240	54.4		10.2	353	42.6		43.8	5	39.8		-08.8	359	36.0		58.4
8	318	01.5	255	54.6		10.7	8	43.3		43.4	20	42.0		-08.8	14	38.3		58.4
9	333	04.0	270	54.8		11.3	23	44.0		43.0	35	44.2		-08.7	29	40.7		58.4
10	348	06.4	285	55.1		11.8	38	44.6		42.6	50	46.4		-08.7	44	43.0		58.3
11	3	08.9	300	55.3	+25	12.3	53	45.3	-19	42.2	65	48.6	-21	-08.6	59	45.3	-19	58.3
12	18	11.3	315	55.5	+25	12.9	68	46.0	-19	41.9	80	50.8	-21	-08.6	74	47.7	-19	58.3
13	33	13.8	330	55.8		13.4	83	46.6		41.5	95	53.0		-08.6	89	50.0		58.3
14	48	16.3	345	56.0		13.9	98	47.3		41.1	110	55.2		-08.5	104	52.3		58.2
15	63	18.7	0	56.2		14.4	113	48.0		40.7	125	57.4		-08.5	119	54.7		58.2
16	78	21.2	15	56.5		15.0	128	48.6		40.3	140	59.6		-08.4	134	57.0		58.2
17	93	23.7	30	56.7	+25	15.5	143	49.3	-19	39.9	156	01.8	-21	-08.4	149	59.3	-19	58.2
18	108	26.1	45	56.9	+25	16.0	158	50.0	-19	39.5	171	03.9	-21	-08.4	165	01.7	-19	58.1
19	123	28.6	60	57.2		16.6	173	50.6		39.1	186	06.1		-08.3	180	04.0		58.1
20	138	31.1	75	57.4		17.1	188	51.3		38.7	201	08.3		-08.3	195	06.3		58.1
21	153	33.5	90	57.7		17.6	203	51.9		38.3	216	10.5		-08.2	210	08.7		58.1
22	168	36.0	105	57.9		18.1	218	52.6		38.0	231	12.7		-08.2	225	11.0		58.0
23	183	38.5	120	58.2		18.6	233	53.3		37.6	246	14.9		-08.1	240	13.3		58.0
24	198	40.9	135	58.4	+25	19.2	248	53.9	-19	37.2	261	17.1	-21	-08.1	255	15.7	-19	58.0
Dif.	—		+2		+5		+7		+4		+22		0		+23			

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 01 ^m 2			SD: 16'5 Edad: 16 ^d 6			PHE { 4 ^h : 60'5 12 ^h : 60'2 20 ^h : 60'0												
	PMG: 01 ^h 53 ^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	40.1	+8 02.3	332	43.6	74	-13 38.2	125	60 N	3 14	4 12	4 57	22 59	94	6 12	17			
1	194	40.2	03.3	347	10.0	74	-13 50.7	124	58	27	20	5 02	47 89		21 21				
2	209	40.4	04.2	1	36.4	74	-14 03.1	122	56	38	27	06	36 86		29 24				
3	224	40.6	05.1	16	02.8	73	15.3	122	54	47	33	10	26 83		36 27				
4	239	40.7	06.0	30	29.1	73	27.5	121	52	3 55	38	14	18 81		43 29				
5	254	40.9	+8 07.0	44	55.4	73	-14 39.6	119	50	4 02	4 43	5 17	22 10	79	6 49	32			
6	269	41.1	+8 07.9	59	21.7	73	-14 51.5	119	45	4 17	4 53	5 24	21 54	75	7 01	37			
7	284	41.3	08.8	73	48.0	72	-15 03.4	117	40	29	5 02	29	41 72		12 40				
8	299	41.4	09.7	88	14.2	72	15.1	116	35	38	08	34	30 69		21 43				
9	314	41.6	10.6	102	40.4	72	26.7	116	30	45	14	38	20 67		29 45				
10	329	41.8	11.6	117	06.6	72	38.3	114	20	4 57	23	46	21 04	63	43 50				
11	344	41.9	+8 12.5	131	32.8	71	-15 49.7	113	10 N	5 06	5 31	5 52	20 50	60	7 55	53			
12	359	42.1	+8 13.4	145	58.9	71	-16 01.0	111	0	5 13	5 37	5 58	20 36	57	8 07	56			
13	14	42.3	14.3	160	25.0	71	12.1	111	10 S	18	42	6 04	23 54		18 60				
14	29	42.4	15.2	174	51.1	71	23.2	110	20	22	47	10	20 09	51	30 64				
15	44	42.6	16.2	189	17.2	70	34.2	108	30	24	52	16	19 53	47	45 68				
16	59	42.7	17.1	203	43.2	70	45.0	107	35	25	55	20	44 45		8 53 70				
17	74	42.9	+8 18.0	218	09.2	70	-16 55.7	106	40	5 26	5 57	6 24	19 33	43	9 02	74			
18	89	43.1	+8 18.9	232	35.2	70	-17 06.3	104	45	5 26	6 00	6 29	19 21	39	9 13	77			
19	104	43.2	19.8	247	01.2	69	16.7	104	50	25	03	35	19 06	35	27 81				
20	119	43.4	20.8	261	27.1	69	27.1	102	52	25	04	38	18 59	33	33 84				
21	134	43.6	21.7	275	53.0	69	37.3	101	54	24	05	41	52 30		40 86				
22	149	43.7	22.6	290	18.9	69	47.4	100	56	23	07	44	43 28		48 89				
23	164	43.9	23.5	304	44.8	68	-17 57.4	98	58	23	08	48	18 34	24	9 56	93			
24	179	44.1	+8 24.4	319	10.6		-18 07.2		60 S	5 21	6 10	6 52	18 23	20	10 06	98			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 10 ^h 43 ^m 5		Mag: -4.6 PMG: 14 ^h 56 ^m			Mag: +0.7 PMG: 07 ^h 24 ^m			Mag: -2.2 PMG: 06 ^h 34 ^m			Mag: +0.6 PMG: 06 ^h 58 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	198	40.9	135	58.4	+25 19.2	248	53.9	-19 37.2	261	17.1	-21 08.1	255	15.7	-19 58.0
1	213	43.4	150	58.7	19.7	263	54.6	36.8	276	19.3	08.1	270	18.0	58.0
2	228	45.8	165	58.9	20.2	278	55.3	36.4	291	21.5	08.0	285	20.4	57.9
3	243	48.3	180	59.1	20.7	293	55.9	36.0	306	23.7	08.0	300	22.7	57.9
4	258	50.8	195	59.4	21.2	308	56.6	35.6	321	25.9	07.9	315	25.0	57.9
5	273	53.2	210	59.7	+25 21.8	323	57.3	-19 35.2	336	28.1	-21 07.9	330	27.4	-19 57.9
6	288	55.7	225	59.9	+25 22.3	338	57.9	-19 34.8	351	30.3	-21 07.9	345	29.7	-19 57.9
7	303	58.2	241	00.2	22.8	353	58.6	34.4	6	32.5	07.8	0	32.0	57.8
8	319	00.6	256	00.4	23.3	8	59.3	34.0	21	34.7	07.8	15	34.4	57.8
9	334	03.1	271	00.7	23.8	23	59.9	33.6	36	36.9	07.7	30	36.7	57.8
10	349	05.6	286	00.9	24.3	39	00.6	33.2	51	39.1	07.7	45	39.0	57.8
11	4	08.0	301	01.2	+25 24.8	54	01.3	-19 32.9	66	41.3	-21 07.7	60	41.4	-19 57.7
12	19	10.5	316	01.4	+25 25.3	69	01.9	-19 32.5	81	43.5	-21 07.6	75	43.7	-19 57.7
13	34	12.9	331	01.7	25.9	84	02.6	32.1	96	45.7	07.6	90	46.1	57.7
14	49	15.4	346	02.0	26.4	99	03.3	31.7	111	47.9	07.5	105	48.4	57.7
15	64	17.9	1	02.2	26.9	114	04.0	31.3	126	50.1	07.5	120	50.7	57.6
16	79	20.3	16	02.5	27.4	129	04.6	30.9	141	52.3	07.4	135	53.1	57.6
17	94	22.8	31	02.8	+25 27.9	144	05.3	-19 30.5	156	54.4	-21 07.4	150	55.4	-19 57.6
18	109	25.3	46	03.0	+25 28.4	159	06.0	-19 30.1	171	56.6	-21 07.4	165	57.7	-19 57.6
19	124	27.7	61	03.3	28.9	174	06.6	29.7	186	58.8	07.3	181	00.1	57.6
20	139	30.2	76	03.6	29.4	189	07.3	29.3	202	01.0	07.3	196	02.4	57.5
21	154	32.7	91	03.8	29.9	204	08.0	28.9	217	03.2	07.2	211	04.8	57.5
22	169	35.1	106	04.1	30.4	219	08.6	28.5	232	05.4	07.2	226	07.1	57.5
23	184	37.6	121	04.4	30.9	234	09.3	28.1	247	07.6	07.2	241	09.4	57.5
24	199	40.1	136	04.7	+25 31.4	249	10.0	-19 27.7	262	09.8	-21 07.1	256	11.8	-19 57.4
Dif.	—		+3	+5		+7	+4		+22		0	+23		0

UT	SOL			☾ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0			SD: 16'3			PHE { 4 ^h : 59'7											
	PMG: 12 ^h 00 ^m 9			Edad: 17 ^d 6			{ 12 ^h : 59'4											
							{ 20 ^h : 59'1											
	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	44.1	+8 24.4	319	10.6	68	-18 07.2	97	60 N	19 09	19 55	20 54	** ** *	**	6 29	25		
1	194	44.2		333	36.4	69		16.9	96	58	04	46	41	** ** *	**	42 29		
2	209	44.4		348	02.3	67		26.5	95	56	19 00	39	29	** ** *	**	6 53 33		
3	224	44.6		2	28.0	68		36.0	93	54	18 55	33	20	23 49	74	7 03 35		
4	239	44.7		16	53.8	68		45.3	92	52	52	27	11	39	71	12 37		
5	254	44.9	+8 29.0	31	19.6	67	-18 54.5	91	50	18 48	19 22	20 03	23 29	70	7 21	38		
6	269	45.1	+8 29.9	45	45.3	67	-19 03.6	89	45	18 41	19 11	19 48	23 09	68	7 38	42		
7	284	45.2		60	11.0	67		12.5	88	40	35	19 03	36	22 53	66	7 52 45		
8	299	45.4		74	36.7	67		21.3	87	35	30	18 56	26	39	64	8 04 47		
9	314	45.6		89	02.4	67		30.0	85	30	25	49	18	27	63	14 50		
10	329	45.7		103	28.1	66		38.5	84	20	17	40	19 06	22 07	61	33 52		
11	344	45.9	+8 34.5	117	53.7	67	-19 46.9	82	10 N	18 10	18 32	18 57	21 50	58	8 48	55		
12	359	46.0	+8 35.4	132	19.4	66	-19 55.1	82	0	18 04	18 25	18 49	21 33	57	9 03	58		
13	14	46.2		146	45.0	66	-20 03.3	79	10 S	17 58	19	44		17 55	18 60			
14	29	46.4		161	10.6	66		11.2	79	20	52	14	40	21 00	53	34 62		
15	44	46.5		175	36.2	66		19.1	77	30	45	09	36	20 40	51	9 53 65		
16	59	46.7		190	01.8	66		26.8	76	35	40	06	35	29	49	10 03 67		
17	74	46.9	+8 40.0	204	27.4	66	-20 34.4	74	40	17 36	18 03	18 35	20 16	47	10 16	69		
18	89	47.0	+8 40.9	218	53.0	66	-20 41.8	73	45	17 31	18 00	18 34	20 00	46	10 30	72		
19	104	47.2		233	18.6	65		49.1	71	50	24	17 57	34	19 41	43	48 75		
20	119	47.3		247	44.1	66	-20 56.2	70	52	21	55	34		32 42	10 57	76		
21	134	47.5		262	09.7	65	-21 03.2	68	54	18	54	35		22 40	11 06	79		
22	149	47.7		276	35.2	66		10.0	68	56	15	52	35	19 11	38	17 81		
23	164	47.8		291	00.8	65		16.8	65	58	11	51	36	18 58	35	29 84		
24	179	48.0	+8 46.4	305	26.3		-21 23.3		60 S	17 07	17 49	18 37	18 43	32	11 44	87		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 10 ^h 39 ^m 6		Mag: -4.6 PMG: 14 ^h 55 ^m				Mag: +0.7 PMG: 07 ^h 23 ^m				Mag: -2.2 PMG: 06 ^h 30 ^m				Mag: +0.6 PMG: 06 ^h 54 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	°	'		°	°	'		°	°	'		°	°	'	
0	199	40.1	136 04.7	+25 31.4			249 10.0	-19 27.7			262 09.8	-21 -07.1			256 11.8	-19 57.4		
1	214	42.5	151 04.9		31.9		264 10.6		27.3		277 12.1		-07.1		271 14.1		57.4	
2	229	45.0	166 05.2		32.4		279 11.3		26.9		292 14.3		-07.0		286 16.5		57.4	
3	244	47.4	181 05.5		32.9		294 12.0		26.5		307 16.5		-07.0		301 18.8		57.4	
4	259	49.9	196 05.8		33.4		309 12.7		26.1		322 18.7		-07.0		316 21.1		57.3	
5	274	52.4	211 06.0	+25 33.9			324 13.3	-19 25.7			337 20.9	-21 -06.9			331 23.5	-19 57.3		
6	289	54.8	226 06.3	+25 34.4			339 14.0	-19 25.3			352 23.1	-21 -06.9			346 25.8	-19 57.3		
7	304	57.3	241 06.6		34.9		354 14.7		24.9		7 25.3		-06.8		1 28.2		57.3	
8	319	59.8	256 06.9		35.4		9 15.3		24.5		22 27.5		-06.8		16 30.5		57.3	
9	335	02.2	271 07.2		35.8		24 16.0		24.1		37 29.7		-06.8		31 32.8		57.2	
10	350	04.7	286 07.5		36.3		39 16.7		23.7		52 31.9		-06.7		46 35.2		57.2	
11	5 07.2	301 07.7	+25 36.8		54 17.3	-19 23.3					67 34.1	-21 -06.7			61 37.5	-19 57.2		
12	20 09.6	316 08.0	+25 37.3		69 18.0	-19 22.9					82 36.3	-21 -06.6			76 39.9	-19 57.2		
13	35 12.1	331 08.3		37.8		84 18.7		22.5			97 38.5		-06.6		91 42.2		57.1	
14	50 14.6	346 08.6		38.3		99 19.4		22.1			112 40.7		-06.6		106 44.5		57.1	
15	65 17.0	1 08.9		38.8		114 20.0		21.7			127 42.9		-06.5		121 46.9		57.1	
16	80 19.5	16 09.2		39.3		129 20.7		21.3			142 45.1		-06.5		136 49.2		57.1	
17	95 21.9	31 09.5	+25 39.7		144 21.4	-19 20.9					157 47.3	-21 -06.4			151 51.6	-19 57.1		
18	110 24.4	46 09.8	+25 40.2		159 22.0	-19 20.5					172 49.5	-21 -06.4			166 53.9	-19 57.0		
19	125 26.9	61 10.1		40.7		174 22.7		20.1			187 51.7		-06.4		181 56.2		57.0	
20	140 29.3	76 10.4		41.2		189 23.4		19.7			202 53.9		-06.3		196 58.6		57.0	
21	155 31.8	91 10.7		41.7		204 24.1		19.3			217 56.1		-06.3		212 00.9		57.0	
22	170 34.3	106 11.0		42.1		219 24.7		18.9			232 58.3		-06.2		227 03.3		56.9	
23	185 36.7	121 11.3		42.6		234 25.4		18.5			248 00.5		-06.2		242 05.6		56.9	
24	200 39.2	136 11.6	+25 43.1		249 26.1	-19 18.1					263 02.8	-21 -06.2			257 08.0	-19 56.9		
Dif.	—		+3	+5		+7	+4			+22		0		+23				

No usar para navegación

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'0			SD: 15'8			PHE { 4 ^h : 57'8 12 ^h : 57'4 20 ^h : 57'1													
	PMG: 12 ^h 00 ^m 4			Edad: 19 ^d 6																
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	Rº: 56 ^m												
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m				
0	179	51.8	+9	08.1	291	41.6	68	-23	17.3	29	60 N	19 14	20 00	21 01	1 53	61	7 32	55		
1	194	52.0		09.1	306	07.4	69		20.2	28	58	09	19 51	20 47	33	61	7 52	55		
2	209	52.1		10.0	320	33.3	69		23.0	26	56	19 04	44	35	17	60	8 09	55		
3	224	52.3		10.9	334	59.2	69		25.6	25	54	18 59	37	24	1 03	59	23	55		
4	239	52.5		11.8	349	25.1	70		28.1	24	52	55	31	15	0 50	60	35	56		
5	254	52.6	+9	12.7	3	51.1	70	-23	30.5	22	50	18 51	19 25	20 07	0 39	60	8 46	56		
6	269	52.8	+9	13.6	18	17.1	70	-23	32.7	20	45	18 43	19 14	19 51	0 17	58	9 09	56		
7	284	52.9		14.5	32	43.1	71		34.7	19	40	37	19 05	38	***	**	28	55		
8	299	53.1		15.4	47	09.2	71		36.6	18	35	31	18 57	28	***	**	43	56		
9	314	53.2		16.3	61	35.3	71		38.4	16	30	26	51	20	***	**	9 56	56		
10	329	53.4		17.2	76	01.4	72		40.0	15	20	18	40	19 07	***	**	10 19	56		
11	344	53.6	+9	18.1	90	27.6	72	-23	41.5	13	10 N	18 10	18 32	18 57	23 45	53	10 39	55		
12	359	53.7	+9	19.0	104	53.8	72	-23	42.8	12	0	18 04	18 25	18 49	23 27	53	10 57	56		
13	14	53.9		19.9	119	20.0	73		44.0	10	10 S	17 57	18	43	23 08	55	11 16	55		
14	29	54.0		20.8	133	46.3	73		45.0	10	20	50	12	38	22 48	56	36	55		
15	44	54.2		21.7	148	12.6	74		46.0	7	30	42	06	34	25	57	11 58	55		
16	59	54.3		22.6	162	39.0	74		46.7	6	35	38	03	33	22 12	57	12 12	54		
17	74	54.5	+9	23.5	177	05.4	75	-23	47.3	5	40	17 33	18 00	18 32	21 57	57	12 27	54		
18	89	54.6	+9	24.4	191	31.9	75	-23	47.8	4	45	17 27	17 57	18 31	21 38	58	12 46	53		
19	104	54.8		25.3	205	58.4	75		48.2	2	50	20	53	30	15	59	13 08	54		
20	119	55.0		26.2	220	24.9	76		48.4	1	52	17	51	30	21 04	60	19	53		
21	134	55.1		27.1	234	51.5	77		48.5	1	54	14	49	30	20 52	60	32	52		
22	149	55.3		28.0	249	18.2	77		48.4	2	56	10	48	30	38	60	13 46	52		
23	164	55.4		28.9	263	44.9	77		48.2	4	58	06	45	31	21	61	14 03	51		
24	179	55.6	+9	29.8	278	11.6		-23	47.8		60 S	17 01	17 43	18 31	20 01	62	14 23	51		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 10 ^h 31 ^m 7		Mag: -4.6 PMG: 14 ^h 54 ^m				Mag: +0.6 PMG: 07 ^h 21 ^m				Mag: -2.2 PMG: 06 ^h 23 ^m				Mag: +0.6 PMG: 06 ^h 47 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	201	38.3	136	19.3	+25	54.3	249	42.3	-19	08.3	263	55.8	-21	-05.2	258	04.2	-19	56.4		
1	216	40.8	151	19.6		54.7	264	43.0		07.9	278	58.0		-05.2	273	06.6		56.4		
2	231	43.3	166	19.9		55.2	279	43.6		07.5	294	00.3		-05.2	288	08.9		56.3		
3	246	45.7	181	20.3		55.6	294	44.3		07.1	309	02.5		-05.1	303	11.3		56.3		
4	261	48.2	196	20.6		56.1	309	45.0		06.7	324	04.7		-05.1	318	13.6		56.3		
5	276	50.7	211	21.0	+25	56.5	324	45.7	-19	06.2	339	06.9	-21	-05.0	333	16.0	-19	56.3		
6	291	53.1	226	21.3	+25	57.0	339	46.3	-19	05.8	354	09.1	-21	-05.0	348	18.3	-19	56.3		
7	306	55.6	241	21.6		57.4	354	47.0		05.4	9	11.3		-05.0	3	20.7		56.2		
8	321	58.0	256	22.0		57.9	9	47.7		05.0	24	13.6		-04.9	18	23.0		56.2		
9	337	00.5	271	22.3		58.3	24	48.4		04.6	39	15.8		-04.9	33	25.4		56.2		
10	352	03.0	286	22.7		58.8	39	49.1		04.2	54	18.0		-04.9	48	27.7		56.2		
11	7	05.4	301	23.0	+25	59.2	54	49.7	-19	03.8	69	20.2	-21	-04.8	63	30.1	-19	56.1		
12	22	07.9	316	23.4	+25	59.7	69	50.4	-19	03.4	84	22.4	-21	-04.8	78	32.4	-19	56.1		
13	37	10.4	331	23.7	+26	00.1	84	51.1		02.9	99	24.6		-04.7	93	34.8		56.1		
14	52	12.8	346	24.1		00.6	99	51.8		02.5	114	26.9		-04.7	108	37.1		56.1		
15	67	15.3	1	24.5		01.0	114	52.4		02.1	129	29.1		-04.7	123	39.5		56.1		
16	82	17.8	16	24.8		01.4	129	53.1		01.7	144	31.3		-04.6	138	41.8		56.0		
17	97	20.2	31	25.2	+26	01.9	144	53.8	-19	01.3	159	33.5	-21	-04.6	153	44.2	-19	56.0		
18	112	22.7	46	25.5	+26	02.3	159	54.5	-19	00.9	174	35.7	-21	-04.6	168	46.5	-19	56.0		
19	127	25.2	61	25.9		02.8	174	55.2		00.5	189	38.0		-04.5	183	48.9		56.0		
20	142	27.6	76	26.2		03.2	189	55.8	-19	00.0	204	40.2		-04.5	198	51.2		56.0		
21	157	30.1	91	26.6		03.6	204	56.5	-18	59.6	219	42.4		-04.4	213	53.6		55.9		
22	172	32.5	106	27.0		04.1	219	57.2		59.2	234	44.6		-04.4	228	55.9		55.9		
23	187	35.0	121	27.3		04.5	234	57.9		58.8	249	46.9		-04.4	243	58.3		55.9		
24	202	37.5	136	27.7	+26	04.9	249	58.6	-18	58.4	264	49.1	-21	-04.3	259	00.6	-19	55.9		
Dif.	—		+4		+4		+7		+4		+22		0		+23					

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9			SD: 15'5 Edad: 20 ^d 6														
	PMG: 12 ^h 00 ^m 2			PMG: 05 ^h 40 ^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	55.6	+9	278	11.6	78	-23	47.8	4	60 N	2 58	3 59	4 45	2 54	41	8 27	69	
1	194	55.7		292	38.4	79		47.4	7	58	3 13	4 08	51	34	43	8 47	67	
2	209	55.9		307	05.3	79		46.7	7	56	25	16	4 56	17	44	9 04	65	
3	224	56.0		321	32.2	79		46.0	9	54	36	23	5 01	2 02	46	18	64	
4	239	56.2		335	59.1	81		45.1	10	52	45	29	05	1 50	46	31	63	
5	254	56.3	+9	350	26.2	80	-23	44.1	12	50	3 53	4 34	5 08	1 39	47	9 42	62	
6	269	56.5	+9	4	53.2	82	-23	42.9	12	45	4 09	4 46	5 17	1 15	49	10 05	60	
7	284	56.7		19	20.4	82		41.7	15	40	22	4 55	23	0 57	50	23	59	
8	299	56.8		33	47.6	82		40.2	15	35	32	5 03	29	41	51	39	57	
9	314	57.0		48	14.8	83		38.7	17	30	41	09	34	28	51	10 52	57	
10	329	57.1		62	42.1	84		37.0	18	20	4 54	20	43	0 05	52	11 15	55	
11	344	57.3	+9	77	09.5	84	-23	35.2	19	10 N	5 04	5 29	5 50	** ** *	**	11 34	54	
12	359	57.4	+9	91	36.9	85	-23	33.3	21	0	5 12	5 36	5 57	** ** *	**	11 53	52	
13	14	57.6		106	04.4	86		31.2	22	10 S	18	42	6 04	** ** *	**	12 11	51	
14	29	57.7		120	32.0	86		29.0	23	20	23	48	11	23 44	54	31	49	
15	44	57.9		134	59.6	87		26.7	24	30	27	55	19	22	56	12 53	48	
16	59	58.0		149	27.3	87		24.3	26	35	28	5 58	23	23 09	58	13 06	47	
17	74	58.2	+9	163	55.0	88	-23	21.7	27	40	5 30	6 01	6 28	22 54	60	13 21	46	
18	89	58.3	+9	178	22.8	89	-23	19.0	28	45	5 30	6 05	6 34	22 36	62	13 39	45	
19	104	58.5		192	50.7	90		16.2	29	50	31	09	41	14	64	14 02	42	
20	119	58.6		207	18.7	90		13.3	31	52	31	10	45	22 04	65	12	41	
21	134	58.8		221	46.7	91		10.2	32	54	31	12	48	21 52	67	24	40	
22	149	58.9		236	14.8	91		07.0	33	56	31	14	52	38	69	38	38	
23	164	59.1		250	42.9	92		03.7	34	58	31	16	6 56	21 22	71	14 54	36	
24	179	59.2	+9	265	11.1		-23	00.3		60 S	5 30	6 19	7 01	21 03	74	15 14	33	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 10 ^h 27 ^m 8		Mag: -4.7 PMG: 14 ^h 54 ^m			Mag: +0.6 PMG: 07 ^h 20 ^m			Mag: -2.2 PMG: 06 ^h 20 ^m			Mag: +0.6 PMG: 06 ^h 43 ^m						
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	202	37.5	136	27.7	+26	04.9	249	58.6	-18	58.4	264	49.1	-21	04.3	259	00.6	-19	55.9
1	217	39.9	151	28.1		05.4	264	59.2		58.0	279	51.3		04.3	274	03.0		55.9
2	232	42.4	166	28.5		05.8	279	59.9		57.6	294	53.5		04.3	289	05.3		55.8
3	247	44.9	181	28.8		06.2	295	00.6		57.1	309	55.7		04.2	304	07.7		55.8
4	262	47.3	196	29.2		06.7	310	01.3		56.7	324	58.0		04.2	319	10.0		55.8
5	277	49.8	211	29.6	+26	07.1	325	02.0	-18	56.3	340	00.2	-21	04.1	334	12.4	-19	55.8
6	292	52.3	226	29.9	+26	07.5	340	02.6	-18	55.9	355	02.4	-21	04.1	349	14.7	-19	55.8
7	307	54.7	241	30.3		07.9	355	03.3		55.5	10	04.6		04.1	4	17.1		55.7
8	322	57.2	256	30.7		08.4	10	04.0		55.0	25	06.9		04.0	19	19.4		55.7
9	337	59.7	271	31.1		08.8	25	04.7		54.6	40	09.1		04.0	34	21.8		55.7
10	353	02.1	286	31.5		09.2	40	05.4		54.2	55	11.3		04.0	49	24.1		55.7
11	8	04.6	301	31.8	+26	09.6	55	06.0	-18	53.8	70	13.5	-21	03.9	64	26.5	-19	55.7
12	23	07.0	316	32.2	+26	10.1	70	06.7	-18	53.4	85	15.8	-21	03.9	79	28.8	-19	55.6
13	38	09.5	331	32.6		10.5	85	07.4		52.9	100	18.0		03.9	94	31.2		55.6
14	53	12.0	346	33.0		10.9	100	08.1		52.5	115	20.2		03.8	109	33.5		55.6
15	68	14.4	1	33.4		11.3	115	08.8		52.1	130	22.4		03.8	124	35.9		55.6
16	83	16.9	16	33.8		11.8	130	09.5		51.7	145	24.7		03.7	139	38.2		55.6
17	98	19.4	31	34.2	+26	12.2	145	10.1	-18	51.3	160	26.9	-21	03.7	154	40.6	-19	55.5
18	113	21.8	46	34.6	+26	12.6	160	10.8	-18	50.8	175	29.1	-21	03.7	169	42.9	-19	55.5
19	128	24.3	61	35.0		13.0	175	11.5		50.4	190	31.3		03.6	184	45.3		55.5
20	143	26.8	76	35.4		13.4	190	12.2		50.0	205	33.6		03.6	199	47.7		55.5
21	158	29.2	91	35.8		13.8	205	12.9		49.6	220	35.8		03.6	214	50.0		55.5
22	173	31.7	106	36.2		14.2	220	13.6		49.2	235	38.0		03.5	229	52.4		55.4
23	188	34.1	121	36.6		14.7	235	14.2		48.7	250	40.3		03.5	244	54.7		55.4
24	203	36.6	136	37.0	+26	15.1	250	14.9	-18	48.3	265	42.5	-21	03.5	259	57.1	-19	55.4
Dif.	—		+4	+4			+7	+4			+22	0			+24			

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 : 56'0 12 ^h : 55'8 20 ^h : 55'5										
	PMG: 11 ^h 59 ^m 9			Edad: 21 ^d 6													
	PMG: 06 ^h 33 ^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	179	59.2	+9 51.3	265	11.1	93	-23 00.3	35	60 N	19 19	20 06	21 08	3 35	26	9 36	78	
1	194	59.4	52.2	279	39.4	94	-22 56.8	37	58	13	19 56	20 53	17 29	29	9 54	74	
2	209	59.5	53.1	294	07.8	94	53.1	37	56	08	48	40	3 01	32	10 09	72	
3	224	59.7	53.9	308	36.2	95	49.4	39	54	19 03	41	29	2 48	34	22	70	
4	239	59.8	54.8	323	04.7	96	45.5	40	52	18 58	35	20	36	36	34	67	
5	255	00.0	+9 55.7	337	33.3	96	-22 41.5	41	50	18 54	19 29	20 11	2 26	37	10 44	66	
6	270	00.1	+9 56.6	352	01.9	98	-22 37.4	43	45	18 46	19 17	19 54	2 04	40	11 05	63	
7	285	00.3	57.5	6	30.7	97	33.1	43	40	39	19 07	41	1 47	42	22	60	
8	300	00.4	58.4	20	59.4	99	28.8	45	35	33	18 59	30	32	44	36	59	
9	315	00.6	+9 59.3	35	28.3	99	24.3	45	30	27	52	21	1 19	45	11 49	57	
10	330	00.7	+10 00.2	49	57.2	100	19.8	47	20	18	41	19 07	0 57	48	12 10	54	
11	345	00.9	+10 01.1	64	26.2	101	-22 15.1	48	10 N	18 11	18 32	18 57	0 38	49	12 28	52	
12	0	01.0	+10 02.0	78	55.3	102	-22 10.3	49	0	18 03	18 24	18 49	0 20	51	12 45	50	
13	15	01.2	02.8	93	24.5	102	05.4	50	10 S	17 56	17	42	0 03	52	13 02	48	
14	30	01.3	03.7	107	53.7	103	-22 00.4	51	20	49	11	37	** ** *	**	20	46	
15	45	01.5	04.6	122	23.0	104	-21 55.3	52	30	40	04	32	** ** *	**	41	43	
16	60	01.6	05.5	136	52.4	104	50.1	53	35	35	18 01	30	** ** *	**	13 53	41	
17	75	01.8	+10 06.4	151	21.8	105	-21 44.8	54	40	17 30	17 57	18 29	23 54	60	14 07	39	
18	90	01.9	+10 07.3	165	51.3	106	-21 39.4	55	45	17 24	17 53	18 27	23 38	63	14 24	36	
19	105	02.1	08.2	180	20.9	107	33.9	56	50	16	49	26	18	67	44	33	
20	120	02.2	09.1	194	50.6	108	28.3	58	52	13	47	26	23 09	68	14 53	32	
21	135	02.4	09.9	209	20.4	108	22.5	58	54	09	45	26	22 59	70	15 04	30	
22	150	02.5	10.8	223	50.2	109	16.7	59	56	05	43	26	47	72	16	28	
23	165	02.7	11.7	238	20.1	110	10.8	60	58	17 00	40	26	33	75	30	25	
24	180	02.8	+10 12.6	252	50.1		-21 04.8		60 S	16 55	17 38	18 26	22 17	79	15 47	21	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 10 ^h 23 ^m 9		Mag: -4.7 PMG: 14 ^h 53 ^m			Mag: +0.6 PMG: 07 ^h 19 ^m			Mag: -2.2 PMG: 06 ^h 16 ^m			Mag: +0.6 PMG: 06 ^h 39 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	203	36.6	136	37.0	+26 15.1	250	14.9	-18 48.3	265	42.5	-21 -03.5	259	57.1	-19 55.4			
1	218	39.1	151	37.4	15.5	265	15.6	47.9	280	44.7	-03.4	274	59.4	55.4			
2	233	41.5	166	37.8	15.9	280	16.3	47.5	295	46.9	-03.4	290	01.8	55.4			
3	248	44.0	181	38.2	16.3	295	17.0	47.0	310	49.2	-03.4	305	04.1	55.3			
4	263	46.5	196	38.6	16.7	310	17.7	46.6	325	51.4	-03.3	320	06.5	55.3			
5	278	48.9	211	39.0	+26 17.1	325	18.3	-18 46.2	340	53.6	-21 -03.3	335	08.9	-19 55.3			
6	293	51.4	226	39.4	+26 17.5	340	19.0	-18 45.8	355	55.9	-21 -03.2	350	11.2	-19 55.3			
7	308	53.9	241	39.8	17.9	355	19.7	45.4	10	58.1	-03.2	5	13.6	55.3			
8	323	56.3	256	40.2	18.3	10	20.4	44.9	26	00.3	-03.2	20	15.9	55.2			
9	338	58.8	271	40.7	18.7	25	21.1	44.5	41	02.6	-03.1	35	18.3	55.2			
10	354	01.3	286	41.1	19.1	40	21.8	44.1	56	04.8	-03.1	50	20.6	55.2			
11	9	03.7	301	41.5	+26 19.5	55	22.5	-18 43.7	71	07.0	-21 -03.1	65	23.0	-19 55.2			
12	24	06.2	316	41.9	+26 19.9	70	23.1	-18 43.2	86	09.3	-21 -03.0	80	25.3	-19 55.2			
13	39	08.6	331	42.3	20.3	85	23.8	42.8	101	11.5	-03.0	95	27.7	55.2			
14	54	11.1	346	42.8	20.7	100	24.5	42.4	116	13.7	-03.0	110	30.1	55.1			
15	69	13.6	1	43.2	21.1	115	25.2	42.0	131	16.0	-02.9	125	32.4	55.1			
16	84	16.0	16	43.6	21.5	130	25.9	41.5	146	18.2	-02.9	140	34.8	55.1			
17	99	18.5	31	44.0	+26 21.9	145	26.6	-18 41.1	161	20.4	-21 -02.9	155	37.1	-19 55.1			
18	114	21.0	46	44.5	+26 22.3	160	27.3	-18 40.7	176	22.7	-21 -02.8	170	39.5	-19 55.1			
19	129	23.4	61	44.9	22.7	175	27.9	40.2	191	24.9	-02.8	185	41.8	55.0			
20	144	25.9	76	45.3	23.1	190	28.6	39.8	206	27.1	-02.8	200	44.2	55.0			
21	159	28.4	91	45.8	23.5	205	29.3	39.4	221	29.4	-02.7	215	46.6	55.0			
22	174	30.8	106	46.2	23.9	220	30.0	39.0	236	31.6	-02.7	230	48.9	55.0			
23	189	33.3	121	46.6	24.3	235	30.7	38.5	251	33.8	-02.6	245	51.3	55.0			
24	204	35.8	136	47.1	+26 24.7	250	31.4	-18 38.1	266	36.1	-21 -02.6	260	53.6	-19 54.9			
Dif.	—		+4		+4	+7		+4	+22		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 7				SD: 15'1 Edad: 22 ^d 6 PHE { 4 ^h : 55'3 12 ^h : 55'1 20 ^h : 54'9 PMG: 07 ^h 23 ^m Rº: 47 ^m														
	hG ☉		Dec		hG ☾		Dif.		Dec			Dif.			Náut.	Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	02.8	+10	12.6	252	50.1	110	-21	04.8	61	60 N	2 50	3 53	4 39	4 01	17	10 54	80	
1	195	02.9		13.5	267	20.1	111	-20	58.7	63	58	3 06	4 02	46	3 46	20	11 08	77	
2	210	03.1		14.4	281	50.2	112		52.4	63	56	19	11	51	33	23	21	73	
3	225	03.2		15.2	296	20.4	113		46.1	64	54	30	18	4 56	22	25	32	70	
4	240	03.4		16.1	310	50.7	113		39.7	65	52	39	24	5 00	12	27	41	69	
5	255	03.5	+10	17.0	325	21.0	115	-20	33.2	65	50	3 48	4 30	5 04	3 03	29	11 50	67	
6	270	03.7	+10	17.9	339	51.5	115	-20	26.7	67	45	4 05	4 42	5 13	2 44	33	12 08	63	
7	285	03.8		18.8	354	22.0	115		20.0	68	40	18	4 52	20	29	35	22	61	
8	300	04.0		19.7	8	52.5	117		13.2	69	35	29	5 00	26	16	37	35	58	
9	315	04.1		20.5	23	23.2	117	-20	06.3	69	30	38	07	32	2 04	40	12 46	55	
10	330	04.3		21.4	37	53.9	118	-19	59.4	70	20	4 52	18	41	1 45	42	13 04	52	
11	345	04.4	+10	22.3	52	24.7	118	-19	52.4	72	10 N	5 03	5 28	5 49	1 27	46	13 20	49	
12	0	04.6	+10	23.2	66	55.5	120	-19	45.2	72	0	5 11	5 35	5 56	1 11	48	13 35	46	
13	15	04.7		24.1	81	26.5	120		38.0	73	10 S	18	42	6 04	0 55	51	13 50	43	
14	30	04.8		25.0	95	57.5	121		30.7	74	20	23	49	11	38	53	14 06	40	
15	45	05.0		25.8	110	28.6	121		23.3	74	30	28	56	20	18	57	24	37	
16	60	05.1		26.7	124	59.7	122		15.9	76	35	30	5 59	25	0 07	58	34	35	
17	75	05.3	+10	27.6	139	30.9	123	-19	08.3	76	40	5 31	6 03	6 30	** ** *	**	14 46	33	
18	90	05.4	+10	28.5	154	02.2	124	-19	00.7	77	45	5 33	6 07	6 37	** ** *	**	15 00	30	
19	105	05.6		29.4	168	33.6	125	-18	53.0	78	50	34	12	44	** ** *	**	17	26	
20	120	05.7		30.2	183	05.1	125		45.2	79	52	34	14	48	** ** *	**	25	24	
21	135	05.8		31.1	197	36.6	125		37.3	79	54	35	16	52	** ** *	**	34	22	
22	150	06.0		32.0	212	08.1	127		29.4	81	56	35	18	6 56	23 59	73	44	20	
23	165	06.1		32.9	226	39.8	127		21.3	81	58	35	21	7 01	23 48	76	15 55	18	
24	180	06.3	+10	33.8	241	11.5		-18	13.2		60 S	5 35	6 23	7 06	23 36	79	16 08	14	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 10 ^h 19 ^m 9		Mag: -4.7 PMG: 14 ^h 52 ^m				Mag: +0.6 PMG: 07 ^h 18 ^m				Mag: -2.2 PMG: 06 ^h 13 ^m				Mag: +0.6 PMG: 06 ^h 35 ^m				
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	204	35.8	136	47.1	+26	24.7	250	31.4	-18	38.1	266	36.1	-21	02.6	260	53.6	-19	54.9	
1	219	38.2	151	47.5		25.1	265	32.1		37.7	281	38.3		02.6	275	56.0		54.9	
2	234	40.7	166	48.0		25.5	280	32.8		37.3	296	40.6		02.5	290	58.4		54.9	
3	249	43.1	181	48.4		25.9	295	33.4		36.8	311	42.8		02.5	306	00.7		54.9	
4	264	45.6	196	48.9		26.2	310	34.1		36.4	326	45.0		02.5	321	03.1		54.9	
5	279	48.1	211	49.3	+26	26.6	325	34.8	-18	36.0	341	47.3	-21	02.4	336	05.4	-19	54.8	
6	294	50.5	226	49.8	+26	27.0	340	35.5	-18	35.5	356	49.5	-21	02.4	351	07.8	-19	54.8	
7	309	53.0	241	50.2		27.4	355	36.2		35.1	11	51.7		02.4	6	10.1		54.8	
8	324	55.5	256	50.7		27.8	10	36.9		34.7	26	54.0		02.3	21	12.5		54.8	
9	339	57.9	271	51.1		28.2	25	37.6		34.2	41	56.2		02.3	36	14.9		54.8	
10	355	00.4	286	51.6		28.5	40	38.3		33.8	56	58.5		02.3	51	17.2		54.8	
11	10	02.9	301	52.0	+26	28.9	55	39.0	-18	33.4	72	00.7	-21	02.2	66	19.6	-19	54.7	
12	25	05.3	316	52.5	+26	29.3	70	39.6	-18	33.0	87	02.9	-21	02.2	81	22.0	-19	54.7	
13	40	07.8	331	52.9		29.7	85	40.3		32.5	102	05.2		02.2	96	24.3		54.7	
14	55	10.3	346	53.4		30.1	100	41.0		32.1	117	07.4		02.1	111	26.7		54.7	
15	70	12.7	1	53.9		30.4	115	41.7		31.7	132	09.7		02.1	126	29.0		54.7	
16	85	15.2	16	54.3		30.8	130	42.4		31.2	147	11.9		02.1	141	31.4		54.6	
17	100	17.6	31	54.8	+26	31.2	145	43.1	-18	30.8	162	14.1	-21	02.0	156	33.8	-19	54.6	
18	115	20.1	46	55.3	+26	31.6	160	43.8	-18	30.4	177	16.4	-21	02.0	171	36.1	-19	54.6	
19	130	22.6	61	55.7		31.9	175	44.5		29.9	192	18.6		02.0	186	38.5		54.6	
20	145	25.0	76	56.2		32.3	190	45.2		29.5	207	20.9		01.9	201	40.8		54.6	
21	160	27.5	91	56.7		32.7	205	45.9		29.1	222	23.1		01.9	216	43.2		54.6	
22	175	30.0	106	57.2		33.0	220	46.5		28.6	237	25.4		01.9	231	45.6		54.5	
23	190	32.4	121	57.6		33.4	235	47.2		28.2	252	27.6		01.8	246	47.9		54.5	
24	205	34.9	136	58.1	+26	33.8	250	47.9	-18	27.8	267	29.8	-21	01.8	261	50.3	-19	54.5	
Dif.	—		+5		+4		+7		+4		+22		0		+24				

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 59 ^m 5				SD: 14'9 Edad: 23 ^d 6 PMG: 08 ^h 10 ^m PHE { 4 ^h : 54'8 12 ^h : 54'6 20 ^h : 54'5 Rº: 45 ^m															
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.							
	h	°	'	°	'	°	'	°	'	°			'	h	m	h	m	h	m	m
0	180	06.3	+10	33.8	241	11.5	128	-18	13.2	81	60 N	19 24	20 11	21 16	4 18	11	12 14	79		
1	195	06.4		34.6	255	43.3	129	-18	05.1	83	58	18	20 01	20 59	4 06	15	25	76		
2	210	06.6		35.5	270	15.2	129	-17	56.8	83	56	12	19 53	46	3 56	18	34	73		
3	225	06.7		36.4	284	47.1	130		48.5	84	54	07	45	34	47	20	42	7		
4	240	06.8		37.3	299	19.1	131		40.1	85	52	19 02	38	24	39	22	50	68		
5	255	07.0	+10	38.1	313	51.2	131	-17	31.6	86	50	18 58	19 32	20 15	3 32	24	12 57	66		
6	270	07.1	+10	39.0	328	23.3	132	-17	23.0	86	45	18 48	19 19	19 57	3 17	27	13 11	62		
7	285	07.3		39.9	342	55.5	133		14.4	87	40	41	09	43	3 04	30	23	59		
8	300	07.4		40.8	357	27.8	133	-17	05.7	87	35	34	19 01	32	2 53	33	33	56		
9	315	07.5		41.6	12	00.1	134	-16	57.0	88	30	29	18 53	23	44	35	41	55		
10	330	07.7		42.5	26	32.5	135		48.2	89	20	19	42	19 08	27	39	13 56	51		
11	345	07.8	+10	43.4	41	05.0	135	-16	39.3	90	10 N	18 11	18 32	18 57	2 13	42	14 09	47		
12	0	08.0	+10	44.3	55	37.5	136	-16	30.3	90	0	18 03	18 24	18 48	1 59	45	14 21	44		
13	15	08.1		45.1	70	10.1	136		21.3	91	10 S	17 55	16	41	46	48	33	41		
14	30	08.3		46.0	84	42.7	137		12.2	92	20	47	09	35	31	52	14 46	38		
15	45	08.4		46.9	99	15.4	138	-16	03.0	92	30	38	18 02	30	15	55	15 01	33		
16	60	08.5		47.8	113	48.2	138	-15	53.8	93	35	33	17 59	28	1 05	57	09	31		
17	75	08.7	+10	48.6	128	21.0	139	-15	44.5	93	40	17 27	17 54	18 26	0 54	60	15 19	28		
18	90	08.8	+10	49.5	142	53.9	140	-15	35.2	94	45	17 20	17 50	18 24	0 41	62	15 30	25		
19	105	09.0		50.4	157	26.9	140		25.8	95	50	12	45	23	25	66	43	22		
20	120	09.1		51.2	171	59.9	141		16.3	95	52	08	43	22	17	69	49	20		
21	135	09.2		52.1	186	33.0	141	-15	06.8	96	54	04	41	22	0 09	70	15 56	18		
22	150	09.4		53.0	201	06.1	142	-14	57.2	96	56	17 00	38	21	** ** *	**	16 04	16		
23	165	09.5		53.9	215	39.3	143		47.6	97	58	16 55	35	21	** ** *	**	13	13		
24	180	09.6	+10	54.7	230	12.6		-14	37.9		60 S	16 49	17 32	18 20	** ** *	**	16 22	10		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 10 ^h 16 ^m 0		Mag: -4.7 PMG: 14 ^h 52 ^m				Mag: +0.6 PMG: 07 ^h 16 ^m				Mag: -2.2 PMG: 06 ^h 09 ^m				Mag: +0.6 PMG: 06 ^h 32 ^m					
	hG ♂		hG ♀		dec.		hG ♂		dec.		hG ♀		dec.		hG ♀		dec.			
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'		
0	205	34.9	136	58.1	+26	33.8	250	47.9	-18	27.8	267	29.8	-21	-01.8	261	50.3	-19	54.5		
1	220	37.4	151	58.6		34.1	265	48.6		27.3	282	32.1		-01.8	276	52.7		54.5		
2	235	39.8	166	59.1		34.5	280	49.3		26.9	297	34.3		-01.7	291	55.0		54.5		
3	250	42.3	181	59.6		34.9	295	50.0		26.5	312	36.6		-01.7	306	57.4		54.5		
4	265	44.7	197	00.0		35.2	310	50.7		26.0	327	38.8		-01.7	321	59.7		54.4		
5	280	47.2	212	00.5	+26	35.6	325	51.4	-18	25.6	342	41.1	-21	-01.6	337	02.1	-19	54.4		
6	295	49.7	227	01.0	+26	36.0	340	52.1	-18	25.2	357	43.3	-21	-01.6	352	04.5	-19	54.4		
7	310	52.1	242	01.5		36.3	355	52.8		24.7	12	45.6		-01.6	7	06.8		54.4		
8	325	54.6	257	02.0		36.7	10	53.5		24.3	27	47.8		-01.5	22	09.2		54.4		
9	340	57.1	272	02.5		37.1	25	54.2		23.8	42	50.0		-01.5	37	11.6		54.3		
10	355	59.5	287	03.0		37.4	40	54.8		23.4	57	52.3		-01.5	52	13.9		54.3		
11	11	02.0	302	03.5	+26	37.8	55	55.5	-18	23.0	72	54.5	-21	-01.4	67	16.3	-19	54.3		
12	26	04.5	317	04.0	+26	38.1	70	56.2	-18	22.5	87	56.8	-21	-01.4	82	18.7	-19	54.3		
13	41	06.9	332	04.5		38.5	85	56.9		22.1	102	59.0		-01.4	97	21.0		54.3		
14	56	09.4	347	05.0		38.8	100	57.6		21.7	118	01.3		-01.3	112	23.4		54.3		
15	71	11.9	2	05.5		39.2	115	58.3		21.2	133	03.5		-01.3	127	25.7		54.2		
16	86	14.3	17	06.0		39.5	130	59.0		20.8	148	05.8		-01.3	142	28.1		54.2		
17	101	16.8	32	06.5	+26	39.9	145	59.7	-18	20.3	163	08.0	-21	-01.2	157	30.5	-19	54.2		
18	116	19.2	47	07.0	+26	40.3	161	00.4	-18	19.9	178	10.3	-21	-01.2	172	32.8	-19	54.2		
19	131	21.7	62	07.5		40.6	176	01.1		19.5	193	12.5		-01.2	187	35.2		54.2		
20	146	24.2	77	08.0		41.0	191	01.8		19.0	208	14.8		-01.1	202	37.6		54.2		
21	161	26.6	92	08.5		41.3	206	02.5		18.6	223	17.0		-01.1	217	39.9		54.1		
22	176	29.1	107	09.1		41.7	221	03.2		18.2	238	19.3		-01.1	232	42.3		54.1		
23	191	31.6	122	09.6		42.0	236	03.9		17.7	253	21.5		-01.0	247	44.7		54.1		
24	206	34.0	137	10.1	+26	42.3	251	04.6	-18	17.3	268	23.8	-21	-01.0	262	47.0	-19	54.1		
Dif.	—		+5		+4		+7		+4		+22		0		+24					

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 : 54'4 12 ^h : 54'3 20 ^h : 54'2			Edad: 24 ^d 6			Rº: 42 ^m		
	PMG: 11 ^h 59 ^m 2																	
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	09.6	+10	54.7	230	12.6	143	-14	37.9	98	60 N	2 42	3 46	4 34	4 29	9	13 33	78
1	195	09.8		55.6	244	45.9	143		28.1	98	58	2 59	3 56	40	21	12	41	74
2	210	09.9		56.5	259	19.2	145		18.3	98	56	3 12	4 05	46	14	14	47	72
3	225	10.1		57.3	273	52.7	144	-14	08.5	100	54	24	13	51	07	16	53	70
4	240	10.2		58.2	288	26.1	146	-13	58.5	99	52	34	20	4 56	4 01	18	13 58	68
5	255	10.3	+10	59.1	302	59.7	145	-13	48.6	101	50	3 43	4 26	5 00	3 56	20	14 03	66
6	270	10.5	+11	00.0	317	33.2	147	-13	38.5	100	45	4 01	4 39	5 10	3 44	24	14 13	62
7	285	10.6		00.8	332	06.9	147		28.5	102	40	15	49	17	34	27	22	58
8	300	10.7		01.7	346	40.6	147		18.3	101	35	26	4 58	24	26	30	29	56
9	315	10.9		02.6	1	14.3	148	-13	08.2	103	30	36	5 05	30	19	32	36	53
10	330	11.0		03.4	15	48.1	148	-12	57.9	102	20	4 50	17	39	3 06	36	47	49
11	345	11.2	+11	04.3	30	21.9	149	-12	47.7	104	10 N	5 02	5 27	5 48	2 55	39	14 56	46
12	0	11.3	+11	05.2	44	55.8	149	-12	37.3	103	0	5 10	5 35	5 56	2 44	43	15 05	42
13	15	11.4		06.0	59	29.7	150		27.0	104	10 S	18	42	6 04	34	46	14	39
14	30	11.6		06.9	74	03.7	151		16.6	105	20	24	50	12	23	49	24	35
15	45	11.7		07.8	88	37.8	150	-12	06.1	105	30	29	5 57	21	10	53	34	31
16	60	11.8		08.6	103	11.8	151	-11	55.6	106	35	31	6 01	26	2 02	56	40	29
17	75	12.0	+11	09.5	117	45.9	152	-11	45.0	106	40	5 33	6 05	6 32	1 54	58	15 47	26
18	90	12.1	+11	10.4	132	20.1	152	-11	34.4	106	45	5 35	6 09	6 39	1 43	63	15 55	23
19	105	12.2		11.2	146	54.3	153		23.8	107	50	37	14	48	31	66	16 05	19
20	120	12.4		12.1	161	28.6	153		13.1	107	52	37	17	51	26	68	09	18
21	135	12.5		12.9	176	02.9	153	-11	02.4	108	54	38	19	6 55	19	70	14	15
22	150	12.6		13.8	190	37.2	154	-10	51.6	108	56	38	22	7 00	12	73	20	13
23	165	12.8		14.7	205	11.6	154		40.8	108	58	39	25	05	1 04	76	16 26	10
24	180	12.9	+11	15.5	219	46.0		-10	30.0		60 S	5 39	6 28	7 11	0 55	79	16 32	8
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 10 ^h 12 ^m 1		Mag: -4.7 PMG: 14 ^h 51 ^m				Mag: +0.6 PMG: 07 ^h 15 ^m				Mag: -2.3 PMG: 06 ^h 06 ^m				Mag: +0.6 PMG: 06 ^h 28 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	206	34.0	137	10.1	+26	42.3	251	04.6	-18	17.3	268	23.8	-21	01.0	262	47.0	-19	54.1
1	221	36.5	152	10.6		42.7	266	05.3		16.8	283	26.0		01.0	277	49.4		54.1
2	236	39.0	167	11.1		43.0	281	06.0		16.4	298	28.3		00.9	292	51.8		54.1
3	251	41.4	182	11.7		43.4	296	06.7		16.0	313	30.5		00.9	307	54.1		54.0
4	266	43.9	197	12.2		43.7	311	07.3		15.5	328	32.8		00.9	322	56.5		54.0
5	281	46.3	212	12.7	+26	44.1	326	08.0	-18	15.1	343	35.0	-21	00.8	337	58.9	-19	54.0
6	296	48.8	227	13.3	+26	44.4	341	08.7	-18	14.6	358	37.3	-21	00.8	353	01.2	-19	54.0
7	311	51.3	242	13.8		44.7	356	09.4		14.2	13	39.5		00.8	8	03.6		54.0
8	326	53.7	257	14.3		45.1	11	10.1		13.8	28	41.8		00.8	23	06.0		54.0
9	341	56.2	272	14.9		45.4	26	10.8		13.3	43	44.1		00.7	38	08.3		53.9
10	356	58.7	287	15.4		45.8	41	11.5		12.9	58	46.3		00.7	53	10.7		53.9
11	12	01.1	302	15.9	+26	46.1	56	12.2	-18	12.4	73	48.6	-21	00.7	68	13.1	-19	53.9
12	27	03.6	317	16.5	+26	46.4	71	12.9	-18	12.0	88	50.8	-21	00.6	83	15.5	-19	53.9
13	42	06.1	332	17.0		46.8	86	13.6		11.5	103	53.1		00.6	98	17.8		53.9
14	57	08.5	347	17.6		47.1	101	14.3		11.1	118	55.3		00.6	113	20.2		53.9
15	72	11.0	2	18.1		47.4	116	15.0		10.7	133	57.6		00.5	128	22.6		53.8
16	87	13.5	17	18.6		47.8	131	15.7		10.2	148	59.8		00.5	143	24.9		53.8
17	102	15.9	32	19.2	+26	48.1	146	16.4	-18	09.8	164	02.1	-21	00.5	158	27.3	-19	53.8
18	117	18.4	47	19.7	+26	48.4	161	17.1	-18	09.3	179	04.3	-21	00.4	173	29.7	-19	53.8
19	132	20.8	62	20.3		48.8	176	17.8		08.9	194	06.6		00.4	188	32.0		53.8
20	147	23.3	77	20.9		49.1	191	18.5		08.4	209	08.9		00.4	203	34.4		53.8
21	162	25.8	92	21.4		49.4	206	19.2		08.0	224	11.1		00.3	218	36.8		53.7
22	177	28.2	107	22.0		49.7	221	19.9		07.5	239	13.4		00.3	233	39.2		53.7
23	192	30.7	122	22.5		50.1	236	20.6		07.1	254	15.6		00.3	248	41.5		53.7
24	207	33.2	137	23.1	+26	50.4	251	21.3	-18	06.7	269	17.9	-21	00.2	263	43.9	-19	53.7
Dif.	—		+5		+3		+7		+4		+23		0		+24			

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: 14'7 Edad: 25 ^d 6 PMG: 09 ^h 37 ^m Rº: 41 ^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	12.9	+11	15.5	219	46.0	155	-10	30.0	109	60 N	19 29	20 17	21 24	4 38	7	14 51	76	
1	195	13.0		16.4	234	20.5	155		19.1	109	58	22	20 07	21 06	33	9	55	74	
2	210	13.2		17.3	248	55.0	155	-10	08.2	110	56	16	19 57	20 51	28	12	14 59	71	
3	225	13.3		18.1	263	29.5	156	-9	57.2	110	54	10	49	39	23	15	15 03	69	
4	240	13.4		19.0	278	04.1	156		46.2	110	52	05	42	28	19	17	06	67	
5	255	13.6	+11	19.8	292	38.7	156	-9	35.2	110	50	19 01	19 36	20 19	4 16	18	15 09	65	
6	270	13.7	+11	20.7	307	13.3	157	-9	24.2	111	45	18 51	19 22	20 00	4 08	22	15 15	61	
7	285	13.8		21.6	321	48.0	157		13.1	112	40	43	11	19 46	4 01	25	20	58	
8	300	14.0		22.4	336	22.7	158	-9	01.9	111	35	36	19 02	34	3 56	27	25	55	
9	315	14.1		23.3	350	57.5	158	-8	50.8	112	30	30	18 55	24	51	30	29	52	
10	330	14.2		24.2	5	32.3	158		39.6	113	20	20	42	19 09	42	34	36	48	
11	345	14.4	+11	25.0	20	07.1	158	-8	28.3	112	10 N	18 11	18 32	18 57	3 34	38	15 42	44	
12	0	14.5	+11	25.9	34	41.9	159	-8	17.1	113	0	18 02	18 23	18 48	3 27	41	15 47	41	
13	15	14.6		26.7	49	16.8	159	-8	05.8	113	10 S	17 54	16	40	20	45	53	37	
14	30	14.8		27.6	63	51.7	159	-7	54.5	114	20	46	08	34	12	49	15 59	33	
15	45	14.9		28.4	78	26.6	160		43.1	114	30	36	18 00	28	3 03	53	16 05	29	
16	60	15.0		29.3	93	01.6	160		31.7	114	35	30	17 56	26	2 58	55	09	27	
17	75	15.2	+11	30.2	107	36.6	160	-7	20.3	114	40	17 24	17 52	18 23	2 52	58	16 13	24	
18	90	15.3	+11	31.0	122	11.6	160	-7	08.9	114	45	17 17	17 47	18 21	2 46	61	16 18	21	
19	105	15.4		31.9	136	46.6	161	-6	57.5	115	50	08	41	19	37	66	24	17	
20	120	15.6		32.7	151	21.7	161		46.0	115	52	04	39	18	34	67	27	15	
21	135	15.7		33.6	165	56.8	161		34.5	116	54	17 00	36	17	29	70	29	14	
22	150	15.8		34.4	180	31.9	161		22.9	115	56	16 55	33	17	25	71	33	11	
23	165	15.9		35.3	195	07.0	162	-6	11.4	116	58	50	30	16	20	74	36	10	
24	180	16.1	+11	36.2	209	42.2		-5	59.8		60 S	16 44	17 27	18 15	2 14	77	16 40	7	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 10 ^h 08 ^m 1		Mag: -4.7 PMG: 14 ^h 50 ^m				Mag: +0.6 PMG: 07 ^h 14 ^m				Mag: -2.3 PMG: 06 ^h 02 ^m				Mag: +0.6 PMG: 06 ^h 24 ^m				
	hG ♊		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	207	33.2	137	23.1	+26	50.4	251	21.3	-18	06.7	269	17.9	-21	-00.2	263	43.9	-19	53.7	
1	222	35.6	152	23.7		50.7	266	22.0		06.2	284	20.2		-00.2	278	46.3		53.7	
2	237	38.1	167	24.2		51.0	281	22.7		05.8	299	22.4		-00.2	293	48.6		53.7	
3	252	40.6	182	24.8		51.4	296	23.4		05.3	314	24.7		-00.2	308	51.0		53.6	
4	267	43.0	197	25.4		51.7	311	24.1		04.9	329	26.9		-00.1	323	53.4		53.6	
5	282	45.5	212	25.9	+26	52.0	326	24.8	-18	04.4	344	29.2	-21	-00.1	338	55.7	-19	53.6	
6	297	48.0	227	26.5	+26	52.3	341	25.5	-18	04.0	359	31.5	-21	-00.1	353	58.1	-19	53.6	
7	312	50.4	242	27.1		52.6	356	26.2		03.5	14	33.7		00.0	9	00.5		53.6	
8	327	52.9	257	27.7		53.0	11	26.9		03.1	29	36.0		00.0	24	02.9		53.6	
9	342	55.3	272	28.2		53.3	26	27.6		02.6	44	38.2	-21	00.0	39	05.2		53.5	
10	357	57.8	287	28.8		53.6	41	28.3		02.2	59	40.5	-20	-59.9	54	07.6		53.5	
11	13	00.3	302	29.4	+26	53.9	56	29.0	-18	01.7	74	42.8	-20	-59.9	69	10.0	-19	53.5	
12	28	02.7	317	30.0	+26	54.2	71	29.7	-18	01.3	89	45.0	-20	-59.9	84	12.4	-19	53.5	
13	43	05.2	332	30.6		54.5	86	30.4		00.8	104	47.3		-59.8	99	14.7		53.5	
14	58	07.7	347	31.2		54.8	101	31.1	-18	00.4	119	49.5		-59.8	114	17.1		53.5	
15	73	10.1	2	31.8		55.2	116	31.8	-17	59.9	134	51.8		-59.8	129	19.5		53.4	
16	88	12.6	17	32.3		55.5	131	32.5		59.5	149	54.1		-59.8	144	21.8		53.4	
17	103	15.1	32	32.9	+26	55.8	146	33.2	-17	59.1	164	56.3	-20	-59.7	159	24.2	-19	53.4	
18	118	17.5	47	33.5	+26	56.1	161	33.9	-17	58.6	179	58.6	-20	-59.7	174	26.6	-19	53.4	
19	133	20.0	62	34.1		56.4	176	34.6		58.2	195	00.9		-59.7	189	29.0		53.4	
20	148	22.4	77	34.7		56.7	191	35.3		57.7	210	03.1		-59.6	204	31.3		53.4	
21	163	24.9	92	35.3		57.0	206	36.0		57.3	225	05.4		-59.6	219	33.7		53.4	
22	178	27.4	107	35.9		57.3	221	36.7		56.8	240	07.7		-59.6	234	36.1		53.3	
23	193	29.8	122	36.5		57.6	236	37.4		56.4	255	09.9		-59.5	249	38.5		53.3	
24	208	32.3	137	37.2	+26	57.9	251	38.1	-17	55.9	270	12.2	-20	-59.5	264	40.8	-19	53.3	
Dif.	—		+6		+3		+7		+4		+23		0		+24				

UT	SOL				 LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna									
	SD: 15°9				SD: 14°7 Edad: 26 ^d 6																	PHE { 4 ^h : 54°0 12 ^h : 54°0 20 ^h : 53°9						
	PMG: 11 ^h 58 ^m 8				PMG: 10 ^h 18 ^m Rº: 41 ^m																							
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.															
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	m	h m m	m									
0	180	16.1	+11	36.2	209	42.2	162	-5	59.8	116	60 N	2 33	3 40	4 28	4 45	6	16 07	77										
1	195	16.2		37.0	224	17.4	162		48.2	116	58	2 51	3 50	35	42	9	09	73										
2	210	16.3		37.9	238	52.6	162		36.6	117	56	3 06	4 00	41	40	11	10	71										
3	225	16.5		38.7	253	27.8	162		24.9	116	54	18	08	47	38	13	12	68										
4	240	16.6		39.6	268	03.0	163		13.3	117	52	29	15	52	36	15	13	67										
5	255	16.7	+11	40.4	282	38.3	163	-5	01.6	117	50	3 38	4 22	4 56	4 34	17	16 14	65										
6	270	16.8	+11	41.3	297	13.6	162	-4	49.9	117	45	3 57	4 35	5 06	4 30	20	16 16	61										
7	285	17.0		42.1	311	48.8	163		38.2	118	40	4 12	46	14	26	24	18	58										
8	300	17.1		43.0	326	24.1	164		26.4	117	35	24	4 55	21	23	27	20	55										
9	315	17.2		43.8	340	59.5	163		14.7	118	30	33	5 03	28	21	29	21	52										
10	330	17.4		44.7	355	34.8	163	-4	02.9	118	20	4 49	15	38	16	33	24	48										
11	345	17.5	+11	45.5	10	10.1	164	-3	51.1	118	10 N	5 01	5 26	5 47	4 12	37	16 26	44										
12	0	17.6	+11	46.4	24	45.5	164	-3	39.3	118	0	5 10	5 34	5 55	4 08	41	16 28	40										
13	15	17.7		47.2	39	20.9	163		27.5	118	10 S	18	42	6 04	05	44	30	37										
14	30	17.9		48.1	53	56.2	164		15.7	118	20	24	50	13	4 01	47	32	33										
15	45	18.0		48.9	68	31.6	164	-3	03.9	119	30	30	5 58	22	3 56	52	34	29										
16	60	18.1		49.8	83	07.0	164	-2	52.0	119	35	33	6 02	28	53	55	36	26										
17	75	18.2	+11	50.6	97	42.4	164	-2	40.1	118	40	5 35	6 07	6 34	3 50	58	16 37	24										
18	90	18.4	+11	51.5	112	17.8	165	-2	28.3	119	45	5 37	6 12	6 42	3 47	61	16 39	21										
19	105	18.5		52.3	126	53.3	164		16.4	119	50	40	17	51	43	64	41	17										
20	120	18.6		53.2	141	28.7	164	-2	04.5	119	52	40	20	55	41	66	42	15										
21	135	18.7		54.0	156	04.1	165	-1	52.6	119	54	41	23	6 59	39	68	43	13										
22	150	18.9		54.9	170	39.6	164		40.7	120	56	42	26	7 04	36	71	44	11										
23	165	19.0		55.7	185	15.0	164		28.7	119	58	43	29	10	3 34	73	16 46	8										
24	180	19.1	+11	56.6	199	50.4		-1	16.8		60 S	5 44	6 32	7 16	3 31	76	16 47	6										
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO													
	PMG: 10 ^h 04 ^m 2		Mag: -4.7 PMG: 14 ^h 49 ^m				Mag: +0.6 PMG: 07 ^h 13 ^m				Mag: -2.3 PMG: 05 ^h 58 ^m				Mag: +0.6 PMG: 06 ^h 20 ^m													
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.											
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'										
0	208	32.3	137	37.2	+26	57.9	251	38.1	-17	55.9	270	12.2	-20	59.5	264	40.8	-19	53.3										
1	223	34.8	152	37.8		58.2	266	38.8		55.4	285	14.5		59.5	279	43.2		53.3										
2	238	37.2	167	38.4		58.5	281	39.5		55.0	300	16.7		59.5	294	45.6		53.3										
3	253	39.7	182	39.0		58.8	296	40.2		54.5	315	19.0		59.4	309	48.0		53.3										
4	268	42.2	197	39.6		59.1	311	40.9		54.1	330	21.3		59.4	324	50.3		53.2										
5	283	44.6	212	40.2	+26	59.4	326	41.6	-17	53.6	345	23.5	-20	59.4	339	52.7	-19	53.2										
6	298	47.1	227	40.8	+26	59.7	341	42.3	-17	53.2	0	25.8	-20	59.3	354	55.1	-19	53.2										
7	313	49.6	242	41.5	+27	00.0	356	43.1		52.7	15	28.1		59.3	9	57.5		53.2										
8	328	52.0	257	42.1		00.3	11	43.8		52.3	30	30.3		59.3	24	59.8		53.2										
9	343	54.5	272	42.7		00.6	26	44.5		51.8	45	32.6		59.3	40	02.2		53.2										
10	358	56.9	287	43.3		00.9	41	45.2		51.4	60	34.9		59.2	55	04.6		53.2										
11	13	59.4	302	44.0	+27	01.2	56	45.9	-17	50.9	75	37.1	-20	59.2	70	07.0	-19	53.1										
12	29	01.9	317	44.6	+27	01.5	71	46.6	-17	50.5	90	39.4	-20	59.2	85	09.3	-19	53.1										
13	44	04.3	332	45.2		01.8	86	47.3		50.0	105	41.7		59.1	100	11.7		53.1										
14	59	06.8	347	45.9		02.1	101	48.0		49.6	120	43.9		59.1	115	14.1		53.1										
15	74	09.3	2	46.5		02.4	116	48.7		49.1	135	46.2		59.1	130	16.5		53.1										
16	89	11.7	17	47.1		02.7	131	49.4		48.7	150	48.5		59.1	145	18.9		53.1										
17	104	14.2	32	47.8	+27	02.9	146	50.1	-17	48.2	165	50.8	-20	59.0	160	21.2	-19	53.1										
18	119	16.7	47	48.4	+27	03.2	161	50.8	-17	47.7	180	53.0	-20	59.0	175	23.6	-19	53.0										
19	134	19.1	62	49.1		03.5	176	51.5		47.3	195	55.3		59.0	190	26.0		53.0										
20	149	21.6	77	49.7		03.8	191	52.2		46.8	210	57.6		58.9	205	28.4		53.0										
21	164	24.0	92	50.4		04.1	206	52.9		46.4	225	59.8		58.9	220	30.7		53.0										
22	179	26.5	107	51.0		04.4	221	53.6		45.9	241	02.1		58.9	235	33.1		53.0										
23	194	29.0	122	51.7		04.7	236	54.3		45.5	256	04.4		58.9	250	35.5		53.0										
24	209	31.4	137	52.3	+27	04.9	251	55.1	-17	45.0	271	06.7	-20	58.8	265	37.9	-19	53.0										
Dif.	—		+6		+3		+7		+5		+23		0		+24													

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°9				SD: 14°7 PHE { 4 ^h : 54'0 Edad: 27 ^d 6 12 ^h : 54'0 20 ^h : 54'0													
	PMG: 11 ^h 58 ^m 6				PMG: 10 ^h 59 ^m Rº: 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	h m m		
0	180	19.1	+11	56.6	199	50.4	165	-1	16.8	119	60 N	19 34	20 23	21 32	4 51 7	17 24 77		
1	195	19.2		57.4	214	25.9	164	-1	04.9	120	58	27	12	21 12	51 9	22 75		
2	210	19.4		58.3	229	01.3	165	-0	52.9	119	56	20	20 02	20 57	51 11	21 72		
3	225	19.5	+11	59.1	243	36.8	164		41.0	119	54	14	19 53	44	51 13	20 70		
4	240	19.6	+12	00.0	258	12.2	164		29.1	120	52	09	46	33	51 15	20 67		
5	255	19.7	+12	00.8	272	47.6	165	-0	17.1	120	50	19 04	19 39	20 23	4 51 16	17 19 65		
6	270	19.9	+12	01.7	287	23.1	164	-0	05.1	119	45	18 54	19 25	20 03	4 50 21	17 17 62		
7	285	20.0		02.5	301	58.5	164	+0	06.8	120	40	45	14	19 48	50 24	16 58		
8	300	20.1		03.4	316	33.9	165		18.8	119	35	38	19 04	36	50 26	15 55		
9	315	20.2		04.2	331	09.4	164		30.7	120	30	31	18 56	26	50 29	13 53		
10	330	20.4		05.0	345	44.8	164		42.7	119	20	20	43	19 10	49 34	12 48		
11	345	20.5	+12	05.9	0	20.2	164	+0	54.6	120	10 N	18 11	18 32	18 57	4 49 37	17 10 44		
12	0	20.6	+12	06.7	14	55.6	164	+1	06.6	120	0	18 02	18 23	18 48	4 49 40	17 08 41		
13	15	20.7		07.6	29	31.0	164		18.6	119	10 S	17 53	15	40	49 44	07 37		
14	30	20.9		08.4	44	06.4	164		30.5	120	20	44	18 07	33	48 48	05 34		
15	45	21.0		09.3	58	41.8	164		42.5	119	30	34	17 58	26	48 53	03 30		
16	60	21.1		10.1	73	17.2	163	+1	54.4	119	35	28	54	23	48 55	02 27		
17	75	21.2	+12	10.9	87	52.5	164	+2	06.3	120	40	17 21	17 49	18 21	4 48 58	17 01 24		
18	90	21.3	+12	11.8	102	27.9	163	+2	18.3	119	45	17 14	17 44	18 18	4 48 61	17 00 21		
19	105	21.5		12.6	117	03.2	163		30.2	119	50	04	38	15	47 66	16 58 17		
20	120	21.6		13.5	131	38.5	163		42.1	120	52	17 00	35	14	47 67	57 16		
21	135	21.7		14.3	146	13.8	163	+2	54.1	119	54	16 56	32	13	47 69	56 14		
22	150	21.8		15.1	160	49.1	163	+3	06.0	119	56	50	29	12	47 71	55 12		
23	165	21.9		16.0	175	24.4	163		17.9	118	58	45	25	11	47 74	54 9		
24	180	22.1	+12	16.8	189	59.7		+3	29.7		60 S	16 38	17 22	18 10	4 47 76	16 53 7		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 10 ^h 00 ^m 3		Mag: -4.7 PMG: 14 ^h 48 ^m				Mag: +0.5 PMG: 07 ^h 12 ^m				Mag: -2.3 PMG: 05 ^h 55 ^m				Mag: +0.6 PMG: 06 ^h 16 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	209	31.4	137	52.3	+27	04.9	251	55.1	-17	45.0	271	06.7	-20	-58.8	265	37.9	-19	53.0
1	224	33.9	152	53.0		05.2	266	55.8		44.6	286	08.9		-58.8	280	40.3		52.9
2	239	36.4	167	53.6		05.5	281	56.5		44.1	301	11.2		-58.8	295	42.6		52.9
3	254	38.8	182	54.3		05.8	296	57.2		43.6	316	13.5		-58.7	310	45.0		52.9
4	269	41.3	197	55.0		06.1	311	57.9		43.2	331	15.8		-58.7	325	47.4		52.9
5	284	43.8	212	55.6	+27	06.3	326	58.6	-17	42.7	346	18.0	-20	-58.7	340	49.8	-19	52.9
6	299	46.2	227	56.3	+27	06.6	341	59.3	-17	42.3	1	20.3	-20	-58.7	355	52.2	-19	52.9
7	314	48.7	242	57.0		06.9	357	00.0		41.8	16	22.6		-58.6	10	54.5		52.9
8	329	51.2	257	57.6		07.2	12	00.7		41.4	31	24.9		-58.6	25	56.9		52.8
9	344	53.6	272	58.3		07.4	27	01.4		40.9	46	27.1		-58.6	40	59.3		52.8
10	359	56.1	287	59.0		07.7	42	02.1		40.4	61	29.4		-58.5	56	01.7		52.8
11	14	58.5	302	59.7	+27	08.0	57	02.8	-17	40.0	76	31.7	-20	-58.5	71	04.1	-19	52.8
12	30	01.0	318	00.4	+27	08.2	72	03.5	-17	39.5	91	34.0	-20	-58.5	86	06.4	-19	52.8
13	45	03.5	333	01.0		08.5	87	04.3		39.1	106	36.2		-58.5	101	08.8		52.8
14	60	05.9	348	01.7		08.8	102	05.0		38.6	121	38.5		-58.4	116	11.2		52.8
15	75	08.4	3	02.4		09.1	117	05.7		38.1	136	40.8		-58.4	131	13.6		52.7
16	90	10.9	18	03.1		09.3	132	06.4		37.7	151	43.1		-58.4	146	16.0		52.7
17	105	13.3	33	03.8	+27	09.6	147	07.1	-17	37.2	166	45.4	-20	-58.3	161	18.3	-19	52.7
18	120	15.8	48	04.5	+27	09.8	162	07.8	-17	36.8	181	47.6	-20	-58.3	176	20.7	-19	52.7
19	135	18.3	63	05.2		10.1	177	08.5		36.3	196	49.9		-58.3	191	23.1		52.7
20	150	20.7	78	05.9		10.4	192	09.2		35.8	211	52.2		-58.3	206	25.5		52.7
21	165	23.2	93	06.6		10.6	207	09.9		35.4	226	54.5		-58.2	221	27.9		52.7
22	180	25.6	108	07.3		10.9	222	10.7		34.9	241	56.8		-58.2	236	30.3		52.6
23	195	28.1	123	08.0		11.2	237	11.4		34.5	256	59.0		-58.2	251	32.6		52.6
24	210	30.6	138	08.7	+27	11.4	252	12.1	-17	34.0	272	01.3	-20	-58.2	266	35.0	-19	52.6
Dif.	—		+7		+3		+7		+5		+23		0		+24		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9				SD: 14°7 Edad: 28 ^d 6					PHE { 4 ^h : 54'0 12 ^h : 54'1 20 ^h : 54'1								
	PMG: 11 ^h 58 ^m 4				PMG: 11 ^h 39 ^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		
0	180	22.1	+12	16.8	189	59.7	162	+3	29.7	119	2 25	3 33	4 22	4 58	7	18 41	78	
1	195	22.2		17.7	204	34.9	162		41.6	119	58	44	45	30	5 00	10	37 75	
2	210	22.3		18.5	219	10.1	162	+3	53.5	119	56	2 59	3 54	36	02	12	33 73	
3	225	22.4		19.3	233	45.3	162	+4	05.4	118	54	3 12	4 03	42	04	14	30 70	
4	240	22.5		20.2	248	20.5	162		17.2	118	52	24	11	48	06	16	27 68	
5	255	22.7	+12	21.0	262	55.7	161	+4	29.0	118	50	3 33	4 17	4 52	5 07	18	18 24 67	
6	270	22.8	+12	21.9	277	30.8	162	+4	40.8	118	45	3 53	4 32	5 03	5 11	22	18 19 62	
7	285	22.9		22.7	292	06.0	161	+4	52.6	118	40	4 09	43	12	14	25	14 59	
8	300	23.0		23.5	306	41.1	160	+5	04.4	118	35	21	4 53	19	16	28	10 56	
9	315	23.1		24.4	321	16.1	161		16.2	118	30	31	5 01	25	19	30	06 54	
10	330	23.3		25.2	335	51.2	160		28.0	117	20	47	14	37	23	34	18 00 49	
11	345	23.4	+12	26.0	350	26.2	160	+5	39.7	117	10 N	4 59	5 25	5 46	5 26	38	17 54 46	
12	0	23.5	+12	26.9	5	01.2	160	+5	51.4	117	0	5 09	5 34	5 55	5 29	42	17 49 42	
13	15	23.6		27.7	19	36.2	160	+6	03.1	117	10 S	18	42	6 04	33	45	44 39	
14	30	23.7		28.5	34	11.2	159		14.8	117	20	25	51	13	36	49	39 35	
15	45	23.8		29.4	48	46.1	159		26.5	116	30	31	5 59	24	41	53	33 31	
16	60	24.0		30.2	63	21.0	158		38.1	116	35	34	6 04	30	43	56	29 29	
17	75	24.1	+12	31.0	77	55.8	159	+6	49.7	116	40	5 37	6 09	6 36	5 46	58	17 25 26	
18	90	24.2	+12	31.9	92	30.7	158	+7	01.3	116	45	5 40	6 14	6 44	5 49	62	17 21 22	
19	105	24.3		32.7	107	05.5	157		12.9	116	50	42	20	54	53	65	15 19	
20	120	24.4		33.5	121	40.2	158		24.5	115	52	44	23	6 58	54	68	13 16	
21	135	24.5		34.4	136	15.0	157		36.0	115	54	45	26	7 03	56	70	10 15	
22	150	24.7		35.2	150	49.7	157		47.5	115	56	46	29	08	5 58	73	07 13	
23	165	24.8		36.0	165	24.4	156	+7	59.0	114	58	47	33	14	6 01	75	17 03 11	
24	180	24.9	+12	36.9	179	59.0		+8	10.4		60 S	5 48	6 37	7 21	6 03	78	17 00 7	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 9 ^h 56 ^m 3		Mag: -4.7 PMG: 14 ^h 47 ^m				Mag: +0.5 PMG: 07 ^h 11 ^m				Mag: -2.3 PMG: 05 ^h 51 ^m				Mag: +0.6 PMG: 06 ^h 13 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	210	30.6	138	08.7	+27	11.4	252	12.1	-17	34.0	272	01.3	-20	58.2	266	35.0	-19	52.6
1	225	33.0	153	09.4		11.7	267	12.8		33.5	287	03.6		58.1	281	37.4		52.6
2	240	35.5	168	10.1		11.9	282	13.5		33.1	302	05.9		58.1	296	39.8		52.6
3	255	38.0	183	10.8		12.2	297	14.2		32.6	317	08.2		58.1	311	42.2		52.6
4	270	40.4	198	11.5		12.5	312	14.9		32.2	332	10.5		58.0	326	44.6		52.6
5	285	42.9	213	12.2	+27	12.7	327	15.6	-17	31.7	347	12.7	-20	58.0	341	46.9	-19	52.5
6	300	45.4	228	13.0	+27	13.0	342	16.3	-17	31.2	2	15.0	-20	58.0	356	49.3	-19	52.5
7	315	47.8	243	13.7		13.2	357	17.1		30.8	17	17.3		58.0	11	51.7		52.5
8	330	50.3	258	14.4		13.5	12	17.8		30.3	32	19.6		57.9	26	54.1		52.5
9	345	52.8	273	15.1		13.7	27	18.5		29.8	47	21.9		57.9	41	56.5		52.5
10	0	55.2	288	15.9		14.0	42	19.2		29.4	62	24.2		57.9	56	58.9		52.5
11	15	57.7	303	16.6	+27	14.2	57	19.9	-17	28.9	77	26.4	-20	57.9	72	01.2	-19	52.5
12	31	00.1	318	17.3	+27	14.5	72	20.6	-17	28.5	92	28.7	-20	57.8	87	03.6	-19	52.5
13	46	02.6	333	18.1		14.7	87	21.3		28.0	107	31.0		57.8	102	06.0		52.4
14	61	05.1	348	18.8		15.0	102	22.0		27.5	122	33.3		57.8	117	08.4		52.4
15	76	07.5	3	19.5		15.2	117	22.8		27.1	137	35.6		57.8	132	10.8		52.4
16	91	10.0	18	20.3		15.5	132	23.5		26.6	152	37.9		57.7	147	13.2		52.4
17	106	12.5	33	21.0	+27	15.7	147	24.2	-17	26.1	167	40.2	-20	57.7	162	15.6	-19	52.4
18	121	14.9	48	21.8	+27	16.0	162	24.9	-17	25.7	182	42.4	-20	57.7	177	17.9	-19	52.4
19	136	17.4	63	22.5		16.2	177	25.6		25.2	197	44.7		57.7	192	20.3		52.4
20	151	19.9	78	23.2		16.4	192	26.3		24.7	212	47.0		57.6	207	22.7		52.4
21	166	22.3	93	24.0		16.7	207	27.0		24.3	227	49.3		57.6	222	25.1		52.3
22	181	24.8	108	24.8		16.9	222	27.8		23.8	242	51.6		57.6	237	27.5		52.3
23	196	27.3	123	25.5		17.2	237	28.5		23.3	257	53.9		57.5	252	29.9		52.3
24	211	29.7	138	26.3	+27	17.4	252	29.2	-17	22.9	272	56.2	-20	57.5	267	32.3	-19	52.3
Dif.	—		+7		+2		+7		+5		+23		0		+24		0	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'9				SD: 14'8												PHE {	
	PMG: 11 ^h 58 ^m 2				Edad: 29 ^d 6													{ 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.					
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	180	24.9	+12	36.9	179	59.0	156	+8	10.4	114	60 N	19 39	20 29	21 40	5 05	8	19 59 80	
1	195	25.0		37.7	194	33.6	156		21.8	114	58	31	17	19	10	11	52 77	
2	210	25.1		38.5	209	08.2	155		33.2	114	56	24	20 06	21 03	14	14	46 74	
3	225	25.2		39.3	223	42.7	155		44.6	113	54	18	19 58	20 49	18	17	40 72	
4	240	25.4		40.2	238	17.2	154	+8	55.9	113	52	12	50	37	22	18	35 69	
5	255	25.5	+12	41.0	252	51.6	155	+9	07.2	113	50	19 07	19 42	20 27	5 25	20	19 31 67	
6	270	25.6	+12	41.8	267	26.1	153	+9	18.5	112	45	18 56	19 28	20 06	5 33	23	19 21 63	
7	285	25.7		42.7	282	00.4	154		29.7	112	40	47	16	19 50	39	27	13 60	
8	300	25.8		43.5	296	34.8	153		40.9	112	35	39	19 06	38	44	30	06 57	
9	315	25.9		44.3	311	09.1	152	+9	52.1	111	30	33	18 57	27	49	32	19 00 55	
10	330	26.0		45.1	325	43.3	152	+10	03.2	111	20	21	44	19 10	5 57	36	18 49 51	
11	345	26.2	+12	46.0	340	17.5	152	+10	14.3	111	10 N	18 11	18 33	18 58	6 04	40	18 40 47	
12	0	26.3	+12	46.8	354	51.7	151	+10	25.4	110	0	18 02	18 23	18 47	6 11	43	18 31 45	
13	15	26.4		47.6	9	25.8	151		36.4	110	10 S	17 52	14	39	18	46	23 41	
14	30	26.5		48.4	23	59.9	150		47.4	109	20	43	18 05	31	25	50	14 37	
15	45	26.6		49.3	38	33.9	150	+10	58.3	109	30	32	17 56	24	34	54	18 04 33	
16	60	26.7		50.1	53	07.9	150	+11	09.2	109	35	26	52	21	39	56	17 58 31	
17	75	26.8	+12	50.9	67	41.9	149	+11	20.1	108	40	17 19	17 46	18 18	6 44	60	17 51 28	
18	90	26.9	+12	51.7	82	15.8	148	+11	30.9	108	45	17 10	17 41	18 15	6 51	63	17 43 25	
19	105	27.0		52.6	96	49.6	148		41.7	108	50	17 01	34	12	6 58	67	34 21	
20	120	27.2		53.4	111	23.4	148	+11	52.5	107	52	16 56	31	11	7 02	69	29 20	
21	135	27.3		54.2	125	57.2	147	+12	03.2	106	54	51	28	09	06	71	25 17	
22	150	27.4		55.0	140	30.9	146		13.8	106	56	46	24	08	11	73	20 15	
23	165	27.5		55.9	155	04.5	146		24.4	106	58	40	21	07	16	76	14 12	
24	180	27.6	+12	56.7	169	38.1		+12	35.0		60 S	16 33	17 17	18 05	7 21	80	17 07 10	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 52 ^m 4		Mag: -4.7 PMG: 14 ^h 45 ^m				Mag: +0.5 PMG: 07 ^h 10 ^m				Mag: -2.3 PMG: 05 ^h 47 ^m				Mag: +0.6 PMG: 06 ^h 09 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	211	29.7	138	26.3	+27	17.4	252	29.2	-17	22.9	272	56.2	-20	-57.5	267	32.3	-19	52.3
1	226	32.2	153	27.0		17.6	267	29.9		22.4	287	58.5		-57.5	282	34.7		52.3
2	241	34.6	168	27.8		17.9	282	30.6		21.9	303	00.7		-57.5	297	37.0		52.3
3	256	37.1	183	28.6		18.1	297	31.3		21.5	318	03.0		-57.4	312	39.4		52.3
4	271	39.6	198	29.3		18.3	312	32.1		21.0	333	05.3		-57.4	327	41.8		52.2
5	286	42.0	213	30.1	+27	18.6	327	32.8	-17	20.5	348	07.6	-20	-57.4	342	44.2	-19	52.2
6	301	44.5	228	30.9	+27	18.8	342	33.5	-17	20.1	3	09.9	-20	-57.4	357	46.6	-19	52.2
7	316	47.0	243	31.6		19.0	357	34.2		19.6	18	12.2		-57.3	12	49.0		52.2
8	331	49.4	258	32.4		19.3	12	34.9		19.1	33	14.5		-57.3	27	51.4		52.2
9	346	51.9	273	33.2		19.5	27	35.6		18.7	48	16.8		-57.3	42	53.8		52.2
10	1	54.4	288	34.0		19.7	42	36.4		18.2	63	19.1		-57.3	57	56.1		52.2
11	16	56.8	303	34.8	+27	20.0	57	37.1	-17	17.7	78	21.4	-20	-57.2	72	58.5	-19	52.2
12	31	59.3	318	35.5	+27	20.2	72	37.8	-17	17.3	93	23.7	-20	-57.2	88	00.9	-19	52.1
13	47	01.7	333	36.3		20.4	87	38.5		16.8	108	25.9		-57.2	103	03.3		52.1
14	62	04.2	348	37.1		20.6	102	39.2		16.3	123	28.2		-57.2	118	05.7		52.1
15	77	06.7	3	37.9		20.9	117	39.9		15.8	138	30.5		-57.1	133	08.1		52.1
16	92	09.1	18	38.7		21.1	132	40.7		15.4	153	32.8		-57.1	148	10.5		52.1
17	107	11.6	33	39.5	+27	21.3	147	41.4	-17	14.9	168	35.1	-20	-57.1	163	12.9	-19	52.1
18	122	14.1	48	40.3	+27	21.5	162	42.1	-17	14.4	183	37.4	-20	-57.1	178	15.3	-19	52.1
19	137	16.5	63	41.1		21.8	177	42.8		14.0	198	39.7		-57.0	193	17.7		52.1
20	152	19.0	78	41.9		22.0	192	43.5		13.5	213	42.0		-57.0	208	20.0		52.1
21	167	21.5	93	42.7		22.2	207	44.3		13.0	228	44.3		-57.0	223	22.4		52.0
22	182	23.9	108	43.5		22.4	222	45.0		12.6	243	46.6		-57.0	238	24.8		52.0
23	197	26.4	123	44.3		22.6	237	45.7		12.1	258	48.9		-56.9	253	27.2		52.0
24	212	28.9	138	45.2	+27	22.9	252	46.4	-17	11.6	273	51.2	-20	-56.9	268	29.6	-19	52.0
Dif.	—		+8		+2		+7		+5		+23		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 1				SD: 14'8 Edad: 0 ^d 9 PMG: 13 ^h 05 ^m					PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7			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	180	27.6	+12	56.7	169	38.1	146	+12	35.0	105	60 N	2 15	3 27	4 16	5 13	12	21 19	81	
1	195	27.7		57.5	184	11.7	145		45.5	105	58	36	39	24	21 15		09	77	
2	210	27.8		58.3	198	45.2	144	+12	56.0	104	56	2 53	49	31	28 18		21 00	74	
3	225	27.9	+12	59.1	213	18.6	144	+13	06.4	103	54	3 07	3 58	38	35 19		20 52	71	
4	240	28.0	+13	00.0	227	52.0	144		16.7	104	52	18	4 06	43	40 22		44	70	
5	255	28.2	+13	00.8	242	25.4	142	+13	27.1	102	50	3 29	4 13	4 49	5 45	24	20 38	68	
6	270	28.3	+13	01.6	256	58.6	143	+13	37.3	102	45	3 49	4 28	5 00	5 56	28	20 24	64	
7	285	28.4		02.4	271	31.9	142		47.5	102	40	4 05	40	09	6 06	30	13	61	
8	300	28.5		03.2	286	05.1	141	+13	57.7	101	35	18	50	17	14 33		20 03	59	
9	315	28.6		04.1	300	38.2	140	+14	07.8	101	30	29	4 58	23	21 35		19 55	56	
10	330	28.7		04.9	315	11.2	141		17.9	100	20	46	5 12	35	33 39		40	53	
11	345	28.8	+13	05.7	329	44.3	139	+14	27.9	99	10 N	4 58	5 24	5 45	6 44	42	19 27	50	
12	0	28.9	+13	06.5	344	17.2	139	+14	37.8	99	0	5 09	5 33	5 55	6 54	46	19 16	46	
13	15	29.0		07.3	358	50.1	139		47.7	98	10 S	18	42	6 04	7 04	49	19 04	44	
14	30	29.1		08.1	13	23.0	137	+14	57.5	98	20	25	5 51	14	15 52		18 51	41	
15	45	29.2		09.0	27	55.7	138	+15	07.3	97	30	32	6 00	25	28 56		37	37	
16	60	29.3		09.8	42	28.5	136		17.0	96	35	35	05	31	35 58		29	35	
17	75	29.5	+13	10.6	57	01.1	136	+15	26.6	96	40	5 39	6 11	6 38	7 44	60	18 19	33	
18	90	29.6	+13	11.4	71	33.7	136	+15	36.2	96	45	5 42	6 16	6 47	7 54	63	18 08	30	
19	105	29.7		12.2	86	06.3	134		45.8	94	50	45	23	6 57	8 05	68	17 55	26	
20	120	29.8		13.0	100	38.7	135	+15	55.2	94	52	47	26	7 01	11 70		49	24	
21	135	29.9		13.9	115	11.2	133	+16	04.6	93	54	48	29	06	17 72		42	22	
22	150	30.0		14.7	129	43.5	133		13.9	93	56	49	33	12	24 75		35	19	
23	165	30.1		15.5	144	15.8	133		23.2	92	58	51	37	18	8 32	77	17 26	17	
24	180	30.2	+13	16.3	158	48.1		+16	32.4		60 S	5 52	6 41	7 25	8 41	81	17 17	13	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 48 ^m 5		Mag: -4.7 PMG: 14 ^h 44 ^m				Mag: +0.5 PMG: 07 ^h 09 ^m				Mag: -2.3 PMG: 05 ^h 44 ^m				Mag: +0.6 PMG: 06 ^h 05 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	212	28.9	138	45.2	+27	22.9	252	46.4	-17	11.6	273	51.2	-20	56.9	268	29.6	-19	52.0
1	227	31.3	153	46.0		23.1	267	47.1		11.1	288	53.5		56.9	283	32.0		52.0
2	242	33.8	168	46.8		23.3	282	47.9		10.7	303	55.8		56.9	298	34.4		52.0
3	257	36.2	183	47.6		23.5	297	48.6		10.2	318	58.1		56.8	313	36.8		52.0
4	272	38.7	198	48.4		23.7	312	49.3		09.7	334	00.4		56.8	328	39.2		52.0
5	287	41.2	213	49.3	+27	23.9	327	50.0	-17	09.2	349	02.7	-20	56.8	343	41.6	-19	51.9
6	302	43.6	228	50.1	+27	24.1	342	50.7	-17	08.8	4	05.0	-20	56.8	358	44.0	-19	51.9
7	317	46.1	243	50.9		24.4	357	51.5		08.3	19	07.3		56.7	13	46.4		51.9
8	332	48.6	258	51.8		24.6	12	52.2		07.8	34	09.6		56.7	28	48.7		51.9
9	347	51.0	273	52.6		24.8	27	52.9		07.4	49	11.9		56.7	43	51.1		51.9
10	2	53.5	288	53.4		25.0	42	53.6		06.9	64	14.2		56.7	58	53.5		51.9
11	17	56.0	303	54.3	+27	25.2	57	54.3	-17	06.4	79	16.5	-20	56.7	73	55.9	-19	51.9
12	32	58.4	318	55.1	+27	25.4	72	55.1	-17	05.9	94	18.8	-20	56.6	88	58.3	-19	51.9
13	48	00.9	333	56.0		25.6	87	55.8		05.5	109	21.1		56.6	104	00.7		51.9
14	63	03.4	348	56.8		25.8	102	56.5		05.0	124	23.4		56.6	119	03.1		51.8
15	78	05.8	3	57.6		26.0	117	57.2		04.5	139	25.7		56.6	134	05.5		51.8
16	93	08.3	18	58.5		26.2	132	58.0		04.0	154	28.0		56.5	149	07.9		51.8
17	108	10.7	33	59.4	+27	26.4	147	58.7	-17	03.6	169	30.3	-20	56.5	164	10.3	-19	51.8
18	123	13.2	49	00.2	+27	26.6	162	59.4	-17	03.1	184	32.6	-20	56.5	179	12.7	-19	51.8
19	138	15.7	64	01.1		26.8	178	00.1		02.6	199	34.9		56.5	194	15.1		51.8
20	153	18.1	79	01.9		27.0	193	00.8		02.1	214	37.2		56.4	209	17.5		51.8
21	168	20.6	94	02.8		27.2	208	01.6		01.7	229	39.5		56.4	224	19.9		51.8
22	183	23.1	109	03.7		27.4	223	02.3		01.2	244	41.8		56.4	239	22.3		51.8
23	198	25.5	124	04.5		27.6	238	03.0		00.7	259	44.1		56.4	254	24.7		51.7
24	213	28.0	139	05.4	+27	27.8	253	03.7	-17	00.2	274	46.4	-20	56.3	269	27.0	-19	51.7
Dif.	—		+8		+2		+7		+5		+23		0		+24			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9			SD: 14'9			PHE { 4 ^h : 54'8 12 ^h : 54'9 20 ^h : 55'1										
	PMG: 11 ^h 57 ^m 9			Edad: 1 ^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		
0	180	30.2	+13 16.3	158	48.1	131	+16 32.4	91	60 N	19 44	20 35	21 49	5 25	16	22 40	78	
1	195	30.3		173	20.2	131		41.5	58	36	22	26	36	20	26	75	
2	210	30.4		187	52.3	131		50.6	56	28	11	21 09	46	22	14	72	
3	225	30.5		202	24.4	130	+16 59.6	89	54	21	20 02	20 54	5 54	25	22 03	70	
4	240	30.6		216	56.4	129	+17 08.5	88	52	15	19 53	42	6 02	27	21 54	68	
5	255	30.7	+13 20.4	231	28.3	128	+17 17.3	88	50	19 10	19 46	20 31	6 09	29	21 46	66	
6	270	30.8	+13 21.2	246	00.1	128	+17 26.1	87	45	18 59	19 30	20 10	6 24	32	21 28	63	
7	285	30.9		260	31.9	128		34.8	40	49	18	19 53	36	35	14	60	
8	300	31.0		275	03.7	126		43.4	35	41	19 08	40	47	37	21 02	58	
9	315	31.1		289	35.3	126	+17 52.0	85	30	34	18 59	29	6 56	40	20 51	57	
10	330	31.2		304	06.9	125	+18 00.5	84	20	22	44	19 11	7 12	43	33	54	
11	345	31.3	+13 25.2	318	38.4	125	+18 08.9	83	10 N	18 11	18 33	18 58	7 26	46	20 17	52	
12	0	31.4	+13 26.0	333	09.9	124	+18 17.2	82	0	18 01	18 23	18 47	7 40	48	20 02	50	
13	15	31.6		347	41.3	123		25.4	10 S	17 52	13	38	7 53	51	19 48	47	
14	30	31.7		2	12.6	123		33.6	20	41	18 04	30	8 07	54	32	45	
15	45	31.8		16	43.9	122		41.7	30	30	17 55	23	24	56	14	42	
16	60	31.9		31	15.1	121		49.7	35	23	49	19	33	59	19 04	40	
17	75	32.0	+13 30.1	45	46.2	121	+18 57.6	78	40	17 16	17 44	18 16	8 44	61	18 52	38	
18	90	32.1	+13 30.9	60	17.3	120	+19 05.4	78	45	17 07	17 38	18 12	8 57	64	18 38	36	
19	105	32.2		74	48.3	119		13.2	50	16 57	31	08	9 13	68	21	32	
20	120	32.3		89	19.2	119		20.9	52	52	27	07	21	69	13	31	
21	135	32.4		103	50.1	118		28.4	54	47	24	05	29	72	18 04	29	
22	150	32.5		118	20.9	117		35.9	56	41	20	04	39	73	17 54	27	
23	165	32.6		132	51.6	117		43.3	58	34	16	02	9 49	77	43	24	
24	180	32.7	+13 35.7	147	22.3		+19 50.7		60 S	16 27	17 12	18 00	10 02	80	17 30	20	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 9 ^h 44 ^m 5		Mag: -4.7 PMG: 14 ^h 43 ^m			Mag: +0.5 PMG: 07 ^h 07 ^m			Mag: -2.3 PMG: 05 ^h 40 ^m			Mag: +0.6 PMG: 06 ^h 01 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	213	28.0	139	05.4	+27 27.8	253	03.7	-17 00.2	274	46.4	-20 -56.3	269	27.0	-19 51.7			
1	228	30.5	154	06.3		268	04.5	-16 59.8	289	48.7	-56.3	284	29.4		51.7		
2	243	32.9	169	07.2		283	05.2		304	51.0	-56.3	299	31.8		51.7		
3	258	35.4	184	08.0		298	05.9		319	53.3	-56.3	314	34.2		51.7		
4	273	37.8	199	08.9		313	06.6		334	55.6	-56.3	329	36.6		51.7		
5	288	40.3	214	09.8	+27 28.8	328	07.4	-16 57.8	349	57.9	-20 -56.2	344	39.0	-19 51.7			
6	303	42.8	229	10.7	+27 29.0	343	08.1	-16 57.4	5	00.2	-20 -56.2	359	41.4	-19 51.7			
7	318	45.2	244	11.6		358	08.8		20	02.5	-56.2	14	43.8		51.7		
8	333	47.7	259	12.5		13	09.5		35	04.8	-56.2	29	46.2		51.6		
9	348	50.2	274	13.4		28	10.3		50	07.2	-56.1	44	48.6		51.6		
10	3	52.6	289	14.3		43	11.0		65	09.5	-56.1	59	51.0		51.6		
11	18	55.1	304	15.2	+27 29.9	58	11.7	-16 55.0	80	11.8	-20 -56.1	74	53.4	-19 51.6			
12	33	57.6	319	16.1	+27 30.1	73	12.4	-16 54.5	95	14.1	-20 -56.1	89	55.8	-19 51.6			
13	49	00.0	334	17.0		88	13.2		110	16.4	-56.1	104	58.2		51.6		
14	64	02.5	349	17.9		103	13.9		125	18.7	-56.0	120	00.6		51.6		
15	79	05.0	4	18.8		118	14.6		140	21.0	-56.0	135	03.0		51.6		
16	94	07.4	19	19.7		133	15.3		155	23.3	-56.0	150	05.4		51.6		
17	109	09.9	34	20.6	+27 31.0	148	16.1	-16 52.1	170	25.6	-20 -56.0	165	07.8	-19 51.6			
18	124	12.3	49	21.5	+27 31.2	163	16.8	-16 51.6	185	27.9	-20 -55.9	180	10.2	-19 51.5			
19	139	14.8	64	22.4		178	17.5		200	30.2	-55.9	195	12.6		51.5		
20	154	17.3	79	23.4		193	18.3		215	32.6	-55.9	210	15.0		51.5		
21	169	19.7	94	24.3		208	19.0		230	34.9	-55.9	225	17.4		51.5		
22	184	22.2	109	25.2		223	19.7		245	37.2	-55.9	240	19.8		51.5		
23	199	24.7	124	26.2		238	20.4		260	39.5	-55.8	255	22.2		51.5		
24	214	27.1	139	27.1	+27 32.2	253	21.2	-16 48.7	275	41.8	-20 -55.8	270	24.6	-19 51.5			
Dif.	—		+9		+2	+7		+5	+23		0		+24				

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9				SD: 15°0		PHE { 4 ^h : 55°2 12 ^h : 55°4 20 ^h : 55°5					Edad: 2 ^d 9			Rº: 51 ^m					
	PMG: 11 ^h 57 ^m 7				PMG: 14 ^h 40 ^m															
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m				
0	180	32.7	+13	35.7	147	22.3	116	+19	50.7	72	60 N	2 06	3 20	4 11	5 41	26	23 58 70			
1	195	32.8		36.5	161	52.9	115	+19	57.9	71	58	28	33	19	5 56	28	41 67			
2	210	32.9		37.3	176	23.4	115	+20	05.0	71	56	2 46	44	27	6 08	32	26 66			
3	225	33.0		38.1	190	53.9	114		12.1	69	54	3 01	3 53	33	19	34	13 65			
4	240	33.1		38.9	205	24.3	113		19.0	69	52	13	4 02	39	29	35	23 02 63			
5	255	33.2	+13	39.7	219	54.6	113	+20	25.9	68	50	3 24	4 09	4 45	6 38	36	22 52 62			
6	270	33.3	+13	40.5	234	24.9	112	+20	32.7	66	45	3 46	4 25	4 57	6 56	40	22 31 61			
7	285	33.4		41.3	248	55.1	111		39.3	66	40	4 02	37	5 06	7 11	42	14 59			
8	300	33.5		42.1	263	25.2	111		45.9	65	35	16	48	14	24	43	22 00 58			
9	315	33.6		42.9	277	55.3	110		52.4	64	30	27	4 56	22	36	44	21 48 57			
10	330	33.7		43.7	292	25.3	109	+20	58.8	63	20	44	5 11	34	7 55	47	27 55			
11	345	33.8	+13	44.5	306	55.2	109	+21	05.1	61	10 N	4 57	5 23	5 44	8 12	49	21 09 53			
12	0	33.9	+13	45.3	321	25.1	108	+21	11.2	61	0	5 08	5 33	5 54	8 28	51	20 52 52			
13	15	34.0		46.1	335	54.9	107		17.3	60	10 S	18	43	6 04	8 44	52	35 51			
14	30	34.1		46.9	350	24.6	107		23.3	59	20	26	5 52	14	9 01	55	20 17 49			
15	45	34.2		47.7	4	54.3	106		29.2	58	30	33	6 02	26	20	58	19 56 47			
16	60	34.3		48.5	19	23.9	105		35.0	56	35	37	07	33	32	59	44 46			
17	75	34.3	+13	49.3	33	53.4	105	+21	40.6	56	40	5 41	6 12	6 40	9 45	61	19 30 45			
18	90	34.4	+13	50.1	48	22.9	104	+21	46.2	55	45	5 44	6 19	6 49	10 01	62	19 14 43			
19	105	34.5		50.9	62	52.3	104		51.7	53	50	48	26	7 00	21	65	18 53 41			
20	120	34.6		51.7	77	21.7	103	+21	57.0	53	52	49	29	05	30	66	44 39			
21	135	34.7		52.5	91	51.0	102	+22	02.3	51	54	51	33	10	41	67	33 38			
22	150	34.8		53.3	106	20.2	102		07.4	51	56	53	37	16	10 52	70	21 36			
23	165	34.9		54.1	120	49.4	101		12.5	49	58	54	41	23	11 06	72	18 07 34			
24	180	35.0	+13	54.9	135	18.5		+22	17.4		60 S	5 56	6 45	7 30	11 22	76	17 50 31			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 9 ^h 40 ^m 6		Mag: -4.7 PMG: 14 ^h 41 ^m				Mag: +0.5 PMG: 07 ^h 06 ^m				Mag: -2.3 PMG: 05 ^h 36 ^m				Mag: +0.6 PMG: 05 ^h 57 ^m					
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	214	27.1	139	27.1	+27	32.2	253	21.2	-16	48.7	275	41.8	-20	55.8	270	24.6	-19	51.5		
1	229	29.6	154	28.0		32.4	268	21.9		48.2	290	44.1		55.8	285	27.0		51.5		
2	244	32.1	169	29.0		32.6	283	22.6		47.8	305	46.4		55.8	300	29.4		51.5		
3	259	34.5	184	29.9		32.7	298	23.3		47.3	320	48.7		55.7	315	31.8		51.4		
4	274	37.0	199	30.8		32.9	313	24.1		46.8	335	51.1		55.7	330	34.2		51.4		
5	289	39.5	214	31.8	+27	33.1	328	24.8	-16	46.3	350	53.4	-20	55.7	345	36.6	-19	51.4		
6	304	41.9	229	32.7	+27	33.3	343	25.5	-16	45.8	5	55.7	-20	55.7	0	39.0	-19	51.4		
7	319	44.4	244	33.7		33.4	358	26.3		45.4	20	58.0		55.7	15	41.4		51.4		
8	334	46.8	259	34.6		33.6	13	27.0		44.9	36	00.3		55.6	30	43.8		51.4		
9	349	49.3	274	35.6		33.8	28	27.7		44.4	51	02.6		55.6	45	46.2		51.4		
10	4	51.8	289	36.6		33.9	43	28.5		43.9	66	04.9		55.6	60	48.6		51.4		
11	19	54.2	304	37.5	+27	34.1	58	29.2	-16	43.4	81	07.3	-20	55.6	75	51.0	-19	51.4		
12	34	56.7	319	38.5	+27	34.2	73	29.9	-16	42.9	96	09.6	-20	55.6	90	53.4	-19	51.4		
13	49	59.2	334	39.4		34.4	88	30.6		42.5	111	11.9		55.5	105	55.8		51.4		
14	65	01.6	349	40.4		34.6	103	31.4		42.0	126	14.2		55.5	120	58.2		51.3		
15	80	04.1	4	41.4		34.7	118	32.1		41.5	141	16.5		55.5	136	00.6		51.3		
16	95	06.6	19	42.4		34.9	133	32.8		41.0	156	18.8		55.5	151	03.0		51.3		
17	110	09.0	34	43.3	+27	35.1	148	33.6	-16	40.5	171	21.2	-20	55.5	166	05.4	-19	51.3		
18	125	11.5	49	44.3	+27	35.2	163	34.3	-16	40.0	186	23.5	-20	55.4	181	07.8	-19	51.3		
19	140	13.9	64	45.3		35.4	178	35.0		39.5	201	25.8		55.4	196	10.2		51.3		
20	155	16.4	79	46.3		35.5	193	35.8		39.1	216	28.1		55.4	211	12.6		51.3		
21	170	18.9	94	47.3		35.7	208	36.5		38.6	231	30.4		55.4	226	15.0		51.3		
22	185	21.3	109	48.3		35.8	223	37.2		38.1	246	32.7		55.3	241	17.4		51.3		
23	200	23.8	124	49.3		36.0	238	38.0		37.6	261	35.1		55.3	256	19.8		51.3		
24	215	26.3	139	50.3	+27	36.1	253	38.7	-16	37.1	276	37.4	-20	55.3	271	22.2	-19	51.2		
Dif.	—		+10		+2		+7		+5		+23		0		+24					

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 57 ^m 6				SD: 15°2 Edad: 3 ^d 9 PMG: 15 ^h 31 ^m PHE { 4 ^h : 55°7 12 ^h : 55°9 20 ^h : 56°1 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	180	35.0	+13	54.9	135	18.5	100	+22	17.4	48	60 N	19 49	20 41	21 58	6 07	39	*** ** *		
1	195	35.1		55.7	149	47.5	100		22.2	47	58	40	27	34	24	42	*** ** *		
2	210	35.2		56.4	164	16.5	99		26.9	46	56	32	16	21 15	40	43	*** ** *		
3	225	35.3		57.2	178	45.4	98		31.5	45	54	25	20 06	20 59	6 53	44	*** ** *		
4	240	35.4		58.0	193	14.2	98		36.0	43	52	19	19 57	46	7 04	45	*** ** *		
5	255	35.5	+13	58.8	207	43.0	98	+22	40.3	43	50	19 13	19 49	20 35	7 14	46	23 54 56		
6	270	35.6	+13	59.6	222	11.8	96	+22	44.6	41	45	19 01	19 33	20 13	7 36	47	23 32 55		
7	285	35.7	+14	00.4	236	40.4	97		48.7	41	40	18 51	20	19 55	7 53	49	23 13 55		
8	300	35.8		01.2	251	09.1	95		52.8	39	35	43	09	42	8 07	50	22 58 55		
9	315	35.9		02.0	265	37.6	95	+22	56.7	37	30	35	19 00	30	20	51	45 54		
10	330	36.0		02.8	280	06.1	95	+23	00.4	37	20	22	18 45	19 12	8 42	51	22 55		
11	345	36.1	+14	03.6	294	34.6	94	+23	04.1	36	10 N	18 11	18 33	18 58	9 01	52	22 02 55		
12	0	36.2	+14	04.4	309	03.0	93	+23	07.7	34	0	18 01	18 22	18 47	9 19	53	21 44 54		
13	15	36.2		05.1	323	31.3	93		11.1	33	10 S	17 51	12	37	36	55	26 54		
14	30	36.3		05.9	337	59.6	92		14.4	32	20	40	18 03	29	9 56	55	21 06 54		
15	45	36.4		06.7	352	27.8	92		17.6	31	30	28	17 53	21	10 18	56	20 43 54		
16	60	36.5		07.5	6	56.0	91		20.7	29	35	21	47	17	31	56	30 53		
17	75	36.6	+14	08.3	21	24.1	91	+23	23.6	28	40	17 13	17 41	18 13	10 46	57	20 15 52		
18	90	36.7	+14	09.1	35	52.2	90	+23	26.4	27	45	17 04	17 35	18 09	11 03	59	19 57 52		
19	105	36.8		09.9	50	20.2	90		29.1	26	50	16 53	27	05	26	59	34 51		
20	120	36.9		10.7	64	48.2	89		31.7	25	52	48	24	03	36	60	23 51		
21	135	37.0		11.4	79	16.1	89		34.2	23	54	43	20	02	11 48	61	19 11 50		
22	150	37.1		12.2	93	44.0	88		36.5	22	56	36	16	18 00	12 02	61	18 57 50		
23	165	37.2		13.0	108	11.8	88		38.7	21	58	30	11	17 58	18	63	41 48		
24	180	37.3	+14	13.8	122	39.6		+23	40.8		60 S	16 22	17 07	17 56	12 38	64	18 21 47		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 9 ^h 36 ^m 7		Mag: -4.7 PMG: 14 ^h 40 ^m				Mag: +0.5 PMG: 07 ^h 05 ^m				Mag: -2.3 PMG: 05 ^h 33 ^m				Mag: +0.6 PMG: 05 ^h 54 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	215	26.3	139	50.3	+27	36.1	253	38.7	-16	37.1	276	37.4	-20	-55.3	271	22.2	-19	51.2	
1	230	28.7	154	51.3		36.3	268	39.4		36.6	291	39.7		-55.3	286	24.6		51.2	
2	245	31.2	169	52.3		36.4	283	40.2		36.1	306	42.0		-55.3	301	27.0		51.2	
3	260	33.7	184	53.3		36.6	298	40.9		35.7	321	44.3		-55.2	316	29.4		51.2	
4	275	36.1	199	54.3		36.7	313	41.6		35.2	336	46.7		-55.2	331	31.8		51.2	
5	290	38.6	214	55.3	+27	36.9	328	42.4	-16	34.7	351	49.0	-20	-55.2	346	34.2	-19	51.2	
6	305	41.1	229	56.3	+27	37.0	343	43.1	-16	34.2	6	51.3	-20	-55.2	1	36.7	-19	51.2	
7	320	43.5	244	57.3		37.2	358	43.8		33.7	21	53.6		-55.2	16	39.1		51.2	
8	335	46.0	259	58.3		37.3	13	44.6		33.2	36	56.0		-55.1	31	41.5		51.2	
9	350	48.4	274	59.3		37.5	28	45.3		32.7	51	58.3		-55.1	46	43.9		51.2	
10	5	50.9	290	00.4		37.6	43	46.0		32.2	67	00.6		-55.1	61	46.3		51.2	
11	20	53.4	305	01.4	+27	37.8	58	46.8	-16	31.8	82	02.9	-20	-55.1	76	48.7	-19	51.1	
12	35	55.8	320	02.4	+27	37.9	73	47.5	-16	31.3	97	05.3	-20	-55.1	91	51.1	-19	51.1	
13	50	58.3	335	03.5		38.0	88	48.2		30.8	112	07.6		-55.0	106	53.5		51.1	
14	66	00.8	350	04.5		38.2	103	49.0		30.3	127	09.9		-55.0	121	55.9		51.1	
15	81	03.2	5	05.5		38.3	118	49.7		29.8	142	12.2		-55.0	136	58.3		51.1	
16	96	05.7	20	06.6		38.5	133	50.4		29.3	157	14.6		-55.0	152	00.7		51.1	
17	111	08.2	35	07.6	+27	38.6	148	51.2	-16	28.8	172	16.9	-20	-55.0	167	03.1	-19	51.1	
18	126	10.6	50	08.7	+27	38.7	163	51.9	-16	28.3	187	19.2	-20	-55.0	182	05.5	-19	51.1	
19	141	13.1	65	09.7		38.9	178	52.6		27.8	202	21.5		-54.9	197	07.9		51.1	
20	156	15.6	80	10.8		39.0	193	53.4		27.4	217	23.9		-54.9	212	10.3		51.1	
21	171	18.0	95	11.8		39.1	208	54.1		26.9	232	26.2		-54.9	227	12.7		51.1	
22	186	20.5	110	12.9		39.3	223	54.8		26.4	247	28.5		-54.9	242	15.2		51.1	
23	201	22.9	125	13.9		39.4	238	55.6		25.9	262	30.8		-54.9	257	17.6		51.0	
24	216	25.4	140	15.0	+27	39.5	253	56.3	-16	25.4	277	33.2	-20	-54.8	272	20.0	-19	51.0	
Dif.	—		+10		+1		+7		+5		+23		0		+24		0		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9				SD: 15°3 Edad: 4 ^d 9												PHE { 4 ^h : 56°3 12 ^h : 56°5 20 ^h : 56°7	
	PMG: 11 ^h 57 ^m 4				PMG: 16 ^h 25 ^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	180	37.3	+14	13.8	122	39.6	87	+23	40.8	19	60 N	1 56	3 13	4 05	6 46	57	1 08 56	
1	195	37.3		14.6	137	07.3	87		42.7	19	58	2 20	27	14	7 06	57	0 48 56	
2	210	37.4		15.4	151	35.0	87		44.6	16	56	39	38	22	23	57	32 55	
3	225	37.5		16.1	166	02.7	86		46.2	16	54	2 55	48	29	37	57	18 55	
4	240	37.6		16.9	180	30.3	85		47.8	14	52	3 08	3 57	35	7 49	57	0 05 56	
5	255	37.7	+14	17.7	194	57.8	85	+23	49.2	13	50	3 19	4 05	4 41	8 00	57	*** **	
6	270	37.8	+14	18.5	209	25.3	85	+23	50.5	12	45	3 42	4 21	4 53	8 23	57	*** **	
7	285	37.9		19.3	223	52.8	85		51.7	11	40	3 59	34	5 03	42	56	*** **	
8	300	38.0		20.1	238	20.3	84		52.8	9	35	4 13	45	12	8 57	56	23 53 51	
9	315	38.1		20.8	252	47.7	83		53.7	8	30	24	4 54	20	9 11	55	39 52	
10	330	38.1		21.6	267	15.0	84		54.5	6	20	43	5 10	33	33	56	23 17 53	
11	345	38.2	+14	22.4	281	42.4	82	+23	55.1	5	10 N	4 57	5 22	5 44	9 53	56	22 57 54	
12	0	38.3	+14	23.2	296	09.6	83	+23	55.6	4	0	5 08	5 33	5 54	10 12	55	22 38 55	
13	15	38.4		24.0	310	36.9	82		56.0	3	10 S	18	43	6 04	31	54	20 56	
14	30	38.5		24.7	325	04.1	82		56.3	1	20	26	5 52	15	10 51	54	22 00 57	
15	45	38.6		25.5	339	31.3	82		56.4	0	30	34	6 03	27	11 14	53	21 37 58	
16	60	38.7		26.3	353	58.5	81		56.4	2	35	38	08	34	27	53	23 59	
17	75	38.8	+14	27.1	8	25.6	81	+23	56.2	3	40	5 42	6 14	6 42	11 43	53	21 07 60	
18	90	38.8	+14	27.8	22	52.7	81	+23	55.9	4	45	5 46	6 21	6 52	12 02	52	20 49 60	
19	105	38.9		28.6	37	19.8	80		55.5	6	50	51	29	7 03	25	51	25 62	
20	120	39.0		29.4	51	46.8	80		54.9	7	52	52	32	08	36	51	14 63	
21	135	39.1		30.2	66	13.8	80		54.2	8	54	54	36	14	12 49	50	20 01 64	
22	150	39.2		31.0	80	40.8	80		53.4	10	56	56	40	20	13 03	50	19 47 64	
23	165	39.3		31.7	95	07.8	79		52.4	11	58	5 58	45	27	13 21	48	19 29 66	
24	180	39.4	+14	32.5	109	34.7		+23	51.3		60 S	6 00	6 50	7 35	13 42	47	19 08 68	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 32 ^m 7		Mag: -4.7 PMG: 14 ^h 38 ^m				Mag: +0.5 PMG: 07 ^h 04 ^m				Mag: -2.3 PMG: 05 ^h 29 ^m				Mag: +0.6 PMG: 05 ^h 50 ^m			
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	216	25.4	140	15.0	+27	39.5	253	56.3	-16	25.4	277	33.2	-20	54.8	272	20.0	-19	51.0
1	231	27.9	155	16.1		39.7	268	57.1		24.9	292	35.5		54.8	287	22.4		51.0
2	246	30.3	170	17.1		39.8	283	57.8		24.4	307	37.8		54.8	302	24.8		51.0
3	261	32.8	185	18.2		39.9	298	58.5		23.9	322	40.1		54.8	317	27.2		51.0
4	276	35.3	200	19.3		40.1	313	59.3		23.4	337	42.5		54.8	332	29.6		51.0
5	291	37.7	215	20.4	+27	40.2	329	00.0	-16	22.9	352	44.8	-20	54.7	347	32.0	-19	51.0
6	306	40.2	230	21.4	+27	40.3	344	00.7	-16	22.4	7	47.1	-20	54.7	2	34.4	-19	51.0
7	321	42.7	245	22.5		40.4	359	01.5		22.0	22	49.5		54.7	17	36.8		51.0
8	336	45.1	260	23.6		40.6	14	02.2		21.5	37	51.8		54.7	32	39.2		51.0
9	351	47.6	275	24.7		40.7	29	03.0		21.0	52	54.1		54.7	47	41.6		51.0
10	6	50.1	290	25.8		40.8	44	03.7		20.5	67	56.5		54.7	62	44.1		51.0
11	21	52.5	305	26.9	+27	40.9	59	04.4	-16	20.0	82	58.8	-20	54.6	77	46.5	-19	51.0
12	36	55.0	320	28.0	+27	41.0	74	05.2	-16	19.5	98	01.1	-20	54.6	92	48.9	-19	50.9
13	51	57.4	335	29.1		41.2	89	05.9		19.0	113	03.5		54.6	107	51.3		50.9
14	66	59.9	350	30.2		41.3	104	06.6		18.5	128	05.8		54.6	122	53.7		50.9
15	82	02.4	5	31.3		41.4	119	07.4		18.0	143	08.1		54.6	137	56.1		50.9
16	97	04.8	20	32.4		41.5	134	08.1		17.5	158	10.5		54.5	152	58.5		50.9
17	112	07.3	35	33.5	+27	41.6	149	08.9	-16	17.0	173	12.8	-20	54.5	168	00.9	-19	50.9
18	127	09.8	50	34.6	+27	41.7	164	09.6	-16	16.5	188	15.1	-20	54.5	183	03.3	-19	50.9
19	142	12.2	65	35.7		41.9	179	10.3		16.0	203	17.5		54.5	198	05.8		50.9
20	157	14.7	80	36.9		42.0	194	11.1		15.5	218	19.8		54.5	213	08.2		50.9
21	172	17.2	95	38.0		42.1	209	11.8		15.0	233	22.1		54.5	228	10.6		50.9
22	187	19.6	110	39.1		42.2	224	12.6		14.6	248	24.5		54.4	243	13.0		50.9
23	202	22.1	125	40.2		42.3	239	13.3		14.1	263	26.8		54.4	258	15.4		50.9
24	217	24.6	140	41.4	+27	42.4	254	14.0	-16	13.6	278	29.1	-20	54.4	273	17.8	-19	50.9
Dif.	—		+11		+1		+7		+5		+23		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 57 ^m 3				SD: 15°5 Edad: 5 ^d 9 PHE { 4 ^h : 56°9 12 ^h : 57°1 20 ^h : 57°4 PMG: 17 ^h 20 ^m Rº: 55 ^m																
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.		Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m		
0	180	39.4	+14	32.5	109	34.7	80	+23	51.3	12	60 N	19 54	20 47	22 08	7 43	76	2 04	39			
1	195	39.4		33.3	124	01.7	79		50.1	14	58	45	33	21 41	8 03	73	1 44	41			
2	210	39.5		34.0	138	28.6	78		48.7	15	56	36	21	21	20	71	27	43			
3	225	39.6		34.8	152	55.4	79		47.2	16	54	29	10	21 05	34	69	13	45			
4	240	39.7		35.6	167	22.3	78		45.6	18	52	22	20 01	20 51	46	68	1 01	45			
5	255	39.8	+14	36.4	181	49.1	79	+23	43.8	20	50	19 16	19 53	20 39	8 57	67	0 50	46			
6	270	39.9	+14	37.1	196	16.0	78	+23	41.8	20	45	19 04	19 36	20 16	9 20	64	0 27	48			
7	285	39.9		37.9	210	42.8	78		39.8	22	40	18 53	22	19 58	38	63	0 08	50			
8	300	40.0		38.7	225	09.6	78		37.6	24	35	44	11	44	9 53	62	***	***			
9	315	40.1		39.5	239	36.4	77		35.2	24	30	36	19 02	32	10 06	61	***	***			
10	330	40.2		40.2	254	03.1	78		32.8	27	20	23	18 46	19 13	29	59	***	***			
11	345	40.3	+14	41.0	268	29.9	77	+23	30.1	27	10 N	18 11	18 33	18 59	10 49	56	23 51	53			
12	0	40.4	+14	41.8	282	56.6	78	+23	27.4	29	0	18 01	18 22	18 47	11 07	55	23 33	55			
13	15	40.4		42.5	297	23.4	77		24.5	30	10 S	17 50	12	37	25	54	23 16	57			
14	30	40.5		43.3	311	50.1	77		21.5	32	20	39	18 02	28	11 45	52	22 57	59			
15	45	40.6		44.1	326	16.8	77		18.3	33	30	26	17 51	19	12 07	50	35	62			
16	60	40.7		44.8	340	43.5	77		15.0	34	35	19	45	15	20	49	22	64			
17	75	40.8	+14	45.6	355	10.2	77	+23	11.6	36	40	17 11	17 39	18 11	12 36	47	22 07	66			
18	90	40.9	+14	46.4	9	36.9	77	+23	08.0	38	45	17 01	17 32	18 07	12 54	45	21 49	68			
19	105	40.9		47.1	24	03.6	77		04.2	38	50	16 50	24	02	13 16	43	27	71			
20	120	41.0		47.9	38	30.3	77	+23	00.4	40	52	44	20	18 00	27	41	17	72			
21	135	41.1		48.7	52	57.0	77	+22	56.4	41	54	39	16	17 58	39	40	21 05	74			
22	150	41.2		49.4	67	23.7	77		52.3	43	56	32	12	56	13 53	37	20 51	77			
23	165	41.3		50.2	81	50.4	77		48.0	44	58	25	07	54	14 09	35	35	79			
24	180	41.3	+14	51.0	96	17.1		+22	43.6		60 S	16 16	17 02	17 51	14 29	31	20 16	83			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG 9 ^h 28 ^m 8		Mag: -4.7 PMG: 14 ^h 36 ^m				Mag: +0.4 PMG: 07 ^h 03 ^m				Mag: -2.3 PMG: 05 ^h 25 ^m				Mag: +0.6 PMG: 05 ^h 46 ^m						
	hG ♂		hG ♀				hG ♂				hG ♀				hG ♀						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	217	24.6	140	41.4	+27	42.4	254	14.0	-16	13.6	278	29.1	-20	-54.4	273	17.8	-19	50.9			
1	232	27.0	155	42.5		42.5	269	14.8		13.1	293	31.5		-54.4	288	20.2		50.8			
2	247	29.5	170	43.7		42.6	284	15.5		12.6	308	33.8		-54.4	303	22.6		50.8			
3	262	31.9	185	44.8		42.7	299	16.3		12.1	323	36.1		-54.4	318	25.0		50.8			
4	277	34.4	200	45.9		42.8	314	17.0		11.6	338	38.5		-54.3	333	27.5		50.8			
5	292	36.9	215	47.1	+27	43.0	329	17.8	-16	11.1	353	40.8	-20	-54.3	348	29.9	-19	50.8			
6	307	39.3	230	48.2	+27	43.1	344	18.5	-16	10.6	8	43.1	-20	-54.3	3	32.3	-19	50.8			
7	322	41.8	245	49.4		43.2	359	19.2		10.1	23	45.5		-54.3	18	34.7		50.8			
8	337	44.3	260	50.5		43.3	14	20.0		09.6	38	47.8		-54.3	33	37.1		50.8			
9	352	46.7	275	51.7		43.4	29	20.7		09.1	53	50.2		-54.2	48	39.5		50.8			
10	7	49.2	290	52.9		43.5	44	21.5		08.6	68	52.5		-54.2	63	41.9		50.8			
11	22	51.7	305	54.0	+27	43.6	59	22.2	-16	08.1	83	54.8	-20	-54.2	78	44.4	-19	50.8			
12	37	54.1	320	55.2	+27	43.7	74	23.0	-16	07.6	98	57.2	-20	-54.2	93	46.8	-19	50.8			
13	52	56.6	335	56.4		43.8	89	23.7		07.1	113	59.5		-54.2	108	49.2		50.8			
14	67	59.0	350	57.6		43.9	104	24.4		06.6	129	01.9		-54.2	123	51.6		50.8			
15	83	01.5	5	58.7		44.0	119	25.2		06.1	144	04.2		-54.1	138	54.0		50.7			
16	98	04.0	20	59.9		44.1	134	25.9		05.6	159	06.5		-54.1	153	56.4		50.7			
17	113	06.4	36	01.1	+27	44.1	149	26.7	-16	05.1	174	08.9	-20	-54.1	168	58.8	-19	50.7			
18	128	08.9	51	02.3	+27	44.2	164	27.4	-16	04.6	189	11.2	-20	-54.1	184	01.3	-19	50.7			
19	143	11.4	66	03.5		44.3	179	28.2		04.1	204	13.6		-54.1	199	03.7		50.7			
20	158	13.8	81	04.7		44.4	194	28.9		03.6	219	15.9		-54.1	214	06.1		50.7			
21	173	16.3	96	05.9		44.5	209	29.6		03.1	234	18.3		-54.1	229	08.5		50.7			
22	188	18.8	111	07.1		44.6	224	30.4		02.6	249	20.6		-54.0	244	10.9		50.7			
23	203	21.2	126	08.3		44.7	239	31.1		02.1	264	22.9		-54.0	259	13.3		50.7			
24	218	23.7	141	09.5	+27	44.8	254	31.9	-16	01.6	279	25.3	-20	-54.0	274	15.8	-19	50.7			
Dif.	—		+12		+1		+7		+5		+23		0		+24						

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9				SD: 15°7					PHE { 4 ^h : 57°6			Salida de Luna		Puesta de Luna			
	PMG: 11 ^h 57 ^m 2				Edad: 6 ^d 9					{ 12 ^h : 57°9								
					R ^o : 55 ^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	180	41.3	+14	51.0	96	17.1	77	+22	43.6	46	60 N	1 46	3 07	4 00	8 59	89	2 43	25
1	195	41.4		51.7	110	43.8	77		39.0	47	58	2 12	21	09	9 16	85	25	30
2	210	41.5		52.5	125	10.5	77		34.3	48	56	33	33	18	31	81	2 10	33
3	225	41.6		53.3	139	37.2	77		29.5	49	54	2 49	44	25	43	79	1 58	34
4	240	41.6		54.0	154	03.9	78		24.6	51	52	3 03	3 53	32	9 54	77	46	37
5	255	41.7	+14	54.8	168	30.7	77	+22	19.5	53	50	3 15	4 01	4 38	10 04	75	1 36	39
6	270	41.8	+14	55.5	182	57.4	77	+22	14.2	53	45	3 38	4 18	4 50	10 24	71	1 15	42
7	285	41.9		56.3	197	24.1	77		08.9	55	40	3 56	32	5 01	41	68	0 58	44
8	300	42.0		57.1	211	50.8	78	+22	03.4	57	35	4 11	43	10	10 55	66	44	46
9	315	42.0		57.8	226	17.6	77	+21	57.7	57	30	22	4 53	18	11 07	64	31	48
10	330	42.1		58.6	240	44.3	78		52.0	59	20	41	5 08	31	28	60	0 10	50
11	345	42.2	+14	59.3	255	11.1	78	+21	46.1	61	10 N	4 56	5 21	5 43	11 45	58	***	***
12	0	42.3	+15	00.1	269	37.9	78	+21	40.0	61	0	5 08	5 32	5 54	12 02	55	***	***
13	15	42.4		00.9	284	04.7	78		33.9	63	10 S	18	43	6 04	19	52	***	***
14	30	42.4		01.6	298	31.5	78		27.6	65	20	27	5 53	16	37	49	23	56
15	45	42.5		02.4	312	58.3	78		21.1	66	30	35	6 04	29	12	57	46	37
16	60	42.6		03.1	327	25.1	79		14.5	67	35	40	10	36	13	09	44	26
17	75	42.7	+15	03.9	341	52.0	78	+21	07.8	68	40	5 44	6 16	6 44	13	23	41	23
18	90	42.7	+15	04.6	356	18.8	79	+21	01.0	70	45	5 49	6 23	6 54	13	39	38	22
19	105	42.8		05.4	10	45.7	79	+20	54.0	71	50	53	32	7 06	13	59	34	38
20	120	42.9		06.2	25	12.6	79		46.9	72	52	55	35	11	14	08	33	29
21	135	43.0		06.9	39	39.5	79		39.7	73	54	5 57	39	17	19	30		19
22	150	43.0		07.7	54	06.4	80		32.4	75	56	6 00	44	24	30	28	22	08
23	165	43.1		08.4	68	33.4	80		24.9	76	58	02	49	31	14	44	25	21
24	180	43.2	+15	09.2	83	00.4		+20	17.3		60 S	6 04	6 54	7 40	15	00	21	21
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 24 ^m 9		Mag: -4.7 PMG: 14 ^h 34 ^m				Mag: +0.4 PMG: 07 ^h 02 ^m				Mag: -2.3 PMG: 05 ^h 21 ^m				Mag: +0.6 PMG: 05 ^h 42 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	218	23.7	141	09.5	+27	44.8	254	31.9	-16	01.6	279	25.3	-20	54.0	274	15.8	-19	50.7
1	233	26.2	156	10.7		44.9	269	32.6		01.1	294	27.6		54.0	289	18.2		50.7
2	248	28.6	171	11.9		45.0	284	33.4		00.6	309	30.0		54.0	304	20.6		50.7
3	263	31.1	186	13.1		45.0	299	34.1	-16	00.1	324	32.3		54.0	319	23.0		50.7
4	278	33.5	201	14.3		45.1	314	34.9	-15	59.6	339	34.7		53.9	334	25.4		50.7
5	293	36.0	216	15.5	+27	45.2	329	35.6	-15	59.1	354	37.0	-20	53.9	349	27.8	-19	50.7
6	308	38.5	231	16.8	+27	45.3	344	36.4	-15	58.6	9	39.4	-20	53.9	4	30.3	-19	50.6
7	323	40.9	246	18.0		45.4	359	37.1		58.1	24	41.7		53.9	19	32.7		50.6
8	338	43.4	261	19.2		45.5	14	37.8		57.6	39	44.0		53.9	34	35.1		50.6
9	353	45.9	276	20.5		45.5	29	38.6		57.1	54	46.4		53.9	49	37.5		50.6
10	8	48.3	291	21.7		45.6	44	39.3		56.6	69	48.7		53.8	64	39.9		50.6
11	23	50.8	306	22.9	+27	45.7	59	40.1	-15	56.1	84	51.1	-20	53.8	79	42.3	-19	50.6
12	38	53.3	321	24.2	+27	45.8	74	40.8	-15	55.6	99	53.4	-20	53.8	94	44.8	-19	50.6
13	53	55.7	336	25.4		45.8	89	41.6		55.1	114	55.8		53.8	109	47.2		50.6
14	68	58.2	351	26.7		45.9	104	42.3		54.6	129	58.1		53.8	124	49.6		50.6
15	84	00.7	6	27.9		46.0	119	43.1		54.1	145	00.5		53.8	139	52.0		50.6
16	99	03.1	21	29.2		46.1	134	43.8		53.6	160	02.8		53.8	154	54.4		50.6
17	114	05.6	36	30.4	+27	46.1	149	44.6	-15	53.1	175	05.2	-20	53.7	169	56.9	-19	50.6
18	129	08.0	51	31.7	+27	46.2	164	45.3	-15	52.6	190	07.5	-20	53.7	184	59.3	-19	50.6
19	144	10.5	66	33.0		46.3	179	46.1		52.1	205	09.9		53.7	200	01.7		50.6
20	159	13.0	81	34.2		46.4	194	46.8		51.6	220	12.2		53.7	215	04.1		50.6
21	174	15.4	96	35.5		46.4	209	47.6		51.1	235	14.6		53.7	230	06.5		50.6
22	189	17.9	111	36.8		46.5	224	48.3		50.6	250	16.9		53.7	245	09.0		50.6
23	204	20.4	126	38.1		46.6	239	49.1		50.1	265	19.3		53.7	260	11.4		50.5
24	219	22.8	141	39.3	+27	46.6	254	49.8	-15	49.6	280	21.6	-20	53.6	275	13.8	-19	50.5
Dif.	—		+13		+1		+7		+5		+23		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																	
	Edad: 7 ^d 9																					
	PMG: 19 ^h 10 ^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	180	43.2	+15	09.2	83	00.4	79	+20	17.3	78	60 N	19 59	20 53	22 19	10 28	94	3 08	18				
1	195	43.3		09.9	97	27.3	80		09.5	78	58	49	38	21 49	41	90	2 55	21				
2	210	43.3		10.7	111	54.3	81	+20	01.7	80	56	40	25	27	10 52	87	43	24				
3	225	43.4		11.4	126	21.4	80	+19	53.7	81	54	33	14	21 10	11 02	84	32	27				
4	240	43.5		12.2	140	48.4	81		45.6	83	52	26	20 05	20 56	11	81	23	29				
5	255	43.6	+15	12.9	155	15.5	81	+19	37.3	84	50	19 19	19 56	20 43	11 19	79	2 15	31				
6	270	43.6	+15	13.7	169	42.6	81	+19	28.9	84	45	19 06	19 39	20 19	11 35	75	1 57	35				
7	285	43.7		14.4	184	09.7	81		20.5	87	40	18 55	25	20 00	11 49	71	42	39				
8	300	43.8		15.2	198	36.8	82		11.8	87	35	46	13	19 46	12 01	68	30	41				
9	315	43.8		15.9	213	04.0	82	+19	03.1	89	30	38	19 03	33	11	65	19	44				
10	330	43.9		16.7	227	31.2	82	+18	54.2	89	20	24	18 47	19 14	28	61	1 00	48				
11	345	44.0	+15	17.4	241	58.4	82	+18	45.3	91	10 N	18 12	18 34	18 59	12 43	57	0 44	51				
12	0	44.1	+15	18.2	256	25.6	82	+18	36.2	92	0	18 00	18 22	18 47	12 57	54	0 28	55				
13	15	44.1		18.9	270	52.8	83		27.0	94	10 S	17 49	11	36	13 11	50	0 13	57				
14	30	44.2		19.7	285	20.1	83		17.6	94	20	38	18 01	27	26	46	***	***				
15	45	44.3		20.4	299	47.4	83	+18	08.2	96	30	25	17 49	18	43	42	***	***				
16	60	44.3		21.2	314	14.7	84	+17	58.6	97	35	17	43	13	13 53	39	***	***				
17	75	44.4	+15	21.9	328	42.1	84	+17	48.9	98	40	17 08	17 37	18 09	14 04	37	***	***				
18	90	44.5	+15	22.7	343	09.5	84	+17	39.1	99	45	16 58	17 29	18 04	14 17	33	***	***				
19	105	44.6		23.4	357	36.9	84		29.2	101	50	46	20	17 59	33	29	23 56	81				
20	120	44.6		24.2	12	04.3	84		19.1	101	52	41	17	57	41	26	49	83				
21	135	44.7		24.9	26	31.7	85	+17	09.0	103	54	34	12	54	49	24	41	86				
22	150	44.8		25.7	40	59.2	85	+16	58.7	103	56	28	08	52	14 58	22	32	89				
23	165	44.8		26.4	55	26.7	85		48.4	105	58	20	17 03	49	15 09	18	23	92				
24	180	44.9	+15	27.1	69	54.2		+16	37.9		60 S	16 11	16 57	17 47	15 21	14	23 11	97				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 9 ^h 20 ^m 9		Mag: -4.7 PMG: 14 ^h 32 ^m				Mag: +0.4 PMG: 07 ^h 00 ^m				Mag: -2.3 PMG: 05 ^h 18 ^m				Mag: +0.6 PMG: 05 ^h 38 ^m							
	hG ♂		hG ♀				hG ♂				hG ♀				hG ♀							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	219	22.8	141	39.3	+27	46.6	254	49.8	-15	49.6	280	21.6	-20	-53.6	275	13.8	-19	50.5				
1	234	25.3	156	40.6		46.7	269	50.6		49.1	295	24.0		-53.6	290	16.2		50.5				
2	249	27.8	171	41.9		46.8	284	51.3		48.6	310	26.3		-53.6	305	18.6		50.5				
3	264	30.2	186	43.2		46.8	299	52.1		48.1	325	28.7		-53.6	320	21.1		50.5				
4	279	32.7	201	44.5		46.9	314	52.8		47.6	340	31.0		-53.6	335	23.5		50.5				
5	294	35.2	216	45.8	+27	46.9	329	53.6	-15	47.1	355	33.4	-20	-53.6	350	25.9	-19	50.5				
6	309	37.6	231	47.1	+27	47.0	344	54.3	-15	46.6	10	35.7	-20	-53.6	5	28.3	-19	50.5				
7	324	40.1	246	48.4		47.1	359	55.1		46.0	25	38.1		-53.5	20	30.7		50.5				
8	339	42.5	261	49.7		47.1	14	55.8		45.5	40	40.5		-53.5	35	33.2		50.5				
9	354	45.0	276	51.0		47.2	29	56.6		45.0	55	42.8		-53.5	50	35.6		50.5				
10	9	47.5	291	52.3		47.2	44	57.3		44.5	70	45.2		-53.5	65	38.0		50.5				
11	24	49.9	306	53.7	+27	47.3	59	58.1	-15	44.0	85	47.5	-20	-53.5	80	40.4	-19	50.5				
12	39	52.4	321	55.0	+27	47.4	74	58.8	-15	43.5	100	49.9	-20	-53.5	95	42.9	-19	50.5				
13	54	54.9	336	56.3		47.4	89	59.6		43.0	115	52.2		-53.5	110	45.3		50.5				
14	69	57.3	351	57.6		47.5	105	00.3		42.5	130	54.6		-53.4	125	47.7		50.5				
15	84	59.8	6	59.0		47.5	120	01.1		42.0	145	56.9		-53.4	140	50.1		50.5				
16	100	02.3	22	00.3		47.6	135	01.8		41.5	160	59.3		-53.4	155	52.5		50.5				
17	115	04.7	37	01.6	+27	47.6	150	02.6	-15	41.0	176	01.7	-20	-53.4	170	55.0	-19	50.5				
18	130	07.2	52	03.0	+27	47.7	165	03.3	-15	40.5	191	04.0	-20	-53.4	185	57.4	-19	50.5				
19	145	09.6	67	04.3		47.7	180	04.1		40.0	206	06.4		-53.4	200	59.8		50.4				
20	160	12.1	82	05.7		47.8	195	04.8		39.5	221	08.7		-53.4	216	02.2		50.4				
21	175	14.6	97	07.0		47.8	210	05.6		39.0	236	11.1		-53.3	231	04.7		50.4				
22	190	17.0	112	08.4		47.9	225	06.3		38.5	251	13.4		-53.3	246	07.1		50.4				
23	205	19.5	127	09.7		47.9	240	07.1		37.9	266	15.8		-53.3	261	09.5		50.4				
24	220	22.0	142	11.1	+27	48.0	255	07.9	-15	37.4	281	18.2	-20	-53.3	276	11.9	-19	50.4				
Dif.	—		+13		+1		+8		+5		+24		0		+24							

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°1 12 ^h : 59°4 20 ^h : 59°6					Edad: 8 ^d 9			Rº: 53 ^m		Rº		Rº			
	PMG: 11 ^h 57 ^m 0				PMG: 20 ^h 03 ^m																	
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'			°	'		°	h	m	h	m	h	m	m			
0	180	44.9	+15	27.1	69	54.2	86	+16	37.9	106	60 N	1 34	3 00	3 54	12 02	97		3 26	12			
1	195	45.0		27.9	84	21.8	86		27.3	107	58	2 04	15	4 04	11	93		16	16			
2	210	45.0		28.6	98	49.4	86		16.6	108	56	26	28	13	19	90		3 07	19			
3	225	45.1		29.4	113	17.0	86	+16	05.8	109	54	43	39	21	26	87		2 59	22			
4	240	45.2		30.1	127	44.6	87	+15	54.9	110	52	2 58	49	28	32	85		52	25			
5	255	45.2	+15	30.9	142	12.3	86	+15	43.9	111	50	3 10	3 57	4 34	12 38	82		2 46	26			
6	270	45.3	+15	31.6	156	39.9	87	+15	32.8	112	45	3 35	4 15	4 47	12 50	77		2 32	31			
7	285	45.4		32.3	171	07.6	88		21.6	114	40	3 53	29	4 58	13 00	73		21	35			
8	300	45.4		33.1	185	35.4	87	+15	10.2	114	35	4 08	41	5 08	09	69		11	38			
9	315	45.5		33.8	200	03.1	88	+14	58.8	115	30	20	4 51	16	16	67		2 03	41			
10	330	45.6		34.5	214	30.9	88		47.3	116	20	40	5 07	30	29	62		1 48	45			
11	345	45.6	+15	35.3	228	58.7	88	+14	35.7	117	10 N	4 55	5 20	5 42	13 40	57		1 35	49			
12	0	45.7	+15	36.0	243	26.5	89	+14	24.0	119	0	5 07	5 32	5 54	13 51	53		1 23	53			
13	15	45.8		36.8	257	54.4	88		12.1	119	10 S	18	43	6 05	14 01	49		1 10	58			
14	30	45.8		37.5	272	22.2	89	+14	00.2	120	20	27	5 54	17	12	45		0 57	61			
15	45	45.9		38.2	286	50.1	90	+13	48.2	121	30	37	6 05	30	25	39		42	66			
16	60	46.0		39.0	301	18.1	89		36.1	122	35	41	11	38	32	37		33	69			
17	75	46.0	+15	39.7	315	46.0	90	+13	23.9	122	40	5 46	6 18	6 46	14 41	33		0 23	72			
18	90	46.1	+15	40.4	330	14.0	90	+13	11.7	124	45	5 51	6 26	6 56	14 50	30		0 10	76			
19	105	46.2		41.2	344	42.0	90	+12	59.3	125	50	56	34	7 09	15 02	25	***	***	***			
20	120	46.2		41.9	359	10.0	90		46.8	125	52	5 58	38	14	07	23	***	***	***			
21	135	46.3		42.6	13	38.0	90		34.3	127	54	6 00	43	21	13	20	***	***	***			
22	150	46.4		43.4	28	06.0	91		21.6	127	56	03	47	28	20	17	***	***	***			
23	165	46.4		44.1	42	34.1	91	+12	08.9	128	58	06	53	35	15 27	14	***	***	***			
24	180	46.5	+15	44.8	57	02.2		+11	56.1		60 S	6 08	6 58	7 44	15 35	11	***	***	***			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 9 ^h 17 ^m 0		Mag: -4.7 PMG: 14 ^h 30 ^m				Mag: +0.4 PMG: 06 ^h 59 ^m				Mag: -2.4 PMG: 05 ^h 14 ^m				Mag: +0.6 PMG: 05 ^h 34 ^m							
	hG ♂		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	220	22.0	142	11.1	+27	48.0	255	07.9	-15	37.4	281	18.2	-20	53.3	276	11.9	-19	50.4				
1	235	24.4	157	12.4		48.0	270	08.6		36.9	296	20.5		53.3	291	14.4		50.4				
2	250	26.9	172	13.8		48.0	285	09.4		36.4	311	22.9		53.3	306	16.8		50.4				
3	265	29.4	187	15.2		48.1	300	10.1		35.9	326	25.2		53.3	321	19.2		50.4				
4	280	31.8	202	16.6		48.1	315	10.9		35.4	341	27.6		53.3	336	21.6		50.4				
5	295	34.3	217	17.9	+27	48.2	330	11.6	-15	34.9	356	30.0	-20	53.2	351	24.1	-19	50.4				
6	310	36.8	232	19.3	+27	48.2	345	12.4	-15	34.4	11	32.3	-20	53.2	6	26.5	-19	50.4				
7	325	39.2	247	20.7		48.2	0	13.1		33.9	26	34.7		53.2	21	28.9		50.4				
8	340	41.7	262	22.1		48.3	15	13.9		33.4	41	37.1		53.2	36	31.3		50.4				
9	355	44.1	277	23.5		48.3	30	14.6		32.9	56	39.4		53.2	51	33.8		50.4				
10	10	46.6	292	24.9		48.3	45	15.4		32.3	71	41.8		53.2	66	36.2		50.4				
11	25	49.1	307	26.3	+27	48.4	60	16.2	-15	31.8	86	44.1	-20	53.2	81	38.6	-19	50.4				
12	40	51.5	322	27.7	+27	48.4	75	16.9	-15	31.3	101	46.5	-20	53.2	96	41.0	-19	50.4				
13	55	54.0	337	29.1		48.5	90	17.7		30.8	116	48.9		53.1	111	43.5		50.4				
14	70	56.5	352	30.5		48.5	105	18.4		30.3	131	51.2		53.1	126	45.9		50.4				
15	85	58.9	7	31.9		48.5	120	19.2		29.8	146	53.6		53.1	141	48.3		50.4				
16	101	01.4	22	33.3		48.5	135	19.9		29.3	161	56.0		53.1	156	50.8		50.4				
17	116	03.9	37	34.7	+27	48.6	150	20.7	-15	28.8	176	58.3	-20	53.1	171	53.2	-19	50.4				
18	131	06.3	52	36.1	+27	48.6	165	21.4	-15	28.3	192	00.7	-20	53.1	186	55.6	-19	50.3				
19	146	08.8	67	37.6		48.6	180	22.2		27.8	207	03.1		53.1	201	58.0		50.3				
20	161	11.3	82	39.0		48.7	195	23.0		27.2	222	05.4		53.1	217	00.5		50.3				
21	176	13.7	97	40.4		48.7	210	23.7		26.7	237	07.8		53.1	232	02.9		50.3				
22	191	16.2	112	41.9		48.7	225	24.5		26.2	252	10.2		53.0	247	05.3		50.3				
23	206	18.6	127	43.3		48.7	240	25.2		25.7	267	12.5		53.0	262	07.8		50.3				
24	221	21.1	142	44.7	+27	48.8	255	26.0	-15	25.2	282	14.9	-20	53.0	277	10.2	-19	50.3				
Dif.	—		+14				0				+24				0				+24			

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			SD: 16°3			PHE {					Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 9			Edad: 9 ^d 9			20 ^h : 60°3					Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 20 ^h 56 ^m			Rº: 53 ^m			Fin del crepúsculo					Salida de Luna		Puesta de Luna				
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m m		h m m	m			
0	180	46.5	+15	44.8	57	02.2	91	+11	56.1	129	60 N	20 04	20 59	22 30	13 39	98	3 38	10
1	195	46.6		45.6	71	30.3	92		43.2	129	58	19 53	43	21 57	44	95	32	13
2	210	46.6		46.3	85	58.5	91		30.3	131	56	44	30	34	49	91	26	16
3	225	46.7		47.0	100	26.6	92		17.2	131	54	36	18	16	53	88	21	19
4	240	46.7		47.8	114	54.8	92	+11	04.1	132	52	29	08	21 01	13 57	85	17	21
5	255	46.8	+15	48.5	129	23.0	92	+10	50.9	133	50	19 22	20 00	20 48	14 00	83	3 12	24
6	270	46.9	+15	49.2	143	51.2	92	+10	37.6	133	45	19 09	19 41	20 22	14 07	78	3 03	29
7	285	46.9		50.0	158	19.4	92		24.3	135	40	18 57	27	20 03	13	74	2 56	32
8	300	47.0		50.7	172	47.6	93	+10	10.8	135	35	47	15	19 48	18	71	49	36
9	315	47.1		51.4	187	15.9	92	+9	57.3	135	30	39	19 04	35	23	67	44	38
10	330	47.1		52.1	201	44.1	93		43.8	137	20	24	18 48	15	31	61	33	44
11	345	47.2	+15	52.9	216	12.4	93	+9	30.1	137	10 N	18 12	18 34	19 00	14 37	57	2 24	49
12	0	47.2	+15	53.6	230	40.7	93	+9	16.4	138	0	18 00	18 22	18 47	14 44	52	2 16	53
13	15	47.3		54.3	245	09.0	93	+9	02.6	138	10 S	17 49	18 11	36	50	48	2 08	56
14	30	47.4		55.1	259	37.3	94	+8	48.8	139	20	37	17 59	26	14 57	43	1 58	62
15	45	47.4		55.8	274	05.7	93		34.9	140	30	23	48	16	15 04	38	48	67
16	60	47.5		56.5	288	34.0	94		20.9	140	35	15	41	11	09	35	42	70
17	75	47.5	+15	57.2	303	02.4	93	+8	06.9	141	40	17 06	17 34	18 06	15 14	31	1 35	73
18	90	47.6	+15	58.0	317	30.7	94	+7	52.8	142	45	16 55	17 26	18 01	15 20	27	1 26	78
19	105	47.7		58.7	331	59.1	94		38.6	142	50	43	17	17 56	27	22	17	82
20	120	47.7	+15	59.4	346	27.5	94		24.4	142	52	37	13	53	30	20	12	85
21	135	47.8	+16	00.1	0	55.9	94	+7	10.2	143	54	31	09	51	33	18	07	88
22	150	47.8		00.8	15	24.3	94	+6	55.9	144	56	23	17 04	48	37	15	1 01	91
23	165	47.9		01.6	29	52.7	94		41.5	144	58	15	16 58	45	41	13	0 55	94
24	180	47.9	+16	02.3	44	21.1		+6	27.1		60 S	16 06	16 52	17 42	15 46	9	0 48	97
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 9 ^h 13 ^m 1		Mag: -4.7 PMG: 14 ^h 28 ^m			Mag: +0.4 PMG: 06 ^h 58 ^m			Mag: -2.4 PMG: 05 ^h 10 ^m			Mag: +0.6 PMG: 05 ^h 30 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	221	21.1	142	44.7	+27	48.8	255	26.0	-15	25.2	282	14.9	-20	-53.0	277	10.2	-19	50.3
1	236	23.6	157	46.2		48.8	270	26.8		24.7	297	17.3		-53.0	292	12.6		50.3
2	251	26.0	172	47.6		48.8	285	27.5		24.2	312	19.6		-53.0	307	15.0		50.3
3	266	28.5	187	49.1		48.8	300	28.3		23.7	327	22.0		-53.0	322	17.5		50.3
4	281	31.0	202	50.6		48.8	315	29.0		23.1	342	24.4		-53.0	337	19.9		50.3
5	296	33.4	217	52.0	+27	48.9	330	29.8	-15	22.6	357	26.7	-20	-53.0	352	22.3	-19	50.3
6	311	35.9	232	53.5	+27	48.9	345	30.5	-15	22.1	12	29.1	-20	-53.0	7	24.8	-19	50.3
7	326	38.4	247	54.9		48.9	0	31.3		21.6	27	31.5		-52.9	22	27.2		50.3
8	341	40.8	262	56.4		48.9	15	32.1		21.1	42	33.8		-52.9	37	29.6		50.3
9	356	43.3	277	57.9		48.9	30	32.8		20.6	57	36.2		-52.9	52	32.0		50.3
10	11	45.7	292	59.4		48.9	45	33.6		20.1	72	38.6		-52.9	67	34.5		50.3
11	26	48.2	308	00.8	+27	48.9	60	34.3	-15	19.5	87	41.0	-20	-52.9	82	36.9	-19	50.3
12	41	50.7	323	02.3	+27	49.0	75	35.1	-15	19.0	102	43.3	-20	-52.9	97	39.3	-19	50.3
13	56	53.1	338	03.8		49.0	90	35.9		18.5	117	45.7		-52.9	112	41.8		50.3
14	71	55.6	353	05.3		49.0	105	36.6		18.0	132	48.1		-52.9	127	44.2		50.3
15	86	58.1	8	06.8		49.0	120	37.4		17.5	147	50.5		-52.9	142	46.6		50.3
16	102	00.5	23	08.3		49.0	135	38.1		17.0	162	52.8		-52.8	157	49.1		50.3
17	117	03.0	38	09.8	+27	49.0	150	38.9	-15	16.5	177	55.2	-20	-52.8	172	51.5	-19	50.3
18	132	05.5	53	11.3	+27	49.0	165	39.7	-15	15.9	192	57.6	-20	-52.8	187	53.9	-19	50.3
19	147	07.9	68	12.8		49.0	180	40.4		15.4	207	59.9		-52.8	202	56.4		50.3
20	162	10.4	83	14.3		49.0	195	41.2		14.9	223	02.3		-52.8	217	58.8		50.3
21	177	12.9	98	15.9		49.0	210	41.9		14.4	238	04.7		-52.8	233	01.2		50.3
22	192	15.3	113	17.4		49.0	225	42.7		13.9	253	07.1		-52.8	248	03.7		50.3
23	207	17.8	128	18.9		49.0	240	43.5		13.4	268	09.4		-52.8	263	06.1		50.3
24	222	20.2	143	20.4	+27	49.0	255	44.2	-15	12.9	283	11.8	-20	-52.8	278	08.5	-19	50.2
Dif.	—		+15	0		+8	+5		+24	0		+24	0		+24	0		0

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9			SD: 16°4 Edad: 10 ^d 9	PHE { 4 ^h : 60°4 12 ^h : 60°6 20 ^h : 60°7			R°: 52 ^m			Náut.			Civil	Hora R°		Hora R°		
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.			h m	h m		h m	h m m	h m m	h m m		
h	°	'	°	°	'	°	'	°	°	h m	h m	h m	h m m	h m m	h m m				
0	180	47.9	+16	02.3		44	21.1	94	+6	27.1	145	60 N	1 22	2 54	3 49	15 17	100	3 48	9
1	195	48.0		03.0		58	49.5	94	+6	12.6	145	58	1 55	3 10	3 59	19 96		45	12
2	210	48.1		03.7		73	17.9	94	+5	58.1	146	56	2 19	23	4 09	20 93		42	15
3	225	48.1		04.4		87	46.3	94		43.5	146	54	37	34	17	21 90		40	18
4	240	48.2		05.2		102	14.7	95		28.9	146	52	2 53	44	24	22 87		38	20
5	255	48.2	+16	05.9		116	43.2	94	+5	14.3	147	50	3 05	3 53	4 31	15 23	85	3 36	22
6	270	48.3	+16	06.6		131	11.6	94	+4	59.6	147	45	3 31	4 12	4 45	15 25	80	3 32	27
7	285	48.3		07.3		145	40.0	95		44.9	148	40	3 50	26	4 56	27 75		28	31
8	300	48.4		08.0		160	08.5	94		30.1	148	35	4 06	39	5 06	29 71		25	34
9	315	48.5		08.8		174	36.9	94		15.3	149	30	18	4 49	14	30 68		22	38
10	330	48.5		09.5		189	05.3	94	+4	00.4	148	20	38	5 06	29	32 62		17	43
11	345	48.6	+16	10.2		203	33.7	95	+3	45.6	150	10 N	4 54	5 20	5 42	15 34	58	3 13	48
12	0	48.6	+16	10.9		218	02.2	94	+3	30.6	149	0	5 07	5 32	5 53	15 36	53	3 09	52
13	15	48.7		11.6		232	30.6	94		15.7	150	10 S	18	43	6 05	38 48		04	57
14	30	48.7		12.3		246	59.0	94	+3	00.7	150	20	28	5 54	17	40 43		3 00	62
15	45	48.8		13.1		261	27.4	94	+2	45.7	150	30	38	6 06	31	42 38		2 55	67
16	60	48.8		13.8		275	55.8	94		30.7	150	35	43	13	39	44 34		52	70
17	75	48.9	+16	14.5		290	24.2	93	+2	15.7	151	40	5 48	6 20	6 48	15 45	31	2 48	75
18	90	48.9	+16	15.2		304	52.5	94	+2	00.6	151	45	5 53	6 28	6 59	15 47	27	2 44	79
19	105	49.0		15.9		319	20.9	94	+1	45.5	151	50	5 58	37	7 12	49 22		39	84
20	120	49.1		16.6		333	49.3	93		30.4	151	52	6 01	41	18	50 20		37	86
21	135	49.1		17.3		348	17.6	94		15.3	152	54	03	46	24	51 18		35	89
22	150	49.2		18.0		2	46.0	93	+1	00.1	151	56	06	51	31	52 15		32	92
23	165	49.2		18.8		17	14.3	93	+0	45.0	152	58	09	6 56	40	15 54	12	2 29	95
24	180	49.3	+16	19.5		31	42.6		+0	29.8		60 S	6 12	7 03	7 49	15 55	9	2 25	99

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 9 ^h 09 ^m 1		Mag: -4.7 PMG: 14 ^h 25 ^m				Mag: +0.4 PMG: 06 ^h 57 ^m				Mag: -2.4 PMG: 05 ^h 06 ^m				Mag: +0.6 PMG: 05 ^h 27 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	°	'	°	°	'	°	°	°	°	'	°	°	°	°	'	
0	222	20.2	143	20.4	+27	49.0	255	44.2	-15	12.9	283	11.8	-20	52.8	278	08.5	-19	50.2	
1	237	22.7	158	22.0		49.0	270	45.0		12.3	298	14.2		52.8	293	11.0		50.2	
2	252	25.2	173	23.5		49.0	285	45.8		11.8	313	16.6		52.7	308	13.4		50.2	
3	267	27.6	188	25.0		49.0	300	46.5		11.3	328	18.9		52.7	323	15.8		50.2	
4	282	30.1	203	26.6		49.0	315	47.3		10.8	343	21.3		52.7	338	18.3		50.2	
5	297	32.6	218	28.1	+27	49.0	330	48.0	-15	10.3	358	23.7	-20	52.7	353	20.7	-19	50.2	
6	312	35.0	233	29.7	+27	49.0	345	48.8	-15	09.8	13	26.1	-20	52.7	8	23.1	-19	50.2	
7	327	37.5	248	31.2		49.0	0	49.6		09.2	28	28.5		52.7	23	25.6		50.2	
8	342	40.0	263	32.8		49.0	15	50.3		08.7	43	30.8		52.7	38	28.0		50.2	
9	357	42.4	278	34.3		49.0	30	51.1		08.2	58	33.2		52.7	53	30.4		50.2	
10	12	44.9	293	35.9		49.0	45	51.9		07.7	73	35.6		52.7	68	32.9		50.2	
11	27	47.3	308	37.5	+27	49.0	60	52.6	-15	07.2	88	38.0	-20	52.7	83	35.3	-19	50.2	
12	42	49.8	323	39.0	+27	49.0	75	53.4	-15	06.6	103	40.4	-20	52.6	98	37.7	-19	50.2	
13	57	52.3	338	40.6		48.9	90	54.2		06.1	118	42.7		52.6	113	40.2		50.2	
14	72	54.7	353	42.2		48.9	105	54.9		05.6	133	45.1		52.6	128	42.6		50.2	
15	87	57.2	8	43.8		48.9	120	55.7		05.1	148	47.5		52.6	143	45.0		50.2	
16	102	59.7	23	45.4		48.9	135	56.5		04.6	163	49.9		52.6	158	47.5		50.2	
17	118	02.1	38	47.0	+27	48.9	150	57.2	-15	04.1	178	52.3	-20	52.6	173	49.9	-19	50.2	
18	133	04.6	53	48.6	+27	48.9	165	58.0	-15	03.5	193	54.6	-20	52.6	188	52.4	-19	50.2	
19	148	07.1	68	50.1		48.9	180	58.7		03.0	208	57.0		52.6	203	54.8		50.2	
20	163	09.5	83	51.8		48.8	195	59.5		02.5	223	59.4		52.6	218	57.2		50.2	
21	178	12.0	98	53.4		48.8	211	00.3		02.0	239	01.8		52.6	233	59.7		50.2	
22	193	14.5	113	55.0		48.8	226	01.0		01.5	254	04.2		52.6	249	02.1		50.2	
23	208	16.9	128	56.6		48.8	241	01.8		00.9	269	06.6		52.5	264	04.5		50.2	
24	223	19.4	143	58.2	+27	48.8	256	02.6	-15	00.4	284	08.9	-20	52.5	279	07.0	-19	50.2	
Dif.	—		+16		0		+8		+5		+24		0		+24				

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9			SD: 16'6			PHE { 4 ^h : 60'8 12 ^h : 60'9 20 ^h : 61'0										
	PMG: 11 ^h 56 ^m 7			Edad: 11 ^d 9													
	PMG: 22 ^h 41 ^m			R ^o : 55 ^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	49.3	+16	19.5	31	42.6	93	+0	29.8	152	60 N	20 09	21 05	22 44	16 57	101	3 57 9
1	195	49.3		20.2	46	10.9	93	+0	14.6	152	58	19 58	20 49	22 06	55	97	57 12
2	210	49.4		20.9	60	39.2	93	-0	00.6	152	56	48	35	21 41	53	93	57 16
3	225	49.4		21.6	75	07.5	92		15.8	152	54	40	23	21	51	91	58 18
4	240	49.5		22.3	89	35.7	92		31.0	152	52	32	12	21 05	49	88	58 20
5	255	49.5	+16	23.0	104	03.9	93	-0	46.2	152	50	19 25	20 03	20 52	16 48	85	3 58 23
6	270	49.6	+16	23.7	118	32.2	92	-1	01.4	152	45	19 11	19 44	20 25	16 45	80	3 59 27
7	285	49.6		24.4	133	00.4	91		16.6	152	40	18 59	29	20 05	42	76	59 32
8	300	49.7		25.1	147	28.5	92		31.8	152	35	49	16	19 50	40	72	3 59 35
9	315	49.7		25.8	161	56.7	91	-1	47.0	152	30	40	19 06	37	38	69	4 00 38
10	330	49.8		26.5	176	24.8	91	-2	02.2	152	20	25	18 48	16	34	64	00 44
11	345	49.8	+16	27.2	190	52.9	91	-2	17.4	152	10 N	18 12	18 34	19 00	16 32	58	4 01 48
12	0	49.9	+16	27.9	205	21.0	91	-2	32.6	151	0	18 00	18 22	18 47	16 29	54	4 01 53
13	15	49.9		28.6	219	49.1	90	-2	47.7	152	10 S	17 48	18 10	35	26	50	01 58
14	30	50.0		29.4	234	17.1	91	-3	02.9	151	20	36	17 58	25	23	45	02 62
15	45	50.0		30.1	248	45.2	89		18.0	152	30	21	46	15	20	39	02 68
16	60	50.1		30.8	263	13.1	90		33.2	151	35	13	40	10	18	36	02 72
17	75	50.1	+16	31.5	277	41.1	89	-3	48.3	151	40	17 04	17 32	18 04	16 16	33	4 03 75
18	90	50.2	+16	32.2	292	09.0	90	-4	03.4	150	45	16 53	17 24	17 59	16 14	29	4 03 80
19	105	50.2		32.9	306	37.0	88		18.4	151	50	40	14	53	11	24	03 85
20	120	50.3		33.6	321	04.8	89		33.5	150	52	33	10	50	10	21	03 88
21	135	50.3		34.3	335	32.7	88	-4	48.5	150	54	27	05	48	09	19	04 90
22	150	50.4		35.0	350	00.5	88	-5	03.5	150	56	19	17 00	45	07	16	04 93
23	165	50.4		35.7	4	28.3	87		18.5	149	58	11	16 54	42	06	13	04 96
24	180	50.5	+16	36.4	18	56.0		-5	33.4		60 S	16 01	16 48	17 38	16 04	10	4 04 100

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 9 ^h 05 ^m 2		Mag: -4.7 PMG: 14 ^h 23 ^m			Mag: +0.4 PMG: 06 ^h 55 ^m			Mag: -2.4 PMG: 05 ^h 03 ^m			Mag: +0.6 PMG: 05 ^h 23 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	223	19.4	143	58.2	+27	48.8	256	02.6	-15	00.4	284	08.9	-20	-52.5	279	07.0	-19	50.2
1	238	21.8	158	59.8		48.7	271	03.3	-14	59.9	299	11.3		-52.5	294	09.4		50.2
2	253	24.3	174	01.4		48.7	286	04.1		59.4	314	13.7		-52.5	309	11.8		50.2
3	268	26.8	189	03.1		48.7	301	04.9		58.9	329	16.1		-52.5	324	14.3		50.2
4	283	29.2	204	04.7		48.7	316	05.6		58.3	344	18.5		-52.5	339	16.7		50.2
5	298	31.7	219	06.3	+27	48.6	331	06.4	-14	57.8	359	20.9	-20	-52.5	354	19.2	-19	50.2
6	313	34.2	234	08.0	+27	48.6	346	07.2	-14	57.3	14	23.2	-20	-52.5	9	21.6	-19	50.2
7	328	36.6	249	09.6		48.6	1	07.9		56.8	29	25.6		-52.5	24	24.0		50.2
8	343	39.1	264	11.3		48.5	16	08.7		56.3	44	28.0		-52.5	39	26.5		50.2
9	358	41.6	279	12.9		48.5	31	09.5		55.7	59	30.4		-52.5	54	28.9		50.2
10	13	44.0	294	14.6		48.5	46	10.2		55.2	74	32.8		-52.5	69	31.4		50.2
11	28	46.5	309	16.2	+27	48.5	61	11.0	-14	54.7	89	35.2	-20	-52.5	84	33.8	-19	50.2
12	43	49.0	324	17.9	+27	48.4	76	11.8	-14	54.2	104	37.6	-20	-52.4	99	36.2	-19	50.2
13	58	51.4	339	19.5		48.4	91	12.6		53.6	119	40.0		-52.4	114	38.7		50.2
14	73	53.9	354	21.2		48.4	106	13.3		53.1	134	42.3		-52.4	129	41.1		50.2
15	88	56.3	9	22.9		48.3	121	14.1		52.6	149	44.7		-52.4	144	43.6		50.2
16	103	58.8	24	24.6		48.3	136	14.9		52.1	164	47.1		-52.4	159	46.0		50.2
17	119	01.3	39	26.2	+27	48.2	151	15.6	-14	51.6	179	49.5	-20	-52.4	174	48.4	-19	50.2
18	134	03.7	54	27.9	+27	48.2	166	16.4	-14	51.0	194	51.9	-20	-52.4	189	50.9	-19	50.2
19	149	06.2	69	29.6		48.2	181	17.2		50.5	209	54.3		-52.4	204	53.3		50.2
20	164	08.7	84	31.3		48.1	196	17.9		50.0	224	56.7		-52.4	219	55.8		50.2
21	179	11.1	99	33.0		48.1	211	18.7		49.5	239	59.1		-52.4	234	58.2		50.2
22	194	13.6	114	34.7		48.0	226	19.5		48.9	255	01.5		-52.4	250	00.6		50.2
23	209	16.1	129	36.4		48.0	241	20.2		48.4	270	03.9		-52.4	265	03.1		50.2
24	224	18.5	144	38.1	+27	47.9	256	21.0	-14	47.9	285	06.2	-20	-52.4	280	05.5	-19	50.2
Dif.	—		+17			0	+8			+5			+24			0		

UT	SOL				○ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 15°9				SD: 16°6 Edad: 12 ^d 9												PHE { 4 ^h : 61°0 12 ^h : 60°9 20 ^h : 60°9					
	PMG: 11 ^h 56 ^m 6				PMG: 23 ^h 36 ^m												Rº: 56 ^m					
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº								
h	°	'	°	'	°	'			°	'	h	m	h	m	h	m	m					
0	180	50.5	+16	36.4	18	56.0	88	-5	33.4	149	60 N	1 09	2 47	3 44	18 38	102	4 06	10				
1	195	50.5		37.1	33	23.8	87	-5	48.3	149	58	1 46	3 04	3 55	32	97	09	14				
2	210	50.5		37.8	47	51.5	86	-6	03.2	148	56	2 12	18	4 04	26	94	13	17				
3	225	50.6		38.5	62	19.1	86		18.0	148	54	31	30	13	22	90	16	20				
4	240	50.6		39.2	76	46.7	86		32.8	148	52	2 47	40	20	17	88	18	23				
5	255	50.7	+16	39.8	91	14.3	86	-6	47.6	147	50	3 01	3 50	4 27	18 13	86	4 21	24				
6	270	50.7	+16	40.5	105	41.9	85	-7	02.3	147	45	3 27	4 09	4 42	18 05	80	4 26	30				
7	285	50.8		41.2	120	09.4	85		17.0	146	40	3 47	24	4 54	17 58	76	31	33				
8	300	50.8		41.9	134	36.9	84		31.6	146	35	4 03	36	5 04	52	73	34	38				
9	315	50.9		42.6	149	04.3	84	-7	46.2	145	30	16	4 47	13	47	69	38	40				
10	330	50.9		43.3	163	31.7	84	-8	00.7	145	20	37	5 05	28	38	64	44	45				
11	345	50.9	+16	44.0	177	59.1	83	-8	15.2	145	10 N	4 53	5 19	5 41	17 30	60	4 49	50				
12	0	51.0	+16	44.7	192	26.4	83	-8	29.7	143	0	5 06	5 32	5 53	17 23	55	4 54	55				
13	15	51.0		45.4	206	53.7	82		44.0	144	10 S	18	43	6 05	16	51	4 59	59				
14	30	51.1		46.1	221	20.9	82	-8	58.4	142	20	29	5 55	18	17 08	47	5 04	64				
15	45	51.1		46.8	235	48.1	82	-9	12.6	142	30	39	6 07	32	16 59	42	10	70				
16	60	51.2		47.5	250	15.3	81		26.8	142	35	44	14	41	54	39	14	72				
17	75	51.2	+16	48.2	264	42.4	81	-9	41.0	141	40	5 49	6 22	6 50	16 49	35	5 18	76				
18	90	51.2	+16	48.9	279	09.5	80	-9	55.1	140	45	5 55	6 30	7 01	16 43	31	5 23	80				
19	105	51.3		49.5	293	36.5	80	-10	09.1	139	50	6 01	40	15	35	27	28	86				
20	120	51.3		50.2	308	03.5	80		23.0	139	52	04	44	21	31	25	31	88				
21	135	51.4		50.9	322	30.5	79		36.9	138	54	06	49	28	28	21	34	90				
22	150	51.4		51.6	336	57.4	78	-10	50.7	138	56	09	6 54	35	23	19	37	94				
23	165	51.5		52.3	351	24.2	79	-11	04.5	136	58	13	7 00	44	16 19	16	5 40	98				
24	180	51.5	+16	53.0	5	51.1		-11	18.1		60 S	6 16	7 07	7 54	16 14	12	5 44	102				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 9 ^h 01 ^m 3		Mag: -4.7 PMG: 14 ^h 20 ^m				Mag: +0.3 PMG: 06 ^h 54 ^m				Mag: -2.4 PMG: 04 ^h 59 ^m				Mag: +0.6 PMG: 05 ^h 19 ^m							
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	224	18.5	144	38.1	+27	47.9	256	21.0	-14	47.9	285	06.2	-20	52.4	280	05.5	-19	50.2				
1	239	21.0	159	39.8		47.9	271	21.8		47.4	300	08.6		52.3	295	08.0		50.2				
2	254	23.4	174	41.5		47.9	286	22.6		46.8	315	11.0		52.3	310	10.4		50.2				
3	269	25.9	189	43.3		47.8	301	23.3		46.3	330	13.4		52.3	325	12.8		50.2				
4	284	28.4	204	45.0		47.8	316	24.1		45.8	345	15.8		52.3	340	15.3		50.2				
5	299	30.8	219	46.7	+27	47.7	331	24.9	-14	45.3	0	18.2	-20	52.3	355	17.7	-19	50.2				
6	314	33.3	234	48.4	+27	47.7	346	25.6	-14	44.7	15	20.6	-20	52.3	10	20.2	-19	50.2				
7	329	35.8	249	50.2		47.6	1	26.4		44.2	30	23.0		52.3	25	22.6		50.2				
8	344	38.2	264	51.9		47.6	16	27.2		43.7	45	25.4		52.3	40	25.1		50.2				
9	359	40.7	279	53.6		47.5	31	28.0		43.2	60	27.8		52.3	55	27.5		50.2				
10	14	43.2	294	55.4		47.5	46	28.7		42.6	75	30.2		52.3	70	29.9		50.2				
11	29	45.6	309	57.1	+27	47.4	61	29.5	-14	42.1	90	32.6	-20	52.3	85	32.4	-19	50.2				
12	44	48.1	324	58.9	+27	47.3	76	30.3	-14	41.6	105	35.0	-20	52.3	100	34.8	-19	50.2				
13	59	50.6	340	00.7		47.3	91	31.0		41.1	120	37.4		52.3	115	37.3		50.2				
14	74	53.0	355	02.4		47.2	106	31.8		40.5	135	39.8		52.3	130	39.7		50.2				
15	89	55.5	10	04.2		47.2	121	32.6		40.0	150	42.2		52.3	145	42.2		50.2				
16	104	57.9	25	06.0		47.1	136	33.4		39.5	165	44.6		52.3	160	44.6		50.1				
17	120	00.4	40	07.7	+27	47.0	151	34.1	-14	39.0	180	47.0	-20	52.2	175	47.1	-19	50.1				
18	135	02.9	55	09.5	+27	47.0	166	34.9	-14	38.4	195	49.4	-20	52.2	190	49.5	-19	50.1				
19	150	05.3	70	11.3		46.9	181	35.7		37.9	210	51.8		52.2	205	51.9		50.1				
20	165	07.8	85	13.1		46.9	196	36.5		37.4	225	54.2		52.2	220	54.4		50.1				
21	180	10.3	100	14.9		46.8	211	37.2		36.9	240	56.6		52.2	235	56.8		50.1				
22	195	12.7	115	16.7		46.7	226	38.0		36.3	255	59.0		52.2	250	59.3		50.1				
23	210	15.2	130	18.4		46.7	241	38.8		35.8	271	01.4		52.2	266	01.7		50.1				
24	225	17.7	145	20.3	+27	46.6	256	39.6	-14	35.3	286	03.8	-20	52.2	281	04.2	-19	50.1				
Dif.	—		+18				-1				+8				+5				+24			

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			SD: 16 ^h 6 Edad: 13 ^d 9			PHE { 4 ^h : 60 ^m 8 12 ^h : 60 ^m 7 20 ^h : 60 ^m 5											
	PMG: 11 ^h 56 ^m 5			PMG: ** **			Rº: **											
	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	51.5	+16	53.0	5	51.1	77	-11	18.1	136	60 N	20 14	21 12	22 59	20 20	99	4 16	14
1	195	51.5		53.7	20	17.8	78		31.7	135	58	20 02	20 54	22 15	09	96	23	18
2	210	51.6		54.4	34	44.6	77		45.2	135	56	19 52	39	21 48	20 00	92	30	21
3	225	51.6		55.0	49	11.3	76	-11	58.7	133	54	43	27	27	19 52	89	36	24
4	240	51.7		55.7	63	37.9	76	-12	12.0	133	52	36	16	21 10	45	86	41	26
5	255	51.7	+16	56.4	78	04.5	75	-12	25.3	132	50	19 28	20 06	20 56	19 39	83	4 45	29
6	270	51.7	+16	57.1	92	31.0	75	-12	38.5	131	45	19 13	19 47	20 29	19 25	79	4 56	33
7	285	51.8		57.8	106	57.5	75	-12	51.6	130	40	19 01	31	20 08	14	75	5 04	38
8	300	51.8		58.5	121	24.0	74	-13	04.6	129	35	18 51	18	19 52	19 05	72	12	40
9	315	51.9		59.1	135	50.4	74		17.5	128	30	42	19 07	38	18 56	70	18	44
10	330	51.9	+16	59.8	150	16.8	73		30.3	128	20	26	18 49	17	42	65	29	49
11	345	51.9	+17	00.5	164	43.1	73	-13	43.1	126	10 N	18 12	18 35	19 00	18 30	61	5 39	53
12	0	52.0	+17	01.2	179	09.4	72	-13	55.7	126	0	18 00	18 22	18 47	18 18	58	5 49	56
13	15	52.0		01.9	193	35.6	72	-14	08.3	124	10 S	17 48	18 10	35	18 07	54	5 58	61
14	30	52.0		02.6	208	01.8	71		20.7	124	20	35	17 58	24	17 55	50	6 08	65
15	45	52.1		03.2	222	27.9	71		33.1	123	30	20	45	13	41	46	20	69
16	60	52.1		03.9	236	54.0	71		45.4	121	35	11	38	08	33	43	26	73
17	75	52.1	+17	04.6	251	20.1	70	-14	57.5	121	40	17 01	17 30	18 02	17 24	40	6 34	76
18	90	52.2	+17	05.3	265	46.1	69	-15	09.6	119	45	16 50	17 21	17 57	17 14	36	6 43	80
19	105	52.2		05.9	280	12.0	70		21.5	118	50	36	11	50	17 02	31	54	85
20	120	52.3		06.6	294	38.0	68		33.3	118	52	30	07	47	16 56	29	6 59	87
21	135	52.3		07.3	309	03.8	69		45.1	116	54	23	17 02	44	49	28	7 04	90
22	150	52.3		08.0	323	29.7	67	-15	56.7	115	56	15	16 56	41	42	25	11	93
23	165	52.4		08.6	337	55.4	68	-16	08.2	114	58	16 06	50	38	35	20	18	96
24	180	52.4	+17	09.3	352	21.2		-16	19.6		60 S	15 56	16 44	17 34	16 26	17	7 26	101
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 57 ^m 4		Mag: -4.7 PMG: 14 ^h 17 ^m				Mag: +0.3 PMG: 06 ^h 53 ^m				Mag: -2.4 PMG: 04 ^h 55 ^m				Mag: +0.5 PMG: 05 ^h 15 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	225	17.7	145	20.3	+27	46.6	256	39.6	-14	35.3	286	03.8	-20	-52.2	281	04.2	-19	50.1
1	240	20.1	160	22.1		46.5	271	40.3		34.7	301	06.2		-52.2	296	06.6		50.1
2	255	22.6	175	23.9		46.5	286	41.1		34.2	316	08.6		-52.2	311	09.1		50.1
3	270	25.0	190	25.7		46.4	301	41.9		33.7	331	11.0		-52.2	326	11.5		50.1
4	285	27.5	205	27.5		46.3	316	42.7		33.2	346	13.4		-52.2	341	14.0		50.1
5	300	30.0	220	29.3	+27	46.2	331	43.4	-14	32.6	1	15.8	-20	-52.2	356	16.4	-19	50.1
6	315	32.4	235	31.1	+27	46.2	346	44.2	-14	32.1	16	18.2	-20	-52.2	11	18.8	-19	50.1
7	330	34.9	250	33.0		46.1	1	45.0		31.6	31	20.6		-52.2	26	21.3		50.1
8	345	37.4	265	34.8		46.0	16	45.8		31.0	46	23.0		-52.2	41	23.7		50.1
9	0	39.8	280	36.6		45.9	31	46.5		30.5	61	25.4		-52.2	56	26.2		50.1
10	15	42.3	295	38.5		45.9	46	47.3		30.0	76	27.8		-52.2	71	28.6		50.1
11	30	44.8	310	40.3	+27	45.8	61	48.1	-14	29.5	91	30.2	-20	-52.2	86	31.1	-19	50.2
12	45	47.2	325	42.2	+27	45.7	76	48.9	-14	28.9	106	32.6	-20	-52.1	101	33.5	-19	50.2
13	60	49.7	340	44.0		45.6	91	49.6		28.4	121	35.0		-52.1	116	36.0		50.2
14	75	52.2	355	45.9		45.5	106	50.4		27.9	136	37.4		-52.1	131	38.4		50.2
15	90	54.6	10	47.7		45.5	121	51.2		27.3	151	39.8		-52.1	146	40.9		50.2
16	105	57.1	25	49.6		45.4	136	52.0		26.8	166	42.2		-52.1	161	43.3		50.2
17	120	59.5	40	51.5	+27	45.3	151	52.8	-14	26.3	181	44.6	-20	-52.1	176	45.8	-19	50.2
18	136	02.0	55	53.4	+27	45.2	166	53.5	-14	25.8	196	47.0	-20	-52.1	191	48.2	-19	50.2
19	151	04.5	70	55.2		45.1	181	54.3		25.2	211	49.4		-52.1	206	50.7		50.2
20	166	06.9	85	57.1		45.0	196	55.1		24.7	226	51.8		-52.1	221	53.1		50.2
21	181	09.4	100	59.0		45.0	211	55.9		24.2	241	54.2		-52.1	236	55.6		50.2
22	196	11.9	116	00.9		44.9	226	56.6		23.6	256	56.6		-52.1	251	58.0		50.2
23	211	14.3	131	02.8		44.8	241	57.4		23.1	271	59.0		-52.1	267	00.5		50.2
24	226	16.8	146	04.7	+27	44.7	256	58.2	-14	22.6	287	01.5	-20	-52.1	282	02.9	-19	50.2
Dif.	—		+19		-1		+8		+5		+24		0		+24		0	

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°8				SD: 16°5		PHE { 4 ^h : 60°4 12 ^h : 60°2 20 ^h : 59°9					Edad: 14 ^d 9			Salida de Luna		Puesta de Luna		
	PMG: 11 ^h 56 ^m 5				PMG: 00 ^h 32 ^m		R°: 58 ^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
0	180	52.4	+17	09.3	352	21.2	67	-16	19.6	113		60 N	0 52	2 41	3 38	21 59	91	4 30	20
1	195	52.4		10.0	6	46.9	66		30.9	111		58	1 37	2 58	3 50	45	86	41	25
2	210	52.5		10.7	21	12.5	66		42.0	111		56	2 05	3 13	4 00	32	84	4 51	28
3	225	52.5		11.3	35	38.1	66	-16	53.1	109		54	26	26	09	21	81	5 00	30
4	240	52.5		12.0	50	03.7	65	-17	04.0	108		52	42	36	17	11	79	07	34
5	255	52.6	+17	12.7	64	29.2	65	-17	14.8	107		50	2 56	3 46	4 24	21 02	78	5 14	36
6	270	52.6	+17	13.4	78	54.7	65	-17	25.5	106		45	3 24	4 06	4 39	20 44	74	5 29	40
7	285	52.6		14.0	93	20.2	64		36.1	104		40	3 45	22	4 52	29	71	42	43
8	300	52.7		14.7	107	45.6	63		46.5	103		35	4 01	34	5 02	17	68	5 52	46
9	315	52.7		15.4	122	10.9	64	-17	56.8	102		30	15	4 45	11	20 06	67	6 02	48
10	330	52.7		16.0	136	36.3	62	-18	07.0	101		20	36	5 03	27	19 47	64	18	52
11	345	52.8	+17	16.7	151	01.5	63	-18	17.1	99		10 N	4 52	5 18	5 40	19 31	61	6 32	55
12	0	52.8	+17	17.4	165	26.8	62	-18	27.0	98		0	5 06	5 31	5 53	19 16	58	6 45	59
13	15	52.8		18.1	179	52.0	62		36.8	97		10 S	18	44	6 05	19 01	56	6 59	61
14	30	52.9		18.7	194	17.2	61		46.5	95		20	29	5 56	19	18 45	53	7 13	65
15	45	52.9		19.4	208	42.3	62	-18	56.0	94		30	40	6 09	34	27	50	29	69
16	60	52.9		20.1	223	07.5	60	-19	05.4	93		35	45	16	42	16	49	39	71
17	75	53.0	+17	20.7	237	32.5	61	-19	14.7	91		40	5 51	6 23	6 52	18 04	46	7 50	73
18	90	53.0	+17	21.4	251	57.6	60	-19	23.8	90		45	5 57	6 32	7 04	17 50	44	8 03	77
19	105	53.0		22.1	266	22.6	60		32.8	89		50	6 04	42	17	33	40	19	81
20	120	53.0		22.7	280	47.6	59		41.7	87		52	06	47	24	25	38	26	83
21	135	53.1		23.4	295	12.5	60		50.4	86		54	09	52	31	17	35	34	86
22	150	53.1		24.1	309	37.5	59	-19	59.0	85		56	13	6 58	39	17 07	32	44	88
23	165	53.1		24.7	324	02.4	58	-20	07.5	83		58	16	7 04	48	16 55	30	8 54	92
24	180	53.2	+17	25.4	338	27.2		-20	15.8			60 S	6 20	7 11	7 58	16 43	25	9 07	96

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 8 ^h 53 ^m 4		Mag: -4.7 PMG: 14 ^h 14 ^m				Mag: +0.3 PMG: 06 ^h 52 ^m				Mag: -2.4 PMG: 04 ^h 51 ^m				Mag: +0.5 PMG: 05 ^h 11 ^m				
	hG ♂		hG ♀		dec.		hG ♂		dec.		hG ♀		dec.		hG ♀		dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	226	16.8	146	04.7	+27	44.7	256	58.2	-14	22.6	287	01.5	-20	52.1	282	02.9	-19	50.2	
1	241	19.3	161	06.6		44.6	271	59.0		22.0	302	03.9		52.1	297	05.4		50.2	
2	256	21.7	176	08.5		44.5	286	59.8		21.5	317	06.3		52.1	312	07.8		50.2	
3	271	24.2	191	10.4		44.4	302	00.5		21.0	332	08.7		52.1	327	10.3		50.2	
4	286	26.7	206	12.3		44.3	317	01.3		20.4	347	11.1		52.1	342	12.7		50.2	
5	301	29.1	221	14.2	+27	44.2	332	02.1	-14	19.9	2	13.5	-20	52.1	357	15.2	-19	50.2	
6	316	31.6	236	16.2	+27	44.1	347	02.9	-14	19.4	17	15.9	-20	52.1	12	17.6	-19	50.2	
7	331	34.0	251	18.1		44.0	2	03.7		18.8	32	18.3		52.1	27	20.1		50.2	
8	346	36.5	266	20.0		43.9	17	04.4		18.3	47	20.7		52.1	42	22.5		50.2	
9	1	39.0	281	21.9		43.8	32	05.2		17.8	62	23.1		52.1	57	25.0		50.2	
10	16	41.4	296	23.9		43.7	47	06.0		17.2	77	25.6		52.1	72	27.4		50.2	
11	31	43.9	311	25.8	+27	43.6	62	06.8	-14	16.7	92	28.0	-20	52.1	87	29.9	-19	50.2	
12	46	46.4	326	27.8	+27	43.5	77	07.6	-14	16.2	107	30.4	-20	52.1	102	32.3	-19	50.2	
13	61	48.8	341	29.7		43.4	92	08.3		15.7	122	32.8		52.0	117	34.8		50.2	
14	76	51.3	356	31.7		43.3	107	09.1		15.1	137	35.2		52.0	132	37.2		50.2	
15	91	53.8	11	33.6		43.2	122	09.9		14.6	152	37.6		52.0	147	39.7		50.2	
16	106	56.2	26	35.6		43.1	137	10.7		14.1	167	40.0		52.0	162	42.1		50.2	
17	121	58.7	41	37.6	+27	43.0	152	11.5	-14	13.5	182	42.4	-20	52.0	177	44.6	-19	50.2	
18	137	01.2	56	39.5	+27	42.9	167	12.2	-14	13.0	197	44.9	-20	52.0	192	47.0	-19	50.2	
19	152	03.6	71	41.5		42.8	182	13.0		12.4	212	47.3		52.0	207	49.5		50.2	
20	167	06.1	86	43.5		42.7	197	13.8		11.9	227	49.7		52.0	222	51.9		50.2	
21	182	08.5	101	45.5		42.6	212	14.6		11.4	242	52.1		52.0	237	54.4		50.2	
22	197	11.0	116	47.5		42.4	227	15.4		10.8	257	54.5		52.0	252	56.9		50.2	
23	212	13.5	131	49.5		42.3	242	16.2		10.3	272	56.9		52.0	267	59.3		50.2	
24	227	15.9	146	51.5	+27	42.2	257	16.9	-14	09.8	287	59.3	-20	52.0	283	01.8	-19	50.2	
Dif.	—		+20		-1		+8		+5		+24		0		+25				

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'8			SD: 16'3		PHE {		4 ^h : 59'7				Civil		Náut.		Hora		Rº	
	PMG: 11 ^h 56 ^m 4			Edad: 15 ^d 9		20 ^h : 59'1		Rº: 59 ^m											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.												
h	°	'	°	°	'	°	'	°	°	h m	h m	h m	h m	h m	m	h m	m		
0	180	53.2	+17 25.4	338	27.2	59	−20 15.8	81	60 N	20 19	21 18	23 21	23 30	74		4 50	31		
1	195	53.2	26.0	352	52.1	58	23.9	80	58	20 07	20 59	22 25	23 11	72		5 06	35		
2	210	53.2	26.7	7	16.9	58	31.9	79	56	19 56	44	21 55	22 56	69		19	38		
3	225	53.2	27.4	21	41.7	58	39.8	77	54	47	31	33	42	69		30	41		
4	240	53.3	28.0	36	06.5	57	47.5	76	52	39	20	15	30	68		41	42		
5	255	53.3	+17 28.7	50	31.2	58	−20 55.1	75	50	19 31	20 10	21 00	22 20	67		5 50	44		
6	270	53.3	+17 29.3	64	56.0	57	−21 02.6	72	45	19 16	19 49	20 32	21 58	65		6 09	47		
7	285	53.4	30.0	79	20.7	57	09.8	72	40	19 03	33	20 10	40	64		25	49		
8	300	53.4	30.7	93	45.4	57	17.0	70	35	18 52	20	19 54	25	64		38	51		
9	315	53.4	31.3	108	10.1	57	24.0	68	30	43	19 09	40	21 13	62		6 50	52		
10	330	53.4	32.0	122	34.8	56	30.8	67	20	27	18 50	18	20 51	61		7 10	55		
11	345	53.5	+17 32.6	136	59.4	57	−21 37.5	66	10 N	18 13	18 35	19 01	20 32	60		7 27	57		
12	0	53.5	+17 33.3	151	24.1	56	−21 44.1	63	0	18 00	18 22	18 47	20 14	59		7 44	59		
13	15	53.5	34.0	165	48.7	56	50.4	63	10 S	17 47	18 09	35	19 57	57		8 00	61		
14	30	53.5	34.6	180	13.3	56	−21 56.7	61	20	34	17 57	23	38	57		18	62		
15	45	53.6	35.3	194	37.9	57	−22 02.8	59	30	18	43	12	17	55		38	65		
16	60	53.6	35.9	209	02.6	56	08.7	58	35	17 09	36	06	19 05	53		8 50	66		
17	75	53.6	+17 36.6	223	27.2	56	−22 14.5	56	40	16 59	17 28	18 01	18 50	53		9 03	68		
18	90	53.6	+17 37.2	237	51.8	56	−22 20.1	55	45	16 48	17 19	17 54	18 34	50		9 20	70		
19	105	53.7	37.9	252	16.4	56	25.6	53	50	33	08	47	13	48		40	72		
20	120	53.7	38.5	266	41.0	56	30.9	52	52	27	17 04	44	18 03	47		9 49	74		
21	135	53.7	39.2	281	05.6	56	36.1	50	54	19	16 58	41	17 52	46		10 00	75		
22	150	53.7	39.8	295	30.2	56	41.1	49	56	11	53	38	39	45		12	77		
23	165	53.8	40.5	309	54.8	56	46.0	47	58	16 02	46	34	25	42		26	80		
24	180	53.8	+17 41.1	324	19.4		−22 50.7		60 S	15 51	16 39	17 30	17 08	39		10 43	83		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 8 ^h 49 ^m 5		Mag: −4.7 PMG: 14 ^h 11 ^m			Mag: +0.3 PMG: 06 ^h 51 ^m			Mag: −2.4 PMG: 04 ^h 47 ^m			Mag: +0.5 PMG: 05 ^h 07 ^m							
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	227	15.9	146	51.5	+27 42.2	257	16.9	−14 09.8	287	59.3	−20 −52.0	283	01.8	−19 50.2					
1	242	18.4	161	53.5	42.1	272	17.7	09.2	303	01.8	−52.0	298	04.2	50.2					
2	257	20.9	176	55.5	42.0	287	18.5	08.7	318	04.2	−52.0	313	06.7	50.2					
3	272	23.3	191	57.5	41.9	302	19.3	08.2	333	06.6	−52.0	328	09.1	50.2					
4	287	25.8	206	59.5	41.7	317	20.1	07.6	348	09.0	−52.0	343	11.6	50.2					
5	302	28.3	222	01.5	+27 41.6	332	20.9	−14 07.1	3	11.4	−20 −52.0	358	14.0	−19 50.2					
6	317	30.7	237	03.5	+27 41.5	347	21.6	−14 06.6	18	13.9	−20 −52.0	13	16.5	−19 50.2					
7	332	33.2	252	05.6	41.4	2	22.4	06.0	33	16.3	−52.0	28	18.9	50.2					
8	347	35.6	267	07.6	41.3	17	23.2	05.5	48	18.7	−52.0	43	21.4	50.2					
9	2	38.1	282	09.6	41.1	32	24.0	05.0	63	21.1	−52.0	58	23.9	50.2					
10	17	40.6	297	11.7	41.0	47	24.8	04.4	78	23.5	−52.0	73	26.3	50.2					
11	32	43.0	312	13.7	+27 40.9	62	25.6	−14 03.9	93	25.9	−20 −52.0	88	28.8	−19 50.2					
12	47	45.5	327	15.8	+27 40.8	77	26.3	−14 03.4	108	28.4	−20 −52.0	103	31.2	−19 50.2					
13	62	48.0	342	17.8	40.6	92	27.1	02.8	123	30.8	−52.0	118	33.7	50.2					
14	77	50.4	357	19.9	40.5	107	27.9	02.3	138	33.2	−52.0	133	36.1	50.2					
15	92	52.9	12	21.9	40.4	122	28.7	01.7	153	35.6	−52.0	148	38.6	50.2					
16	107	55.4	27	24.0	40.2	137	29.5	01.2	168	38.1	−52.0	163	41.1	50.2					
17	122	57.8	42	26.1	+27 40.1	152	30.3	−14 00.7	183	40.5	−20 −52.0	178	43.5	−19 50.2					
18	138	00.3	57	28.1	+27 40.0	167	31.1	−14 00.1	198	42.9	−20 −52.0	193	46.0	−19 50.2					
19	153	02.8	72	30.2	39.8	182	31.8	−13 59.6	213	45.3	−52.0	208	48.4	50.2					
20	168	05.2	87	32.3	39.7	197	32.6	59.1	228	47.7	−52.0	223	50.9	50.2					
21	183	07.7	102	34.4	39.6	212	33.4	58.5	243	50.2	−52.0	238	53.3	50.2					
22	198	10.1	117	36.5	39.4	227	34.2	58.0	258	52.6	−52.0	253	55.8	50.2					
23	213	12.6	132	38.6	39.3	242	35.0	57.4	273	55.0	−52.0	268	58.3	50.2					
24	228	15.1	147	40.7	+27 39.2	257	35.8	−13 56.9	288	57.4	−20 −52.0	284	00.7	−19 50.2					
Dif.	—		+21		−1	+8		+5	+24		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: 16 ^d 9		PHE { 4 ^h : 58'8 12 ^h : 58'5 20 ^h : 58'2		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											
0	180	53.8	+17	41.1	324	19.4	56	-22	50.7	45	60 N	0 30	2 34	3 33	**	**	**	5 21	48											
1	195	53.8		41.8	338	44.0	57		55.2	44	58	1 27	2 53	46	**	**	**	41	50											
2	210	53.8		42.4	353	08.7	56	-22	59.6	43	56	1 57	3 08	3 56	**	**	**	5 57	51											
3	225	53.8		43.1	7	33.3	57	-23	03.9	41	54	2 20	21	4 05	23	51	53	6 11	52											
4	240	53.9		43.7	21	58.0	56		08.0	39	52	37	33	14	38	54		23	53											
5	255	53.9	+17	44.4	36	22.6	57	-23	11.9	38	50	2 52	3 42	4 21	23	27	54	6 34	53											
6	270	53.9	+17	45.0	50	47.3	57	-23	15.7	36	45	3 21	4 03	4 37	23	03	55	6 56	54											
7	285	53.9		45.7	65	12.0	57		19.3	35	40	42	19	4 49	22	44	56	7 14	55											
8	300	53.9		46.3	79	36.7	58		22.8	33	35	3 59	33	5 00	29	55		29	56											
9	315	54.0		47.0	94	01.5	57		26.1	31	30	4 13	4 44	10	22	15	56	7 42	57											
10	330	54.0		47.6	108	26.2	58		29.2	30	20	35	5 02	26	21	52	56	8 05	57											
11	345	54.0	+17	48.3	122	51.0	58	-23	32.2	29	10 N	4 52	5 18	5 40	21	32	56	8 24	58											
12	0	54.0	+17	48.9	137	15.8	58	-23	35.1	27	0	5 06	5 31	5 53	21	13	57	8 43	58											
13	15	54.0		49.6	151	40.6	59		37.8	25	10 S	18	44	6 06	20	54	58	9 01	58											
14	30	54.1		50.2	166	05.5	59		40.3	24	20	30	5 56	19	35	57		20	59											
15	45	54.1		50.8	180	30.4	59		42.7	22	30	41	6 10	35	20	12	57	43	59											
16	60	54.1		51.5	194	55.3	59		44.9	21	35	47	17	44	19	58	58	9 56	60											
17	75	54.1	+17	52.1	209	20.2	60	-23	47.0	19	40	5 53	6 25	6 54	19	43	57	10 11	60											
18	90	54.1	+17	52.8	223	45.2	60	-23	48.9	18	45	5 59	6 34	7 06	19	24	58	10 30	60											
19	105	54.2		53.4	238	10.2	61		50.7	16	50	6 06	45	20	19	01	58	10 52	61											
20	120	54.2		54.1	252	35.3	61		52.3	14	52	09	50	27	18	50	58	11 03	61											
21	135	54.2		54.7	267	00.4	61		53.7	13	54	12	6 55	34	38	57		15	62											
22	150	54.2		55.3	281	25.5	62		55.0	12	56	16	7 01	43	24	57		29	62											
23	165	54.2		56.0	295	50.7	62		56.2	10	58	19	08	7 52	18	07	57	11 46	62											
24	180	54.2	+17	56.6	310	15.9		-23	57.2		60 S	6 23	7 15	8 03	17	47	57	12 06	62											
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG: 8 ^h 45 ^m 6		Mag: -4.7 PMG: 14 ^h 07 ^m				Mag: +0.3 PMG: 06 ^h 49 ^m				Mag: -2.4 PMG: 04 ^h 43 ^m				Mag: +0.5 PMG: 05 ^h 03 ^m															
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'												
0	228	15.1	147	40.7	+27	39.2	257	35.8	-13	56.9	288	57.4	-20	52.0	284	00.7	-19	50.2												
1	243	17.5	162	42.8		39.0	272	36.6		56.4	303	59.9		52.0	299	03.2		50.2												
2	258	20.0	177	44.9		38.9	287	37.4		55.8	319	02.3		52.0	314	05.6		50.2												
3	273	22.5	192	47.0		38.7	302	38.1		55.3	334	04.7		52.0	329	08.1		50.3												
4	288	24.9	207	49.1		38.6	317	38.9		54.8	349	07.1		52.0	344	10.5		50.3												
5	303	27.4	222	51.2	+27	38.5	332	39.7	-13	54.2	4	09.6	-20	52.0	359	13.0	-19	50.3												
6	318	29.9	237	53.3	+27	38.3	347	40.5	-13	53.7	19	12.0	-20	52.0	14	15.5	-19	50.3												
7	333	32.3	252	55.5		38.2	2	41.3		53.1	34	14.4		52.0	29	17.9		50.3												
8	348	34.8	267	57.6		38.0	17	42.1		52.6	49	16.8		52.0	44	20.4		50.3												
9	3	37.3	282	59.7		37.9	32	42.9		52.1	64	19.3		52.0	59	22.8		50.3												
10	18	39.7	298	01.9		37.7	47	43.7		51.5	79	21.7		52.0	74	25.3		50.3												
11	33	42.2	313	04.0	+27	37.6	62	44.5	-13	51.0	94	24.1	-20	52.0	89	27.8	-19	50.3												
12	48	44.6	328	06.2	+27	37.4	77	45.2	-13	50.4	109	26.6	-20	52.0	104	30.2	-19	50.3												
13	63	47.1	343	08.3		37.3	92	46.0		49.9	124	29.0		52.0	119	32.7		50.3												
14	78	49.6	358	10.5		37.1	107	46.8		49.4	139	31.4		52.0	134	35.1		50.3												
15	93	52.0	13	12.7		37.0	122	47.6		48.8	154	33.8		52.0	149	37.6		50.3												
16	108	54.5	28	14.8		36.8	137	48.4		48.3	169	36.3		52.0	164	40.1		50.3												
17	123	57.0	43	17.0	+27	36.7	152	49.2	-13	47.7	184	38.7	-20	52.0	179	42.5	-19	50.3												
18	138	59.4	58	19.2	+27	36.5	167	50.0	-13	47.2	199	41.1	-20	52.0	194	45.0	-19	50.3												
19	154	01.9	73	21.4		36.3	182	50.8		46.7	214	43.6		52.0	209	47.5		50.3												
20	169	04.4	88	23.5		36.2	197	51.6		46.1	229	46.0		52.0	224	49.9		50.3												
21	184	06.8	103	25.7		36.0	212	52.4		45.6	244	48.4		52.0	239	52.4		50.3												
22	199	09.3	118	27.9		35.9	227	53.1		45.0	259	50.9		52.0	254	54.8		50.3												
23	214	11.8	133	30.1		35.7	242	53.9		44.5	274	53.3		52.0	269	57.3		50.3												
24	229	14.2	148	32.3	+27	35.5	257	54.7	-13	44.0	289	55.7	-20	52.0	284	59.8	-19	50.3												
Dif.	—		+22				-2				+8				+5				+24				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: 15'8 Edad: 17 ^d 9 PMG: 03 ^h 27 ^m PHE { 4 ^h : 57'9 12 ^h : 57'6 20 ^h : 57'3 Rº: 56 ^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	m
0	180	54.2	+17	56.6	310	15.9	62	-23	57.2	9	60 N	20 23	21 24	** **	0 44	51	6 09	66
1	195	54.3		57.3	324	41.1	63		58.1	7	58	11	21 05	22 35		23 52	31	64
2	210	54.3		57.9	339	06.4	64		58.8	5	56	20 00	20 49	22 02	0 05	53	6 48	63
3	225	54.3		58.5	353	31.8	64		59.3	4	54	19 50	35	21 38	** ** *	**	7 03	62
4	240	54.3		59.2	7	57.2	64	-23	59.7	3	52	42	23	20	** ** *	**	16	62
5	255	54.3	+17	59.8	22	22.6	65	-24	00.0	1	50	19 34	20 13	21 04	** ** *	**	7 27	61
6	270	54.3	+18	00.4	36	48.1	66	-24	00.1	0	45	19 18	19 52	20 35	23 58	45	7 50	61
7	285	54.4		01.1	51	13.7	66	-24	00.1	2	40	19 05	35	20 13	40	46	8 09	60
8	300	54.4		01.7	65	39.3	66	-23	59.9	4	35	18 54	22	19 55	24	48	25	59
9	315	54.4		02.3	80	04.9	67		59.5	4	30	44	19 10	41	23 11	49	8 39	58
10	330	54.4		03.0	94	30.6	68		59.1	7	20	28	18 51	19	22 48	51	9 02	57
11	345	54.4	+18	03.6	108	56.4	68	-23	58.4	7	10 N	18 13	18 35	19 01	22 28	53	9 22	56
12	0	54.4	+18	04.2	123	22.2	69	-23	57.7	9	0	18 00	18 22	18 47	22 10	54	9 41	55
13	15	54.4		04.9	137	48.1	70		56.8	11	10 S	17 47	18 09	34	21 52	55	9 59	55
14	30	54.4		05.5	152	14.1	70		55.7	12	20	33	17 56	22	32	57	10 19	54
15	45	54.5		06.1	166	40.1	71		54.5	13	30	17	42	11	21 09	59	42	53
16	60	54.5		06.8	181	06.2	71		53.2	15	35	17 08	35	18 05	20 56	59	10 56	52
17	75	54.5	+18	07.4	195	32.3	72	-23	51.7	16	40	16 57	17 26	17 59	20 40	61	11 11	52
18	90	54.5	+18	08.0	209	58.5	73	-23	50.1	17	45	16 45	17 17	17 52	20 22	62	11 30	50
19	105	54.5		08.6	224	24.8	73		48.4	19	50	30	06	45	19 59	64	11 53	48
20	120	54.5		09.3	238	51.1	74		46.5	21	52	24	17 01	42	48	65	12 04	48
21	135	54.5		09.9	253	17.5	75		44.4	21	54	16	16 55	38	35	67	17	46
22	150	54.5		10.5	267	44.0	75		42.3	23	56	16 07	49	35	21	68	31	45
23	165	54.6		11.2	282	10.5	77		40.0	25	58	15 58	43	31	19 04	70	12 48	44
24	180	54.6	+18	11.8	296	37.2		-23	37.5		60 S	15 47	16 35	17 27	18 44	72	13 08	42
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 41 ^m 6		Mag: -4.7 PMG: 14 ^h 04 ^m				Mag: +0.3 PMG: 06 ^h 48 ^m				Mag: -2.4 PMG: 04 ^h 40 ^m				Mag: +0.5 PMG: 04 ^h 59 ^m			
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.		hG ♀	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	229	14.2	148	32.3	+27	35.5	257	54.7	-13	44.0	289	55.7	-20	-52.0	284	59.8	-19	50.3
1	244	16.7	163	34.5		35.4	272	55.5		43.4	304	58.2		-52.0	300	02.2		50.3
2	259	19.1	178	36.7		35.2	287	56.3		42.9	320	00.6		-52.0	315	04.7		50.3
3	274	21.6	193	39.0		35.0	302	57.1		42.3	335	03.0		-52.0	330	07.2		50.3
4	289	24.1	208	41.2		34.9	317	57.9		41.8	350	05.5		-52.0	345	09.6		50.3
5	304	26.5	223	43.4	+27	34.7	332	58.7	-13	41.2	5	07.9	-20	-52.0	0	12.1	-19	50.3
6	319	29.0	238	45.6	+27	34.5	347	59.5	-13	40.7	20	10.3	-20	-52.0	15	14.5	-19	50.3
7	334	31.5	253	47.9		34.4	3	00.3		40.2	35	12.8		-52.0	30	17.0		50.3
8	349	33.9	268	50.1		34.2	18	01.1		39.6	50	15.2		-52.0	45	19.5		50.4
9	4	36.4	283	52.3		34.0	33	01.9		39.1	65	17.6		-52.0	60	21.9		50.4
10	19	38.9	298	54.6		33.8	48	02.6		38.5	80	20.1		-52.0	75	24.4		50.4
11	34	41.3	313	56.8	+27	33.7	63	03.4	-13	38.0	95	22.5	-20	-52.0	90	26.9	-19	50.4
12	49	43.8	328	59.1	+27	33.5	78	04.2	-13	37.5	110	24.9	-20	-52.0	105	29.3	-19	50.4
13	64	46.3	344	01.4		33.3	93	05.0		36.9	125	27.4		-52.0	120	31.8		50.4
14	79	48.7	359	03.6		33.1	108	05.8		36.4	140	29.8		-52.0	135	34.3		50.4
15	94	51.2	14	05.9		33.0	123	06.6		35.8	155	32.3		-52.0	150	36.7		50.4
16	109	53.6	29	08.2		32.8	138	07.4		35.3	170	34.7		-52.0	165	39.2		50.4
17	124	56.1	44	10.4	+27	32.6	153	08.2	-13	34.7	185	37.1	-20	-52.0	180	41.7	-19	50.4
18	139	58.6	59	12.7	+27	32.4	168	09.0	-13	34.2	200	39.6	-20	-52.0	195	44.1	-19	50.4
19	155	01.0	74	15.0		32.2	183	09.8		33.6	215	42.0		-52.0	210	46.6		50.4
20	170	03.5	89	17.3		32.1	198	10.6		33.1	230	44.5		-52.0	225	49.1		50.4
21	185	06.0	104	19.6		31.9	213	11.4		32.6	245	46.9		-52.0	240	51.5		50.4
22	200	08.4	119	21.9		31.7	228	12.2		32.0	260	49.3		-52.0	255	54.0		50.4
23	215	10.9	134	24.2		31.5	243	13.0		31.5	275	51.8		-52.0	270	56.4		50.4
24	230	13.4	149	26.5	+27	31.3	258	13.8	-13	30.9	290	54.2	-20	-52.0	285	58.9	-19	50.4
Dif.	—		+23		-2		+8		+5		+24		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: 15°6 Edad: 18 ^d 9 PMG: 04 ^h 23 ^m PHE { 4^h: 57°0 12^h: 56°7 20^h: 56°4 Rº: 53^m					Náut.	Civil		Hora	Rº	Hora	Rº		
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.												
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	180	54.6	+18	11.8	296	37.2	76	−23	37.5	25	60 N	** **	2 27	3 29	1 35	32	7 15	78
1	195	54.6		12.4	311	03.8	78		35.0	27	58	1 16	2 47	41	1 15	35	35	74
2	210	54.6		13.0	325	30.6	78		32.3	29	56	1 50	3 03	3 52	0 58	38	7 51	72
3	225	54.6		13.7	339	57.4	80		29.4	29	54	2 14	17	4 02	44	40	8 05	70
4	240	54.6		14.3	354	24.4	79		26.5	31	52	32	29	10	32	41	18	68
5	255	54.6	+18	14.9	8	51.3	81	−23	23.4	32	50	2 48	3 39	4 18	0 21	42	8 28	67
6	270	54.6	+18	15.5	23	18.4	82	−23	20.2	34	45	3 18	4 00	4 34	***	***	8 51	64
7	285	54.6		16.2	37	45.6	82		16.8	34	40	40	17	47	***	***	9 09	62
8	300	54.6		16.8	52	12.8	83		13.4	36	35	3 57	31	4 59	***	***	24	60
9	315	54.6		17.4	66	40.1	84		09.8	38	30	4 11	4 42	5 08	***	***	37	59
10	330	54.7		18.0	81	07.5	84		06.0	38	20	34	5 01	25	23 39	46	9 59	56
11	345	54.7	+18	18.6	95	34.9	86	−23	02.2	40	10 N	4 51	5 17	5 39	23 21	48	10 18	55
12	0	54.7	+18	19.3	110	02.5	86	−22	58.2	41	0	5 06	5 31	5 53	23 04	50	10 36	53
13	15	54.7		19.9	124	30.1	87		54.1	42	10 S	19	44	6 06	22 47	53	10 54	50
14	30	54.7		20.5	138	57.8	88		49.9	43	20	30	5 57	20	29	55	11 13	48
15	45	54.7		21.1	153	25.6	88		45.6	45	30	42	6 11	36	22 08	58	35	46
16	60	54.7		21.7	167	53.4	90		41.1	45	35	48	19	45	21 55	60	11 48	44
17	75	54.7	+18	22.3	182	21.4	90	−22	36.6	47	40	5 54	6 27	6 56	21 41	62	12 03	42
18	90	54.7	+18	23.0	196	49.4	91	−22	31.9	48	45	6 01	6 37	7 08	21 24	64	12 20	40
19	105	54.7		23.6	211	17.5	92		27.1	49	50	08	48	23	21 03	68	41	38
20	120	54.7		24.2	225	45.7	93		22.2	51	52	12	53	30	20 53	69	12 52	36
21	135	54.7		24.8	240	14.0	94		17.1	51	54	15	6 58	38	42	71	13 03	34
22	150	54.7		25.4	254	42.4	95		12.0	52	56	19	7 04	46	29	73	16	32
23	165	54.7		26.0	269	10.9	95		06.8	54	58	23	11	7 56	20 14	76	13 32	29
24	180	54.7	+18	26.6	283	39.4		−22	01.4		60 S	6 27	7 19	8 08	19 56	80	13 50	25

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 8 ^h 37 ^m 7		Mag: −4.6 PMG: 14 ^h 00 ^m			Mag: +0.3 PMG: 06 ^h 47 ^m			Mag: −2.4 PMG: 04 ^h 36 ^m			Mag: +0.5 PMG: 04 ^h 55 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	230	13.4	149	26.5	+27	31.3	258	13.8	−13	30.9	290	54.2	−20	52.0	285	58.9	−19	50.4
1	245	15.8	164	28.8		31.1	273	14.6		30.4	305	56.7		52.0	301	01.4		50.4
2	260	18.3	179	31.1		30.9	288	15.4		29.8	320	59.1		52.0	316	03.8		50.4
3	275	20.8	194	33.4		30.7	303	16.2		29.3	336	01.5		52.0	331	06.3		50.4
4	290	23.2	209	35.8		30.5	318	17.0		28.8	351	04.0		52.0	346	08.8		50.4
5	305	25.7	224	38.1	+27	30.4	333	17.7	−13	28.2	6	06.4	−20	52.0	1	11.3	−19	50.4
6	320	28.1	239	40.4	+27	30.2	348	18.5	−13	27.7	21	08.9	−20	52.0	16	13.7	−19	50.4
7	335	30.6	254	42.8		30.0	3	19.3		27.1	36	11.3		52.0	31	16.2		50.5
8	350	33.1	269	45.1		29.8	18	20.1		26.6	51	13.8		52.0	46	18.7		50.5
9	5	35.5	284	47.5		29.6	33	20.9		26.0	66	16.2		52.0	61	21.1		50.5
10	20	38.0	299	49.8		29.4	48	21.7		25.5	81	18.6		52.0	76	23.6		50.5
11	35	40.5	314	52.2	+27	29.2	63	22.5	−13	24.9	96	21.1	−20	52.0	91	26.1	−19	50.5
12	50	42.9	329	54.5	+27	29.0	78	23.3	−13	24.4	111	23.5	−20	52.0	106	28.5	−19	50.5
13	65	45.4	344	56.9		28.8	93	24.1		23.8	126	26.0		52.1	121	31.0		50.5
14	80	47.9	359	59.3		28.6	108	24.9		23.3	141	28.4		52.1	136	33.5		50.5
15	95	50.3	15	01.7		28.4	123	25.7		22.8	156	30.9		52.1	151	35.9		50.5
16	110	52.8	30	04.0		28.2	138	26.5		22.2	171	33.3		52.1	166	38.4		50.5
17	125	55.2	45	06.4	+27	27.9	153	27.3	−13	21.7	186	35.8	−20	52.1	181	40.9	−19	50.5
18	140	57.7	60	08.8	+27	27.7	168	28.1	−13	21.1	201	38.2	−20	52.1	196	43.3	−19	50.5
19	156	00.2	75	11.2		27.5	183	28.9		20.6	216	40.7		52.1	211	45.8		50.5
20	171	02.6	90	13.6		27.3	198	29.7		20.0	231	43.1		52.1	226	48.3		50.5
21	186	05.1	105	16.0		27.1	213	30.5		19.5	246	45.6		52.1	241	50.8		50.5
22	201	07.6	120	18.4		26.9	228	31.3		18.9	261	48.0		52.1	256	53.2		50.5
23	216	10.0	135	20.8		26.7	243	32.1		18.4	276	50.5		52.1	271	55.7		50.5
24	231	12.5	150	23.2	+27	26.5	258	32.9	−13	17.8	291	52.9	−20	52.1	286	58.2	−19	50.5
Dif.	—		+24		−2		+8		+5		+24		0		+25			

UT	SOL			LUNA					Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°8			SD: 15°3		PHE { 4^h: 56'1 12^h: 55'9 20^h: 55'6					Edad: 19 ^d 9							
	PMG: 11 ^h 56 ^m 3			PMG: 05 ^h 16 ^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	m	h m m	m		
0	180	54.7	+18	283	39.4	96	-22	01.4	55	60 N	20 28	21 31	** **	2 07	20	8 33	82	
1	195	54.7		298	08.0	97	-21	55.9	56	58	15	21 10	22 47	1 50	24	8 49	78	
2	210	54.7		312	36.7	98		50.3	56	56	20 04	20 53	22 09	36	27	9 03	75	
3	225	54.8		327	05.5	99		44.7	58	54	19 54	39	21 44	24	29	15	72	
4	240	54.8		341	34.4	100		38.9	59	52	45	27	25	13	31	26	70	
5	255	54.8	+18	356	03.4	101	-21	33.0	60	50	19 37	20 16	21 09	1 03	33	9 35	68	
6	270	54.8	+18	10	32.5	101	-21	27.0	61	45	19 21	19 55	20 38	0 43	36	9 55	64	
7	285	54.8		25	01.6	102		20.9	62	40	19 07	37	20 15	26	39	10 11	61	
8	300	54.8		39	30.8	104		14.7	63	35	18 55	23	19 57	0 12	41	24	59	
9	315	54.8		54	00.2	104		08.4	65	30	45	19 12	43	** **	**	36	57	
10	330	54.8		68	29.6	105	-21	01.9	65	20	28	18 52	20	** **	**	10 55	55	
11	345	54.8	+18	82	59.1	105	-20	55.4	66	10 N	18 14	18 36	19 02	** **	**	11 13	51	
12	0	54.8	+18	97	28.6	107	-20	48.8	67	0	18 00	18 22	18 47	23 54	47	11 29	48	
13	15	54.8		111	58.3	107		42.1	67	10 S	17 46	18 08	34	40	49	11 44	46	
14	30	54.8		126	28.0	109		35.4	69	20	32	17 55	22	24	53	12 01	44	
15	45	54.8		140	57.9	109		28.5	70	30	16	41	10	23 06	56	21	40	
16	60	54.8		155	27.8	110		21.5	71	35	17 06	33	18 04	22 55	59	32	38	
17	75	54.8	+18	169	57.8	111	-20	14.4	72	40	16 55	17 24	17 57	22 43	61	12 45	36	
18	90	54.8	+18	184	27.9	112	-20	07.2	72	45	16 43	17 15	17 50	22 28	65	13 00	33	
19	105	54.8		198	58.1	112	-20	00.0	74	50	28	17 03	43	11	68	19	29	
20	120	54.8		213	28.3	114	-19	52.6	74	52	21	16 58	39	22 02	70	28	27	
21	135	54.8		227	58.7	114		45.2	75	54	13	52	36	21 53	72	37	26	
22	150	54.8		242	29.1	115		37.7	76	56	16 04	46	32	42	75	13 48	23	
23	165	54.8		256	59.6	116		30.1	77	58	15 54	39	28	30	78	14 01	20	
24	180	54.8	+18	271	30.2		-19	22.4		60 S	15 42	16 31	17 23	21 16	82	14 15	17	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 8 ^h 33 ^m 8		Mag: -4.6 PMG: 13 ^h 56 ^m			Mag: +0.3 PMG: 06 ^h 45 ^m			Mag: -2.4 PMG: 04 ^h 32 ^m			Mag: +0.5 PMG: 04 ^h 51 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	°	'		
0	231	12.5	150	23.2	+27	258	32.9	-13	17.8	291	52.9	-20	-52.1	286	58.2	-19	50.5	
1	246	15.0	165	25.7		273	33.7		17.3	306	55.4		-52.1	302	00.6		50.5	
2	261	17.4	180	28.1		288	34.5		16.7	321	57.8		-52.1	317	03.1		50.6	
3	276	19.9	195	30.5		303	35.3		16.2	337	00.3		-52.1	332	05.6		50.6	
4	291	22.4	210	32.9		318	36.1		15.6	352	02.7		-52.1	347	08.1		50.6	
5	306	24.8	225	35.4	+27	333	36.9	-13	15.1	7	05.2	-20	-52.1	2	10.5	-19	50.6	
6	321	27.3	240	37.8	+27	348	37.7	-13	14.5	22	07.6	-20	-52.1	17	13.0	-19	50.6	
7	336	29.7	255	40.3		3	38.5		14.0	37	10.1		-52.1	32	15.5		50.6	
8	351	32.2	270	42.7		18	39.3		13.4	52	12.5		-52.1	47	17.9		50.6	
9	6	34.7	285	45.2		33	40.1		12.9	67	15.0		-52.1	62	20.4		50.6	
10	21	37.1	300	47.6		48	40.9		12.4	82	17.4		-52.1	77	22.9		50.6	
11	36	39.6	315	50.1	+27	63	41.7	-13	11.8	97	19.9	-20	-52.1	92	25.4	-19	50.6	
12	51	42.1	330	52.6	+27	78	42.5	-13	11.3	112	22.3	-20	-52.1	107	27.8	-19	50.6	
13	66	44.5	345	55.0		93	43.3		10.7	127	24.8		-52.1	122	30.3		50.6	
14	81	47.0	0	57.5		108	44.1		10.2	142	27.2		-52.2	137	32.8		50.6	
15	96	49.5	16	00.0		123	44.9		09.6	157	29.7		-52.2	152	35.3		50.6	
16	111	51.9	31	02.5		138	45.7		09.1	172	32.1		-52.2	167	37.7		50.6	
17	126	54.4	46	05.0	+27	153	46.5	-13	08.5	187	34.6	-20	-52.2	182	40.2	-19	50.6	
18	141	56.9	61	07.5	+27	168	47.3	-13	08.0	202	37.0	-20	-52.2	197	42.7	-19	50.6	
19	156	59.3	76	10.0		183	48.2		07.4	217	39.5		-52.2	212	45.1		50.7	
20	172	01.8	91	12.5		198	49.0		06.9	232	42.0		-52.2	227	47.6		50.7	
21	187	04.2	106	15.0		213	49.8		06.3	247	44.4		-52.2	242	50.1		50.7	
22	202	06.7	121	17.5		228	50.6		05.8	262	46.9		-52.2	257	52.6		50.7	
23	217	09.2	136	20.0		243	51.4		05.2	277	49.3		-52.2	272	55.0		50.7	
24	232	11.6	151	22.6	+27	258	52.2	-13	04.7	292	51.8	-20	-52.2	287	57.5	-19	50.7	
Dif.	—		+25	-2		+8		+5		+25		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: 15'1 Edad: 20 ^d 9 PMG: 06 ^h 06 ^m PHE { 4 ^h : 55'4 12 ^h : 55'2 20 ^h : 55'0 Rº: 46 ^m															
	hG ☉		Dec		hG ☾		Dif. Dec Dif.			Náut.	Civil		Hora	Rº	Hora	Rº				
	°	'	°	'	°	'	°	'		h	m		h	m	h	m	h	m		
h																				
0	180	54.8	+18	41.2	271	30.2	117	-19	22.4	78	60 N	2 21	3 24	2 27	13	9 55	81			
1	195	54.8		41.8	286	00.9	118		14.6	78	58	1 05	42	37	14	16	10 07	78		
2	210	54.8		42.4	300	31.7	119	-19	06.8	80	56	1 43	2 59	48	2 03	19	18	75		
3	225	54.8		43.0	315	02.6	119	-18	58.8	80	54	2 08	3 13	3 58	1 53	21	27	72		
4	240	54.8		43.6	329	33.5	120		50.8	81	52	28	25	4 07	44	24	36	70		
5	255	54.8	+18	44.2	344	04.5	121	-18	42.7	82	50	2 44	3 36	4 15	1 36	25	10 43	68		
6	270	54.8	+18	44.8	358	35.6	122	-18	34.5	82	45	3 14	3 58	4 32	1 19	29	10 59	64		
7	285	54.8		45.4	13	06.8	122		26.3	84	40	37	4 15	45	1 05	32	11 12	61		
8	300	54.7		46.0	27	38.0	124		17.9	84	35	3 55	29	4 57	0 53	35	23	58		
9	315	54.7		46.6	42	09.4	124		09.5	85	30	4 10	4 41	5 07	43	37	33	56		
10	330	54.7		47.2	56	40.8	125	-18	01.0	85	20	33	5 01	24	25	40	11 50	51		
11	345	54.7	+18	47.8	71	12.3	126	-17	52.5	87	10 N	4 51	5 17	5 39	0 09	44	12 04	48		
12	0	54.7	+18	48.4	85	43.9	126	-17	43.8	87	0	5 06	5 31	5 53	** ** *	**	12 17	46		
13	15	54.7		49.0	100	15.5	128		35.1	87	10 S	19	44	6 06	** ** *	**	30	43		
14	30	54.7		49.5	114	47.3	128		26.4	89	20	31	5 58	21	** ** *	**	12 45	39		
15	45	54.7		50.1	129	19.1	128		17.5	89	30	43	6 12	37	** ** *	**	13 01	35		
16	60	54.7		50.7	143	50.9	130	-17	08.6	90	35	49	20	47	23 54	57	10	33		
17	75	54.7	+18	51.3	158	22.9	130	-16	59.6	91	40	5 56	6 29	6 58	23 44	60	13 21	30		
18	90	54.7	+18	51.9	172	54.9	132	-16	50.5	91	45	6 03	6 39	7 10	23 33	63	13 33	27		
19	105	54.7		52.5	187	27.1	131		41.4	92	50	11	50	26	19	67	48	23		
20	120	54.7		53.1	201	59.2	133		32.2	92	52	14	6 56	33	12	69	13 55	21		
21	135	54.7		53.7	216	31.5	133		23.0	93	54	18	7 01	41	23 05	71	14 03	19		
22	150	54.7		54.3	231	03.8	134		13.7	94	56	22	08	7 50	22 57	74	11	17		
23	165	54.7		54.9	245	36.2	135	-16	04.3	94	58	26	15	8 00	22 48	77	14 21	14		
24	180	54.7	+18	55.4	260	08.7		-15	54.9		60 S	6 31	7 23	8 12	22 38	80	14 32	11		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 8 ^h 29 ^m 8		Mag: -4.6 PMG: 13 ^h 52 ^m				Mag: +0.2 PMG: 06 ^h 44 ^m				Mag: -2.4 PMG: 04 ^h 28 ^m				Mag: +0.5 PMG: 04 ^h 47 ^m					
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	232	11.6	151	22.6	+27	21.0	258	52.2	-13	04.7	292	51.8	-20	52.2	287	57.5	-19	50.7		
1	247	14.1	166	25.1		20.8	273	53.0		04.1	307	54.2		52.2	303	00.0		50.7		
2	262	16.6	181	27.6		20.5	288	53.8		03.6	322	56.7		52.2	318	02.5		50.7		
3	277	19.0	196	30.2		20.3	303	54.6		03.0	337	59.2		52.2	333	04.9		50.7		
4	292	21.5	211	32.7		20.0	318	55.4		02.5	353	01.6		52.2	348	07.4		50.7		
5	307	24.0	226	35.3	+27	19.8	333	56.2	-13	01.9	8	04.1	-20	52.2	3	09.9	-19	50.7		
6	322	26.4	241	37.8	+27	19.6	348	57.0	-13	01.4	23	06.5	-20	52.2	18	12.4	-19	50.7		
7	337	28.9	256	40.4		19.3	3	57.8		00.8	38	09.0		52.2	33	14.9		50.7		
8	352	31.4	271	42.9		19.1	18	58.6	-13	00.3	53	11.5		52.2	48	17.3		50.7		
9	7	33.8	286	45.5		18.8	33	59.4	-12	59.7	68	13.9		52.3	63	19.8		50.7		
10	22	36.3	301	48.1		18.6	49	00.2		59.2	83	16.4		52.3	78	22.3		50.8		
11	37	38.7	316	50.6	+27	18.3	64	01.0	-12	58.6	98	18.8	-20	52.3	93	24.8	-19	50.8		
12	52	41.2	331	53.2	+27	18.0	79	01.8	-12	58.1	113	21.3	-20	52.3	108	27.2	-19	50.8		
13	67	43.7	346	55.8		17.8	94	02.6		57.5	128	23.8		52.3	123	29.7		50.8		
14	82	46.1	1	58.4		17.5	109	03.5		56.9	143	26.2		52.3	138	32.2		50.8		
15	97	48.6	17	01.0		17.3	124	04.3		56.4	158	28.7		52.3	153	34.7		50.8		
16	112	51.1	32	03.6		17.0	139	05.1		55.8	173	31.2		52.3	168	37.1		50.8		
17	127	53.5	47	06.2	+27	16.8	154	05.9	-12	55.3	188	33.6	-20	52.3	183	39.6	-19	50.8		
18	142	56.0	62	08.8	+27	16.5	169	06.7	-12	54.7	203	36.1	-20	52.3	198	42.1	-19	50.8		
19	157	58.5	77	11.4		16.2	184	07.5		54.2	218	38.5		52.3	213	44.6		50.8		
20	173	00.9	92	14.0		16.0	199	08.3		53.6	233	41.0		52.3	228	47.1		50.8		
21	188	03.4	107	16.6		15.7	214	09.1		53.1	248	43.5		52.3	243	49.5		50.8		
22	203	05.8	122	19.2		15.4	229	09.9		52.5	263	45.9		52.3	258	52.0		50.8		
23	218	08.3	137	21.9		15.2	244	10.7		52.0	278	48.4		52.3	273	54.5		50.8		
24	233	10.8	152	24.5	+27	14.9	259	11.5	-12	51.4	293	50.9	-20	52.4	288	57.0	-19	50.8		
Dif.	—		+26 -3				+8 +6				+25 0				+25					

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8				PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'5														
	PMG: 11 ^h 56 ^m 4				Edad: 21 ^d 9														
	PMG: 06 ^h 52 ^m				R ^o : 43 ^m														
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	R ^o	Hora	R ^o			
h	°	'	°	'	°	'	°	'	°	N	h m	h m	h m	h m m	h m m	h m m			
0	180	54.7	+18	55.4	260	08.7	135	-15	54.9	95	60 N	20 33	21 38	** **	2 40	9	11 16	79	
1	195	54.6		56.0	274	41.2	137		45.4	96	58	19	21 16	23 01	30	13	25	76	
2	210	54.6		56.6	289	13.9	136		35.8	96	56	20 08	20 58	22 17	22	15	33	73	
3	225	54.6		57.2	303	46.5	138		26.2	97	54	19 57	43	21 50	14	18	39	71	
4	240	54.6		57.8	318	19.3	138		16.5	98	52	48	31	29	08	19	46	68	
5	255	54.6	+18	58.4	332	52.1	139	-15	06.7	97	50	19 40	20 20	21 13	2 01	22	11 51	67	
6	270	54.6	+18	59.0	347	25.0	140	-14	57.0	99	45	19 23	19 57	20 41	1 48	25	12 03	63	
7	285	54.6	+18	59.5	1	58.0	140		47.1	99	40	19 09	40	20 18	37	29	13	59	
8	300	54.6	+19	00.1	16	31.0	141		37.2	100	35	18 57	25	19 59	28	31	21	57	
9	315	54.6		00.7	31	04.1	141		27.2	100	30	47	19 13	44	20	33	29	54	
10	330	54.6		01.3	45	37.2	142		17.2	101	20	29	18 53	21	1 05	38	41	50	
11	345	54.5	+19	01.9	60	10.4	143	-14	07.1	101	10 N	18 14	18 36	19 02	0 53	41	12 52	46	
12	0	54.5	+19	02.4	74	43.7	143	-13	57.0	102	0	18 00	18 22	18 47	0 41	44	13 03	42	
13	15	54.5		03.0	89	17.0	144		46.8	102	10 S	17 46	18 08	34	29	47	13	39	
14	30	54.5		03.6	103	50.4	145		36.6	102	20	31	17 54	21	17	50	24	35	
15	45	54.5		04.2	118	23.9	145		26.4	104	30	14	40	09	0 02	55	36	32	
16	60	54.5		04.8	132	57.4	146		16.0	103	35	17 05	32	18 02	** **	**	43	29	
17	75	54.5	+19	05.3	147	31.0	146	-13	05.7	105	40	16 54	17 23	17 56	** **	**	13 51	27	
18	90	54.5	+19	05.9	162	04.6	147	-12	55.2	104	45	16 41	17 13	17 48	** **	**	14 00	24	
19	105	54.5		06.5	176	38.3	147		44.8	105	50	25	17 01	40	** **	**	11	20	
20	120	54.4		07.1	191	12.0	148		34.3	106	52	18	16 55	37	** **	**	16	18	
21	135	54.4		07.6	205	45.8	149		23.7	106	54	09	49	33	** **	**	22	16	
22	150	54.4		08.2	220	19.7	149		13.1	106	56	16 00	43	29	** **	**	28	14	
23	165	54.4		08.8	234	53.6	150	-12	02.5	107	58	15 50	36	24	** **	**	35	12	
24	180	54.4	+19	09.4	249	27.6		-11	51.8		60 S	15 38	16 28	17 20	23 58	77	14 43	9	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 8 ^h 25 ^m 9		Mag: -4.6 PMG: 13 ^h 48 ^m				Mag: +0.2 PMG: 06 ^h 43 ^m				Mag: -2.4 PMG: 04 ^h 24 ^m				Mag: +0.5 PMG: 04 ^h 43 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	233	10.8	152	24.5	+27	14.9	259	11.5	-12	51.4	293	50.9	-20	-52.4	288	57.0	-19	50.8	
1	248	13.2	167	27.2		14.6	274	12.3		50.9	308	53.3		-52.4	303	59.5		50.9	
2	263	15.7	182	29.8		14.4	289	13.1		50.3	323	55.8		-52.4	319	01.9		50.9	
3	278	18.2	197	32.4		14.1	304	14.0		49.8	338	58.3		-52.4	334	04.4		50.9	
4	293	20.6	212	35.1		13.8	319	14.8		49.2	354	00.7		-52.4	349	06.9		50.9	
5	308	23.1	227	37.8	+27	13.6	334	15.6	-12	48.7	9	03.2	-20	-52.4	4	09.4	-19	50.9	
6	323	25.6	242	40.4	+27	13.3	349	16.4	-12	48.1	24	05.7	-20	-52.4	19	11.9	-19	50.9	
7	338	28.0	257	43.1		13.0	4	17.2		47.6	39	08.1		-52.4	34	14.3		50.9	
8	353	30.5	272	45.7		12.7	19	18.0		47.0	54	10.6		-52.4	49	16.8		50.9	
9	8	33.0	287	48.4		12.5	34	18.8		46.4	69	13.1		-52.4	64	19.3		50.9	
10	23	35.4	302	51.1		12.2	49	19.6		45.9	84	15.6		-52.4	79	21.8		50.9	
11	38	37.9	317	53.8	+27	11.9	64	20.4	-12	45.3	99	18.0	-20	-52.4	94	24.3	-19	50.9	
12	53	40.3	332	56.5	+27	11.6	79	21.3	-12	44.8	114	20.5	-20	-52.4	109	26.7	-19	50.9	
13	68	42.8	347	59.2		11.3	94	22.1		44.2	129	23.0		-52.5	124	29.2		50.9	
14	83	45.3	3	01.9		11.1	109	22.9		43.7	144	25.4		-52.5	139	31.7		51.0	
15	98	47.7	18	04.6		10.8	124	23.7		43.1	159	27.9		-52.5	154	34.2		51.0	
16	113	50.2	33	07.3		10.5	139	24.5		42.6	174	30.4		-52.5	169	36.7		51.0	
17	128	52.7	48	10.0	+27	10.2	154	25.3	-12	42.0	189	32.8	-20	-52.5	184	39.2	-19	51.0	
18	143	55.1	63	12.7	+27	09.9	169	26.1	-12	41.5	204	35.3	-20	-52.5	199	41.6	-19	51.0	
19	158	57.6	78	15.4		09.6	184	26.9		40.9	219	37.8		-52.5	214	44.1		51.0	
20	174	00.1	93	18.2		09.3	199	27.7		40.3	234	40.3		-52.5	229	46.6		51.0	
21	189	02.5	108	20.9		09.0	214	28.6		39.8	249	42.7		-52.5	244	49.1		51.0	
22	204	05.0	123	23.6		08.8	229	29.4		39.2	264	45.2		-52.5	259	51.6		51.0	
23	219	07.5	138	26.4		08.5	244	30.2		38.7	279	47.7		-52.5	274	54.0		51.0	
24	234	09.9	153	29.1	+27	08.2	259	31.0	-12	38.1	294	50.2	-20	-52.5	289	56.5	-19	51.0	
Dif.	—		+27 -3				+8 +6				+25 0				+25 0				

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			Salida		Puesta			
	PMG: 11 ^h 56 ^m 4				Edad: 22 ^d 9					{ 12 ^h : 54'3			de Luna		de Luna			
	PMG: 07 ^h 35 ^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		
0	180	54.4	+19 09.4	249	27.6	150	-11 51.8	107	60 N	** **	2 14	3 19	2 49	8	12 35	77		
1	195	54.4	09.9	264	01.6	150	41.1	108	58	0 51	37	33	43	10	41	74		
2	210	54.4	10.5	278	35.6	151	30.3	108	56	1 35	2 54	45	37	12	46	71		
3	225	54.3	11.1	293	09.7	152	19.5	109	54	2 02	3 09	3 55	32	14	50	70		
4	240	54.3	11.7	307	43.9	152	-11 08.6	109	52	23	22	4 04	27	17	54	68		
5	255	54.3	+19 12.2	322	18.1	153	-10 57.7	109	50	2 40	3 33	4 12	2 23	18	12 58	65		
6	270	54.3	+19 12.8	336	52.4	153	-10 46.8	110	45	3 11	3 55	4 30	2 13	23	13 06	61		
7	285	54.3	13.4	351	26.7	153	35.8	110	40	35	4 13	44	2 06	25	12	58		
8	300	54.3	13.9	6	01.0	154	24.8	110	35	3 53	27	4 55	1 59	28	18	55		
9	315	54.3	14.5	20	35.4	155	13.8	111	30	4 08	4 40	5 06	53	30	23	52		
10	330	54.2	15.1	35	09.9	154	-10 02.7	111	20	32	5 00	23	43	34	31	49		
11	345	54.2	+19 15.6	49	44.3	156	-9 51.6	111	10 N	4 50	5 16	5 39	1 34	38	13 38	45		
12	0	54.2	+19 16.2	64	18.9	155	-9 40.5	112	0	5 06	5 31	5 53	1 25	42	13 45	41		
13	15	54.2	16.8	78	53.4	156	29.3	112	10 S	19	45	6 07	16	46	52	38		
14	30	54.2	17.3	93	28.0	157	18.1	113	20	32	5 58	22	1 07	49	13 59	34		
15	45	54.2	17.9	108	02.7	157	-9 06.8	112	30	44	6 13	39	0 57	53	14 08	29		
16	60	54.1	18.5	122	37.4	157	-8 55.6	113	35	51	21	6 48	51	55	12	28		
17	75	54.1	+19 19.0	137	12.1	157	-8 44.3	114	40	5 58	6 30	7 00	0 44	58	14 18	24		
18	90	54.1	+19 19.6	151	46.8	158	-8 32.9	113	45	6 05	6 41	7 13	0 36	62	14 24	21		
19	105	54.1	20.2	166	21.6	159	21.6	114	50	13	53	29	26	66	31	18		
20	120	54.1	20.7	180	56.5	158	-8 10.2	114	52	17	6 58	36	21	68	34	16		
21	135	54.0	21.3	195	31.3	159	-7 58.8	115	54	21	7 04	44	16	70	38	14		
22	150	54.0	21.8	210	06.2	160	47.3	115	56	25	11	7 54	11	72	42	12		
23	165	54.0	22.4	224	41.2	159	35.8	115	58	29	18	8 04	0 05	74	14 47	9		
24	180	54.0	+19 23.0	239	16.1		-7 24.3		60 S	6 34	7 26	8 16	** **	**	14 52	6		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 22 ^m 0		Mag: -4.6 PMG: 13 ^h 44 ^m				Mag: +0.2 PMG: 06 ^h 42 ^m				Mag: -2.5 PMG: 04 ^h 20 ^m				Mag: +0.5 PMG: 04 ^h 39 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	234	09.9	153	29.1	+27	08.2	259	31.0	-12	38.1	294	50.2	-20	52.5	289	56.5	-19	51.0
1	249	12.4	168	31.9		07.9	274	31.8		37.6	309	52.6		52.6	304	59.0		51.0
2	264	14.8	183	34.6		07.6	289	32.6		37.0	324	55.1		52.6	320	01.5		51.1
3	279	17.3	198	37.4		07.3	304	33.4		36.5	339	57.6		52.6	335	04.0		51.1
4	294	19.8	213	40.1		07.0	319	34.3		35.9	355	00.1		52.6	350	06.5		51.1
5	309	22.2	228	42.9	+27	06.7	334	35.1	-12	35.4	10	02.5	-20	52.6	5	09.0	-19	51.1
6	324	24.7	243	45.7	+27	06.4	349	35.9	-12	34.8	25	05.0	-20	52.6	20	11.4	-19	51.1
7	339	27.2	258	48.4		06.1	4	36.7		34.2	40	07.5		52.6	35	13.9		51.1
8	354	29.6	273	51.2		05.8	19	37.5		33.7	55	10.0		52.6	50	16.4		51.1
9	9	32.1	288	54.0		05.5	34	38.3		33.1	70	12.4		52.6	65	18.9		51.1
10	24	34.6	303	56.8		05.2	49	39.1		32.6	85	14.9		52.6	80	21.4		51.1
11	39	37.0	318	59.6	+27	04.8	64	40.0	-12	32.0	100	17.4	-20	52.6	95	23.9	-19	51.1
12	54	39.5	334	02.4	+27	04.5	79	40.8	-12	31.5	115	19.9	-20	52.6	110	26.3	-19	51.1
13	69	41.9	349	05.2		04.2	94	41.6		30.9	130	22.4		52.7	125	28.8		51.1
14	84	44.4	4	08.0		03.9	109	42.4		30.3	145	24.8		52.7	140	31.3		51.2
15	99	46.9	19	10.8		03.6	124	43.2		29.8	160	27.3		52.7	155	33.8		51.2
16	114	49.3	34	13.6		03.3	139	44.0		29.2	175	29.8		52.7	170	36.3		51.2
17	129	51.8	49	16.5	+27	03.0	154	44.9	-12	28.7	190	32.3	-20	52.7	185	38.8	-19	51.2
18	144	54.3	64	19.3	+27	02.7	169	45.7	-12	28.1	205	34.8	-20	52.7	200	41.3	-19	51.2
19	159	56.7	79	22.1		02.3	184	46.5		27.6	220	37.2		52.7	215	43.7		51.2
20	174	59.2	94	25.0		02.0	199	47.3		27.0	235	39.7		52.7	230	46.2		51.2
21	190	01.7	109	27.8		01.7	214	48.1		26.4	250	42.2		52.7	245	48.7		51.2
22	205	04.1	124	30.6		01.4	229	48.9		25.9	265	44.7		52.7	260	51.2		51.2
23	220	06.6	139	33.5		01.1	244	49.8		25.3	280	47.2		52.8	275	53.7		51.2
24	235	09.1	154	36.3	+27	00.7	259	50.6	-12	24.8	295	49.6	-20	52.8	290	56.2	-19	51.2
Dif.	—		+28		-3		+8		+6		+25		0		+25			

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8				PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1																
	Edad: 23 ^d 9																				
	PMG: 11 ^h 56 ^m 4				PMG: 08 ^h 17 ^m Rº: 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	h m m				
0	180	54.0	+19	23.0		239	16.1	160	-7	24.3	115	60 N	20 38	21 44	** **	2 57	6	13 52	77		
1	195	54.0		23.5		253	51.1	160		12.8	115	58	23	21	23 18	53	9	55	74		
2	210	53.9		24.1		268	26.1	161	-7	01.3	116	56	11	21 03	22 25	49	12	13 57	72		
3	225	53.9		24.6		283	01.2	161	-6	49.7	116	54	20 01	20 47	21 56	46	14	14 00	68		
4	240	53.9		25.2		297	36.3	161		38.1	116	52	19 51	34	34	44	15	02	66		
5	255	53.9	+19	25.8		312	11.4	161	-6	26.5	117	50	19 43	20 23	21 17	2 41	17	14 03	65		
6	270	53.9	+19	26.3		326	46.5	161	-6	14.8	116	45	19 25	20 00	20 44	2 36	20	14 07	61		
7	285	53.8		26.9		341	21.6	162	-6	03.2	117	40	19 11	19 42	20	31	24	10	58		
8	300	53.8		27.4		355	56.8	162	-5	51.5	117	35	18 59	27	20 01	27	27	13	55		
9	315	53.8		28.0		10	32.0	162		39.8	118	30	48	19 14	19 46	23	30	15	53		
10	330	53.8		28.5		25	07.2	163		28.0	117	20	30	18 54	22	17	34	20	47		
11	345	53.7	+19	29.1		39	42.5	163	-5	16.3	118	10 N	18 14	18 37	19 03	2 12	37	14 23	44		
12	0	53.7	+19	29.6		54	17.8	162	-5	04.5	118	0	18 00	18 22	18 47	2 07	40	14 26	41		
13	15	53.7		30.2		68	53.0	163	-4	52.7	118	10 S	17 46	18 08	34	2 02	44	30	37		
14	30	53.7		30.7		83	28.3	164		40.9	118	20	31	17 54	21	1 56	48	33	33		
15	45	53.7		31.3		98	03.7	163		29.1	118	30	13	39	08	50	52	37	29		
16	60	53.6		31.9		112	39.0	164		17.3	118	35	17 03	30	18 01	46	55	40	26		
17	75	53.6	+19	32.4		127	14.4	163	-4	05.5	119	40	16 52	17 21	17 54	1 42	58	14 42	24		
18	90	53.6	+19	33.0		141	49.7	164	-3	53.6	119	45	16 39	17 11	17 47	1 38	61	14 45	20		
19	105	53.6		33.5		156	25.1	164		41.7	119	50	22	16 58	38	32	65	49	16		
20	120	53.5		34.0		171	00.5	164		29.8	119	52	15	53	34	29	67	50	15		
21	135	53.5		34.6		185	35.9	164		17.9	119	54	16 06	47	30	26	69	52	13		
22	150	53.5		35.1		200	11.3	165	-3	06.0	119	56	15 57	40	26	23	71	54	11		
23	165	53.5		35.7		214	46.8	164	-2	54.1	119	58	46	32	22	19	74	56	9		
24	180	53.4	+19	36.2		229	22.2		-2	42.2		60 S	15 34	16 24	17 16	1 15	77	14 58	6		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG 8 ^h 18 ^m 0		Mag: -4.5 PMG: 13 ^h 39 ^m				Mag: +0.2 PMG: 06 ^h 40 ^m				Mag: -2.5 PMG: 04 ^h 16 ^m				Mag: +0.5 PMG: 04 ^h 35 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	235	09.1	154	36.3	+27	00.7	259	50.6	-12	24.8	295	49.6	-20	-52.8	290	56.2	-19	51.2			
1	250	11.5	169	39.2		00.4	274	51.4		24.2	310	52.1		-52.8	305	58.7		51.3			
2	265	14.0	184	42.1	+27	00.1	289	52.2		23.7	325	54.6		-52.8	321	01.2		51.3			
3	280	16.4	199	44.9	+26	59.8	304	53.0		23.1	340	57.1		-52.8	336	03.7		51.3			
4	295	18.9	214	47.8		59.4	319	53.8		22.5	355	59.6		-52.8	351	06.1		51.3			
5	310	21.4	229	50.7	+26	59.1	334	54.7	-12	22.0	11	02.1	-20	-52.8	6	08.6	-19	51.3			
6	325	23.8	244	53.6	+26	58.8	349	55.5	-12	21.4	26	04.5	-20	-52.8	21	11.1	-19	51.3			
7	340	26.3	259	56.5		58.4	4	56.3		20.9	41	07.0		-52.8	36	13.6		51.3			
8	355	28.8	274	59.4		58.1	19	57.1		20.3	56	09.5		-52.9	51	16.1		51.3			
9	10	31.2	290	02.2		57.8	34	57.9		19.7	71	12.0		-52.9	66	18.6		51.3			
10	25	33.7	305	05.1		57.4	49	58.8		19.2	86	14.5		-52.9	81	21.1		51.3			
11	40	36.2	320	08.1	+26	57.1	64	59.6	-12	18.6	101	17.0	-20	-52.9	96	23.6	-19	51.3			
12	55	38.6	335	11.0	+26	56.8	80	00.4	-12	18.1	116	19.5	-20	-52.9	111	26.1	-19	51.4			
13	70	41.1	350	13.9		56.4	95	01.2		17.5	131	21.9		-52.9	126	28.5		51.4			
14	85	43.5	5	16.8		56.1	110	02.0		17.0	146	24.4		-52.9	141	31.0		51.4			
15	100	46.0	20	19.7		55.8	125	02.9		16.4	161	26.9		-52.9	156	33.5		51.4			
16	115	48.5	35	22.6		55.4	140	03.7		15.8	176	29.4		-52.9	171	36.0		51.4			
17	130	50.9	50	25.6	+26	55.1	155	04.5	-12	15.3	191	31.9	-20	-53.0	186	38.5	-19	51.4			
18	145	53.4	65	28.5	+26	54.7	170	05.3	-12	14.7	206	34.4	-20	-53.0	201	41.0	-19	51.4			
19	160	55.9	80	31.5		54.4	185	06.2		14.2	221	36.9		-53.0	216	43.5		51.4			
20	175	58.3	95	34.4		54.0	200	07.0		13.6	236	39.4		-53.0	231	46.0		51.4			
21	191	00.8	110	37.4		53.7	215	07.8		13.0	251	41.9		-53.0	246	48.5		51.4			
22	206	03.3	125	40.3		53.3	230	08.6		12.5	266	44.3		-53.0	261	51.0		51.5			
23	221	05.7	140	43.3		53.0	245	09.4		11.9	281	46.8		-53.0	276	53.5		51.5			
24	236	08.2	155	46.2	+26	52.6	260	10.3	-12	11.4	296	49.3	-20	-53.0	291	55.9	-19	51.5			
Dif.	—		+29		-3		+8		+6		+25		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: 14'7 Edad: 24 ^d 9 PMG: 08 ^h 57 ^m Rº: 41 ^m													
					PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1													
	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	180	53.4	+19	36.2	229	22.2	165	-2	42.2	120	58	0 33	31	29	3 03	6	15 09	77
1	195	53.4		36.8	243	57.7	164		30.2	120	58				02	8	09	74
2	210	53.4		37.3	258	33.1	165		18.2	119	56	1 27	2 50	41	01	10	09	71
3	225	53.4		37.9	273	08.6	164	-2	06.3	120	54	1 56	3 05	3 52	3 00	13	08	70
4	240	53.3		38.4	287	44.0	165	-1	54.3	120	52	2 18	18	4 01	2 59	15	08	67
5	255	53.3	+19	39.0	302	19.5	165	-1	42.3	120	50	2 36	3 30	4 10	2 58	17	15 08	66
6	270	53.3	+19	39.5	316	55.0	165	-1	30.3	120	45	3 09	3 53	4 27	2 56	21	15 08	61
7	285	53.2		40.0	331	30.5	165		18.3	120	40	33	4 11	42	55	23	08	58
8	300	53.2		40.6	346	06.0	164	-1	06.3	120	35	3 51	26	4 54	54	26	08	55
9	315	53.2		41.1	0	41.4	165	-0	54.3	120	30	4 07	38	5 05	53	28	08	52
10	330	53.2		41.7	15	16.9	165		42.3	120	20	31	4 59	23	51	33	07	48
11	345	53.1	+19	42.2	29	52.4	165	-0	30.3	120	10 N	4 50	5 16	5 38	2 49	37	15 07	44
12	0	53.1	+19	42.7	44	27.9	165	-0	18.3	120	0	5 05	5 31	5 53	2 47	41	15 07	40
13	15	53.1		43.3	59	03.4	164	-0	06.3	121	10 S	19	45	6 07	46	44	07	37
14	30	53.0		43.8	73	38.8	165	+0	05.8	120	20	32	5 59	23	44	48	06	34
15	45	53.0		44.4	88	14.3	165		17.8	120	30	45	6 14	40	42	53	06	29
16	60	53.0		44.9	102	49.8	164		29.8	120	35	52	23	6 50	41	55	06	26
17	75	53.0	+19	45.4	117	25.2	165	+0	41.8	121	40	5 59	6 32	7 01	2 40	58	15 06	23
18	90	52.9	+19	46.0	132	00.7	165	+0	53.9	120	45	6 07	6 43	7 15	2 39	61	15 05	21
19	105	52.9		46.5	146	36.2	164	+1	05.9	120	50	15	6 55	31	37	65	05	17
20	120	52.9		47.0	161	11.6	164		17.9	120	52	19	7 01	39	36	67	05	15
21	135	52.8		47.6	175	47.0	164		29.9	120	54	23	07	48	35	69	05	13
22	150	52.8		48.1	190	22.4	164		41.9	121	56	27	14	7 57	34	72	05	11
23	165	52.8		48.6	204	57.8	164	+1	54.0	120	58	32	21	8 08	2 33	74	15 05	8
24	180	52.7	+19	49.2	219	33.2		+2	06.0		60 S	6 37	7 30	8 21	2 32	77	15 04	6
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 14 ^m 1		Mag: -4.5 PMG: 13 ^h 34 ^m				Mag: +0.2 PMG: 06 ^h 39 ^m				Mag: -2.5 PMG: 04 ^h 12 ^m				Mag: +0.5 PMG: 04 ^h 32 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	236	08.2	155	46.2	+26	52.6	260	10.3	-12	11.4	296	49.3	-20	53.0	291	55.9	-19	51.5
1	251	10.7	170	49.2		52.3	275	11.1		10.8	311	51.8		53.0	306	58.4		51.5
2	266	13.1	185	52.2		51.9	290	11.9		10.2	326	54.3		53.1	322	00.9		51.5
3	281	15.6	200	55.2		51.6	305	12.7		09.7	341	56.8		53.1	337	03.4		51.5
4	296	18.0	215	58.1		51.2	320	13.6		09.1	356	59.3		53.1	352	05.9		51.5
5	311	20.5	231	01.1	+26	50.9	335	14.4	-12	08.6	12	01.8	-20	53.1	7	08.4	-19	51.5
6	326	23.0	246	04.1	+26	50.5	350	15.2	-12	08.0	27	04.3	-20	53.1	22	10.9	-19	51.5
7	341	25.4	261	07.1		50.1	5	16.0		07.4	42	06.8		53.1	37	13.4		51.5
8	356	27.9	276	10.1		49.8	20	16.8		06.9	57	09.3		53.1	52	15.9		51.6
9	11	30.4	291	13.1		49.4	35	17.7		06.3	72	11.8		53.1	67	18.4		51.6
10	26	32.8	306	16.1		49.1	50	18.5		05.7	87	14.3		53.2	82	20.9		51.6
11	41	35.3	321	19.1	+26	48.7	65	19.3	-12	05.2	102	16.7	-20	53.2	97	23.4	-19	51.6
12	56	37.8	336	22.2	+26	48.3	80	20.1	-12	04.6	117	19.2	-20	53.2	112	25.9	-19	51.6
13	71	40.2	351	25.2		48.0	95	21.0		04.1	132	21.7		53.2	127	28.4		51.6
14	86	42.7	6	28.2		47.6	110	21.8		03.5	147	24.2		53.2	142	30.8		51.6
15	101	45.2	21	31.3		47.2	125	22.6		02.9	162	26.7		53.2	157	33.3		51.6
16	116	47.6	36	34.3		46.8	140	23.4		02.4	177	29.2		53.2	172	35.8		51.6
17	131	50.1	51	37.3	+26	46.5	155	24.3	-12	01.8	192	31.7	-20	53.2	187	38.3	-19	51.7
18	146	52.5	66	40.4	+26	46.1	170	25.1	-12	01.3	207	34.2	-20	53.3	202	40.8	-19	51.7
19	161	55.0	81	43.4		45.7	185	25.9		00.7	222	36.7		53.3	217	43.3		51.7
20	176	57.5	96	46.5		45.3	200	26.8	-12	00.1	237	39.2		53.3	232	45.8		51.7
21	191	59.9	111	49.5		45.0	215	27.6	-11	59.6	252	41.7		53.3	247	48.3		51.7
22	207	02.4	126	52.6		44.6	230	28.4		59.0	267	44.2		53.3	262	50.8		51.7
23	222	04.9	141	55.7		44.2	245	29.2		58.4	282	46.7		53.3	277	53.3		51.7
24	237	07.3	156	58.7	+26	43.8	260	30.1	-11	57.9	297	49.2	-20	53.3	292	55.8	-19	51.7
Dif.	—		+30		-4		+8		+6		+25		0		+25			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8			SD: 14'7 Edad: 25 ^d 9																
	PMG: 11 ^h 56 ^m 5			PMG: 09 ^h 38 ^m 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	m	h	m	m	
0	180	52.7	+19	49.2	219	33.2	164	+2	06.0	120	60 N	20 42	21 51	** **	3 09	6	16 26	78		
1	195	52.7		49.7	234	08.6	164		18.0	120	58	27	26	** **	10	9	23	75		
2	210	52.7		50.2	248	44.0	164		30.0	120	56	15	21 07	22 34	11	12	20	73		
3	225	52.6		50.8	263	19.4	163		42.0	119	54	20 04	20 51	22 02	13	13	18	70		
4	240	52.6		51.3	277	54.7	163	+2	53.9	120	52	19 54	38	21 39	14	15	15	69		
5	255	52.6	+19	51.8	292	30.0	163	+3	05.9	120	50	19 45	20 26	21 21	3 15	17	16 14	66		
6	270	52.5	+19	52.4	307	05.3	163	+3	17.9	120	45	19 27	20 02	20 47	3 17	21	16 09	62		
7	285	52.5		52.9	321	40.6	163		29.9	119	40	12	19 44	22	18	25	06	59		
8	300	52.5		53.4	336	15.9	162		41.8	119	35	19 00	28	20 03	20	27	03	56		
9	315	52.4		53.9	350	51.1	163	+3	53.7	120	30	18 49	19 16	19 48	21	30	16 00	53		
10	330	52.4		54.5	5	26.4	162	+4	05.7	119	20	31	18 55	23	24	33	15 55	49		
11	345	52.4	+19	55.0	20	01.6	161	+4	17.6	119	10 N	18 15	18 37	19 04	3 26	37	15 51	46		
12	0	52.3	+19	55.5	34	36.7	162	+4	29.5	119	0	18 00	18 22	18 48	3 28	41	15 47	42		
13	15	52.3		56.0	49	11.9	161		41.4	119	10 S	17 45	18 08	33	30	45	44	38		
14	30	52.3		56.6	63	47.0	161	+4	53.3	118	20	30	17 53	20	32	49	40	34		
15	45	52.2		57.1	78	22.1	161	+5	05.1	119	30	12	38	07	35	52	35	30		
16	60	52.2		57.6	92	57.2	161		17.0	118	35	17 02	29	18 00	36	55	32	28		
17	75	52.2	+19	58.1	107	32.3	160	+5	28.8	118	40	16 50	17 20	17 53	3 38	58	15 29	25		
18	90	52.1	+19	58.7	122	07.3	160	+5	40.6	118	45	16 37	17 09	17 45	3 40	61	15 26	22		
19	105	52.1		59.2	136	42.3	160	+5	52.4	118	50	20	16 56	36	42	66	22	18		
20	120	52.1	+19	59.7	151	17.3	159	+6	04.2	118	52	12	50	32	43	68	20	16		
21	135	52.0	+20	00.2	165	52.2	160		16.0	117	54	16 03	44	28	44	70	18	14		
22	150	52.0		00.7	180	27.2	158		27.7	118	56	15 54	37	24	46	72	16	12		
23	165	51.9		01.3	195	02.0	159		39.5	117	58	43	29	19	47	75	13	10		
24	180	51.9	+20	01.8	209	36.9		+6	51.2		60 S	15 30	16 21	17 13	3 49	77	15 10	7		

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 8 ^h 10 ^m 2			Mag: -4.5 PMG: 13 ^h 29 ^m			Mag: +0.2 PMG: 06 ^h 38 ^m			Mag: -2.5 PMG: 04 ^h 08 ^m			Mag: +0.5 PMG: 04 ^h 28 ^m					
	hG ♂			hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	237	07.3	156	58.7	+26	43.8	260	30.1	-11	57.9	297	49.2	-20	-53.3	292	55.8	-19	51.7
1	252	09.8	172	01.8		43.4	275	30.9		57.3	312	51.7		-53.3	307	58.3		51.7
2	267	12.3	187	04.9		43.1	290	31.7		56.8	327	54.2		-53.4	323	00.8		51.8
3	282	14.7	202	08.0		42.7	305	32.5		56.2	342	56.7		-53.4	338	03.3		51.8
4	297	17.2	217	11.1		42.3	320	33.4		55.6	357	59.2		-53.4	353	05.8		51.8
5	312	19.6	232	14.2	+26	41.9	335	34.2	-11	55.1	13	01.7	-20	-53.4	8	08.3	-19	51.8
6	327	22.1	247	17.3	+26	41.5	350	35.0	-11	54.5	28	04.2	-20	-53.4	23	10.8	-19	51.8
7	342	24.6	262	20.4		41.1	5	35.9		53.9	43	06.7		-53.4	38	13.3		51.8
8	357	27.0	277	23.5		40.7	20	36.7		53.4	58	09.2		-53.4	53	15.8		51.8
9	12	29.5	292	26.6		40.3	35	37.5		52.8	73	11.7		-53.5	68	18.3		51.8
10	27	32.0	307	29.7		40.0	50	38.3		52.3	88	14.2		-53.5	83	20.8		51.8
11	42	34.4	322	32.9	+26	39.6	65	39.2	-11	51.7	103	16.7	-20	-53.5	98	23.3	-19	51.9
12	57	36.9	337	36.0	+26	39.2	80	40.0	-11	51.1	118	19.2	-20	-53.5	113	25.8	-19	51.9
13	72	39.4	352	39.1		38.8	95	40.8		50.6	133	21.7		-53.5	128	28.3		51.9
14	87	41.8	7	42.3		38.4	110	41.7		50.0	148	24.2		-53.5	143	30.8		51.9
15	102	44.3	22	45.4		38.0	125	42.5		49.4	163	26.7		-53.5	158	33.3		51.9
16	117	46.8	37	48.5		37.6	140	43.3		48.9	178	29.2		-53.6	173	35.8		51.9
17	132	49.2	52	51.7	+26	37.2	155	44.2	-11	48.3	193	31.8	-20	-53.6	188	38.3	-19	51.9
18	147	51.7	67	54.8	+26	36.8	170	45.0	-11	47.7	208	34.3	-20	-53.6	203	40.8	-19	51.9
19	162	54.1	82	58.0		36.4	185	45.8		47.2	223	36.8		-53.6	218	43.3		51.9
20	177	56.6	98	01.2		35.9	200	46.6		46.6	238	39.3		-53.6	233	45.8		52.0
21	192	59.1	113	04.3		35.5	215	47.5		46.1	253	41.8		-53.6	248	48.3		52.0
22	208	01.5	128	07.5		35.1	230	48.3		45.5	268	44.3		-53.6	263	50.8		52.0
23	223	04.0	143	10.7		34.7	245	49.1		44.9	283	46.8		-53.7	278	53.3		52.0
24	238	06.5	158	13.9	+26	34.3	260	50.0	-11	44.4	298	49.3	-20	-53.7	293	55.8	-19	52.0
Dif.	—		+31	-4			+8	+6			+25	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: 14'8 Edad: 26 ^d 9 PMG: 10 ^h 19 ^m PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5 Rº: 43 ^m													
	hG ☉		Dec		hG ☾		Dif.			Dec			Dif.					
	h	°	'	°	'	°	'	°		'	h		m	h	m	h	m	m
0	180	51.9	+20	01.8	209	36.9	158	+6	51.2	116	60 N	** **	2 02	3 10	3 15	8	17 44	80
1	195	51.9		02.3	224	11.7	158	+7	02.8	117	58	** **	26	25	19	11	38	77
2	210	51.8		02.8	238	46.5	157		14.5	116	56	1 18	2 46	38	23	13	33	74
3	225	51.8		03.3	253	21.2	157		26.1	117	54	1 51	3 01	49	26	15	28	72
4	240	51.8		03.8	267	55.9	157		37.8	115	52	2 14	15	3 58	29	17	24	69
5	255	51.7	+20	04.4	282	30.6	156	+7	49.3	116	50	2 32	3 27	4 07	3 32	19	17 20	67
6	270	51.7	+20	04.9	297	05.2	156	+8	00.9	115	45	3 06	3 51	4 25	3 38	23	17 11	64
7	285	51.6		05.4	311	39.8	156		12.4	116	40	30	4 09	40	43	26	17 05	60
8	300	51.6		05.9	326	14.4	155		24.0	114	35	3 50	24	4 53	47	29	16 59	57
9	315	51.6		06.4	340	48.9	155		35.4	115	30	4 05	37	5 04	51	31	53	55
10	330	51.5		06.9	355	23.4	154		46.9	114	20	30	4 58	22	3 57	36	44	51
11	345	51.5	+20	07.4	9	57.8	154	+8	58.3	114	10 N	4 49	5 16	5 38	4 03	39	16 37	47
12	0	51.4	+20	07.9	24	32.2	154	+9	09.7	114	0	5 05	5 31	5 53	4 09	42	16 29	44
13	15	51.4		08.5	39	06.6	153		21.1	113	10 S	20	5 45	6 08	15	46	22	40
14	30	51.4		09.0	53	40.9	153		32.4	113	20	33	6 00	23	21	49	14	37
15	45	51.3		09.5	68	15.2	152		43.7	113	30	46	16	41	27	55	05	33
16	60	51.3		10.0	82	49.4	151	+9	55.0	112	35	5 53	24	6 51	31	57	16 00	30
17	75	51.2	+20	10.5	97	23.5	152	+10	06.2	112	40	6 01	6 34	7 03	4 36	59	15 54	28
18	90	51.2	+20	11.0	111	57.7	151	+10	17.4	112	45	6 09	6 45	7 17	4 41	63	15 48	24
19	105	51.1		11.5	126	31.8	150		28.6	111	50	18	6 57	34	48	67	40	20
20	120	51.1		12.0	141	05.8	150		39.7	111	52	21	7 03	42	51	69	36	19
21	135	51.1		12.5	155	39.8	149	+10	50.8	111	54	26	10	7 51	54	71	32	16
22	150	51.0		13.0	170	13.7	149	+11	01.9	110	56	30	17	8 00	4 58	73	28	14
23	165	51.0		13.5	184	47.6	148		12.9	109	58	35	25	12	5 02	76	15 23	11
24	180	50.9	+20	14.0	199	21.4		+11	23.8		60 S	6 41	7 34	8 25	5 06	79	15 17	9
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 06 ^m 2		Mag: -4.4 PMG: 13 ^h 24 ^m				Mag: +0.2 PMG: 06 ^h 36 ^m				Mag: -2.5 PMG: 04 ^h 04 ^m				Mag: +0.5 PMG: 04 ^h 24 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	238	06.5	158	13.9	+26	34.3	260	50.0	-11	44.4	298	49.3	-20	53.7	293	55.8	-19	52.0
1	253	08.9	173	17.0		33.9	275	50.8		43.8	313	51.8		53.7	308	58.3		52.0
2	268	11.4	188	20.2		33.5	290	51.6		43.2	328	54.3		53.7	324	00.8		52.0
3	283	13.9	203	23.4		33.1	305	52.5		42.7	343	56.8		53.7	339	03.3		52.0
4	298	16.3	218	26.6		32.7	320	53.3		42.1	358	59.3		53.7	354	05.8		52.1
5	313	18.8	233	29.8	+26	32.2	335	54.1	-11	41.5	14	01.8	-20	53.7	9	08.3	-19	52.1
6	328	21.2	248	33.0	+26	31.8	350	55.0	-11	41.0	29	04.3	-20	53.8	24	10.8	-19	52.1
7	343	23.7	263	36.2		31.4	5	55.8		40.4	44	06.9		53.8	39	13.3		52.1
8	358	26.2	278	39.5		31.0	20	56.6		39.8	59	09.4		53.8	54	15.8		52.1
9	13	28.6	293	42.7		30.6	35	57.5		39.3	74	11.9		53.8	69	18.3		52.1
10	28	31.1	308	45.9		30.1	50	58.3		38.7	89	14.4		53.8	84	20.8		52.1
11	43	33.6	323	49.1	+26	29.7	65	59.1	-11	38.1	104	16.9	-20	53.8	99	23.3	-19	52.1
12	58	36.0	338	52.4	+26	29.3	81	00.0	-11	37.6	119	19.4	-20	53.9	114	25.8	-19	52.1
13	73	38.5	353	55.6		28.9	96	00.8		37.0	134	21.9		53.9	129	28.3		52.2
14	88	41.0	8	58.9		28.4	111	01.6		36.5	149	24.4		53.9	144	30.8		52.2
15	103	43.4	24	02.1		28.0	126	02.5		35.9	164	26.9		53.9	159	33.3		52.2
16	118	45.9	39	05.3		27.6	141	03.3		35.3	179	29.5		53.9	174	35.8		52.2
17	133	48.4	54	08.6	+26	27.1	156	04.1	-11	34.8	194	32.0	-20	53.9	189	38.3	-19	52.2
18	148	50.8	69	11.9	+26	26.7	171	05.0	-11	34.2	209	34.5	-20	53.9	204	40.8	-19	52.2
19	163	53.3	84	15.1		26.3	186	05.8		33.6	224	37.0		54.0	219	43.3		52.2
20	178	55.7	99	18.4		25.8	201	06.6		33.1	239	39.5		54.0	234	45.8		52.2
21	193	58.2	114	21.7		25.4	216	07.5		32.5	254	42.0		54.0	249	48.3		52.3
22	209	00.7	129	24.9		25.0	231	08.3		31.9	269	44.5		54.0	264	50.8		52.3
23	224	03.1	144	28.2		24.5	246	09.2		31.4	284	47.1		54.0	279	53.3		52.3
24	239	05.6	159	31.5	+26	24.1	261	10.0	-11	30.8	299	49.6	-20	54.0	294	55.8	-19	52.3
Dif.	—		+32		-4		+8		+6		+25		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 6				SD: 14'8 Edad: 27 ^d 9 PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'8 PMG: 11 ^h 02 ^m Rº: 46 ^m													
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.					
	h	° ' "	° ' "	h	° ' "	h	° ' "	h	° ' "	h			° ' "	h	° ' "	h	° ' "	h
0	180	50.9	+20	14.0	199	21.4	148	+11	23.8	110	60 N	20 47	21 57	** **	3 23	10	19 04	82
1	195	50.9		14.5	213	55.2	147		34.8	109	58	31	31	** **	30	13	18 55	78
2	210	50.9		15.0	228	28.9	147		45.7	108	56	18	21 11	22 43	36	16	47	75
3	225	50.8		15.5	243	02.6	146	+11	56.5	108	54	20 07	20 55	22 08	41	18	40	72
4	240	50.8		16.0	257	36.2	146	+12	07.3	108	52	19 57	41	21 44	46	21	33	71
5	255	50.7	+20	16.5	272	09.8	145	+12	18.1	107	50	19 48	20 29	21 25	3 51	22	18 27	69
6	270	50.7	+20	17.0	286	43.3	145	+12	28.8	107	45	19 29	20 05	20 50	4 01	26	18 15	64
7	285	50.6		17.5	301	16.8	144		39.5	106	40	14	19 46	25	09	29	18 05	61
8	300	50.6		18.0	315	50.2	143	+12	50.1	106	35	19 02	30	20 05	16	32	17 56	59
9	315	50.5		18.5	330	23.5	143	+13	00.7	105	30	18 50	19 17	19 49	22	34	48	57
10	330	50.5		19.0	344	56.8	143		11.2	105	20	32	18 56	24	33	38	35	53
11	345	50.4	+20	19.5	359	30.1	141	+13	21.7	104	10 N	18 15	18 38	19 04	4 42	42	17 24	49
12	0	50.4	+20	20.0	14	03.2	141	+13	32.1	104	0	18 00	18 22	18 48	4 51	45	17 13	46
13	15	50.4		20.5	28	36.3	141		42.5	103	10 S	17 45	18 08	33	5 01	48	17 02	43
14	30	50.3		21.0	43	09.4	140	+13	52.8	103	20	29	17 53	20	10	52	16 51	39
15	45	50.3		21.5	57	42.4	139	+14	03.1	102	30	11	37	18 06	22	55	38	36
16	60	50.2		22.0	72	15.3	139		13.3	102	35	17 01	28	17 59	28	58	30	34
17	75	50.2	+20	22.5	86	48.2	138	+14	23.5	101	40	16 49	17 18	17 52	5 35	61	16 22	31
18	90	50.1	+20	23.0	101	21.0	138	+14	33.6	101	45	16 35	17 07	17 43	5 44	64	16 12	28
19	105	50.1		23.5	115	53.8	136		43.7	100	50	18	16 54	34	5 55	68	16 00	24
20	120	50.0		24.0	130	26.4	137	+14	53.7	99	52	10	48	30	6 00	70	15 55	22
21	135	50.0		24.5	144	59.1	135	+15	03.6	99	54	16 01	42	26	05	72	48	21
22	150	49.9		25.0	159	31.6	135		13.5	98	56	15 51	34	21	11	75	42	17
23	165	49.9		25.5	174	04.1	135		23.3	98	58	39	26	16	18	78	34	15
24	180	49.8	+20	25.9	188	36.6		+15	33.1		60 S	15 26	16 17	17 11	6 25	82	15 26	11
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 8 ^h 02 ^m 3		Mag: -4.4 PMG: 13 ^h 19 ^m				Mag: +0.1 PMG: 06 ^h 35 ^m				Mag: -2.5 PMG: 04 ^h 00 ^m				Mag: +0.5 PMG: 04 ^h 20 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "
0	239	05.6	159	31.5	+26	24.1	261	10.0	-11	30.8	299	49.6	-20	-54.0	294	55.8	-19	52.3
1	254	08.1	174	34.8		23.6	276	10.8		30.2	314	52.1		-54.1	309	58.3		52.3
2	269	10.5	189	38.1		23.2	291	11.7		29.7	329	54.6		-54.1	325	00.8		52.3
3	284	13.0	204	41.4		22.7	306	12.5		29.1	344	57.1		-54.1	340	03.3		52.3
4	299	15.5	219	44.7		22.3	321	13.3		28.5	359	59.6		-54.1	355	05.8		52.4
5	314	17.9	234	48.0	+26	21.8	336	14.2	-11	28.0	15	02.2	-20	-54.1	10	08.3	-19	52.4
6	329	20.4	249	51.3	+26	21.4	351	15.0	-11	27.4	30	04.7	-20	-54.1	25	10.8	-19	52.4
7	344	22.9	264	54.6		20.9	6	15.9		26.8	45	07.2		-54.2	40	13.3		52.4
8	359	25.3	279	58.0		20.5	21	16.7		26.3	60	09.7		-54.2	55	15.8		52.4
9	14	27.8	295	01.3		20.0	36	17.5		25.7	75	12.2		-54.2	70	18.4		52.4
10	29	30.2	310	04.6		19.6	51	18.4		25.1	90	14.8		-54.2	85	20.9		52.4
11	44	32.7	325	07.9	+26	19.1	66	19.2	-11	24.6	105	17.3	-20	-54.2	100	23.4	-19	52.4
12	59	35.2	340	11.3	+26	18.7	81	20.0	-11	24.0	120	19.8	-20	-54.2	115	25.9	-19	52.5
13	74	37.6	355	14.6		18.2	96	20.9		23.4	135	22.3		-54.3	130	28.4		52.5
14	89	40.1	10	18.0		17.8	111	21.7		22.9	150	24.8		-54.3	145	30.9		52.5
15	104	42.6	25	21.3		17.3	126	22.6		22.3	165	27.4		-54.3	160	33.4		52.5
16	119	45.0	40	24.7		16.8	141	23.4		21.7	180	29.9		-54.3	175	35.9		52.5
17	134	47.5	55	28.0	+26	16.4	156	24.2	-11	21.2	195	32.4	-20	-54.3	190	38.4	-19	52.5
18	149	50.0	70	31.4	+26	15.9	171	25.1	-11	20.6	210	34.9	-20	-54.3	205	40.9	-19	52.5
19	164	52.4	85	34.8		15.4	186	25.9		20.0	225	37.4		-54.4	220	43.4		52.5
20	179	54.9	100	38.1		15.0	201	26.8		19.5	240	40.0		-54.4	235	45.9		52.6
21	194	57.3	115	41.5		14.5	216	27.6		18.9	255	42.5		-54.4	250	48.4		52.6
22	209	59.8	130	44.9		14.0	231	28.4		18.3	270	45.0		-54.4	265	50.9		52.6
23	225	02.3	145	48.3		13.6	246	29.3		17.7	285	47.5		-54.4	280	53.5		52.6
24	240	04.7	160	51.6	+26	13.1	261	30.1	-11	17.2	300	50.1	-20	-54.5	295	56.0	-19	52.6
Dif.	—		+33		-5		+8		+6		+25		0		+25			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15'8				SD: 14'9 Edad: 28 ^d 9					PHE { 4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'2											
	PMG: 11 ^h 56 ^m 7				PMG: 11 ^h 48 ^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	180	49.8	+20	25.9	188	36.6	133	+15	33.1	97	60 N	3 06	1 55	3 06	3 33	14	20 26	81			
1	195	49.8		26.4	203	08.9	133		42.8	96	58	2 21	2 21	22	43	18	13	77			
2	210	49.7		26.9	217	41.2	133	+15	52.4	96	56	1 10	41	35	52	20	20 02	74			
3	225	49.7		27.4	232	13.5	131	+16	02.0	95	54	1 45	2 58	46	3 59	24	19 52	72			
4	240	49.6		27.9	246	45.6	131		11.5	94	52	2 09	3 12	3 56	4 07	25	44	69			
5	255	49.6	+20	28.4	261	17.7	131	+16	20.9	94	50	2 28	3 24	4 05	4 13	27	19 36	68			
6	270	49.5	+20	28.9	275	49.8	129	+16	30.3	93	45	3 03	3 48	4 24	4 27	30	19 19	65			
7	285	49.5		29.4	290	21.7	129		39.6	93	40	28	4 07	39	38	34	19 06	62			
8	300	49.4		29.8	304	53.6	129		48.9	91	35	3 48	23	4 52	48	36	18 55	59			
9	315	49.4		30.3	319	25.5	127	+16	58.0	91	30	4 04	36	5 03	4 56	38	45	57			
10	330	49.3		30.8	333	57.2	127	+17	07.1	91	20	29	4 58	22	5 11	42	28	54			
11	345	49.3	+20	31.3	348	28.9	126	+17	16.2	89	10 N	4 49	5 15	5 38	5 24	45	18 13	51			
12	0	49.2	+20	31.8	3	00.5	126	+17	25.1	89	0	5 05	5 31	5 53	5 36	48	17 59	49			
13	15	49.2		32.3	17	32.1	125		34.0	88	10 S	20	5 46	6 08	5 49	50	45	47			
14	30	49.1		32.7	32	03.6	124		42.8	87	20	34	6 01	24	6 02	54	30	44			
15	45	49.1		33.2	46	35.0	124	+17	51.5	87	30	47	17	42	17	57	14	40			
16	60	49.0		33.7	61	06.4	122	+18	00.2	86	35	5 55	26	6 53	26	59	17 04	39			
17	75	49.0	+20	34.2	75	37.6	122	+18	08.8	85	40	6 02	6 35	7 05	6 36	62	16 53	36			
18	90	48.9	+20	34.7	90	08.8	122	+18	17.3	84	45	6 10	6 47	7 19	6 48	65	16 40	33			
19	105	48.9		35.1	104	40.0	120		25.7	83	50	20	7 00	36	7 03	69	24	30			
20	120	48.8		35.6	119	11.0	120		34.0	83	52	24	06	45	10	70	17	28			
21	135	48.8		36.1	133	42.0	120		42.3	81	54	28	12	7 54	17	73	16 09	26			
22	150	48.7		36.6	148	13.0	118		50.4	81	56	33	20	8 04	26	75	15 59	24			
23	165	48.7		37.0	162	43.8	118	+18	58.5	80	58	38	28	15	7 36	78	15 49	21			
24	180	48.6	+20	37.5	177	14.6		+19	06.5		60 S	6 44	7 37	8 29	7 47	82	15 37	17			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG 7 ^h 58 ^m 4		Mag: -4.3 PMG: 13 ^h 14 ^m				Mag: +0.1 PMG: 06 ^h 34 ^m				Mag: -2.5 PMG: 03 ^h 56 ^m				Mag: +0.5 PMG: 04 ^h 16 ^m						
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	240	04.7	160	51.6	+26	13.1	261	30.1	-11	17.2	300	50.1	-20	54.5	295	56.0	-19	52.6			
1	255	07.2	175	55.0		12.6	276	31.0		16.6	315	52.6		54.5	310	58.5		52.6			
2	270	09.7	190	58.4		12.2	291	31.8		16.0	330	55.1		54.5	326	01.0		52.6			
3	285	12.1	206	01.8		11.7	306	32.7		15.5	345	57.6		54.5	341	03.5		52.7			
4	300	14.6	221	05.2		11.2	321	33.5		14.9	1	00.2		54.5	356	06.0		52.7			
5	315	17.1	236	08.6	+26	10.7	336	34.3	-11	14.3	16	02.7	-20	54.5	11	08.5	-19	52.7			
6	330	19.5	251	12.1	+26	10.2	351	35.2	-11	13.8	31	05.2	-20	54.6	26	11.0	-19	52.7			
7	345	22.0	266	15.5		09.8	6	36.0		13.2	46	07.7		54.6	41	13.5		52.7			
8	0	24.5	281	18.9		09.3	21	36.9		12.6	61	10.3		54.6	56	16.0		52.7			
9	15	26.9	296	22.3		08.8	36	37.7		12.1	76	12.8		54.6	71	18.5		52.7			
10	30	29.4	311	25.7		08.3	51	38.6		11.5	91	15.3		54.6	86	21.1		52.8			
11	45	31.8	326	29.2	+26	07.8	66	39.4	-11	10.9	106	17.8	-20	54.7	101	23.6	-19	52.8			
12	60	34.3	341	32.6	+26	07.3	81	40.2	-11	10.4	121	20.4	-20	54.7	116	26.1	-19	52.8			
13	75	36.8	356	36.1		06.9	96	41.1		09.8	136	22.9		54.7	131	28.6		52.8			
14	90	39.2	11	39.5		06.4	111	41.9		09.2	151	25.4		54.7	146	31.1		52.8			
15	105	41.7	26	43.0		05.9	126	42.8		08.7	166	28.0		54.7	161	33.6		52.8			
16	120	44.2	41	46.4		05.4	141	43.6		08.1	181	30.5		54.8	176	36.1		52.8			
17	135	46.6	56	49.9	+26	04.9	156	44.5	-11	07.5	196	33.0	-20	54.8	191	38.6	-19	52.9			
18	150	49.1	71	53.3	+26	04.4	171	45.3	-11	06.9	211	35.6	-20	54.8	206	41.1	-19	52.9			
19	165	51.6	86	56.8		03.9	186	46.2		06.4	226	38.1		54.8	221	43.7		52.9			
20	180	54.0	102	00.3		03.4	201	47.0		05.8	241	40.6		54.8	236	46.2		52.9			
21	195	56.5	117	03.7		02.9	216	47.8		05.2	256	43.1		54.8	251	48.7		52.9			
22	210	59.0	132	07.2		02.4	231	48.7		04.7	271	45.7		54.9	266	51.2		52.9			
23	226	01.4	147	10.7		01.9	246	49.5		04.1	286	48.2		54.9	281	53.7		52.9			
24	241	03.9	162	14.2	+26	01.4	261	50.4	-11	03.5	301	50.7	-20	54.9	296	56.2	-19	53.0			
Dif.	—		+34				-5	+8				+6	+25				0	+25			

UT	SOL			 LUNA					Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15'8			SD: 15'1 Edad: 0 ^d 3														PHE { 4 ^h : 55'3 12 ^h : 55'5 20 ^h : 55'6	
	PMG: 11 ^h 56 ^m 8			PMG: 12 ^h 36 ^m R ^o : 51 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	R ^o	Hora	R ^o		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m		
0	180	48.6	+20	37.5	177	14.6	117	+19	06.5	80	60 N	20 51	22 04	** **		3 47	22	21 47	75
1	195	48.5		38.0	191	45.3	116		14.5	78	58	35	21 37	** **		4 01	25	30	72
2	210	48.5		38.5	206	15.9	116		22.3	78	56	22	21 16	22 52		12	28	16	70
3	225	48.4		38.9	220	46.5	115		30.1	76	54	10	20 59	22 14		23	30	21 04	68
4	240	48.4		39.4	235	17.0	114		37.7	76	52	20 00	44	21 49		32	32	20 53	66
5	255	48.3	+20	39.9	249	47.4	114	+19	45.3	75	50	19 51	20 32	21 29		4 40	34	20 44	65
6	270	48.3	+20	40.3	264	17.8	113	+19	52.8	74	45	19 31	20 07	20 53		4 57	37	20 24	62
7	285	48.2		40.8	278	48.1	112	+20	00.2	73	40	16	19 48	27		5 12	39	20 08	60
8	300	48.2		41.3	293	18.3	111		07.5	72	35	19 03	32	20 07		24	41	19 54	59
9	315	48.1		41.8	307	48.4	111		14.7	71	30	18 52	19 18	19 50		34	44	42	58
10	330	48.0		42.2	322	18.5	110		21.8	70	20	32	18 56	25		5 53	46	22	56
11	345	48.0	+20	42.7	336	48.5	109	+20	28.8	69	10 N	18 16	18 38	19 05		6 09	48	19 04	54
12	0	47.9	+20	43.2	351	18.4	109	+20	35.7	68	0	18 00	18 23	18 48		6 24	51	18 48	52
13	15	47.9		43.6	5	48.3	108		42.5	68	10 S	17 45	18 08	33		39	53	32	50
14	30	47.8		44.1	20	18.1	107		49.3	66	20	29	17 52	19		6 56	55	18 14	49
15	45	47.8		44.6	34	47.8	107	+20	55.9	65	30	10	36	18 05		7 14	58	17 54	46
16	60	47.7		45.0	49	17.5	105	+21	02.4	64	35	17 00	27	17 58		25	60	43	44
17	75	47.6	+20	45.5	63	47.0	106	+21	08.8	64	40	16 48	17 17	17 50		7 38	62	17 29	43
18	90	47.6	+20	46.0	78	16.6	104	+21	15.2	62	45	16 33	17 06	17 42		7 53	64	17 13	41
19	105	47.5		46.4	92	46.0	104		21.4	61	50	16	16 52	32		8 12	67	16 54	38
20	120	47.5		46.9	107	15.4	103		27.5	60	52	16 07	46	28		20	69	45	37
21	135	47.4		47.3	121	44.7	102		33.5	59	54	15 58	39	24		30	71	35	35
22	150	47.4		47.8	136	13.9	102		39.4	58	56	48	32	19		41	73	23	33
23	165	47.3		48.3	150	43.1	101		45.2	57	58	36	24	14		8 54	76	16 10	30
24	180	47.2	+20	48.7	165	12.2		+21	50.9		60 S	15 22	16 14	17 08		9 09	80	15 54	27
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 7 ^h 54 ^m 4		Mag: -4.3 PMG: 13 ^h 08 ^m				Mag: +0.1 PMG: 06 ^h 32 ^m				Mag: -2.5 PMG: 03 ^h 52 ^m				Mag: +0.5 PMG: 04 ^h 12 ^m				
	hG ♂		hG ♀	dec.			hG ♂	dec.			hG ♀	dec.			hG ♀	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	241	03.9	162	14.2	+26	01.4	261	50.4	-11	03.5	301	50.7	-20	-54.9	296	56.2	-19	53.0	
1	256	06.3	177	17.7		00.9	276	51.2		03.0	316	53.3		-54.9	311	58.7		53.0	
2	271	08.8	192	21.2	+26	00.4	291	52.1		02.4	331	55.8		-54.9	327	01.2		53.0	
3	286	11.3	207	24.7	+25	59.9	306	52.9		01.8	346	58.3		-55.0	342	03.8		53.0	
4	301	13.7	222	28.2		59.4	321	53.8		01.2	2	00.9		-55.0	357	06.3		53.0	
5	316	16.2	237	31.7	+25	58.9	336	54.6	-11	00.7	17	03.4	-20	-55.0	12	08.8	-19	53.0	
6	331	18.7	252	35.2	+25	58.4	351	55.5	-11	00.1	32	05.9	-20	-55.0	27	11.3	-19	53.0	
7	346	21.1	267	38.7		57.8	6	56.3	-10	59.5	47	08.5		-55.0	42	13.8		53.1	
8	1	23.6	282	42.2		57.3	21	57.2		59.0	62	11.0		-55.1	57	16.3		53.1	
9	16	26.1	297	45.7		56.8	36	58.0		58.4	77	13.5		-55.1	72	18.8		53.1	
10	31	28.5	312	49.2		56.3	51	58.9		57.8	92	16.1		-55.1	87	21.3		53.1	
11	46	31.0	327	52.8	+25	55.8	66	59.7	-10	57.3	107	18.6	-20	-55.1	102	23.9	-19	53.1	
12	61	33.5	342	56.3	+25	55.3	82	00.6	-10	56.7	122	21.2	-20	-55.1	117	26.4	-19	53.1	
13	76	35.9	357	59.8		54.7	97	01.4		56.1	137	23.7		-55.2	132	28.9		53.1	
14	91	38.4	13	03.4		54.2	112	02.3		55.5	152	26.2		-55.2	147	31.4		53.2	
15	106	40.8	28	06.9		53.7	127	03.1		55.0	167	28.8		-55.2	162	33.9		53.2	
16	121	43.3	43	10.5		53.2	142	04.0		54.4	182	31.3		-55.2	177	36.4		53.2	
17	136	45.8	58	14.0	+25	52.7	157	04.8	-10	53.8	197	33.8	-20	-55.2	192	39.0	-19	53.2	
18	151	48.2	73	17.6	+25	52.1	172	05.7	-10	53.3	212	36.4	-20	-55.3	207	41.5	-19	53.2	
19	166	50.7	88	21.1		51.6	187	06.5		52.7	227	38.9		-55.3	222	44.0		53.2	
20	181	53.2	103	24.7		51.1	202	07.4		52.1	242	41.5		-55.3	237	46.5		53.2	
21	196	55.6	118	28.3		50.5	217	08.2		51.5	257	44.0		-55.3	252	49.0		53.3	
22	211	58.1	133	31.8		50.0	232	09.1		51.0	272	46.5		-55.3	267	51.5		53.3	
23	227	00.6	148	35.4		49.5	247	09.9		50.4	287	49.1		-55.4	282	54.0		53.3	
24	242	03.0	163	39.0	+25	49.0	262	10.8	-10	49.8	302	51.6	-20	-55.4	297	56.6	-19	53.3	
Dif.	—		+35		-5		+8		+6		+25		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 9				SD: 15°2 Edad: 1 ^d 3					PHE { 4 ^h : 55°8 12 ^h : 55°9 20 ^h : 56°1			PMG: 13 ^h 27 ^m		R°: 54 ^m				
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.			Náut.		Civil		Hora	R°		Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	180	47.2	+20	48.7	165	12.2	101	+21	50.9	56	60 N	** **	1 49	3 02	4 09	34	23 02	61	
1	195	47.2		49.2	179	41.3	100	+21	56.5	55	58	** **	2 17	18	26	37	22 42	61	
2	210	47.1		49.6	194	10.3	99	+22	02.0	54	56	1 00	38	32	40	39	26	59	
3	225	47.1		50.1	208	39.2	98		07.4	52	54	1 39	2 55	43	4 53	41	22 12	59	
4	240	47.0		50.6	223	08.0	98		12.6	52	52	2 05	3 09	3 54	5 04	42	21 59	59	
5	255	46.9	+20	51.0	237	36.8	97	+22	17.8	50	50	2 25	3 21	4 03	5 14	43	21 49	58	
6	270	46.9	+20	51.5	252	05.5	97	+22	22.8	49	45	3 01	3 46	4 22	5 34	46	21 26	58	
7	285	46.8		51.9	266	34.2	96		27.7	48	40	27	4 06	37	5 51	47	21 08	57	
8	300	46.8		52.4	281	02.8	95		32.5	47	35	3 47	22	4 50	6 05	48	20 53	57	
9	315	46.7		52.8	295	31.3	95		37.2	46	30	4 03	35	5 02	18	49	40	56	
10	330	46.6		53.3	309	59.8	94		41.8	44	20	29	4 57	21	39	51	20 18	55	
11	345	46.6	+20	53.7	324	28.2	94	+22	46.2	44	10 N	4 49	5 15	5 38	6 57	52	19 58	55	
12	0	46.5	+20	54.2	338	56.6	93	+22	50.6	42	0	5 05	5 31	5 53	7 15	53	19 40	54	
13	15	46.4		54.6	353	24.9	92		54.8	41	10 S	20	5 46	6 09	32	55	22	53	
14	30	46.4		55.1	7	53.1	92	+22	58.9	40	20	34	6 01	25	7 51	55	19 03	52	
15	45	46.3		55.5	22	21.3	91	+23	02.9	39	30	48	18	44	8 12	58	18 40	52	
16	60	46.3		56.0	36	49.4	91		06.8	37	35	5 56	27	6 54	25	58	27	51	
17	75	46.2	+20	56.4	51	17.5	90	+23	10.5	36	40	6 04	6 37	7 07	8 40	59	18 12	51	
18	90	46.1	+20	56.9	65	45.5	90	+23	14.1	35	45	6 12	6 48	7 21	8 57	61	17 54	50	
19	105	46.1		57.3	80	13.5	89		17.6	34	50	22	7 02	39	9 19	62	32	48	
20	120	46.0		57.8	94	41.4	89		21.0	32	52	26	08	47	29	63	22	47	
21	135	45.9		58.2	109	09.3	88		24.2	32	54	30	15	7 56	41	64	17	10	
22	150	45.9		58.7	123	37.1	87		27.4	30	56	35	23	8 07	9 54	66	16	56	
23	165	45.8		59.1	138	04.8	87		30.4	28	58	41	31	19	10 10	67	16	40	
24	180	45.8	+20	59.6	152	32.5		+23	33.2		60 S	6 47	7 40	8 33	10 29	69	16	21	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 50 ^m 5		Mag: -4.2 PMG: 13 ^h 02 ^m				Mag: +0.1 PMG: 06 ^h 31 ^m				Mag: -2.5 PMG: 03 ^h 48 ^m				Mag: +0.5 PMG: 04 ^h 08 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	242	03.0	163	39.0	+25	49.0	262	10.8	-10	49.8	302	51.6	-20	55.4	297	56.6	-19	53.3
1	257	05.5	178	42.6		48.4	277	11.6		49.3	317	54.2		55.4	312	59.1		53.3
2	272	07.9	193	46.2		47.9	292	12.5		48.7	332	56.7		55.4	328	01.6		53.3
3	287	10.4	208	49.8		47.3	307	13.3		48.1	347	59.2		55.5	343	04.1		53.4
4	302	12.9	223	53.3		46.8	322	14.2		47.5	3	01.8		55.5	358	06.6		53.4
5	317	15.3	238	56.9	+25	46.3	337	15.0	-10	47.0	18	04.3	-20	55.5	13	09.2	-19	53.4
6	332	17.8	254	00.5	+25	45.7	352	15.9	-10	46.4	33	06.9	-20	55.5	28	11.7	-19	53.4
7	347	20.3	269	04.2		45.2	7	16.7		45.8	48	09.4		55.5	43	14.2		53.4
8	2	22.7	284	07.8		44.6	22	17.6		45.3	63	12.0		55.6	58	16.7		53.4
9	17	25.2	299	11.4		44.1	37	18.4		44.7	78	14.5		55.6	73	19.2		53.4
10	32	27.7	314	15.0		43.5	52	19.3		44.1	93	17.0		55.6	88	21.7		53.5
11	47	30.1	329	18.6	+25	43.0	67	20.1	-10	43.5	108	19.6	-20	55.6	103	24.3	-19	53.5
12	62	32.6	344	22.2	+25	42.5	82	21.0	-10	43.0	123	22.1	-20	55.6	118	26.8	-19	53.5
13	77	35.1	359	25.9		41.9	97	21.8		42.4	138	24.7		55.7	133	29.3		53.5
14	92	37.5	14	29.5		41.4	112	22.7		41.8	153	27.2		55.7	148	31.8		53.5
15	107	40.0	29	33.1		40.8	127	23.5		41.3	168	29.8		55.7	163	34.3		53.5
16	122	42.4	44	36.8		40.2	142	24.4		40.7	183	32.3		55.7	178	36.9		53.6
17	137	44.9	59	40.4	+25	39.7	157	25.3	-10	40.1	198	34.9	-20	55.8	193	39.4	-19	53.6
18	152	47.4	74	44.0	+25	39.1	172	26.1	-10	39.5	213	37.4	-20	55.8	208	41.9	-19	53.6
19	167	49.8	89	47.7		38.6	187	27.0		39.0	228	40.0		55.8	223	44.4		53.6
20	182	52.3	104	51.3		38.0	202	27.8		38.4	243	42.5		55.8	238	46.9		53.6
21	197	54.8	119	55.0		37.5	217	28.7		37.8	258	45.1		55.8	253	49.5		53.6
22	212	57.2	134	58.7		36.9	232	29.5		37.2	273	47.6		55.9	268	52.0		53.7
23	227	59.7	150	02.3		36.3	247	30.4		36.7	288	50.1		55.9	283	54.5		53.7
24	243	02.2	165	06.0	+25	35.8	262	31.2	-10	36.1	303	52.7	-20	55.9	298	57.0	-19	53.7
Dif.	—		+36		-5		+9		+6		+25		0		+25			

UT	SOL				LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°8 PMG: 11 ^h 57 ^m 0				SD: 15°3 Edad: 2 ^d 3 PMG: 14 ^h 21 ^m												PHE { 4 ^h : 56°3 12 ^h : 56°4 20 ^h : 56°6 Rº: 55 ^m	
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.												
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	45.8	+20	59.6	152	32.5	87	+23	33.2	28	60 N	20 55	22 11	** ** *	4 43	52	** ** *	
1	195	45.7	+21	00.0	167	00.2	86		36.0	26	58	39	21 42	** ** *	5 03	52	23 43 45	
2	210	45.6		00.5	181	27.8	86		38.6	25	56	25	20	23 03	19	53	25 48	
3	225	45.6		00.9	195	55.4	85		41.1	24	54	13	21 02	22 20	34	53	23 11 48	
4	240	45.5		01.3	210	22.9	85		43.5	22	52	20 02	20 47	21 53	46	53	22 58 49	
5	255	45.4	+21	01.8	224	50.4	84	+23	45.7	21	50	19 53	20 35	21 33	5 57	54	22 47 50	
6	270	45.4	+21	02.2	239	17.8	84	+23	47.8	20	45	19 34	20 09	20 55	6 20	54	22 24 51	
7	285	45.3		02.7	253	45.2	84		49.8	18	40	18	19 49	29	38	54	22 05 52	
8	300	45.2		03.1	268	12.6	83		51.6	17	35	19 04	33	20 09	6 53	55	21 50 52	
9	315	45.2		03.6	282	39.9	83		53.3	16	30	18 53	19 20	19 52	7 07	54	36 53	
10	330	45.1		04.0	297	07.2	82		54.9	14	20	33	18 57	26	30	54	21 13 54	
11	345	45.0	+21	04.4	311	34.4	82	+23	56.3	14	10 N	18 16	18 39	19 06	7 49	55	20 53 55	
12	0	45.0	+21	04.9	326	01.6	82	+23	57.7	11	0	18 01	18 23	18 49	8 08	55	20 34 55	
13	15	44.9		05.3	340	28.8	81		58.8	11	10 S	17 45	18 07	33	27	54	20 15 56	
14	30	44.8		05.7	354	55.9	81	+23	59.9	9	20	29	17 52	19	8 46	55	19 55 57	
15	45	44.8		06.2	9	23.0	81	+24	00.8	8	30	17 10	36	18 05	9 10	54	32 57	
16	60	44.7		06.6	23	50.1	80		01.6	6	35	16 59	26	17 57	23	55	18 58	
17	75	44.6	+21	07.0	38	17.1	80	+24	02.2	5	40	16 46	17 16	17 49	9 39	55	19 03 58	
18	90	44.6	+21	07.5	52	44.1	80	+24	02.7	4	45	16 32	17 04	17 41	9 58	54	18 44 58	
19	105	44.5		07.9	67	11.1	79		03.1	2	50	14	16 51	31	10 21	54	20 59	
20	120	44.4		08.3	81	38.0	79		03.3	1	52	16 05	44	27	32	54	18 09 59	
21	135	44.4		08.8	96	04.9	79		03.4	0	54	15 56	37	22	10 45	54	17 56 60	
22	150	44.3		09.2	110	31.8	79		03.4	2	56	45	30	17	11 00	53	42 60	
23	165	44.2		09.6	124	58.7	79		03.2	3	58	33	21	11	17	53	24 61	
24	180	44.1	+21	10.1	139	25.6		+24	02.9		60 S	15 19	16 11	17 05	11 38	53	17 03 62	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 46 ^m 6		Mag: -4.2 PMG: 12 ^h 56 ^m				Mag: +0.1 PMG: 06 ^h 30 ^m				Mag: -2.5 PMG: 03 ^h 44 ^m				Mag: +0.5 PMG: 04 ^h 04 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	243	02.2	165	06.0	+25 35.8		262	31.2	-10 36.1		303	52.7	-20 -55.9		298	57.0	-19 53.7	
1	258	04.6	180	09.7	35.2		277	32.1	35.5		318	55.2	-55.9		313	59.5	53.7	
2	273	07.1	195	13.3	34.6		292	33.0	35.0		333	57.8	-56.0		329	02.1	53.7	
3	288	09.6	210	17.0	34.1		307	33.8	34.4		349	00.3	-56.0		344	04.6	53.7	
4	303	12.0	225	20.7	33.5		322	34.7	33.8		4	02.9	-56.0		359	07.1	53.8	
5	318	14.5	240	24.4	+25 32.9		337	35.5	-10 33.2		19	05.4	-20 -56.0		14	09.6	-19 53.8	
6	333	16.9	255	28.1	+25 32.4		352	36.4	-10 32.7		34	08.0	-20 -56.0		29	12.1	-19 53.8	
7	348	19.4	270	31.7	31.8		7	37.2	32.1		49	10.5	-56.1		44	14.7	53.8	
8	3	21.9	285	35.4	31.2		22	38.1	31.5		64	13.1	-56.1		59	17.2	53.8	
9	18	24.3	300	39.1	30.6		37	39.0	30.9		79	15.7	-56.1		74	19.7	53.8	
10	33	26.8	315	42.8	30.1		52	39.8	30.4		94	18.2	-56.1		89	22.2	53.9	
11	48	29.3	330	46.5	+25 29.5		67	40.7	-10 29.8		109	20.8	-20 -56.2		104	24.7	-19 53.9	
12	63	31.7	345	50.3	+25 28.9		82	41.5	-10 29.2		124	23.3	-20 -56.2		119	27.3	-19 53.9	
13	78	34.2	0	54.0	28.3		97	42.4	28.7		139	25.9	-56.2		134	29.8	53.9	
14	93	36.7	15	57.7	27.8		112	43.2	28.1		154	28.4	-56.2		149	32.3	53.9	
15	108	39.1	31	01.4	27.2		127	44.1	27.5		169	31.0	-56.3		164	34.8	53.9	
16	123	41.6	46	05.1	26.6		142	45.0	26.9		184	33.5	-56.3		179	37.4	54.0	
17	138	44.1	61	08.8	+25 26.0		157	45.8	-10 26.4		199	36.1	-20 -56.3		194	39.9	-19 54.0	
18	153	46.5	76	12.6	+25 25.4		172	46.7	-10 25.8		214	38.6	-20 -56.3		209	42.4	-19 54.0	
19	168	49.0	91	16.3	24.8		187	47.5	25.2		229	41.2	-56.4		224	44.9	54.0	
20	183	51.4	106	20.0	24.2		202	48.4	24.6		244	43.7	-56.4		239	47.5	54.0	
21	198	53.9	121	23.8	23.7		217	49.3	24.1		259	46.3	-56.4		254	50.0	54.0	
22	213	56.4	136	27.5	23.1		232	50.1	23.5		274	48.9	-56.4		269	52.5	54.1	
23	228	58.8	151	31.3	22.5		247	51.0	22.9		289	51.4	-56.4		284	55.0	54.1	
24	244	01.3	166	35.0	+25 21.9		262	51.8	-10 22.3		304	54.0	-20 -56.5		299	57.6	-19 54.1	
Dif.	—		+37 -6				+9 +6				+26 0				+25 0			

UT	SOL				 LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8				SD: 15'4 Edad: 3 ^d 3															PHE { 4 ^h : 56'8 12 ^h : 56'9 20 ^h : 57'1	
	PMG: 11 ^h 57 ^m 1				PMG: 15 ^h 16 ^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	180	44.1	+21	10.1	139	25.6	78	+24	02.9	5	60 N	** **	1 43	2 59	5 35	71	0 03	44			
1	195	44.1		10.5	153	52.4	78		02.4	5	58	** **	2 12	3 15	5 55	69	** **	**			
2	210	44.0		10.9	168	19.2	78		01.9	8	56	0 50	34	29	6 12	68	** **	**			
3	225	43.9		11.3	182	46.0	78		01.1	8	54	1 34	2 51	41	27	66	23 59	38			
4	240	43.9		11.8	197	12.8	78	+24	00.3	10	52	2 01	3 06	3 51	39	65	47	40			
5	255	43.8	+21	12.2	211	39.6	77	+23	59.3	12	50	2 21	3 19	4 01	6 51	64	23 37	41			
6	270	43.7	+21	12.6	226	06.3	77	+23	58.1	13	45	2 58	3 45	4 20	7 14	62	23 15	43			
7	285	43.7		13.1	240	33.0	78		56.8	14	40	3 25	4 04	36	32	61	22 57	46			
8	300	43.6		13.5	254	59.8	77		55.4	15	35	3 45	21	4 49	7 48	60	42	48			
9	315	43.5		13.9	269	26.5	77		53.9	17	30	4 02	34	5 01	8 01	60	29	49			
10	330	43.4		14.3	283	53.2	77		52.2	19	20	28	4 57	21	24	58	22 07	51			
11	345	43.4	+21	14.7	298	19.9	77	+23	50.3	19	10 N	4 48	5 15	5 38	8 44	57	21 48	53			
12	0	43.3	+21	15.2	312	46.6	76	+23	48.4	21	0	5 06	5 31	5 54	9 03	55	21 29	55			
13	15	43.2		15.6	327	13.2	77		46.3	23	10 S	21	5 47	6 09	21	55	21 11	57			
14	30	43.2		16.0	341	39.9	77		44.0	24	20	35	6 02	26	9 41	53	20 52	58			
15	45	43.1		16.4	356	06.6	76		41.6	25	30	49	19	45	10 04	52	29	61			
16	60	43.0		16.9	10	33.2	77		39.1	27	35	5 57	28	6 56	18	50	16	62			
17	75	42.9	+21	17.3	24	59.9	77	+23	36.4	28	40	6 05	6 38	7 08	10 34	48	20 01	63			
18	90	42.9	+21	17.7	39	26.6	76	+23	33.6	29	45	6 14	6 50	7 23	10 52	47	19 42	66			
19	105	42.8		18.1	53	53.2	77		30.7	31	50	24	7 04	41	11 15	45	19	69			
20	120	42.7		18.5	68	19.9	77		27.6	32	52	28	10	50	26	44	19 08	70			
21	135	42.6		18.9	82	46.6	77		24.4	34	54	33	17	7 59	39	43	18 56	71			
22	150	42.6		19.4	97	13.3	76		21.0	35	56	38	25	8 10	11 53	41	42	73			
23	165	42.5		19.8	111	39.9	77		17.5	36	58	43	34	22	12 10	39	18 25	76			
24	180	42.4	+21	20.2	126	06.6		+23	13.9		60 S	6 49	7 44	8 37	12 31	35	18 05	79			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 7 ^h 42 ^m 6		Mag: -4.1 PMG: 12 ^h 50 ^m				Mag: +0.1 PMG: 06 ^h 28 ^m				Mag: -2.5 PMG: 03 ^h 40 ^m				Mag: +0.4 PMG: 03 ^h 59 ^m						
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	244	01.3	166	35.0	+25	21.9	262	51.8	-10	22.3	304	54.0	-20	56.5	299	57.6	-19	54.1			
1	259	03.8	181	38.8		21.3	277	52.7		21.8	319	56.5		56.5	315	00.1		54.1			
2	274	06.2	196	42.5		20.7	292	53.6		21.2	334	59.1		56.5	330	02.6		54.1			
3	289	08.7	211	46.3		20.1	307	54.4		20.6	350	01.6		56.5	345	05.1		54.1			
4	304	11.2	226	50.0		19.5	322	55.3		20.0	5	04.2		56.6	0	07.7		54.2			
5	319	13.6	241	53.8	+25	18.9	337	56.2	-10	19.5	20	06.8	-20	56.6	15	10.2	-19	54.2			
6	334	16.1	256	57.6	+25	18.3	352	57.0	-10	18.9	35	09.3	-20	56.6	30	12.7	-19	54.2			
7	349	18.6	272	01.3		17.7	7	57.9		18.3	50	11.9		56.6	45	15.2		54.2			
8	4	21.0	287	05.1		17.1	22	58.7		17.7	65	14.4		56.7	60	17.8		54.2			
9	19	23.5	302	08.9		16.5	37	59.6		17.2	80	17.0		56.7	75	20.3		54.2			
10	34	25.9	317	12.7		15.9	53	00.5		16.6	95	19.6		56.7	90	22.8		54.3			
11	49	28.4	332	16.4	+25	15.3	68	01.3	-10	16.0	110	22.1	-20	56.7	105	25.3	-19	54.3			
12	64	30.9	347	20.2	+25	14.7	83	02.2	-10	15.4	125	24.7	-20	56.8	120	27.9	-19	54.3			
13	79	33.3	2	24.0		14.1	98	03.1		14.9	140	27.2		56.8	135	30.4		54.3			
14	94	35.8	17	27.8		13.4	113	03.9		14.3	155	29.8		56.8	150	32.9		54.3			
15	109	38.3	32	31.6		12.8	128	04.8		13.7	170	32.4		56.8	165	35.4		54.3			
16	124	40.7	47	35.4		12.2	143	05.6		13.2	185	34.9		56.9	180	38.0		54.4			
17	139	43.2	62	39.2	+25	11.6	158	06.5	-10	12.6	200	37.5	-20	56.9	195	40.5	-19	54.4			
18	154	45.7	77	43.0	+25	11.0	173	07.4	-10	12.0	215	40.0	-20	56.9	210	43.0	-19	54.4			
19	169	48.1	92	46.8		10.4	188	08.2		11.4	230	42.6		56.9	225	45.6		54.4			
20	184	50.6	107	50.6		09.8	203	09.1		10.9	245	45.2		57.0	240	48.1		54.4			
21	199	53.1	122	54.4		09.1	218	10.0		10.3	260	47.7		57.0	255	50.6		54.5			
22	214	55.5	137	58.2		08.5	233	10.8		09.7	275	50.3		57.0	270	53.1		54.5			
23	229	58.0	153	02.1		07.9	248	11.7		09.1	290	52.9		57.0	285	55.7		54.5			
24	245	00.4	168	05.9	+25	07.3	263	12.6	-10	08.6	305	55.4	-20	57.1	300	58.2	-19	54.5			
Dif.	—		+38		-6		+9		+6		+26		0		+25						

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 57 ^m 2				SD: 15'6 Edad: 4 ^d 3 PHE { 4 ^h : 57'3 12 ^h : 57'5 20 ^h : 57'7														
	PMG: 16 ^h 11 ^m				Rº: 55 ^m														
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	h m	h m			h m	Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	180	42.4	+21	20.2	126	06.6	77	+23	13.9	38	60 N	20 59	22 17	** **	6 46	85	0 47	29	
1	195	42.3		20.6	140	33.3	77		10.1	39	58	42	21 47	** **	7 04	81	28	33	
2	210	42.3		21.0	155	00.0	78		06.2	40	56	28	24	23 15	20	78	0 13	35	
3	225	42.2		21.4	169	26.8	77	+23	02.2	42	54	16	21 06	22 26	33	76	** **	*	
4	240	42.1		21.8	183	53.5	77	+22	58.0	43	52	20 05	20 51	21 58	44	74	** **	**	
5	255	42.0	+21	22.2	198	20.2	78	+22	53.7	45	50	19 55	20 38	21 36	7 55	72	** **	**	
6	270	42.0	+21	22.7	212	47.0	77	+22	49.2	46	45	19 35	20 11	20 58	8 16	69	23 58	37	
7	285	41.9		23.1	227	13.7	78		44.6	47	40	19	19 51	31	33	67	43	40	
8	300	41.8		23.5	241	40.5	78		39.9	49	35	19 06	35	20 10	8 48	64	30	42	
9	315	41.7		23.9	256	07.3	78		35.0	50	30	18 54	19 21	19 53	9 01	62	23 18	44	
10	330	41.7		24.3	270	34.1	79		30.0	51	20	34	18 58	27	22	60	22 58	48	
11	345	41.6	+21	24.7	285	01.0	78	+22	24.9	52	10 N	18 17	18 40	19 06	9 41	57	22 41	51	
12	0	41.5	+21	25.1	299	27.8	79	+22	19.7	54	0	18 01	18 23	18 49	9 58	55	22 24	54	
13	15	41.4		25.5	313	54.7	79		14.3	56	10 S	17 45	18 08	34	10 16	52	22 08	57	
14	30	41.4		25.9	328	21.6	79		08.7	56	20	28	17 52	19	34	50	21 50	60	
15	45	41.3		26.3	342	48.5	79	+22	03.1	58	30	17 09	35	18 04	10 56	46	30	63	
16	60	41.2		26.7	357	15.4	80	+21	57.3	59	35	16 58	26	17 57	11 08	45	18	66	
17	75	41.1	+21	27.1	11	42.4	80	+21	51.4	61	40	16 45	17 15	17 49	11 22	43	21 04	68	
18	90	41.1	+21	27.5	26	09.4	80	+21	45.3	62	45	16 30	17 03	17 40	11 39	40	20 48	71	
19	105	41.0		27.9	40	36.4	80		39.1	63	50	12	16 49	29	12 00	37	28	75	
20	120	40.9		28.3	55	03.4	81		32.8	64	52	16 03	42	25	10	35	18	77	
21	135	40.8		28.7	69	30.5	81		26.4	66	54	15 54	35	20	22	32	20 07	79	
22	150	40.7		29.1	83	57.6	81		19.8	67	56	43	28	15	34	30	19 55	82	
23	165	40.7		29.5	98	24.7	81		13.1	68	58	30	19	09	12 49	27	41	85	
24	180	40.6	+21	29.9	112	51.8		+21	06.3		60 S	15 15	16 09	17 03	13 06	23	19 24	89	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 38 ^m 7		Mag: -4.0 PMG: 12 ^h 44 ^m				Mag: +0.1 PMG: 06 ^h 27 ^m				Mag: -2.5 PMG: 03 ^h 36 ^m				Mag: +0.4 PMG: 03 ^h 55 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	245	00.4	168	05.9	+25	07.3	263	12.6	-10	08.6	305	55.4	-20	-57.1	300	58.2	-19	54.5
1	260	02.9	183	09.7		06.7	278	13.4		08.0	320	58.0		-57.1	316	00.7		54.5
2	275	05.4	198	13.5		06.0	293	14.3		07.4	336	00.6		-57.1	331	03.3		54.5
3	290	07.8	213	17.4		05.4	308	15.2		06.8	351	03.1		-57.1	346	05.8		54.6
4	305	10.3	228	21.2		04.8	323	16.0		06.3	6	05.7		-57.2	1	08.3		54.6
5	320	12.8	243	25.0	+25	04.2	338	16.9	-10	05.7	21	08.3	-20	-57.2	16	10.8	-19	54.6
6	335	15.2	258	28.9	+25	03.5	353	17.8	-10	05.1	36	10.8	-20	-57.2	31	13.4	-19	54.6
7	350	17.7	273	32.7		02.9	8	18.6		04.5	51	13.4		-57.2	46	15.9		54.6
8	5	20.2	288	36.6		02.3	23	19.5		03.9	66	16.0		-57.3	61	18.4		54.7
9	20	22.6	303	40.4		01.6	38	20.4		03.4	81	18.5		-57.3	76	21.0		54.7
10	35	25.1	318	44.3		01.0	53	21.2		02.8	96	21.1		-57.3	91	23.5		54.7
11	50	27.5	333	48.1	+25	00.4	68	22.1	-10	02.2	111	23.7	-20	-57.3	106	26.0	-19	54.7
12	65	30.0	348	52.0	+24	59.7	83	23.0	-10	01.6	126	26.2	-20	-57.4	121	28.5	-19	54.7
13	80	32.5	3	55.8		59.1	98	23.8		01.1	141	28.8		-57.4	136	31.1		54.7
14	95	34.9	18	59.7		58.4	113	24.7	-10	00.5	156	31.4		-57.4	151	33.6		54.8
15	110	37.4	34	03.6		57.8	128	25.6	-9	59.9	171	33.9		-57.5	166	36.1		54.8
16	125	39.9	49	07.4		57.2	143	26.5		59.3	186	36.5		-57.5	181	38.7		54.8
17	140	42.3	64	11.3	+24	56.5	158	27.3	-9	58.8	201	39.1	-20	-57.5	196	41.2	-19	54.8
18	155	44.8	79	15.2	+24	55.9	173	28.2	-9	58.2	216	41.7	-20	-57.5	211	43.7	-19	54.8
19	170	47.3	94	19.0		55.2	188	29.1		57.6	231	44.2		-57.6	226	46.3		54.9
20	185	49.7	109	22.9		54.6	203	29.9		57.0	246	46.8		-57.6	241	48.8		54.9
21	200	52.2	124	26.8		53.9	218	30.8		56.5	261	49.4		-57.6	256	51.3		54.9
22	215	54.7	139	30.7		53.3	233	31.7		55.9	276	51.9		-57.6	271	53.9		54.9
23	230	57.1	154	34.6		52.6	248	32.5		55.3	291	54.5		-57.7	286	56.4		54.9
24	245	59.6	169	38.5	+24	52.0	263	33.4	-9	54.7	306	57.1	-20	-57.7	301	58.9	-19	55.0
Dif.	—		+39		-6		+9		+6		+26		0		+25			

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: 15'7 Edad: 5 ^d 3 PHE { 4 ^h : 57'8 12 ^h : 58'0 20 ^h : 58'2 PMG: 17 ^h 06 ^m Rº: 52 ^m													
	hG ☉		Dec		hG ☾		Dif. Dec			Dif.			Hora	Rº	Hora	Rº		
	°	'	°	'	°	'	°	'		°	'							
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m		
0	180	40.6	+21	29.9	112	51.8	82	+21	06.3	70	60 N	1 37	2 55	8 11	91	1 16	19	
1	195	40.5		30.3	127	19.0	82	+20	59.3	71	58	2 08	3 12	25	88	1 01	23	
2	210	40.4		30.7	141	46.2	82		52.2	72	56	3 30	26	38	84	0 48	26	
3	225	40.3		31.1	156	13.4	83		45.0	73	54	2 48	38	49	81	37	28	
4	240	40.3		31.5	170	40.7	83		37.7	75	52	3 04	49	8 58	79	27	30	
5	255	40.2	+21	31.9	185	08.0	83	+20	30.2	75	50	3 17	3 59	9 07	77	0 18	32	
6	270	40.1	+21	32.3	199	35.3	83	+20	22.7	77	45	3 43	4 19	9 25	72	***	***	
7	285	40.0		32.7	214	02.6	84		15.0	79	40	4 03	35	40	69	***	***	
8	300	39.9		33.1	228	30.0	85	+20	07.1	79	35	20	4 49	9 52	67	***	***	
9	315	39.9		33.5	242	57.5	84	+19	59.2	81	30	34	5 00	10 03	64	***	***	
10	330	39.8		33.9	257	24.9	85		51.1	82	20	28	4 56	22	60	23	46	45
11	345	39.7	+21	34.3	271	52.4	85	+19	42.9	83	10 N	5 15	5 38	10 38	56	23	32	49
12	0	39.6	+21	34.7	286	19.9	86	+19	34.6	84	0	5 32	5 54	10 53	53	23	18	53
13	15	39.5		35.1	300	47.5	86		26.2	85	10 S	5 47	6 10	11 08	50	23	05	56
14	30	39.5		35.5	315	15.1	86		17.7	87	20	6 03	27	24	46	22	50	60
15	45	39.4		35.8	329	42.7	87		09.0	88	30	20	46	42	43	33	65	
16	60	39.3		36.2	344	10.4	87	+19	00.2	88	35	29	6 57	11 53	40	24	67	
17	75	39.2	+21	36.6	358	38.1	87	+18	51.4	90	40	6 40	7 10	12 05	37	22	12	70
18	90	39.1	+21	37.0	13	05.8	88	+18	42.4	92	45	6 52	7 25	12 19	34	21	59	74
19	105	39.0		37.4	27	33.6	88		33.2	92	50	7 06	43	37	29	43	78	
20	120	39.0		37.8	42	01.4	88		24.0	93	52	13	7 52	45	28	35	81	
21	135	38.9		38.2	56	29.2	89		14.7	95	54	20	8 02	12 54	25	26	83	
22	150	38.8		38.6	70	57.1	89	+18	05.2	95	56	28	13	13 04	23	17	86	
23	165	38.7		38.9	85	25.0	90	+17	55.7	97	58	37	26	13 16	19	21	06	89
24	180	38.6	+21	39.3	99	53.0		+17	46.0		60 S	7 47	8 40	13 29	16	20	53	93
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 34 ^m 8		Mag: -4.0 PMG: 12 ^h 38 ^m				Mag: 0.0 PMG: 06 ^h 25 ^m				Mag: -2.5 PMG: 03 ^h 32 ^m				Mag: +0.4 PMG: 03 ^h 51 ^m			
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	245	59.6	169	38.5	+24	52.0	263	33.4	-9	54.7	306	57.1	-20	57.7	301	58.9	-19	55.0
1	261	02.0	184	42.3		51.3	278	34.3		54.2	321	59.7		57.7	317	01.5		55.0
2	276	04.5	199	46.2		50.7	293	35.2		53.6	337	02.2		57.7	332	04.0		55.0
3	291	07.0	214	50.1		50.0	308	36.0		53.0	352	04.8		57.8	347	06.5		55.0
4	306	09.4	229	54.0		49.4	323	36.9		52.4	7	07.4		57.8	2	09.1		55.0
5	321	11.9	244	57.9	+24	48.7	338	37.8	-9	51.9	22	10.0	-20	57.8	17	11.6	-19	55.0
6	336	14.4	260	01.8	+24	48.1	353	38.6	-9	51.3	37	12.5	-20	57.9	32	14.1	-19	55.1
7	351	16.8	275	05.7		47.4	8	39.5		50.7	52	15.1		57.9	47	16.7		55.1
8	6	19.3	290	09.7		46.8	23	40.4		50.1	67	17.7		57.9	62	19.2		55.1
9	21	21.8	305	13.6		46.1	38	41.3		49.5	82	20.3		57.9	77	21.7		55.1
10	36	24.2	320	17.5		45.4	53	42.1		49.0	97	22.8		58.0	92	24.3		55.1
11	51	26.7	335	21.4	+24	44.8	68	43.0	-9	48.4	112	25.4	-20	58.0	107	26.8	-19	55.2
12	66	29.2	350	25.3	+24	44.1	83	43.9	-9	47.8	127	28.0	-20	58.0	122	29.3	-19	55.2
13	81	31.6	5	29.2		43.5	98	44.7		47.2	142	30.6		58.1	137	31.9		55.2
14	96	34.1	20	33.2		42.8	113	45.6		46.7	157	33.1		58.1	152	34.4		55.2
15	111	36.5	35	37.1		42.1	128	46.5		46.1	172	35.7		58.1	167	36.9		55.2
16	126	39.0	50	41.0		41.5	143	47.4		45.5	187	38.3		58.1	182	39.5		55.3
17	141	41.5	65	44.9	+24	40.8	158	48.2	-9	44.9	202	40.9	-20	58.2	197	42.0	-19	55.3
18	156	43.9	80	48.9	+24	40.1	173	49.1	-9	44.4	217	43.5	-20	58.2	212	44.5	-19	55.3
19	171	46.4	95	52.8		39.4	188	50.0		43.8	232	46.0		58.2	227	47.1		55.3
20	186	48.9	110	56.7		38.8	203	50.9		43.2	247	48.6		58.2	242	49.6		55.3
21	201	51.3	126	00.7		38.1	218	51.7		42.6	262	51.2		58.3	257	52.1		55.4
22	216	53.8	141	04.6		37.4	233	52.6		42.1	277	53.8		58.3	272	54.7		55.4
23	231	56.3	156	08.6		36.7	248	53.5		41.5	292	56.4		58.3	287	57.2		55.4
24	246	58.7	171	12.5	+24	36.1	263	54.4	-9	40.9	307	58.9	-20	58.4	302	59.8	-19	55.4
Dif.	—		+39 -7				+9 +6				+26 0				+25 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 5				SD: 15'9 Edad: 6 ^d 3 PMG: 17 ^h 58 ^m PHE { 4 ^h : 58'4 12 ^h : 58'6 20 ^h : 58'7 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	180	38.6	+21	39.3	99	53.0	90	+17	46.0	98	60 N	21 03	22 24	** **	** **	9 42	94	1 35	13															
1	195	38.6		39.7	114	21.0	90		36.2	98	58	20 46	21 51	** **	** **	9 53	90	24	16															
2	210	38.5		40.1	128	49.0	91		26.4	100	56	31	28	23 31		10 02	87	14	20															
3	225	38.4		40.5	143	17.1	91		16.4	101	54	18	21 09	22 32		10	84	1 05	23															
4	240	38.3		40.8	157	45.2	91	+17	06.3	102	52	20 07	20 53	22 02		17	82	0 57	25															
5	255	38.2	+21	41.2	172	13.3	92	+16	56.1	103	50	19 58	20 40	21 40		10 24	79	0 50	27															
6	270	38.1	+21	41.6	186	41.5	92	+16	45.8	104	45	19 37	20 13	21 01		10 37	75	0 35	32															
7	285	38.0		42.0	201	09.7	93		35.4	105	40	21	19 53	20 33		49	70	23	35															
8	300	38.0		42.4	215	38.0	92		24.9	106	35	19 07	36	20 12		10 59	67	12	38															
9	315	37.9		42.7	230	06.2	94		14.3	107	30	18 55	19 22	19 55		11 07	64	0 02	41															
10	330	37.8		43.1	244	34.6	93	+16	03.6	108	20	35	18 59	28		22	59	** **	**															
11	345	37.7	+21	43.5	259	02.9	94	+15	52.8	109	10 N	18 17	18 40	19 07		11 34	56	** **	**															
12	0	37.6	+21	43.9	273	31.3	94	+15	41.9	110	0	18 01	18 23	18 49		11 46	52	** **	**															
13	15	37.5		44.2	287	59.7	95		30.9	111	10 S	17 45	18 08	34		11 58	48	** **	**															
14	30	37.5		44.6	302	28.2	95		19.8	112	20	28	17 52	19		12 10	44	23 50	60															
15	45	37.4		45.0	316	56.7	95	+15	08.6	112	30	17 08	34	18 04		25	39	38	64															
16	60	37.3		45.4	331	25.2	96	+14	57.4	114	35	16 57	25	17 56		33	36	31	67															
17	75	37.2	+21	45.7	345	53.8	96	+14	46.0	114	40	16 44	17 14	17 48		12 42	33	23 22	71															
18	90	37.1	+21	46.1	0	22.4	96	+14	34.6	116	45	16 29	17 02	17 39		12 53	30	23 13	75															
19	105	37.0		46.5	14	51.0	97		23.0	116	50	10	16 48	28		13 06	25	23 01	80															
20	120	36.9		46.8	29	19.7	97	+14	11.4	117	52	16 01	41	24		13	22	22 56	82															
21	135	36.8		47.2	43	48.4	98	+13	59.7	119	54	15 51	34	19		19	21	49	85															
22	150	36.8		47.6	58	17.2	97		47.8	118	56	40	26	13		27	17	43	87															
23	165	36.7		48.0	72	45.9	98		36.0	120	58	27	17	08		35	15	35	91															
24	180	36.6	+21	48.3	87	14.7		+13	24.0		60 S	15 12	16 06	17 01		13 45	11	22 26	95															
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO																			
	PMG: 7 ^h 30 ^m 9		Mag: -4.1 PMG: 12 ^h 32 ^m				Mag: 0.0 PMG: 06 ^h 24 ^m				Mag: -2.5 PMG: 03 ^h 27 ^m				Mag: +0.4 PMG: 03 ^h 47 ^m																			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.																		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'																
0	246	58.7	171	12.5	+24	36.1	263	54.4	-9	40.9	307	58.9	-20	-58.4	302	59.8	-19	55.4																
1	262	01.2	186	16.5		35.4	278	55.2		40.3	323	01.5		-58.4	318	02.3		55.4																
2	277	03.7	201	20.4		34.7	293	56.1		39.7	338	04.1		-58.4	333	04.8		55.5																
3	292	06.1	216	24.4		34.0	308	57.0		39.2	353	06.7		-58.4	348	07.4		55.5																
4	307	08.6	231	28.3		33.4	323	57.9		38.6	8	09.3		-58.5	3	09.9		55.5																
5	322	11.0	246	32.3	+24	32.7	338	58.8	-9	38.0	23	11.8	-20	-58.5	18	12.4	-19	55.5																
6	337	13.5	261	36.2	+24	32.0	353	59.6	-9	37.4	38	14.4	-20	-58.5	33	15.0	-19	55.5																
7	352	16.0	276	40.2		31.3	9	00.5		36.9	53	17.0		-58.6	48	17.5		55.6																
8	7	18.4	291	44.2		30.6	24	01.4		36.3	68	19.6		-58.6	63	20.1		55.6																
9	22	20.9	306	48.1		29.9	39	02.3		35.7	83	22.2		-58.6	78	22.6		55.6																
10	37	23.4	321	52.1		29.3	54	03.1		35.1	98	24.8		-58.6	93	25.1		55.6																
11	52	25.8	336	56.1	+24	28.6	69	04.0	-9	34.5	113	27.4	-20	-58.7	108	27.7	-19	55.6																
12	67	28.3	352	00.0	+24	27.9	84	04.9	-9	34.0	128	29.9	-20	-58.7	123	30.2	-19	55.7																
13	82	30.8	7	04.0		27.2	99	05.8		33.4	143	32.5		-58.7	138	32.7		55.7																
14	97	33.2	22	08.0		26.5	114	06.6		32.8	158	35.1		-58.8	153	35.3		55.7																
15	112	35.7	37	12.0		25.8	129	07.5		32.2	173	37.7		-58.8	168	37.8		55.7																
16	127	38.1	52	15.9		25.1	144	08.4		31.7	188	40.3		-58.8	183	40.4		55.7																
17	142	40.6	67	19.9	+24	24.4	159	09.3	-9	31.1	203	42.9	-20	-58.9	198	42.9	-19	55.8																
18	157	43.1	82	23.9	+24	23.7	174	10.2	-9	30.5	218	45.5	-20	-58.9	213	45.4	-19	55.8																
19	172	45.5	97	27.9		23.0	189	11.0		29.9	233	48.0		-58.9	228	48.0		55.8																
20	187	48.0	112	31.9		22.3	204	11.9		29.3	248	50.6		-58.9	243	50.5		55.8																
21	202	50.5	127	35.9		21.6	219	12.8		28.8	263	53.2		-59.0	258	53.1		55.8																
22	217	52.9	142	39.8		20.9	234	13.7		28.2	278	55.8		-59.0	273	55.6		55.9																
23	232	55.4	157	43.8		20.2	249	14.6		27.6	293	58.4		-59.0	288	58.1		55.9																
24	247	57.9	172	47.8	+24	19.5	264	15.4	-9	27.0	309	01.0	-20	-59.1	304	00.7	-19	55.9																
Dif.	—		+40				-7				+9				+6				+26				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 57 ^m 6				SD: 16'0 Edad: 7 ^d 3 PMG: 18 ^h 50 ^m PHE { 4 ^h : 58'9 12 ^h : 59'1 20 ^h : 59'3 Rº: 50 ^m					Náut.	Civil		Hora	Rº	Hora	Rº		
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	h m	h m		h m	h m		h m	m	m			
h	°	'	°	'	°	'	°	'	° N	h m	h m	h m	h m	h m	m	h m	m	
0	180	36.6	+21	48.3	87	14.7	99	+13	24.0	121	60 N	***	1 31	2 52	11 16	95	1 48	10
1	195	36.5		48.7	101	43.6	98	+13	11.9	121	58	***	2 03	3 09	23 91	40	40	14
2	210	36.4		49.1	116	12.4	99	+12	59.8	122	56	0 23	27	24	29 88	34	16	
3	225	36.3		49.4	130	41.3	99		47.6	123	54	1 23	2 46	36	34 85	28	19	
4	240	36.2		49.8	145	10.2	100		35.3	124	52	1 53	3 01	47	39 82	22	22	
5	255	36.1	+21	50.1	159	39.2	100	+12	22.9	125	50	2 15	3 15	3 57	11 43	80	1 17	24
6	270	36.1	+21	50.5	174	08.2	100	+12	10.4	125	45	2 54	3 41	4 18	11 52	75	1 07	28
7	285	36.0		50.9	188	37.2	100	+11	57.9	126	40	3 22	4 02	34	11 59	72	0 58	31
8	300	35.9		51.2	203	06.2	101		45.3	127	35	3 43	19	4 48	12 06	68	50	35
9	315	35.8		51.6	217	35.3	101		32.6	128	30	4 00	33	5 00	11 65	43	38	
10	330	35.7		52.0	232	04.4	101		19.8	128	20	27	4 56	20	21 60	31	43	
11	345	35.6	+21	52.3	246	33.5	101	+11	07.0	129	10 N	4 48	5 15	5 38	12 30	55	0 21	47
12	0	35.5	+21	52.7	261	02.6	102	+10	54.1	130	0	5 06	5 32	5 54	12 38	50	0 11	51
13	15	35.4		53.0	275	31.8	102		41.1	130	10 S	22	5 48	6 10	46 46	0 01	55	
14	30	35.3		53.4	290	01.0	102		28.1	131	20	36	6 04	27	12 54	42	***	***
15	45	35.3		53.8	304	30.2	102		15.0	132	30	51	21	47	13 04	37	***	***
16	60	35.2		54.1	318	59.4	103	+10	01.8	132	35	5 59	31	6 58	09 34	***	***	***
17	75	35.1	+21	54.5	333	28.7	102	+9	48.6	133	40	6 08	6 41	7 11	13 15	31	***	***
18	90	35.0	+21	54.8	347	57.9	103	+9	35.3	134	45	6 17	6 54	7 27	13 23	27	***	***
19	105	34.9		55.2	2	27.2	103		21.9	134	50	27	7 08	45	31 23	***	***	***
20	120	34.8		55.5	16	56.5	104	+9	08.5	135	52	32	15	7 54	35 20	***	***	***
21	135	34.7		55.9	31	25.9	103	+8	55.0	135	54	37	22	8 04	40 17	***	***	***
22	150	34.6		56.2	45	55.2	104		41.5	136	56	42	30	16	44 16	***	***	***
23	165	34.5		56.6	60	24.6	104		27.9	136	58	48	39	29	13 50	12	***	***
24	180	34.4	+21	56.9	74	54.0		+8	14.3		60 S	6 55	7 50	8 44	13 56	9	***	***

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 26 ^m 9		Mag: -4.1 PMG: 12 ^h 25 ^m				Mag: 0.0 PMG: 06 ^h 23 ^m				Mag: -2.6 PMG: 03 ^h 23 ^m				Mag: +0.4 PMG: 03 ^h 43 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	247	57.9	172	47.8	+24	19.5	264	15.4	-9	27.0	309	01.0	-20	59.1	304	00.7	-19	55.9
1	263	00.3	187	51.8		18.8	279	16.3		26.5	324	03.6		59.1	319	03.2		55.9
2	278	02.8	202	55.8		18.1	294	17.2		25.9	339	06.2		59.1	334	05.8		55.9
3	293	05.3	217	59.8		17.4	309	18.1		25.3	354	08.7		59.2	349	08.3		56.0
4	308	07.7	233	03.8		16.7	324	19.0		24.7	9	11.3		59.2	4	10.8		56.0
5	323	10.2	248	07.8	+24	16.0	339	19.9	-9	24.1	24	13.9	-20	59.2	19	13.4	-19	56.0
6	338	12.6	263	11.8	+24	15.3	354	20.7	-9	23.6	39	16.5	-20	59.2	34	15.9	-19	56.0
7	353	15.1	278	15.8		14.6	9	21.6		23.0	54	19.1		59.3	49	18.5		56.0
8	8	17.6	293	19.8		13.9	24	22.5		22.4	69	21.7		59.3	64	21.0		56.1
9	23	20.0	308	23.9		13.2	39	23.4		21.8	84	24.3		59.3	79	23.5		56.1
10	38	22.5	323	27.9		12.5	54	24.3		21.3	99	26.9		59.4	94	26.1		56.1
11	53	25.0	338	31.9	+24	11.8	69	25.1	-9	20.7	114	29.5	-20	59.4	109	28.6	-19	56.1
12	68	27.4	353	35.9	+24	11.1	84	26.0	-9	20.1	129	32.1	-20	59.4	124	31.2	-19	56.1
13	83	29.9	8	39.9		10.3	99	26.9		19.5	144	34.7		59.5	139	33.7		56.2
14	98	32.4	23	43.9		09.6	114	27.8		18.9	159	37.3		59.5	154	36.3		56.2
15	113	34.8	38	48.0		08.9	129	28.7		18.4	174	39.9		59.5	169	38.8		56.2
16	128	37.3	53	52.0		08.2	144	29.6		17.8	189	42.4		59.5	184	41.3		56.2
17	143	39.8	68	56.0	+24	07.5	159	30.4	-9	17.2	204	45.0	-20	59.6	199	43.9	-19	56.2
18	158	42.2	84	00.0	+24	06.8	174	31.3	-9	16.6	219	47.6	-20	59.6	214	46.4	-19	56.3
19	173	44.7	99	04.0		06.1	189	32.2		16.1	234	50.2		59.6	229	49.0		56.3
20	188	47.1	114	08.1		05.3	204	33.1		15.5	249	52.8		59.7	244	51.5		56.3
21	203	49.6	129	12.1		04.6	219	34.0		14.9	264	55.4		59.7	259	54.1		56.3
22	218	52.1	144	16.1		03.9	234	34.9		14.3	279	58.0		59.7	274	56.6		56.4
23	233	54.5	159	20.2		03.2	249	35.8		13.7	295	00.6		59.8	289	59.1		56.4
24	248	57.0	174	24.2	+24	02.5	264	36.6	-9	13.2	310	03.2	-20	59.8	305	01.7	-19	56.4
Dif.	—		+40		-7		+9		+6		+26		0		+25		0	

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 57 ^m 8				Edad: 8 ^d 3												
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	PMG: 19 ^h 40 ^m	Rº: 51 ^m									
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	34.4	+21	56.9	74	54.0	104	+8	14.3	137	60 N	21 07	22 30	** ** *	12 51	96	1 58 8
1	195	34.3		57.3	89	23.4	104	+8	00.6	138	58	20 49	21 56	** ** *	54	92	54 11
2	210	34.3		57.6	103	52.8	104	+7	46.8	138	56	34	31	** ** *	57	89	50 14
3	225	34.2		58.0	118	22.2	105		33.0	139	54	21	21 12	22 38	12 59	86	47 1
4	240	34.1		58.3	132	51.7	104		19.1	139	52	10	20 56	22 06	13 01	84	44 19
5	255	34.0	+21	58.7	147	21.1	105	+7	05.2	139	50	20 00	20 43	21 43	13 03	81	1 41 21
6	270	33.9	+21	59.0	161	50.6	105	+6	51.3	140	45	19 39	20 15	21 03	13 07	76	1 35 26
7	285	33.8		59.4	176	20.1	105		37.3	141	40	22	19 54	20 35	11	72	29 30
8	300	33.7	+21	59.7	190	49.6	104		23.2	141	35	19 08	38	20 13	14	68	25 33
9	315	33.6	+22	00.1	205	19.0	105	+6	09.1	141	30	18 56	23	19 56	16	65	21 36
10	330	33.5		00.4	219	48.5	106	+5	55.0	142	20	36	19 00	29	21	60	14 41
11	345	33.4	+22	00.8	234	18.1	105	+5	40.8	142	10 N	18 18	18 41	19 07	13 25	55	1 08 46
12	0	33.3	+22	01.1	248	47.6	105	+5	26.6	143	0	18 01	18 24	18 50	13 28	51	1 02 50
13	15	33.2		01.5	263	17.1	105	+5	12.3	142	10 S	17 45	18 08	34	32	46	0 56 55
14	30	33.1		01.8	277	46.6	105	+4	58.1	144	20	28	17 52	19	36	42	50 59
15	45	33.0		02.1	292	16.1	106		43.7	143	30	17 08	34	18 04	41	36	42 65
16	60	32.9		02.5	306	45.7	105		29.4	144	35	16 56	24	17 56	43	33	38 68
17	75	32.9	+22	02.8	321	15.2	105	+4	15.0	145	40	16 43	17 13	17 47	13 46	30	0 33 72
18	90	32.8	+22	03.2	335	44.7	106	+4	00.5	144	45	16 28	17 01	17 38	13 50	25	0 28 75
19	105	32.7		03.5	350	14.3	105	+3	46.1	145	50	09	16 46	27	54	21	21 80
20	120	32.6		03.8	4	43.8	105		31.6	145	52	16 00	39	22	55	19	18 83
21	135	32.5		04.2	19	13.3	106		17.1	146	54	15 50	32	17	13 57	17	14 86
22	150	32.4		04.5	33	42.9	105	+3	02.5	146	56	38	24	12	14 00	14	10 89
23	165	32.3		04.8	48	12.4	105	+2	47.9	146	58	25	15	17 06	02	11	06 91
24	180	32.2	+22	05.2	62	41.9		+2	33.3		60 S	15 10	16 04	16 59	14 05	8	0 01 95

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 23 ^m 0		Mag: -4.1 PMG: 12 ^h 19 ^m				Mag: 0.0 PMG: 06 ^h 21 ^m				Mag: -2.6 PMG: 03 ^h 19 ^m				Mag: +0.4 PMG: 03 ^h 39 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	248	57.0	174	24.2	+24	02.5	264	36.6	-9	13.2	310	03.2	-20	-59.8	305	01.7	-19	56.4
1	263	59.5	189	28.2		01.7	279	37.5		12.6	325	05.8		-59.8	320	04.2		56.4
2	279	01.9	204	32.3		01.0	294	38.4		12.0	340	08.4		-59.9	335	06.8		56.4
3	294	04.4	219	36.3	+24	00.3	309	39.3		11.4	355	11.0		-59.9	350	09.3		56.5
4	309	06.9	234	40.3	+23	59.6	324	40.2		10.8	10	13.6	-20	-59.9	5	11.9		56.5
5	324	09.3	249	44.4	+23	58.8	339	41.1	-9	10.3	25	16.2	-21	00.0	20	14.4	-19	56.5
6	339	11.8	264	48.4	+23	58.1	354	42.0	-9	09.7	40	18.8	-21	00.0	35	17.0	-19	56.5
7	354	14.2	279	52.5		57.4	9	42.8		09.1	55	21.4		00.0	50	19.5		56.5
8	9	16.7	294	56.5		56.6	24	43.7		08.5	70	24.0		00.0	65	22.0		56.6
9	24	19.2	310	00.5		55.9	39	44.6		08.0	85	26.6		-00.1	80	24.6		56.6
10	39	21.6	325	04.6		55.2	54	45.5		07.4	100	29.2		-00.1	95	27.1		56.6
11	54	24.1	340	08.6	+23	54.4	69	46.4	-9	06.8	115	31.8	-21	-00.1	110	29.7	-19	56.6
12	69	26.6	355	12.7	+23	53.7	84	47.3	-9	06.2	130	34.4	-21	-00.2	125	32.2	-19	56.7
13	84	29.0	10	16.7		53.0	99	48.2		05.6	145	37.0		-00.2	140	34.8		56.7
14	99	31.5	25	20.8		52.2	114	49.1		05.1	160	39.6		-00.2	155	37.3		56.7
15	114	34.0	40	24.8		51.5	129	49.9		04.5	175	42.2		-00.3	170	39.9		56.7
16	129	36.4	55	28.9		50.8	144	50.8		03.9	190	44.8		-00.3	185	42.4		56.7
17	144	38.9	70	32.9	+23	50.0	159	51.7	-9	03.3	205	47.4	-21	-00.3	200	45.0	-19	56.8
18	159	41.4	85	37.0	+23	49.3	174	52.6	-9	02.7	220	50.0	-21	-00.4	215	47.5	-19	56.8
19	174	43.8	100	41.1		48.6	189	53.5		02.2	235	52.6		-00.4	230	50.1		56.8
20	189	46.3	115	45.1		47.8	204	54.4		01.6	250	55.2		-00.4	245	52.6		56.8
21	204	48.7	130	49.2		47.1	219	55.3		01.0	265	57.8		-00.5	260	55.1		56.9
22	219	51.2	145	53.2		46.3	234	56.2	-9	00.4	281	00.4		-00.5	275	57.7		56.9
23	234	53.7	160	57.3		45.6	249	57.1	-8	59.8	296	03.0		-00.5	291	00.2		56.9
24	249	56.1	176	01.3	+23	44.9	264	58.0	-8	59.3	311	05.6	-21	-00.6	306	02.8	-19	56.9
Dif.	—		+40		-7		+9		+6		+26		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 57 ^m 9				SD: 16'3 Edad: 9 ^d 3 PHE { 4 ^h : 59'8 12 ^h : 59'9 20 ^h : 60'0 PMG: 20 ^h 31 ^m Rº: 52 ^m														
	hG ☉		Dec		hG ☾		Dif. Dec Dif.			Náut.	Civil		Hora	Rº	Hora	Rº			
	°	'	°	'	°	'	°	'		°	'		h m	'	h m m	'	h m m	'	
h																			
0	180	32.2	+22	05.2	62	41.9	105	+2	33.3	146	60 N	h m ** **	1 25	2 49	14 27	97	2 06	9	
1	195	32.1		05.5	77	11.4	105		18.7	146	58	** **	1 59	3 07	26	94	05	12	
2	210	32.0		05.8	91	40.9	105	+2	04.1	147	56	** **	2 24	22	26	90	04	15	
3	225	31.9		06.2	106	10.4	105	+1	49.4	146	54	1 17	43	34	25	87	04	16	
4	240	31.8		06.5	120	39.9	105		34.8	147	52	1 49	2 59	46	25	84	03	19	
5	255	31.7	+22	06.8	135	09.4	104	+1	20.1	147	50	2 12	3 13	3 56	14 24	83	2 02	21	
6	270	31.6	+22	07.2	149	38.8	105	+1	05.4	148	45	2 53	3 40	4 16	14 23	78	2 01	26	
7	285	31.5		07.5	164	08.3	104	+0	50.6	147	40	3 21	4 01	33	23	73	1 59	30	
8	300	31.4		07.8	178	37.7	105		35.9	147	35	3 42	18	47	22	69	58	34	
9	315	31.3		08.2	193	07.2	104		21.2	148	30	4 00	32	4 59	21	67	57	37	
10	330	31.2		08.5	207	36.6	104	+0	06.4	148	20	27	4 56	5 20	21	60	55	42	
11	345	31.1	+22	08.8	222	06.0	103	-0	08.4	147	10 N	4 48	5 15	5 38	14 20	56	1 54	46	
12	0	31.0	+22	09.2	236	35.3	104	-0	23.1	148	0	5 06	5 32	5 54	14 19	51	1 52	51	
13	15	30.9		09.5	251	04.7	103		37.9	148	10 S	22	5 48	6 11	18	47	51	55	
14	30	30.8		09.8	265	34.0	104	-0	52.7	147	20	37	6 04	28	18	42	49	60	
15	45	30.7		10.1	280	03.4	103	-1	07.4	148	30	5 52	22	48	17	37	47	66	
16	60	30.6		10.5	294	32.7	103		22.2	148	35	6 00	32	6 59	16	34	46	69	
17	75	30.5	+22	10.8	309	02.0	102	-1	37.0	148	40	6 09	6 43	7 13	14 16	30	1 45	72	
18	90	30.4	+22	11.1	323	31.2	102	-1	51.8	148	45	6 18	6 55	7 28	14 15	27	1 43	77	
19	105	30.3		11.4	338	00.4	103	-2	06.6	147	50	29	7 10	48	15	22	41	82	
20	120	30.2		11.7	352	29.7	101		21.3	148	52	34	17	7 57	14	20	41	84	
21	135	30.1		12.1	6	58.8	102		36.1	147	54	39	24	8 07	14	17	40	86	
22	150	30.0		12.4	21	28.0	101	-2	50.8	148	56	44	32	18	14	14	39	89	
23	165	29.9		12.7	35	57.1	101	-3	05.6	147	58	50	42	32	14 13	12	1 37	93	
24	180	29.8	+22	13.0	50	26.2		-3	20.3		60 S	6 57	7 52	8 47	14 13	9	1 36	96	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 7 ^h 19 ^m 1		Mag: -4.2 PMG: 12 ^h 13 ^m				Mag: 0.0 PMG: 06 ^h 20 ^m				Mag: -2.6 PMG: 03 ^h 15 ^m				Mag: +0.4 PMG: 03 ^h 35 ^m				
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°
0	249	56.1	176	01.3	+23	44.9	264	58.0	-8	59.3	311	05.6	-21	00.6	306	02.8	-19	56.9	
1	264	58.6	191	05.4		44.1	279	58.8		58.7	326	08.2		00.6	321	05.3		56.9	
2	280	01.1	206	09.5		43.4	294	59.7		58.1	341	10.8		00.6	336	07.9		57.0	
3	295	03.5	221	13.5		42.6	310	00.6		57.5	356	13.4		00.7	351	10.4		57.0	
4	310	06.0	236	17.6		41.9	325	01.5		57.0	11	16.0		00.7	6	13.0		57.0	
5	325	08.5	251	21.7	+23	41.1	340	02.4	-8	56.4	26	18.6	-21	00.7	21	15.5	-19	57.0	
6	340	10.9	266	25.7	+23	40.4	355	03.3	-8	55.8	41	21.3	-21	00.8	36	18.1	-19	57.0	
7	355	13.4	281	29.8		39.7	10	04.2		55.2	56	23.9		00.8	51	20.6		57.1	
8	10	15.9	296	33.9		38.9	25	05.1		54.6	71	26.5		00.8	66	23.2		57.1	
9	25	18.3	311	37.9		38.2	40	06.0		54.1	86	29.1		00.9	81	25.7		57.1	
10	40	20.8	326	42.0		37.4	55	06.9		53.5	101	31.7		00.9	96	28.3		57.1	
11	55	23.2	341	46.1	+23	36.7	70	07.8	-8	52.9	116	34.3	-21	00.9	111	30.8	-19	57.2	
12	70	25.7	356	50.1	+23	35.9	85	08.7	-8	52.3	131	36.9	-21	01.0	126	33.4	-19	57.2	
13	85	28.2	11	54.2		35.2	100	09.5		51.7	146	39.5		01.0	141	35.9		57.2	
14	100	30.6	26	58.3		34.4	115	10.4		51.2	161	42.1		01.0	156	38.5		57.2	
15	115	33.1	42	02.4		33.7	130	11.3		50.6	176	44.7		01.1	171	41.0		57.3	
16	130	35.6	57	06.4		32.9	145	12.2		50.0	191	47.3		01.1	186	43.6		57.3	
17	145	38.0	72	10.5	+23	32.1	160	13.1	-8	49.4	206	49.9	-21	01.1	201	46.1	-19	57.3	
18	160	40.5	87	14.6	+23	31.4	175	14.0	-8	48.8	221	52.6	-21	01.2	216	48.7	-19	57.3	
19	175	43.0	102	18.7		30.6	190	14.9		48.3	236	55.2		01.2	231	51.2		57.3	
20	190	45.4	117	22.7		29.9	205	15.8		47.7	251	57.8		01.2	246	53.8		57.4	
21	205	47.9	132	26.8		29.1	220	16.7		47.1	267	00.4		01.3	261	56.3		57.4	
22	220	50.3	147	30.9		28.4	235	17.6		46.5	282	03.0		01.3	276	58.9		57.4	
23	235	52.8	162	35.0		27.6	250	18.5		45.9	297	05.6		01.3	292	01.4		57.4	
24	250	55.3	177	39.0	+23	26.8	265	19.4	-8	45.4	312	08.2	-21	01.4	307	04.0	-19	57.5	
Dif.	—		+41 -8				+9 +6				+26 0				+25				

UT	SOL				○ LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8				SD: 16 ^h 4 Edad: 10 ^d 3						PHE { 4 ^h : 60 ^m 1 12 ^h : 60 ^m 1 20 ^h : 60 ^m 2							
	PMG: 11 ^h 58 ^m 1				PMG: 21 ^h 23 ^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	180	29.8	+22	13.0	50	26.2	101	-3	20.3	147	60 N	21 10	22 37	** ** *	16 04	99	2 15	9
1	195	29.7		13.3	64	55.3	101		35.0	147	58	20 52	22 00	** ** *	16 00	95	17	12
2	210	29.6		13.7	79	24.4	100	-3	49.7	147	56	36	21 35	** ** *	15 56	91	19	15
3	225	29.5		14.0	93	53.4	99	-4	04.4	147	54	23	21 15	22 44		52	89	20
4	240	29.4		14.3	108	22.3	100		19.1	146	52	12	20 59	22 10		49	86	22
5	255	29.3	+22	14.6	122	51.3	99	-4	33.7	146	50	20 02	20 45	21 46		15 47	83	2 23
6	270	29.2	+22	14.9	137	20.2	99	-4	48.3	146	45	19 41	20 17	21 05		15 41	78	2 27
7	285	29.1		15.2	151	49.1	98	-5	02.9	146	40	24	19 56	20 37		36	74	29
8	300	29.0		15.6	166	17.9	98		17.5	146	35	19 10	39	20 15		31	71	32
9	315	28.9		15.9	180	46.7	98		32.1	145	30	18 57	24	19 57		28	67	34
10	330	28.8		16.2	195	15.5	97	-5	46.6	145	20	36	19 01	30		21	62	37
11	345	28.7	+22	16.5	209	44.2	97	-6	01.1	145	10 N	18 18	18 41	19 08		15 16	57	2 40
12	0	28.6	+22	16.8	224	12.9	97	-6	15.6	144	0	18 02	18 24	18 50		15 10	54	2 43
13	15	28.5		17.1	238	41.6	96		30.0	144	10 S	17 45	18 08	34		05	49	46
14	30	28.4		17.4	253	10.2	96		44.4	144	20	28	17 51	19		15 00	44	49
15	45	28.3		17.7	267	38.8	95	-6	58.8	143	30	17 08	34	18 03		14 54	39	53
16	60	28.2		18.0	282	07.3	95	-7	13.1	143	35	16 56	24	17 55		50	36	55
17	75	28.1	+22	18.4	296	35.8	95	-7	27.4	142	40	16 43	17 13	17 46		14 46	33	2 57
18	90	28.0	+22	18.7	311	04.3	94	-7	41.6	142	45	16 27	17 00	17 37		14 42	29	3 00
19	105	27.9		19.0	325	32.7	93	-7	55.8	142	50	16 07	16 45	26		37	24	03
20	120	27.8		19.3	340	01.0	93	-8	10.0	141	52	15 58	38	21		34	22	05
21	135	27.7		19.6	354	29.3	93		24.1	141	54	48	31	16		31	20	06
22	150	27.6		19.9	8	57.6	92		38.2	140	56	36	22	10		28	17	08
23	165	27.5		20.2	23	25.8	92	-8	52.2	140	58	23	13	17 04		25	14	10
24	180	27.4	+22	20.5	37	54.0		-9	06.2		60 S	15 07	16 02	16 58		14 22	10	3 12

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 15 ^m 1		Mag: -4.2 PMG: 12 ^h 06 ^m				Mag: 0.0 PMG: 06 ^h 18 ^m				Mag: -2.6 PMG: 03 ^h 11 ^m				Mag: +0.4 PMG: 03 ^h 31 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	250	55.3	177	39.0	+23	26.8	265	19.4	-8	45.4	312	08.2	-21	-01.4	307	04.0	-19	57.5
1	265	57.7	192	43.1		26.1	280	20.3		44.8	327	10.8		-01.4	322	06.5		57.5
2	281	00.2	207	47.2		25.3	295	21.2		44.2	342	13.4		-01.4	337	09.1		57.5
3	296	02.7	222	51.3		24.6	310	22.1		43.6	357	16.1		-01.5	352	11.6		57.5
4	311	05.1	237	55.4		23.8	325	23.0		43.0	12	18.7		-01.5	7	14.2		57.5
5	326	07.6	252	59.4	+23	23.0	340	23.9	-8	42.5	27	21.3	-21	-01.5	22	16.7	-19	57.6
6	341	10.1	268	03.5	+23	22.3	355	24.8	-8	41.9	42	23.9	-21	-01.6	37	19.3	-19	57.6
7	356	12.5	283	07.6		21.5	10	25.7		41.3	57	26.5		-01.6	52	21.8		57.6
8	11	15.0	298	11.7		20.8	25	26.5		40.7	72	29.1		-01.6	67	24.4		57.6
9	26	17.5	313	15.8		20.0	40	27.4		40.1	87	31.7		-01.7	82	27.0		57.7
10	41	19.9	328	19.8		19.2	55	28.3		39.6	102	34.4		-01.7	97	29.5		57.7
11	56	22.4	343	23.9	+23	18.5	70	29.2	-8	39.0	117	37.0	-21	-01.7	112	32.1	-19	57.7
12	71	24.8	358	28.0	+23	17.7	85	30.1	-8	38.4	132	39.6	-21	-01.8	127	34.6	-19	57.7
13	86	27.3	13	32.1		16.9	100	31.0		37.8	147	42.2		-01.8	142	37.2		57.8
14	101	29.8	28	36.2		16.2	115	31.9		37.2	162	44.8		-01.8	157	39.7		57.8
15	116	32.2	43	40.3		15.4	130	32.8		36.7	177	47.4		-01.9	172	42.3		57.8
16	131	34.7	58	44.3		14.6	145	33.7		36.1	192	50.1		-01.9	187	44.8		57.8
17	146	37.2	73	48.4	+23	13.9	160	34.6	-8	35.5	207	52.7	-21	-01.9	202	47.4	-19	57.8
18	161	39.6	88	52.5	+23	13.1	175	35.5	-8	34.9	222	55.3	-21	-02.0	217	49.9	-19	57.9
19	176	42.1	103	56.6		12.3	190	36.4		34.3	237	57.9		-02.0	232	52.5		57.9
20	191	44.6	119	00.7		11.6	205	37.3		33.8	253	00.5		-02.1	247	55.0		57.9
21	206	47.0	134	04.8		10.8	220	38.2		33.2	268	03.1		-02.1	262	57.6		57.9
22	221	49.5	149	08.9		10.0	235	39.1		32.6	283	05.8		-02.1	278	00.2		58.0
23	236	51.9	164	12.9		09.2	250	40.0		32.0	298	08.4		-02.2	293	02.7		58.0
24	251	54.4	179	17.0	+23	08.5	265	40.9	-8	31.5	313	11.0	-21	-02.2	308	05.3	-19	58.0
Dif.	—		+41		-8		+9		+6		+26		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: 16'4 Edad: 11 ^d 3 PMG: 22 ^h 17 ^m												PHE { 4 ^h : 60'2 12 ^h : 60'2 20 ^h : 60'1 Rº: 56 ^m
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	180	27.4	+22	20.5	37	54.0	91	-9	06.2	139	60 N	** **	1 19	2 46	17 43	100	2 24 11
1	195	27.3		20.8	52	22.1	91		20.1	138	58	** **	1 56	3 04	35 95	29 15	
2	210	27.2		21.1	66	50.2	90		33.9	139	56	** **	2 21	20	27 92	34 18	
3	225	27.1		21.4	81	18.2	90	-9	47.8	137	54	1 12	41	33	21 89	38 2	
4	240	27.0		21.7	95	46.2	89	-10	01.5	137	52	1 46	2 57	44	15 86	42 24	
5	255	26.9	+22	22.0	110	14.1	88	-10	15.2	136	50	2 10	3 11	3 54	17 10	84	2 46 26
6	270	26.8	+22	22.3	124	41.9	89	-10	28.8	136	45	2 51	3 39	4 15	16 59	78	2 54 31
7	285	26.7		22.6	139	09.8	87		42.4	135	40	3 19	4 00	32	50 74	3 01 34	
8	300	26.6		22.9	153	37.5	87	-10	55.9	135	35	41	17	47	42 71	06 38	
9	315	26.5		23.2	168	05.2	87	-11	09.4	133	30	3 59	32	4 59	35 68	11 41	
10	330	26.4		23.5	182	32.9	86		22.7	134	20	4 27	4 56	5 20	23 64	20 46	
11	345	26.3	+22	23.8	197	00.5	86	-11	36.1	132	10 N	4 48	5 15	5 38	16 13	60	3 28 50
12	0	26.2	+22	24.1	211	28.1	85	-11	49.3	132	0	5 06	5 32	5 55	16 04	55	3 35 55
13	15	26.1		24.4	225	55.6	84	-12	02.5	131	10 S	22	5 49	6 11	15 54	52	43 58
14	30	26.0		24.7	240	23.0	84		15.6	130	20	38	6 05	29	44 48	3 51 62	
15	45	25.9		25.0	254	50.4	83		28.6	129	30	5 53	23	6 49	33 43	4 00 68	
16	60	25.7		25.3	269	17.7	83		41.5	129	35	6 01	33	7 01	26 41	05 71	
17	75	25.6	+22	25.5	283	45.0	82	-12	54.4	128	40	6 10	6 44	7 14	15 19	37	4 11 74
18	90	25.5	+22	25.8	298	12.2	82	-13	07.2	127	45	6 20	6 57	7 30	15 11	33	4 18 78
19	105	25.4		26.1	312	39.4	81		19.9	126	50	31	7 12	49	15 01	28	26 84
20	120	25.3		26.4	327	06.5	80		32.5	125	52	35	19	7 59	14 56	26	30 86
21	135	25.2		26.7	341	33.5	80		45.0	125	54	41	26	8 09	51 23	34 89	
22	150	25.1		27.0	356	00.5	79	-13	57.5	123	56	46	35	21	45 21	39 92	
23	165	25.0		27.3	10	27.4	79	-14	09.8	123	58	52	44	34	14 39	17	4 44 95
24	180	24.9	+22	27.6	24	54.3		-14	22.1		60 S	6 59	7 55	8 50	14 32	13	4 50 99

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 11 ^m 2		Mag: -4.2 PMG: 12 ^h 00 ^m				Mag: 0.0 PMG: 06 ^h 17 ^m				Mag: -2.6 PMG: 03 ^h 07 ^m				Mag: +0.4 PMG: 03 ^h 27 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	251	54.4	179	17.0	+23	08.5	265	40.9	-8	31.5	313	11.0	-21	02.2	308	05.3	-19	58.0
1	266	56.9	194	21.1		07.7	280	41.8		30.9	328	13.6		02.2	323	07.8		58.0
2	281	59.3	209	25.2		06.9	295	42.7		30.3	343	16.2		02.3	338	10.4		58.1
3	297	01.8	224	29.3		06.2	310	43.6		29.7	358	18.9		02.3	353	12.9		58.1
4	312	04.3	239	33.4		05.4	325	44.5		29.1	13	21.5		02.3	8	15.5		58.1
5	327	06.7	254	37.4	+23	04.6	340	45.4	-8	28.6	28	24.1	-21	02.4	23	18.0	-19	58.1
6	342	09.2	269	41.5	+23	03.8	355	46.3	-8	28.0	43	26.7	-21	02.4	38	20.6	-19	58.2
7	357	11.7	284	45.6		03.1	10	47.2		27.4	58	29.4		02.4	53	23.2		58.2
8	12	14.1	299	49.7		02.3	25	48.1		26.8	73	32.0		02.5	68	25.7		58.2
9	27	16.6	314	53.8		01.5	40	49.0		26.2	88	34.6		02.5	83	28.3		58.2
10	42	19.1	329	57.9		00.7	55	49.9		25.6	103	37.2		02.5	98	30.8		58.2
11	57	21.5	345	02.0	+23	00.0	70	50.8	-8	25.1	118	39.8	-21	02.6	113	33.4	-19	58.3
12	72	24.0	0	06.0	+22	59.2	85	51.7	-8	24.5	133	42.5	-21	02.6	128	35.9	-19	58.3
13	87	26.4	15	10.1		58.4	100	52.6		23.9	148	45.1		02.7	143	38.5		58.3
14	102	28.9	30	14.2		57.6	115	53.5		23.3	163	47.7		02.7	158	41.1		58.3
15	117	31.4	45	18.3		56.8	130	54.5		22.7	178	50.3		02.7	173	43.6		58.4
16	132	33.8	60	22.4		56.1	145	55.4		22.2	193	53.0		02.8	188	46.2		58.4
17	147	36.3	75	26.4	+22	55.3	160	56.3	-8	21.6	208	55.6	-21	02.8	203	48.7	-19	58.4
18	162	38.8	90	30.5	+22	54.5	175	57.2	-8	21.0	223	58.2	-21	02.8	218	51.3	-19	58.4
19	177	41.2	105	34.6		53.7	190	58.1		20.4	239	00.8		02.9	233	53.8		58.5
20	192	43.7	120	38.7		53.0	205	59.0		19.8	254	03.5		02.9	248	56.4		58.5
21	207	46.2	135	42.8		52.2	220	59.9		19.3	269	06.1		02.9	263	59.0		58.5
22	222	48.6	150	46.9		51.4	236	00.8		18.7	284	08.7		03.0	279	01.5		58.5
23	237	51.1	165	50.9		50.6	251	01.7		18.1	299	11.3		03.0	294	04.1		58.6
24	252	53.6	180	55.0	+22	49.8	266	02.6	-8	17.5	314	14.0	-21	03.1	309	06.6	-19	58.6
Dif.	—		+41	-8			+9	+6			+26	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 : 60'1 12 ^h : 60'0 20 ^h : 59'9														
	PMG: 11 ^h 58 ^m 4			Edad: 12 ^d 3														
	PMG: 23 ^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		h m m	h m m			
0	180	24.9	+22 27.6	24	54.3	78	-14 22.1	122	60 N	21 13	22 43	** **		19 23	96	2 35 16		
1	195	24.8	27.9	39	21.1	78	34.3	121	58	20 54	22 04	** **		19 10	92	44 20		
2	210	24.7	28.1	53	47.9	77	46.4	120	56	39	21 38	** **		18 59	88	52 24		
3	225	24.6	28.4	68	14.6	76	-14 58.4	119	54	26	18	22 49		50	85	2 59 27		
4	240	24.5	28.7	82	41.2	76	-15 10.3	118	52	14	21 01	22 14		41	83	3 06 29		
5	255	24.4	+22 29.0	97	07.8	76	-15 22.1	117	50	20 04	20 47	21 49		18 34	80	3 12 31		
6	270	24.3	+22 29.3	111	34.4	74	-15 33.8	116	45	19 42	20 19	21 07		18 17	77	3 25 35		
7	285	24.2	29.6	126	00.8	74	45.4	115	40	25	19 57	20 38		18 04	73	35 40		
8	300	24.0	29.8	140	27.2	74	-15 56.9	114	35	19 11	40	20 16		17 53	70	44 43		
9	315	23.9	30.1	154	53.6	73	-16 08.3	113	30	18 58	25	19 58		43	68	3 52 45		
10	330	23.8	30.4	169	19.9	72	19.6	111	20	37	19 02	30		27	64	4 06 49		
11	345	23.7	+22 30.7	183	46.1	72	-16 30.7	111	10 N	18 19	18 42	19 09		17 13	60	4 18 53		
12	0	23.6	+22 31.0	198	12.3	72	-16 41.8	110	0	18 02	18 24	18 51		16 59	58	4 30 56		
13	15	23.5	31.2	212	38.5	70	-16 52.8	108	10 S	17 45	18 08	34		46	55	41 60		
14	30	23.4	31.5	227	04.5	71	-17 03.6	108	20	28	17 51	19		32	51	4 53 64		
15	45	23.3	31.8	241	30.6	69	14.4	106	30	17 07	33	18 03		16	47	5 08 68		
16	60	23.2	32.1	255	56.5	69	25.0	105	35	16 55	23	17 55		16 07	45	16 71		
17	75	23.1	+22 32.3	270	22.4	69	-17 35.5	104	40	16 42	17 12	17 46		15 56	42	5 25 74		
18	90	23.0	+22 32.6	284	48.3	68	-17 45.9	103	45	16 26	16 59	17 36		15 44	39	5 36 78		
19	105	22.8	32.9	299	14.1	67	-17 56.2	102	50	16 06	44	25		29	35	50 82		
20	120	22.7	33.2	313	39.8	67	-18 06.4	100	52	15 57	37	20		22	33	5 56 85		
21	135	22.6	33.4	328	05.5	67	16.4	99	54	47	29	15		14	31	6 03 87		
22	150	22.5	33.7	342	31.2	65	26.3	98	56	35	21	09		15 06	27	11 90		
23	165	22.4	34.0	356	56.7	66	36.1	97	58	21	11	17 03		14 56	25	19 94		
24	180	22.3	+22 34.2	11	22.3		-18 45.8		60 S	15 05	16 00	16 56		14 45	20	6 29 99		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 7 ^h 07 ^m 3		Mag: -4.2 PMG: 11 ^h 53 ^m			Mag: -0.1 PMG: 06 ^h 15 ^m			Mag: -2.6 PMG: 03 ^h 03 ^m				Mag: +0.4 PMG: 03 ^h 23 ^m					
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	252	53.6	180	55.0	+22 49.8	266	02.6	-8 17.5	314	14.0	-21 -03.1	309	06.6	-19 58.6				
1	267	56.0	195	59.1	49.0	281	03.5	16.9	329	16.6	-03.1	324	09.2	58.6				
2	282	58.5	211	03.2	48.3	296	04.4	16.4	344	19.2	-03.1	339	11.8	58.6				
3	298	00.9	226	07.3	47.5	311	05.3	15.8	359	21.9	-03.2	354	14.3	58.7				
4	313	03.4	241	11.3	46.7	326	06.2	15.2	14	24.5	-03.2	9	16.9	58.7				
5	328	05.9	256	15.4	+22 45.9	341	07.1	-8 14.6	29	27.1	-21 -03.2	24	19.4	-19 58.7				
6	343	08.3	271	19.5	+22 45.1	356	08.0	-8 14.0	44	29.7	-21 -03.3	39	22.0	-19 58.7				
7	358	10.8	286	23.6	44.4	11	08.9	13.5	59	32.4	-03.3	54	24.6	58.8				
8	13	13.3	301	27.6	43.6	26	09.8	12.9	74	35.0	-03.4	69	27.1	58.8				
9	28	15.7	316	31.7	42.8	41	10.7	12.3	89	37.6	-03.4	84	29.7	58.8				
10	43	18.2	331	35.8	42.0	56	11.7	11.7	104	40.3	-03.4	99	32.2	58.8				
11	58	20.7	346	39.9	+22 41.2	71	12.6	-8 11.1	119	42.9	-21 -03.5	114	34.8	-19 58.9				
12	73	23.1	1	43.9	+22 40.4	86	13.5	-8 10.6	134	45.5	-21 -03.5	129	37.4	-19 58.9				
13	88	25.6	16	48.0	39.6	101	14.4	10.0	149	48.1	-03.5	144	39.9	58.9				
14	103	28.1	31	52.1	38.9	116	15.3	09.4	164	50.8	-03.6	159	42.5	58.9				
15	118	30.5	46	56.2	38.1	131	16.2	08.8	179	53.4	-03.6	174	45.0	59.0				
16	133	33.0	62	00.2	37.3	146	17.1	08.2	194	56.0	-03.6	189	47.6	59.0				
17	148	35.4	77	04.3	+22 36.5	161	18.0	-8 07.7	209	58.7	-21 -03.7	204	50.2	-19 59.0				
18	163	37.9	92	08.4	+22 35.7	176	18.9	-8 07.1	225	01.3	-21 -03.7	219	52.7	-19 59.0				
19	178	40.4	107	12.4	34.9	191	19.8	06.5	240	03.9	-03.8	234	55.3	59.1				
20	193	42.8	122	16.5	34.1	206	20.7	05.9	255	06.6	-03.8	249	57.8	59.1				
21	208	45.3	137	20.6	33.4	221	21.6	05.3	270	09.2	-03.8	265	00.4	59.1				
22	223	47.8	152	24.6	32.6	236	22.6	04.8	285	11.8	-03.9	280	03.0	59.1				
23	238	50.2	167	28.7	31.8	251	23.5	04.2	300	14.5	-03.9	295	05.5	59.2				
24	253	52.7	182	32.8	+22 31.0	266	24.4	-8 03.6	315	17.1	-21 -04.0	310	08.1	-19 59.2				
Dif.	—		+41		-8	+9		+6	+26		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 6				SD: 16'3 Edad: 13 ^d 3 PMG: ** ** PHE { 4 ^h : 59'7 12 ^h : 59'6 20 ^h : 59'4 R ^º : **													
	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	22.3	+22	34.2	11	22.3	65	-18	45.8	95	60 N	** **	1 14	2 44	20 59	84	2 51	25
1	195	22.2		34.5	25	47.8	64	-18	55.3	94	58	** **	1 52	3 02	42	80	3 04	29
2	210	22.1		34.8	40	13.2	64	-19	04.7	93	56	** **	2 19	18	27	78	16	32
3	225	22.0		35.0	54	38.6	63		14.0	92	54	1 07	39	31	15	76	26	35
4	240	21.9		35.3	69	03.9	63		23.2	90	52	1 43	2 56	43	20 04	74	35	37
5	255	21.7	+22	35.6	83	29.2	63	-19	32.2	89	50	2 07	3 10	3 53	19 54	73	3 43	39
6	270	21.6	+22	35.8	97	54.5	62	-19	41.1	88	45	2 50	3 38	4 15	19 34	70	4 00	43
7	285	21.5		36.1	112	19.7	61		49.9	86	40	3 18	3 59	32	17	69	15	45
8	300	21.4		36.4	126	44.8	61	-19	58.5	85	35	41	4 17	46	19 03	67	27	48
9	315	21.3		36.6	141	09.9	61	-20	07.0	83	30	3 58	31	4 59	18 51	66	37	50
10	330	21.2		36.9	155	35.0	60		15.3	83	20	4 26	4 55	5 20	31	63	4 55	54
11	345	21.1	+22	37.2	170	00.0	60	-20	23.6	80	10 N	4 48	5 15	5 38	18 13	61	5 11	57
12	0	21.0	+22	37.4	184	25.0	60	-20	31.6	80	0	5 06	5 33	5 55	17 57	59	5 26	59
13	15	20.9		37.7	198	50.0	59		39.6	78	10 S	23	5 49	6 12	41	57	41	62
14	30	20.7		38.0	213	14.9	59		47.4	76	20	38	6 06	30	23	55	5 57	64
15	45	20.6		38.2	227	39.8	58	-20	55.0	76	30	5 54	24	6 50	17 03	53	6 16	67
16	60	20.5		38.5	242	04.6	58	-21	02.6	73	35	6 02	34	7 02	16 52	51	27	69
17	75	20.4	+22	38.7	256	29.4	58	-21	09.9	72	40	6 11	6 45	7 15	16 38	50	6 39	71
18	90	20.3	+22	39.0	270	54.2	57	-21	17.1	71	45	6 21	6 58	7 31	16 23	47	6 54	74
19	105	20.2		39.2	285	18.9	57		24.2	70	50	32	7 13	7 51	16 04	44	7 12	77
20	120	20.1		39.5	299	43.6	57		31.2	68	52	37	20	8 01	15 55	42	21	79
21	135	20.0		39.8	314	08.3	56		38.0	66	54	42	28	11	45	40	30	81
22	150	19.8		40.0	328	32.9	57		44.6	65	56	48	37	23	33	39	41	84
23	165	19.7		40.3	342	57.6	55		51.1	63	58	6 54	46	37	15 21	35	7 53	87
24	180	19.6	+22	40.5	357	22.1		-21	57.4		60 S	7 01	7 57	8 53	15 05	32	8 08	91

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 7 ^h 03 ^m 3		Mag: -4.2 PMG: 11 ^h 47 ^m			Mag: -0.1 PMG: 06 ^h 14 ^m			Mag: -2.6 PMG: 02 ^h 58 ^m			Mag: +0.4 PMG: 03 ^h 19 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	253	52.7	182	32.8	+22	31.0	266	24.4	-8	03.6	315	17.1	-21	04.0	310	08.1	-19	59.2	
1	268	55.2	197	36.8		30.2	281	25.3		03.0	330	19.7		04.0	325	10.7		59.2	
2	283	57.6	212	40.9		29.4	296	26.2		02.4	345	22.4		04.0	340	13.2		59.2	
3	299	00.1	227	45.0		28.6	311	27.1		01.9	0	25.0		04.1	355	15.8		59.3	
4	314	02.6	242	49.0		27.9	326	28.0		01.3	15	27.7		04.1	10	18.3		59.3	
5	329	05.0	257	53.1	+22	27.1	341	28.9	-8	00.7	30	30.3	-21	04.1	25	20.9	-19	59.3	
6	344	07.5	272	57.1	+22	26.3	356	29.8	-8	00.1	45	32.9	-21	04.2	40	23.5	-19	59.3	
7	359	09.9	288	01.2		25.5	11	30.7	-7	59.5	60	35.6		04.2	55	26.0		59.4	
8	14	12.4	303	05.2		24.7	26	31.7		59.0	75	38.2		04.3	70	28.6		59.4	
9	29	14.9	318	09.3		23.9	41	32.6		58.4	90	40.8		04.3	85	31.2		59.4	
10	44	17.3	333	13.4		23.1	56	33.5		57.8	105	43.5		04.3	100	33.7		59.4	
11	59	19.8	348	17.4	+22	22.3	71	34.4	-7	57.2	120	46.1	-21	04.4	115	36.3	-19	59.5	
12	74	22.3	3	21.5	+22	21.5	86	35.3	-7	56.6	135	48.7	-21	04.4	130	38.9	-19	59.5	
13	89	24.7	18	25.5		20.8	101	36.2		56.1	150	51.4		04.4	145	41.4		59.5	
14	104	27.2	33	29.6		20.0	116	37.1		55.5	165	54.0		04.5	160	44.0		59.5	
15	119	29.7	48	33.6		19.2	131	38.0		54.9	180	56.7		04.5	175	46.6		59.6	
16	134	32.1	63	37.7		18.4	146	39.0		54.3	195	59.3		04.6	190	49.1		59.6	
17	149	34.6	78	41.7	+22	17.6	161	39.9	-7	53.7	211	01.9	-21	04.6	205	51.7	-19	59.6	
18	164	37.0	93	45.8	+22	16.8	176	40.8	-7	53.2	226	04.6	-21	04.6	220	54.2	-19	59.6	
19	179	39.5	108	49.8		16.0	191	41.7		52.6	241	07.2		04.7	235	56.8		59.7	
20	194	42.0	123	53.8		15.2	206	42.6		52.0	256	09.9		04.7	250	59.4		59.7	
21	209	44.4	138	57.9		14.4	221	43.5		51.4	271	12.5		04.8	266	01.9		59.7	
22	224	46.9	154	01.9		13.7	236	44.4		50.8	286	15.1		04.8	281	04.5		59.7	
23	239	49.4	169	06.0		12.9	251	45.4		50.2	301	17.8		04.8	296	07.1		59.8	
24	254	51.8	184	10.0	+22	12.1	266	46.3	-7	49.7	316	20.4	-21	04.9	311	09.6	-19	59.8	
Dif.	—		+41		-8		+9		+6		+26		0		+26				

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: 14 ^d 3 PHE { 4^h: 59'2 12^h: 59'0 20^h: 58'8																
	PMG: 00 ^h 11 ^m				R ^o : 59 ^m																
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	h m	h m	h m	h m			Hora	R ^o	Hora	R ^o					
h	°	'	°	'	°	'															
0	180	19.6	+22	40.5	357	22.1	56	-21	57.4	62	60 N	21 16	22 49	** **	22 23	63	3 16	39			
1	195	19.5		40.8	11	46.7	56	-22	03.6	61	58	20 57	22 08	** **	22 02	63	33	42			
2	210	19.4		41.0	26	11.3	55		09.7	58	56	41	21 41	** **	21 45	63	3 48	44			
3	225	19.3		41.3	40	35.8	55		15.5	58	54	28	20	22 55	31	62	4 01	46			
4	240	19.2		41.5	55	00.3	55		21.3	56	52	16	21 03	22 17	18	62	12	48			
5	255	19.1	+22	41.8	69	24.8	55	-22	26.9	54	50	20 05	20 49	21 52	21 07	62	4 22	49			
6	270	18.9	+22	42.0	83	49.3	54	-22	32.3	53	45	19 44	20 21	21 09	20 44	61	4 43	51			
7	285	18.8		42.3	98	13.7	55		37.6	51	40	26	19 59	20 40	26	61	5 00	53			
8	300	18.7		42.5	112	38.2	54		42.7	50	35	19 12	41	18	20 10	61	15	54			
9	315	18.6		42.8	127	02.6	54		47.7	48	30	18 59	26	20 00	19 57	60	27	55			
10	330	18.5		43.0	141	27.0	55		52.5	47	20	38	19 02	19 31	34	60	5 49	56			
11	345	18.4	+22	43.3	155	51.5	54	-22	57.2	45	10 N	18 19	18 42	19 09	19 14	60	6 08	58			
12	0	18.3	+22	43.5	170	15.9	54	-23	01.7	43	0	18 02	18 25	18 51	18 56	59	6 25	59			
13	15	18.1		43.8	184	40.3	54		06.0	42	10 S	17 46	18 08	34	38	58	6 43	60			
14	30	18.0		44.0	199	04.7	54		10.2	41	20	28	17 51	19	18 18	58	7 01	62			
15	45	17.9		44.2	213	29.1	54		14.3	38	30	17 07	33	18 03	17 56	57	23	63			
16	60	17.8		44.5	227	53.5	54		18.1	38	35	16 55	23	17 55	43	56	36	64			
17	75	17.7	+22	44.7	242	17.9	54	-23	21.9	35	40	16 41	17 12	17 46	17 28	55	7 50	65			
18	90	17.6	+22	45.0	256	42.3	54	-23	25.4	34	45	16 25	16 59	17 36	17 10	55	8 08	66			
19	105	17.4		45.2	271	06.7	54		28.8	33	50	16 05	43	25	16 48	53	29	68			
20	120	17.3		45.5	285	31.1	55		32.1	31	52	15 56	36	20	37	53	40	68			
21	135	17.2		45.7	299	55.6	54		35.2	29	54	45	28	14	25	53	8 51	70			
22	150	17.1		45.9	314	20.0	55		38.1	28	56	33	20	08	16 12	51	9 05	71			
23	165	17.0		46.2	328	44.5	54		40.9	26	58	19	16 10	17 02	15 56	50	20	73			
24	180	16.9	+22	46.4	343	08.9		-23	43.5		60 S	15 03	15 59	16 55	15 37	48	9 39	74			

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 6 ^h 59 ^m 4			Mag: -4.2 PMG: 11 ^h 40 ^m			Mag: -0.1 PMG: 06 ^h 13 ^m			Mag: -2.6 PMG: 02 ^h 54 ^m			Mag: +0.4 PMG: 03 ^h 15 ^m		
	hG ♈	dec.		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	254	51.8	184 10.0	+22 12.1	266 46.3	-7 49.7	316 20.4	-21 -04.9	311 09.6	-19 59.8					
1	269	54.3	199 14.0	11.3	281 47.2	49.1	331 23.1	-04.9	326 12.2	59.8					
2	284	56.8	214 18.1	10.5	296 48.1	48.5	346 25.7	-05.0	341 14.8	59.8					
3	299	59.2	229 22.1	09.7	311 49.0	47.9	1 28.4	-05.0	356 17.3	59.9					
4	315	01.7	244 26.2	08.9	326 49.9	47.3	16 31.0	-05.0	11 19.9	59.9					
5	330	04.2	259 30.2	+22 08.1	341 50.8	-7 46.8	31 33.6	-21 -05.1	26 22.5	-19 59.9					
6	345	06.6	274 34.2	+22 07.3	356 51.8	-7 46.2	46 36.3	-21 -05.1	41 25.0	-19 59.9					
7	0	09.1	289 38.2	06.6	11 52.7	45.6	61 38.9	-05.1	56 27.6	-20 00.0					
8	15	11.5	304 42.3	05.8	26 53.6	45.0	76 41.6	-05.2	71 30.2	00.0					
9	30	14.0	319 46.3	05.0	41 54.5	44.4	91 44.2	-05.2	86 32.7	00.0					
10	45	16.5	334 50.3	04.2	56 55.4	43.9	106 46.9	-05.3	101 35.3	00.1					
11	60	18.9	349 54.3	+22 03.4	71 56.3	-7 43.3	121 49.5	-21 -05.3	116 37.9	-20 00.1					
12	75	21.4	4 58.4	+22 02.6	86 57.3	-7 42.7	136 52.2	-21 -05.3	131 40.4	-20 00.1					
13	90	23.9	20 02.4	01.8	101 58.2	42.1	151 54.8	-05.4	146 43.0	00.1					
14	105	26.3	35 06.4	01.0	116 59.1	41.5	166 57.4	-05.4	161 45.6	00.2					
15	120	28.8	50 10.4	+22 00.2	132 00.0	41.0	182 00.1	-05.5	176 48.1	00.2					
16	135	31.3	65 14.4	+21 59.5	147 00.9	40.4	197 02.7	-05.5	191 50.7	00.2					
17	150	33.7	80 18.5	+21 58.7	162 01.9	-7 39.8	212 05.4	-21 -05.5	206 53.3	-20 00.2					
18	165	36.2	95 22.5	+21 57.9	177 02.8	-7 39.2	227 08.0	-21 -05.6	221 55.9	-20 00.3					
19	180	38.7	110 26.5	57.1	192 03.7	38.6	242 10.7	-05.6	236 58.4	00.3					
20	195	41.1	125 30.5	56.3	207 04.6	38.1	257 13.3	-05.7	252 01.0	00.3					
21	210	43.6	140 34.5	55.5	222 05.5	37.5	272 16.0	-05.7	267 03.6	00.3					
22	225	46.0	155 38.5	54.7	237 06.4	36.9	287 18.6	-05.7	282 06.1	00.4					
23	240	48.5	170 42.5	53.9	252 07.4	36.3	302 21.3	-05.8	297 08.7	00.4					
24	255	51.0	185 46.5	+21 53.2	267 08.3	-7 35.7	317 23.9	-21 -05.8	312 11.3	-20 00.4					
Dif.	—		+40	-8	+9	+6	+26	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 0				SD: 16°0 Edad: 15 ^d 3 PMG: 01 ^h 10 ^m PHE { 4^h: 58°5 12^h: 58°3 20^h: 58°0 R°: 59 ^m																
	hG ☉		Dec		hG ☾		Dif.		Dec			Dif.									
	h	°	'	°	'	°	'	°	'	°		'	h		m	h	m	h	m	m	
0	180	16.9	+22	46.4	343	08.9	55	-23	43.5	25	60 N	***	1 09	2 41	23 26	41	3 55	58			
1	195	16.8		46.6	357	33.4	55		46.0	23	58	***	1 49	3 01	23 05	44	4 15	59			
2	210	16.6		46.9	11	57.9	55		48.3	22	56	***	2 16	16	22 48	45	32	59			
3	225	16.5		47.1	26	22.4	56		50.5	20	54	1 03	37	30	33	47	4 47	59			
4	240	16.4		47.4	40	47.0	55		52.5	18	52	1 40	2 54	42	20	48	5 00	58			
5	255	16.3	+22	47.6	55	11.5	56	-23	54.3	17	50	2 05	3 08	3 52	22 09	49	5 11	59			
6	270	16.2	+22	47.8	69	36.1	56	-23	56.0	15	45	2 48	3 37	4 14	21 45	51	5 34	59			
7	285	16.1		48.1	84	00.7	57		57.5	14	40	3 18	3 59	31	27	51	5 53	59			
8	300	15.9		48.3	98	25.4	57	-23	58.9	12	35	40	4 16	46	21 11	52	6 09	58			
9	315	15.8		48.5	112	50.1	57	-24	00.1	10	30	3 58	31	4 58	20 57	54	22	59			
10	330	15.7		48.7	127	14.8	57		01.1	9	20	4 26	4 55	5 20	34	54	6 45	59			
11	345	15.6	+22	49.0	141	39.5	58	-24	02.0	8	10 N	4 48	5 15	5 38	20 14	55	7 06	58			
12	0	15.5	+22	49.2	156	04.3	58	-24	02.8	6	0	5 07	5 33	5 55	19 55	56	7 24	58			
13	15	15.3		49.4	170	29.1	59		03.4	4	10 S	23	5 50	6 12	36	58	7 43	58			
14	30	15.2		49.7	184	54.0	59		03.8	3	20	39	6 06	30	19 16	58	8 03	58			
15	45	15.1		49.9	199	18.9	59		04.1	1	30	5 55	25	6 51	18 53	59	26	57			
16	60	15.0		50.1	213	43.8	60		04.2	0	35	6 03	35	7 03	39	60	40	57			
17	75	14.9	+22	50.3	228	08.8	60	-24	04.2	1	40	6 12	6 46	7 17	18 23	61	8 55	57			
18	90	14.8	+22	50.6	242	33.8	61	-24	04.1	4	45	6 22	6 59	7 33	18 05	61	9 14	56			
19	105	14.6		50.8	256	58.9	61		03.7	4	50	33	7 15	7 53	17 41	63	37	56			
20	120	14.5		51.0	271	24.0	62		03.3	7	52	38	22	8 02	30	64	9 48	55			
21	135	14.4		51.2	285	49.2	62		02.6	7	54	44	30	13	18	63	10 01	55			
22	150	14.3		51.5	300	14.4	63		01.9	9	56	50	38	25	17 03	65	16	54			
23	165	14.2		51.7	314	39.7	63	-24	01.0	11	58	6 56	48	39	16 46	66	10 33	53			
24	180	14.0	+22	51.9	329	05.0		-23	59.9		60 S	7 03	7 59	8 56	16 25	67	10 53	53			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 6 ^h 55 ^m 5		Mag: -4.2 PMG: 11 ^h 34 ^m				Mag: -0.1 PMG: 06 ^h 11 ^m				Mag: -2.6 PMG: 02 ^h 50 ^m				Mag: +0.4 PMG: 03 ^h 11 ^m						
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	255	51.0	185	46.5	+21	53.2	267	08.3	-7	35.7	317	23.9	-21	05.8	312	11.3	-20	00.4			
1	270	53.4	200	50.5		52.4	282	09.2		35.2	332	26.6		05.9	327	13.8		00.4			
2	285	55.9	215	54.5		51.6	297	10.1		34.6	347	29.2		05.9	342	16.4		00.5			
3	300	58.4	230	58.5		50.8	312	11.0		34.0	2	31.9		06.0	357	19.0		00.5			
4	316	00.8	246	02.5		50.0	327	12.0		33.4	17	34.5		06.0	12	21.6		00.5			
5	331	03.3	261	06.5	+21	49.2	342	12.9	-7	32.8	32	37.2	-21	06.0	27	24.1	-20	00.6			
6	346	05.8	276	10.5	+21	48.4	357	13.8	-7	32.3	47	39.8	-21	06.1	42	26.7	-20	00.6			
7	1	08.2	291	14.5		47.7	12	14.7		31.7	62	42.5		06.1	57	29.3		00.6			
8	16	10.7	306	18.5		46.9	27	15.7		31.1	77	45.1		06.2	72	31.8		00.6			
9	31	13.2	321	22.4		46.1	42	16.6		30.5	92	47.8		06.2	87	34.4		00.7			
10	46	15.6	336	26.4		45.3	57	17.5		29.9	107	50.4		06.2	102	37.0		00.7			
11	61	18.1	351	30.4	+21	44.5	72	18.4	-7	29.4	122	53.1	-21	06.3	117	39.5	-20	00.7			
12	76	20.5	6	34.4	+21	43.7	87	19.3	-7	28.8	137	55.7	-21	06.3	132	42.1	-20	00.7			
13	91	23.0	21	38.4		42.9	102	20.3		28.2	152	58.4		06.4	147	44.7		00.8			
14	106	25.5	36	42.3		42.2	117	21.2		27.6	168	01.0		06.4	162	47.3		00.8			
15	121	27.9	51	46.3		41.4	132	22.1		27.0	183	03.7		06.4	177	49.8		00.8			
16	136	30.4	66	50.3		40.6	147	23.0		26.5	198	06.3		06.5	192	52.4		00.8			
17	151	32.9	81	54.3	+21	39.8	162	24.0	-7	25.9	213	09.0	-21	06.5	207	55.0	-20	00.9			
18	166	35.3	96	58.2	+21	39.0	177	24.9	-7	25.3	228	11.7	-21	06.6	222	57.5	-20	00.9			
19	181	37.8	112	02.2		38.2	192	25.8		24.7	243	14.3		06.6	238	00.1		00.9			
20	196	40.3	127	06.2		37.5	207	26.7		24.1	258	17.0		06.6	253	02.7		01.0			
21	211	42.7	142	10.1		36.7	222	27.7		23.6	273	19.6		06.7	268	05.3		01.0			
22	226	45.2	157	14.1		35.9	237	28.6		23.0	288	22.3		06.7	283	07.8		01.0			
23	241	47.7	172	18.0		35.1	252	29.5		22.4	303	24.9		06.8	298	10.4		01.0			
24	256	50.1	187	22.0	+21	34.3	267	30.4	-7	21.8	318	27.6	-21	06.8	313	13.0	-20	01.1			
Dif.	—		+40				-8	+9				+6	+26				0	+26			

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: 15'8 Edad: 16'3			PHE { 4 ^h : 57'7 12 ^h : 57'5 20 ^h : 57'2										
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	Rº: 56 ^m									
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m
0	180	14.0	+22	51.9	329	05.0	64	-23	59.9	12	60 N	21 19	22 54	** ** *	** ** *	4 53	75
1	195	13.9		52.1	343	30.4	64		58.7	14	58	20 59	22 12	** ** *	** ** *	23 49	29
2	210	13.8		52.3	357	55.8	66		57.3	15	56	43	21 44	** ** *	** ** *	33	32
3	225	13.7		52.6	12	21.4	65		55.8	17	54	29	23	23 00		20	34
4	240	13.6		52.8	26	46.9	66		54.1	17	52	17	21 05	22 20		23 08	36
5	255	13.4	+22	53.0	41	12.5	67	-23	52.4	20	50	20 07	20 51	21 55		22 58	37
6	270	13.3	+22	53.2	55	38.2	68	-23	50.4	21	45	19 45	20 22	21 11		22 36	41
7	285	13.2		53.4	70	04.0	68		48.3	22	40	27	20 00	20 41		18	43
8	300	13.1		53.6	84	29.8	69		46.1	24	35	13	19 42	19		22 03	45
9	315	13.0		53.8	98	55.7	70		43.7	25	30	19 00	27	20 01		21 51	46
10	330	12.8		54.1	113	21.7	70		41.2	26	20	18 39	19 03	19 32		28	50
11	345	12.7	+22	54.3	127	47.7	71	-23	38.6	28	10 N	18 20	18 43	19 10		21 09	52
12	0	12.6	+22	54.5	142	13.8	72	-23	35.8	29	0	18 03	18 25	18 51		20 51	54
13	15	12.5		54.7	156	40.0	72		32.9	31	10 S	17 46	18 09	35		34	55
14	30	12.4		54.9	171	06.2	73		29.8	32	20	28	17 52	19		20 14	58
15	45	12.2		55.1	185	32.5	74		26.6	33	30	17 07	33	18 03		19 52	60
16	60	12.1		55.3	199	58.9	75		23.3	34	35	16 55	23	17 54		39	61
17	75	12.0	+22	55.5	214	25.4	75	-23	19.9	36	40	16 41	17 11	17 45		19 24	63
18	90	11.9	+22	55.7	228	51.9	76	-23	16.3	38	45	16 25	16 58	17 35		19 06	66
19	105	11.8		56.0	243	18.5	78		12.5	38	50	16 05	43	24		18 44	68
20	120	11.6		56.2	257	45.3	77		08.7	40	52	15 55	36	19		34	69
21	135	11.5		56.4	272	12.0	79		04.7	41	54	44	28	13		21	72
22	150	11.4		56.6	286	38.9	79	-23	00.6	42	56	32	19	08		18 08	73
23	165	11.3		56.8	301	05.8	81	-22	56.4	44	58	18	16 09	17 01		17 52	75
24	180	11.2	+22	57.0	315	32.9		-22	52.0		60 S	15 01	15 58	16 54		17 32	79

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 6 ^h 51 ^m 5		Mag: -4.1 PMG: 11 ^h 28 ^m			Mag: -0.1 PMG: 06 ^h 10 ^m			Mag: -2.6 PMG: 02 ^h 46 ^m			Mag: +0.4 PMG: 03 ^h 07 ^m			
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	256	50.1	187	22.0	+21	34.3	267	30.4	-7	21.8	318	27.6	-21	-06.8	
1	271	52.6	202	26.0		33.6	282	31.3		21.2	333	30.2		-06.9	
2	286	55.0	217	29.9		32.8	297	32.3		20.7	348	32.9		-06.9	
3	301	57.5	232	33.9		32.0	312	33.2		20.1	3	35.6		-06.9	
4	317	00.0	247	37.8		31.2	327	34.1		19.5	18	38.2		-07.0	
5	332	02.4	262	41.8	+21	30.4	342	35.1	-7	18.9	33	40.9	-21	-07.0	
6	347	04.9	277	45.7	+21	29.7	357	36.0	-7	18.3	48	43.5	-21	-07.1	
7	2	07.4	292	49.6		28.9	12	36.9		17.8	63	46.2		-07.1	
8	17	09.8	307	53.6		28.1	27	37.8		17.2	78	48.9		-07.1	
9	32	12.3	322	57.5		27.3	42	38.8		16.6	93	51.5		-07.2	
10	47	14.8	338	01.4		26.6	57	39.7		16.0	108	54.2		-07.2	
11	62	17.2	353	05.4	+21	25.8	72	40.6	-7	15.4	123	56.8	-21	-07.3	
12	77	19.7	8	09.3	+21	25.0	87	41.5	-7	14.9	138	59.5	-21	-07.3	
13	92	22.2	23	13.2		24.2	102	42.5		14.3	154	02.1		-07.4	
14	107	24.6	38	17.2		23.4	117	43.4		13.7	169	04.8		-07.4	
15	122	27.1	53	21.1		22.7	132	44.3		13.1	184	07.5		-07.4	
16	137	29.5	68	25.0		21.9	147	45.3		12.5	199	10.1		-07.5	
17	152	32.0	83	28.9	+21	21.1	162	46.2	-7	12.0	214	12.8	-21	-07.5	
18	167	34.5	98	32.8	+21	20.4	177	47.1	-7	11.4	229	15.5	-21	-07.6	
19	182	36.9	113	36.8		19.6	192	48.0		10.8	244	18.1		-07.6	
20	197	39.4	128	40.7		18.8	207	49.0		10.2	259	20.8		-07.7	
21	212	41.9	143	44.6		18.0	222	49.9		09.6	274	23.4		-07.7	
22	227	44.3	158	48.5		17.3	237	50.8		09.1	289	26.1		-07.7	
23	242	46.8	173	52.4		16.5	252	51.8		08.5	304	28.8		-07.8	
24	257	49.3	188	56.3	+21	15.7	267	52.7	-7	07.9	319	31.4	-21	-07.8	
Dif.	—		+39	-8			+9	+6			+27	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: 15'5 Edad: 17 ^d 3		PHE { 4 ^h : 56'9 12 ^h : 56'7 20 ^h : 56'4		PMG: 03 ^h 05 ^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	h m m		
0	180	11.2	+22	57.0	315	32.9	81	-22	52.0	45	60 N	** ** *	1 04	2 40	0 07	25	6 08	82
1	195	11.0		57.2	330	00.0	82		47.5	46	58	** ** *	1 47	2 59	** ** *		26	79
2	210	10.9		57.4	344	27.2	82		42.9	47	56	** ** *	2 14	3 15	** ** *	**	41	76
3	225	10.8		57.6	358	54.4	84		38.2	49	54	0 58	36	29	23 54	25	6 54	73
4	240	10.7		57.8	13	21.8	85		33.3	50	52	1 38	2 53	41	44	27	7 06	71
5	255	10.5	+22	58.0	27	49.3	85	-22	28.3	51	50	2 04	3 07	3 51	23 35	29	7 16	69
6	270	10.4	+22	58.2	42	16.8	86	-22	23.2	52	45	2 47	3 36	4 13	23 17	32	7 37	66
7	285	10.3		58.4	56	44.4	87		18.0	53	40	3 17	3 58	31	23 01	36	7 54	64
8	300	10.2		58.6	71	12.1	88		12.7	55	35	40	4 16	46	22 48	38	8 08	62
9	315	10.0		58.8	85	39.9	89		07.2	55	30	3 58	31	4 58	37	40	21	59
10	330	09.9		59.0	100	07.8	90	-22	01.7	57	20	4 26	4 55	5 20	18	43	8 42	56
11	345	09.8	+22	59.2	114	35.8	90	-21	56.0	58	10 N	4 48	5 15	5 38	22 01	46	9 00	54
12	0	09.7	+22	59.4	129	03.8	92	-21	50.2	59	0	5 07	5 33	5 56	21 45	49	9 17	52
13	15	09.6		59.6	143	32.0	92		44.3	60	10 S	24	5 50	6 13	29	52	34	49
14	30	09.4	+22	59.8	158	00.2	94		38.3	61	20	40	6 07	31	21 12	55	9 53	46
15	45	09.3	+23	00.0	172	28.6	94		32.2	62	30	5 56	25	6 52	20 52	59	10 13	44
16	60	09.2		00.1	186	57.0	95		26.0	64	35	6 04	36	7 04	40	61	25	42
17	75	09.1	+23	00.3	201	25.5	96	-21	19.6	64	40	6 13	6 47	7 18	20 27	63	10 39	40
18	90	08.9	+23	00.5	215	54.1	97	-21	13.2	65	45	6 23	7 00	7 34	20 12	65	10 56	36
19	105	08.8		00.7	230	22.8	98		06.7	67	50	35	16	7 54	19 52	70	11 16	33
20	120	08.7		00.9	244	51.6	99	-21	00.0	67	52	40	23	8 04	43	72	25	32
21	135	08.6		01.1	259	20.5	99	-20	53.3	69	54	45	31	15	33	73	36	29
22	150	08.4		01.3	273	49.4	101		46.4	69	56	51	40	27	21	76	11 48	27
23	165	08.3		01.5	288	18.5	101		39.5	71	58	6 58	7 50	41	19 07	80	12 02	24
24	180	08.2	+23	01.7	302	47.6		-20	32.4		60 S	7 05	8 01	8 58	18 51	84	12 18	21

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 6 ^h 47 ^m 6		Mag: -4.1 PMG: 11 ^h 21 ^m			Mag: -0.1 PMG: 06 ^h 08 ^m			Mag: -2.6 PMG: 02 ^h 41 ^m			Mag: +0.4 PMG: 03 ^h 02 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'				
0	257	49.3	188	56.3	+21	15.7	267	52.7	-7	07.9	319	31.4	-21	07.8	314	14.8	-20	01.7	
1	272	51.7	204	00.2		14.9	282	53.6		07.3	334	34.1		07.9	329	17.4		01.8	
2	287	54.2	219	04.1		14.2	297	54.5		06.7	349	36.8		07.9	344	19.9		01.8	
3	302	56.6	234	08.0		13.4	312	55.5		06.2	4	39.4		08.0	359	22.5		01.8	
4	317	59.1	249	11.9		12.6	327	56.4		05.6	19	42.1		08.0	14	25.1		01.8	
5	333	01.6	264	15.8	+21	11.9	342	57.3	-7	05.0	34	44.7	-21	08.0	29	27.7	-20	01.9	
6	348	04.0	279	19.6	+21	11.1	357	58.3	-7	04.4	49	47.4	-21	08.1	44	30.2	-20	01.9	
7	3	06.5	294	23.5		10.3	12	59.2		03.8	64	50.1		08.1	59	32.8		01.9	
8	18	09.0	309	27.4		09.6	28	00.1		03.3	79	52.7		08.2	74	35.4		02.0	
9	33	11.4	324	31.3		08.8	43	01.1		02.7	94	55.4		08.2	89	38.0		02.0	
10	48	13.9	339	35.2		08.0	58	02.0		02.1	109	58.1		08.3	104	40.6		02.0	
11	63	16.4	354	39.0	+21	07.3	73	02.9	-7	01.5	125	00.7	-21	08.3	119	43.1	-20	02.0	
12	78	18.8	9	42.9	+21	06.5	88	03.9	-7	00.9	140	03.4	-21	08.3	134	45.7	-20	02.1	
13	93	21.3	24	46.8		05.7	103	04.8	-7	00.4	155	06.1		08.4	149	48.3		02.1	
14	108	23.8	39	50.6		05.0	118	05.7	-6	59.8	170	08.7		08.4	164	50.9		02.1	
15	123	26.2	54	54.5		04.2	133	06.7		59.2	185	11.4		08.5	179	53.4		02.2	
16	138	28.7	69	58.4		03.5	148	07.6		58.6	200	14.1		08.5	194	56.0		02.2	
17	153	31.1	85	02.2	+21	02.7	163	08.5	-6	58.0	215	16.7	-21	08.6	209	58.6	-20	02.2	
18	168	33.6	100	06.1	+21	01.9	178	09.5	-6	57.5	230	19.4	-21	08.6	225	01.2	-20	02.2	
19	183	36.1	115	09.9		01.2	193	10.4		56.9	245	22.1		08.6	240	03.8		02.3	
20	198	38.5	130	13.8	+21	00.4	208	11.3		56.3	260	24.8		08.7	255	06.3		02.3	
21	213	41.0	145	17.6	+20	59.7	223	12.3		55.7	275	27.4		08.7	270	08.9		02.3	
22	228	43.5	160	21.5		58.9	238	13.2		55.1	290	30.1		08.8	285	11.5		02.4	
23	243	45.9	175	25.3		58.1	253	14.1		54.6	305	32.8		08.8	300	14.1		02.4	
24	258	48.4	190	29.1	+20	57.4	268	15.1	-6	54.0	320	35.4	-21	08.9	315	16.7	-20	02.4	
Dif.	—		+39		-8		+9		+6		+27		0		+26				

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: 15'3 Edad: 18 ^d 3 PHE { 4 ^h : 56'1 12 ^h : 55'9 20 ^h : 55'7 PMG: 03 ^h 57 ^m Rº: 48 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.						Civil	Náut.	Hora	Rº	Hora	Rº
	°	'	°	'	°	'	°	'	°			'	h	m	h	m	h	m
h																		
0	180	08.2	+23	01.7	302	47.6	103	-20	32.4	71	60 N	21 21	23 00	** **	0 32	16	7 30	84
1	195	08.1		01.8	317	16.9	103		25.3	72	58	21 01	22 15	** **	18	19	45	79
2	210	07.9		02.0	331	46.2	104		18.1	74	56	20 45	21 46	** **	0 05	22	7 57	76
3	225	07.8		02.2	346	15.6	106		10.7	74	54	31	25	23 05	** **	**	8 07	74
4	240	07.7		02.4	0	45.2	106	-20	03.3	75	52	19	21 07	22 23	** **	**	17	72
5	255	07.6	+23	02.6	15	14.8	107	-19	55.8	76	50	20 08	20 53	21 57	** **	**	8 25	70
6	270	07.4	+23	02.8	29	44.5	107	-19	48.2	77	45	19 46	20 23	21 13	23 49	28	8 43	66
7	285	07.3		03.0	44	14.2	109		40.5	78	40	29	20 01	20 43	37	30	8 58	62
8	300	07.2		03.1	58	44.1	110		32.7	79	35	14	19 43	20	26	33	9 10	60
9	315	07.1		03.3	73	14.1	110		24.8	80	30	19 01	28	20 02	17	36	20	58
10	330	06.9		03.5	87	44.1	112		16.8	80	20	18 39	19 04	19 33	23 01	40	38	54
11	345	06.8	+23	03.7	102	14.3	112	-19	08.8	82	10 N	18 21	18 44	19 11	22 47	43	9 54	51
12	0	06.7	+23	03.9	116	44.5	113	-19	00.6	82	0	18 03	18 26	18 52	22 34	46	10 09	48
13	15	06.6		04.0	131	14.8	115	-18	52.4	83	10 S	17 46	18 09	35	21	49	23	45
14	30	06.4		04.2	145	45.3	115		44.1	84	20	28	17 52	19	22 07	52	39	41
15	45	06.3		04.4	160	15.8	115		35.7	84	30	17 07	33	18 03	21 51	56	10 57	37
16	60	06.2		04.6	174	46.3	117		27.3	86	35	16 55	23	17 54	41	59	11 07	35
17	75	06.1	+23	04.7	189	17.0	118	-18	18.7	86	40	16 41	17 11	17 45	21 30	62	11 19	33
18	90	05.9	+23	04.9	203	47.8	118	-18	10.1	87	45	16 24	16 58	17 35	21 17	65	11 32	30
19	105	05.8		05.1	218	18.6	120	-18	01.4	88	50	16 04	42	24	21 02	69	49	26
20	120	05.7		05.3	232	49.6	120	-17	52.6	88	52	15 54	35	19	20 55	70	11 57	24
21	135	05.6		05.4	247	20.6	121		43.8	89	54	44	27	13	46	74	12 05	22
22	150	05.4		05.6	261	51.7	122		34.9	90	56	31	18	07	37	76	15	20
23	165	05.3		05.8	276	22.9	123		25.9	91	58	17	16 08	17 00	27	79	26	17
24	180	05.2	+23	05.9	290	54.2		-17	16.8		60 S	15 00	15 57	16 53	20 15	82	12 39	13
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 43 ^m 7		Mag: -4.1 PMG: 11 ^h 15 ^m				Mag: -0.2 PMG: 06 ^h 07 ^m				Mag: -2.6 PMG: 02 ^h 37 ^m				Mag: +0.4 PMG: 02 ^h 58 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	258	48.4	190	29.1	+20	57.4	268	15.1	-6	54.0	320	35.4	-21	-08.9	315	16.7	-20	02.4
1	273	50.9	205	33.0		56.6	283	16.0		53.4	335	38.1		-08.9	330	19.2		02.4
2	288	53.3	220	36.8		55.9	298	16.9		52.8	350	40.8		-09.0	345	21.8		02.5
3	303	55.8	235	40.6		55.1	313	17.9		52.2	5	43.4		-09.0	0	24.4		02.5
4	318	58.3	250	44.5		54.4	328	18.8		51.7	20	46.1		-09.0	15	27.0		02.5
5	334	00.7	265	48.3	+20	53.6	343	19.8	-6	51.1	35	48.8	-21	-09.1	30	29.6	-20	02.6
6	349	03.2	280	52.1	+20	52.9	358	20.7	-6	50.5	50	51.5	-21	-09.1	45	32.1	-20	02.6
7	4	05.6	295	55.9		52.1	13	21.6		49.9	65	54.1		-09.2	60	34.7		02.6
8	19	08.1	310	59.8		51.3	28	22.6		49.4	80	56.8		-09.2	75	37.3		02.6
9	34	10.6	326	03.6		50.6	43	23.5		48.8	95	59.5		-09.3	90	39.9		02.7
10	49	13.0	341	07.4		49.8	58	24.4		48.2	111	02.2		-09.3	105	42.5		02.7
11	64	15.5	356	11.2	+20	49.1	73	25.4	-6	47.6	126	04.8	-21	-09.4	120	45.0	-20	02.7
12	79	18.0	11	15.0	+20	48.3	88	26.3	-6	47.0	141	07.5	-21	-09.4	135	47.6	-20	02.8
13	94	20.4	26	18.8		47.6	103	27.2		46.5	156	10.2		-09.4	150	50.2		02.8
14	109	22.9	41	22.6		46.9	118	28.2		45.9	171	12.9		-09.5	165	52.8		02.8
15	124	25.4	56	26.4		46.1	133	29.1		45.3	186	15.5		-09.5	180	55.4		02.8
16	139	27.8	71	30.2		45.4	148	30.1		44.7	201	18.2		-09.6	195	58.0		02.9
17	154	30.3	86	34.0	+20	44.6	163	31.0	-6	44.1	216	20.9	-21	-09.6	211	00.5	-20	02.9
18	169	32.8	101	37.8	+20	43.9	178	31.9	-6	43.6	231	23.6	-21	-09.7	226	03.1	-20	02.9
19	184	35.2	116	41.5		43.1	193	32.9		43.0	246	26.2		-09.7	241	05.7		03.0
20	199	37.7	131	45.3		42.4	208	33.8		42.4	261	28.9		-09.8	256	08.3		03.0
21	214	40.1	146	49.1		41.6	223	34.8		41.8	276	31.6		-09.8	271	10.9		03.0
22	229	42.6	161	52.9		40.9	238	35.7		41.3	291	34.3		-09.8	286	13.5		03.0
23	244	45.1	176	56.6		40.2	253	36.6		40.7	306	36.9		-09.9	301	16.0		03.1
24	259	47.5	192	00.4	+20	39.4	268	37.6	-6	40.1	321	39.6	-21	-09.9	316	18.6	-20	03.1
Dif.	—		+38		-7		+9		+6		+27		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 8				SD: 15'1 Edad: 19 ^d 3 PMG: 04 ^h 45 ^m PHE { 4 ^h : 55'5 12 ^h : 55'3 20 ^h : 55'1 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	180	05.2	+23	05.9	290	54.2	123	-17	16.8	91	60 N	** **	0 59	2 38	0 48	11	8 54	82	
1	195	05.1		06.1	305	25.5	125	-17	07.7	92	58	** **	1 44	2 58	37	14	9 04	78	
2	210	04.9		06.3	319	57.0	125	-16	58.5	93	56	** **	2 13	3 14	27	17	13	76	
3	225	04.8		06.4	334	28.5	126		49.2	94	54		0 54	34	19	19	21	73	
4	240	04.7		06.6	349	00.1	127		39.8	94	52		1 36	2 52	11	22	29	70	
5	255	04.5	+23	06.8	3	31.8	128	-16	30.4	94	50		2 02	3 07	0 04	23	9 35	68	
6	270	04.4	+23	06.9	18	03.6	128	-16	21.0	96	45		2 47	3 36	***	***	**	9 49	64
7	285	04.3		07.1	32	35.4	129		11.4	96	40		3 17	3 58	***	***	**	10 00	61
8	300	04.2		07.3	47	07.3	131	-16	01.8	96	35		39	4 16	23 59	30	10	58	
9	315	04.0		07.4	61	39.4	130	-15	52.2	98	30		3 58	31	53	31	18	56	
10	330	03.9		07.6	76	11.4	132		42.4	98	20		4 26	4 56	41	36	32	52	
11	345	03.8	+23	07.8	90	43.6	132	-15	32.6	98	10 N		4 49	5 16	23 30	40	10 45	48	
12	0	03.7	+23	07.9	105	15.8	134	-15	22.8	99	0		5 07	5 34	23 20	43	10 57	44	
13	15	03.5		08.1	119	48.2	133		12.9	100	10 S		24	5 50	23 10	47	11 08	41	
14	30	03.4		08.2	134	20.5	135	-15	02.9	100	20		40	6 08	22 59	51	20	38	
15	45	03.3		08.4	148	53.0	136	-14	52.9	101	30		5 56	26	47	55	34	34	
16	60	03.1		08.6	163	25.6	136		42.8	101	35		6 05	37	40	57	42	32	
17	75	03.0	+23	08.7	177	58.2	136	-14	32.7	102	40		6 14	6 48	22 32	60	11 52	28	
18	90	02.9	+23	08.9	192	30.8	138	-14	22.5	102	45		6 24	7 01	22 22	64	12 02	25	
19	105	02.8		09.0	207	03.6	138		12.3	103	50		36	7 17	11	67	15	21	
20	120	02.6		09.2	221	36.4	139	-14	02.0	103	52		41	25	05	70	21	19	
21	135	02.5		09.3	236	09.3	140	-13	51.7	104	54		47	33	22 00	71	27	18	
22	150	02.4		09.5	250	42.3	140		41.3	105	56		53	42	21 53	74	35	15	
23	165	02.2		09.7	265	15.3	141		30.8	105	58		6 59	7 52	21 46	76	12 43	12	
24	180	02.1	+23	09.8	279	48.4		-13	20.3		60 S		7 07	8 03	21 37	80	12 52	10	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 39 ^m 7		Mag: -4.0 PMG: 11 ^h 09 ^m				Mag: -0.2 PMG: 06 ^h 05 ^m				Mag: -2.6 PMG: 02 ^h 33 ^m				Mag: +0.3 PMG: 02 ^h 54 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	259	47.5	192	00.4	+20	39.4	268	37.6	-6	40.1	321	39.6	-21	09.9	316	18.6	-20	03.1
1	274	50.0	207	04.2		38.7	283	38.5		39.5	336	42.3		10.0	331	21.2		03.1
2	289	52.5	222	07.9		37.9	298	39.5		38.9	351	45.0		10.0	346	23.8		03.2
3	304	54.9	237	11.7		37.2	313	40.4		38.4	6	47.6		10.1	1	26.4		03.2
4	319	57.4	252	15.4		36.5	328	41.3		37.8	21	50.3		10.1	16	29.0		03.2
5	334	59.9	267	19.2	+20	35.7	343	42.3	-6	37.2	36	53.0	-21	10.2	31	31.5	-20	03.3
6	350	02.3	282	22.9	+20	35.0	358	43.2	-6	36.6	51	55.7	-21	10.2	46	34.1	-20	03.3
7	5	04.8	297	26.7		34.3	13	44.2		36.0	66	58.4		10.3	61	36.7		03.3
8	20	07.2	312	30.4		33.5	28	45.1		35.5	82	01.0		10.3	76	39.3		03.3
9	35	09.7	327	34.2		32.8	43	46.1		34.9	97	03.7		10.3	91	41.9		03.4
10	50	12.2	342	37.9		32.1	58	47.0		34.3	112	06.4		10.4	106	44.5		03.4
11	65	14.6	357	41.6	+20	31.3	73	47.9	-6	33.7	127	09.1	-21	10.4	121	47.0	-20	03.4
12	80	17.1	12	45.4	+20	30.6	88	48.9	-6	33.2	142	11.8	-21	10.5	136	49.6	-20	03.5
13	95	19.6	27	49.1		29.9	103	49.8		32.6	157	14.4		10.5	151	52.2		03.5
14	110	22.0	42	52.8		29.2	118	50.8		32.0	172	17.1		10.6	166	54.8		03.5
15	125	24.5	57	56.5		28.4	133	51.7		31.4	187	19.8		10.6	181	57.4		03.6
16	140	27.0	73	00.3		27.7	148	52.7		30.8	202	22.5		10.7	197	00.0		03.6
17	155	29.4	88	04.0	+20	27.0	163	53.6	-6	30.3	217	25.2	-21	10.7	212	02.6	-20	03.6
18	170	31.9	103	07.7	+20	26.2	178	54.6	-6	29.7	232	27.8	-21	10.8	227	05.1	-20	03.6
19	185	34.4	118	11.4		25.5	193	55.5		29.1	247	30.5		10.8	242	07.7		03.7
20	200	36.8	133	15.1		24.8	208	56.4		28.5	262	33.2		10.8	257	10.3		03.7
21	215	39.3	148	18.8		24.1	223	57.4		28.0	277	35.9		10.9	272	12.9		03.7
22	230	41.7	163	22.5		23.4	238	58.3		27.4	292	38.6		10.9	287	15.5		03.8
23	245	44.2	178	26.2		22.6	253	59.3		26.8	307	41.3		11.0	302	18.1		03.8
24	260	46.7	193	29.9	+20	21.9	269	00.2	-6	26.2	322	43.9	-21	11.0	317	20.7	-20	03.8
Dif.	—		+37	-7			+9	+6			+27	0			+26			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'7			SD: 15'0 Edad: 20'3			PHE { 4 ^h : 54'9 12 ^h : 54'7 20 ^h : 54'6										
	PMG: 12 ^h 00 ^m 0			PMG: 05 ^h 31 ^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	h m m	
0	180	02.1	+23	09.8	279	48.4	142	-13	20.3	105	60 N	21 23	23 04	** ** *	0 59	8	
1	195	02.0		10.0	294	21.6	142	-13	09.8	106	58	21 03	22 17	** ** *	51	11	
2	210	01.9		10.1	308	54.8	143	-12	59.2	106	56	20 47	21 48	** ** *	44	14	
3	225	01.7		10.3	323	28.1	144		48.6	107	54	32	26	23 09	38	16	
4	240	01.6		10.4	338	01.5	144		37.9	107	52	20	21 09	22 26	33	17	
5	255	01.5	+23	10.6	352	34.9	145	-12	27.2	108	50	20 10	20 54	21 59	0 27	20	
6	270	01.3	+23	10.7	7	08.4	145	-12	16.4	108	45	19 47	20 25	21 14	0 17	23	
7	285	01.2		10.9	21	41.9	146	-12	05.6	108	40	29	20 02	20 44	0 07	27	
8	300	01.1		11.0	36	15.5	147	-11	54.8	109	35	15	19 44	21	** ** *	**	
9	315	00.9		11.2	50	49.2	147		43.9	109	30	19 02	29	20 02	** ** *	**	
10	330	00.8		11.3	65	22.9	148		33.0	110	20	18 40	19 04	19 34	** ** *	**	
11	345	00.7	+23	11.4	79	56.7	148	-11	22.0	110	10 N	18 21	18 44	19 11	** ** *	**	
12	0	00.6	+23	11.6	94	30.5	149	-11	11.0	110	0	18 04	18 26	18 52	** ** *	**	
13	15	00.4		11.7	109	04.4	150	-11	00.0	111	10 S	17 46	18 09	35	23 57	44	
14	30	00.3		11.9	123	38.4	150	-10	48.9	111	20	28	17 52	19	50	48	
15	45	00.2		12.0	138	12.4	150		37.8	112	30	17 07	33	18 03	42	53	
16	60	00.0		12.2	152	46.4	151		26.6	112	35	16 55	23	17 55	37	55	
17	74	59.9	+23	12.3	167	20.5	152	-10	15.4	112	40	16 41	17 11	17 45	23 32	58	
18	89	59.8	+23	12.4	181	54.7	152	-10	04.2	112	45	16 24	16 58	17 35	23 26	61	
19	104	59.6		12.6	196	28.9	152	-9	53.0	113	50	16 04	42	23	18	66	
20	119	59.5		12.7	211	03.1	153		41.7	113	52	15 54	35	18	15	68	
21	134	59.4		12.9	225	37.4	154		30.4	114	54	43	27	13	11	70	
22	149	59.3		13.0	240	11.8	154		19.0	114	56	30	18	07	07	72	
23	164	59.1		13.1	254	46.2	154	-9	07.6	114	58	15 16	16 07	17 00	23 02	75	
24	179	59.0	+23	13.3	269	20.6		-8	56.2		60 S	14 59	15 56	16 53	22 57	78	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 6 ^h 35 ^m 8		Mag: -4.1 PMG: 11 ^h 03 ^m			Mag: -0.2 PMG: 06 ^h 04 ^m			Mag: -2.6 PMG: 02 ^h 29 ^m			Mag: +0.3 PMG: 02 ^h 50 ^m				
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	260	46.7	193	29.9	+20	21.9	269	00.2	-6	26.2	322	43.9	-21	-11.0		
1	275	49.1	208	33.6		21.2	284	01.2		25.6	337	46.6		-11.1		
2	290	51.6	223	37.3		20.5	299	02.1		25.1	352	49.3		-11.1		
3	305	54.1	238	40.9		19.8	314	03.1		24.5	7	52.0		-11.2		
4	320	56.5	253	44.6		19.1	329	04.0		23.9	22	54.7		-11.2		
5	335	59.0	268	48.3	+20	18.3	344	05.0	-6	23.3	37	57.4	-21	-11.3		
6	351	01.5	283	52.0	+20	17.6	359	05.9	-6	22.8	53	00.1	-21	-11.3		
7	6	03.9	298	55.6		16.9	14	06.9		22.2	68	02.7		-11.4		
8	21	06.4	313	59.3		16.2	29	07.8		21.6	83	05.4		-11.4		
9	36	08.9	329	03.0		15.5	44	08.8		21.0	98	08.1		-11.4		
10	51	11.3	344	06.6		14.8	59	09.7		20.4	113	10.8		-11.5		
11	66	13.8	359	10.3	+20	14.1	74	10.6	-6	19.9	128	13.5	-21	-11.5		
12	81	16.2	14	13.9	+20	13.4	89	11.6	-6	19.3	143	16.2	-21	-11.6		
13	96	18.7	29	17.6		12.7	104	12.5		18.7	158	18.9		-11.6		
14	111	21.2	44	21.2		12.0	119	13.5		18.1	173	21.6		-11.7		
15	126	23.6	59	24.8		11.3	134	14.4		17.6	188	24.2		-11.7		
16	141	26.1	74	28.5		10.6	149	15.4		17.0	203	26.9		-11.8		
17	156	28.6	89	32.1	+20	09.9	164	16.3	-6	16.4	218	29.6	-21	-11.8		
18	171	31.0	104	35.7	+20	09.1	179	17.3	-6	15.8	233	32.3	-21	-11.9		
19	186	33.5	119	39.4		08.4	194	18.2		15.2	248	35.0		-11.9		
20	201	36.0	134	43.0		07.7	209	19.2		14.7	263	37.7		-12.0		
21	216	38.4	149	46.6		07.1	224	20.1		14.1	278	40.4		-12.0		
22	231	40.9	164	50.2		06.4	239	21.1		13.5	293	43.1		-12.1		
23	246	43.3	179	53.8		05.7	254	22.0		12.9	308	45.8		-12.1		
24	261	45.8	194	57.4	+20	05.0	269	23.0	-6	12.4	323	48.4	-21	-12.2		
Dif.	—		+37		-7		+9		+6		+27		0		+26	
															0	

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 : 54'5 12 ^h : 54'4 20 ^h : 54'3													
	PMG: 12 ^h 00 ^m 2				Edad: 21 ^d 3																									
	PMG: 06 ^h 13 ^m				R ^o : 41 ^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	59.0	+23	13.3	269	20.6	155	-8	56.2	114	60 N	0 56	2 37	1 07	6	11 34	77													
1	194	58.9		13.4	283	55.1	155		44.8	115	58	1 43	2 57	1 02	9	38	74													
2	209	58.7		13.5	298	29.6	156		33.3	115	56	2 12	3 13	0 58	11	42	71													
3	224	58.6		13.7	313	04.2	156		21.8	115	54	0 51	33	54	14	45	69													
4	239	58.5		13.8	327	38.8	157	-8	10.3	115	52	1 34	2 51	50	16	47	68													
5	254	58.3	+23	13.9	342	13.5	157	-7	58.8	116	50	2 01	3 06	0 47	17	11 50	65													
6	269	58.2	+23	14.1	356	48.2	157	-7	47.2	116	45	2 46	3 35	0 40	21	11 55	62													
7	284	58.1		14.2	11	22.9	158		35.6	116	40	3 16	3 58	34	25	12 00	58													
8	299	57.9		14.3	25	57.7	158		24.0	117	35	39	4 16	29	27	04	55													
9	314	57.8		14.5	40	32.5	158		12.3	116	30	3 58	31	24	30	07	53													
10	329	57.7		14.6	55	07.3	159	-7	00.7	117	20	4 27	4 56	17	34	13	48													
11	344	57.5	+23	14.7	69	42.2	159	-6	49.0	117	10 N	4 49	5 16	0 10	37	12 18	45													
12	359	57.4	+23	14.9	84	17.1	160	-6	37.3	117	0	5 08	5 34	0 03	41	12 23	41													
13	14	57.3		15.0	98	52.1	159		25.6	118	10 S	25	5 51	33	37	28	37													
14	29	57.2		15.1	113	27.0	161		13.8	118	20	41	6 08	32	33	33	33													
15	44	57.0		15.2	128	02.1	160	-6	02.0	117	30	5 57	27	6 53	29	29	29													
16	59	56.9		15.4	142	37.1	161	-5	50.3	118	35	6 06	37	7 05	26	26	26													
17	74	56.8	+23	15.5	157	12.2	160	-5	38.5	119	40	6 15	6 49	12	45	24	24													
18	89	56.6	+23	15.6	171	47.2	162	-5	26.6	118	45	6 25	7 02	12	50	20	20													
19	104	56.5		15.7	186	22.4	161		14.8	119	50	37	18	55	17	17	17													
20	119	56.4		15.8	200	57.5	162	-5	02.9	118	52	42	26	12	57	15	15													
21	134	56.2		16.0	215	32.7	162	-4	51.1	119	54	48	34	13	00	13	13													
22	149	56.1		16.1	230	07.9	162		39.2	119	56	6 54	43	02	11	02	11													
23	164	56.0		16.2	244	43.1	162		27.3	119	58	7 00	7 53	13	05	9	9													
24	179	55.8	+23	16.3	259	18.3		-4	15.4		60 S	7 08	8 04	13	09	6	6													
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG: 6 ^h 31 ^m 9		Mag: -4.1 PMG: 10 ^h 58 ^m				Mag: -0.2 PMG: 06 ^h 02 ^m				Mag: -2.6 PMG: 02 ^h 24 ^m				Mag: +0.3 PMG: 02 ^h 46 ^m															
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.														
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'												
0	261	45.8	194	57.4	+20	05.0	269	23.0	-6	12.4	323	48.4	-21	12.2	318	22.8	-20	04.6												
1	276	48.3	210	01.0		04.3	284	24.0		11.8	338	51.1		12.2	333	25.4		04.6												
2	291	50.7	225	04.7		03.6	299	24.9		11.2	353	53.8		12.2	348	28.0		04.6												
3	306	53.2	240	08.2		02.9	314	25.9		10.6	8	56.5		12.3	3	30.5		04.6												
4	321	55.7	255	11.8		02.2	329	26.8		10.1	23	59.2		12.3	18	33.1		04.7												
5	336	58.1	270	15.4	+20	01.5	344	27.8	-6	09.5	39	01.9	-21	12.4	33	35.7	-20	04.7												
6	352	00.6	285	19.0	+20	00.8	359	28.7	-6	08.9	54	04.6	-21	12.4	48	38.3	-20	04.7												
7	7	03.1	300	22.6	+20	00.1	14	29.7		08.3	69	07.3		12.5	63	40.9		04.8												
8	22	05.5	315	26.2	+19	59.4	29	30.6		07.8	84	10.0		12.5	78	43.5		04.8												
9	37	08.0	330	29.8		58.8	44	31.6		07.2	99	12.7		12.6	93	46.1		04.8												
10	52	10.5	345	33.3		58.1	59	32.5		06.6	114	15.4		12.6	108	48.7		04.9												
11	67	12.9	0	36.9	+19	57.4	74	33.5	-6	06.0	129	18.1	-21	12.7	123	51.3	-20	04.9												
12	82	15.4	15	40.5	+19	56.7	89	34.4	-6	05.4	144	20.8	-21	12.7	138	53.9	-20	04.9												
13	97	17.8	30	44.0		56.0	104	35.4		04.9	159	23.4		12.8	153	56.5		05.0												
14	112	20.3	45	47.6		55.3	119	36.3		04.3	174	26.1		12.8	168	59.1		05.0												
15	127	22.8	60	51.1		54.7	134	37.3		03.7	189	28.8		12.9	184	01.6		05.0												
16	142	25.2	75	54.7		54.0	149	38.3		03.1	204	31.5		12.9	199	04.2		05.0												
17	157	27.7	90	58.2	+19	53.3	164	39.2	-6	02.6	219	34.2	-21	13.0	214	06.8	-20	05.1												
18	172	30.2	106	01.8	+19	52.6	179	40.2	-6	02.0	234	36.9	-21	13.0	229	09.4	-20	05.1												
19	187	32.6	121	05.3		52.0	194	41.1		01.4	249	39.6		13.1	244	12.0		05.1												
20	202	35.1	136	08.9		51.3	209	42.1		00.8	264	42.3		13.1	259	14.6		05.2												
21	217	37.6	151	12.4		50.6	224	43.0	-6	00.3	279	45.0		13.2	274	17.2		05.2												
22	232	40.0	166	15.9		50.0	239	44.0	-5	59.7	294	47.7		13.2	289	19.8		05.2												
23	247	42.5	181	19.4		49.3	254	45.0		59.1	309	50.4		13.2	304	22.4		05.3												
24	262	45.0	196	23.0	+19	48.6	269	45.9	-5	58.5	324	53.1	-21	13.3	319	25.0	-20	05.3												
Dif.	—		+36				-7				+10				+6				+27				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 4				SD: 14'8 Edad: 22 ^d 3 PMG: 06 ^h 54 ^m													PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 Rº: 41 ^m	
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.						
	h	m	°	'	h	m	°	'			h	m	°	'	h	m	°	'	h
0	179	55.8	+23	16.3	259	18.3	163	-4	15.4	120	60 N	21 25	23 08	** **	1 13	6	12 51	77	
1	194	55.7		16.4	273	53.6	163	-4	03.4	119	58	21 05	22 19	** **	11	9	52	74	
2	209	55.6		16.6	288	28.9	163	-3	51.5	119	56	20 48	21 50	** **	09	11	53	72	
3	224	55.4		16.7	303	04.2	163		39.6	120	54	34	28	23 13	08	12	54	69	
4	239	55.3		16.8	317	39.5	163		27.6	120	52	21	21 10	22 28	06	15	55	67	
5	254	55.2	+23	16.9	332	14.8	164	-3	15.6	120	50	20 11	20 55	22 00	1 04	17	12 55	66	
6	269	55.0	+23	17.0	346	50.2	163	-3	03.6	120	45	19 48	20 26	21 15	1 01	21	12 57	61	
7	284	54.9		17.1	1	25.5	164	-2	51.6	120	40	30	20 03	20 45	0 59	23	58	58	
8	299	54.8		17.3	16	00.9	164		39.6	120	35	15	19 45	22	56	27	12 59	55	
9	314	54.6		17.4	30	36.3	164		27.6	120	30	19 02	30	20 03	54	29	13 00	52	
10	329	54.5		17.5	45	11.7	164		15.6	120	20	18 40	19 05	19 34	51	33	01	48	
11	344	54.4	+23	17.6	59	47.1	164	-2	03.6	120	10 N	18 22	18 45	19 12	0 47	37	13 03	44	
12	359	54.2	+23	17.7	74	22.5	164	-1	51.6	121	0	18 04	18 27	18 53	0 44	41	13 04	40	
13	14	54.1		17.8	88	57.9	165		39.5	120	10 S	17 47	18 10	36	41	44	05	37	
14	29	54.0		17.9	103	33.4	164		27.5	120	20	28	17 52	20	38	48	06	33	
15	44	53.8		18.0	118	08.8	165		15.5	121	30	17 07	33	18 03	35	52	08	28	
16	59	53.7		18.1	132	44.3	164	-1	03.4	120	35	16 55	23	17 55	32	55	08	27	
17	74	53.6	+23	18.2	147	19.7	165	-0	51.4	121	40	16 41	17 11	17 45	0 30	58	13 09	24	
18	89	53.4	+23	18.4	161	55.2	165	-0	39.3	121	45	16 24	16 58	17 35	0 27	61	13 10	21	
19	104	53.3		18.5	176	30.7	164		27.2	120	50	16 03	42	23	24	65	12	16	
20	119	53.2		18.6	191	06.1	165		15.2	121	52	15 54	34	18	23	67	12	15	
21	134	53.0		18.7	205	41.6	165	-0	03.1	120	54	43	26	12	21	69	13	13	
22	149	52.9		18.8	220	17.1	164	+0	08.9	121	56	30	17	06	19	71	13	11	
23	164	52.8		18.9	234	52.5	165		21.0	120	58	15 15	16 07	17 00	17	74	14	9	
24	179	52.6	+23	19.0	249	28.0		+0	33.0		60 S	14 58	15 56	16 52	0 15	76	13 15	6	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 27 ^m 9		Mag: -4.2 PMG: 10 ^h 52 ^m				Mag: -0.2 PMG: 06 ^h 01 ^m				Mag: -2.6 PMG: 02 ^h 20 ^m				Mag: +0.3 PMG: 02 ^h 42 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	262	45.0	196	23.0	+19	48.6	269	45.9	-5	58.5	324	53.1	-21	-13.3	319	25.0	-20	05.3
1	277	47.4	211	26.5		47.9	284	46.9		58.0	339	55.8		-13.3	334	27.6		05.3
2	292	49.9	226	30.0		47.3	299	47.8		57.4	354	58.5		-13.4	349	30.2		05.4
3	307	52.3	241	33.5		46.6	314	48.8		56.8	10	01.2		-13.4	4	32.8		05.4
4	322	54.8	256	37.0		46.0	329	49.7		56.2	25	03.9		-13.5	19	35.3		05.4
5	337	57.3	271	40.5	+19	45.3	344	50.7	-5	55.7	40	06.6	-21	-13.5	34	37.9	-20	05.5
6	352	59.7	286	44.0	+19	44.6	359	51.7	-5	55.1	55	09.3	-21	-13.6	49	40.5	-20	05.5
7	8	02.2	301	47.5		44.0	14	52.6		54.5	70	12.0		-13.6	64	43.1		05.5
8	23	04.7	316	51.0		43.3	29	53.6		53.9	85	14.7		-13.7	79	45.7		05.5
9	38	07.1	331	54.5		42.7	44	54.5		53.4	100	17.4		-13.7	94	48.3		05.6
10	53	09.6	346	58.0		42.0	59	55.5		52.8	115	20.1		-13.8	109	50.9		05.6
11	68	12.1	2	01.4	+19	41.3	74	56.5	-5	52.2	130	22.8	-21	-13.8	124	53.5	-20	05.6
12	83	14.5	17	04.9	+19	40.7	89	57.4	-5	51.6	145	25.5	-21	-13.9	139	56.1	-20	05.7
13	98	17.0	32	08.4		40.0	104	58.4		51.1	160	28.2		-13.9	154	58.7		05.7
14	113	19.4	47	11.9		39.4	119	59.3		50.5	175	30.9		-14.0	170	01.3		05.7
15	128	21.9	62	15.3		38.7	135	00.3		49.9	190	33.6		-14.0	185	03.9		05.8
16	143	24.4	77	18.8		38.1	150	01.3		49.3	205	36.3		-14.1	200	06.5		05.8
17	158	26.8	92	22.2	+19	37.4	165	02.2	-5	48.8	220	39.0	-21	-14.1	215	09.1	-20	05.8
18	173	29.3	107	25.7	+19	36.8	180	03.2	-5	48.2	235	41.7	-21	-14.2	230	11.7	-20	05.9
19	188	31.8	122	29.1		36.1	195	04.1		47.6	250	44.4		-14.2	245	14.3		05.9
20	203	34.2	137	32.6		35.5	210	05.1		47.0	265	47.1		-14.3	260	16.9		05.9
21	218	36.7	152	36.0		34.9	225	06.1		46.5	280	49.8		-14.3	275	19.5		06.0
22	233	39.2	167	39.5		34.2	240	07.0		45.9	295	52.5		-14.4	290	22.1		06.0
23	248	41.6	182	42.9		33.6	255	08.0		45.3	310	55.2		-14.4	305	24.7		06.0
24	263	44.1	197	46.3	+19	32.9	270	09.0	-5	44.7	325	57.9	-21	-14.5	320	27.2	-20	06.1
Dif.	—		+35		-7		+10		+6		+27		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: 23 ^d 3					PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2										
	PMG: 12 ^h 00 ^m 6				PMG: 07 ^h 35 ^m					Rº: 40 ^m										
	hG ☉		Dec		hG ☾		Dif.			Dec			Dif.		Náut.	Civil		Hora	Rº	Hora
h	°	'	°	'	°	'		°	'			°	h	m	h	m	h	m	m	
0	179	52.6	+23	19.0	249	28.0	164	+0	33.0	121	60 N	h m	h m	h m	h m	h m	h m	h m	h m	
1	194	52.5		19.1	264	03.4	165		45.1	121	58	** **	0 53	2 36	1 19	6	14 08	78		
2	209	52.4		19.2	278	38.9	164	+0	57.2	120	56	** **	1 41	2 56	20	8	06	75		
3	224	52.2		19.3	293	14.3	165	+1	09.2	121	54		2 11	3 13	20	11	05	72		
4	239	52.1		19.4	307	49.8	164		21.3	120	52	0 48	33	27	20	14	03	70		
5	254	52.0	+23	19.5	322	25.2	165	+1	33.3	120	50	1 33	2 51	39	21	15	02	67		
6	269	51.8	+23	19.6	337	00.7	164	+1	45.3	121	45	2 01	3 06	3 50	1 21	17	14 01	65		
7	284	51.7		19.7	351	36.1	164	+1	57.4	120	40	2 46	3 35	4 13	1 22	20	13 58	62		
8	299	51.6		19.8	6	11.5	164	+2	09.4	120	35	3 16	3 58	31	22	24	56	58		
9	314	51.4		19.9	20	46.9	164		21.4	120	30	39	4 16	46	23	26	54	55		
10	329	51.3		20.0	35	22.3	164		33.4	120	20	3 58	31	4 59	23	29	52	53		
11	344	51.2	+23	20.0	49	57.7	163	+2	45.4	120	10 N	4 27	4 56	5 21	24	33	49	49		
12	359	51.0	+23	20.1	64	33.0	164	+2	57.4	120	0	4 49	5 16	5 39	1 24	37	13 47	44		
13	14	50.9		20.2	79	08.4	163	+3	09.4	120	10 S	5 08	5 34	5 57	1 25	40	13 44	41		
14	29	50.8		20.3	93	43.7	163		21.4	120	20	25	5 51	6 14	25	45	42	37		
15	44	50.6		20.4	93	43.7	163		21.4	120	20	41	6 09	33	26	48	39	34		
16	59	50.5		20.5	108	19.0	163		33.4	119	30	5 58	28	6 54	27	52	36	30		
17	74	50.4	+23	20.6	122	54.3	163		45.3	120	35	6 06	38	7 06	27	55	35	27		
18	89	50.2	+23	20.7	137	29.6	163	+3	57.3	119	40	6 16	6 50	7 20	1 28	58	13 33	24		
19	104	50.1		20.8	152	04.9	162	+4	09.2	120	45	6 26	7 03	7 37	1 28	62	13 31	21		
20	119	49.9		20.9	166	40.1	162		21.2	119	50	38	19	7 58	29	66	28	17		
21	134	49.8		21.0	181	15.3	162		33.1	119	52	43	27	8 08	30	67	27	15		
22	149	49.7		21.0	195	50.5	162		45.0	118	54	49	35	19	30	69	26	13		
23	164	49.5		21.1	210	25.7	161	+4	56.8	119	56	6 55	44	31	30	72	24	12		
24	179	49.4	+23	21.2	225	00.8	162	+5	08.7	119	58	7 02	7 54	8 46	1 31	74	13 23	9		
					239	36.0		+5	20.6		60 S	7 09	8 06	9 03	1 31	77	13 21	6		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 6 ^h 24 ^m 0		Mag: -4.2 PMG: 10 ^h 46 ^m				Mag: -0.2 PMG: 05 ^h 59 ^m				Mag: -2.7 PMG: 02 ^h 16 ^m				Mag: +0.3 PMG: 02 ^h 38 ^m					
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	263	44.1	197	46.3	+19	32.9	270	09.0	-5	44.7	325	57.9	-21	14.5	320	27.2	-20	06.1		
1	278	46.6	212	49.7		32.3	285	09.9		44.2	341	00.6		14.5	335	29.8		06.1		
2	293	49.0	227	53.2		31.7	300	10.9		43.6	356	03.3		14.6	350	32.4		06.1		
3	308	51.5	242	56.6		31.0	315	11.8		43.0	11	06.0		14.6	5	35.0		06.1		
4	323	53.9	258	00.0		30.4	330	12.8		42.4	26	08.7		14.7	20	37.6		06.2		
5	338	56.4	273	03.4	+19	29.8	345	13.8	-5	41.9	41	11.4	-21	14.7	35	40.2	-20	06.2		
6	353	58.9	288	06.8	+19	29.1	0	14.7	-5	41.3	56	14.1	-21	14.8	50	42.8	-20	06.2		
7	9	01.3	303	10.2		28.5	15	15.7		40.7	71	16.8		14.8	65	45.4		06.3		
8	24	03.8	318	13.6		27.9	30	16.7		40.1	86	19.6		14.9	80	48.0		06.3		
9	39	06.3	333	17.0		27.2	45	17.6		39.6	101	22.3		14.9	95	50.6		06.3		
10	54	08.7	348	20.4		26.6	60	18.6		39.0	116	25.0		15.0	110	53.2		06.4		
11	69	11.2	3	23.8	+19	26.0	75	19.6	-5	38.4	131	27.7	-21	15.0	125	55.8	-20	06.4		
12	84	13.7	18	27.2	+19	25.4	90	20.5	-5	37.8	146	30.4	-21	15.1	140	58.4	-20	06.4		
13	99	16.1	33	30.5		24.8	105	21.5		37.3	161	33.1		15.1	156	01.0		06.5		
14	114	18.6	48	33.9		24.1	120	22.5		36.7	176	35.8		15.2	171	03.6		06.5		
15	129	21.1	63	37.3		23.5	135	23.4		36.1	191	38.5		15.2	186	06.2		06.5		
16	144	23.5	78	40.6		22.9	150	24.4		35.5	206	41.2		15.3	201	08.8		06.6		
17	159	26.0	93	44.0	+19	22.3	165	25.4	-5	35.0	221	43.9	-21	15.3	216	11.4	-20	06.6		
18	174	28.4	108	47.4	+19	21.7	180	26.3	-5	34.4	236	46.6	-21	15.4	231	14.0	-20	06.6		
19	189	30.9	123	50.7		21.0	195	27.3		33.8	251	49.3		15.4	246	16.6		06.7		
20	204	33.4	138	54.1		20.4	210	28.3		33.3	266	52.0		15.5	261	19.2		06.7		
21	219	35.8	153	57.4		19.8	225	29.2		32.7	281	54.7		15.5	276	21.8		06.7		
22	234	38.3	169	00.8		19.2	240	30.2		32.1	296	57.5		15.6	291	24.4		06.8		
23	249	40.8	184	04.1		18.6	255	31.2		31.5	312	00.2		15.6	306	27.0		06.8		
24	264	43.2	199	07.4	+19	18.0	270	32.1	-5	31.0	327	02.9	-21	15.7	321	29.6	-20	06.8		
Dif.	—		+34		-6		+10		+6		+27		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 8				SD: 14'8 Edad: 24 ^d 3 PMG: 08 ^h 15 ^m															PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'4 Rº: 43 ^m
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.							
	h	°	'	°	'	°	'	°			'	°	'	h	m	h	m	h	m	m
0	179	49.4	+23	21.2	239	36.0	161	+5	20.6	118	60 N	21 26	23 11	** **	1 25	7	15 26	79		
1	194	49.3		21.3	254	11.1	160		32.4	118	58	21 06	22 21	** **	28	10	21	76		
2	209	49.1		21.4	268	46.1	161		44.2	118	56	20 49	21 51	** **	31	12	17	73		
3	224	49.0		21.5	283	21.2	160	+5	56.0	118	54	35	29	23 16	34	14	13	71		
4	239	48.9		21.5	297	56.2	160	+6	07.8	118	52	22	21 11	22 29	36	16	09	69		
5	254	48.7	+23	21.6	312	31.2	159	+6	19.6	117	50	20 12	20 56	22 02	1 38	18	15 06	67		
6	269	48.6	+23	21.7	327	06.1	160	+6	31.3	117	45	19 49	20 26	21 16	1 42	22	15 00	62		
7	284	48.5		21.8	341	41.1	158		43.0	117	40	31	20 04	20 46	46	25	14 54	60		
8	299	48.3		21.9	356	15.9	159	+6	54.7	117	35	16	19 46	22	49	28	49	57		
9	314	48.2		21.9	10	50.8	158	+7	06.4	117	30	19 03	30	20 04	52	30	45	54		
10	329	48.1		22.0	25	25.6	158		18.1	116	20	18 41	19 06	19 35	1 57	34	38	50		
11	344	47.9	+23	22.1	40	00.4	158	+7	29.7	116	10 N	18 22	18 45	19 12	2 01	39	14 31	46		
12	359	47.8	+23	22.2	54	35.2	157	+7	41.3	116	0	18 05	18 27	18 53	2 05	42	14 25	43		
13	14	47.6		22.2	69	09.9	157	+7	52.9	115	10 S	17 47	18 10	36	10	45	19	40		
14	29	47.5		22.3	83	44.6	156	+8	04.4	116	20	29	17 53	20	14	49	13	36		
15	44	47.4		22.4	98	19.2	156		16.0	115	30	17 07	34	18 04	19	54	06	31		
16	59	47.2		22.5	112	53.8	155		27.5	115	35	16 55	23	17 55	22	56	14 02	29		
17	74	47.1	+23	22.5	127	28.3	156	+8	39.0	114	40	16 41	17 11	17 45	2 26	59	13 57	26		
18	89	47.0	+23	22.6	142	02.9	154	+8	50.4	114	45	16 24	16 58	17 35	2 30	62	13 52	23		
19	104	46.8		22.7	156	37.3	155	+9	01.8	114	50	16 03	42	23	35	66	45	19		
20	119	46.7		22.8	171	11.8	154		13.2	114	52	15 54	34	18	37	68	42	18		
21	134	46.6		22.8	185	46.2	153		24.6	113	54	42	26	12	39	71	39	15		
22	149	46.4		22.9	200	20.5	153		35.9	113	56	30	17	06	42	73	36	13		
23	164	46.3		23.0	214	54.8	152		47.2	113	58	15 15	16 07	17 00	45	75	32	10		
24	179	46.2	+23	23.0	229	29.0		+9	58.5		60 S	14 58	15 55	16 52	2 48	79	13 27	8		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 6 ^h 20 ^m 1		Mag: -4.3 PMG: 10 ^h 41 ^m				Mag: -0.3 PMG: 05 ^h 57 ^m				Mag: -2.7 PMG: 02 ^h 11 ^m				Mag: +0.3 PMG: 02 ^h 34 ^m					
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	264	43.2	199	07.4	+19	18.0	270	32.1	-5	31.0	327	02.9	-21	-15.7	321	29.6	-20	06.8		
1	279	45.7	214	10.8		17.4	285	33.1		30.4	342	05.6		-15.7	336	32.2		06.9		
2	294	48.2	229	14.1		16.8	300	34.1		29.8	357	08.3		-15.8	351	34.8		06.9		
3	309	50.6	244	17.4		16.2	315	35.0		29.2	12	11.0		-15.8	6	37.4		06.9		
4	324	53.1	259	20.7		15.6	330	36.0		28.7	27	13.7		-15.9	21	40.0		07.0		
5	339	55.5	274	24.0	+19	15.0	345	37.0	-5	28.1	42	16.4	-21	-15.9	36	42.6	-20	07.0		
6	354	58.0	289	27.4	+19	14.4	0	38.0	-5	27.5	57	19.1	-21	-16.0	51	45.2	-20	07.0		
7	10	00.5	304	30.7		13.8	15	38.9		27.0	72	21.9		-16.0	66	47.8		07.1		
8	25	02.9	319	34.0		13.2	30	39.9		26.4	87	24.6		-16.1	81	50.4		07.1		
9	40	05.4	334	37.3		12.6	45	40.9		25.8	102	27.3		-16.1	96	53.0		07.1		
10	55	07.9	349	40.6		12.0	60	41.8		25.2	117	30.0		-16.2	111	55.6		07.2		
11	70	10.3	4	43.8	+19	11.4	75	42.8	-5	24.7	132	32.7	-21	-16.2	126	58.2	-20	07.2		
12	85	12.8	19	47.1	+19	10.8	90	43.8	-5	24.1	147	35.4	-21	-16.3	142	00.8	-20	07.2		
13	100	15.3	34	50.4		10.2	105	44.8		23.5	162	38.1		-16.3	157	03.4		07.3		
14	115	17.7	49	53.7		09.6	120	45.7		22.9	177	40.8		-16.4	172	06.0		07.3		
15	130	20.2	64	57.0		09.0	135	46.7		22.4	192	43.6		-16.4	187	08.6		07.3		
16	145	22.7	80	00.2		08.5	150	47.7		21.8	207	46.3		-16.5	202	11.2		07.3		
17	160	25.1	95	03.5	+19	07.9	165	48.7	-5	21.2	222	49.0	-21	-16.5	217	13.8	-20	07.4		
18	175	27.6	110	06.8	+19	07.3	180	49.6	-5	20.7	237	51.7	-21	-16.6	232	16.4	-20	07.4		
19	190	30.0	125	10.0		06.7	195	50.6		20.1	252	54.4		-16.6	247	19.0		07.4		
20	205	32.5	140	13.3		06.1	210	51.6		19.5	267	57.1		-16.7	262	21.6		07.5		
21	220	35.0	155	16.5		05.6	225	52.5		18.9	282	59.8		-16.7	277	24.2		07.5		
22	235	37.4	170	19.8		05.0	240	53.5		18.4	298	02.6		-16.8	292	26.8		07.5		
23	250	39.9	185	23.0		04.4	255	54.5		17.8	313	05.3		-16.8	307	29.4		07.6		
24	265	42.4	200	26.2	+19	03.8	270	55.5	-5	17.2	328	08.0	-21	-16.9	322	32.0	-20	07.6		
Dif.	—		+33 -6				+10 +6				+27 -1				+26 0					

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 01 ^m 0				SD: 14'8 Edad: 25 ^d 3 PMG: 08 ^h 58 ^m PHE { 4 ^h : 54'5 12 ^h : 54'7 20 ^h : 54'8 Rº: 44 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº		Hora	Rº				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	179	46.2	+23	23.0	229	29.0	152	+9	58.5	112	60 N	***	0 50	2 36	1 32	9		
1	194	46.0		23.1	244	03.2	152	+10	09.7	112	58	***	1 41	2 56	38	12		
2	209	45.9		23.2	258	37.4	151		20.9	111	56	***	2 10	3 13	43	15		
3	224	45.7		23.2	273	11.5	150		32.0	112	54	0 46	33	27	48	17		
4	239	45.6		23.3	287	45.5	151		43.2	111	52	1 32	2 51	39	52	19		
5	254	45.5	+23	23.4	302	19.6	149	+10	54.3	110	50	2 00	3 06	3 50	1 56	20		
6	269	45.3	+23	23.4	316	53.5	149	+11	05.3	110	45	2 46	3 35	4 13	2 04	25		
7	284	45.2		23.5	331	27.4	148		16.3	110	40	3 16	3 58	31	11	28		
8	299	45.1		23.5	346	01.2	148		27.3	109	35	39	4 16	46	17	30		
9	314	44.9		23.6	0	35.0	148		38.2	109	30	3 58	31	4 59	22	33		
10	329	44.8		23.7	15	08.8	147	+11	49.1	109	20	4 27	4 56	5 21	31	37		
11	344	44.7	+23	23.7	29	42.5	146	+12	00.0	108	10 N	4 50	5 17	5 40	2 40	40		
12	359	44.5	+23	23.8	44	16.1	146	+12	10.8	107	0	5 09	5 35	5 57	2 47	44		
13	14	44.4		23.8	58	49.7	145		21.5	108	10 S	26	5 52	6 15	2 55	47		
14	29	44.2		23.9	73	23.2	144		32.3	106	20	42	6 09	33	3 03	51		
15	44	44.1		24.0	87	56.6	144		42.9	107	30	5 58	28	6 55	13	55		
16	59	44.0		24.0	102	30.0	143	+12	53.6	106	35	6 07	39	7 07	18	58		
17	74	43.8	+23	24.1	117	03.3	143	+13	04.2	105	40	6 16	6 50	7 21	3 25	60		
18	89	43.7	+23	24.1	131	36.6	142	+13	14.7	105	45	6 27	7 04	7 38	3 32	64		
19	104	43.6		24.2	146	09.8	142		25.2	104	50	39	20	7 59	41	68		
20	119	43.4		24.2	160	43.0	141		35.6	104	52	44	28	8 08	45	70		
21	134	43.3		24.3	175	16.1	140		46.0	103	54	49	36	20	50	72		
22	149	43.2		24.3	189	49.1	139	+13	56.3	103	56	6 56	45	32	3 55	74		
23	164	43.0		24.4	204	22.0	139	+14	06.6	103	58	7 02	7 55	8 47	4 00	78		
24	179	42.9	+23	24.4	218	54.9		+14	16.9		60 S	7 10	8 07	9 04	4 07	80		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 16 ^m 1		Mag: -4.3 PMG: 10 ^h 36 ^m				Mag: -0.3 PMG: 05 ^h 56 ^m				Mag: -2.7 PMG: 02 ^h 07 ^m				Mag: +0.3 PMG: 02 ^h 29 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	265	42.4	200	26.2	+19	03.8	270	55.5	-5	17.2	328	08.0	-21	16.9	322	32.0	-20	
1	280	44.8	215	29.5		03.3	285	56.4		16.7	343	10.7		16.9	337	34.6		
2	295	47.3	230	32.7		02.7	300	57.4		16.1	358	13.4		17.0	352	37.2		
3	310	49.8	245	35.9		02.1	315	58.4		15.5	13	16.1		17.0	7	39.8		
4	325	52.2	260	39.2		01.5	330	59.4		14.9	28	18.9		17.1	22	42.4		
5	340	54.7	275	42.4	+19	01.0	346	00.3	-5	14.4	43	21.6	-21	17.1	37	45.0	-20	
6	355	57.2	290	45.6	+19	00.4	1	01.3	-5	13.8	58	24.3	-21	17.2	52	47.6	-20	
7	10	59.6	305	48.8	+18	59.8	16	02.3		13.2	73	27.0		17.2	67	50.2		
8	26	02.1	320	52.0		59.3	31	03.3		12.7	88	29.7		17.3	82	52.8		
9	41	04.5	335	55.2		58.7	46	04.3		12.1	103	32.4		17.3	97	55.4		
10	56	07.0	350	58.4		58.2	61	05.2		11.5	118	35.2		17.4	112	58.0		
11	71	09.5	6	01.6	+18	57.6	76	06.2	-5	10.9	133	37.9	-21	17.4	128	00.6	-20	
12	86	11.9	21	04.8	+18	57.0	91	07.2	-5	10.4	148	40.6	-21	17.5	143	03.3	-20	
13	101	14.4	36	08.0		56.5	106	08.2		09.8	163	43.3		17.5	158	05.9		
14	116	16.9	51	11.1		55.9	121	09.1		09.2	178	46.0		17.6	173	08.5		
15	131	19.3	66	14.3		55.4	136	10.1		08.7	193	48.8		17.6	188	11.1		
16	146	21.8	81	17.5		54.8	151	11.1		08.1	208	51.5		17.7	203	13.7		
17	161	24.3	96	20.7	+18	54.3	166	12.1	-5	07.5	223	54.2	-21	17.7	218	16.3	-20	
18	176	26.7	111	23.8	+18	53.7	181	13.1	-5	06.9	238	56.9	-21	17.8	233	18.9	-20	
19	191	29.2	126	27.0		53.2	196	14.0		06.4	253	59.6		17.8	248	21.5		
20	206	31.6	141	30.1		52.6	211	15.0		05.8	269	02.4		17.9	263	24.1		
21	221	34.1	156	33.3		52.1	226	16.0		05.2	284	05.1		17.9	278	26.7		
22	236	36.6	171	36.4		51.5	241	17.0		04.7	299	07.8		18.0	293	29.3		
23	251	39.0	186	39.6		51.0	256	18.0		04.1	314	10.5		18.0	308	31.9		
24	266	41.5	201	42.7	+18	50.5	271	18.9	-5	03.5	329	13.2	-21	18.1	323	34.5	-20	
Dif.	—		+32 -6				+10 +6				+27 -1				+26			

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: 14'9 Edad: 26 ^d 3 PHE 4^h: 54'9 12^h: 55'1 20^h: 55'2												
	PMG: 09 ^h 42 ^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	179	42.9	+23 24.4	218	54.9	139	+14 16.9	101	60 N	21 27	23 13	** **	1 41	13	18 07	82
1	194	42.7	24.5	233	27.8	137	27.0	102	58	21 07	22 22	** **	50	16	17 55	79
2	209	42.6	24.5	248	00.5	137	37.2	100	56	20 50	21 52	** **	1 58	18	45	76
3	224	42.5	24.6	262	33.2	137	47.2	100	54	36	30	23 17	2 05	21	36	73
4	239	42.3	24.6	277	05.9	135	+14 57.2	100	52	23	21 12	22 31	11	23	29	70
5	254	42.2	+23 24.7	291	38.4	135	+15 07.2	99	50	20 12	20 57	22 03	2 16	25	17 22	69
6	269	42.1	+23 24.7	306	10.9	134	+15 17.1	98	45	19 50	20 27	21 17	2 29	28	17 07	65
7	284	41.9	24.8	320	43.3	134	26.9	98	40	32	20 05	20 46	39	32	16 55	62
8	299	41.8	24.8	335	15.7	133	36.7	97	35	17	19 46	23	47	35	44	60
9	314	41.6	24.9	349	48.0	132	46.4	97	30	19 04	31	20 04	2 55	37	35	58
10	329	41.5	24.9	4	20.2	131	+15 56.1	95	20	18 42	19 06	19 35	3 08	41	19	55
11	344	41.4	+23 24.9	18	52.3	131	+16 05.6	96	10 N	18 23	18 46	19 13	3 20	44	16 06	51
12	359	41.2	+23 25.0	33	24.4	130	+16 15.2	94	0	18 05	18 27	18 54	3 31	47	15 53	48
13	14	41.1	25.0	47	56.4	129	24.6	94	10 S	17 47	18 10	37	42	50	41	45
14	29	41.0	25.1	62	28.3	129	34.0	94	20	29	17 53	20	3 54	53	27	43
15	44	40.8	25.1	77	00.2	128	43.4	92	30	17 08	34	18 04	4 08	57	12	39
16	59	40.7	25.1	91	32.0	127	+16 52.6	92	35	16 55	23	17 55	16	59	15 03	37
17	74	40.6	+23 25.2	106	03.7	126	+17 01.8	91	40	16 41	17 12	17 46	4 25	62	14 53	34
18	89	40.4	+23 25.2	120	35.3	125	+17 10.9	91	45	16 24	16 58	17 35	4 36	65	14 41	31
19	104	40.3	25.3	135	06.8	125	20.0	89	50	16 04	42	24	49	69	27	27
20	119	40.1	25.3	149	38.3	124	28.9	89	52	15 54	35	18	4 55	71	20	26
21	134	40.0	25.3	164	09.7	124	37.8	89	54	43	26	13	5 02	73	13	23
22	149	39.9	25.4	178	41.1	122	46.7	87	56	30	17	06	09	76	14 05	21
23	164	39.7	25.4	193	12.3	122	+17 55.4	87	58	15 15	16 07	17 00	18	79	13 55	19
24	179	39.6	+23 25.4	207	43.5		+18 04.1		60 S	14 58	15 55	16 52	5 27	83	13 45	15
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 6 ^h 12 ^m 2		Mag: -4.4 PMG: 10 ^h 31 ^m			Mag: -0.3 PMG: 05 ^h 54 ^m			Mag: -2.7 PMG: 02 ^h 03 ^m			Mag: +0.3 PMG: 02 ^h 25 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	266	41.5	201 42.7	+18 50.5	271 18.9	-5 03.5	329 13.2	-21 -18.1	323 34.5	-20 08.4						
1	281	44.0	216 45.8	49.9	286 19.9	03.0	344 16.0	-18.2	338 37.1	08.4						
2	296	46.4	231 49.0	49.4	301 20.9	02.4	359 18.7	-18.2	353 39.7	08.5						
3	311	48.9	246 52.1	48.9	316 21.9	01.8	14 21.4	-18.3	8 42.3	08.5						
4	326	51.4	261 55.2	48.3	331 22.9	01.2	29 24.1	-18.3	23 44.9	08.5						
5	341	53.8	276 58.3	+18 47.8	346 23.9	-5 00.7	44 26.9	-21 -18.4	38 47.5	-20 08.6						
6	356	56.3	292 01.4	+18 47.3	1 24.8	-5 00.1	59 29.6	-21 -18.4	53 50.1	-20 08.6						
7	11	58.8	307 04.6	46.7	16 25.8	-4 59.5	74 32.3	-18.5	68 52.7	08.6						
8	27	01.2	322 07.7	46.2	31 26.8	59.0	89 35.0	-18.5	83 55.4	08.7						
9	42	03.7	337 10.8	45.7	46 27.8	58.4	104 37.8	-18.6	98 58.0	08.7						
10	57	06.1	352 13.9	45.1	61 28.8	57.8	119 40.5	-18.6	114 00.6	08.8						
11	72	08.6	7 16.9	+18 44.6	76 29.8	-4 57.3	134 43.2	-21 -18.7	129 03.2	-20 08.8						
12	87	11.1	22 20.0	+18 44.1	91 30.7	-4 56.7	149 45.9	-21 -18.7	144 05.8	-20 08.8						
13	102	13.5	37 23.1	43.6	106 31.7	56.1	164 48.6	-18.8	159 08.4	08.9						
14	117	16.0	52 26.2	43.1	121 32.7	55.6	179 51.4	-18.8	174 11.0	08.9						
15	132	18.5	67 29.3	42.5	136 33.7	55.0	194 54.1	-18.9	189 13.6	08.9						
16	147	20.9	82 32.3	42.0	151 34.7	54.4	209 56.8	-18.9	204 16.2	09.0						
17	162	23.4	97 35.4	+18 41.5	166 35.7	-4 53.8	224 59.6	-21 -19.0	219 18.8	-20 09.0						
18	177	25.9	112 38.5	+18 41.0	181 36.6	-4 53.3	240 02.3	-21 -19.0	234 21.4	-20 09.0						
19	192	28.3	127 41.5	40.5	196 37.6	52.7	255 05.0	-19.1	249 24.0	09.1						
20	207	30.8	142 44.6	40.0	211 38.6	52.1	270 07.7	-19.1	264 26.6	09.1						
21	222	33.3	157 47.6	39.5	226 39.6	51.6	285 10.5	-19.2	279 29.2	09.1						
22	237	35.7	172 50.7	39.0	241 40.6	51.0	300 13.2	-19.2	294 31.9	09.2						
23	252	38.2	187 53.7	38.5	256 41.6	50.4	315 15.9	-19.3	309 34.5	09.2						
24	267	40.6	202 56.8	+18 38.0	271 42.6	-4 49.9	330 18.6	-21 -19.4	324 37.1	-20 09.2						
Dif.	—		+31	-5	+10	+6	+27	-1	+26	0						

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7				SD: 15'1		PHE { 4 ^h : 55'4 12 ^h : 55'5 20 ^h : 55'7												
	PMG: 12 ^h 01 ^m 5				Edad: 27 ^d 3														
					PMG: 10 ^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		h m m	
0	179	39.6	+23	25.4	207	43.5	121	+18	04.1	86	60 N	** **	0 49	2 36		1 54	18	19 29	79
1	194	39.5		25.5	222	14.6	120		12.7	85	58	** **	1 40	2 56		2 06	22		14 75
2	209	39.3		25.5	236	45.6	120		21.2	85	56	** **	2 10	3 13		16	25	19 01	72
3	224	39.2		25.5	251	16.6	119		29.7	83	54	0 45	33	27		26	27	18 49	71
4	239	39.0		25.6	265	47.5	117		38.0	83	52	1 32	2 51	39		34	29		39 69
5	254	38.9	+23	25.6	280	18.2	118	+18	46.3	82	50	2 00	3 06	3 50		2 41	32	18 31	67
6	269	38.8	+23	25.6	294	49.0	116	+18	54.5	81	45	2 46	3 36	4 13		2 57	35	18 12	64
7	284	38.6		25.6	309	19.6	116	+19	02.6	80	40	3 16	3 58	31		3 11	37	17 57	62
8	299	38.5		25.7	323	50.2	114		10.6	80	35	40	4 16	46		22	39		44 60
9	314	38.4		25.7	338	20.6	114		18.6	78	30	3 58	32	4 59		32	41		33 58
10	329	38.2		25.7	352	51.0	114		26.4	78	20	4 27	4 57	5 21		3 49	45	17 14	55
11	344	38.1	+23	25.8	7	21.4	112	+19	34.2	77	10 N	4 50	5 17	5 40		4 04	47	16 57	54
12	359	38.0	+23	25.8	21	51.6	112	+19	41.9	76	0	5 09	5 35	5 58		4 18	50	16 41	52
13	14	37.8		25.8	36	21.8	111		49.5	75	10 S	26	5 52	6 15		32	52		26 49
14	29	37.7		25.8	50	51.9	110	+19	57.0	74	20	42	6 10	34		4 47	55	16 10	47
15	44	37.5		25.8	65	21.9	109	+20	04.4	73	30	5 59	29	6 55		5 05	58	15 51	44
16	59	37.4		25.9	79	51.8	109		11.7	72	35	6 08	39	7 07		15	60		40 42
17	74	37.3	+23	25.9	94	21.7	108	+20	18.9	72	40	6 17	6 51	7 22		5 27	62	15 27	41
18	89	37.1	+23	25.9	108	51.5	107	+20	26.1	70	45	6 27	7 05	7 38		5 41	65	15 12	39
19	104	37.0		25.9	123	21.2	106		33.1	69	50	39	21	7 59		5 58	68	14 54	35
20	119	36.9		26.0	137	50.8	105		40.0	69	52	44	28	8 09		6 06	70		46 33
21	134	36.7		26.0	152	20.3	105		46.9	67	54	50	36	20		15	72		36 32
22	149	36.6		26.0	166	49.8	104	+20	53.6	67	56	6 56	46	33		25	75		26 29
23	164	36.4		26.0	181	19.2	103	+21	00.3	65	58	7 03	7 56	8 48		6 37	78	14 14	26
24	179	36.3	+23	26.0	195	48.5		+21	06.8		60 S	7 11	8 07	9 05		6 50	82	14 00	22
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 6 ^h 08 ^m 3		Mag: -4.4 PMG: 10 ^h 26 ^m				Mag: -0.3 PMG: 05 ^h 53 ^m				Mag: -2.7 PMG: 01 ^h 58 ^m				Mag: +0.3 PMG: 02 ^h 21 ^m				
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	267	40.6	202	56.8	+18	38.0	271	42.6	-4	49.9	330	18.6	-21	19.4	324	37.1	-20	09.2	
1	282	43.1	217	59.8		37.5	286	43.6		49.3	345	21.4		19.4	339	39.7		09.3	
2	297	45.6	233	02.8		37.0	301	44.5		48.7	0	24.1		19.5	354	42.3		09.3	
3	312	48.0	248	05.9		36.5	316	45.5		48.2	15	26.8		19.5	9	44.9		09.3	
4	327	50.5	263	08.9		36.0	331	46.5		47.6	30	29.6		19.6	24	47.5		09.4	
5	342	53.0	278	11.9	+18	35.5	346	47.5	-4	47.0	45	32.3	-21	19.6	39	50.1	-20	09.4	
6	357	55.4	293	14.9	+18	35.0	1	48.5	-4	46.5	60	35.0	-21	19.7	54	52.7	-20	09.4	
7	12	57.9	308	17.9		34.5	16	49.5		45.9	75	37.7		19.7	69	55.3		09.5	
8	28	00.4	323	20.9		34.0	31	50.5		45.3	90	40.5		19.8	84	57.9		09.5	
9	43	02.8	338	23.9		33.5	46	51.5		44.8	105	43.2		19.8	100	00.5		09.5	
10	58	05.3	353	26.9		33.0	61	52.5		44.2	120	45.9		19.9	115	03.2		09.6	
11	73	07.8	8	29.9	+18	32.5	76	53.4	-4	43.6	135	48.7	-21	19.9	130	05.8	-20	09.6	
12	88	10.2	23	32.9	+18	32.0	91	54.4	-4	43.1	150	51.4	-21	20.0	145	08.4	-20	09.6	
13	103	12.7	38	35.9		31.5	106	55.4		42.5	165	54.1		20.0	160	11.0		09.7	
14	118	15.1	53	38.9		31.1	121	56.4		41.9	180	56.9		20.1	175	13.6		09.7	
15	133	17.6	68	41.8		30.6	136	57.4		41.4	195	59.6		20.1	190	16.2		09.7	
16	148	20.1	83	44.8		30.1	151	58.4		40.8	211	02.3		20.2	205	18.8		09.8	
17	163	22.5	98	47.8	+18	29.6	166	59.4	-4	40.2	226	05.0	-21	20.3	220	21.4	-20	09.8	
18	178	25.0	113	50.7	+18	29.1	182	00.4	-4	39.7	241	07.8	-21	20.3	235	24.0	-20	09.8	
19	193	27.5	128	53.7		28.7	197	01.4		39.1	256	10.5		20.4	250	26.6		09.9	
20	208	29.9	143	56.7		28.2	212	02.4		38.5	271	13.2		20.4	265	29.3		09.9	
21	223	32.4	158	59.6		27.7	227	03.4		38.0	286	16.0		20.5	280	31.9		09.9	
22	238	34.9	174	02.5		27.2	242	04.4		37.4	301	18.7		20.5	295	34.5		10.0	
23	253	37.3	189	05.5		26.8	257	05.4		36.8	316	21.4		20.6	310	37.1		10.0	
24	268	39.8	204	08.4	+18	26.3	272	06.3	-4	36.3	331	24.2	-21	20.6	325	39.7	-20	10.1	
Dif.	—		+30		-5		+10		+6		+27		-1		+26				

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 01. ^m 7				SD: 15'2 Edad: 28 ^d 3 PMG: 11 ^h 20 ^m PHE { 4 ^h : 55'9 12 ^h : 56'1 20 ^h : 56'3 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
0	179	36.3	+23	26.0	195	48.5	103	+21	06.8	64	60 N	21 28	23 14	** **	2 12	29	20 48	68
1	194	36.2		26.0	210	17.8	101		13.2	64	58	21 07	22 23	** **	28	32	29	66
2	209	36.0		26.0	224	46.9	101		19.6	62	56	20 50	21 53	** **	41	35	13	65
3	224	35.9		26.1	239	16.0	100		25.8	61	54	36	31	23 18	2 53	37	20 00	64
4	239	35.8		26.1	253	45.0	100		31.9	60	52	24	21 13	22 31	3 03	39	19 48	63
5	254	35.6	+23	26.1	268	14.0	98	+21	37.9	59	50	20 13	20 58	22 03	3 13	39	19 38	62
6	269	35.5	+23	26.1	282	42.8	98	+21	43.8	58	45	19 50	20 28	21 18	3 32	43	19 16	61
7	284	35.3		26.1	297	11.6	97		49.6	57	40	32	20 05	20 47	3 48	45	18 59	59
8	299	35.2		26.1	311	40.3	97	+21	55.3	56	35	17	19 47	24	4 01	47	44	59
9	314	35.1		26.1	326	09.0	96	+22	00.9	55	30	19 04	32	20 05	13	48	31	58
10	329	34.9		26.1	340	37.6	95		06.4	53	20	18 42	19 07	19 36	34	49	18 09	57
11	344	34.8	+23	26.1	355	06.1	94	+22	11.7	53	10 N	18 23	18 46	19 13	4 51	52	17 51	55
12	359	34.7	+23	26.2	9	34.5	93	+22	17.0	51	0	18 05	18 28	18 54	5 08	53	17 33	54
13	14	34.5		26.2	24	02.8	93		22.1	50	10 S	17 48	18 11	37	24	55	17 15	54
14	29	34.4		26.2	38	31.1	92		27.1	49	20	29	17 53	21	5 42	57	16 57	52
15	44	34.2		26.2	52	59.3	92		32.0	48	30	17 08	34	18 04	6 03	59	35	50
16	59	34.1		26.2	67	27.5	91		36.8	47	35	16 56	24	17 56	15	60	22	50
17	74	34.0	+23	26.2	81	55.6	90	+22	41.5	45	40	16 41	17 12	17 46	6 29	61	16 08	48
18	89	33.8	+23	26.2	96	23.6	89	+22	46.0	44	45	16 25	16 59	17 36	6 46	63	15 51	47
19	104	33.7		26.2	110	51.5	89		50.4	43	50	16 04	42	24	7 06	66	29	45
20	119	33.6		26.2	125	19.4	88		54.7	42	52	15 54	35	19	16	67	19	44
21	134	33.4		26.2	139	47.2	87	+22	58.9	41	54	43	27	13	27	68	15 08	43
22	149	33.3		26.2	154	14.9	87	+23	03.0	39	56	30	18	07	40	70	14 55	41
23	164	33.2		26.2	168	42.6	87		06.9	38	58	15 15	16 07	17 00	7 55	72	40	39
24	179	33.0	+23	26.2	183	10.3		+23	10.7		60 S	14 58	15 56	16 52	8 12	75	14 22	36
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 04. ^m 4		Mag: -4.5 PMG: 10 ^h 21 ^m				Mag: -0.3 PMG: 05 ^h 51 ^m				Mag: -2.7 PMG: 01 ^h 54 ^m				Mag: +0.3 PMG: 02 ^h 17 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	268	39.8	204	08.4	+18	26.3	272	06.3	-4	36.3	331	24.2	-21	-20.6	325	39.7	-20	10.1
1	283	42.2	219	11.4		25.8	287	07.3		35.7	346	26.9		-20.7	340	42.3		10.1
2	298	44.7	234	14.3		25.4	302	08.3		35.1	1	29.6		-20.7	355	44.9		10.1
3	313	47.2	249	17.2		24.9	317	09.3		34.6	16	32.4		-20.8	10	47.5		10.2
4	328	49.6	264	20.1		24.5	332	10.3		34.0	31	35.1		-20.8	25	50.1		10.2
5	343	52.1	279	23.1	+18	24.0	347	11.3	-4	33.4	46	37.8	-21	-20.9	40	52.8	-20	10.2
6	358	54.6	294	26.0	+18	23.5	2	12.3	-4	32.9	61	40.6	-21	-20.9	55	55.4	-20	10.3
7	13	57.0	309	28.9		23.1	17	13.3		32.3	76	43.3		-21.0	70	58.0		10.3
8	28	59.5	324	31.8		22.6	32	14.3		31.7	91	46.0		-21.1	86	00.6		10.3
9	44	02.0	339	34.7		22.2	47	15.3		31.2	106	48.8		-21.1	101	03.2		10.4
10	59	04.4	354	37.6		21.7	62	16.3		30.6	121	51.5		-21.2	116	05.8		10.4
11	74	06.9	9	40.5	+18	21.3	77	17.3	-4	30.0	136	54.3	-21	-21.2	131	08.4	-20	10.4
12	89	09.4	24	43.3	+18	20.8	92	18.3	-4	29.5	151	57.0	-21	-21.3	146	11.0	-20	10.5
13	104	11.8	39	46.2		20.4	107	19.3		28.9	166	59.7		-21.3	161	13.7		10.5
14	119	14.3	54	49.1		19.9	122	20.3		28.3	182	02.5		-21.4	176	16.3		10.5
15	134	16.7	69	52.0		19.5	137	21.3		27.8	197	05.2		-21.4	191	18.9		10.6
16	149	19.2	84	54.9		19.0	152	22.3		27.2	212	07.9		-21.5	206	21.5		10.6
17	164	21.7	99	57.7	+18	18.6	167	23.3	-4	26.6	227	10.7	-21	-21.5	221	24.1	-20	10.6
18	179	24.1	115	00.6	+18	18.2	182	24.3	-4	26.1	242	13.4	-21	-21.6	236	26.7	-20	10.7
19	194	26.6	130	03.4		17.7	197	25.3		25.5	257	16.1		-21.6	251	29.3		10.7
20	209	29.1	145	06.3		17.3	212	26.3		25.0	272	18.9		-21.7	266	31.9		10.8
21	224	31.5	160	09.1		16.8	227	27.3		24.4	287	21.6		-21.8	281	34.6		10.8
22	239	34.0	175	12.0		16.4	242	28.3		23.8	302	24.4		-21.8	296	37.2		10.8
23	254	36.5	190	14.8		16.0	257	29.3		23.3	317	27.1		-21.9	311	39.8		10.9
24	269	38.9	205	17.7	+18	15.5	272	30.3	-4	22.7	332	29.8	-21	-21.9	326	42.4	-20	10.9
Dif.	—		+29		-4		+10		+6		+27		-1		+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 9				SD: 15'4 Edad: 29 ^d 3					PHE { 4 ^h : 56'5 12 ^h : 56'6 20 ^h : 56'8			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	179	33.0	+23	26.2	183	10.3	85	+23	10.7	37	60 N	2 36	2 41	46	21 56	51		
1	194	32.9		26.2	197	37.8	85		14.4	36	58	2 56	3 00	48	35 52	52		
2	209	32.7		26.2	212	05.3	85		18.0	34	56	3 13	16	49	18 53			
3	224	32.6		26.2	226	32.8	83		21.4	33	54	28	30	49	21 04	53		
4	239	32.5		26.2	241	00.1	84		24.7	32	52	40	42	50	20 51	54		
5	254	32.3	+23	26.2	255	27.5	82	+23	27.9	31	50	3 51	3 52	51	20 40	54		
6	269	32.2	+23	26.2	269	54.7	82	+23	31.0	29	45	4 13	4 15	51	20 17	54		
7	284	32.1		26.2	284	21.9	82		33.9	28	40	31	33	52	19 58	55		
8	299	31.9		26.2	298	49.1	81		36.7	27	35	40	4 48	53	43 55			
9	314	31.8		26.1	313	16.2	81		39.4	25	30	32	5 01	53	29 55			
10	329	31.6		26.1	327	43.3	80		41.9	24	20	22	23	54	19 06	56		
11	344	31.5	+23	26.1	342	10.3	79	+23	44.3	22	10 N	5 41	5 43	55	18 46	56		
12	359	31.4	+23	26.1	356	37.2	79	+23	46.5	22	0	5 58	6 01	55	18 27	56		
13	14	31.2		26.1	11	04.1	79		48.7	20	10 S	6 16	19	56	18 09	56		
14	29	31.1		26.1	25	31.0	78		50.7	18	20	34	6 39	56	17 49	56		
15	44	31.0		26.1	39	57.8	77		52.5	18	30	29	7 02	56	25 57			
16	59	30.8		26.1	54	24.5	78		54.3	16	35	40	7 30	58	16 56	57		
17	74	30.7	+23	26.1	68	51.3	76	+23	55.9	14	40	6 52	7 49	58	16 38	56		
18	89	30.6	+23	26.0	83	17.9	77	+23	57.3	13	45	7 05	8 12	58	14 57			
19	104	30.4		26.0	97	44.6	76		58.6	12	50	21	23	59	16 03	56		
20	119	30.3		26.0	112	11.2	75	+23	59.8	10	52	29	35	59	15 51	56		
21	134	30.1		26.0	126	37.7	75	+24	00.8	9	54	37	8 50	59	36 56			
22	149	30.0		26.0	141	04.2	75		01.7	8	56	46	9 07	59	15 19	56		
23	164	29.9		26.0	155	30.7	75		02.5	6	58	56	9 27	61	14 58	56		
24	179	29.7	+23	25.9	169	57.2		+24	03.1		60 S	8 08	9 27	61	14 58	56		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 6 ^h 00 ^m 4		Mag: -4.5 PMG: 10 ^h 17 ^m			Mag: -0.3 PMG: 05 ^h 50 ^m			Mag: -2.7 PMG: 01 ^h 50 ^m			Mag: +0.3 PMG: 02 ^h 13 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	269	38.9	205	17.7	+18	15.5	272	30.3	-4	22.7	332	29.8	-21	21.9	326	42.4	-20	10.9
1	284	41.4	220	20.5		15.1	287	31.3		22.1	347	32.6		22.0	341	45.0		10.9
2	299	43.9	235	23.3		14.7	302	32.3		21.6	2	35.3		22.0	356	47.6		11.0
3	314	46.3	250	26.2		14.3	317	33.3		21.0	17	38.1		22.1	11	50.2		11.0
4	329	48.8	265	29.0		13.8	332	34.3		20.4	32	40.8		22.1	26	52.9		11.0
5	344	51.2	280	31.8	+18	13.4	347	35.3	-4	19.9	47	43.5	-21	22.2	41	55.5	-20	11.1
6	359	53.7	295	34.6	+18	13.0	2	36.3	-4	19.3	62	46.3	-21	22.2	56	58.1	-20	11.1
7	14	56.2	310	37.4		12.6	17	37.3		18.7	77	49.0		22.3	72	00.7		11.1
8	29	58.6	325	40.2		12.2	32	38.3		18.2	92	51.8		22.3	87	03.3		11.2
9	45	01.1	340	43.0		11.7	47	39.3		17.6	107	54.5		22.4	102	05.9		11.2
10	60	03.6	355	45.8		11.3	62	40.3		17.1	122	57.2		22.5	117	08.5		11.2
11	75	06.0	10	48.6	+18	10.9	77	41.3	-4	16.5	138	00.0	-21	22.5	132	11.2	-20	11.3
12	90	08.5	25	51.4	+18	10.5	92	42.3	-4	15.9	153	02.7	-21	22.6	147	13.8	-20	11.3
13	105	11.0	40	54.2		10.1	107	43.3		15.4	168	05.5		22.6	162	16.4		11.4
14	120	13.4	55	56.9		09.7	122	44.3		14.8	183	08.2		22.7	177	19.0		11.4
15	135	15.9	70	59.7		09.3	137	45.3		14.2	198	10.9		22.7	192	21.6		11.4
16	150	18.4	86	02.5		08.9	152	46.3		13.7	213	13.7		22.8	207	24.2		11.5
17	165	20.8	101	05.3	+18	08.5	167	47.3	-4	13.1	228	16.4	-21	22.8	222	26.8	-20	11.5
18	180	23.3	116	08.0	+18	08.1	182	48.3	-4	12.6	243	19.2	-21	22.9	237	29.5	-20	11.5
19	195	25.7	131	10.8		07.7	197	49.3		12.0	258	21.9		22.9	252	32.1		11.6
20	210	28.2	146	13.5		07.3	212	50.3		11.4	273	24.7		23.0	267	34.7		11.6
21	225	30.7	161	16.3		06.9	227	51.3		10.9	288	27.4		23.1	282	37.3		11.6
22	240	33.1	176	19.0		06.5	242	52.3		10.3	303	30.1		23.1	297	39.9		11.7
23	255	35.6	191	21.8		06.1	257	53.4		09.7	318	32.9		23.2	312	42.5		11.7
24	270	38.1	206	24.5	+18	05.7	272	54.4	-4	09.2	333	35.6	-21	23.2	327	45.2	-20	11.7
Dif.	—		+28			-4	+10			+6	+27			-1	+26			

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 : 57'0 12 ^h : 57'2 20 ^h : 57'4													
	Edad: 0 ^d 7																	
	PMG: 12 ^h 02 ^m 1				PMG: 13 ^h 10 ^m Rº: 56 ^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	29.7	+23	25.9	169	57.2	74	+24	03.1	5	60 N	21 28	23 14	** **	3 27	66	22 47	34
1	194	29.6		25.9	184	23.6	74		03.6	3	58	21 07	22 23	** **	3 48	64	27	38
2	209	29.5		25.9	198	50.0	73		03.9	2	56	20 51	21 53	** **	4 05	63	22 11	40
3	224	29.3		25.9	213	16.3	74		04.1	1	54	36	31	23 18	19	63	21 57	42
4	239	29.2		25.9	227	42.7	73		04.2	1	52	24	21 13	22 31	32	62	45	43
5	254	29.1	+23	25.8	242	09.0	72	+24	04.1	2	50	20 13	20 58	22 03	4 43	62	21 34	44
6	269	28.9	+23	25.8	256	35.2	73	+24	03.9	4	45	19 51	20 28	21 18	5 06	61	21 11	47
7	284	28.8		25.8	271	01.5	72		03.5	5	40	33	20 05	20 47	25	60	20 53	49
8	299	28.6		25.8	285	27.7	72		03.0	6	35	17	19 47	24	41	59	38	50
9	314	28.5		25.7	299	53.9	72		02.4	8	30	19 04	32	20 05	5 54	59	24	52
10	329	28.4		25.7	314	20.1	72		01.6	10	20	18 42	19 07	19 36	6 17	58	20 02	53
11	344	28.2	+23	25.7	328	46.3	71	+24	00.6	11	10 N	18 23	18 46	19 14	6 38	57	19 42	55
12	359	28.1	+23	25.7	343	12.4	72	+23	59.5	12	0	18 06	18 28	18 55	6 56	57	19 23	57
13	14	28.0		25.6	357	38.6	71		58.3	13	10 S	17 48	18 11	38	7 15	56	19 05	57
14	29	27.8		25.6	12	04.7	71		57.0	16	20	30	17 54	21	35	55	18 45	59
15	44	27.7		25.6	26	30.8	71		55.4	16	30	17 09	35	18 05	7 58	54	22	61
16	59	27.6		25.6	40	56.9	71		53.8	18	35	16 56	24	17 56	8 12	53	18 08	62
17	74	27.4	+23	25.5	55	23.0	71	+23	52.0	20	40	16 42	17 13	17 47	8 28	52	17 53	63
18	89	27.3	+23	25.5	69	49.1	70	+23	50.0	20	45	16 25	16 59	17 36	8 47	51	17 34	65
19	104	27.1		25.5	84	15.1	71		48.0	23	50	16 04	43	24	9 10	49	17 11	66
20	119	27.0		25.4	98	41.2	71		45.7	23	52	15 54	35	19	22	48	16 59	68
21	134	26.9		25.4	113	07.3	70		43.4	26	54	43	27	13	34	48	47	69
22	149	26.7		25.4	127	33.3	71		40.8	26	56	31	18	07	9 49	46	32	71
23	164	26.6		25.3	141	59.4	70		38.2	28	58	15 16	16 08	17 01	10 06	45	16 15	72
24	179	26.5	+23	25.3	156	25.4		+23	35.4		60 S	14 58	15 56	16 53	10 28	41	15 54	75
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 56 ^m 5		Mag: -4.5 PMG: 10 ^h 13 ^m				Mag: -0.3 PMG: 05 ^h 48 ^m				Mag: -2.7 PMG: 01 ^h 45 ^m				Mag: +0.3 PMG: 02 ^h 09 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	270	38.1	206	24.5	+18	05.7	272	54.4	-4	09.2	333	35.6	-21	-23.2	327	45.2	-20	11.7
1	285	40.5	221	27.2		05.3	287	55.4		08.6	348	38.4		-23.3	342	47.8		11.8
2	300	43.0	236	30.0		04.9	302	56.4		08.1	3	41.1		-23.3	357	50.4		11.8
3	315	45.5	251	32.7		04.5	317	57.4		07.5	18	43.9		-23.4	12	53.0		11.9
4	330	47.9	266	35.4		04.1	332	58.4		06.9	33	46.6		-23.4	27	55.6		11.9
5	345	50.4	281	38.1	+18	03.7	347	59.4	-4	06.4	48	49.4	-21	-23.5	42	58.2	-20	11.9
6	0	52.9	296	40.8	+18	03.3	3	00.4	-4	05.8	63	52.1	-21	-23.5	58	00.9	-20	12.0
7	15	55.3	311	43.5		03.0	18	01.4		05.3	78	54.8		-23.6	73	03.5		12.0
8	30	57.8	326	46.2		02.6	33	02.4		04.7	93	57.6		-23.7	88	06.1		12.0
9	46	00.2	341	48.9		02.2	48	03.4		04.1	109	00.3		-23.7	103	08.7		12.1
10	61	02.7	356	51.6		01.8	63	04.4		03.6	124	03.1		-23.8	118	11.3		12.1
11	76	05.2	11	54.3	+18	01.4	78	05.5	-4	03.0	139	05.8	-21	-23.8	133	13.9	-20	12.1
12	91	07.6	26	57.0	+18	01.1	93	06.5	-4	02.4	154	08.6	-21	-23.9	148	16.6	-20	12.2
13	106	10.1	41	59.7		00.7	108	07.5		01.9	169	11.3		-23.9	163	19.2		12.2
14	121	12.6	57	02.4		00.3	123	08.5		01.3	184	14.1		-24.0	178	21.8		12.2
15	136	15.0	72	05.1	+18	00.0	138	09.5		00.8	199	16.8		-24.0	193	24.4		12.3
16	151	17.5	87	07.7	+17	59.6	153	10.5	-4	00.2	214	19.6		-24.1	208	27.0		12.3
17	166	20.0	102	10.4	+17	59.2	168	11.5	-3	59.6	229	22.3	-21	-24.2	223	29.7	-20	12.4
18	181	22.4	117	13.0	+17	58.9	183	12.5	-3	59.1	244	25.1	-21	-24.2	238	32.3	-20	12.4
19	196	24.9	132	15.7		58.5	198	13.5		58.5	259	27.8		-24.3	253	34.9		12.4
20	211	27.4	147	18.4		58.1	213	14.6		58.0	274	30.6		-24.3	268	37.5		12.5
21	226	29.8	162	21.0		57.8	228	15.6		57.4	289	33.3		-24.4	283	40.1		12.5
22	241	32.3	177	23.7		57.4	243	16.6		56.8	304	36.0		-24.4	298	42.7		12.5
23	256	34.7	192	26.3		57.0	258	17.6		56.3	319	38.8		-24.5	313	45.4		12.6
24	271	37.2	207	28.9	+17	56.7	273	18.6	-3	55.7	334	41.5	-21	-24.5	328	48.0	-20	12.6
Dif.	—		+27	-4			+10	+6			+27	-1			+26			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 02 ^m 3				SD: 15'7 Edad: 1 ^d 7 PMG: 14 ^h 06 ^m PHE { 4^h: 57'5 12^h: 57'7 20^h: 57'8												Rº: 56 ^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	26.5	+23	25.3	156	25.4	71	+23	35.4	30	60 N	*** **	0 50	2 37	4 33	82	23 21	22
1	194	26.3		25.3	170	51.5	71		32.4	31	58	*** **	1 41	2 57	4 52	79	23 05	25
2	209	26.2		25.2	185	17.6	70		29.3	32	56	*** **	2 11	3 14	5 08	77	22 51	29
3	224	26.1		25.2	199	43.6	71		26.1	34	54	0 46	34	28	22	74	39	31
4	239	25.9		25.1	214	09.7	71		22.7	35	52	1 33	2 52	40	34	73	28	33
5	254	25.8	+23	25.1	228	35.8	71	+23	19.2	37	50	2 01	3 07	3 51	5 45	71	22 18	36
6	269	25.7	+23	25.1	243	01.9	71	+23	15.5	38	45	2 47	3 36	4 14	6 07	68	21 58	39
7	284	25.5		25.0	257	28.0	71		11.7	39	40	3 17	3 59	32	25	66	42	42
8	299	25.4		25.0	271	54.1	71		07.8	41	35	40	4 17	4 47	40	64	28	44
9	314	25.2		24.9	286	20.2	71	+23	03.7	42	30	3 59	33	5 00	6 53	63	21 16	46
10	329	25.1		24.9	300	46.3	72	+22	59.5	44	20	4 28	4 58	22	7 15	61	20 55	50
11	344	25.0	+23	24.8	315	12.5	72	+22	55.1	45	10 N	4 51	5 18	5 41	7 35	58	20 37	52
12	359	24.8	+23	24.8	329	38.7	72	+22	50.6	47	0	5 10	5 36	5 59	7 53	56	20 20	55
13	14	24.7		24.8	344	04.9	72		45.9	48	10 S	27	5 53	6 16	8 11	53	20 02	58
14	29	24.6		24.7	358	31.1	72		41.1	49	20	5 43	6 11	35	30	51	19 44	61
15	44	24.4		24.7	12	57.3	72		36.2	51	30	6 00	30	6 56	8 52	49	23	63
16	59	24.3		24.6	27	23.5	73		31.1	52	35	08	40	7 08	9 05	47	19 10	66
17	74	24.2	+23	24.6	41	49.8	73	+22	25.9	53	40	6 18	6 52	7 22	9 20	45	18 56	68
18	89	24.0	+23	24.5	56	16.1	73	+22	20.6	55	45	6 28	7 05	7 39	9 38	42	18 39	70
19	104	23.9		24.5	70	42.4	74		15.1	56	50	40	22	8 00	9 59	40	17	75
20	119	23.8		24.4	85	08.8	73		09.5	58	52	45	29	10	10 10	38	18 07	76
21	134	23.6		24.4	99	35.1	74	+22	03.7	58	54	51	37	21	22	36	17 56	78
22	149	23.5		24.3	114	01.5	75	+21	57.9	61	56	6 57	46	34	35	34	43	80
23	164	23.4		24.3	128	28.0	74		51.8	61	58	7 04	7 57	8 48	10 51	30	17 27	84
24	179	23.2	+23	24.2	142	54.4		+21	45.7		60 S	7 11	8 08	9 06	11 09	27	17 09	88

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 52 ^m 6		Mag: -4.5 PMG: 10 ^h 08 ^m				Mag: -0.4 PMG: 05 ^h 46 ^m				Mag: -2.7 PMG: 01 ^h 41 ^m				Mag: +0.3 PMG: 02 ^h 04 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	271	37.2	207	28.9	+17	56.7	273	18.6	-3	55.7	334	41.5	-21	24.5	328	48.0	-20	12.6
1	286	39.7	222	31.6		56.3	288	19.6		55.2	349	44.3		24.6	343	50.6		12.6
2	301	42.1	237	34.2		56.0	303	20.6		54.6	4	47.0		24.7	358	53.2		12.7
3	316	44.6	252	36.8		55.6	318	21.6		54.0	19	49.8		24.7	13	55.8		12.7
4	331	47.1	267	39.4		55.3	333	22.7		53.5	34	52.5		24.8	28	58.5		12.8
5	346	49.5	282	42.1	+17	54.9	348	23.7	-3	52.9	49	55.3	-21	24.8	44	01.1	-20	12.8
6	1	52.0	297	44.7	+17	54.6	3	24.7	-3	52.4	64	58.0	-21	24.9	59	03.7	-20	12.8
7	16	54.5	312	47.3		54.2	18	25.7		51.8	80	00.8		24.9	74	06.3		12.9
8	31	56.9	327	49.9		53.9	33	26.7		51.3	95	03.5		25.0	89	08.9		12.9
9	46	59.4	342	52.5		53.5	48	27.7		50.7	110	06.3		25.0	104	11.6		12.9
10	62	01.8	357	55.1		53.2	63	28.8		50.1	125	09.0		25.1	119	14.2		13.0
11	77	04.3	12	57.7	+17	52.9	78	29.8	-3	49.6	140	11.8	-21	25.2	134	16.8	-20	13.0
12	92	06.8	28	00.3	+17	52.5	93	30.8	-3	49.0	155	14.5	-21	25.2	149	19.4	-20	13.0
13	107	09.2	43	02.8		52.2	108	31.8		48.5	170	17.3		25.3	164	22.0		13.1
14	122	11.7	58	05.4		51.9	123	32.8		47.9	185	20.1		25.3	179	24.7		13.1
15	137	14.2	73	08.0		51.5	138	33.8		47.3	200	22.8		25.4	194	27.3		13.2
16	152	16.6	88	10.6		51.2	153	34.9		46.8	215	25.6		25.4	209	29.9		13.2
17	167	19.1	103	13.1	+17	50.9	168	35.9	-3	46.2	230	28.3	-21	25.5	224	32.5	-20	13.2
18	182	21.6	118	15.7	+17	50.5	183	36.9	-3	45.7	245	31.1	-21	25.5	239	35.1	-20	13.3
19	197	24.0	133	18.3		50.2	198	37.9		45.1	260	33.8		25.6	254	37.8		13.3
20	212	26.5	148	20.8		49.9	213	38.9		44.6	275	36.6		25.7	269	40.4		13.3
21	227	29.0	163	23.4		49.6	228	40.0		44.0	290	39.3		25.7	284	43.0		13.4
22	242	31.4	178	25.9		49.2	243	41.0		43.4	305	42.1		25.8	299	45.6		13.4
23	257	33.9	193	28.5		48.9	258	42.0		42.9	320	44.8		25.8	314	48.2		13.4
24	272	36.3	208	31.0	+17	48.6	273	43.0	-3	42.3	335	47.6	-21	25.9	329	50.9	-20	13.5
Dif.	—		+26		-3		+10		+6		+27		-1		+26			0

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'7				PHE { 4 ^h : 58'0 12 ^h : 58'1 20 ^h : 58'3													
	Edad: 2 ^d 7																	
	PMG: 12 ^h 02 ^m 6				PMG: 15 ^h 02 ^m Rº: 53 ^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	h m m
0	179	23.2	+23	24.2	142	54.4	75	+21	45.7	63	60 N	21 28	23 13	** **	5 55	92	23 43	14
1	194	23.1		24.2	157	20.9	75		39.4	64	58	21 07	22 23	** **	6 11	87	30 19	
2	209	23.0		24.1	171	47.4	76		33.0	66	56	20 51	21 53	** **	25	84	20 2	
3	224	22.8		24.1	186	14.0	76		26.4	67	54	37	31	23 17	36	81	10 24	
4	239	22.7		24.0	200	40.6	76		19.7	68	52	24	21 13	22 31	47	78	23 01	27
5	254	22.6	+23	23.9	215	07.2	77	+21	12.9	69	50	20 13	20 58	22 03	6 56	77	22 54	29
6	269	22.4	+23	23.9	229	33.9	77	+21	06.0	71	45	19 51	20 28	21 18	7 15	73	22 37	33
7	284	22.3		23.8	244	00.6	77	+20	58.9	72	40	33	20 06	20 47	31	69	24 36	
8	299	22.2		23.8	258	27.3	78		51.7	74	35	18	19 47	24	44	67	12 40	
9	314	22.0		23.7	272	54.1	78		44.3	74	30	19 05	32	20 06	7 56	64	22 02	42
10	329	21.9		23.7	287	20.9	78		36.9	76	20	18 43	19 07	19 37	8 16	60	21 45	46
11	344	21.7	+23	23.6	301	47.7	79	+20	29.3	77	10 N	18 24	18 47	19 14	8 33	57	21 29	50
12	359	21.6	+23	23.5	316	14.6	79	+20	21.6	78	0	18 06	18 29	18 55	8 49	54	21 15	53
13	14	21.5		23.5	330	41.5	80		13.8	80	10 S	17 49	18 12	38	9 04	52	21 00	57
14	29	21.3		23.4	345	08.5	80	+20	05.8	81	20	30	17 54	22	21	48	20 45	60
15	44	21.2		23.3	359	35.5	81	+19	57.7	82	30	17 09	35	18 05	41	44	26 65	
16	59	21.1		23.3	14	02.6	81		49.5	83	35	16 57	25	17 57	9 52	42	16 67	
17	74	20.9	+23	23.2	28	29.7	81	+19	41.2	84	40	16 43	17 13	17 47	10 05	39	20 04	70
18	89	20.8	+23	23.1	42	56.8	82	+19	32.8	86	45	16 26	17 00	17 37	10 20	36	19 49	74
19	104	20.7		23.1	57	24.0	82		24.2	87	50	16 05	16 44	25	39	32	32 78	
20	119	20.5		23.0	71	51.2	83		15.5	88	52	15 55	36	20	48	30	23 81	
21	134	20.4		22.9	86	18.5	83	+19	06.7	89	54	44	28	14	10 58	27	14 83	
22	149	20.3		22.9	100	45.8	84	+18	57.8	90	56	31	19	08	11 09	24	19 03	86
23	164	20.1		22.8	115	13.2	84		48.8	91	58	15 17	16 09	17 01	21	22	18 51	90
24	179	20.0	+23	22.7	129	40.6		+18	39.7		60 S	14 59	15 57	16 54	11 36	18	18 37	94
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 48 ^m 6		Mag: -4.6 PMG: 10 ^h 04 ^m				Mag: -0.4 PMG: 05 ^h 45 ^m				Mag: -2.7 PMG: 01 ^h 37 ^m				Mag: +0.3 PMG: 02 ^h 00 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	272	36.3	208	31.0	+17	48.6	273	43.0	-3	42.3	335	47.6	-21	-25.9	329	50.9	-20	13.5
1	287	38.8	223	33.5		48.3	288	44.0		41.8	350	50.3		-25.9	344	53.5		13.5
2	302	41.3	238	36.1		48.0	303	45.1		41.2	5	53.1		-26.0	359	56.1		13.6
3	317	43.7	253	38.6		47.6	318	46.1		40.7	20	55.8		-26.0	14	58.7		13.6
4	332	46.2	268	41.1		47.3	333	47.1		40.1	35	58.6		-26.1	30	01.4		13.6
5	347	48.7	283	43.6	+17	47.0	348	48.1	-3	39.5	51	01.4	-21	-26.2	45	04.0	-20	13.7
6	2	51.1	298	46.2	+17	46.7	3	49.1	-3	39.0	66	04.1	-21	-26.2	60	06.6	-20	13.7
7	17	53.6	313	48.7		46.4	18	50.2		38.4	81	06.9		-26.3	75	09.2		13.7
8	32	56.1	328	51.2		46.1	33	51.2		37.9	96	09.6		-26.3	90	11.8		13.8
9	47	58.5	343	53.7		45.8	48	52.2		37.3	111	12.4		-26.4	105	14.5		13.8
10	63	01.0	358	56.2		45.5	63	53.2		36.8	126	15.1		-26.4	120	17.1		13.8
11	78	03.5	13	58.7	+17	45.2	78	54.3	-3	36.2	141	17.9	-21	-26.5	135	19.7	-20	13.9
12	93	05.9	29	01.2	+17	44.9	93	55.3	-3	35.7	156	20.6	-21	-26.6	150	22.3	-20	13.9
13	108	08.4	44	03.6		44.6	108	56.3		35.1	171	23.4		-26.6	165	25.0		14.0
14	123	10.8	59	06.1		44.3	123	57.3		34.5	186	26.2		-26.7	180	27.6		14.0
15	138	13.3	74	08.6		44.0	138	58.4		34.0	201	28.9		-26.7	195	30.2		14.0
16	153	15.8	89	11.1		43.7	153	59.4		33.4	216	31.7		-26.8	210	32.8		14.1
17	168	18.2	104	13.6	+17	43.4	169	00.4	-3	32.9	231	34.4	-21	-26.8	225	35.4	-20	14.1
18	183	20.7	119	16.0	+17	43.1	184	01.4	-3	32.3	246	37.2	-21	-26.9	240	38.1	-20	14.1
19	198	23.2	134	18.5		42.8	199	02.5		31.8	261	39.9		-27.0	255	40.7		14.2
20	213	25.6	149	20.9		42.5	214	03.5		31.2	276	42.7		-27.0	270	43.3		14.2
21	228	28.1	164	23.4		42.2	229	04.5		30.7	291	45.5		-27.1	285	45.9		14.3
22	243	30.6	179	25.8		41.9	244	05.5		30.1	306	48.2		-27.1	300	48.6		14.3
23	258	33.0	194	28.3		41.7	259	06.6		29.5	321	51.0		-27.2	315	51.2		14.3
24	273	35.5	209	30.7	+17	41.4	274	07.6	-3	29.0	336	53.7	-21	-27.2	330	53.8	-20	14.4
Dif.	—		+25		-3		+10		+6		+28		-1		+26			

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7				SD: 15'9		PHE { 4 ^h : 58'4 12 ^h : 58'5 20 ^h : 58'6					Edad: 3 ^d 7			PMG: 15 ^h 55 ^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	20.0	+23	22.7	129	40.6	84	+18	39.7	93	60 N	0 53	2 38	7 27	94	23 57	11			
1	194	19.9		22.7	144	08.0	86		30.4	93	58	** ** *	1 43	2 58	38	90	49 14			
2	209	19.7		22.6	158	35.6	85		21.1	95	56	** ** *	2 12	3 15	49	86	41 17			
3	224	19.6		22.5	173	03.1	86		11.6	96	54	0 48	34	29	7 57	84	34 20			
4	239	19.5		22.4	187	30.7	86	+18	02.0	97	52	1 34	2 52	41	8 05	82	28 22			
5	254	19.3	+23	22.4	201	58.3	87	+17	52.3	98	50	2 02	3 07	3 52	8 13	79	23 23 24			
6	269	19.2	+23	22.3	216	26.0	88	+17	42.5	99	45	2 47	3 37	4 15	8 28	74	23 10 29			
7	284	19.1		22.2	230	53.8	88		32.6	100	40	3 18	4 00	33	40	71	23 00 33			
8	299	18.9		22.1	245	21.6	88		22.6	101	35	3 41	18	4 48	8 51	67	22 52 35			
9	314	18.8		22.1	259	49.4	89		12.5	102	30	4 00	33	5 01	9 00	65	44 38			
10	329	18.7		22.0	274	17.3	89	+17	02.3	103	20	29	4 58	23	16	60	31 43			
11	344	18.6	+23	21.9	288	45.2	90	+16	52.0	105	10 N	4 51	5 18	5 42	9 30	56	22 19 47			
12	359	18.4	+23	21.8	303	13.2	90	+16	41.5	105	0	5 10	5 37	5 59	9 43	52	22 08 51			
13	14	18.3		21.8	317	41.2	91		31.0	106	10 S	27	5 54	6 17	9 56	48	21 57 55			
14	29	18.2		21.7	332	09.3	91		20.4	107	20	5 43	6 11	35	10 09	45	45 59			
15	44	18.0		21.6	346	37.4	92	+16	09.7	108	30	6 00	30	6 56	25	40	31 65			
16	59	17.9		21.5	1	05.6	92	+15	58.9	109	35	09	40	7 09	34	37	23 67			
17	74	17.8	+23	21.4	15	33.8	93	+15	48.0	110	40	6 18	6 52	7 23	10 44	35	21 14 70			
18	89	17.6	+23	21.4	30	02.1	93	+15	37.0	111	45	6 28	7 06	7 39	10 56	31	21 03 75			
19	104	17.5		21.3	44	30.4	93		25.9	112	50	40	22	8 00	11 11	26	20 50 79			
20	119	17.4		21.2	58	58.7	94		14.7	113	52	45	29	10	18	24	44 81			
21	134	17.2		21.1	73	27.1	95	+15	03.4	114	54	51	37	21	25	22	37 84			
22	149	17.1		21.0	87	55.6	95	+14	52.0	114	56	6 57	46	34	33	19	29 87			
23	164	17.0		20.9	102	24.1	95		40.6	115	58	7 04	7 57	8 48	11 43	16	20 21 90			
24	179	16.8	+23	20.8	116	52.6		+14	29.1		60 S	7 11	8 08	9 06	11 54	12	20 11 94			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 5 ^h 44 ^m 7		Mag: -4.6 PMG: 10 ^h 00 ^m				Mag: -0.4 PMG: 05 ^h 43 ^m				Mag: -2.7 PMG: 01 ^h 32 ^m				Mag: +0.3 PMG: 01 ^h 56 ^m					
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	273	35.5	209	30.7	+17	41.4	274	07.6	-3	29.0	336	53.7	-21	27.2	330	53.8	-20	14.4		
1	288	38.0	224	33.2		41.1	289	08.6		28.4	351	56.5		27.3	345	56.4		14.4		
2	303	40.4	239	35.6		40.8	304	09.6		27.9	6	59.2		27.3	0	59.1		14.4		
3	318	42.9	254	38.0		40.5	319	10.7		27.3	22	02.0		27.4	16	01.7		14.5		
4	333	45.3	269	40.5		40.3	334	11.7		26.8	37	04.8		27.5	31	04.3		14.5		
5	348	47.8	284	42.9	+17	40.0	349	12.7	-3	26.2	52	07.5	-21	27.5	46	06.9	-20	14.6		
6	3	50.3	299	45.3	+17	39.7	4	13.8	-3	25.7	67	10.3	-21	27.6	61	09.6	-20	14.6		
7	18	52.7	314	47.7		39.4	19	14.8		25.1	82	13.0		27.6	76	12.2		14.6		
8	33	55.2	329	50.1		39.2	34	15.8		24.6	97	15.8		27.7	91	14.8		14.7		
9	48	57.7	344	52.5		38.9	49	16.8		24.0	112	18.6		27.7	106	17.4		14.7		
10	64	00.1	359	54.9		38.6	64	17.9		23.5	127	21.3		27.8	121	20.1		14.7		
11	79	02.6	14	57.3	+17	38.4	79	18.9	-3	22.9	142	24.1	-21	27.9	136	22.7	-20	14.8		
12	94	05.1	29	59.7	+17	38.1	94	19.9	-3	22.3	157	26.8	-21	27.9	151	25.3	-20	14.8		
13	109	07.5	45	02.1		37.8	109	21.0		21.8	172	29.6		28.0	166	27.9		14.8		
14	124	10.0	60	04.5		37.6	124	22.0		21.2	187	32.4		28.0	181	30.6		14.9		
15	139	12.5	75	06.9		37.3	139	23.0		20.7	202	35.1		28.1	196	33.2		14.9		
16	154	14.9	90	09.3		37.0	154	24.1		20.1	217	37.9		28.1	211	35.8		15.0		
17	169	17.4	105	11.7	+17	36.8	169	25.1	-3	19.6	232	40.7	-21	28.2	226	38.4	-20	15.0		
18	184	19.8	120	14.0	+17	36.5	184	26.1	-3	19.0	247	43.4	-21	28.3	241	41.1	-20	15.0		
19	199	22.3	135	16.4		36.3	199	27.2		18.5	262	46.2		28.3	256	43.7		15.1		
20	214	24.8	150	18.8		36.0	214	28.2		17.9	277	48.9		28.4	271	46.3		15.1		
21	229	27.2	165	21.1		35.8	229	29.2		17.4	292	51.7		28.4	286	48.9		15.1		
22	244	29.7	180	23.5		35.5	244	30.3		16.8	307	54.5		28.5	301	51.6		15.2		
23	259	32.2	195	25.8		35.3	259	31.3		16.3	322	57.2		28.5	316	54.2		15.2		
24	274	34.6	210	28.2	+17	35.0	274	32.3	-3	15.7	338	00.0	-21	28.6	331	56.8	-20	15.3		
Dif.	—		+24		-3		+10		+6		+28		-1		+26					

UT	SOL			 LUNA			Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna										
	SD: 15'7 PMG: 12 ^h 03 ^m 0			SD: 16'0 Edad: 4 ^d 7 PMG: 16 ^h 47 ^m											PHE { 4 ^h : 58'8 12 ^h : 58'9 20 ^h : 59'0 Rº: 51 ^m								
	hG ☉	Dec		hG ☾	Dif.	Dec									Dif.								
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m									
0	179	16.8	+23	20.8	116	52.6	96	+14	29.1	117	60 N	21 27	23 11	***	9 01	94	***	***	***				
1	194	16.7		20.8	131	21.2	96		17.4	117	58	21 07	22 22	***	08	91	***	***	***				
2	209	16.6		20.7	145	49.8	97	+14	05.7	118	56	20 50	21 53	***	15	87	23	58	15				
3	224	16.4		20.6	160	18.5	97	+13	53.9	118	54	36	31	23	15	21	85	54	17				
4	239	16.3		20.5	174	47.2	98		42.1	120	52	24	21	13	22	30	27	81	50	20			
5	254	16.2	+23	20.4	189	16.0	98	+13	30.1	120	50	20 13	20 58	22	03	9	32	79	23	47	21		
6	269	16.0	+23	20.3	203	44.8	99	+13	18.1	122	45	19 51	20 28	21	18	9	42	75	23	39	26		
7	284	15.9		20.2	218	13.7	99	+13	05.9	121	40	33	20	06	20	47	51	70	33	30			
8	299	15.8		20.1	232	42.6	99	+12	53.8	123	35	18	19	48	24	9	58	67	27	34			
9	314	15.7		20.0	247	11.5	100		41.5	123	30	19	05	32	20	06	10	05	64	22	37		
10	329	15.5		19.9	261	40.5	100		29.2	125	20	18	43	19	08	19	37	16	59	14	41		
11	344	15.4	+23	19.8	276	09.5	101	+12	16.7	124	10 N	18 24	18 47	19	14	10	26	55	23	06	46		
12	359	15.3	+23	19.7	290	38.6	101	+12	04.3	126	0	18	07	18	29	18	55	10	35	51	22	59	50
13	14	15.1		19.6	305	07.7	101	+11	51.7	126	10 S	17 49	18	12	38	44	47	52	54				
14	29	15.0		19.5	319	36.8	102		39.1	127	20	31	17	55	22	10	54	42	44	59			
15	44	14.9		19.4	334	06.0	102		26.4	128	30	17	10	36	18	06	11	05	37	36	64		
16	59	14.7		19.4	348	35.2	102		13.6	128	35	16	57	26	17	57	11	35	30	67			
17	74	14.6	+23	19.3	3	04.4	103	+11	00.8	129	40	16	43	17	14	17	48	11	19	31	22	24	71
18	89	14.5	+23	19.2	17	33.7	104	+10	47.9	130	45	16	27	17	00	17	38	11	27	27	22	18	74
19	104	14.3		19.1	32	03.1	103		34.9	130	50	16	06	16	44	26	37	23	09	80			
20	119	14.2		18.9	46	32.4	104		21.9	131	52	15	56	37	21	42	20	05	82				
21	134	14.1		18.8	61	01.8	105	+10	08.8	131	54	45	29	15	47	18	22	01	84				
22	149	14.0		18.7	75	31.3	104	+9	55.7	132	56	32	20	09	52	16	21	56	88				
23	164	13.8		18.6	90	00.7	105		42.5	132	58	18	16	10	17	02	11	59	12	51	90		
24	179	13.7	+23	18.5	104	30.2		+9	29.3		60 S	15 00	15 58	16	55	12	06	9	21	45	94		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 5 ^h 40 ^m 8		Mag: -4.6 PMG: 09 ^h 57 ^m			Mag: -0.4 PMG: 05 ^h 41 ^m			Mag: -2.7 PMG: 01 ^h 28 ^m			Mag: +0.2 PMG: 01 ^h 52 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	274	34.6	210	28.2	+17	35.0	274	32.3	-3	15.7	338	00.0	-21	-28.6	331	56.8	-20	15.3	
1	289	37.1	225	30.5		34.8	289	33.4		15.2	353	02.8		-28.7	346	59.4		15.3	
2	304	39.6	240	32.9		34.5	304	34.4		14.6	8	05.5		-28.7	2	02.1		15.3	
3	319	42.0	255	35.2		34.3	319	35.4		14.1	23	08.3		-28.8	17	04.7		15.4	
4	334	44.5	270	37.5		34.0	334	36.5		13.5	38	11.0		-28.8	32	07.3		15.4	
5	349	46.9	285	39.8	+17	33.8	349	37.5	-3	13.0	53	13.8	-21	-28.9	47	10.0	-20	15.4	
6	4	49.4	300	42.2	+17	33.6	4	38.5	-3	12.4	68	16.6	-21	-28.9	62	12.6	-20	15.5	
7	19	51.9	315	44.5		33.3	19	39.6		11.9	83	19.3		-29.0	77	15.2		15.5	
8	34	54.3	330	46.8		33.1	34	40.6		11.3	98	22.1		-29.1	92	17.8		15.6	
9	49	56.8	345	49.1		32.9	49	41.6		10.8	113	24.9		-29.1	107	20.5		15.6	
10	64	59.3	0	51.4		32.6	64	42.7		10.2	128	27.6		-29.2	122	23.1		15.6	
11	80	01.7	15	53.7	+17	32.4	79	43.7	-3	09.7	143	30.4	-21	-29.2	137	25.7	-20	15.7	
12	95	04.2	30	56.0	+17	32.2	94	44.8	-3	09.1	158	33.2	-21	-29.3	152	28.3	-20	15.7	
13	110	06.7	45	58.3		31.9	109	45.8		08.6	173	35.9		-29.3	167	31.0		15.8	
14	125	09.1	61	00.6		31.7	124	46.8		08.0	188	38.7		-29.4	182	33.6		15.8	
15	140	11.6	76	02.9		31.5	139	47.9		07.5	203	41.5		-29.5	197	36.2		15.8	
16	155	14.1	91	05.2		31.2	154	48.9		06.9	218	44.2		-29.5	212	38.9		15.9	
17	170	16.5	106	07.5	+17	31.0	169	50.0	-3	06.4	233	47.0	-21	-29.6	227	41.5	-20	15.9	
18	185	19.0	121	09.8	+17	30.8	184	51.0	-3	05.8	248	49.8	-21	-29.6	242	44.1	-20	15.9	
19	200	21.4	136	12.0		30.6	199	52.0		05.3	263	52.5		-29.7	257	46.7		16.0	
20	215	23.9	151	14.3		30.4	214	53.1		04.7	278	55.3		-29.7	272	49.4		16.0	
21	230	26.4	166	16.6		30.1	229	54.1		04.2	293	58.1		-29.8	287	52.0		16.1	
22	245	28.8	181	18.8		29.9	244	55.2		03.6	309	00.8		-29.9	302	54.6		16.1	
23	260	31.3	196	21.1		29.7	259	56.2		03.1	324	03.6		-29.9	317	57.2		16.1	
24	275	33.8	211	23.3	+17	29.5	274	57.2	-3	02.5	339	06.4	-21	-30.0	332	59.9	-20	16.2	
Dif.	—		+23			-2	+10			+6	+28			-1	+26			0	

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: 16'1 Edad: 5 ^d 7 PMG: 17 ^h 38 ^m PHE { 4 ^h : 59'0 12 ^h : 59'1 20 ^h : 59'2 Rº: 49 ^m					Náut.	Civil		Hora	Rº	Hora	Rº		
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.												
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	179	13.7	+23	18.5	104	30.2	105	+9	29.3	134	60 N	** **	0 56	2 39	10 35	93	0 08	9
1	194	13.6		18.4	118	59.7	106		15.9	133	58	** **	1 44	2 59	39	90	0 03	12
2	209	13.4		18.3	133	29.3	106	+9	02.6	134	56	** **	2 14	3 16	42	87	** **	**
3	224	13.3		18.2	147	58.9	106	+8	49.2	135	54	0 51	36	30	46	84	** **	**
4	239	13.2		18.1	162	28.5	107		35.7	135	52	1 36	2 53	42	48	82	** **	**
5	254	13.1	+23	18.0	176	58.2	106	+8	22.2	136	50	2 03	3 08	3 53	10 51	80	** **	**
6	269	12.9	+23	17.9	191	27.8	107	+8	08.6	136	45	2 48	3 38	4 15	10 57	74	** **	**
7	284	12.8		17.8	205	57.5	108	+7	55.0	137	40	3 19	4 00	33	11 01	71	** **	**
8	299	12.7		17.7	220	27.3	107		41.3	137	35	3 42	19	4 48	05	67	** **	**
9	314	12.5		17.6	234	57.0	108		27.6	137	30	4 00	34	5 01	09	64	23 59	35
10	329	12.4		17.5	249	26.8	108		13.9	138	20	29	4 59	23	15	59	55	41
11	344	12.3	+23	17.3	263	56.6	108	+7	00.1	139	10 N	4 52	5 19	5 42	11 21	54	23 52	45
12	359	12.1	+23	17.2	278	26.4	109	+6	46.2	138	0	5 11	5 37	6 00	11 26	49	23 49	50
13	14	12.0		17.1	292	56.3	108		32.4	140	10 S	28	5 54	17	31	45	46	54
14	29	11.9		17.0	307	26.1	109		18.4	139	20	5 44	6 11	35	36	41	43	59
15	44	11.8		16.9	321	56.0	109	+6	04.5	140	30	6 00	30	6 56	42	36	40	64
16	59	11.6		16.8	336	25.9	110	+5	50.5	140	35	09	41	7 09	46	32	37	67
17	74	11.5	+23	16.7	350	55.9	109	+5	36.5	141	40	6 18	6 52	7 23	11 50	29	23 35	71
18	89	11.4	+23	16.5	5	25.8	110	+5	22.4	141	45	6 29	7 06	7 40	11 54	26	23 32	75
19	104	11.3		16.4	19	55.8	109	+5	08.3	141	50	40	22	8 00	12 00	21	29	79
20	119	11.1		16.3	34	25.7	110	+4	54.2	141	52	45	29	10	02	19	27	82
21	134	11.0		16.2	48	55.7	110		40.1	142	54	51	37	21	05	16	25	85
22	149	10.9		16.1	63	25.7	110		25.9	142	56	6 57	46	34	08	14	24	87
23	164	10.7		15.9	77	55.7	111	+4	11.7	143	58	7 04	7 56	8 48	12 11	11	23 21	91
24	179	10.6	+23	15.8	92	25.8		+3	57.4		60 S	7 11	8 08	9 05	12 15	8	23 19	94
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 36 ^m 8		Mag: -4.6 PMG: 09 ^h 53 ^m				Mag: -0.4 PMG: 05 ^h 40 ^m				Mag: -2.7 PMG: 01 ^h 23 ^m				Mag: +0.2 PMG: 01 ^h 48 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	275	33.8	211	23.3	+17	29.5	274	57.2	-3	02.5	339	06.4	-21	30.0	332	59.9	-20	16.2
1	290	36.2	226	25.6		29.3	289	58.3		02.0	354	09.1		30.0	348	02.5		16.2
2	305	38.7	241	27.8		29.1	304	59.3		01.4	9	11.9		30.1	3	05.1		16.2
3	320	41.2	256	30.1		28.9	320	00.4		00.9	24	14.7		30.1	18	07.8		16.3
4	335	43.6	271	32.3		28.7	335	01.4	-3	00.3	39	17.4		30.2	33	10.4		16.3
5	350	46.1	286	34.6	+17	28.5	350	02.4	-2	59.8	54	20.2	-21	30.3	48	13.0	-20	16.4
6	5	48.6	301	36.8	+17	28.3	5	03.5	-2	59.2	69	23.0	-21	30.3	63	15.6	-20	16.4
7	20	51.0	316	39.0		28.1	20	04.5		58.7	84	25.7		30.4	78	18.3		16.4
8	35	53.5	331	41.2		27.9	35	05.6		58.1	99	28.5		30.4	93	20.9		16.5
9	50	55.9	346	43.5		27.7	50	06.6		57.6	114	31.3		30.5	108	23.5		16.5
10	65	58.4	1	45.7		27.5	65	07.7		57.0	129	34.0		30.6	123	26.2		16.5
11	81	00.9	16	47.9	+17	27.3	80	08.7	-2	56.5	144	36.8	-21	30.6	138	28.8	-20	16.6
12	96	03.3	31	50.1	+17	27.1	95	09.8	-2	55.9	159	39.6	-21	30.7	153	31.4	-20	16.6
13	111	05.8	46	52.3		26.9	110	10.8		55.4	174	42.3		30.7	168	34.1		16.7
14	126	08.3	61	54.5		26.7	125	11.8		54.8	189	45.1		30.8	183	36.7		16.7
15	141	10.7	76	56.7		26.5	140	12.9		54.3	204	47.9		30.8	198	39.3		16.7
16	156	13.2	91	58.9		26.3	155	13.9		53.7	219	50.6		30.9	213	41.9		16.8
17	171	15.7	107	01.1	+17	26.1	170	15.0	-2	53.2	234	53.4	-21	31.0	228	44.6	-20	16.8
18	186	18.1	122	03.3	+17	25.9	185	16.0	-2	52.7	249	56.2	-21	31.0	243	47.2	-20	16.9
19	201	20.6	137	05.5		25.7	200	17.1		52.1	264	59.0		31.1	258	49.8		16.9
20	216	23.0	152	07.6		25.5	215	18.1		51.6	280	01.7		31.1	273	52.5		16.9
21	231	25.5	167	09.8		25.4	230	19.2		51.0	295	04.5		31.2	288	55.1		17.0
22	246	28.0	182	12.0		25.2	245	20.2		50.5	310	07.3		31.2	303	57.7		17.0
23	261	30.4	197	14.1		25.0	260	21.3		49.9	325	10.0		31.3	319	00.4		17.0
24	276	32.9	212	16.3	+17	24.8	275	22.3	-2	49.4	340	12.8	-21	31.4	334	03.0	-20	17.1
Dif.	—		+22		-2		+10		+5		+28		-1		+26			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7				SD: 16'2 Edad: 7'7					PHE { 4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'4								
	PMG: 12 ^h 03 ^m 6				PMG: 19 ^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	179	07.6	+23	12.7	80	27.1	110	-1 48.6	144	60 N	1 00	2 41	13 43	95	0 25	8		
1	194	07.5		12.6	94	57.1	110	-2 03.0	145	58	1 46	3 01	40	91	26	11		
2	209	07.3		12.4	109	27.1	109	17.5	144	56	2 15	17	37	88	27	14		
3	224	07.2		12.3	123	57.0	110	31.9	144	54	0 55	37	35	85	27	17		
4	239	07.1		12.1	138	27.0	109	-2 46.3	144	52	1 38	2 55	32	83	28	19		
5	254	07.0	+23	12.0	152	56.9	109	-3 00.7	144	50	2 05	3 10	13 30	81	0 29	21		
6	269	06.8	+23	11.9	167	26.8	108	-3 15.1	144	45	2 50	3 39	13 26	76	0 31	26		
7	284	06.7		11.7	181	56.6	109	29.5	144	40	3 20	4 01	23	71	32	30		
8	299	06.6		11.6	196	26.5	108	43.9	143	35	3 43	19	20	68	33	33		
9	314	06.5		11.4	210	56.3	108	-3 58.2	144	30	4 01	34	17	65	34	36		
10	329	06.3		11.3	225	26.1	108	-4 12.6	143	20	30	4 59	13	59	36	41		
11	344	06.2	+23	11.1	239	55.9	107	-4 26.9	143	10 N	4 52	5 19	13 09	55	0 37	46		
12	359	06.1	+23	11.0	254	25.6	108	-4 41.2	142	0	5 11	5 37	13 05	51	0 39	50		
13	14	06.0		10.8	268	55.4	107	-4 55.4	143	10 S	28	5 54	13 01	47	40	55		
14	29	05.8		10.7	283	25.1	107	-5 09.7	142	20	5 44	6 12	12 58	42	42	59		
15	44	05.7		10.5	297	54.8	106	23.9	142	30	6 00	30	53	37	44	64		
16	59	05.6		10.4	312	24.4	106	38.1	141	35	09	41	51	34	44	68		
17	74	05.5	+23	10.2	326	54.0	106	-5 52.2	141	40	6 18	6 52	12 48	31	0 46	71		
18	89	05.3	+23	10.1	341	23.6	106	-6 06.3	141	45	6 28	7 06	12 45	27	0 47	75		
19	104	05.2		09.9	355	53.2	105	20.4	141	50	40	22	41	23	48	81		
20	119	05.1		09.8	10	22.7	105	34.5	140	52	45	29	40	20	49	83		
21	134	05.0		09.6	24	52.2	104	-6 48.5	140	54	51	37	38	18	50	85		
22	149	04.9		09.5	39	21.6	104	-7 02.5	139	56	6 57	46	36	15	51	88		
23	164	04.7		09.3	53	51.0	104	16.4	139	58	7 04	7 56	12 34	12	0 52	91		
24	179	04.6	+23	09.2	68	20.4		-7 30.3		60 S	7 11	8 07	12 31	9	0 53	94		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 5 ^h 29 ^m 0		Mag: -4.6 PMG: 09 ^h 46 ^m			Mag: -0.5 PMG: 05 ^h 36 ^m			Mag: -2.7 PMG: 01 ^h 14 ^m			Mag: +0.2 PMG: 01 ^h 39 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	277	32.0	213	07.1	+17	20.9	275	47.6	-2	36.3	341	19.4	-21	32.8	335	06.2	-20	18.0
1	292	34.5	228	09.2		20.8	290	48.6		35.8	356	22.1		32.8	350	08.8		18.0
2	307	37.0	243	11.2		20.6	305	49.7		35.2	11	24.9		32.9	5	11.4		18.1
3	322	39.4	258	13.3		20.5	320	50.7		34.7	26	27.7		32.9	20	14.0		18.1
4	337	41.9	273	15.4		20.4	335	51.8		34.1	41	30.5		33.0	35	16.7		18.2
5	352	44.4	288	17.4	+17	20.2	350	52.8	-2	33.6	56	33.2	-21	33.0	50	19.3	-20	18.2
6	7	46.8	303	19.5	+17	20.1	5	53.9	-2	33.1	71	36.0	-21	33.1	65	21.9	-20	18.2
7	22	49.3	318	21.5		19.9	20	55.0		32.5	86	38.8		33.2	80	24.6		18.3
8	37	51.8	333	23.6		19.8	35	56.0		32.0	101	41.6		33.2	95	27.2		18.3
9	52	54.2	348	25.6		19.7	50	57.1		31.4	116	44.3		33.3	110	29.8		18.4
10	67	56.7	3	27.6		19.5	65	58.1		30.9	131	47.1		33.3	125	32.5		18.4
11	82	59.1	18	29.7	+17	19.4	80	59.2	-2	30.4	146	49.9	-21	33.4	140	35.1	-20	18.4
12	98	01.6	33	31.7	+17	19.3	96	00.3	-2	29.8	161	52.7	-21	33.5	155	37.8	-20	18.5
13	113	04.1	48	33.7		19.2	111	01.3		29.3	176	55.5		33.5	170	40.4		18.5
14	128	06.5	63	35.7		19.0	126	02.4		28.7	191	58.2		33.6	185	43.0		18.5
15	143	09.0	78	37.8		18.9	141	03.4		28.2	207	01.0		33.6	200	45.7		18.6
16	158	11.5	93	39.8		18.8	156	04.5		27.6	222	03.8		33.7	215	48.3		18.6
17	173	13.9	108	41.8	+17	18.7	171	05.6	-2	27.1	237	06.6	-21	33.8	230	50.9	-20	18.7
18	188	16.4	123	43.8	+17	18.5	186	06.6	-2	26.6	252	09.3	-21	33.8	245	53.6	-20	18.7
19	203	18.9	138	45.8		18.4	201	07.7		26.0	267	12.1		33.9	260	56.2		18.7
20	218	21.3	153	47.8		18.3	216	08.7		25.5	282	14.9		33.9	275	58.8		18.8
21	233	23.8	168	49.8		18.2	231	09.8		24.9	297	17.7		34.0	291	01.5		18.8
22	248	26.3	183	51.8		18.1	246	10.9		24.4	312	20.5		34.0	306	04.1		18.9
23	263	28.7	198	53.8		17.9	261	11.9		23.9	327	23.2		34.1	321	06.7		18.9
24	278	31.2	213	55.8	+17	17.8	276	13.0	-2	23.3	342	26.0	-21	34.2	336	09.4	-20	18.9
Dif.	—		+20		-1		+11		+5		+28		-1		+26			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 03 ^m 8				SD: 16'2 Edad: 8 ^d 7 PHE { 4 ^h : 59'4 12 ^h : 59'4 20 ^h : 59'4 PMG: 20 ^h 08 ^m Rº: 54 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Civil	Náut.			Hora	Rº	Hora	Rº				
	°	'	°	'	°	'	h	m			h	m	h	m	h	m	h	m
h																		
0	179	04.6	+23	09.2	68	20.4	103	-7	30.3	139	60 N	21 25	23 04	** **	15 18	97	0 33	10
1	194	04.5		09.0	82	49.7	103		44.2	138	58	21 06	22 19	** **	11	93	37	13
2	209	04.4		08.9	97	19.0	103	-7	58.0	138	56	20 49	21 50	** **	05	90	41	16
3	224	04.2		08.7	111	48.3	102	-8	11.8	138	54	35	29	23 09	15 00	86	44	19
4	239	04.1		08.5	126	17.5	102		25.6	137	52	23	21 12	22 27	14 55	84	47	22
5	254	04.0	+23	08.4	140	46.7	102	-8	39.3	136	50	20 13	20 57	22 01	14 51	81	0 50	24
6	269	03.9	+23	08.2	155	15.9	101	-8	52.9	136	45	19 51	20 28	21 17	14 42	76	0 57	28
7	284	03.8		08.1	169	45.0	100	-9	06.5	136	40	33	20 06	20 47	34	73	1 02	32
8	299	03.6		07.9	184	14.0	100		20.1	134	35	18	19 48	24	28	69	06	36
9	314	03.5		07.7	198	43.0	100		33.5	135	30	19 05	33	20 06	22	66	10	39
10	329	03.4		07.6	213	12.0	99	-9	47.0	134	20	18 43	19 08	19 37	12	62	17	43
11	344	03.3	+23	07.4	227	40.9	99	-10	00.4	133	10 N	18 25	18 48	19 15	14 04	57	1 23	48
12	359	03.2	+23	07.2	242	09.8	98	-10	13.7	133	0	18 07	18 30	18 56	13 56	53	1 29	52
13	14	03.0		07.1	256	38.6	98		27.0	132	10 S	17 50	18 13	39	48	49	35	56
14	29	02.9		06.9	271	07.4	97		40.2	131	20	32	17 56	23	40	45	41	60
15	44	02.8		06.8	285	36.1	97	-10	53.3	131	30	17 11	37	18 07	30	40	48	66
16	59	02.7		06.6	300	04.8	97	-11	06.4	131	35	16 59	27	17 59	25	37	52	69
17	74	02.5	+23	06.4	314	33.5	96	-11	19.5	129	40	16 45	17 15	17 49	13 19	34	1 57	72
18	89	02.4	+23	06.3	329	02.1	95	-11	32.4	129	45	16 28	17 02	17 39	13 12	30	2 02	76
19	104	02.3		06.1	343	30.6	95		45.3	129	50	16 08	16 46	28	04	25	09	81
20	119	02.2		05.9	357	59.1	94	-11	58.2	127	52	15 58	39	23	13 00	23	12	83
21	134	02.1		05.7	12	27.5	94	-12	10.9	127	54	47	31	17	12 56	21	15	86
22	149	01.9		05.6	26	55.9	93		23.6	126	56	35	22	11	51	18	19	88
23	164	01.8		05.4	41	24.2	93		36.2	126	58	21	12	17 04	46	15	23	92
24	179	01.7	+23	05.2	55	52.5		-12	48.8		60 S	15 04	16 01	16 57	12 40	12	2 27	96
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 25 ^m 0		Mag: -4.7 PMG: 09 ^h 43 ^m				Mag: -0.5 PMG: 05 ^h 35 ^m				Mag: -2.7 PMG: 01 ^h 10 ^m				Mag: +0.2 PMG: 01 ^h 35 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	278	31.2	213	55.8	+17	17.8	276	13.0	-2	23.3	342	26.0	-21	-34.2	336	09.4	-20	18.9
1	293	33.6	228	57.8		17.7	291	14.0		22.8	357	28.8		-34.2	351	12.0		19.0
2	308	36.1	243	59.7		17.6	306	15.1		22.2	12	31.6		-34.3	6	14.6		19.0
3	323	38.6	259	01.7		17.5	321	16.2		21.7	27	34.3		-34.3	21	17.3		19.1
4	338	41.0	274	03.7		17.4	336	17.2		21.2	42	37.1		-34.4	36	19.9		19.1
5	353	43.5	289	05.7	+17	17.3	351	18.3	-2	20.6	57	39.9	-21	-34.5	51	22.5	-20	19.1
6	8	46.0	304	07.6	+17	17.2	6	19.4	-2	20.1	72	42.7	-21	-34.5	66	25.2	-20	19.2
7	23	48.4	319	09.6		17.1	21	20.4		19.5	87	45.5		-34.6	81	27.8		19.2
8	38	50.9	334	11.5		17.0	36	21.5		19.0	102	48.2		-34.6	96	30.4		19.2
9	53	53.4	349	13.5		16.8	51	22.6		18.5	117	51.0		-34.7	111	33.1		19.3
10	68	55.8	4	15.4		16.7	66	23.6		17.9	132	53.8		-34.7	126	35.7		19.3
11	83	58.3	19	17.4	+17	16.6	81	24.7	-2	17.4	147	56.6	-21	-34.8	141	38.4	-20	19.4
12	99	00.7	34	19.3	+17	16.5	96	25.8	-2	16.9	162	59.4	-21	-34.9	156	41.0	-20	19.4
13	114	03.2	49	21.3		16.4	111	26.8		16.3	178	02.1		-34.9	171	43.6		19.4
14	129	05.7	64	23.2		16.4	126	27.9		15.8	193	04.9		-35.0	186	46.3		19.5
15	144	08.1	79	25.2		16.3	141	29.0		15.2	208	07.7		-35.0	201	48.9		19.5
16	159	10.6	94	27.1		16.2	156	30.0		14.7	223	10.5		-35.1	216	51.5		19.6
17	174	13.1	109	29.0	+17	16.1	171	31.1	-2	14.2	238	13.3	-21	-35.2	231	54.2	-20	19.6
18	189	15.5	124	30.9	+17	16.0	186	32.2	-2	13.6	253	16.0	-21	-35.2	246	56.8	-20	19.6
19	204	18.0	139	32.8		15.9	201	33.2		13.1	268	18.8		-35.3	261	59.4		19.7
20	219	20.5	154	34.8		15.8	216	34.3		12.6	283	21.6		-35.3	277	02.1		19.7
21	234	22.9	169	36.7		15.7	231	35.4		12.0	298	24.4		-35.4	292	04.7		19.8
22	249	25.4	184	38.6		15.6	246	36.4		11.5	313	27.2		-35.5	307	07.3		19.8
23	264	27.9	199	40.5		15.5	261	37.5		10.9	328	30.0		-35.5	322	10.0		19.8
24	279	30.3	214	42.4	+17	15.5	276	38.6	-2	10.4	343	32.7	-21	-35.6	337	12.6	-20	19.9
Dif.	—		+20		-1		+11		+5		+28		-1		+26			

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: 16'2 Edad: 9 ^d 7 PHE { 4^h: 59'4 12^h: 59'3 20^h: 59'3 PMG: 21 ^h 02 ^m Rº: 56 ^m												
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Náut.	Civil			Hora	Rº	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	
0	179	01.7	+23 05.2	55	52.5	92	-12 48.8	124	60 N	** **	1 04	2 43	16 55	96	0 43 13	
1	194	01.6	05.1	70	20.7	92	-13 01.2	124	58	** **	1 49	3 02	44 91		50 17	
2	209	01.5	04.9	84	48.9	91	13.6	124	56	** **	2 17	19	35 87		0 57 21	
3	224	01.4	04.7	99	17.0	90	26.0	122	54	0 59	39	33	26 85		1 03 24	
4	239	01.2	04.5	113	45.0	90	38.2	122	52	1 40	2 56	45	19 82		09 25	
5	254	01.1	+23 04.4	128	13.0	90	-13 50.4	120	50	2 07	3 11	3 55	16 12	80	1 14 28	
6	269	01.0	+23 04.2	142	41.0	89	-14 02.4	120	45	2 51	3 40	4 17	15 58	76	1 25 32	
7	284	00.9	04.0	157	08.9	88	14.4	119	40	3 21	4 02	35	47 72		34 36	
8	299	00.8	03.8	171	36.7	88	26.3	119	35	3 44	20	4 50	37 69		42 39	
9	314	00.6	03.7	186	04.5	87	38.2	117	30	4 02	4 35	5 03	28 67		1 49 41	
10	329	00.5	03.5	200	32.2	86	-14 49.9	116	20	31	5 00	24	14 62		2 00 47	
11	344	00.4	+23 03.3	214	59.8	86	-15 01.5	116	10 N	4 53	5 20	5 43	15 01	58	2 11 50	
12	359	00.3	+23 03.1	229	27.4	86	-15 13.1	115	0	5 12	5 38	6 00	14 49	55	2 21 54	
13	14	00.2	02.9	243	55.0	85	24.6	113	10 S	28	5 55	17	37 52		31 58	
14	29	00.0	02.7	258	22.5	84	35.9	113	20	5 44	6 12	36	25 48		41 62	
15	43	59.9	02.6	272	49.9	84	47.2	112	30	6 00	30	6 57	10 45		2 54 66	
16	58	59.8	02.4	287	17.3	83	-15 58.4	111	35	09	41	7 09	14 02	42	3 01 69	
17	73	59.7	+23 02.2	301	44.6	82	-16 09.5	110	40	6 18	6 52	7 23	13 53	39	3 09 72	
18	88	59.6	+23 02.0	316	11.8	82	-16 20.5	108	45	6 28	7 05	7 39	13 42	36	3 18 76	
19	103	59.5	01.8	330	39.0	81	31.3	108	50	40	21	7 59	29 31		30 80	
20	118	59.3	01.6	345	06.1	81	42.1	107	52	45	28	8 09	23 29		35 83	
21	133	59.2	01.5	359	33.2	80	-16 52.8	106	54	50	36	20	17 26		41 86	
22	148	59.1	01.3	14	00.2	80	-17 03.4	105	56	6 56	45	32	09 24		47 89	
23	163	59.0	01.1	28	27.2	79	13.9	103	58	7 03	7 55	8 47	13 01	20	3 55 92	
24	178	58.9	+23 00.9	42	54.1	-17	24.2		60 S	7 10	8 07	9 04	12 52	16	4 03 97	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 5 ^h 21 ^m 1		Mag: -4.7 PMG: 09 ^h 40 ^m			Mag: -0.5 PMG: 05 ^h 33 ^m			Mag: -2.7 PMG: 01 ^h 06 ^m			Mag: +0.2 PMG: 01 ^h 31 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	279	30.3	214	42.4	+17 15.5	276	38.6	-2 10.4	343	32.7	-21 35.6	337	12.6	-20 19.9
1	294	32.8	229	44.3	15.4	291	39.7	09.9	358	35.5	35.6	352	15.3	19.9
2	309	35.2	244	46.2	15.3	306	40.7	09.3	13	38.3	35.7	7	17.9	20.0
3	324	37.7	259	48.1	15.2	321	41.8	08.8	28	41.1	35.7	22	20.5	20.0
4	339	40.2	274	50.0	15.1	336	42.9	08.3	43	43.9	35.8	37	23.2	20.0
5	354	42.6	289	51.8	+17 15.1	351	43.9	-2 07.7	58	46.6	-21 35.9	52	25.8	-20 20.1
6	9	45.1	304	53.7	+17 15.0	6	45.0	-2 07.2	73	49.4	-21 35.9	67	28.4	-20 20.1
7	24	47.6	319	55.6	14.9	21	46.1	06.7	88	52.2	36.0	82	31.1	20.1
8	39	50.0	334	57.5	14.8	36	47.2	06.1	103	55.0	36.0	97	33.7	20.2
9	54	52.5	349	59.4	14.8	51	48.2	05.6	118	57.8	36.1	112	36.4	20.2
10	69	55.0	5	01.2	14.7	66	49.3	05.1	134	00.6	36.2	127	39.0	20.3
11	84	57.4	20	03.1	+17 14.6	81	50.4	-2 04.5	149	03.3	-21 36.2	142	41.6	-20 20.3
12	99	59.9	35	04.9	+17 14.5	96	51.5	-2 04.0	164	06.1	-21 36.3	157	44.3	-20 20.3
13	115	02.4	50	06.8	14.5	111	52.5	03.4	179	08.9	36.3	172	46.9	20.4
14	130	04.8	65	08.7	14.4	126	53.6	02.9	194	11.7	36.4	187	49.5	20.4
15	145	07.3	80	10.5	14.3	141	54.7	02.4	209	14.5	36.5	202	52.2	20.5
16	160	09.7	95	12.3	14.3	156	55.8	01.8	224	17.3	36.5	217	54.8	20.5
17	175	12.2	110	14.2	+17 14.2	171	56.8	-2 01.3	239	20.1	-21 36.6	232	57.5	-20 20.5
18	190	14.7	125	16.0	+17 14.2	186	57.9	-2 00.8	254	22.8	-21 36.6	248	00.1	-20 20.6
19	205	17.1	140	17.9	14.1	201	59.0	-2 00.2	269	25.6	36.7	263	02.7	20.6
20	220	19.6	155	19.7	14.0	217	00.1	-1 59.7	284	28.4	36.7	278	05.4	20.7
21	235	22.1	170	21.5	14.0	232	01.1	59.2	299	31.2	36.8	293	08.0	20.7
22	250	24.5	185	23.4	13.9	247	02.2	58.6	314	34.0	36.9	308	10.6	20.7
23	265	27.0	200	25.2	13.9	262	03.3	58.1	329	36.8	36.9	323	13.3	20.8
24	280	29.5	215	27.0	+17 13.8	277	04.4	-1 57.6	344	39.5	-21 37.0	338	15.9	-20 20.8
Dif.	—		+19	-1		+11	+5		+28		-1		+26	

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 04 ^m 2			SD: 16'1 Edad: 10 ^d 7 PMG: 21 ^h 58 ^m PHE { 4 ^h : 59'2 12 ^h : 59'1 20 ^h : 59'0 Rº: 58 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.						Civil	Náut.	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	°	'	h	m	h	m	h	m	m	
0	178	58.9	+23 00.9	42	54.1	78	-17 24.2	103	60 N	21 24	22 59	** **	18 31	88	0 56	20		
1	193	58.8	00.7	57	20.9	78	34.5	101	58	21 04	22 17	** **	15 85		1 07	24		
2	208	58.6	00.5	71	47.7	78	44.6	101	56	20 48	21 49	** **	18 02	82	18	27		
3	223	58.5	00.3	86	14.5	76	-17 54.7	99	54	34	28	23 05	17 51	79	27	30		
4	238	58.4	+23 00.1	100	41.1	76	-18 04.6	98	52	23	21 11	22 25	41 77		34	33		
5	253	58.3	+22 59.9	115	07.7	76	-18 14.4	97	50	20 12	20 56	22 00	17 32	76	1 42	34		
6	268	58.2	+22 59.7	129	34.3	75	-18 24.1	96	45	19 50	20 27	21 16	17 14	72	1 57	39		
7	283	58.1	59.5	144	00.8	75	33.7	95	40	33	20 05	20 46	16 59	69	2 10	42		
8	298	57.9	59.4	158	27.3	73	43.2	93	35	18	19 47	24	46 67		21	44		
9	313	57.8	59.2	172	53.6	74	-18 52.5	92	30	19 05	32	20 06	35 65		30	47		
10	328	57.7	59.0	187	20.0	73	-19 01.7	92	20	18 44	19 08	19 37	16 16	62	2 47	50		
11	343	57.6	+22 58.8	201	46.3	72	-19 10.9	89	10 N	18 25	18 48	19 15	15 59	60	3 01	54		
12	358	57.5	+22 58.6	216	12.5	72	-19 19.8	89	0	18 08	18 30	18 56	15 44	58	3 15	56		
13	13	57.4	58.4	230	38.7	71	28.7	88	10 S	17 51	18 14	40	29 55		29	59		
14	28	57.3	58.2	245	04.8	71	37.5	86	20	33	17 57	24	15 13	52	3 43	63		
15	43	57.1	58.0	259	30.9	70	46.1	85	30	12	38	18 08	14 55	49	4 00	66		
16	58	57.0	57.8	273	56.9	69	-19 54.6	83	35	17 00	28	17 59	44 47		10	68		
17	73	56.9	+22 57.6	288	22.8	70	-20 02.9	83	40	16 46	17 16	17 50	14 32	45	4 21	71		
18	88	56.8	+22 57.4	302	48.8	68	-20 11.2	81	45	16 30	17 03	17 40	14 18	42	4 34	74		
19	103	56.7	57.2	317	14.6	69	19.3	79	50	09	16 48	29	14 00	39	50	79		
20	118	56.6	57.0	331	40.5	67	27.2	79	52	16 00	40	24	13 52	37	4 58	80		
21	133	56.5	56.8	346	06.2	68	35.1	77	54	15 49	32	18	43 35		5 07	82		
22	148	56.3	56.6	0	32.0	66	42.8	76	56	37	24	12	33 32		16	85		
23	163	56.2	56.4	14	57.6	67	50.4	74	58	23	14	17 06	21 30		27	89		
24	178	56.1	+22 56.1	29	23.3		-20 57.8		60 S	15 06	16 02	16 59	13 08	25	5 40	93		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 17 ^m 2		Mag: -4.7 PMG: 09 ^h 37 ^m				Mag: -0.5 PMG: 05 ^h 31 ^m				Mag: -2.7 PMG: 01 ^h 01 ^m				Mag: +0.2 PMG: 01 ^h 27 ^m			
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	280	29.5	215 27.0	+17 13.8		277 04.4	-1 57.6		344 39.5	-21 -37.0		338 15.9	-20 20.8					
1	295	31.9	230 28.8	13.8		292 05.4	57.0		359 42.3	-37.0		353 18.6	20.9					
2	310	34.4	245 30.6	13.7		307 06.5	56.5		14 45.1	-37.1		8 21.2	20.9					
3	325	36.9	260 32.4	13.7		322 07.6	56.0		29 47.9	-37.2		23 23.8	20.9					
4	340	39.3	275 34.2	13.6		337 08.7	55.4		44 50.7	-37.2		38 26.5	21.0					
5	355	41.8	290 36.0	+17 13.6		352 09.8	-1 54.9		59 53.5	-21 -37.3		53 29.1	-20 21.0					
6	10	44.2	305 37.8	+17 13.5		7 10.8	-1 54.4		74 56.3	-21 -37.3		68 31.8	-20 21.1					
7	25	46.7	320 39.6	13.5		22 11.9	53.8		89 59.0	-37.4		83 34.4	21.1					
8	40	49.2	335 41.4	13.4		37 13.0	53.3		105 01.8	-37.5		98 37.0	21.1					
9	55	51.6	350 43.2	13.4		52 14.1	52.8		120 04.6	-37.5		113 39.7	21.2					
10	70	54.1	5 45.0	13.3		67 15.2	52.3		135 07.4	-37.6		128 42.3	21.2					
11	85	56.6	20 46.8	+17 13.3		82 16.2	-1 51.7		150 10.2	-21 -37.6		143 45.0	-20 21.3					
12	100	59.0	35 48.6	+17 13.2		97 17.3	-1 51.2		165 13.0	-21 -37.7		158 47.6	-20 21.3					
13	116	01.5	50 50.3	13.2		112 18.4	50.7		180 15.8	-37.8		173 50.2	21.3					
14	131	04.0	65 52.1	13.2		127 19.5	50.1		195 18.5	-37.8		188 52.9	21.4					
15	146	06.4	80 53.9	13.1		142 20.6	49.6		210 21.3	-37.9		203 55.5	21.4					
16	161	08.9	95 55.6	13.1		157 21.7	49.1		225 24.1	-37.9		218 58.2	21.5					
17	176	11.3	110 57.4	+17 13.1		172 22.7	-1 48.5		240 26.9	-21 -38.0		234 00.8	-20 21.5					
18	191	13.8	125 59.2	+17 13.0		187 23.8	-1 48.0		255 29.7	-21 -38.1		249 03.4	-20 21.5					
19	206	16.3	141 00.9	13.0		202 24.9	47.5		270 32.5	-38.1		264 06.1	21.6					
20	221	18.7	156 02.7	13.0		217 26.0	46.9		285 35.3	-38.2		279 08.7	21.6					
21	236	21.2	171 04.4	12.9		232 27.1	46.4		300 38.1	-38.2		294 11.4	21.7					
22	251	23.7	186 06.2	12.9		247 28.2	45.9		315 40.8	-38.3		309 14.0	21.7					
23	266	26.1	201 07.9	12.9		262 29.2	45.4		330 43.6	-38.3		324 16.6	21.7					
24	281	28.6	216 09.6	+17 12.8		277 30.3	-1 44.8		345 46.4	-21 -38.4		339 19.3	-20 21.8					
Dif.	—		+18		0	+11		+5	+28		-1	+26						

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'7			SD: 16'1			PHE { 4^h: 58'9 12^h: 58'7 20^h: 58'6												
	PMG: 12 ^h 04 ^m 3			Edad: 11 ^d 7															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.												
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m			
0	178	56.1	+22	56.1	29	23.3	66	-20	57.8	73	60 N	***	1 10	2 45	19 59	73	1 16	31	
1	193	56.0		55.9	43	48.9	65	-21	05.1	72	58	***	1 52	3 04	40 71	31 35			
2	208	55.9		55.7	58	14.4	65		12.3	70	56	***	2 20	21	24 69	45 38			
3	223	55.8		55.5	72	39.9	65		19.3	69	54	1 04	41	34	19 10	68	1 57	40	
4	238	55.7		55.3	87	05.4	64		26.2	68	52	1 43	2 58	46	18 58	67	2 07	42	
5	253	55.5	+22	55.1	101	30.8	64	-21	33.0	66	50	2 09	3 13	3 57	18 48	66	2 16	44	
6	268	55.4	+22	54.9	115	56.2	64	-21	39.6	65	45	2 53	3 42	4 19	18 26	65	2 36	46	
7	283	55.3		54.7	130	21.6	63		46.1	63	40	3 22	4 04	36	18 08	64	2 52	48	
8	298	55.2		54.5	144	46.9	63		52.4	62	35	3 45	21	4 51	17 53	63	3 05	51	
9	313	55.1		54.3	159	12.2	62	-21	58.6	61	30	4 03	4 36	5 03	40 62	17 52			
10	328	55.0		54.1	173	37.4	62	-22	04.7	59	20	31	5 01	25	17 18	61	37 55		
11	343	54.9	+22	53.8	188	02.6	62	-22	10.6	57	10 N	4 54	5 21	5 44	16 59	60	3 55	56	
12	358	54.8	+22	53.6	202	27.8	62	-22	16.3	56	0	5 12	5 38	6 01	16 42	58	4 11	59	
13	13	54.7		53.4	216	53.0	61		21.9	55	10 S	29	5 55	18	24 57	28 60			
14	28	54.5		53.2	231	18.1	61		27.4	53	20	5 44	6 12	36	16 05	56	4 46	62	
15	43	54.4		53.0	245	43.2	60		32.7	52	30	6 00	30	6 57	15 44	54	5 06	64	
16	58	54.3		52.8	260	08.2	61		37.9	50	35	09	41	7 09	31 54	18 66			
17	73	54.2	+22	52.5	274	33.3	60	-22	42.9	49	40	6 18	6 52	7 22	15 17	52	5 32	67	
18	88	54.1	+22	52.3	288	58.3	60	-22	47.8	47	45	6 28	7 05	7 39	15 00	51	5 48	69	
19	103	54.0		52.1	303	23.3	60		52.5	46	50	39	21	7 59	14 39	49	6 09	71	
20	118	53.9		51.9	317	48.3	60	-22	57.1	45	52	44	28	8 08	29 48	18 73			
21	133	53.8		51.7	332	13.3	59	-23	01.6	42	54	50	36	19	18 46	29 74			
22	148	53.7		51.5	346	38.2	60		05.8	42	56	6 56	45	31	14 05	45	41 76		
23	163	53.5		51.2	1	03.2	59		10.0	40	58	7 02	7 54	8 45	13 51	42	6 56	78	
24	178	53.4	+22	51.0	15	28.1		-23	14.0		60 S	7 09	8 06	9 02	13 33	40	7 13	81	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 13 ^m 2		Mag: -4.7 PMG: 09 ^h 34 ^m				Mag: -0.5 PMG: 05 ^h 30 ^m				Mag: -2.7 PMG: 00 ^h 57 ^m				Mag: +0.2 PMG: 01 ^h 22 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	281	28.6	216	09.6	+17	12.8	277	30.3	-1	44.8	345	46.4	-21	38.4	339	19.3	-20	21.8
1	296	31.1	231	11.4		12.8	292	31.4		44.3	0	49.2		38.5	354	21.9		21.8
2	311	33.5	246	13.1		12.8	307	32.5		43.8	15	52.0		38.5	9	24.6		21.8
3	326	36.0	261	14.8		12.8	322	33.6		43.2	30	54.8		38.6	24	27.2		21.9
4	341	38.5	276	16.6		12.8	337	34.7		42.7	45	57.6		38.6	39	29.8		21.9
5	356	40.9	291	18.3	+17	12.7	352	35.8	-1	42.2	61	00.4	-21	38.7	54	32.5	-20	22.0
6	11	43.4	306	20.0	+17	12.7	7	36.8	-1	41.6	76	03.2	-21	38.8	69	35.1	-20	22.0
7	26	45.8	321	21.7		12.7	22	37.9		41.1	91	05.9		38.8	84	37.8		22.0
8	41	48.3	336	23.4		12.7	37	39.0		40.6	106	08.7		38.9	99	40.4		22.1
9	56	50.8	351	25.1		12.7	52	40.1		40.1	121	11.5		38.9	114	43.0		22.1
10	71	53.2	6	26.8		12.6	67	41.2		39.5	136	14.3		39.0	129	45.7		22.2
11	86	55.7	21	28.5	+17	12.6	82	42.3	-1	39.0	151	17.1	-21	39.1	144	48.3	-20	22.2
12	101	58.2	36	30.2	+17	12.6	97	43.4	-1	38.5	166	19.9	-21	39.1	159	51.0	-20	22.2
13	117	00.6	51	31.9		12.6	112	44.5		37.9	181	22.7		39.2	174	53.6		22.3
14	132	03.1	66	33.6		12.6	127	45.6		37.4	196	25.5		39.2	189	56.2		22.3
15	147	05.6	81	35.3		12.6	142	46.6		36.9	211	28.3		39.3	204	58.9		22.4
16	162	08.0	96	37.0		12.6	157	47.7		36.4	226	31.0		39.4	220	01.5		22.4
17	177	10.5	111	38.7	+17	12.6	172	48.8	-1	35.8	241	33.8	-21	39.4	235	04.2	-20	22.4
18	192	13.0	126	40.4	+17	12.6	187	49.9	-1	35.3	256	36.6	-21	39.5	250	06.8	-20	22.5
19	207	15.4	141	42.0		12.6	202	51.0		34.8	271	39.4		39.5	265	09.5		22.5
20	222	17.9	156	43.7		12.6	217	52.1		34.3	286	42.2		39.6	280	12.1		22.6
21	237	20.3	171	45.4		12.5	232	53.2		33.7	301	45.0		39.7	295	14.7		22.6
22	252	22.8	186	47.0		12.5	247	54.3		33.2	316	47.8		39.7	310	17.4		22.6
23	267	25.3	201	48.7		12.5	262	55.4		32.7	331	50.6		39.8	325	20.0		22.7
24	282	27.7	216	50.4	+17	12.5	277	56.5	-1	32.2	346	53.4	-21	39.8	340	22.7	-20	22.7
Dif.	—		+17 0				+11 +5				+28 -1				+26 0			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 04 ^m 5			○	SD: 15'9 Edad: 12'7			PHE { 4 ^h : 58'4 12 ^h : 58'2 20 ^h : 58'0										
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.	Rº: 57 ^m									
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m	
0	178	53.4	+22	51.0	15	28.1	59	-23	14.0	38	60 N	21 22	22 54	** ** *	21 12	51	1 47	49
1	193	53.3		50.8	29	53.0	59		17.8	37	58	21 03	22 14	** ** *	20 51	52	2 06	51
2	208	53.2		50.6	44	17.9	59		21.5	35	56	20 47	21 47	** ** *	33	53	23	52
3	223	53.1		50.3	58	42.8	59		25.0	34	54	33	26	23 01	18	54	37	52
4	238	53.0		50.1	73	07.7	59		28.4	32	52	22	21 09	22 23	20 05	55	2 49	53
5	253	52.9	+22	49.9	87	32.6	58	-23	31.6	31	50	20 11	20 55	21 58	19 54	55	3 00	54
6	268	52.8	+22	49.7	101	57.4	59	-23	34.7	29	45	19 50	20 26	21 15	19 31	55	3 22	55
7	283	52.7		49.4	116	22.3	59		37.6	27	40	32	20 05	20 46	19 12	55	40	56
8	298	52.6		49.2	130	47.2	58		40.3	27	35	18	19 47	23	18 56	56	3 56	56
9	313	52.5		49.0	145	12.0	59		43.0	24	30	19 05	32	20 05	42	57	4 09	57
10	328	52.3		48.7	159	36.9	59		45.4	23	20	18 44	19 08	19 37	18 19	57	32	57
11	343	52.2	+22	48.5	174	01.8	59	-23	47.7	22	10 N	18 25	18 48	19 15	17 59	57	4 51	58
12	358	52.1	+22	48.3	188	26.7	59	-23	49.9	20	0	18 08	18 31	18 57	17 40	58	5 10	58
13	13	52.0		48.1	202	51.6	59		51.9	18	10 S	17 51	18 14	40	21	58	28	59
14	28	51.9		47.8	217	16.5	59		53.7	17	20	33	17 57	25	17 01	58	5 48	59
15	43	51.8		47.6	231	41.4	60		55.4	15	30	13	39	09	16 38	59	6 10	60
16	58	51.7		47.4	246	06.4	59		56.9	14	35	17 01	29	18 00	25	58	24	59
17	73	51.6	+22	47.1	260	31.3	60	-23	58.3	12	40	16 47	17 17	17 51	16 09	59	6 39	60
18	88	51.5	+22	46.9	274	56.3	60	-23	59.5	11	45	16 31	17 04	17 41	15 51	58	6 57	61
19	103	51.4		46.7	289	21.3	60	-24	00.6	9	50	11	16 49	30	28	58	7 20	61
20	118	51.3		46.4	303	46.3	60		01.5	8	52	16 01	42	25	17	58	31	61
21	133	51.2		46.2	318	11.3	60		02.3	6	54	15 51	34	20	15 04	59	43	61
22	148	51.0		45.9	332	36.3	61		02.9	5	56	39	25	14	14 50	59	7 57	62
23	163	50.9		45.7	347	01.4	61		03.4	3	58	25	15	07	33	59	8 14	62
24	178	50.8	+22	45.5	1	26.5		-24	03.7		60 S	15 08	16 04	17 00	14 13	58	8 34	62
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 09 ^m 3		Mag: -4.7 PMG: 09 ^h 32 ^m				Mag: -0.6 PMG: 05 ^h 28 ^m				Mag: -2.7 PMG: 00 ^h 52 ^m				Mag: +0.2 PMG: 01 ^h 18 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	282	27.7	216	50.4	+17	12.5	277	56.5	-1	32.2	346	53.4	-21	-39.8	340	22.7	-20	22.7
1	297	30.2	231	52.0		12.5	292	57.6		31.6	1	56.2		-39.9	355	25.3		22.8
2	312	32.7	246	53.7		12.5	307	58.7		31.1	16	58.9		-39.9	10	27.9		22.8
3	327	35.1	261	55.3		12.5	322	59.8		30.6	32	01.7		-40.0	25	30.6		22.8
4	342	37.6	276	57.0		12.6	338	00.9		30.1	47	04.5		-40.1	40	33.2		22.9
5	357	40.1	291	58.6	+17	12.6	353	01.9	-1	29.5	62	07.3	-21	-40.1	55	35.9	-20	22.9
6	12	42.5	307	00.3	+17	12.6	8	03.0	-1	29.0	77	10.1	-21	-40.2	70	38.5	-20	23.0
7	27	45.0	322	01.9		12.6	23	04.1		28.5	92	12.9		-40.2	85	41.2		23.0
8	42	47.5	337	03.5		12.6	38	05.2		28.0	107	15.7		-40.3	100	43.8		23.0
9	57	49.9	352	05.2		12.6	53	06.3		27.4	122	18.5		-40.4	115	46.4		23.1
10	72	52.4	7	06.8		12.6	68	07.4		26.9	137	21.3		-40.4	130	49.1		23.1
11	87	54.8	22	08.4	+17	12.6	83	08.5	-1	26.4	152	24.1	-21	-40.5	145	51.7	-20	23.2
12	102	57.3	37	10.0	+17	12.6	98	09.6	-1	25.9	167	26.9	-21	-40.5	160	54.4	-20	23.2
13	117	59.8	52	11.7		12.6	113	10.7		25.3	182	29.7		-40.6	175	57.0		23.2
14	133	02.2	67	13.3		12.7	128	11.8		24.8	197	32.4		-40.7	190	59.7		23.3
15	148	04.7	82	14.9		12.7	143	12.9		24.3	212	35.2		-40.7	206	02.3		23.3
16	163	07.2	97	16.5		12.7	158	14.0		23.8	227	38.0		-40.8	221	04.9		23.4
17	178	09.6	112	18.1	+17	12.7	173	15.1	-1	23.2	242	40.8	-21	-40.8	236	07.6	-20	23.4
18	193	12.1	127	19.7	+17	12.7	188	16.2	-1	22.7	257	43.6	-21	-40.9	251	10.2	-20	23.5
19	208	14.6	142	21.3		12.7	203	17.3		22.2	272	46.4		-41.0	266	12.9		23.5
20	223	17.0	157	22.9		12.8	218	18.4		21.7	287	49.2		-41.0	281	15.5		23.5
21	238	19.5	172	24.5		12.8	233	19.5		21.1	302	52.0		-41.1	296	18.2		23.6
22	253	22.0	187	26.1		12.8	248	20.6		20.6	317	54.8		-41.1	311	20.8		23.6
23	268	24.4	202	27.7		12.8	263	21.7		20.1	332	57.6		-41.2	326	23.4		23.7
24	283	26.9	217	29.2	+17	12.9	278	22.8	-1	19.6	348	00.4	-21	-41.3	341	26.1	-20	23.7
Dif.	—		+16		0		+11		+5		+28		-1		+26		0	

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'7				SD: 15'8		PHE { 4 ^h : 57'9 12 ^h : 57'6 20 ^h : 57'4					Edad: 13 ^d 7			Salida de Luna			Puesta de Luna		
	PMG: 12 ^h 04 ^m 7				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	50.8	+22	45.5	1	26.5	61	-24	03.7	2		60 N	** **	1 15	2 48	22 03	31		2 36	68
1	193	50.7		45.2	15	51.6	62		03.9	0		58	** **	1 56	3 07	21 43	35		2 57	67
2	208	50.6		45.0	30	16.8	62		03.9	1		56	** **	2 23	23		26 38		3 15	65
3	223	50.5		44.8	44	42.0	62		03.8	3		54	1 09	2 43	36		12 40		29 65	
4	238	50.4		44.5	59	07.2	63		03.5	5		52	1 46	3 00	48		21 00	41		42 64
5	253	50.3	+22	44.3	73	32.5	63	-24	03.0	6		50	2 12	3 15	3 58		20 49	42		3 54 63
6	268	50.2	+22	44.0	87	57.8	63	-24	02.4	7		45	2 54	3 43	4 20		20 26	45		4 17 62
7	283	50.1		43.8	102	23.1	64		01.7	9		40	3 24	4 05	37		20 07	48		36 61
8	298	50.0		43.5	116	48.5	64	-24	00.8	10		35	3 46	22	4 52		19 52	49		4 52 60
9	313	49.9		43.3	131	13.9	65	-23	59.8	12		30	4 04	4 37	5 04		39 50			5 06 59
10	328	49.8		43.0	145	39.4	65		58.6	13		20	32	5 01	26		19 16	52		29 58
11	343	49.7	+22	42.8	160	04.9	66	-23	57.3	15		10 N	4 54	5 21	5 44		18 56	54		5 49 58
12	358	49.6	+22	42.6	174	30.5	66	-23	55.8	16		0	5 13	5 39	6 01		18 38	55		6 08 56
13	13	49.5		42.3	188	56.1	67		54.2	18		10 S	29	5 55	18		18 19	57		27 55
14	28	49.4		42.1	203	21.8	67		52.4	19		20	5 45	6 12	36		17 59	59		6 47 54
15	43	49.3		41.8	217	47.5	67		50.5	20		30	6 00	30	6 56		37 60			7 10 53
16	58	49.2		41.6	232	13.2	68		48.5	22		35	09	40	7 08		23 61			23 53
17	73	49.0	+22	41.3	246	39.0	69	-23	46.3	23		40	6 18	6 52	7 22		17 08	62		7 39 52
18	88	48.9	+22	41.1	261	04.9	69	-23	44.0	25		45	6 28	7 05	7 38		16 49	65		7 58 50
19	103	48.8		40.8	275	30.8	70		41.5	26		50	39	20	7 58		26 67			8 21 48
20	118	48.7		40.6	289	56.8	71		38.9	28		52	44	27	8 07		15 68			32 48
21	133	48.6		40.3	304	22.9	71		36.1	29		54	49	35	18		16 03	69		44 47
22	148	48.5		40.0	318	49.0	72		33.2	30		56	6 55	44	30		15 49	70		8 59 45
23	163	48.4		39.8	333	15.2	72		30.2	32		58	7 01	7 53	8 44		15 32	72		9 16 43
24	178	48.3	+22	39.5	347	41.4		-23	27.0			60 S	7 08	8 04	9 00		15 11	75		9 36 41
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 5 ^h 05 ^m 4		Mag: -4.7 PMG: 09 ^h 29 ^m				Mag: -0.6 PMG: 05 ^h 26 ^m				Mag: -2.7 PMG: 00 ^h 48 ^m				Mag: +0.2 PMG: 01 ^h 14 ^m					
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	283	26.9	217	29.2	+17	12.9	278	22.8	-1	19.6	348	00.4	-21	41.3	341	26.1	-20	23.7		
1	298	29.3	232	30.8		12.9	293	23.9		19.1	3	03.2		41.3	356	28.7		23.7		
2	313	31.8	247	32.4		12.9	308	25.0		18.5	18	06.0		41.4	11	31.4		23.8		
3	328	34.3	262	34.0		12.9	323	26.1		18.0	33	08.8		41.4	26	34.0		23.8		
4	343	36.7	277	35.5		13.0	338	27.2		17.5	48	11.6		41.5	41	36.7		23.9		
5	358	39.2	292	37.1	+17	13.0	353	28.3	-1	17.0	63	14.3	-21	41.6	56	39.3	-20	23.9		
6	13	41.7	307	38.7	+17	13.0	8	29.4	-1	16.4	78	17.1	-21	41.6	71	42.0	-20	23.9		
7	28	44.1	322	40.2		13.1	23	30.5		15.9	93	19.9		41.7	86	44.6		24.0		
8	43	46.6	337	41.8		13.1	38	31.6		15.4	108	22.7		41.7	101	47.2		24.0		
9	58	49.1	352	43.4		13.1	53	32.7		14.9	123	25.5		41.8	116	49.9		24.1		
10	73	51.5	7	44.9		13.2	68	33.8		14.4	138	28.3		41.9	131	52.5		24.1		
11	88	54.0	22	46.5	+17	13.2	83	34.9	-1	13.8	153	31.1	-21	41.9	146	55.2	-20	24.1		
12	103	56.5	37	48.0	+17	13.2	98	36.1	-1	13.3	168	33.9	-21	42.0	161	57.8	-20	24.2		
13	118	58.9	52	49.6		13.3	113	37.2		12.8	183	36.7		42.0	177	00.5		24.2		
14	134	01.4	67	51.1		13.3	128	38.3		12.3	198	39.5		42.1	192	03.1		24.3		
15	149	03.8	82	52.6		13.4	143	39.4		11.8	213	42.3		42.2	207	05.8		24.3		
16	164	06.3	97	54.2		13.4	158	40.5		11.2	228	45.1		42.2	222	08.4		24.3		
17	179	08.8	112	55.7	+17	13.4	173	41.6	-1	10.7	243	47.9	-21	42.3	237	11.0	-20	24.4		
18	194	11.2	127	57.2	+17	13.5	188	42.7	-1	10.2	258	50.7	-21	42.3	252	13.7	-20	24.4		
19	209	13.7	142	58.7		13.5	203	43.8		09.7	273	53.5		42.4	267	16.3		24.5		
20	224	16.2	158	00.3		13.6	218	44.9		09.2	288	56.3		42.4	282	19.0		24.5		
21	239	18.6	173	01.8		13.6	233	46.0		08.6	303	59.1		42.5	297	21.6		24.5		
22	254	21.1	188	03.3		13.7	248	47.1		08.1	319	01.9		42.6	312	24.3		24.6		
23	269	23.6	203	04.8		13.7	263	48.2		07.6	334	04.6		42.6	327	26.9		24.6		
24	284	26.0	218	06.3	+17	13.8	278	49.3	-1	07.1	349	07.4	-21	42.7	342	29.6	-20	24.7		
Dif.	—		+16		0		+11		+5		+28		-1		+26					

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: 15'6 Edad: 14 ^d PHE { 4^h: 57'2 12^h: 57'0 20^h: 56'8 PMG: 00 ^h 51 ^m Rº: 55^m																
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	h	m	h	m			h	m	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	178	48.3	+22	39.5	347	41.4	73	-23	27.0	33	60 N	21 20	22 49	** **	22 34	20	3 44	81			
1	193	48.2		39.3	2	07.7	74		23.7	34	58	21 01	22 11	** **	18 23		4 04	77			
2	208	48.1		39.0	16	34.1	74		20.3	36	56	20 45	21 45	** **	22 04	26	20 74				
3	223	48.0		38.8	31	00.5	75		16.7	37	54	32	24	22 56	21 52	29	34 72				
4	238	47.9		38.5	45	27.0	76		13.0	38	52	20	21 08	22 20	41 31		46 70				
5	253	47.8	+22	38.3	59	53.6	76	-23	09.2	40	50	20 10	20 54	21 56	21 31 33		4 57 69				
6	268	47.7	+22	38.0	74	20.2	77	-23	05.2	41	45	19 49	20 26	21 14	21 11 36		5 19 66				
7	283	47.6		37.7	88	46.9	78	-23	01.1	42	40	32	20 04	20 45	20 55 39		37 64				
8	298	47.5		37.5	103	13.7	78	-22	56.9	44	35	17	19 47	23	41 41		5 52 62				
9	313	47.4		37.2	117	40.5	80		52.5	45	30	19 05	32	20 05	29 43		6 05 61				
10	328	47.3		37.0	132	07.5	80		48.0	46	20	18 44	19 08	19 37	20 08 46		27 58				
11	343	47.2	+22	36.7	146	34.5	81	-22	43.4	47	10 N	18 25	18 48	19 15	19 50 49		6 47 55				
12	358	47.1	+22	36.4	161	01.6	81	-22	38.7	49	0	18 09	18 31	18 57	19 33 51		7 04 54				
13	13	47.0		36.2	175	28.7	83		33.8	50	10 S	17 52	18 14	41	19 16 54		22 52				
14	28	46.9		35.9	189	56.0	83		28.8	51	20	34	17 58	25	18 58 57		7 41 50				
15	43	46.8		35.6	204	23.3	84		23.7	52	30	14	40	09	37 60		8 03 47				
16	58	46.7		35.4	218	50.7	85		18.5	54	35	17 02	30	18 01	24 62		16 45				
17	73	46.6	+22	35.1	233	18.2	85	-22	13.1	54	40	16 48	17 18	17 52	18 10 64		8 31 43				
18	88	46.5	+22	34.8	247	45.7	87	-22	07.7	56	45	16 32	17 06	17 43	17 54 66		8 48 41				
19	103	46.4		34.6	262	13.4	87	-22	02.1	57	50	12	16 50	31	33 70		9 09 38				
20	118	46.3		34.3	276	41.1	88	-21	56.4	59	52	16 03	43	27	23 72		20 36				
21	133	46.2		34.0	291	08.9	89		50.5	59	54	15 53	36	21	17 12 73		31 34				
22	148	46.1		33.8	305	36.8	89		44.6	60	56	41	27	15	16 59 76		44 32				
23	163	46.0		33.5	320	04.7	91		38.6	62	58	27	17	09	44 79		9 59 29				
24	178	45.9	+22	33.2	334	32.8		-21	32.4		60 S	15 11	16 06	17 02	16 26 83		10 17 26				

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 01 ^m 4		Mag: -4.7 PMG: 09 ^h 27 ^m				Mag: -0.6 PMG: 05 ^h 24 ^m				Mag: -2.7 PMG: 00 ^h 43 ^m				Mag: +0.2 PMG: 01 ^h 10 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	284	26.0	218	06.3	+17	13.8	278	49.3	-1	07.1	349	07.4	-21	-42.7	342	29.6	-20	24.7
1	299	28.5	233	07.8		13.8	293	50.4		06.6	4	10.2		-42.7	357	32.2		24.7
2	314	31.0	248	09.3		13.9	308	51.6		06.0	19	13.0		-42.8	12	34.8		24.7
3	329	33.4	263	10.8		13.9	323	52.7		05.5	34	15.8		-42.9	27	37.5		24.8
4	344	35.9	278	12.3		14.0	338	53.8		05.0	49	18.6		-42.9	42	40.1		24.8
5	359	38.3	293	13.8	+17	14.0	353	54.9	-1	04.5	64	21.4	-21	-43.0	57	42.8	-20	24.9
6	14	40.8	308	15.3	+17	14.1	8	56.0	-1	04.0	79	24.2	-21	-43.0	72	45.4	-20	24.9
7	29	43.3	323	16.8		14.1	23	57.1		03.5	94	27.0		-43.1	87	48.1		24.9
8	44	45.7	338	18.3		14.2	38	58.2		02.9	109	29.8		-43.2	102	50.7		25.0
9	59	48.2	353	19.8		14.2	53	59.3		02.4	124	32.6		-43.2	117	53.4		25.0
10	74	50.7	8	21.3		14.3	69	00.5		01.9	139	35.4		-43.3	132	56.0		25.1
11	89	53.1	23	22.7	+17	14.4	84	01.6	-1	01.4	154	38.2	-21	-43.3	147	58.7	-20	25.1
12	104	55.6	38	24.2	+17	14.4	99	02.7	-1	00.9	169	41.0	-21	-43.4	163	01.3	-20	25.1
13	119	58.1	53	25.7		14.5	114	03.8	-1	00.4	184	43.8		-43.5	178	03.9		25.2
14	135	00.5	68	27.1		14.5	129	04.9	-0	59.8	199	46.6		-43.5	193	06.6		25.2
15	150	03.0	83	28.6		14.6	144	06.0		59.3	214	49.4		-43.6	208	09.2		25.3
16	165	05.4	98	30.1		14.7	159	07.1		58.8	229	52.2		-43.6	223	11.9		25.3
17	180	07.9	113	31.5	+17	14.7	174	08.3	-0	58.3	244	55.0	-21	-43.7	238	14.5	-20	25.4
18	195	10.4	128	33.0	+17	14.8	189	09.4	-0	57.8	259	57.8	-21	-43.8	253	17.2	-20	25.4
19	210	12.8	143	34.4		14.9	204	10.5		57.3	275	00.6		-43.8	268	19.8		25.4
20	225	15.3	158	35.9		14.9	219	11.6		56.7	290	03.4		-43.9	283	22.5		25.5
21	240	17.8	173	37.3		15.0	234	12.7		56.2	305	06.2		-43.9	298	25.1		25.5
22	255	20.2	188	38.8		15.1	249	13.8		55.7	320	09.0		-44.0	313	27.8		25.6
23	270	22.7	203	40.2		15.1	264	14.9		55.2	335	11.8		-44.1	328	30.4		25.6
24	285	25.2	218	41.7	+17	15.2	279	16.1	-0	54.7	350	14.6	-21	-44.1	343	33.1	-20	25.6
Dif.	—		+15		+1		+11		+5		+28		-1		+26			

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 05 ^m 0				SD: 15'4 Edad: 15 ^d 7		PHE { 4 ^h : 56'6 12 ^h : 56'3 20 ^h : 56'1											
	PMG: 01 ^h 46 ^m				Rº: 50 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº					
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	178	45.9	+22	33.2	334	32.8	91	-21	32.4	63	60 N	h m ** **	1 21	2 50	22 54	13	5 05	84
1	193	45.8		32.9	349	00.9	92		26.1	63	58	** **	1 59	3 09	41 17		21	80
2	208	45.7		32.7	3	29.1	94		19.8	65	56	** **	2 26	25	30 20		34	78
3	223	45.6		32.4	17	57.5	94		13.3	66	54	1 14	2 46	38	21 21		46	75
4	238	45.5		32.1	32	25.9	94		06.7	67	52	1 50	3 02	3 50	12 24		5 56	73
5	253	45.4	+22	31.8	46	54.3	96	-21	00.0	68	50	2 14	3 16	4 00	22 04	26	6 06	70
6	268	45.3	+22	31.6	61	22.9	97	-20	53.2	69	45	2 56	3 45	4 21	21 47	30	6 25	67
7	283	45.2		31.3	75	51.6	97		46.3	71	40	3 25	4 06	38	34 33		41	64
8	298	45.1		31.0	90	20.3	98		39.2	71	35	3 47	23	4 53	22 36		6 54	61
9	313	45.0		30.7	104	49.1	99		32.1	72	30	4 05	4 38	5 05	21 12	38	7 06	59
10	328	44.9		30.5	119	18.0	100		24.9	73	20	33	5 02	26	20 54	42	25	56
11	343	44.8	+22	30.2	133	47.0	101	-20	17.6	74	10 N	4 55	5 22	5 45	20 39	45	7 42	53
12	358	44.7	+22	29.9	148	16.1	102	-20	10.2	75	0	5 13	5 39	6 01	20 24	49	7 58	50
13	13	44.6		29.6	162	45.3	103	-20	02.7	76	10 S	29	5 55	18	20 10	51	8 14	47
14	28	44.5		29.3	177	14.6	103	-19	55.1	77	20	5 45	6 12	36	19 55	54	31	44
15	43	44.4		29.1	191	43.9	105		47.4	78	30	6 00	30	6 56	37 58		8 50	40
16	58	44.3		28.8	206	13.4	105		39.6	79	35	09	40	7 08	26 61		9 01	38
17	73	44.2	+22	28.5	220	42.9	106	-19	31.7	80	40	6 17	6 51	7 21	19 14	63	9 14	36
18	88	44.1	+22	28.2	235	12.5	107	-19	23.7	81	45	6 27	7 04	7 37	19 00	66	9 29	33
19	103	44.1		27.9	249	42.2	108		15.6	81	50	38	19	7 57	18 43	70	47	29
20	118	44.0		27.6	264	12.0	109	-19	07.5	83	52	43	26	8 06	35 72		9 56	27
21	133	43.9		27.4	278	41.9	110	-18	59.2	83	54	48	34	17	25 75		10 05	25
22	148	43.8		27.1	293	11.9	110		50.9	84	56	6 54	42	29	15 77		16	23
23	163	43.7		26.8	307	41.9	112		42.5	85	58	7 00	7 52	42	18 03	81	10 28	20
24	178	43.6	+22	26.5	322	12.1		-18	34.0		60 S	7 07	8 03	8 58	17 49	85	10 43	16
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 57 ^m 5		Mag: -4.7 PMG: 09 ^h 24 ^m				Mag: -0.6 PMG: 05 ^h 23 ^m				Mag: -2.7 PMG: 00 ^h 39 ^m				Mag: +0.2 PMG: 01 ^h 06 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	285	25.2	218	41.7	+17	15.2	279	16.1	-0	54.7	350	14.6	-21	44.1	343	33.1	-20	25.6
1	300	27.6	233	43.1		15.3	294	17.2		54.2	5	17.4		44.2	358	35.7		25.7
2	315	30.1	248	44.5		15.4	309	18.3		53.7	20	20.2		44.2	13	38.3		25.7
3	330	32.6	263	46.0		15.4	324	19.4		53.1	35	23.0		44.3	28	41.0		25.8
4	345	35.0	278	47.4		15.5	339	20.5		52.6	50	25.8		44.4	43	43.6		25.8
5	0	37.5	293	48.8	+17	15.6	354	21.7	-0	52.1	65	28.6	-21	44.4	58	46.3	-20	25.8
6	15	39.9	308	50.2	+17	15.7	9	22.8	-0	51.6	80	31.4	-21	44.5	73	48.9	-20	25.9
7	30	42.4	323	51.6		15.7	24	23.9		51.1	95	34.2		44.5	88	51.6		25.9
8	45	44.9	338	53.1		15.8	39	25.0		50.6	110	36.9		44.6	103	54.2		26.0
9	60	47.3	353	54.5		15.9	54	26.1		50.1	125	39.7		44.7	118	56.9		26.0
10	75	49.8	8	55.9		16.0	69	27.3		49.5	140	42.5		44.7	133	59.5		26.0
11	90	52.3	23	57.3	+17	16.1	84	28.4	-0	49.0	155	45.3	-21	44.8	149	02.2	-20	26.1
12	105	54.7	38	58.7	+17	16.1	99	29.5	-0	48.5	170	48.1	-21	44.8	164	04.8	-20	26.1
13	120	57.2	54	00.1		16.2	114	30.6		48.0	185	50.9		44.9	179	07.5		26.2
14	135	59.7	69	01.5		16.3	129	31.8		47.5	200	53.7		45.0	194	10.1		26.2
15	151	02.1	84	02.9		16.4	144	32.9		47.0	215	56.5		45.0	209	12.8		26.2
16	166	04.6	99	04.3		16.5	159	34.0		46.5	230	59.3		45.1	224	15.4		26.3
17	181	07.1	114	05.7	+17	16.6	174	35.1	-0	46.0	246	02.1	-21	45.1	239	18.1	-20	26.3
18	196	09.5	129	07.0	+17	16.6	189	36.2	-0	45.4	261	04.9	-21	45.2	254	20.7	-20	26.4
19	211	12.0	144	08.4		16.7	204	37.4		44.9	276	07.7		45.3	269	23.3		26.4
20	226	14.4	159	09.8		16.8	219	38.5		44.4	291	10.5		45.3	284	26.0		26.5
21	241	16.9	174	11.2		16.9	234	39.6		43.9	306	13.3		45.4	299	28.6		26.5
22	256	19.4	189	12.6		17.0	249	40.7		43.4	321	16.1		45.4	314	31.3		26.5
23	271	21.8	204	13.9		17.1	264	41.9		42.9	336	18.9		45.5	329	33.9		26.6
24	286	24.3	219	15.3	+17	17.2	279	43.0	-0	42.4	351	21.7	-21	45.5	344	36.6	-20	26.6
Dif.	—		+14		+1		+11		+5		+28		-1		+26		0	

UT	SOL				○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'7				SD: 15'3 Edad: 16 ^d 7																
	PMG: 12 ^h 05 ^m 2				PMG: 02 ^h 36 ^m																
					Rº: 48 ^m																
	hG ☉	Dec			hG ☾	Dif.		Dec		Dif.			Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m			
0	178	43.6	+22	26.5	322	12.1	112	-18	34.0	86	60 N	21 17	22 44	** **	23 07	9	6 29	84			
1	193	43.5		26.2	336	42.3	113		25.4	87	58	20 59	22 07	** **	22 58	12	41	81			
2	208	43.4		25.9	351	12.6	114		16.7	87	56	44	21 42	** **	50	14	6 52	77			
3	223	43.3		25.6	5	43.0	115	-18	08.0	88	54	31	22	22 51	42	18	7 01	74			
4	238	43.2		25.3	20	13.5	116	-17	59.2	89	52	19	21 06	22 17	36	19	09	72			
5	253	43.1	+22	25.1	34	44.1	117	-17	50.3	90	50	20 09	20 52	21 53	22 30	21	7 16	70			
6	268	43.0	+22	24.8	49	14.8	117	-17	41.3	91	45	19 48	20 24	21 12	22 17	25	7 32	66			
7	283	42.9		24.5	63	45.5	118		32.2	91	40	31	20 03	20 44	22 07	28	45	62			
8	298	42.8		24.2	78	16.3	119		23.1	92	35	17	19 46	22	21 58	31	7 55	60			
9	313	42.7		23.9	92	47.2	120		13.9	93	30	19 04	32	20 04	50	33	8 05	57			
10	328	42.6		23.6	107	18.2	121	-17	04.6	93	20	18 44	19 08	19 37	36	38	21	53			
11	343	42.5	+22	23.3	121	49.3	122	-16	55.3	94	10 N	18 26	18 48	19 15	21 24	41	8 35	50			
12	358	42.4	+22	23.0	136	20.5	122	-16	45.9	95	0	18 09	18 31	18 57	21 13	44	8 48	46			
13	13	42.4		22.7	150	51.7	124		36.4	96	10 S	17 52	18 15	41	21 01	48	9 01	43			
14	28	42.3		22.4	165	23.1	124		26.8	96	20	35	17 58	26	20 49	52	15	39			
15	43	42.2		22.1	179	54.5	125		17.2	97	30	15	41	10	35	56	30	36			
16	58	42.1		21.8	194	26.0	125	-16	07.5	98	35	17 03	31	18 02	27	58	39	34			
17	73	42.0	+22	21.5	208	57.5	127	-15	57.7	98	40	16 49	17 20	17 53	20 17	62	9 50	30			
18	88	41.9	+22	21.2	223	29.2	127	-15	47.9	99	45	16 34	17 07	17 44	20 06	65	10 02	27			
19	103	41.8		20.9	238	00.9	128		38.0	99	50	14	16 52	33	19 53	69	16	24			
20	118	41.7		20.6	252	32.7	129		28.1	100	52	16 05	45	28	47	71	23	22			
21	133	41.6		20.3	267	04.6	130		18.1	101	54	15 55	37	23	40	73	30	20			
22	148	41.5		20.0	281	36.6	130	-15	08.0	101	56	43	29	17	32	76	39	17			
23	163	41.4		19.7	296	08.6	131	-14	57.9	102	58	29	19	11	24	78	48	14			
24	178	41.3	+22	19.4	310	40.7		-14	47.7		60 S	15 13	16 09	17 04	19 14	82	10 59	11			

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 53 ^m 6		Mag: -4.7 PMG: 09 ^h 22 ^m				Mag: -0.6 PMG: 05 ^h 21 ^m				Mag: -2.7 PMG: 00 ^h 34 ^m				Mag: +0.2 PMG: 01 ^h 01 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	286	24.3	219	15.3	+17	17.2	279	43.0	-0	42.4	351	21.7	-21	-45.5	344	36.6	-20	26.6
1	301	26.8	234	16.7		17.3	294	44.1		41.9	6	24.5		-45.6	359	39.2		26.7
2	316	29.2	249	18.0		17.4	309	45.3		41.4	21	27.3		-45.7	14	41.9		26.7
3	331	31.7	264	19.4		17.5	324	46.4		40.9	36	30.1		-45.7	29	44.5		26.7
4	346	34.2	279	20.7		17.6	339	47.5		40.3	51	32.9		-45.8	44	47.2		26.8
5	1	36.6	294	22.1	+17	17.7	354	48.6	-0	39.8	66	35.7	-21	-45.8	59	49.8	-20	26.8
6	16	39.1	309	23.5	+17	17.8	9	49.8	-0	39.3	81	38.5	-21	-45.9	74	52.5	-20	26.9
7	31	41.6	324	24.8		17.9	24	50.9		38.8	96	41.3		-46.0	89	55.1		26.9
8	46	44.0	339	26.1		18.0	39	52.0		38.3	111	44.1		-46.0	104	57.8		26.9
9	61	46.5	354	27.5		18.1	54	53.2		37.8	126	46.9		-46.1	120	00.4		27.0
10	76	48.9	9	28.8		18.2	69	54.3		37.3	141	49.7		-46.1	135	03.1		27.0
11	91	51.4	24	30.2	+17	18.3	84	55.4	-0	36.8	156	52.5	-21	-46.2	150	05.7	-20	27.1
12	106	53.9	39	31.5	+17	18.4	99	56.5	-0	36.3	171	55.3	-21	-46.3	165	08.4	-20	27.1
13	121	56.3	54	32.8		18.5	114	57.7		35.8	186	58.1		-46.3	180	11.0		27.1
14	136	58.8	69	34.2		18.6	129	58.8		35.3	202	00.9		-46.4	195	13.7		27.2
15	152	01.3	84	35.5		18.7	144	59.9		34.7	217	03.7		-46.4	210	16.3		27.2
16	167	03.7	99	36.8		18.8	160	01.1		34.2	232	06.5		-46.5	225	19.0		27.3
17	182	06.2	114	38.1	+17	18.9	175	02.2	-0	33.7	247	09.3	-21	-46.6	240	21.6	-20	27.3
18	197	08.7	129	39.5	+17	19.0	190	03.3	-0	33.2	262	12.1	-21	-46.6	255	24.3	-20	27.4
19	212	11.1	144	40.8		19.1	205	04.5		32.7	277	14.9		-46.7	270	26.9		27.4
20	227	13.6	159	42.1		19.2	220	05.6		32.2	292	17.7		-46.7	285	29.6		27.4
21	242	16.0	174	43.4		19.3	235	06.7		31.7	307	20.5		-46.8	300	32.2		27.5
22	257	18.5	189	44.7		19.4	250	07.9		31.2	322	23.3		-46.9	315	34.9		27.5
23	272	21.0	204	46.0		19.5	265	09.0		30.7	337	26.1		-46.9	330	37.5		27.6
24	287	23.4	219	47.3	+17	19.6	280	10.1	-0	30.2	352	28.9	-21	-47.0	345	40.2	-20	27.6
Dif.	—		+13		+1		+11		+5		+28		-1		+26		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 3				SD: 15:1 Edad: 17:7 PMG: 03 ^h 24 ^m PHE { 4^h: 55:3 12^h: 55:1 20^h: 55:0 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	41.3	+22	19.4	310	40.7	132	-14	47.7	102	60 N	*** **	1 27	2 54	23 16	7	7 53	81
1	193	41.3		19.1	325	12.9	133		37.5	103	58	*** **	2 03	3 12	10 10		8 02	77
2	208	41.2		18.8	339	45.2	133		27.2	103	56	*** **	29	27	04 13		09 75	
3	223	41.1		18.5	354	17.5	135		16.9	104	54	1 20	2 48	40	23 00	14	15 73	
4	238	41.0		18.2	8	50.0	134	-14	06.5	105	52	1 54	3 05	3 52	22 55	17	21 70	
5	253	40.9	+22	17.9	23	22.4	136	-13	56.0	105	50	2 17	3 19	4 02	22 51	18	8 26	69
6	268	40.8	+22	17.6	37	55.0	136	-13	45.5	106	45	2 58	3 46	4 23	22 42	23	8 38	64
7	283	40.7		17.3	52	27.6	137		34.9	106	40	3 27	4 07	40	35 26		47 61	
8	298	40.6		16.9	67	00.3	138		24.3	106	35	3 49	25	4 54	29 28		8 55	58
9	313	40.5		16.6	81	33.1	139		13.7	107	30	4 06	4 39	5 06	23 31		9 02	55
10	328	40.4		16.3	96	06.0	139	-13	03.0	108	20	34	5 03	27	14 35		14 51	
11	343	40.4	+22	16.0	110	38.9	139	-12	52.2	108	10 N	4 55	5 22	5 45	22 05	39	9 25	47
12	358	40.3	+22	15.7	125	11.8	141	-12	41.4	108	0	5 13	5 39	6 02	21 57	43	9 34	44
13	13	40.2		15.4	139	44.9	141		30.6	109	10 S	29	5 56	18	49 46		44 40	
14	28	40.1		15.1	154	18.0	142		19.7	109	20	5 45	6 12	36	41 50		9 54	37
15	43	40.0		14.8	168	51.2	142	-12	08.8	110	30	6 00	30	6 56	31 54		10 06	32
16	58	39.9		14.5	183	24.4	143	-11	57.8	110	35	08	40	7 07	25 57		13 29	
17	73	39.8	+22	14.1	197	57.7	144	-11	46.8	110	40	6 17	6 51	7 21	21 19	59	10 20	27
18	88	39.7	+22	13.8	212	31.1	144	-11	35.8	111	45	6 26	7 03	7 37	21 11	63	10 29	24
19	103	39.7		13.5	227	04.5	145		24.7	112	50	37	18	7 56	21 02	67	40 19	
20	118	39.6		13.2	241	38.0	145		13.5	111	52	42	25	8 05	20 58	69	45 17	
21	133	39.5		12.9	256	11.5	147	-11	02.4	112	54	47	33	15	53 72		50 16	
22	148	39.4		12.6	270	45.2	146	-10	51.2	113	56	53	41	27	48 74		10 56	13
23	163	39.3		12.2	285	18.8	147		39.9	113	58	6 59	7 50	40	20 42	77	11 02	11
24	178	39.2	+22	11.9	299	52.5		-10	28.6		60 S	7 06	8 01	8 56	20 36	79	11 10	8
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 49 ^m 6		Mag: -4.7 PMG: 09 ^h 20 ^m				Mag: -0.6 PMG: 05 ^h 19 ^m				Mag: -2.7 PMG: 00 ^h 30 ^m				Mag: +0.2 PMG: 00 ^h 57 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	287	23.4	219	47.3	+17	19.6	280	10.1	-0	30.2	352	28.9	-21	47.0	345	40.2	-20	27.6
1	302	25.9	234	48.6		19.8	295	11.3		29.7	7	31.7		47.0	0	42.8		27.6
2	317	28.4	249	49.9		19.9	310	12.4		29.2	22	34.5		47.1	15	45.5		27.7
3	332	30.8	264	51.2		20.0	325	13.5		28.7	37	37.3		47.2	30	48.1		27.7
4	347	33.3	279	52.5		20.1	340	14.7		28.2	52	40.1		47.2	45	50.8		27.8
5	2	35.8	294	53.8	+17	20.2	355	15.8	-0	27.7	67	42.9	-21	47.3	60	53.4	-20	27.8
6	17	38.2	309	55.0	+17	20.3	10	17.0	-0	27.1	82	45.7	-21	47.3	75	56.0	-20	27.8
7	32	40.7	324	56.3		20.4	25	18.1		26.6	97	48.6		47.4	90	58.7		27.9
8	47	43.2	339	57.6		20.6	40	19.2		26.1	112	51.4		47.5	106	01.3		27.9
9	62	45.6	354	58.9		20.7	55	20.4		25.6	127	54.2		47.5	121	04.0		28.0
10	77	48.1	10	00.2		20.8	70	21.5		25.1	142	57.0		47.6	136	06.6		28.0
11	92	50.5	25	01.4	+17	20.9	85	22.6	-0	24.6	157	59.8	-21	47.6	151	09.3	-20	28.1
12	107	53.0	40	02.7	+17	21.0	100	23.8	-0	24.1	173	02.6	-21	47.7	166	11.9	-20	28.1
13	122	55.5	55	04.0		21.2	115	24.9		23.6	188	05.4		47.7	181	14.6		28.1
14	137	57.9	70	05.2		21.3	130	26.1		23.1	203	08.2		47.8	196	17.2		28.2
15	153	00.4	85	06.5		21.4	145	27.2		22.6	218	11.0		47.9	211	19.9		28.2
16	168	02.9	100	07.7		21.5	160	28.3		22.1	233	13.8		47.9	226	22.5		28.3
17	183	05.3	115	09.0	+17	21.7	175	29.5	-0	21.6	248	16.6	-21	48.0	241	25.2	-20	28.3
18	198	07.8	130	10.3	+17	21.8	190	30.6	-0	21.1	263	19.4	-21	48.0	256	27.8	-20	28.3
19	213	10.3	145	11.5		21.9	205	31.8		20.6	278	22.2		48.1	271	30.5		28.4
20	228	12.7	160	12.8		22.0	220	32.9		20.1	293	25.0		48.2	286	33.1		28.4
21	243	15.2	175	14.0		22.2	235	34.1		19.6	308	27.8		48.2	301	35.8		28.5
22	258	17.7	190	15.2		22.3	250	35.2		19.1	323	30.6		48.3	316	38.4		28.5
23	273	20.1	205	16.5		22.4	265	36.3		18.6	338	33.4		48.3	331	41.1		28.5
24	288	22.6	220	17.7	+17	22.6	280	37.5	-0	18.1	353	36.2	-21	48.4	346	43.7	-20	28.6
Dif.	—		+13		+1		+11		+5		+28		-1		+26		0	

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'7			PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6													
	PMG: 12 ^h 05 ^m 5			SD: 15'0 Edad: 18 ^d 7													
				PMG: 04 ^h 08 ^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	h m m		
0	178	39.2	+22 11.9	299	52.5	148	-10 28.6	113	60 N	21 14	22 38	** **	23 23	6	9 14 78		
1	193	39.1		314	26.3	149		17.3	58	20 57	22 04	** **	20 8		19 76		
2	208	39.0		329	00.2	148	-10 06.0	114	56	42	21 39	** **	17 11		24 72		
3	223	39.0		343	34.0	150	-9 54.6	114	54	29	20	22 46	14 13		28 70		
4	238	38.9		358	08.0	150		43.2	52	18	21 04	22 14	12 15		31 69		
5	253	38.8	+22 10.3	12	42.0	150	-9 31.8	115	50	20 08	20 50	21 51	23 09	17	9 35 66		
6	268	38.7	+22 10.0	27	16.0	151	-9 20.3	115	45	19 47	20 23	21 11	23 05	20	9 42 62		
7	283	38.6		41	50.1	152	-9 08.8	115	40	30	20 02	20 43	23 01	24	48 59		
8	298	38.5		56	24.3	152	-8 57.3	116	35	16	19 45	21	22 57	27	53 56		
9	313	38.4		70	58.5	152		45.7	30	19 04	31	20 04	54 29		9 57 54		
10	328	38.4		85	32.7	153		34.1	20	18 43	19 08	19 36	49 33		10 05 49		
11	343	38.3	+22 08.4	100	07.0	154	-8 22.5	116	10 N	18 26	18 48	19 15	22 44	37	10 12 45		
12	358	38.2	+22 08.0	114	41.4	153	-8 10.9	117	0	18 09	18 31	18 57	22 40	41	10 18 41		
13	13	38.1		129	15.7	155	-7 59.2	117	10 S	17 53	18 15	41	35 45		24 38		
14	28	38.0		143	50.2	154		47.5	20	35	17 59	26	31 48		31 34		
15	43	37.9		158	24.6	156		35.8	30	15	42	11	25 53		38 30		
16	58	37.9		172	59.2	155		24.1	35	17 04	32	18 03	22 55		42 28		
17	73	37.8	+22 06.4	187	33.7	156	-7 12.3	117	40	16 51	17 21	17 55	22 18	59	10 47 25		
18	88	37.7	+22 06.0	202	08.3	157	-7 00.6	118	45	16 35	17 08	17 45	22 14	62	10 53 21		
19	103	37.6		216	43.0	156	-6 48.8	119	50	16	16 54	34	09 66		10 59 18		
20	118	37.5		231	17.6	157		36.9	52	16 07	47	30	07 68		11 02 16		
21	133	37.4		245	52.3	158		25.1	54	15 57	39	25	05 69		06 13		
22	148	37.4		260	27.1	158		13.3	56	45	31	19	22 02	72	09 12		
23	163	37.3		275	01.9	158	-6 01.4	119	58	32	22	13	21 59	74	13 10		
24	178	37.2	+22 04.0	289	36.7		-5 49.5		60 S	15 16	16 11	17 06	21 55	78	11 18 6		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 4 ^h 45 ^m 7		Mag: -4.7 PMG: 09 ^h 18 ^m			Mag: -0.7 PMG: 05 ^h 17 ^m			Mag: -2.7 PMG: 00 ^h 26 ^m			Mag: +0.2 PMG: 00 ^h 53 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	288	22.6	220	17.7	+17 22.6	280	37.5	-0 18.1	353	36.2	-21 -48.4	346	43.7	-20 28.6			
1	303	25.0	235	18.9		295	38.6		8	39.0	-48.5	1	46.4				
2	318	27.5	250	20.2		310	39.8		23	41.8	-48.5	16	49.0				
3	333	30.0	265	21.4		325	40.9		38	44.6	-48.6	31	51.7				
4	348	32.4	280	22.6		340	42.1		53	47.4	-48.6	46	54.4				
5	3 34.9	295	23.9	+17 23.2		355	43.2	-0 15.6	68	50.2	-21 -48.7	61	57.0	-20 28.8			
6	18 37.4	310	25.1	+17 23.3		10	44.4	-0 15.1	83	53.0	-21 -48.8	76	59.7	-20 28.8			
7	33 39.8	325	26.3			25	45.5		98	55.8	-48.8	92	02.3				
8	48 42.3	340	27.5			40	46.7		113	58.6	-48.9	107	05.0				
9	63 44.8	355	28.7			55	47.8		129	01.4	-48.9	122	07.6				
10	78 47.2	10	29.9			70	49.0		144	04.2	-49.0	137	10.3				
11	93 49.7	25	31.1	+17 24.0		85	50.1	-0 12.6	159	07.0	-21 -49.1	152	12.9	-20 29.0			
12	108 52.1	40	32.3	+17 24.2		100	51.3	-0 12.1	174	09.8	-21 -49.1	167	15.6	-20 29.1			
13	123 54.6	55	33.5			115	52.4		189	12.6	-49.2	182	18.2				
14	138 57.1	70	34.7			130	53.6		204	15.4	-49.2	197	20.9				
15	153 59.5	85	35.9			145	54.7		219	18.2	-49.3	212	23.5				
16	169 02.0	100	37.1			160	55.9		234	21.0	-49.4	227	26.2				
17	184 04.5	115	38.3	+17 24.9		175	57.0	-0 09.6	249	23.8	-21 -49.4	242	28.8	-20 29.3			
18	199 06.9	130	39.5	+17 25.0		190	58.2	-0 09.1	264	26.6	-21 -49.5	257	31.5	-20 29.3			
19	214 09.4	145	40.7			205	59.3		279	29.4	-49.5	272	34.1				
20	229 11.9	160	41.9			221	00.5		294	32.2	-49.6	287	36.8				
21	244 14.3	175	43.1			236	01.6		309	35.1	-49.6	302	39.4				
22	259 16.8	190	44.2			251	02.8		324	37.9	-49.7	317	42.1				
23	274 19.3	205	45.4			266	03.9		339	40.7	-49.8	332	44.7				
24	289 21.7	220	46.6	+17 25.9		281	05.1	-0 06.1	354	43.5	-21 -49.8	347	47.4	-20 29.6			
Dif.	—		+12	+1		+11	+5		+28		-1	+27					

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 : 54'5 12 ^h : 54'4 20 ^h : 54'3										
	PMG: 12 ^h 05 ^m 6			Edad: 19 ^d 7												
	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	37.2	+22 04.0	289	36.7	159	-5 49.5	119	60 N	** **	1 33	2 57	23 29	6	10 32	77
1	193	37.1		304	11.6	159		37.6	58	** **	2 08	3 15	28	9	35	74
2	208	37.0		318	46.5	159		25.7	56	** **	32	30	28	11	36	72
3	223	36.9		333	21.4	159		13.7	54	1 26	2 51	43	27	13	38	70
4	238	36.9		347	56.3	160	-5 01.8	120	52	1 58	3 07	3 54	27	15	40	67
5	253	36.8	+22 02.4	2	31.3	160	-4 49.8	119	50	2 20	3 21	4 04	23 26	17	10 41	66
6	268	36.7	+22 02.0	17	06.3	161	-4 37.9	120	45	3 01	3 48	4 24	23 25	21	10 44	61
7	283	36.6		31	41.4	160		25.9	40	29	4 09	41	25	23	47	58
8	298	36.5		46	16.4	161		13.9	35	3 50	26	4 55	24	26	49	55
9	313	36.5		60	51.5	161	-4 01.9	121	30	4 07	4 40	5 07	23	29	51	52
10	328	36.4		75	26.6	162	-3 49.8	120	20	35	5 04	28	22	33	54	48
11	343	36.3	+22 00.3	90	01.8	161	-3 37.8	120	10 N	4 56	5 23	5 46	23 21	37	10 57	44
12	358	36.2	+22 00.0	104	36.9	162	-3 25.8	121	0	5 14	5 40	6 02	23 21	40	10 59	41
13	13	36.1	+21 59.6	119	12.1	162		13.7	10 S	30	5 56	18	20	44	11 02	37
14	28	36.1		133	47.3	163	-3 01.7	121	20	5 45	6 12	36	19	48	05	33
15	43	36.0		148	22.6	162	-2 49.6	121	30	6 00	29	6 55	18	52	08	29
16	58	35.9		162	57.8	163		37.5	35	08	39	7 07	17	55	10	26
17	73	35.8	+21 58.2	177	33.1	162	-2 25.5	121	40	6 16	6 50	7 20	23 17	58	11 12	23
18	88	35.7	+21 57.9	192	08.3	163	-2 13.4	121	45	6 26	7 02	7 35	23 16	61	11 14	21
19	103	35.7		206	43.6	163	-2 01.3	121	50	36	17	7 54	15	65	17	16
20	118	35.6		221	18.9	164	-1 49.2	121	52	41	24	8 04	15	67	18	15
21	133	35.5		235	54.3	163		37.1	54	46	31	14	14	69	19	13
22	148	35.4		250	29.6	164		25.0	56	51	39	25	14	71	21	11
23	163	35.4		265	05.0	163		12.9	58	6 57	49	38	23 13	74	11 23	8
24	178	35.3	+21 55.8	279	40.3		-1 00.8		60 S	7 04	7 59	8 54	23 13	76	11 24	6
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 4 ^h 41 ^m 8		Mag: -4.7 PMG: 09 ^h 16 ^m			Mag: -0.7 PMG: 05 ^h 15 ^m			Mag: -2.7 PMG: 00 ^h 21 ^m			Mag: +0.2 PMG: 00 ^h 49 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	289	21.7	220 46.6	+17 25.9	281 05.1	-0 06.1	354 43.5	-21 49.8	347 47.4	-20 29.6						
1	304	24.2	235 47.8	26.0	296 06.2	05.6	9 46.3	49.9	2 50.0	29.6						
2	319	26.6	250 48.9	26.2	311 07.4	05.1	24 49.1	49.9	17 52.7	29.7						
3	334	29.1	265 50.1	26.3	326 08.5	04.6	39 51.9	50.0	32 55.3	29.7						
4	349	31.6	280 51.3	26.5	341 09.7	04.1	54 54.7	50.1	47 58.0	29.7						
5	4	34.0	295 52.4	+17 26.6	356 10.8	-0 03.6	69 57.5	-21 50.1	63 00.6	-20 29.8						
6	19	36.5	310 53.6	+17 26.8	11 12.0	-0 03.1	85 00.3	-21 50.2	78 03.3	-20 29.8						
7	34	39.0	325 54.7	26.9	26 13.2	02.6	100 03.1	50.2	93 05.9	29.9						
8	49	41.4	340 55.9	27.1	41 14.3	02.1	115 05.9	50.3	108 08.6	29.9						
9	64	43.9	355 57.0	27.2	56 15.5	01.6	130 08.7	50.4	123 11.2	29.9						
10	79	46.4	10 58.2	27.4	71 16.6	01.1	145 11.5	50.4	138 13.9	30.0						
11	94	48.8	25 59.3	+17 27.5	86 17.8	-0 00.6	160 14.3	-21 50.5	153 16.5	-20 30.0						
12	109	51.3	41 00.5	+17 27.7	101 18.9	-0 00.1	175 17.1	-21 50.5	168 19.2	-20 30.1						
13	124	53.7	56 01.6	27.8	116 20.1	+0 00.3	190 19.9	50.6	183 21.8	30.1						
14	139	56.2	71 02.7	28.0	131 21.3	00.8	205 22.7	50.7	198 24.5	30.2						
15	154	58.7	86 03.9	28.1	146 22.4	01.3	220 25.5	50.7	213 27.1	30.2						
16	170	01.1	101 05.0	28.3	161 23.6	01.8	235 28.3	50.8	228 29.8	30.2						
17	185	03.6	116 06.1	+17 28.5	176 24.7	+0 02.3	250 31.1	-21 50.8	243 32.5	-20 30.3						
18	200	06.1	131 07.3	+17 28.6	191 25.9	+0 02.8	265 33.9	-21 50.9	258 35.1	-20 30.3						
19	215	08.5	146 08.4	28.8	206 27.1	03.3	280 36.7	50.9	273 37.8	30.4						
20	230	11.0	161 09.5	28.9	221 28.2	03.8	295 39.5	51.0	288 40.4	30.4						
21	245	13.5	176 10.6	29.1	236 29.4	04.3	310 42.4	51.1	303 43.1	30.4						
22	260	15.9	191 11.8	29.2	251 30.5	04.8	325 45.2	51.1	318 45.7	30.5						
23	275	18.4	206 12.9	29.4	266 31.7	05.3	340 48.0	51.2	333 48.4	30.5						
24	290	20.9	221 14.0	+17 29.6	281 32.9	+0 05.8	355 50.8	-21 51.2	348 51.0	-20 30.6						
Dif.	—		+11	+2	+12	+5	+28	-1	+27	0						

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'7				PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2										
	PMG: 12 ^h 05 ^m 7				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
0	178	35.3	+21 55.8	279	40.3	164	-1 00.8	121	60 N	21 11	22 32	** ** *	23 35	6	11 49 77
1	193	35.2	55.4	294	15.7	164	-0 48.7	121	58	20 54	22 00	** ** *	37	9	49 74
2	208	35.1	55.1	308	51.1	164	36.6	120	56	39	21 36	23 39	39	11	48 72
3	223	35.0	54.7	323	26.5	164	24.6	121	54	27	17	22 40	40	14	48 69
4	238	35.0	54.4	338	01.9	164	12.5	121	52	16	21 02	22 10	42	15	47 67
5	253	34.9	+21 54.0	352	37.3	164	-0 00.4	121	50	20 06	20 49	21 48	23 43	17	11 47 65
6	268	34.8	+21 53.7	7	12.7	164	+0 11.7	121	45	19 46	20 22	21 09	23 46	21	11 45 62
7	283	34.7	53.3	21	48.1	164	23.8	121	40	29	20 01	20 41	48	25	45 58
8	298	34.7	53.0	36	23.5	164	35.9	121	35	15	19 44	20	50	27	44 55
9	313	34.6	52.6	50	58.9	164	+0 48.0	121	30	19 03	30	20 03	52	30	43 53
10	328	34.5	52.3	65	34.3	164	+1 00.1	120	20	18 43	19 07	19 36	55	34	42 48
11	343	34.4	+21 51.9	80	09.7	165	+1 12.1	121	10 N	18 26	18 48	19 15	23 58	38	11 41 44
12	358	34.4	+21 51.5	94	45.2	164	+1 24.2	121	0	18 09	18 32	18 58	** ** *	**	11 40 41
13	13	34.3	51.2	109	20.6	164	36.3	120	10 S	17 53	16	42	** ** *	**	39 37
14	28	34.2	50.8	123	56.0	164	+1 48.3	121	20	36	18 00	27	** ** *	**	38 33
15	43	34.1	50.5	138	31.4	164	+2 00.4	120	30	17	17 43	12	** ** *	**	37 29
16	58	34.1	50.1	153	06.8	164	12.4	120	35	17 05	33	18 04	** ** *	**	36 27
17	73	34.0	+21 49.7	167	42.2	164	+2 24.4	121	40	16 52	17 22	17 56	** ** *	**	11 35 24
18	88	33.9	+21 49.4	182	17.6	164	+2 36.5	120	45	16 37	17 10	17 47	** ** *	**	11 35 20
19	103	33.8	49.0	196	53.0	163	+2 48.5	120	50	18	16 55	36	** ** *	**	33 17
20	118	33.8	48.6	211	28.3	164	+3 00.5	120	52	16 09	49	32	** ** *	**	33 15
21	133	33.7	48.3	226	03.7	163	12.5	119	54	15 59	41	27	** ** *	**	32 13
22	148	33.6	47.9	240	39.0	164	24.4	120	56	48	33	21	** ** *	**	32 11
23	163	33.5	47.5	255	14.4	163	36.4	120	58	35	24	15	** ** *	**	31 9
24	178	33.5	+21 47.2	269	49.7		+3 48.4		60 S	15 20	16 14	17 09	** ** *	**	11 30 6
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 4 ^h 37 ^m 8		Mag: -4.7 PMG: 09 ^h 14 ^m			Mag: -0.7 PMG: 05 ^h 13 ^m			Mag: -2.8 PMG: 00 ^h 17 ^m			Mag: +0.1 PMG: 00 ^h 44 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	290	20.9	221	14.0	+17 29.6	281	32.9	+0 05.8	355	50.8	-21 -51.2	348	51.0	-20 30.6	
1	305	23.3	236	15.1	29.7	296	34.0	06.3	10	53.6	-51.3	3	53.7	30.6	
2	320	25.8	251	16.2	29.9	311	35.2	06.8	25	56.4	-51.4	18	56.3	30.7	
3	335	28.2	266	17.3	30.1	326	36.4	07.3	40	59.2	-51.4	33	59.0	30.7	
4	350	30.7	281	18.4	30.2	341	37.5	07.7	56	02.0	-51.5	49	01.6	30.7	
5	5	33.2	296	19.5	+17 30.4	356	38.7	+0 08.2	71	04.8	-21 -51.5	64	04.3	-20 30.8	
6	20	35.6	311	20.6	+17 30.6	11	39.9	+0 08.7	86	07.6	-21 -51.6	79	06.9	-20 30.8	
7	35	38.1	326	21.7	30.7	26	41.0	09.2	101	10.4	-51.7	94	09.6	30.9	
8	50	40.6	341	22.8	30.9	41	42.2	09.7	116	13.2	-51.7	109	12.2	30.9	
9	65	43.0	356	23.9	31.0	56	43.4	10.2	131	16.0	-51.8	124	14.9	30.9	
10	80	45.5	11	25.0	31.2	71	44.5	10.7	146	18.8	-51.8	139	17.5	31.0	
11	95	48.0	26	26.1	+17 31.4	86	45.7	+0 11.2	161	21.6	-21 -51.9	154	20.2	-20 31.0	
12	110	50.4	41	27.1	+17 31.6	101	46.9	+0 11.7	176	24.4	-21 -52.0	169	22.8	-20 31.1	
13	125	52.9	56	28.2	31.7	116	48.0	12.2	191	27.2	-52.0	184	25.5	31.1	
14	140	55.4	71	29.3	31.9	131	49.2	12.7	206	30.0	-52.1	199	28.2	31.1	
15	155	57.8	86	30.4	32.1	146	50.4	13.1	221	32.8	-52.1	214	30.8	31.2	
16	171	00.3	101	31.4	32.2	161	51.5	13.6	236	35.6	-52.2	229	33.5	31.2	
17	186	02.7	116	32.5	+17 32.4	176	52.7	+0 14.1	251	38.5	-21 -52.2	244	36.1	-20 31.3	
18	201	05.2	131	33.6	+17 32.6	191	53.9	+0 14.6	266	41.3	-21 -52.3	259	38.8	-20 31.3	
19	216	07.7	146	34.6	32.7	206	55.0	15.1	281	44.1	-52.4	274	41.4	31.4	
20	231	10.1	161	35.7	32.9	221	56.2	15.6	296	46.9	-52.4	289	44.1	31.4	
21	246	12.6	176	36.8	33.1	236	57.4	16.1	311	49.7	-52.5	304	46.7	31.4	
22	261	15.1	191	37.8	33.3	251	58.6	16.6	326	52.5	-52.5	319	49.4	31.5	
23	276	17.5	206	38.9	33.4	266	59.7	17.1	341	55.3	-52.6	334	52.0	31.5	
24	291	20.0	221	39.9	+17 33.6	282	00.9	+0 17.5	356	58.1	-21 -52.7	349	54.7	-20 31.6	
Dif.	—		+11	+2		+12	+5		+28		-1	+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 8				SD: 14'8 Edad: 21 ^d 7 PMG: 06 ^h 11 ^m Rº: 41 ^m													
	hG ☉		Dec		hG ☾		Dif.			Dec			Dif.					
	h	°	'	°	'	°	'	°		'	h		m	h	m	h	m	m
0	178	33.5	+21	47.2	269	49.7	163	+3	48.4	119	60 N	** **	1 40	3 01	23 41	8	13 06	78
1	193	33.4		46.8	284	25.0	163	+4	00.3	119	58	** **	2 12	18	46 11		03 75	
2	208	33.3		46.4	299	00.3	163		12.2	119	56	0 34	36	33	50 13		13 00	72
3	223	33.3		46.1	313	35.6	163		24.1	119	54	1 32	2 54	45	54 15		12 57	70
4	238	33.2		45.7	328	10.9	162		36.0	119	52	2 02	3 10	3 56	23 57	18	54 68	
5	253	33.1	+21	45.3	342	46.1	162	+4	47.9	119	50	2 24	3 23	4 06	** ** *	**	12 52	66
6	268	33.0	+21	45.0	357	21.3	162	+4	59.8	118	45	3 03	3 50	4 26	** ** *	**	12 47	62
7	283	33.0		44.6	11	56.5	162	+5	11.6	118	40	30	4 11	43	** ** *	**	43 58	
8	298	32.9		44.2	26	31.7	162		23.4	118	35	3 52	27	4 56	** ** *	**	39 56	
9	313	32.8		43.8	41	06.9	161		35.2	118	30	4 09	4 41	5 08	** ** *	**	36 53	
10	328	32.8		43.5	55	42.0	162		47.0	118	20	36	5 04	29	** ** *	**	30 49	
11	343	32.7	+21	43.1	70	17.2	161	+5	58.8	117	10 N	4 57	5 23	5 46	** ** *	**	12 25	45
12	358	32.6	+21	42.7	84	52.3	160	+6	10.5	118	0	5 14	5 40	6 02	0 01 41		12 21	41
13	13	32.5		42.4	99	27.3	161		22.3	117	10 S	30	5 56	18	04 44		16 38	
14	28	32.5		42.0	114	02.4	160		34.0	116	20	44	6 12	35	07 48		11 35	
15	43	32.4		41.6	128	37.4	160		45.6	117	30	5 59	29	6 55	10 53		06 30	
16	58	32.3		41.2	143	12.4	159	+6	57.3	116	35	6 07	38	7 06	12 56		12 03	28
17	73	32.3	+21	40.8	157	47.3	159	+7	08.9	117	40	6 16	6 49	7 19	0 15 58		11 59	25
18	88	32.2	+21	40.5	172	22.2	159	+7	20.6	115	45	6 25	7 01	7 34	0 17 62		11 55	22
19	103	32.1		40.1	186	57.1	159		32.1	116	50	35	16	7 53	20 66		50 18	
20	118	32.1		39.7	201	32.0	158		43.7	115	52	40	22	8 02	22 67		48 16	
21	133	32.0		39.3	216	06.8	158	+7	55.2	115	54	45	30	12	23 70		45 15	
22	148	31.9		38.9	230	41.6	158	+8	06.7	115	56	50	38	23	25 72		43 12	
23	163	31.8		38.6	245	16.4	157		18.2	115	58	6 56	47	36	0 27 75		11 40	9
24	178	31.8	+21	38.2	259	51.1		+8	29.7		60 S	7 02	7 57	8 51	0 29 78		11 36	7

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 33 ^m 9		Mag: -4.7 PMG: 09 ^h 13 ^m				Mag: -0.7 PMG: 05 ^h 12 ^m				Mag: -2.8 PMG: 00 ^h 12 ^m				Mag: +0.1 PMG: 00 ^h 40 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	291	20.0	221	39.9	+17	33.6	282	00.9	+0	17.5	356	58.1	-21	52.7	349	54.7	-20	31.6
1	306	22.5	236	41.0		33.8	297	02.1		18.0	12	00.9		52.7	4	57.3		31.6
2	321	24.9	251	42.0		34.0	312	03.3		18.5	27	03.7		52.8	20	00.0		31.6
3	336	27.4	266	43.1		34.1	327	04.4		19.0	42	06.5		52.8	35	02.6		31.7
4	351	29.8	281	44.1		34.3	342	05.6		19.5	57	09.3		52.9	50	05.3		31.7
5	6	32.3	296	45.2	+17	34.5	357	06.8	+0	20.0	72	12.1	-21	52.9	65	08.0	-20	31.8
6	21	34.8	311	46.2	+17	34.7	12	08.0	+0	20.5	87	14.9	-21	53.0	80	10.6	-20	31.8
7	36	37.2	326	47.2		34.9	27	09.1		21.0	102	17.7		53.1	95	13.3		31.9
8	51	39.7	341	48.3		35.0	42	10.3		21.4	117	20.5		53.1	110	15.9		31.9
9	66	42.2	356	49.3		35.2	57	11.5		21.9	132	23.3		53.2	125	18.6		31.9
10	81	44.6	11	50.3		35.4	72	12.7		22.4	147	26.1		53.2	140	21.2		32.0
11	96	47.1	26	51.4	+17	35.6	87	13.8	+0	22.9	162	28.9	-21	53.3	155	23.9	-20	32.0
12	111	49.6	41	52.4	+17	35.8	102	15.0	+0	23.4	177	31.8	-21	53.4	170	26.5	-20	32.1
13	126	52.0	56	53.4		35.9	117	16.2		23.9	192	34.6		53.4	185	29.2		32.1
14	141	54.5	71	54.4		36.1	132	17.4		24.4	207	37.4		53.5	200	31.8		32.1
15	156	57.0	86	55.4		36.3	147	18.6		24.8	222	40.2		53.5	215	34.5		32.2
16	171	59.4	101	56.5		36.5	162	19.7		25.3	237	43.0		53.6	230	37.1		32.2
17	187	01.9	116	57.5	+17	36.7	177	20.9	+0	25.8	252	45.8	-21	53.7	245	39.8	-20	32.3
18	202	04.3	131	58.5	+17	36.9	192	22.1	+0	26.3	267	48.6	-21	53.7	260	42.5	-20	32.3
19	217	06.8	146	59.5		37.0	207	23.3		26.8	282	51.4		53.8	275	45.1		32.4
20	232	09.3	162	00.5		37.2	222	24.5		27.3	297	54.2		53.8	290	47.8		32.4
21	247	11.7	177	01.5		37.4	237	25.6		27.7	312	57.0		53.9	305	50.4		32.4
22	262	14.2	192	02.5		37.6	252	26.8		28.2	327	59.8		53.9	320	53.1		32.5
23	277	16.7	207	03.5		37.8	267	28.0		28.7	343	02.6		54.0	335	55.7		32.5
24	292	19.1	222	04.5	+17	38.0	282	29.2	+0	29.2	358	05.4	-21	54.1	350	58.4	-20	32.6
Dif.	—		+10		+2		+12		+5		+28		-1		+27			

UT	SOL			LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 05 ^m 9			SD: 14'8 Edad: 22 ^d 7														
	PMG: 06 ^h 52 ^m			PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.											
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m				
0	178	31.8	+21	38.2	259	51.1	157	+8	29.7	114	60 N	21 08	22 26	*** **	23 49	11	14 24	81
1	193	31.7		37.8	274	25.8	156		41.1	114	58	20 51	21 55	*** **	23 57	13	18	77
2	208	31.6		37.4	289	00.4	156	+8	52.5	114	56	37	33	23 24	*** **	**	12	74
3	223	31.6		37.0	303	35.0	156	+9	03.9	113	54	25	21 15	22 35	*** **	**	07	71
4	238	31.5		36.6	318	09.6	155		15.2	113	52	14	20 59	22 06	*** **	**	14 02	70
5	253	31.4	+21	36.3	332	44.1	155	+9	26.5	113	50	20 04	20 46	21 45	0 00	19	13 58	67
6	268	31.4	+21	35.9	347	18.6	155	+9	37.8	112	45	19 44	20 20	21 07	0 07	23	13 49	63
7	283	31.3		35.5	1	53.1	154	+9	49.0	112	40	28	20 00	20 40	13	26	41	60
8	298	31.2		35.1	16	27.5	153	+10	00.2	112	35	15	19 44	19	17	29	35	57
9	313	31.2		34.7	31	01.8	153		11.4	111	30	19 03	30	20 02	22	31	29	55
10	328	31.1		34.3	45	36.1	153		22.5	111	20	18 43	19 07	19 36	29	36	19	51
11	343	31.0	+21	33.9	60	10.4	152	+10	33.6	111	10 N	18 26	18 48	19 15	0 36	39	13 10	48
12	358	31.0	+21	33.5	74	44.6	152	+10	44.7	110	0	18 10	18 32	18 58	0 42	43	13 02	44
13	13	30.9		33.2	89	18.8	151	+10	55.7	110	10 S	17 54	16	42	48	47	12 54	41
14	28	30.8		32.8	103	52.9	150	+11	06.7	109	20	37	18 00	28	0 55	50	46	37
15	43	30.8		32.4	118	26.9	151		17.6	109	30	18	17 43	13	1 03	54	36	33
16	58	30.7		32.0	133	01.0	149		28.5	109	35	17 06	34	18 05	08	56	31	30
17	73	30.7	+21	31.6	147	34.9	149	+11	39.4	108	40	16 54	17 23	17 57	1 13	59	12 24	28
18	88	30.6	+21	31.2	162	08.8	149	+11	50.2	108	45	16 39	17 11	17 48	1 19	62	12 17	25
19	103	30.5		30.8	176	42.7	148	+12	01.0	108	50	20	16 57	38	26	67	08	21
20	118	30.5		30.4	191	16.5	148		11.8	107	52	11	51	33	29	69	04	19
21	133	30.4		30.0	205	50.3	146		22.5	106	54	16 02	44	29	33	71	12 00	17
22	148	30.3		29.6	220	23.9	147		33.1	106	56	15 51	36	23	37	73	11 55	14
23	163	30.3		29.2	234	57.6	146		43.7	106	58	38	27	18	42	76	49	12
24	178	30.2	+21	28.8	249	31.2		+12	54.3		60 S	15 23	16 17	17 11	1 47	79	11 43	9

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 4 ^h 30 ^m 0		Mag: -4.7 PMG: 09 ^h 11 ^m			Mag: -0.7 PMG: 05 ^h 10 ^m			Mag: -2.8 PMG: 00 ^h 08 ^m			Mag: +0.1 PMG: 00 ^h 36 ^m						
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	292	19.1	222	04.5	+17	38.0	282	29.2	+0	29.2	358	05.4	-21	-54.1	350	58.4	-20	32.6
1	307	21.6	237	05.5		38.2	297	30.4		29.7	13	08.2		-54.1	6	01.0		32.6
2	322	24.1	252	06.5		38.4	312	31.6		30.2	28	11.0		-54.2	21	03.7		32.6
3	337	26.5	267	07.5		38.5	327	32.7		30.6	43	13.8		-54.2	36	06.3		32.7
4	352	29.0	282	08.5		38.7	342	33.9		31.1	58	16.6		-54.3	51	09.0		32.7
5	7	31.5	297	09.4	+17	38.9	357	35.1	+0	31.6	73	19.5	-21	-54.4	66	11.6	-20	32.8
6	22	33.9	312	10.4	+17	39.1	12	36.3	+0	32.1	88	22.3	-21	-54.4	81	14.3	-20	32.8
7	37	36.4	327	11.4		39.3	27	37.5		32.6	103	25.1		-54.5	96	17.0		32.8
8	52	38.8	342	12.4		39.5	42	38.7		33.0	118	27.9		-54.5	111	19.6		32.9
9	67	41.3	357	13.4		39.7	57	39.9		33.5	133	30.7		-54.6	126	22.3		32.9
10	82	43.8	12	14.3		39.9	72	41.0		34.0	148	33.5		-54.6	141	24.9		33.0
11	97	46.2	27	15.3	+17	40.1	87	42.2	+0	34.5	163	36.3	-21	-54.7	156	27.6	-20	33.0
12	112	48.7	42	16.3	+17	40.3	102	43.4	+0	35.0	178	39.1	-21	-54.8	171	30.2	-20	33.1
13	127	51.2	57	17.2		40.5	117	44.6		35.5	193	41.9		-54.8	186	32.9		33.1
14	142	53.6	72	18.2		40.7	132	45.8		35.9	208	44.7		-54.9	201	35.5		33.1
15	157	56.1	87	19.2		40.9	147	47.0		36.4	223	47.5		-54.9	216	38.2		33.2
16	172	58.6	102	20.1		41.0	162	48.2		36.9	238	50.3		-55.0	231	40.8		33.2
17	188	01.0	117	21.1	+17	41.2	177	49.4	+0	37.4	253	53.1	-21	-55.1	246	43.5	-20	33.3
18	203	03.5	132	22.0	+17	41.4	192	50.6	+0	37.8	268	55.9	-21	-55.1	261	46.2	-20	33.3
19	218	05.9	147	23.0		41.6	207	51.7		38.3	283	58.7		-55.2	276	48.8		33.3
20	233	08.4	162	23.9		41.8	222	52.9		38.8	299	01.5		-55.2	291	51.5		33.4
21	248	10.9	177	24.9		42.0	237	54.1		39.3	314	04.3		-55.3	306	54.1		33.4
22	263	13.3	192	25.8		42.2	252	55.3		39.8	329	07.2		-55.3	321	56.8		33.5
23	278	15.8	207	26.8		42.4	267	56.5		40.2	344	10.0		-55.4	336	59.4		33.5
24	293	18.3	222	27.7	+17	42.6	282	57.7	+0	40.7	359	12.8	-21	-55.5	352	02.1	-20	33.6
Dif.	—		+10	+2			+12	+5			+28	-1			+27			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7				SD: 14'9 Edad: 23 ^d 7												PHE { 4 ^h : 54'7 12 ^h : 54'9 20 ^h : 55'0	
	PMG: 12 ^h 06 ^m 0				PMG: 07 ^h 35 ^m												Rº: 46 ^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	h m	m	
0	178	30.2	+21	28.8	249	31.2	145	+12	54.3	105	60 N	** ** *	1 46	3 04	** ** *	15 45	82	
1	193	30.1		28.4	264	04.7	144	+13	04.8	105	58	** ** *	2 17	21	** ** *	35	78	
2	208	30.1		28.0	278	38.1	144		15.3	104	56	0 49	40	35	0 03	17	26 75	
3	223	30.0		27.6	293	11.5	144		25.7	104	54	1 38	2 58	48	09	19	18 73	
4	238	30.0		27.2	307	44.9	143		36.1	103	52	2 06	3 13	3 58	15	20	12 70	
5	253	29.9	+21	26.8	322	18.2	142	+13	46.4	103	50	2 27	3 26	4 08	0 19	23	15 05 69	
6	268	29.8	+21	26.4	336	51.4	141	+13	56.7	102	45	3 05	3 52	4 28	0 30	27	14 52 65	
7	283	29.8		26.0	351	24.5	141	+14	06.9	102	40	32	4 12	44	39	30	41 62	
8	298	29.7		25.6	5	57.6	141		17.1	101	35	3 53	29	4 58	46	33	32 59	
9	313	29.7		25.2	20	30.7	139		27.2	100	30	4 10	4 42	5 09	0 53	35	24 56	
10	328	29.6		24.8	35	03.6	139		37.2	100	20	36	5 05	29	1 05	38	14 10 53	
11	343	29.5	+21	24.4	49	36.5	138	+14	47.2	100	10 N	4 57	5 24	5 46	1 15	42	13 58 49	
12	358	29.5	+21	24.0	64	09.3	138	+14	57.2	99	0	5 14	5 40	6 02	1 25	45	13 46 47	
13	13	29.4		23.6	78	42.1	137	+15	07.1	98	10 S	30	5 56	18	35	48	35 43	
14	28	29.3		23.2	93	14.8	136		16.9	98	20	44	6 11	35	45	52	23 40	
15	43	29.3		22.8	107	47.4	136		26.7	97	30	5 59	28	6 54	1 57	56	09 37	
16	58	29.2		22.4	122	20.0	134		36.4	97	35	6 07	38	7 05	2 04	58	13 01 35	
17	73	29.2	+21	22.0	136	52.4	135	+15	46.1	96	40	6 15	6 48	7 18	2 12	61	12 52 32	
18	88	29.1	+21	21.6	151	24.9	133	+15	55.7	95	45	6 24	7 00	7 33	2 21	65	12 42 28	
19	103	29.1		21.1	165	57.2	133	+16	05.2	95	50	34	14	7 51	33	68	29 25	
20	118	29.0		20.7	180	29.5	132		14.7	94	52	38	21	8 00	38	70	23 23	
21	133	28.9		20.3	195	01.7	131		24.1	93	54	43	28	10	44	72	17 21	
22	148	28.9		19.9	209	33.8	130		33.4	93	56	48	36	21	50	75	09 19	
23	163	28.8		19.5	224	05.8	130		42.7	92	58	6 54	44	33	2 58	78	12 01 16	
24	178	28.8	+21	19.1	238	37.8		+16	51.9		60 S	7 00	7 54	8 48	3 06	82	11 52 13	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 26 ^m 1		Mag: -4.7 PMG: 09 ^h 10 ^m				Mag: -0.8 PMG: 05 ^h 08 ^m				Mag: -2.8 PMG: 00 ^h 03 ^m				Mag: +0.1 PMG: 00 ^h 32 ^m			
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	293	18.3	222	27.7	+17	42.6	282	57.7	+0	40.7	359	12.8	-21	55.5	352	02.1	-20	33.6
1	308	20.7	237	28.7		42.8	297	58.9		41.2	14	15.6		55.5	7	04.7		33.6
2	323	23.2	252	29.6		43.0	313	00.1		41.7	29	18.4		55.6	22	07.4		33.6
3	338	25.7	267	30.5		43.2	328	01.3		42.2	44	21.2		55.6	37	10.0		33.7
4	353	28.1	282	31.5		43.4	343	02.5		42.6	59	24.0		55.7	52	12.7		33.7
5	8	30.6	297	32.4	+17	43.6	358	03.7	+0	43.1	74	26.8	-21	55.7	67	15.4	-20	33.8
6	23	33.1	312	33.3	+17	43.8	13	04.9	+0	43.6	89	29.6	-21	55.8	82	18.0	-20	33.8
7	38	35.5	327	34.2		44.0	28	06.1		44.1	104	32.4		55.9	97	20.7		33.8
8	53	38.0	342	35.2		44.2	43	07.3		44.5	119	35.2		55.9	112	23.3		33.9
9	68	40.4	357	36.1		44.4	58	08.5		45.0	134	38.0		56.0	127	26.0		33.9
10	83	42.9	12	37.0		44.6	73	09.7		45.5	149	40.8		56.0	142	28.6		34.0
11	98	45.4	27	37.9	+17	44.8	88	10.9	+0	46.0	164	43.6	-21	56.1	157	31.3	-20	34.0
12	113	47.8	42	38.8	+17	45.0	103	12.1	+0	46.4	179	46.4	-21	56.2	172	33.9	-20	34.1
13	128	50.3	57	39.7		45.2	118	13.3		46.9	194	49.2		56.2	187	36.6		34.1
14	143	52.8	72	40.7		45.4	133	14.5		47.4	209	52.0		56.3	202	39.3		34.1
15	158	55.2	87	41.6		45.7	148	15.7		47.9	224	54.9		56.3	217	41.9		34.2
16	173	57.7	102	42.5		45.9	163	16.9		48.3	239	57.7		56.4	232	44.6		34.2
17	189	00.2	117	43.4	+17	46.1	178	18.1	+0	48.8	255	00.5	-21	56.4	247	47.2	-20	34.3
18	204	02.6	132	44.3	+17	46.3	193	19.3	+0	49.3	270	03.3	-21	56.5	262	49.9	-20	34.3
19	219	05.1	147	45.2		46.5	208	20.5		49.8	285	06.1		56.6	277	52.5		34.3
20	234	07.6	162	46.1		46.7	223	21.7		50.2	300	08.9		56.6	292	55.2		34.4
21	249	10.0	177	47.0		46.9	238	22.9		50.7	315	11.7		56.7	307	57.8		34.4
22	264	12.5	192	47.9		47.1	253	24.1		51.2	330	14.5		56.7	323	00.5		34.5
23	279	14.9	207	48.7		47.3	268	25.3		51.6	345	17.3		56.8	338	03.2		34.5
24	294	17.4	222	49.6	+17	47.5	283	26.5	+0	52.1	0	20.1	-21	56.8	353	05.8	-20	34.6
Dif.	—		+9 +2				+12 +5				+28 -1				+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 1				SD: 15:0 Edad: 24:7 PHE { 4 ^h : 55:2 12 ^h : 55:4 20 ^h : 55:6 PMG: 08 ^h 21 ^m Rº: 49 ^m														
	hG ☉	Dec			hG ☾	Dif.			Dec										Dif.
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	
0	178	28.8	+21	19.1	238	37.8	129	+16	51.9	92	60 N	21 05	22 20	** ** *	** ** *	0 10	19	17 07	80
1	193	28.7		18.7	253	09.7	128	+17	01.1	90	58	20 48	21 51	** ** *			16 53	77	
2	208	28.6		18.3	267	41.5	128		10.1	90	56	34	29	23 12		20 22	41	74	
3	223	28.6		17.8	282	13.3	126		19.1	90	54	22	21 12	22 29		28 24	31	72	
4	238	28.5		17.4	296	44.9	126		28.1	88	52	12	20 57	22 02		35 27	22	70	
5	253	28.5	+21	17.0	311	16.5	125	+17	36.9	88	50	20 02	20 44	21 42		0 42	28	16 14	68
6	268	28.4	+21	16.6	325	48.0	125	+17	45.7	87	45	19 43	20 19	21 05		0 57	31	15 57	64
7	283	28.4		16.2	340	19.5	123	+17	54.4	87	40	27	19 59	20 38		1 09	34	43	62
8	298	28.3		15.8	354	50.8	123	+18	03.1	86	35	14	43	18		19 37	31	60	
9	313	28.2		15.3	9	22.1	122		11.7	84	30	19 02	29	20 01		28 39	20	58	
10	328	28.2		14.9	23	53.3	121		20.1	85	20	18 42	19 07	19 35		43 43	15 03	55	
11	343	28.1	+21	14.5	38	24.4	121	+18	28.6	83	10 N	18 25	18 48	19 15		1 57	46	14 47	53
12	358	28.1	+21	14.1	52	55.5	119	+18	36.9	82	0	18 10	18 32	18 58		2 10	48	14 33	50
13	13	28.0		13.7	67	26.4	119		45.1	82	10 S	17 54	17	43		23 51	18	48	
14	28	28.0		13.2	81	57.3	118	+18	53.3	81	20	38	18 01	28		37 54	14 03	45	
15	43	27.9		12.8	96	28.1	117	+19	01.4	80	30	19	17 44	14		2 53	57	13 46	42
16	58	27.9		12.4	110	58.8	117		09.4	80	35	17 08	35	18 06		3 02	60	36	39
17	73	27.8	+21	12.0	125	29.5	115	+19	17.4	78	40	16 55	17 25	17 58		3 13	62	13 24	38
18	88	27.8	+21	11.6	140	00.0	115	+19	25.2	78	45	16 40	17 13	17 50		3 26	65	13 10	35
19	103	27.7		11.1	154	30.5	114		33.0	76	50	22	16 59	40		41 69	12 54	31	
20	118	27.6		10.7	169	00.9	113		40.6	76	52	14	53	35		48 71	46	30	
21	133	27.6		10.3	183	31.2	112		48.2	75	54	16 04	46	31		3 56	73	38	27
22	148	27.5		09.8	198	01.4	112	+19	55.7	74	56	15 53	38	26		4 05	76	28	25
23	163	27.5		09.4	212	31.6	110	+20	03.1	73	58	41	30	20		16 78	17	22	
24	178	27.4	+21	09.0	227	01.6		+20	10.4		60 S	15 27	16 20	17 14		4 28	82	12 05	18
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 4 ^h 22 ^m 1		Mag: -4.7 PMG: 09 ^h 08 ^m				Mag: -0.8 PMG: 05 ^h 06 ^m				Mag: -2.8 PMG: 23 ^h 54 ^m				Mag: +0.1 PMG: 00 ^h 28 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	294	17.4	222	49.6	+17	47.5	283	26.5	+0	52.1	0	20.1	-21	-56.8	353	05.8	-20	34.6	
1	309	19.9	237	50.5		47.7	298	27.7		52.6	15	22.9		-56.9	8	08.5		34.6	
2	324	22.3	252	51.4		47.9	313	28.9		53.1	30	25.7		-57.0	23	11.1		34.6	
3	339	24.8	267	52.3		48.1	328	30.1		53.5	45	28.5		-57.0	38	13.8		34.7	
4	354	27.3	282	53.2		48.4	343	31.3		54.0	60	31.3		-57.1	53	16.4		34.7	
5	9	29.7	297	54.0	+17	48.6	358	32.5	+0	54.5	75	34.1	-21	-57.1	68	19.1	-20	34.8	
6	24	32.2	312	54.9	+17	48.8	13	33.7	+0	55.0	90	36.9	-21	-57.2	83	21.7	-20	34.8	
7	39	34.7	327	55.8		49.0	28	34.9		55.4	105	39.7		-57.3	98	24.4		34.8	
8	54	37.1	342	56.7		49.2	43	36.1		55.9	120	42.6		-57.3	113	27.1		34.9	
9	69	39.6	357	57.5		49.4	58	37.4		56.4	135	45.4		-57.4	128	29.7		34.9	
10	84	42.0	12	58.4		49.6	73	38.6		56.8	150	48.2		-57.4	143	32.4		35.0	
11	99	44.5	27	59.3	+17	49.8	88	39.8	+0	57.3	165	51.0	-21	-57.5	158	35.0	-20	35.0	
12	114	47.0	43	00.1	+17	50.0	103	41.0	+0	57.8	180	53.8	-21	-57.5	173	37.7	-20	35.0	
13	129	49.4	58	01.0		50.3	118	42.2		58.2	195	56.6		-57.6	188	40.3		35.1	
14	144	51.9	73	01.8		50.5	133	43.4		58.7	210	59.4		-57.7	203	43.0		35.1	
15	159	54.4	88	02.7		50.7	148	44.6		59.2	226	02.2		-57.7	218	45.6		35.2	
16	174	56.8	103	03.5		50.9	163	45.8	+0	59.7	241	05.0		-57.8	233	48.3		35.2	
17	189	59.3	118	04.4	+17	51.1	178	47.0	+1	00.1	256	07.8	-21	-57.8	248	51.0	-20	35.3	
18	205	01.8	133	05.2	+17	51.3	193	48.3	+1	00.6	271	10.6	-21	-57.9	263	53.6	-20	35.3	
19	220	04.2	148	06.1		51.5	208	49.5		01.1	286	13.4		-57.9	278	56.3		35.3	
20	235	06.7	163	06.9		51.8	223	50.7		01.5	301	16.2		-58.0	293	58.9		35.4	
21	250	09.2	178	07.8		52.0	238	51.9		02.0	316	19.0		-58.1	309	01.6		35.4	
22	265	11.6	193	08.6		52.2	253	53.1		02.5	331	21.8		-58.1	324	04.2		35.5	
23	280	14.1	208	09.5		52.4	268	54.3		02.9	346	24.6		-58.2	339	06.9		35.5	
24	295	16.5	223	10.3	+17	52.6	283	55.5	+1	03.4	1	27.4	-21	-58.2	354	09.5	-20	35.5	
Dif.	—		+9		+2		+12		+5		+28		-1		+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 2				SD: 15'2 Edad: 25 ^d 7 PHE { 4 ^h : 55'8 12 ^h : 56'0 20 ^h : 56'2 PMG: 09 ^h 10 ^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		
0	178	27.4	+21	09.0	227	01.6	110	+20	10.4	72	60 N	** **	1 53	3 08	0 15	24	18 27	74			
1	193	27.4		08.6	241	31.6	109		17.6	72	58	** **	2 22	25	29	28	18 10	71			
2	208	27.3		08.1	256	01.5	108		24.8	70	56	1 01	2 44	39	42	30	17 55	69			
3	223	27.3		07.7	270	31.3	108		31.8	69	54	1 43	3 01	3 50	0 52	33	43	67			
4	238	27.2		07.3	285	01.1	106		38.7	69	52	2 10	16	4 01	1 02	34	32	66			
5	253	27.2	+21	06.8	299	30.7	106	+20	45.6	67	50	2 31	3 29	4 10	1 10	36	17 22	65			
6	268	27.1	+21	06.4	314	00.3	105	+20	52.3	67	45	3 08	3 54	4 30	1 28	40	17 01	63			
7	283	27.1		06.0	328	29.8	104	+20	59.0	65	40	34	4 14	46	43	42	16 45	61			
8	298	27.0		05.6	342	59.2	103	+21	05.5	64	35	3 55	30	4 59	1 56	43	31	59			
9	313	27.0		05.1	357	28.5	102		11.9	64	30	4 11	4 44	5 10	2 07	45	16 18	59			
10	328	26.9		04.7	11	57.7	102		18.3	62	20	37	5 06	30	26	48	15 58	56			
11	343	26.9	+21	04.2	26	26.9	100	+21	24.5	62	10 N	4 58	5 24	5 47	2 43	49	15 40	55			
12	358	26.8	+21	03.8	40	55.9	100	+21	30.7	60	0	5 15	5 40	6 03	2 58	52	15 23	53			
13	13	26.8		03.4	55	24.9	99		36.7	59	10 S	30	5 56	18	3 14	54	15 06	52			
14	28	26.7		02.9	69	53.8	99		42.6	58	20	44	6 11	35	31	56	14 48	50			
15	43	26.7		02.5	84	22.7	97		48.4	58	30	5 58	28	6 53	3 50	59	28	47			
16	58	26.6		02.1	98	51.4	97		54.2	56	35	6 06	37	7 04	4 02	60	15	47			
17	73	26.6	+21	01.6	113	20.1	96	+21	59.8	55	40	6 14	6 47	7 17	4 15	62	14 02	45			
18	88	26.5	+21	01.2	127	48.7	95	+22	05.3	53	45	6 22	6 59	7 32	4 31	64	13 45	44			
19	103	26.5		00.7	142	17.2	94		10.6	53	50	32	7 13	49	50	67	25	41			
20	118	26.4	+21	00.3	156	45.6	93		15.9	52	52	37	19	7 58	4 59	69	16	39			
21	133	26.4	+20	59.9	171	13.9	93		21.1	50	54	41	26	8 07	5 09	71	13 05	38			
22	148	26.3		59.4	185	42.2	92		26.1	49	56	46	33	18	21	72	12 53	36			
23	163	26.3		59.0	200	10.4	91		31.0	49	58	52	42	30	5 34	76	12 39	34			
24	178	26.2	+20	58.5	214	38.5		+22	35.9		60 S	6 58	7 52	8 44	5 50	79	12 23	30			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 4 ^h 18 ^m 2		Mag: -4.7 PMG: 09 ^h 07 ^m				Mag: -0.8 PMG: 05 ^h 04 ^m				Mag: -2.8 PMG: 23 ^h 50 ^m				Mag: +0.1 PMG: 00 ^h 23 ^m						
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	295	16.5	223	10.3	+17	52.6	283	55.5	+1	03.4	1	27.4	-21	58.2	354	09.5	-20	35.5			
1	310	19.0	238	11.1		52.8	298	56.8		03.9	16	30.3		58.3	9	12.2		35.6			
2	325	21.5	253	12.0		53.1	313	58.0		04.3	31	33.1		58.3	24	14.9		35.6			
3	340	23.9	268	12.8		53.3	328	59.2		04.8	46	35.9		58.4	39	17.5		35.7			
4	355	26.4	283	13.6		53.5	344	00.4		05.3	61	38.7		58.5	54	20.2		35.7			
5	10	28.9	298	14.5	+17	53.7	359	01.6	+1	05.7	76	41.5	-21	58.5	69	22.8	-20	35.8			
6	25	31.3	313	15.3	+17	53.9	14	02.8	+1	06.2	91	44.3	-21	58.6	84	25.5	-20	35.8			
7	40	33.8	328	16.1		54.2	29	04.1		06.7	106	47.1		58.6	99	28.1		35.8			
8	55	36.3	343	16.9		54.4	44	05.3		07.1	121	49.9		58.7	114	30.8		35.9			
9	70	38.7	358	17.7		54.6	59	06.5		07.6	136	52.7		58.7	129	33.4		35.9			
10	85	41.2	13	18.6		54.8	74	07.7		08.1	151	55.5		58.8	144	36.1		36.0			
11	100	43.7	28	19.4	+17	55.0	89	08.9	+1	08.5	166	58.3	-21	58.9	159	38.8	-20	36.0			
12	115	46.1	43	20.2	+17	55.3	104	10.2	+1	09.0	182	01.1	-21	58.9	174	41.4	-20	36.0			
13	130	48.6	58	21.0		55.5	119	11.4		09.4	197	03.9		59.0	189	44.1		36.1			
14	145	51.0	73	21.8		55.7	134	12.6		09.9	212	06.7		59.0	204	46.7		36.1			
15	160	53.5	88	22.6		55.9	149	13.8		10.4	227	09.5		59.1	219	49.4		36.2			
16	175	56.0	103	23.4		56.1	164	15.1		10.8	242	12.3		59.1	234	52.0		36.2			
17	190	58.4	118	24.2	+17	56.4	179	16.3	+1	11.3	257	15.1	-21	59.2	249	54.7	-20	36.3			
18	206	00.9	133	25.0	+17	56.6	194	17.5	+1	11.8	272	17.9	-21	59.3	264	57.4	-20	36.3			
19	221	03.4	148	25.8		56.8	209	18.7		12.2	287	20.8		59.3	280	00.0		36.3			
20	236	05.8	163	26.6		57.0	224	19.9		12.7	302	23.6		59.4	295	02.7		36.4			
21	251	08.3	178	27.4		57.3	239	21.2		13.2	317	26.4		59.4	310	05.3		36.4			
22	266	10.8	193	28.2		57.5	254	22.4		13.6	332	29.2		59.5	325	08.0		36.5			
23	281	13.2	208	29.0		57.7	269	23.6		14.1	347	32.0		59.5	340	10.6		36.5			
24	296	15.7	223	29.8	+17	57.9	284	24.9	+1	14.5	2	34.8	-21	59.6	355	13.3	-20	36.5			
Dif.	—		+8		+2		+12		+5		+28		-1		+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 3			SD: 15'3 Edad: 26 ^d 7 PHE { 4^h: 56'4 12^h: 56'6 20^h: 56'9																
	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	h m m					
0	178	26.2	+20	58.5		214	38.5	91	+22	35.9	46	60 N	21 01	22 14	** **	0 39	38	19 41	59	
1	193	26.2		58.1		229	06.6	89		40.5	46	58	20 45	21 46	** **	0 57	41	21	59	
2	208	26.1		57.7		243	34.5	89		45.1	45	56	31	25	23 02	1 12	43	19 04	55	
3	223	26.1		57.2		258	02.4	88		49.6	43	54	20	21 08	22 24	25	44	18 50	59	
4	238	26.1		56.8		272	30.2	88		53.9	42	52	10	20 54	21 58	36	46	38	58	
5	253	26.0	+20	56.3		286	58.0	86	+22	58.1	41	50	20 00	20 42	21 38	1 46	47	18 27	58	
6	268	26.0	+20	55.9		301	25.6	86	+23	02.2	40	45	19 41	20 17	21 02	2 08	48	18 04	58	
7	283	25.9		55.4		315	53.2	85		06.2	39	40	26	19 57	20 37	25	49	17 46	57	
8	298	25.9		55.0		330	20.7	85		10.1	37	35	13	41	16	39	51	30	58	
9	313	25.8		54.5		344	48.2	84		13.8	36	30	19 01	28	20 00	2 52	51	17 17	57	
10	328	25.8		54.1		359	15.6	83		17.4	34	20	18 42	19 06	19 34	3 14	52	16 54	57	
11	343	25.7	+20	53.6		13	42.9	82	+23	20.8	34	10 N	18 25	18 48	19 14	3 32	54	16 35	56	
12	358	25.7	+20	53.2		28	10.1	82	+23	24.2	32	0	18 10	18 32	18 58	3 50	55	16 16	56	
13	13	25.7		52.7		42	37.3	81		27.4	31	10 S	17 55	17	43	4 08	56	15 58	55	
14	28	25.6		52.3		57	04.4	81		30.5	29	20	38	18 02	29	27	57	38	55	
15	43	25.6		51.8		71	31.5	79		33.4	29	30	20	17 45	15	4 49	58	15	55	
16	58	25.5		51.4		85	58.4	80		36.3	27	35	17 09	36	07	5 02	59	15 02	54	
17	73	25.5	+20	50.9		100	25.4	78	+23	39.0	25	40	16 57	17 26	18 00	5 17	60	14 47	54	
18	88	25.4	+20	50.5		114	52.2	78	+23	41.5	24	45	16 42	17 15	17 51	5 35	60	14 29	53	
19	103	25.4		50.0		129	19.0	77		43.9	23	50	24	17 01	42	5 57	62	14 06	52	
20	118	25.3		49.6		143	45.7	77		46.2	22	52	16	16 55	37	6 08	62	13 55	52	
21	133	25.3		49.1		158	12.4	76		48.4	20	54	16 07	48	33	20	63	43	51	
22	148	25.3		48.7		172	39.0	76		50.4	19	56	15 56	41	28	33	65	29	50	
23	163	25.2		48.2		187	05.6	75		52.3	17	58	44	32	23	6 50	65	13 13	49	
24	178	25.2	+20	47.7		201	32.1		+23	54.0		60 S	15 30	16 23	17 17	7 09	68	12 53	47	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 4 ^h 14 ^m 3		Mag: -4.7 PMG: 09 ^h 06 ^m				Mag: -0.8 PMG: 05 ^h 02 ^m				Mag: -2.7 PMG: 23 ^h 45 ^m				Mag: +0.1 PMG: 00 ^h 19 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	
0	296	15.7	223	29.8	+17	57.9	284	24.9	+1	14.5	2	34.8	-21	-59.6	355	13.3	-20	36.5	
1	311	18.2	238	30.5		58.2	299	26.1		15.0	17	37.6		-59.7	10	15.9		36.6	
2	326	20.6	253	31.3		58.4	314	27.3		15.5	32	40.4		-59.7	25	18.6		36.6	
3	341	23.1	268	32.1		58.6	329	28.5		15.9	47	43.2		-59.8	40	21.3		36.7	
4	356	25.5	283	32.9		58.8	344	29.8		16.4	62	46.0		-59.8	55	23.9		36.7	
5	11	28.0	298	33.7	+17	59.1	359	31.0	+1	16.8	77	48.8	-21	-59.9	70	26.6	-20	36.7	
6	26	30.5	313	34.4	+17	59.3	14	32.2	+1	17.3	92	51.6	-21	-59.9	85	29.2	-20	36.8	
7	41	32.9	328	35.2		59.5	29	33.5		17.8	107	54.4	-22	00.0	100	31.9		36.8	
8	56	35.4	343	36.0	+17	59.7	44	34.7		18.2	122	57.2		-00.1	115	34.5		36.9	
9	71	37.9	358	36.7	+18	00.0	59	35.9		18.7	138	00.0		-00.1	130	37.2		36.9	
10	86	40.3	13	37.5		00.2	74	37.1		19.1	153	02.8		-00.2	145	39.9		37.0	
11	101	42.8	28	38.3	+18	00.4	89	38.4	+1	19.6	168	05.6	-22	-00.2	160	42.5	-20	37.0	
12	116	45.3	43	39.0	+18	00.6	104	39.6	+1	20.1	183	08.4	-22	-00.3	175	45.2	-20	37.0	
13	131	47.7	58	39.8		00.9	119	40.8		20.5	198	11.2		-00.3	190	47.8		37.1	
14	146	50.2	73	40.6		01.1	134	42.1		21.0	213	14.0		-00.4	205	50.5		37.1	
15	161	52.7	88	41.3		01.3	149	43.3		21.4	228	16.8		-00.4	220	53.1		37.2	
16	176	55.1	103	42.1		01.6	164	44.5		21.9	243	19.7		-00.5	235	55.8		37.2	
17	191	57.6	118	42.8	+18	01.8	179	45.8	+1	22.4	258	22.5	-22	-00.6	250	58.5	-20	37.2	
18	207	00.0	133	43.6	+18	02.0	194	47.0	+1	22.8	273	25.3	-22	-00.6	266	01.1	-20	37.3	
19	222	02.5	148	44.3		02.2	209	48.3		23.3	288	28.1		-00.7	281	03.8		37.3	
20	237	05.0	163	45.1		02.5	224	49.5		23.7	303	30.9		-00.7	296	06.4		37.4	
21	252	07.4	178	45.8		02.7	239	50.7		24.2	318	33.7		-00.8	311	09.1		37.4	
22	267	09.9	193	46.6		02.9	254	52.0		24.6	333	36.5		-00.8	326	11.7		37.5	
23	282	12.4	208	47.3		03.2	269	53.2		25.1	348	39.3		-00.9	341	14.4		37.5	
24	297	14.8	223	48.0	+18	03.4	284	54.4	+1	25.5	3	42.1	-22	-01.0	356	17.0	-20	37.5	
Dif.	—		+8	+2			+12	+5			+28		-1		+27				0

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7				SD: 15'5												PHE { 4 ^h : 57'1 12 ^h : 57'3 20 ^h : 57'6	
	PMG: 12 ^h 06 ^m 4				Edad: 27 ^d 7													
	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	25.2	+20	47.7	201	32.1	75	+23	54.0	17	60 N	***	1 59	3 12	1 17	59	20 40	41
1	193	25.2		47.3	215	58.6	74		55.7	14	58	***	2 27	28	38	58	20	43
2	208	25.1		46.8	230	25.0	73		57.1	14	56	1 11	2 48	42	1 55	58	20 03	45
3	223	25.1		46.4	244	51.3	73		58.5	12	54	1 49	3 05	3 53	2 09	58	19 49	46
4	238	25.0		45.9	259	17.6	73	+23	59.7	10	52	2 15	19	4 04	22	58	36	48
5	253	25.0	+20	45.4	273	43.9	72	+24	00.7	9	50	2 35	3 31	4 13	2 33	58	19 25	49
6	268	24.9	+20	45.0	288	10.1	71	+24	01.6	8	45	3 11	3 56	4 32	2 56	58	19 02	51
7	283	24.9		44.5	302	36.2	71		02.4	6	40	36	4 16	4 47	3 14	58	18 43	52
8	298	24.9		44.1	317	02.3	71		03.0	5	35	3 56	32	5 00	30	58	28	53
9	313	24.8		43.6	331	28.4	70		03.5	3	30	4 13	4 45	12	3 43	58	18 14	54
10	328	24.8		43.1	345	54.4	70		03.8	2	20	38	5 07	31	4 06	58	17 51	55
11	343	24.7	+20	42.7	0	20.4	70	+24	04.0	1	10 N	4 58	5 25	5 47	4 26	58	17 31	56
12	358	24.7	+20	42.2	14	46.4	69	+24	04.1	1	0	5 15	5 41	6 03	4 45	57	17 12	57
13	13	24.7		41.7	29	12.3	68		04.0	3	10 S	30	5 56	18	5 04	56	16 53	59
14	28	24.6		41.3	43	38.1	69		03.7	3	20	44	6 11	34	24	56	33	59
15	43	24.6		40.8	58	04.0	68		03.4	6	30	5 58	27	6 53	5 47	56	16 10	60
16	58	24.5		40.3	72	29.8	68		02.8	6	35	6 05	36	7 03	6 01	55	15 56	61
17	73	24.5	+20	39.9	86	55.6	67	+24	02.2	9	40	6 13	6 46	7 16	6 17	55	15 41	61
18	88	24.5	+20	39.4	101	21.3	67	+24	01.3	9	45	6 21	6 57	7 30	6 35	55	15 22	62
19	103	24.4		38.9	115	47.0	67	+24	00.4	12	50	31	7 11	47	6 59	54	14 58	64
20	118	24.4		38.5	130	12.7	67	+23	59.2	12	52	35	17	7 56	7 10	54	47	64
21	133	24.4		38.0	144	38.4	66		58.0	14	54	39	24	8 05	23	53	34	65
22	148	24.3		37.5	159	04.0	66		56.6	16	56	44	31	15	38	52	19	66
23	163	24.3		37.1	173	29.6	66		55.0	17	58	49	39	27	7 55	52	14 02	67
24	178	24.3	+20	36.6	187	55.2		+23	53.3		60 S	6 55	7 49	8 41	8 17	50	13 40	69
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 10 ^m 3		Mag: -4.6 PMG: 09 ^h 04 ^m				Mag: -0.8 PMG: 05 ^h 00 ^m				Mag: -2.7 PMG: 23 ^h 41 ^m				Mag: +0.1 PMG: 00 ^h 15 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	297	14.8	223	48.0	+18	03.4	284	54.4	+1	25.5	3	42.1	-22	01.0	356	17.0	-20	37.5
1	312	17.3	238	48.8		03.6	299	55.7		26.0	18	44.9		01.0	11	19.7		37.6
2	327	19.8	253	49.5		03.9	314	56.9		26.5	33	47.7		01.1	26	22.4		37.6
3	342	22.2	268	50.2		04.1	329	58.2		26.9	48	50.5		01.1	41	25.0		37.7
4	357	24.7	283	51.0		04.3	344	59.4		27.4	63	53.3		01.2	56	27.7		37.7
5	12	27.2	298	51.7	+18	04.6	0	00.6	+1	27.8	78	56.1	-22	01.2	71	30.3	-20	37.7
6	27	29.6	313	52.4	+18	04.8	15	01.9	+1	28.3	93	58.9	-22	01.3	86	33.0	-20	37.8
7	42	32.1	328	53.1		05.0	30	03.1		28.7	109	01.7		01.3	101	35.6		37.8
8	57	34.5	343	53.9		05.2	45	04.4		29.2	124	04.5		01.4	116	38.3		37.9
9	72	37.0	358	54.6		05.5	60	05.6		29.6	139	07.3		01.5	131	41.0		37.9
10	87	39.5	13	55.3		05.7	75	06.9		30.1	154	10.1		01.5	146	43.6		38.0
11	102	41.9	28	56.0	+18	05.9	90	08.1	+1	30.5	169	12.9	-22	01.6	161	46.3	-20	38.0
12	117	44.4	43	56.7	+18	06.2	105	09.3	+1	31.0	184	15.7	-22	01.6	176	48.9	-20	38.0
13	132	46.9	58	57.5		06.4	120	10.6		31.5	199	18.5		01.7	191	51.6		38.1
14	147	49.3	73	58.2		06.6	135	11.8		31.9	214	21.3		01.7	206	54.2		38.1
15	162	51.8	88	58.9		06.9	150	13.1		32.4	229	24.1		01.8	221	56.9		38.2
16	177	54.3	103	59.6		07.1	165	14.3		32.8	244	27.0		01.9	236	59.6		38.2
17	192	56.7	119	00.3	+18	07.3	180	15.6	+1	33.3	259	29.8	-22	01.9	252	02.2	-20	38.2
18	207	59.2	134	01.0	+18	07.6	195	16.8	+1	33.7	274	32.6	-22	02.0	267	04.9	-20	38.3
19	223	01.6	149	01.7		07.8	210	18.1		34.2	289	35.4		02.0	282	07.5		38.3
20	238	04.1	164	02.4		08.1	225	19.3		34.6	304	38.2		02.1	297	10.2		38.4
21	253	06.6	179	03.1		08.3	240	20.6		35.1	319	41.0		02.1	312	12.8		38.4
22	268	09.0	194	03.8		08.5	255	21.8		35.5	334	43.8		02.2	327	15.5		38.4
23	283	11.5	209	04.5		08.8	270	23.1		36.0	349	46.6		02.2	342	18.2		38.5
24	298	14.0	224	05.2	+18	09.0	285	24.3	+1	36.4	4	49.4	-22	02.3	357	20.8	-20	38.5
Dif.	—		+7		+2		+12		+5		+28		-1		+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 4				SD: 15'7 Edad: 28 ^d 7 PMG: 11 ^h 56 ^m PHE { 4 ^h : 57'8 12 ^h : 58'0 20 ^h : 58'2 Rº: 57 ^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	24.3	+20	36.6	187	55.2	66	+23	53.3	19	60 N	20 57	22 08	** **	2 16	78		
1	193	24.2		36.1	202	20.8	66		51.4	20	58	41	21 42	** **	36	76		
2	208	24.2		35.6	216	46.4	65		49.4	21	56	28	22	22 53	2 53	73		
3	223	24.2		35.2	231	11.9	65		47.3	23	54	17	21 05	22 18	3 07	72		
4	238	24.1		34.7	245	37.4	66		45.0	25	52	20 07	20 51	21 54	20	70		
5	253	24.1	+20	34.2	260	03.0	65	+23	42.5	26	50	19 58	20 39	21 35	3 31	69		
6	268	24.0	+20	33.7	274	28.5	65	+23	39.9	27	45	19 39	20 15	21 00	3 54	67		
7	283	24.0		33.3	288	54.0	65		37.2	29	40	24	19 56	20 35	4 12	65		
8	298	24.0		32.8	303	19.5	64		34.3	31	35	12	40	20 15	28	63		
9	313	23.9		32.3	317	44.9	65		31.2	32	30	19 00	27	19 59	4 41	63		
10	328	23.9		31.8	332	10.4	65		28.0	33	20	18 41	19 05	34	5 04	60		
11	343	23.9	+20	31.3	346	35.9	65	+23	24.7	35	10 N	18 25	18 48	19 14	5 24	59		
12	358	23.8	+20	30.9	1	01.4	64	+23	21.2	37	0	18 10	18 32	18 58	5 42	57		
13	13	23.8		30.4	15	26.8	65		17.5	37	10 S	17 55	17	43	6 00	56		
14	28	23.8		29.9	29	52.3	65		13.8	40	20	39	18 03	29	20	54		
15	43	23.7		29.4	44	17.8	65		09.8	41	30	21	17 47	16	43	52		
16	58	23.7		28.9	58	43.3	65		05.7	42	35	17 10	38	09	6 56	51		
17	73	23.7	+20	28.5	73	08.8	65	+23	01.5	44	40	16 58	17 28	18 01	7 12	49		
18	88	23.7	+20	28.0	87	34.3	65	+22	57.1	45	45	16 44	17 17	17 53	7 30	47		
19	103	23.6		27.5	101	59.8	65		52.6	47	50	27	17 03	44	7 53	44		
20	118	23.6		27.0	116	25.3	65		47.9	48	52	19	16 57	39	8 04	42		
21	133	23.6		26.5	130	50.8	66		43.1	50	54	16 10	51	35	16	41		
22	148	23.5		26.0	145	16.4	65		38.1	51	56	15 59	43	30	30	39		
23	163	23.5		25.6	159	41.9	66		33.0	52	58	48	35	25	8 47	36		
24	178	23.5	+20	25.1	174	07.5		+22	27.8		60 S	15 34	16 26	17 20	9 07	32		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 06 ^m 4		Mag: -4.6 PMG: 09 ^h 03 ^m				Mag: -0.8 PMG: 04 ^h 58 ^m				Mag: -2.7 PMG: 23 ^h 36 ^m				Mag: +0.1 PMG: 00 ^h 11 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	298	14.0	224	05.2	+18	09.0	285	24.3	+1	36.4	4	49.4	-22	-02.3	357	20.8		
1	313	16.4	239	05.9		09.2	300	25.6		36.9	19	52.2		-02.4	12	23.5		
2	328	18.9	254	06.6		09.5	315	26.8		37.3	34	55.0		-02.4	27	26.1		
3	343	21.4	269	07.2		09.7	330	28.1		37.8	49	57.8		-02.5	42	28.8		
4	358	23.8	284	07.9		09.9	345	29.3		38.2	65	00.6		-02.5	57	31.4		
5	13	26.3	299	08.6	+18	10.2	0	30.6	+1	38.7	80	03.4	-22	-02.6	72	34.1		
6	28	28.8	314	09.3	+18	10.4	15	31.8	+1	39.1	95	06.2	-22	-02.6	87	36.8		
7	43	31.2	329	10.0		10.6	30	33.1		39.6	110	09.0		-02.7	102	39.4		
8	58	33.7	344	10.6		10.9	45	34.3		40.0	125	11.8		-02.7	117	42.1		
9	73	36.1	359	11.3		11.1	60	35.6		40.5	140	14.6		-02.8	132	44.7		
10	88	38.6	14	12.0		11.4	75	36.9		40.9	155	17.4		-02.9	147	47.4		
11	103	41.1	29	12.7	+18	11.6	90	38.1	+1	41.4	170	20.2	-22	-02.9	162	50.0		
12	118	43.5	44	13.3	+18	11.8	105	39.4	+1	41.8	185	23.0	-22	-03.0	177	52.7		
13	133	46.0	59	14.0		12.1	120	40.6		42.3	200	25.8		-03.0	192	55.3		
14	148	48.5	74	14.7		12.3	135	41.9		42.7	215	28.6		-03.1	207	58.0		
15	163	50.9	89	15.3		12.5	150	43.1		43.1	230	31.4		-03.1	223	00.7		
16	178	53.4	104	16.0		12.8	165	44.4		43.6	245	34.2		-03.2	238	03.3		
17	193	55.9	119	16.7	+18	13.0	180	45.7	+1	44.0	260	37.0	-22	-03.2	253	06.0		
18	208	58.3	134	17.3	+18	13.3	195	46.9	+1	44.5	275	39.8	-22	-03.3	268	08.6		
19	224	00.8	149	18.0		13.5	210	48.2		44.9	290	42.6		-03.4	283	11.3		
20	239	03.3	164	18.6		13.7	225	49.4		45.4	305	45.4		-03.4	298	13.9		
21	254	05.7	179	19.3		14.0	240	50.7		45.8	320	48.2		-03.5	313	16.6		
22	269	08.2	194	19.9		14.2	255	52.0		46.3	335	51.0		-03.5	328	19.3		
23	284	10.6	209	20.6		14.5	270	53.2		46.7	350	53.8		-03.6	343	21.9		
24	299	13.1	224	21.2	+18	14.7	285	54.5	+1	47.2	5	56.6	-22	-03.6	358	24.6		
Dif.	—		+7		+2		+13		+4		+28		-1		+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 5				SD: 15'9 Edad: 0'3 PHE { 4 ^h : 58'4 12 ^h : 58'6 20 ^h : 58'7 PMG: 12 ^h 53 ^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 m	h m m				
0	178	23.5	+20	25.1	174	07.5	66	+22	27.8	54	60 N	*** ** 2 06	3 17	3 34	91	21 48	17
1	193	23.4		24.6	188	33.1	66		22.4	56	58	*** ** 32	32	3 52	87	34	21
2	208	23.4		24.1	202	58.7	66		16.8	57	56	1 21	2 52	4 06	84	22	24
3	223	23.4		23.6	217	24.3	66		11.1	58	54	1 55	3 08	3 56	19	81	27
4	238	23.4		23.1	231	49.9	67	+22	05.3	60	52	2 19	22	4 06	30	79	29
5	253	23.3	+20	22.6	246	15.6	67	+21	59.3	61	50	2 38	3 34	4 15	4 40	77	32
6	268	23.3	+20	22.1	260	41.3	67	+21	53.2	62	45	3 13	3 59	4 34	5 01	73	36
7	283	23.3		21.7	275	07.0	68		47.0	64	40	39	4 18	4 49	17	70	39
8	298	23.2		21.2	289	32.8	67		40.6	66	35	3 58	33	5 02	31	68	42
9	313	23.2		20.7	303	58.5	68		34.0	66	30	4 14	4 46	13	5 44	65	45
10	328	23.2		20.2	318	24.3	69		27.4	68	20	39	5 08	32	6 04	62	49
11	343	23.2	+20	19.7	332	50.2	68	+21	20.6	70	10 N	4 59	5 25	5 48	6 23	59	52
12	358	23.1	+20	19.2	347	16.0	69	+21	13.6	71	0	5 15	5 41	6 03	6 39	57	56
13	13	23.1		18.7	1	41.9	70	+21	06.5	72	10 S	30	5 55	18	6 56	54	58
14	28	23.1		18.2	16	07.9	69	+20	59.3	73	20	43	6 10	34	7 14	51	62
15	43	23.1		17.7	30	33.8	70		52.0	75	30	5 57	26	6 52	35	47	66
16	58	23.0		17.2	44	59.8	70		44.5	77	35	6 04	35	7 02	7 47	45	69
17	73	23.0	+20	16.7	59	25.8	71	+20	36.8	77	40	6 11	6 45	7 14	8 01	42	71
18	88	23.0	+20	16.2	73	51.9	71	+20	29.1	79	45	6 20	6 56	7 28	8 17	39	74
19	103	22.9		15.7	88	18.0	72		21.2	80	50	29	7 09	45	37	35	80
20	118	22.9		15.2	102	44.2	72		13.2	82	52	33	15	7 53	46	34	82
21	133	22.9		14.7	117	10.4	72	+20	05.0	82	54	37	21	8 02	8 57	31	84
22	148	22.9		14.2	131	36.6	72	+19	56.8	84	56	42	29	12	9 09	28	87
23	163	22.9		13.7	146	02.8	74		48.4	86	58	47	37	24	9 23	25	90
24	178	22.8	+20	13.2	160	29.2		+19	39.8		60 S	6 52	7 46	8 37	9 39	21	95

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 4 ^h 02 ^m 5		Mag: -4.6 PMG: 09 ^h 02 ^m			Mag: -0.9 PMG: 04 ^h 56 ^m			Mag: -2.7 PMG: 23 ^h 32 ^m			Mag: +0.1 PMG: 00 ^h 06 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	299	13.1	224	21.2	+18	14.7	285	54.5	+1	47.2	5	56.6	-22	03.6	358	24.6	-20	39.5
1	314	15.6	239	21.9		14.9	300	55.8		47.6	20	59.4		03.7	13	27.2		39.6
2	329	18.0	254	22.5		15.2	315	57.0		48.0	36	02.2		03.7	28	29.9		39.6
3	344	20.5	269	23.2		15.4	330	58.3		48.5	51	05.0		03.8	43	32.5		39.6
4	359	23.0	284	23.8		15.6	345	59.5		48.9	66	07.8		03.9	58	35.2		39.7
5	14	25.4	299	24.4	+18	15.9	1	00.8	+1	49.4	81	10.6	-22	03.9	73	37.9	-20	39.7
6	29	27.9	314	25.1	+18	16.1	16	02.1	+1	49.8	96	13.4	-22	04.0	88	40.5	-20	39.8
7	44	30.4	329	25.7		16.4	31	03.3		50.3	111	16.2		04.0	103	43.2		39.8
8	59	32.8	344	26.3		16.6	46	04.6		50.7	126	19.0		04.1	118	45.8		39.9
9	74	35.3	359	27.0		16.8	61	05.9		51.1	141	21.8		04.1	133	48.5		39.9
10	89	37.8	14	27.6		17.1	76	07.2		51.6	156	24.7		04.2	148	51.1		39.9
11	104	40.2	29	28.2	+18	17.3	91	08.4	+1	52.0	171	27.5	-22	04.2	163	53.8	-20	40.0
12	119	42.7	44	28.8	+18	17.6	106	09.7	+1	52.5	186	30.3	-22	04.3	178	56.5	-20	40.0
13	134	45.1	59	29.5		17.8	121	11.0		52.9	201	33.1		04.4	193	59.1		40.1
14	149	47.6	74	30.1		18.1	136	12.2		53.3	216	35.9		04.4	209	01.8		40.1
15	164	50.1	89	30.7		18.3	151	13.5		53.8	231	38.7		04.5	224	04.4		40.1
16	179	52.5	104	31.3		18.5	166	14.8		54.2	246	41.5		04.5	239	07.1		40.2
17	194	55.0	119	31.9	+18	18.8	181	16.0	+1	54.7	261	44.3	-22	04.6	254	09.7	-20	40.2
18	209	57.5	134	32.6	+18	19.0	196	17.3	+1	55.1	276	47.1	-22	04.6	269	12.4	-20	40.3
19	224	59.9	149	33.2		19.3	211	18.6		55.5	291	49.9		04.7	284	15.1		40.3
20	240	02.4	164	33.8		19.5	226	19.9		56.0	306	52.7		04.7	299	17.7		40.3
21	255	04.9	179	34.4		19.7	241	21.1		56.4	321	55.5		04.8	314	20.4		40.4
22	270	07.3	194	35.0		20.0	256	22.4		56.9	336	58.3		04.8	329	23.0		40.4
23	285	09.8	209	35.6		20.2	271	23.7		57.3	352	01.1		04.9	344	25.7		40.5
24	300	12.3	224	36.2	+18	20.5	286	25.0	+1	57.7	7	03.9	-22	05.0	359	28.3	-20	40.5
Dif.	—		+6	+2			+13	+4			+28	-1			+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 5			SD: 16'0 Edad: 1 ^d 3 PHE { 4 ^h : 58'9 12 ^h : 59'0 20 ^h : 59'1 PMG: 13 ^h 49 ^m Rº: 54 ^m								Civil		Nút.	Hora	Rº	Hora	Rº			
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.														
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	178	22.8	+20	13.2	160	29.2	73	+19	39.8	86	60 N	20 53	22 01	** **		5 05	96		22 05	12	
1	193	22.8		12.7	174	55.5	74		31.2	88	58	38	21 37	** **		19 91		21 55	15		
2	208	22.8		12.2	189	21.9	74		22.4	89	56	25	17	22 44		30 88		46 19			
3	223	22.8		11.7	203	48.3	75		13.5	90	54	14	21 01	22 12		40 85		38 22			
4	238	22.7		11.2	218	14.8	76	+19	04.5	92	52	20 04	20 48	21 49		49 83		31 24			
5	253	22.7	+20	10.7	232	41.4	75	+18	55.3	93	50	19 56	20 36	21 31		5 57	80		21 25	26	
6	268	22.7	+20	10.2	247	07.9	77	+18	46.0	93	45	19 38	20 12	20 57		6 14	75		21 11	31	
7	283	22.7		09.7	261	34.6	76		36.7	96	40	23	19 54	33		27 72		21 00	35		
8	298	22.6		09.2	276	01.2	77		27.1	96	35	19 10	39	20 13		39 69		20 50	38		
9	313	22.6		08.7	290	27.9	78		17.5	97	30	18 59	26	19 58		6 49	66		42 40		
10	328	22.6		08.2	304	54.7	78	+18	07.8	99	20	41	19 05	33		7 06	62		27 45		
11	343	22.6	+20	07.7	319	21.5	79	+17	57.9	99	10 N	18 25	18 47	19 14		7 22	57		20 14	49	
12	358	22.6	+20	07.2	333	48.4	79	+17	48.0	101	0	18 10	18 32	18 58		7 36	54		20 02	53	
13	13	22.5		06.7	348	15.3	80		37.9	102	10 S	17 55	18	43		7 50	50		19 49	58	
14	28	22.5		06.2	2	42.3	80		27.7	103	20	40	18 03	30		8 05	46		36 61		
15	43	22.5		05.7	17	09.3	80		17.4	104	30	22	17 48	17		22 42		21 66			
16	58	22.5		05.1	31	36.3	81	+17	07.0	105	35	12	39	10		32 39		12 69			
17	73	22.5	+20	04.6	46	03.4	82	+16	56.5	107	40	17 00	17 29	18 02		8 43	37		19 01	73	
18	88	22.4	+20	04.1	60	30.6	82	+16	45.8	107	45	16 46	17 18	17 55		8 56	33		18 49	77	
19	103	22.4		03.6	74	57.8	83		35.1	108	50	29	06	46		9 12	29		35 81		
20	118	22.4		03.1	89	25.1	83		24.3	110	52	21	17 00	42		20 26		28 83			
21	133	22.4		02.6	103	52.4	84		13.3	110	54	13	16 53	37		28 24		20 86			
22	148	22.4		02.1	118	19.8	84	+16	02.3	111	56	16 03	46	33		37 22		11 89			
23	163	22.3		01.6	132	47.2	84	+15	51.2	113	58	15 51	38	28		9 48	18		18 01	93	
24	178	22.3	+20	01.0	147	14.6		+15	39.9		60 S	15 38	16 30	17 23		10 00	14		17 50	97	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 3 ^h 58 ^m 5		Mag: -4.6 PMG: 09 ^h 01 ^m				Mag: -0.9 PMG: 04 ^h 54 ^m				Mag: -2.7 PMG: 23 ^h 27 ^m				Mag: +0.1 PMG: 00 ^h 02 ^m						
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	300	12.3	224	36.2	+18	20.5	286	25.0	+1	57.7	7	03.9	-22	-05.0	359	28.3	-20	40.5			
1	315	14.7	239	36.8		20.7	301	26.2		58.2	22	06.7		-05.0	14	31.0		40.6			
2	330	17.2	254	37.4		21.0	316	27.5		58.6	37	09.5		-05.1	29	33.7		40.6			
3	345	19.6	269	38.0		21.2	331	28.8		59.1	52	12.3		-05.1	44	36.3		40.6			
4	0	22.1	284	38.6		21.4	346	30.1		59.5	67	15.1		-05.2	59	39.0		40.7			
5	15	24.6	299	39.2	+18	21.7	1	31.3	+1	59.9	82	17.9	-22	-05.2	74	41.6	-20	40.7			
6	30	27.0	314	39.8	+18	21.9	16	32.6	+2	00.4	97	20.7	-22	-05.3	89	44.3	-20	40.8			
7	45	29.5	329	40.4		22.2	31	33.9		00.8	112	23.5		-05.3	104	46.9		40.8			
8	60	32.0	344	41.0		22.4	46	35.2		01.2	127	26.3		-05.4	119	49.6		40.8			
9	75	34.4	359	41.6		22.6	61	36.5		01.7	142	29.1		-05.4	134	52.3		40.9			
10	90	36.9	14	42.1		22.9	76	37.7		02.1	157	31.9		-05.5	149	54.9		40.9			
11	105	39.4	29	42.7	+18	23.1	91	39.0	+2	02.5	172	34.7	-22	-05.6	164	57.6	-20	41.0			
12	120	41.8	44	43.3	+18	23.4	106	40.3	+2	03.0	187	37.5	-22	-05.6	180	00.2	-20	41.0			
13	135	44.3	59	43.9		23.6	121	41.6		03.4	202	40.3		-05.7	195	02.9		41.0			
14	150	46.7	74	44.5		23.9	136	42.9		03.8	217	43.1		-05.7	210	05.5		41.1			
15	165	49.2	89	45.1		24.1	151	44.2		04.3	232	45.9		-05.8	225	08.2		41.1			
16	180	51.7	104	45.6		24.3	166	45.4		04.7	247	48.7		-05.8	240	10.9		41.2			
17	195	54.1	119	46.2	+18	24.6	181	46.7	+2	05.1	262	51.5	-22	-05.9	255	13.5	-20	41.2			
18	210	56.6	134	46.8	+18	24.8	196	48.0	+2	05.6	277	54.3	-22	-05.9	270	16.2	-20	41.3			
19	225	59.1	149	47.3		25.1	211	49.3		06.0	292	57.0		-06.0	285	18.8		41.3			
20	241	01.5	164	47.9		25.3	226	50.6		06.4	307	59.8		-06.0	300	21.5		41.3			
21	256	04.0	179	48.5		25.6	241	51.9		06.9	323	02.6		-06.1	315	24.1		41.4			
22	271	06.5	194	49.0		25.8	256	53.2		07.3	338	05.4		-06.2	330	26.8		41.4			
23	286	08.9	209	49.6		26.1	271	54.4		07.7	353	08.2		-06.2	345	29.4		41.5			
24	301	11.4	224	50.2	+18	26.3	286	55.7	+2	08.2	8	11.0	-22	-06.3	0	32.1	-20	41.5			
Dif.	—		+6		+2		+13		+4		+28		-1		+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 5				SD: 16'1 Edad: 2 ^d 3 PMG: 14 ^h 43 ^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	22.3	+20	01.0	147	14.6	86	+15	39.9	113	60 N	** **	2 12	3 21	6 41	97	22 17	9
1	193	22.3		00.5	161	42.2	85		28.6	114	58	** **	37	36	50	93	10	13
2	208	22.3	+20	00.0	176	09.7	87		17.2	115	56	1 29	2 56	48	6 58	89	05	15
3	223	22.3	+19	59.5	190	37.4	86	+15	05.7	116	54	2 01	3 12	3 59	7 05	86	22 00	18
4	238	22.3		59.0	205	05.0	87	+14	54.1	117	52	24	25	4 09	12	83	21 55	21
5	253	22.2	+19	58.5	219	32.7	88	+14	42.4	118	50	2 42	3 37	4 18	7 17	81	21 51	23
6	268	22.2	+19	57.9	234	00.5	88	+14	30.6	119	45	3 16	4 01	4 36	7 29	77	21 42	28
7	283	22.2		57.4	248	28.3	89		18.7	120	40	3 41	19	4 51	39	73	35	31
8	298	22.2		56.9	262	56.2	90	+14	06.7	120	35	4 00	35	5 03	48	69	28	35
9	313	22.2		56.4	277	24.2	89	+13	54.7	122	30	16	4 47	14	7 55	66	22	38
10	328	22.2		55.9	291	52.1	91		42.5	122	20	40	5 08	32	8 08	61	12	43
11	343	22.2	+19	55.3	306	20.2	90	+13	30.3	123	10 N	4 59	5 26	5 48	8 19	57	21 03	47
12	358	22.1	+19	54.8	320	48.2	92	+13	18.0	124	0	5 15	5 41	6 03	8 30	52	20 55	51
13	13	22.1		54.3	335	16.4	91	+13	05.6	125	10 S	30	5 55	18	40	48	47	55
14	28	22.1		53.8	349	44.5	93	+12	53.1	125	20	43	6 10	33	8 51	44	37	61
15	43	22.1		53.3	4	12.8	92		40.6	126	30	5 56	25	6 51	9 04	39	27	65
16	58	22.1		52.7	18	41.0	93		28.0	127	35	6 03	34	7 01	11	36	21	68
17	73	22.1	+19	52.2	33	09.3	94	+12	15.3	128	40	6 10	6 43	7 13	9 20	32	20 14	72
18	88	22.1	+19	51.7	47	37.7	94	+12	02.5	128	45	6 18	6 54	7 26	9 29	29	20 06	76
19	103	22.0		51.2	62	06.1	95	+11	49.7	129	50	27	7 07	43	41	24	19 56	81
20	118	22.0		50.6	76	34.6	95		36.8	130	52	31	13	51	46	22	51	84
21	133	22.0		50.1	91	03.1	95		23.8	131	54	35	19	7 59	52	19	46	86
22	148	22.0		49.6	105	31.6	96	+11	10.7	131	56	39	26	8 09	9 59	16	40	89
23	163	22.0		49.1	120	00.2	97	+10	57.6	131	58	44	34	20	10 06	13	19 34	92
24	178	22.0	+19	48.5	134	28.9		+10	44.5		60 S	6 50	7 42	8 33	10 14	10	19 27	96
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 54 ^m 6		Mag: -4.6 PMG: 09 ^h 00 ^m				Mag: -0.9 PMG: 04 ^h 52 ^m				Mag: -2.7 PMG: 23 ^h 23 ^m				Mag: +0.1 PMG: 23 ^h 54 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	301	11.4	224	50.2	+18	26.3	286	55.7	+2	08.2	8	11.0	-22	06.3	0	32.1	-20	41.5
1	316	13.9	239	50.7		26.5	301	57.0		08.6	23	13.8		06.3	15	34.8		41.5
2	331	16.3	254	51.3		26.8	316	58.3		09.0	38	16.6		06.4	30	37.4		41.6
3	346	18.8	269	51.8		27.0	331	59.6		09.5	53	19.4		06.4	45	40.1		41.6
4	1	21.2	284	52.4		27.3	347	00.9		09.9	68	22.2		06.5	60	42.7		41.7
5	16	23.7	299	53.0	+18	27.5	2	02.2	+2	10.3	83	25.0	-22	06.5	75	45.4	-20	41.7
6	31	26.2	314	53.5	+18	27.8	17	03.5	+2	10.8	98	27.8	-22	06.6	90	48.0	-20	41.7
7	46	28.6	329	54.1		28.0	32	04.8		11.2	113	30.6		06.6	105	50.7		41.8
8	61	31.1	344	54.6		28.2	47	06.1		11.6	128	33.4		06.7	120	53.4		41.8
9	76	33.6	359	55.1		28.5	62	07.4		12.1	143	36.2		06.8	135	56.0		41.9
10	91	36.0	14	55.7		28.7	77	08.7		12.5	158	39.0		06.8	150	58.7		41.9
11	106	38.5	29	56.2	+18	29.0	92	09.9	+2	12.9	173	41.8	-22	06.9	166	01.3	-20	42.0
12	121	41.0	44	56.8	+18	29.2	107	11.2	+2	13.3	188	44.6	-22	06.9	181	04.0	-20	42.0
13	136	43.4	59	57.3		29.5	122	12.5		13.8	203	47.4		07.0	196	06.6		42.0
14	151	45.9	74	57.9		29.7	137	13.8		14.2	218	50.2		07.0	211	09.3		42.1
15	166	48.4	89	58.4		29.9	152	15.1		14.6	233	53.0		07.1	226	12.0		42.1
16	181	50.8	104	58.9		30.2	167	16.4		15.1	248	55.8		07.1	241	14.6		42.2
17	196	53.3	119	59.5	+18	30.4	182	17.7	+2	15.5	263	58.6	-22	07.2	256	17.3	-20	42.2
18	211	55.7	135	00.0	+18	30.7	197	19.0	+2	15.9	279	01.4	-22	07.2	271	19.9	-20	42.2
19	226	58.2	150	00.5		30.9	212	20.3		16.3	294	04.2		07.3	286	22.6		42.3
20	242	00.7	165	01.0		31.2	227	21.6		16.8	309	07.0		07.3	301	25.2		42.3
21	257	03.1	180	01.6		31.4	242	22.9		17.2	324	09.8		07.4	316	27.9		42.4
22	272	05.6	195	02.1		31.7	257	24.2		17.6	339	12.6		07.4	331	30.6		42.4
23	287	08.1	210	02.6		31.9	272	25.5		18.0	354	15.4		07.5	346	33.2		42.4
24	302	10.5	225	03.1	+18	32.1	287	26.8	+2	18.5	9	18.2	-22	07.6	1	35.9	-20	42.5
Dif.	—		+5		+2		+13		+4		+28		-1		+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: 16'2 Edad: 3 ^d 3 PHE { 4 ^h : 59'5 12 ^h : 59'5 20 ^h : 59'5 PMG: 15 ^h 34 ^m Rº: 51 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.											
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m		
0	178	22.0	+19	48.5	134	28.9	97	+10	44.5	133	60 N	20 48	21 55	** **	8 18	95	22 26	8
1	193	22.0		48.0	148	57.6	97		31.2	133	58	34	32	23 29	23	92	23	11
2	208	22.0		47.5	163	26.3	98		17.9	133	56	22	21 13	22 36	27	89	20	14
3	223	21.9		46.9	177	55.1	98	+10	04.6	135	54	11	20 58	22 07	31	86	18	17
4	238	21.9		46.4	192	23.9	98	+9	51.1	134	52	20 02	45	21 45	35	83	16	19
5	253	21.9	+19	45.9	206	52.7	99	+9	37.7	136	50	19 53	20 33	21 27	8 38	81	22 14	21
6	268	21.9	+19	45.3	221	21.6	100	+9	24.1	136	45	19 36	20 10	20 54	8 46	75	22 10	25
7	283	21.9		44.8	235	50.6	99	+9	10.5	136	40	21	19 52	30	52	71	06	29
8	298	21.9		44.3	250	19.5	101	+8	56.9	137	35	19 09	37	20 12	8 57	68	03	33
9	313	21.9		43.7	264	48.6	100		43.2	137	30	18 58	25	19 56	9 01	65	22 00	36
10	328	21.9		43.2	279	17.6	101		29.5	138	20	40	19 04	32	09	60	21 55	41
11	343	21.9	+19	42.7	293	46.7	101	+8	15.7	139	10 N	18 25	18 47	19 13	9 16	55	21 50	46
12	358	21.9	+19	42.1	308	15.8	102	+8	01.8	138	0	18 10	18 32	18 58	9 22	51	21 46	50
13	13	21.9		41.6	322	45.0	102	+7	48.0	140	10 S	17 56	18	44	28	47	42	55
14	28	21.8		41.1	337	14.2	102		34.0	139	20	40	18 04	31	35	42	38	59
15	43	21.8		40.5	351	43.4	103		20.1	140	30	23	17 49	18	43	36	32	65
16	58	21.8		40.0	6	12.7	103	+7	06.1	141	35	13	40	11	47	34	29	68
17	73	21.8	+19	39.5	20	42.0	103	+6	52.0	141	40	17 02	17 31	18 04	9 52	30	21 26	71
18	88	21.8	+19	38.9	35	11.3	104	+6	37.9	141	45	16 48	17 20	17 56	9 58	26	21 22	75
19	103	21.8		38.4	49	40.7	104		23.8	142	50	32	08	48	10 05	21	17	80
20	118	21.8		37.8	64	10.1	104	+6	09.6	142	52	24	17 02	44	08	19	15	82
21	133	21.8		37.3	78	39.5	104	+5	55.4	142	54	16	16 56	40	11	18	12	85
22	148	21.8		36.8	93	08.9	105		41.2	142	56	16 06	49	36	15	15	09	89
23	163	21.8		36.2	107	38.4	105		27.0	143	58	15 55	42	31	19	12	06	92
24	178	21.8	+19	35.7	122	07.9		+5	12.7		60 S	15 42	16 33	17 26	10 24	9	21 03	95
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 50 ^m 7		Mag: -4.6 PMG: 08 ^h 59 ^m				Mag: -0.9 PMG: 04 ^h 50 ^m				Mag: -2.7 PMG: 23 ^h 18 ^m				Mag: +0.1 PMG: 23 ^h 49 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	302	10.5	225	03.1	+18	32.1	287	26.8	+2	18.5	9	18.2	-22	-07.6	1	35.9	-20	42.5
1	317	13.0	240	03.7		32.4	302	28.1		18.9	24	21.0		-07.6	16	38.5		42.5
2	332	15.5	255	04.2		32.6	317	29.4		19.3	39	23.8		-07.7	31	41.2		42.6
3	347	17.9	270	04.7		32.9	332	30.7		19.7	54	26.6		-07.7	46	43.8		42.6
4	2	20.4	285	05.2		33.1	347	32.0		20.2	69	29.4		-07.8	61	46.5		42.6
5	17	22.8	300	05.7	+18	33.4	2	33.3	+2	20.6	84	32.2	-22	-07.8	76	49.2	-20	42.7
6	32	25.3	315	06.2	+18	33.6	17	34.7	+2	21.0	99	35.0	-22	-07.9	91	51.8	-20	42.7
7	47	27.8	330	06.7		33.9	32	36.0		21.4	114	37.7		-07.9	106	54.5		42.8
8	62	30.2	345	07.2		34.1	47	37.3		21.9	129	40.5		-08.0	121	57.1		42.8
9	77	32.7	0	07.8		34.3	62	38.6		22.3	144	43.3		-08.0	136	59.8		42.9
10	92	35.2	15	08.3		34.6	77	39.9		22.7	159	46.1		-08.1	152	02.4		42.9
11	107	37.6	30	08.8	+18	34.8	92	41.2	+2	23.1	174	48.9	-22	-08.1	167	05.1	-20	42.9
12	122	40.1	45	09.3	+18	35.1	107	42.5	+2	23.6	189	51.7	-22	-08.2	182	07.7	-20	43.0
13	137	42.6	60	09.8		35.3	122	43.8		24.0	204	54.5		-08.2	197	10.4		43.0
14	152	45.0	75	10.3		35.6	137	45.1		24.4	219	57.3		-08.3	212	13.1		43.1
15	167	47.5	90	10.8		35.8	152	46.4		24.8	235	00.1		-08.4	227	15.7		43.1
16	182	50.0	105	11.3		36.0	167	47.7		25.2	250	02.9		-08.4	242	18.4		43.1
17	197	52.4	120	11.7	+18	36.3	182	49.0	+2	25.7	265	05.7	-22	-08.5	257	21.0	-20	43.2
18	212	54.9	135	12.2	+18	36.5	197	50.4	+2	26.1	280	08.5	-22	-08.5	272	23.7	-20	43.2
19	227	57.3	150	12.7		36.8	212	51.7		26.5	295	11.3		-08.6	287	26.3		43.3
20	242	59.8	165	13.2		37.0	227	53.0		26.9	310	14.1		-08.6	302	29.0		43.3
21	258	02.3	180	13.7		37.3	242	54.3		27.3	325	16.9		-08.7	317	31.7		43.3
22	273	04.7	195	14.2		37.5	257	55.6		27.8	340	19.7		-08.7	332	34.3		43.4
23	288	07.2	210	14.7		37.8	272	56.9		28.2	355	22.5		-08.8	347	37.0		43.4
24	303	09.7	225	15.1	+18	38.0	287	58.2	+2	28.6	10	25.3	-22	-08.8	2	39.6	-20	43.5
Dif.	—		+5		+2		+13		+4		+28		-1		+27			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7				SD: 16'2 Edad: 4 ^d 3												PHE { 4 ^h : 59'5 12 ^h : 59'5 20 ^h : 59'5	
	PMG: 12 ^h 06 ^m 6				PMG: 16 ^h 25 ^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	178	21.8	+19	35.7	122	07.9	106	+5	12.7	144	60 N	** **	2 19	3 25	9 53	95	22 34	8
1	193	21.8		35.1	136	37.5	105	+4	58.3	143	58	0 46	2 42	40	55	91	34	11
2	208	21.8		34.6	151	07.0	106		44.0	144	56	1 38	3 01	3 52	56	88	34	14
3	223	21.8		34.1	165	36.6	106		29.6	144	54	2 07	16	4 02	57	85	35	16
4	238	21.8		33.5	180	06.2	106		15.2	144	52	29	29	12	58	83	35	19
5	253	21.8	+19	33.0	194	35.8	107	+4	00.8	144	50	2 46	3 40	4 20	9 59	81	22 35	21
6	268	21.8	+19	32.4	209	05.5	106	+3	46.4	145	45	3 19	4 03	4 38	10 01	76	22 35	26
7	283	21.8		31.9	223	35.1	107		31.9	144	40	3 43	21	4 52	03	71	35	30
8	298	21.8		31.3	238	04.8	107		17.5	145	35	4 02	36	5 04	05	67	36	32
9	313	21.7		30.8	252	34.5	108	+3	03.0	145	30	17	4 49	15	06	65	36	36
10	328	21.7		30.2	267	04.3	107	+2	48.5	146	20	4 41	5 09	33	09	59	36	41
11	343	21.7	+19	29.7	281	34.0	108	+2	33.9	145	10 N	5 00	5 26	5 49	10 11	54	22 36	46
12	358	21.7	+19	29.1	296	03.8	107	+2	19.4	145	0	5 16	5 41	6 03	10 13	50	22 36	50
13	13	21.7		28.6	310	33.5	108	+2	04.9	146	10 S	29	5 55	17	15	45	37	54
14	28	21.7		28.0	325	03.3	108	+1	50.3	146	20	42	6 09	32	17	41	37	59
15	43	21.7		27.5	339	33.1	108		35.7	145	30	5 55	24	6 50	19	36	37	64
16	58	21.7		26.9	354	02.9	108		21.2	146	35	6 02	33	7 00	21	32	37	68
17	73	21.7	+19	26.4	8	32.7	109	+1	06.6	146	40	6 09	6 42	7 11	10 22	30	22 37	71
18	88	21.7	+19	25.8	23	02.6	108	+0	52.0	146	45	6 16	6 52	7 24	10 24	26	22 37	75
19	103	21.7		25.3	37	32.4	109		37.4	146	50	25	7 05	41	26	21	37	81
20	118	21.7		24.7	52	02.3	108		22.8	145	52	29	10	48	27	19	37	83
21	133	21.7		24.2	66	32.1	109	+0	08.3	146	54	33	16	7 57	29	16	37	85
22	148	21.7		23.6	81	02.0	108	-0	06.3	146	56	37	23	8 06	30	14	38	87
23	163	21.7		23.1	95	31.8	109		20.9	146	58	41	31	17	10 31	11	22 38	90
24	178	21.7	+19	22.5	110	01.7		-0	35.5		60 S	6 46	7 39	8 29	10 33	8	22 38	94
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 3 ^h 46 ^m 7		Mag: -4.6 PMG: 08 ^h 59 ^m				Mag: -0.9 PMG: 04 ^h 48 ^m				Mag: -2.7 PMG: 23 ^h 14 ^m				Mag: +0.1 PMG: 23 ^h 45 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	303	09.7	225	15.1	+18	38.0	287	58.2	+2	28.6	10	25.3	-22	08.8	2	39.6	-20	43.5
1	318	12.1	240	15.6		38.2	302	59.6		29.0	25	28.1		08.9	17	42.3		43.5
2	333	14.6	255	16.1		38.5	318	00.9		29.4	40	30.8		08.9	32	44.9		43.5
3	348	17.1	270	16.6		38.7	333	02.2		29.9	55	33.6		09.0	47	47.6		43.6
4	3	19.5	285	17.1		39.0	348	03.5		30.3	70	36.4		09.0	62	50.2		43.6
5	18	22.0	300	17.5	+18	39.2	3	04.8	+2	30.7	85	39.2	-22	09.1	77	52.9	-20	43.7
6	33	24.4	315	18.0	+18	39.5	18	06.1	+2	31.1	100	42.0	-22	09.1	92	55.6	-20	43.7
7	48	26.9	330	18.5		39.7	33	07.5		31.5	115	44.8		09.2	107	58.2		43.7
8	63	29.4	345	18.9		39.9	48	08.8		32.0	130	47.6		09.3	123	00.9		43.8
9	78	31.8	0	19.4		40.2	63	10.1		32.4	145	50.4		09.3	138	03.5		43.8
10	93	34.3	15	19.9		40.4	78	11.4		32.8	160	53.2		09.4	153	06.2		43.9
11	108	36.8	30	20.3	+18	40.7	93	12.7	+2	33.2	175	56.0	-22	09.4	168	08.8	-20	43.9
12	123	39.2	45	20.8	+18	40.9	108	14.1	+2	33.6	190	58.8	-22	09.5	183	11.5	-20	44.0
13	138	41.7	60	21.3		41.2	123	15.4		34.0	206	01.6		09.5	198	14.2		44.0
14	153	44.2	75	21.7		41.4	138	16.7		34.4	221	04.4		09.6	213	16.8		44.0
15	168	46.6	90	22.2		41.6	153	18.0		34.9	236	07.2		09.6	228	19.5		44.1
16	183	49.1	105	22.6		41.9	168	19.4		35.3	251	09.9		09.7	243	22.1		44.1
17	198	51.6	120	23.1	+18	42.1	183	20.7	+2	35.7	266	12.7	-22	09.7	258	24.8	-20	44.2
18	213	54.0	135	23.5	+18	42.4	198	22.0	+2	36.1	281	15.5	-22	09.8	273	27.4	-20	44.2
19	228	56.5	150	24.0		42.6	213	23.3		36.5	296	18.3		09.8	288	30.1		44.2
20	243	58.9	165	24.4		42.9	228	24.7		36.9	311	21.1		09.9	303	32.7		44.3
21	259	01.4	180	24.9		43.1	243	26.0		37.4	326	23.9		09.9	318	35.4		44.3
22	274	03.9	195	25.3		43.3	258	27.3		37.8	341	26.7		10.0	333	38.1		44.4
23	289	06.3	210	25.8		43.6	273	28.7		38.2	356	29.5		10.0	348	40.7		44.4
24	304	08.8	225	26.2	+18	43.8	288	30.0	+2	38.6	11	32.3	-22	10.1	3	43.4	-20	44.4
Dif.	—		+5		+2		+13		+4		+28		-1		+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: 16:2 Edad: 5:3 PMG: 17 ^h 15 ^m											PHE { 4 ^h : 59:5 12 ^h : 59:4 20 ^h : 59:4 Rº: 50 ^m		
	hG ☉	Dec		hG ☾	Dif.	Dec									Dif.	Civil	Náut.
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m			
0	178	21.7	+19 22.5	110	01.7	109	-0 35.5	145	60 N	20 44	21 48	** **	11 28	94			
1	193	21.7	22.0	124	31.6	108	-0 50.0	146	58	30	26	23 12	26	91			
2	208	21.7	21.4	139	01.4	109	-1 04.6	146	56	18	21 09	22 28	24	88			
3	223	21.7	20.8	153	31.3	109	19.2	145	54	20 08	20 54	22 01	22	85			
4	238	21.7	20.3	168	01.2	109	33.7	145	52	19 59	41	21 40	21	82			
5	253	21.7	+19 19.7	182	31.1	108	-1 48.2	146	50	19 51	20 30	21 23	11 20	80			
6	268	21.8	+19 19.2	197	00.9	109	-2 02.8	145	45	19 33	20 08	20 51	11 17	75			
7	283	21.8	18.6	211	30.8	109	17.3	145	40	19	19 50	28	14	71			
8	298	21.8	18.0	226	00.7	108	31.8	144	35	19 07	36	20 10	12	68			
9	313	21.8	17.5	240	30.5	109	-2 46.2	145	30	18 57	23	19 55	11	64			
10	328	21.8	16.9	255	00.4	108	-3 00.7	144	20	39	19 03	31	08	59			
11	343	21.8	+19 16.4	269	30.2	109	-3 15.1	144	10 N	18 24	18 47	19 13	11 05	55			
12	358	21.8	+19 15.8	284	00.1	108	-3 29.5	144	0	18 10	18 32	18 57	11 03	50			
13	13	21.8	15.2	298	29.9	108	43.9	144	10 S	17 56	18	44	11 00	46			
14	28	21.8	14.7	312	59.7	108	-3 58.3	144	20	41	18 04	31	10 58	41			
15	43	21.8	14.1	327	29.5	108	-4 12.7	143	30	24	17 50	19	55	36			
16	58	21.8	13.5	341	59.3	108	27.0	143	35	14	42	12	53	34			
17	73	21.8	+19 13.0	356	29.1	107	-4 41.3	142	40	17 03	17 33	18 05	10 52	30			
18	88	21.8	+19 12.4	10	58.8	108	-4 55.5	143	45	16 50	17 22	17 58	10 50	26			
19	103	21.8	11.9	25	28.6	107	-5 09.8	142	50	34	10	50	47	22			
20	118	21.8	11.3	39	58.3	107	24.0	141	52	27	17 05	46	46	20			
21	133	21.8	10.7	54	28.0	107	38.1	142	54	19	16 59	42	45	17			
22	148	21.8	10.2	68	57.7	107	-5 52.3	141	56	16 09	52	38	44	14			
23	163	21.8	09.6	83	27.4	107	-6 06.4	140	58	15 59	45	34	42	12			
24	178	21.9	+19 09.0	97	57.1	107	-6 20.4	140	60 S	15 47	16 37	17 29	10 41	8			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 3 ^h 42 ^m 8		Mag: -4.6 PMG: 08 ^h 58 ^m			Mag: -1.0 PMG: 04 ^h 46 ^m			Mag: -2.7 PMG: 23 ^h 10 ^m			Mag: +0.1 PMG: 23 ^h 41 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	304	08.8	225 26.2	+18 43.8		288 30.0	+2 38.6		11 32.3	-22 -10.1		3 43.4	-20 44.4				
1	319	11.3	240 26.7	44.1		303 31.3	39.0		26 35.1	-10.1		18 46.0	44.5				
2	334	13.7	255 27.1	44.3		318 32.6	39.4		41 37.9	-10.2		33 48.7	44.5				
3	349	16.2	270 27.5	44.6		333 34.0	39.8		56 40.7	-10.2		48 51.3	44.6				
4	4	18.7	285 28.0	44.8		348 35.3	40.2		71 43.4	-10.3		63 54.0	44.6				
5	19	21.1	300 28.4	+18 45.0		3 36.6	+2 40.7		86 46.2	-22 -10.3		78 56.6	-20 44.6				
6	34	23.6	315 28.8	+18 45.3		18 38.0	+2 41.1		101 49.0	-22 -10.4		93 59.3	-20 44.7				
7	49	26.1	330 29.3	45.5		33 39.3	41.5		116 51.8	-10.5		109 02.0	44.7				
8	64	28.5	345 29.7	45.8		48 40.6	41.9		131 54.6	-10.5		124 04.6	44.8				
9	79	31.0	0 30.1	46.0		63 42.0	42.3		146 57.4	-10.6		139 07.3	44.8				
10	94	33.4	15 30.6	46.2		78 43.3	42.7		162 00.2	-10.6		154 09.9	44.8				
11	109	35.9	30 31.0	+18 46.5		93 44.6	+2 43.1		177 03.0	-22 -10.7		169 12.6	-20 44.9				
12	124	38.4	45 31.4	+18 46.7		108 46.0	+2 43.5		192 05.8	-22 -10.7		184 15.2	-20 44.9				
13	139	40.8	60 31.8	47.0		123 47.3	43.9		207 08.6	-10.8		199 17.9	45.0				
14	154	43.3	75 32.3	47.2		138 48.6	44.3		222 11.3	-10.8		214 20.5	45.0				
15	169	45.8	90 32.7	47.4		153 50.0	44.8		237 14.1	-10.9		229 23.2	45.0				
16	184	48.2	105 33.1	47.7		168 51.3	45.2		252 16.9	-10.9		244 25.9	45.1				
17	199	50.7	120 33.5	+18 47.9		183 52.7	+2 45.6		267 19.7	-22 -11.0		259 28.5	-20 45.1				
18	214	53.2	135 33.9	+18 48.2		198 54.0	+2 46.0		282 22.5	-22 -11.0		274 31.2	-20 45.2				
19	229	55.6	150 34.3	48.4		213 55.3	46.4		297 25.3	-11.1		289 33.8	45.2				
20	244	58.1	165 34.8	48.7		228 56.7	46.8		312 28.1	-11.1		304 36.5	45.2				
21	260	00.5	180 35.2	48.9		243 58.0	47.2		327 30.9	-11.2		319 39.1	45.3				
22	275	03.0	195 35.6	49.1		258 59.4	47.6		342 33.7	-11.2		334 41.8	45.3				
23	290	05.5	210 36.0	49.4		274 00.7	48.0		357 36.4	-11.3		349 44.4	45.4				
24	305	07.9	225 36.4	+18 49.6		289 02.1	+2 48.4		12 39.2	-22 -11.3		4 47.1	-20 45.4				
Dif.	—		+4	+2		+13	+4		+28	-1		+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: 16'2 Edad: 6 ^d 3				PHE { 4 ^h : 59'3 12 ^h : 59'2 20 ^h : 59'2			Rº: 52 ^m					
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.	Náut.		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	21.9	+19	09.0	97	57.1	106	-6	20.4	141	60 N	13 02	95	22 51	12	
1	193	21.9		08.4	112	26.7	107		34.5	139	58	12 57	91	22 58	15	
2	208	21.9		07.9	126	56.4	105	-6	48.4	140	56	52	88	23 04	18	
3	223	21.9		07.3	141	25.9	106	-7	02.4	139	54	47	85	09	21	
4	238	21.9		06.7	155	55.5	106		16.3	138	52	43	83	14	24	
5	253	21.9	+19	06.2	170	25.1	105	-7	30.1	139	50	12 40	80	23 18	26	
6	268	21.9	+19	05.6	184	54.6	105	-7	44.0	137	45	12 32	75	23 28	30	
7	283	21.9		05.0	199	24.1	105	-7	57.7	137	40	25	72	36	34	
8	298	21.9		04.4	213	53.6	104	-8	11.4	137	35	20	68	43	37	
9	313	21.9		03.9	228	23.0	104		25.1	136	30	15	65	49	40	
10	328	21.9		03.3	242	52.4	104		38.7	136	20	07	60	23 59	45	
11	343	22.0	+19	02.7	257	21.8	104	-8	52.3	135	10 N	12 00	55	***	***	
12	358	22.0	+19	02.1	271	51.2	103	-9	05.8	135	0	11 53	52	***	***	
13	13	22.0		01.6	286	20.5	103		19.3	134	10 S	46	48	***	***	
14	28	22.0		01.0	300	49.8	102		32.7	133	20	39	44	***	***	
15	43	22.0	+19	00.4	315	19.0	103		46.0	133	30	31	39	***	***	
16	58	22.0	+18	59.8	329	48.3	102	-9	59.3	133	35	27	35	***	***	
17	73	22.0	+18	59.3	344	17.5	101	-10	12.6	131	40	11 22	32	***	***	
18	88	22.0	+18	58.7	358	46.6	101	-10	25.7	131	45	11 16	28	***	***	
19	103	22.0		58.1	13	15.7	101		38.8	131	50	09	24	***	***	
20	118	22.1		57.5	27	44.8	101	-10	51.9	130	52	06	21	***	***	
21	133	22.1		56.9	42	13.9	100	-11	04.9	129	54	11 02	19	0 02	85	
22	148	22.1		56.4	56	42.9	100		17.8	128	56	10 58	17	05	88	
23	163	22.1		55.8	71	11.9	99		30.6	128	58	10 54	14	0 08	92	
24	178	22.1	+18	55.2	85	40.8		-11	43.4		60 S	10 49	10	0 12	95	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 3 ^h 38 ^m 9		Mag: -4.6 PMG: 08 ^h 57 ^m			Mag: -1.0 PMG: 04 ^h 43 ^m			Mag: -2.7 PMG: 23 ^h 05 ^m			Mag: +0.1 PMG: 23 ^h 37 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	305	07.9	225	36.4	+18 49.6	289	02.1	+2 48.4	12	39.2	-22 11.3	4	47.1	-20 45.4
1	320	10.4	240	36.8	49.9	304	03.4	48.8	27	42.0	11.4	19	49.8	45.4
2	335	12.9	255	37.2	50.1	319	04.7	49.2	42	44.8	11.4	34	52.4	45.5
3	350	15.3	270	37.6	50.3	334	06.1	49.6	57	47.6	11.5	49	55.1	45.5
4	5	17.8	285	38.0	50.6	349	07.4	50.0	72	50.4	11.5	64	57.7	45.6
5	20	20.3	300	38.4	+18 50.8	4	08.8	+2 50.4	87	53.2	-22 11.6	80	00.4	-20 45.6
6	35	22.7	315	38.8	+18 51.0	19	10.1	+2 50.9	102	56.0	-22 11.6	95	03.0	-20 45.6
7	50	25.2	330	39.2	51.3	34	11.5	51.3	117	58.8	11.7	110	05.7	45.7
8	65	27.7	345	39.6	51.5	49	12.8	51.7	133	01.5	11.7	125	08.3	45.7
9	80	30.1	0	40.0	51.8	64	14.2	52.1	148	04.3	11.8	140	11.0	45.8
10	95	32.6	15	40.4	52.0	79	15.5	52.5	163	07.1	11.8	155	13.7	45.8
11	110	35.0	30	40.8	+18 52.2	94	16.9	+2 52.9	178	09.9	-22 11.9	170	16.3	-20 45.9
12	125	37.5	45	41.1	+18 52.5	109	18.2	+2 53.3	193	12.7	-22 11.9	185	19.0	-20 45.9
13	140	40.0	60	41.5	52.7	124	19.6	53.7	208	15.5	12.0	200	21.6	45.9
14	155	42.4	75	41.9	53.0	139	20.9	54.1	223	18.3	12.0	215	24.3	46.0
15	170	44.9	90	42.3	53.2	154	22.3	54.5	238	21.0	12.1	230	26.9	46.0
16	185	47.4	105	42.7	53.4	169	23.6	54.9	253	23.8	12.1	245	29.6	46.1
17	200	49.8	120	43.1	+18 53.7	184	25.0	+2 55.3	268	26.6	-22 12.2	260	32.2	-20 46.1
18	215	52.3	135	43.4	+18 53.9	199	26.3	+2 55.7	283	29.4	-22 12.2	275	34.9	-20 46.1
19	230	54.8	150	43.8	54.1	214	27.7	56.1	298	32.2	12.3	290	37.6	46.2
20	245	57.2	165	44.2	54.4	229	29.0	56.5	313	35.0	12.3	305	40.2	46.2
21	260	59.7	180	44.6	54.6	244	30.4	56.9	328	37.8	12.4	320	42.9	46.3
22	276	02.2	195	44.9	54.9	259	31.8	57.3	343	40.5	12.5	335	45.5	46.3
23	291	04.6	210	45.3	55.1	274	33.1	57.7	358	43.3	12.5	350	48.2	46.3
24	306	07.1	225	45.7	+18 55.3	289	34.5	+2 58.1	13	46.1	-22 12.6	5	50.8	-20 46.4
Dif.	—		+4	+2		+13	+4		+28	-1		+27		

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: 16'1 Edad: 7 ^d 3		PHE { 4 ^h : 59'1 12 ^h : 59'0 20 ^h : 58'9						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	178	22.1	+18	85	40.8	99	-11	43.4	127	60 N	20 39	21 42	** **	14 37	95		23 03	17
1	193	22.1		100	09.7	98	-11	56.1	127	58	26	21	22 58	28	90		13	21
2	208	22.1		114	38.5	99	-12	08.8	125	56	15	21 04	22 20	20	86		22	24
3	223	22.2		129	07.4	97		21.3	125	54	20 05	20 50	21 55	12	84		30	27
4	238	22.2		143	36.1	98		33.8	124	52	19 56	38	35	06	81		38	29
5	253	22.2	+18	158	04.9	96	-12	46.2	124	50	19 48	20 27	21 19	14 00	79		23 44	32
6	268	22.2	+18	172	33.5	97	-12	58.6	123	45	19 31	20 05	20 48	13 47	75		23 58	36
7	283	22.2		187	02.2	96	-13	10.9	121	40	17	19 48	26	37	71		** **	**
8	298	22.2		201	30.8	95		23.0	122	35	19 06	34	20 08	28	68		** **	**
9	313	22.3		215	59.3	95		35.2	120	30	18 56	22	19 53	20	65		** **	**
10	328	22.3		230	27.8	95		47.2	119	20	39	19 02	30	13 07	61		** **	**
11	343	22.3	+18	244	56.3	94	-13	59.1	119	10 N	18 24	18 46	19 12	12 55	57		0 09	48
12	358	22.3	+18	259	24.7	94	-14	11.0	118	0	18 10	18 32	18 57	12 45	53		0 17	53
13	13	22.3		273	53.1	93		22.8	116	10 S	17 56	18	44	34	50		26	56
14	28	22.3		288	21.4	93		34.4	116	20	42	18 05	32	23	46		35	61
15	43	22.4		302	49.7	92		46.0	116	30	25	17 51	20	10	42		46	65
16	58	22.4		317	17.9	92	-14	57.6	114	35	16	43	13	12 02	40		52	68
17	73	22.4	+18	331	46.1	92	-15	09.0	113	40	17 05	17 34	18 07	11 54	36		0 59	72
18	88	22.4	+18	346	14.3	90	-15	20.3	113	45	16 52	17 24	18 00	11 44	33		1 08	75
19	103	22.4		0	42.3	91		31.6	111	50	37	13	17 52	33	28		18	79
20	118	22.5		15	10.4	90		42.7	111	52	30	07	49	27	27		22	82
21	133	22.5		29	38.4	89	-15	53.8	109	54	22	17 02	45	21	24		27	85
22	148	22.5		44	06.3	89	-16	04.7	109	56	13	16 55	41	15	21		33	88
23	163	22.5		58	34.2	89		15.6	107	58	16 03	48	37	11 08	18		40	91
24	178	22.5	+18	73	02.1		-16	26.3		60 S	15 51	16 40	17 32	10 59	15		1 47	95
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 34 ^m 9		Mag: -4.6 PMG: 08 ^h 57 ^m				Mag: -1.0 PMG: 04 ^h 41 ^m				Mag: -2.7 PMG: 23 ^h 01 ^m				Mag: +0.1 PMG: 23 ^h 32 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	306	07.1	225	45.7	+18	55.3	289	34.5	+2	58.1	13	46.1	-22	-12.6	5	50.8	-20	46.4
1	321	09.5	240	46.1		55.6	304	35.8		58.5	28	48.9		-12.6	20	53.5		46.4
2	336	12.0	255	46.4		55.8	319	37.2		58.9	43	51.7		-12.7	35	56.1		46.5
3	351	14.5	270	46.8		56.0	334	38.5		59.3	58	54.5		-12.7	50	58.8		46.5
4	6	16.9	285	47.2		56.3	349	39.9	+2	59.7	73	57.3		-12.8	66	01.4		46.5
5	21	19.4	300	47.5	+18	56.5	4	41.3	+3	00.1	89	00.0	-22	-12.8	81	04.1	-20	46.6
6	36	21.9	315	47.9	+18	56.7	19	42.6	+3	00.5	104	02.8	-22	-12.9	96	06.8	-20	46.6
7	51	24.3	330	48.2		57.0	34	44.0		00.9	119	05.6		-12.9	111	09.4		46.7
8	66	26.8	345	48.6		57.2	49	45.4		01.3	134	08.4		-13.0	126	12.1		46.7
9	81	29.3	0	48.9		57.4	64	46.7		01.7	149	11.2		-13.0	141	14.7		46.7
10	96	31.7	15	49.3		57.7	79	48.1		02.1	164	14.0		-13.1	156	17.4		46.8
11	111	34.2	30	49.7	+18	57.9	94	49.4	+3	02.5	179	16.7	-22	-13.1	171	20.0	-20	46.8
12	126	36.6	45	50.0	+18	58.2	109	50.8	+3	02.9	194	19.5	-22	-13.2	186	22.7	-20	46.9
13	141	39.1	60	50.4		58.4	124	52.2		03.3	209	22.3		-13.2	201	25.3		46.9
14	156	41.6	75	50.7		58.6	139	53.5		03.7	224	25.1		-13.3	216	28.0		46.9
15	171	44.0	90	51.1		58.9	154	54.9		04.1	239	27.9		-13.3	231	30.6		47.0
16	186	46.5	105	51.4		59.1	169	56.3		04.5	254	30.7		-13.4	246	33.3		47.0
17	201	49.0	120	51.8	+18	59.3	184	57.6	+3	04.8	269	33.4	-22	-13.4	261	36.0	-20	47.1
18	216	51.4	135	52.1	+18	59.6	199	59.0	+3	05.2	284	36.2	-22	-13.5	276	38.6	-20	47.1
19	231	53.9	150	52.4	+18	59.8	215	00.4		05.6	299	39.0		-13.5	291	41.3		47.1
20	246	56.4	165	52.8	+19	00.0	230	01.7		06.0	314	41.8		-13.6	306	43.9		47.2
21	261	58.8	180	53.1		00.3	245	03.1		06.4	329	44.6		-13.6	321	46.6		47.2
22	277	01.3	195	53.5		00.5	260	04.5		06.8	344	47.4		-13.7	336	49.2		47.3
23	292	03.8	210	53.8		00.7	275	05.9		07.2	359	50.1		-13.7	351	51.9		47.3
24	307	06.2	225	54.1	+19	01.0	290	07.2	+3	07.6	14	52.9	-22	-13.8	6	54.5	-20	47.3
Dif.	—		+4	+2			+14	+4			+28	-1			+27			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna															
	SD: 15'8				SD: 16'0 Edad: 8 ^d 3												PHE { 4 ^h : 58'8 12 ^h : 58'7 20 ^h : 58'5													
	PMG: 12 ^h 06 ^m 5				PMG: 19 ^h 51 ^m												Rº: 56 ^m													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.																						
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m														
0	178	22.5	+18	41.1	73	02.1	88	-16	26.3	107	60 N	2 32	3 35	3 35	16 12	90	23 20	26												
1	193	22.6		40.5	87	29.9	87		37.0	106	58	1 16	2 53	48	15 58	86	34	30												
2	208	22.6		39.9	101	57.6	87		47.6	104	56	1 53	3 10	3 59	46	83	46	34												
3	223	22.6		39.3	116	25.3	86	-16	58.0	104	54	2 19	24	4 09	36	80	23 57	36												
4	238	22.6		38.7	130	52.9	86	-17	08.4	102	52	38	36	18	27	78	***	***												
5	253	22.6	+18	38.1	145	20.5	86	-17	18.6	102	50	2 54	3 46	4 26	15 19	75	***	***												
6	268	22.7	+18	37.5	159	48.1	85	-17	28.8	100	45	3 25	4 08	4 42	15 02	71	***	***												
7	283	22.7		36.9	174	15.6	84		38.8	100	40	3 48	25	4 56	14 48	68	0 10	39												
8	298	22.7		36.3	188	43.0	84		48.8	98	35	4 05	39	5 07	36	66	20	42												
9	313	22.7		35.7	203	10.4	84	-17	58.6	97	30	20	4 51	17	25	65	29	44												
10	328	22.8		35.1	217	37.8	83	-18	08.3	96	20	4 43	5 11	35	14 08	61	44	48												
11	343	22.8	+18	34.5	232	05.1	82	-18	17.9	95	10 N	5 01	5 27	5 49	13 52	58	0 57	52												
12	358	22.8	+18	33.9	246	32.3	82	-18	27.4	94	0	5 16	5 41	6 03	13 38	56	1 10	54												
13	13	22.8		33.3	260	59.5	82		36.8	93	10 S	29	5 54	17	24	53	22	58												
14	28	22.9		32.7	275	26.7	81		46.1	91	20	41	6 08	31	13 09	50	36	61												
15	43	22.9		32.1	289	53.8	80	-18	55.2	91	30	53	22	47	12 52	46	1 51	65												
16	58	22.9		31.5	304	20.8	81	-19	04.3	89	35	5 59	30	6 57	42	44	2 00	68												
17	73	22.9	+18	30.9	318	47.9	79	-19	13.2	88	40	6 06	6 38	7 07	12 30	42	2 11	70												
18	88	23.0	+18	30.3	333	14.8	79	-19	22.0	87	45	6 13	6 48	7 20	12 17	39	2 23	73												
19	103	23.0		29.7	347	41.7	79		30.7	85	50	20	7 00	35	12 01	35	37	78												
20	118	23.0		29.1	2	08.6	78		39.2	85	52	24	05	42	11 54	33	44	80												
21	133	23.0		28.5	16	35.4	78		47.7	83	54	27	11	50	45	31	2 52	82												
22	148	23.1		27.9	31	02.2	77	-19	56.0	82	56	31	17	7 59	36	28	3 01	85												
23	163	23.1		27.3	45	28.9	77	-20	04.2	81	58	35	24	8 09	11 26	25	3 11	88												
24	178	23.1	+18	26.7	59	55.6		-20	12.3		60 S	6 40	7 32	8 21	11 14	21	3 22	93												
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG 3 ^h 31 ^m 0		Mag: -4.6 PMG: 08 ^h 56 ^m				Mag: -1.0 PMG: 04 ^h 39 ^m				Mag: -2.7 PMG: 22 ^h 56 ^m				Mag: +0.1 PMG: 23 ^h 28 ^m															
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.															
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'												
0	307	06.2	225	54.1	+19	01.0	290	07.2	+3	07.6	14	52.9	-22	13.8	6	54.5	-20	47.3												
1	322	08.7	240	54.5		01.2	305	08.6		08.0	29	55.7		13.8	21	57.2		47.4												
2	337	11.1	255	54.8		01.4	320	10.0		08.4	44	58.5		13.9	36	59.8		47.4												
3	352	13.6	270	55.1		01.7	335	11.4		08.8	60	01.3		13.9	52	02.5		47.4												
4	7	16.1	285	55.5		01.9	350	12.7		09.2	75	04.1		14.0	67	05.1		47.5												
5	22	18.5	300	55.8	+19	02.1	5	14.1	+3	09.6	90	06.8	-22	14.0	82	07.8	-20	47.5												
6	37	21.0	315	56.1	+19	02.3	20	15.5	+3	10.0	105	09.6	-22	14.1	97	10.5	-20	47.6												
7	52	23.5	330	56.4		02.6	35	16.9		10.3	120	12.4		14.1	112	13.1		47.6												
8	67	25.9	345	56.8		02.8	50	18.2		10.7	135	15.2		14.2	127	15.8		47.6												
9	82	28.4	0	57.1		03.0	65	19.6		11.1	150	18.0		14.2	142	18.4		47.7												
10	97	30.9	15	57.4		03.3	80	21.0		11.5	165	20.7		14.2	157	21.1		47.7												
11	112	33.3	30	57.7	+19	03.5	95	22.4	+3	11.9	180	23.5	-22	14.3	172	23.7	-20	47.8												
12	127	35.8	45	58.0	+19	03.7	110	23.7	+3	12.3	195	26.3	-22	14.3	187	26.4	-20	47.8												
13	142	38.3	60	58.3		04.0	125	25.1		12.7	210	29.1		14.4	202	29.0		47.8												
14	157	40.7	75	58.7		04.2	140	26.5		13.1	225	31.9		14.4	217	31.7		47.9												
15	172	43.2	90	59.0		04.4	155	27.9		13.5	240	34.6		14.5	232	34.3		47.9												
16	187	45.6	105	59.3		04.6	170	29.3		13.9	255	37.4		14.5	247	37.0		48.0												
17	202	48.1	120	59.6	+19	04.9	185	30.7	+3	14.2	270	40.2	-22	14.6	262	39.6	-20	48.0												
18	217	50.6	135	59.9	+19	05.1	200	32.0	+3	14.6	285	43.0	-22	14.6	277	42.3	-20	48.0												
19	232	53.0	151	00.2		05.3	215	33.4		15.0	300	45.8		14.7	292	44.9		48.1												
20	247	55.5	166	00.5		05.6	230	34.8		15.4	315	48.5		14.7	307	47.6		48.1												
21	262	58.0	181	00.8		05.8	245	36.2		15.8	330	51.3		14.8	322	50.3		48.2												
22	278	00.4	196	01.1		06.0	260	37.6		16.2	345	54.1		14.8	337	52.9		48.2												
23	293	02.9	211	01.4		06.2	275	39.0		16.6	0	56.9		14.9	352	55.6		48.2												
24	308	05.4	226	01.7	+19	06.5	290	40.4	+3	17.0	15	59.7	-22	14.9	7	58.2	-20	48.3												
Dif.	—		+3				+2				+14				+4				+28				0				+27			

UT	SOL				☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15'8				SD: 15'9		PHE { 4 ^h : 58'4 12 ^h : 58'3 20 ^h : 58'1													
	PMG: 12 ^h 06 ^m 4				Edad: 9 ^d 3															
					PMG: 20 ^h 47 ^m		R ^o : 57 ^m													
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.			Civil	Náut.		R ^o		Hora	R ^o
h	°	'	°	'	°	'		°	'				h m	h m	h m	h m	m		h m	m
0	178	23.1	+18	26.7	59	55.6	76	-20	12.3	79	60 N	20 34	21 35	** **			17 42	78	23 46	41
1	193	23.1		26.1	74	22.2	76		20.2	78	58	22	21 16	22 46			24 75		** **	**
2	208	23.2		25.4	88	48.8	76		28.0	77	56	11	20 59	22 13			17 09	72	** **	**
3	223	23.2		24.8	103	15.4	75		35.7	76	54	20 01	46	21 49			16 56	71	** **	**
4	238	23.2		24.2	117	41.9	75		43.3	74	52	19 53	34	30			45 69		0 07	37
5	253	23.3	+18	23.6	132	08.4	74	-20	50.7	73	50	19 45	20 24	21 15			16 34	69	0 16	39
6	268	23.3	+18	23.0	146	34.8	74	-20	58.0	72	45	19 29	20 03	20 45			16 13	67	0 34	43
7	283	23.3		22.4	161	01.2	73	-21	05.2	71	40	15	19 46	23			15 56	65	0 49	45
8	298	23.3		21.8	175	27.5	73		12.3	69	35	19 04	32	20 06			42 63		1 02	47
9	313	23.4		21.2	189	53.8	73		19.2	68	30	18 54	20	19 52			30 62		13 49	
10	328	23.4		20.6	204	20.1	72		26.0	66	20	38	19 01	29			15 09	60	32 52	
11	343	23.4	+18	19.9	218	46.3	72	-21	32.6	66	10 N	18 23	18 46	19 12			14 50	59	1 49	54
12	358	23.5	+18	19.3	233	12.5	72	-21	39.2	63	0	18 10	18 32	18 57			14 34	56	2 04	57
13	13	23.5		18.7	247	38.7	71		45.5	63	10 S	17 57	19	44			14 17	55	20 59	
14	28	23.5		18.1	262	04.8	71		51.8	61	20	43	18 06	32			13 59	53	37 61	
15	43	23.6		17.5	276	30.9	71	-21	57.9	60	30	27	17 52	21			38 52		2 56	64
16	58	23.6		16.9	290	57.0	70	-22	03.9	58	35	17	44	15			26 50		3 08	65
17	73	23.6	+18	16.3	305	23.0	70	-22	09.7	57	40	17 07	17 36	18 08			13 12	49	3 21	67
18	88	23.7	+18	15.6	319	49.0	70	-22	15.4	56	45	16 55	17 26	18 02			12 56	47	3 36	69
19	103	23.7		15.0	334	15.0	69		21.0	54	50	40	15	17 54			36 44		3 55	73
20	118	23.7		14.4	348	40.9	69		26.4	53	52	33	10	51			27 42		4 04	74
21	133	23.8		13.8	3	06.8	69		31.7	51	54	25	17 04	48			16 41		14 76	
22	148	23.8		13.2	17	32.7	68		36.8	50	56	16	16 58	44			12 04	39	26 78	
23	163	23.8		12.6	31	58.5	69		41.8	49	58	16 06	52	40			11 51	36	39 81	
24	178	23.9	+18	11.9	46	24.4		-22	46.7		60 S	15 55	16 44	17 36			11 35	33	4 55	84

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 27 ^m 1		Mag: -4.6 PMG: 08 ^h 56 ^m				Mag: -1.0 PMG: 04 ^h 37 ^m				Mag: -2.7 PMG: 22 ^h 52 ^m				Mag: +0.1 PMG: 23 ^h 24 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	308	05.4	226	01.7	+19	06.5	290	40.4	+3	17.0	15	59.7	-22	-14.9	7	58.2	-20	48.3
1	323	07.8	241	02.0		06.7	305	41.7		17.3	31	02.4		-15.0	23	00.9		48.3
2	338	10.3	256	02.3		06.9	320	43.1		17.7	46	05.2		-15.0	38	03.5		48.4
3	353	12.8	271	02.6		07.2	335	44.5		18.1	61	08.0		-15.1	53	06.2		48.4
4	8	15.2	286	02.9		07.4	350	45.9		18.5	76	10.8		-15.1	68	08.8		48.4
5	23	17.7	301	03.2	+19	07.6	5	47.3	+3	18.9	91	13.5	-22	-15.2	83	11.5	-20	48.5
6	38	20.1	316	03.5	+19	07.8	20	48.7	+3	19.3	106	16.3	-22	-15.2	98	14.1	-20	48.5
7	53	22.6	331	03.8		08.1	35	50.1		19.7	121	19.1		-15.3	113	16.8		48.6
8	68	25.1	346	04.1		08.3	50	51.5		20.0	136	21.9		-15.3	128	19.4		48.6
9	83	27.5	1	04.4		08.5	65	52.9		20.4	151	24.7		-15.4	143	22.1		48.6
10	98	30.0	16	04.7		08.7	80	54.3		20.8	166	27.4		-15.4	158	24.7		48.7
11	113	32.5	31	05.0	+19	09.0	95	55.7	+3	21.2	181	30.2	-22	-15.5	173	27.4	-20	48.7
12	128	34.9	46	05.2	+19	09.2	110	57.0	+3	21.6	196	33.0	-22	-15.5	188	30.1	-20	48.8
13	143	37.4	61	05.5		09.4	125	58.4		22.0	211	35.8		-15.6	203	32.7		48.8
14	158	39.9	76	05.8		09.6	140	59.8		22.3	226	38.5		-15.6	218	35.4		48.8
15	173	42.3	91	06.1		09.9	156	01.2		22.7	241	41.3		-15.7	233	38.0		48.9
16	188	44.8	106	06.4		10.1	171	02.6		23.1	256	44.1		-15.7	248	40.7		48.9
17	203	47.2	121	06.6	+19	10.3	186	04.0	+3	23.5	271	46.9	-22	-15.8	263	43.3	-20	49.0
18	218	49.7	136	06.9	+19	10.5	201	05.4	+3	23.9	286	49.6	-22	-15.8	278	46.0	-20	49.0
19	233	52.2	151	07.2		10.7	216	06.8		24.2	301	52.4		-15.9	293	48.6		49.0
20	248	54.6	166	07.5		11.0	231	08.2		24.6	316	55.2		-15.9	308	51.3		49.1
21	263	57.1	181	07.7		11.2	246	09.6		25.0	331	58.0		-16.0	323	53.9		49.1
22	278	59.6	196	08.0		11.4	261	11.0		25.4	347	00.7		-16.0	338	56.6		49.1
23	294	02.0	211	08.3		11.6	276	12.4		25.8	2	03.5		-16.1	353	59.2		49.2
24	309	04.5	226	08.5	+19	11.9	291	13.8	+3	26.1	17	06.3	-22	-16.1	9	01.9	-20	49.2
Dif.	—		+3	+2			+14	+4			+28	0			+27	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 4				SD: 15'8 Edad: 10 ^d 3 PMG: 21 ^h 44 ^m PHE { 4^h: 58'0 12^h: 57'8 20^h: 57'7 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	h m	h m	
0	178	23.9	+18	11.9	46	24.4	68	-22	46.7	47	60 N	** **	2 38	3 39	19 00	57	** **	
1	193	23.9		11.3	60	50.2	68		51.4	46	58	1 27	2 58	3 52	18 39	58	0 04	
2	208	23.9		10.7	75	16.0	67	-22	56.0	44	56	2 01	3 14	4 03	21 58		20 45	
3	223	24.0		10.1	89	41.7	68	-23	00.4	43	54	24	28	12	18 07	58	33 47	
4	238	24.0		09.5	104	07.5	67		04.7	41	52	43	39	21	17 54	58	44 49	
5	253	24.0	+18	08.8	118	33.2	67	-23	08.8	40	50	2 58	3 50	4 28	17 43	58	0 55	
6	268	24.1	+18	08.2	132	58.9	67	-23	12.8	39	45	3 28	4 11	4 45	17 20	57	1 17	
7	283	24.1		07.6	147	24.6	67		16.7	37	40	3 50	27	4 58	17 01	58	34 52	
8	298	24.1		07.0	161	50.3	67		20.4	35	35	4 07	41	5 09	16 45	58	1 49	
9	313	24.2		06.3	176	16.0	67		23.9	34	30	21	4 53	19	32 57		2 02	
10	328	24.2		05.7	190	41.7	66		27.3	33	20	4 44	5 12	35	16 09	57	24 55	
11	343	24.2	+18	05.1	205	07.3	67	-23	30.6	31	10 N	5 01	5 27	5 50	15 49	57	2 43	
12	358	24.3	+18	04.5	219	33.0	66	-23	33.7	30	0	5 16	5 41	6 03	15 30	57	3 01	
13	13	24.3		03.8	233	58.6	66		36.7	28	10 S	29	5 54	16	15 12	57	19 58	
14	28	24.4		03.2	248	24.2	67		39.5	27	20	40	6 07	30	14 52	57	3 38	
15	43	24.4		02.6	262	49.9	66		42.2	26	30	52	21	46	30 55		4 00	
16	58	24.4		02.0	277	15.5	66		44.8	24	35	5 58	28	6 55	16 56		13 60	
17	73	24.5	+18	01.3	291	41.1	66	-23	47.2	22	40	6 04	6 37	7 05	14 01	55	4 28	
18	88	24.5	+18	00.7	306	06.7	66	-23	49.4	21	45	6 11	6 46	7 18	13 43	55	4 45	
19	103	24.5	+18	00.1	320	32.3	67		51.5	19	50	18	6 57	32	20 54		5 08	
20	118	24.6	+17	59.4	334	58.0	66		53.4	18	52	21	7 02	39	13 09	54	18 64	
21	133	24.6		58.8	349	23.6	66		55.2	17	54	24	07	47	12 57	53	30 65	
22	148	24.7		58.2	3	49.2	67		56.9	15	56	28	13	7 55	43 53		5 44	
23	163	24.7		57.5	18	14.9	66		58.4	14	58	32	20	8 05	12 27	52	6 00	
24	178	24.7	+17	56.9	32	40.5		-23	59.8		60 S	6 36	7 28	8 16	12 08	50	6 19	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 23 ^m 1		Mag: -4.6 PMG: 08 ^h 55 ^m				Mag: -1.1 PMG: 04 ^h 35 ^m				Mag: -2.7 PMG: 22 ^h 47 ^m				Mag: +0.1 PMG: 23 ^h 20 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	309	04.5	226	08.5	+19	11.9	291	13.8	+3	26.1	17	06.3	-22	16.1	9	01.9	-20	49.2
1	324	07.0	241	08.8		12.1	306	15.2		26.5	32	09.1		16.1	24	04.5		49.3
2	339	09.4	256	09.1		12.3	321	16.6		26.9	47	11.8		16.2	39	07.2		49.3
3	354	11.9	271	09.3		12.5	336	18.0		27.3	62	14.6		16.2	54	09.8		49.3
4	9	14.4	286	09.6		12.7	351	19.5		27.7	77	17.4		16.3	69	12.5		49.4
5	24	16.8	301	09.9	+19	13.0	6	20.9	+3	28.0	92	20.2	-22	16.3	84	15.1	-20	49.4
6	39	19.3	316	10.1	+19	13.2	21	22.3	+3	28.4	107	22.9	-22	16.4	99	17.8	-20	49.5
7	54	21.7	331	10.4		13.4	36	23.7		28.8	122	25.7		16.4	114	20.4		49.5
8	69	24.2	346	10.6		13.6	51	25.1		29.2	137	28.5		16.5	129	23.1		49.5
9	84	26.7	1	10.9		13.8	66	26.5		29.5	152	31.3		16.5	144	25.8		49.6
10	99	29.1	16	11.1		14.1	81	27.9		29.9	167	34.0		16.6	159	28.4		49.6
11	114	31.6	31	11.4	+19	14.3	96	29.3	+3	30.3	182	36.8	-22	16.6	174	31.1	-20	49.7
12	129	34.1	46	11.6	+19	14.5	111	30.7	+3	30.7	197	39.6	-22	16.7	189	33.7	-20	49.7
13	144	36.5	61	11.9		14.7	126	32.1		31.1	212	42.3		16.7	204	36.4		49.7
14	159	39.0	76	12.1		14.9	141	33.5		31.4	227	45.1		16.8	219	39.0		49.8
15	174	41.5	91	12.4		15.2	156	35.0		31.8	242	47.9		16.8	234	41.7		49.8
16	189	43.9	106	12.6		15.4	171	36.4		32.2	257	50.7		16.9	249	44.3		49.9
17	204	46.4	121	12.9	+19	15.6	186	37.8	+3	32.6	272	53.4	-22	16.9	264	47.0	-20	49.9
18	219	48.9	136	13.1	+19	15.8	201	39.2	+3	32.9	287	56.2	-22	17.0	279	49.6	-20	49.9
19	234	51.3	151	13.4		16.0	216	40.6		33.3	302	59.0		17.0	294	52.3		50.0
20	249	53.8	166	13.6		16.2	231	42.0		33.7	318	01.8		17.1	309	54.9		50.0
21	264	56.2	181	13.9		16.5	246	43.4		34.1	333	04.5		17.1	324	57.6		50.0
22	279	58.7	196	14.1		16.7	261	44.9		34.4	348	07.3		17.1	340	00.2		50.1
23	295	01.2	211	14.3		16.9	276	46.3		34.8	3	10.1		17.2	355	02.9		50.1
24	310	03.6	226	14.6	+19	17.1	291	47.7	+3	35.2	18	12.8	-22	17.2	10	05.5	-20	50.2
Dif.	—		+3		+2		+14		+4		+28		0		+27		0	

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: 15'7 Edad: 11 ^d 3 PMG: 22 ^h 41 ^m PHE { 4 ^h : 57'5 12 ^h : 57'4 20 ^h : 57'2 Rº: 55 ^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	24.7	+17	56.9	32	40.5	67	-23	59.8	12	60 N	20 29	21 29	23 33	19 57	38	0 27	60
1	193	24.8		56.3	47	06.2	67	-24	01.0	10	58	17	21 10	22 36	37 40		0 48	59
2	208	24.8		55.6	61	31.9	67		02.0	9	56	20 07	20 55	22 05	19 43		1 05	59
3	223	24.9		55.0	75	57.6	67		02.9	8	54	19 57	42	21 43	19 05	44	20	59
4	238	24.9		54.4	90	23.3	67		03.7	6	52	49	30	25	18 52	45	33	59
5	253	25.0	+17	53.7	104	49.0	67	-24	04.3	5	50	19 42	20 20	21 11	18 41	46	1 44	59
6	268	25.0	+17	53.1	119	14.7	68	-24	04.8	3	45	19 26	20 00	20 42	18 17	49	2 07	59
7	283	25.0		52.5	133	40.5	68		05.1	2	40	13	19 44	21	17 59	49	26	58
8	298	25.1		51.8	148	06.3	68		05.3	0	35	19 02	30	20 04	43 51		42	58
9	313	25.1		51.2	162	32.1	68		05.3	1	30	18 53	19	19 50	29 52		2 56	57
10	328	25.2		50.6	176	57.9	69		05.2	2	20	37	19 00	28	17 06	53	3 19	57
11	343	25.2	+17	49.9	191	23.8	68	-24	05.0	4	10 N	18 23	18 45	19 11	16 46	54	3 39	57
12	358	25.3	+17	49.3	205	49.6	70	-24	04.6	6	0	18 10	18 32	18 57	16 27	56	3 58	56
13	13	25.3		48.7	220	15.6	69		04.0	7	10 S	17 57	19	44	16 09	56	4 17	56
14	28	25.3		48.0	234	41.5	70		03.3	8	20	43	18 06	33	15 49	57	4 37	55
15	43	25.4		47.4	249	07.5	70		02.5	10	30	28	17 53	22	25 59		5 00	55
16	58	25.4		46.7	263	33.5	70		01.5	11	35	19	46	16	15 12	59	13	55
17	73	25.5	+17	46.1	277	59.5	71	-24	00.4	13	40	17 09	17 37	18 10	14 56	61	5 29	54
18	88	25.5	+17	45.5	292	25.6	71	-23	59.1	14	45	16 57	17 28	18 04	14 38	61	5 48	53
19	103	25.6		44.8	306	51.7	72		57.7	15	50	42	18	17 57	14 63		6 11	52
20	118	25.6		44.2	321	17.9	71		56.2	17	52	36	13	54	14 03	64	22	52
21	133	25.7		43.5	335	44.0	73		54.5	18	54	28	07	50	13 50	65	35	51
22	148	25.7		42.9	350	10.3	72		52.7	20	56	20	17 02	47	36 65		6 50	50
23	163	25.7		42.2	4	36.5	74		50.7	21	58	10	16 55	43	13 19	66	7 07	49
24	178	25.8	+17	41.6	19	02.9		-23	48.6		60 S	16 00	16 48	17 39	12 58	69	7 28	47
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 19 ^m 2		Mag: -4.5 PMG: 08 ^h 55 ^m				Mag: -1.1 PMG: 04 ^h 32 ^m				Mag: -2.7 PMG: 22 ^h 43 ^m				Mag: +0.1 PMG: 23 ^h 16 ^m			
	hG ♂		hG ♀	dec.			hG ♂	dec.			hG ♀	dec.			hG ♀	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	310	03.6	226	14.6	+19	17.1	291	47.7	+3	35.2	18	12.8	-22	-17.2	10	05.5	-20	50.2
1	325	06.1	241	14.8		17.3	306	49.1		35.5	33	15.6		-17.3	25	08.2		50.2
2	340	08.6	256	15.0		17.5	321	50.5		35.9	48	18.4		-17.3	40	10.8		50.2
3	355	11.0	271	15.3		17.7	336	52.0		36.3	63	21.1		-17.4	55	13.5		50.3
4	10	13.5	286	15.5		18.0	351	53.4		36.7	78	23.9		-17.4	70	16.1		50.3
5	25	16.0	301	15.7	+19	18.2	6	54.8	+3	37.0	93	26.7	-22	-17.5	85	18.8	-20	50.4
6	40	18.4	316	15.9	+19	18.4	21	56.2	+3	37.4	108	29.5	-22	-17.5	100	21.4	-20	50.4
7	55	20.9	331	16.2		18.6	36	57.6		37.8	123	32.2		-17.6	115	24.1		50.4
8	70	23.4	346	16.4		18.8	51	59.1		38.1	138	35.0		-17.6	130	26.7		50.5
9	85	25.8	1	16.6		19.0	67	00.5		38.5	153	37.8		-17.7	145	29.4		50.5
10	100	28.3	16	16.8		19.2	82	01.9		38.9	168	40.5		-17.7	160	32.0		50.6
11	115	30.7	31	17.1	+19	19.4	97	03.3	+3	39.2	183	43.3	-22	-17.8	175	34.7	-20	50.6
12	130	33.2	46	17.3	+19	19.7	112	04.8	+3	39.6	198	46.1	-22	-17.8	190	37.3	-20	50.6
13	145	35.7	61	17.5		19.9	127	06.2		40.0	213	48.8		-17.9	205	40.0		50.7
14	160	38.1	76	17.7		20.1	142	07.6		40.4	228	51.6		-17.9	220	42.6		50.7
15	175	40.6	91	17.9		20.3	157	09.1		40.7	243	54.4		-17.9	235	45.3		50.7
16	190	43.1	106	18.2		20.5	172	10.5		41.1	258	57.1		-18.0	250	47.9		50.8
17	205	45.5	121	18.4	+19	20.7	187	11.9	+3	41.5	273	59.9	-22	-18.0	265	50.6	-20	50.8
18	220	48.0	136	18.6	+19	20.9	202	13.3	+3	41.8	289	02.7	-22	-18.1	280	53.2	-20	50.9
19	235	50.5	151	18.8		21.1	217	14.8		42.2	304	05.5		-18.1	295	55.9		50.9
20	250	52.9	166	19.0		21.3	232	16.2		42.6	319	08.2		-18.2	310	58.5		50.9
21	265	55.4	181	19.2		21.5	247	17.6		42.9	334	11.0		-18.2	326	01.2		51.0
22	280	57.9	196	19.4		21.8	262	19.1		43.3	349	13.8		-18.3	341	03.8		51.0
23	296	00.3	211	19.6		22.0	277	20.5		43.7	4	16.5		-18.3	356	06.5		51.1
24	311	02.8	226	19.8	+19	22.2	292	21.9	+3	44.0	19	19.3	-22	-18.4	11	09.1	-20	51.1
Dif.	—		+2		+2		+14		+4		+28		0		+27		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 2				SD: 15'6 Edad: 12 ^d 3		PHE { 4 ^h : 57'0 12 ^h : 56'9 20 ^h : 56'7		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	178	25.8	+17	41.6	19	02.9	73	-23	48.6	23	60 N	0 41	2 45	3 44	20 35	24	1 27	76			
1	193	25.8		41.0	33	29.2	74		46.3	24	58	1 38	3 03	3 56	17 27	27	1 47	73			
2	208	25.9		40.3	47	55.6	75		43.9	25	56	2 08	19	4 07	20 02	30	2 04	71			
3	223	25.9		39.7	62	22.1	75		41.4	26	54	30	32	16	19 49	32	19	69			
4	238	26.0		39.0	76	48.6	76		38.8	28	52	2 48	43	24	37	35	32	67			
5	253	26.0	+17	38.4	91	15.2	76	-23	36.0	30	50	3 02	3 53	4 31	19 27	36	2 43	66			
6	268	26.1	+17	37.7	105	41.8	76	-23	33.0	30	45	3 31	4 13	4 47	19 06	39	3 06	64			
7	283	26.1		37.1	120	08.4	78		30.0	32	40	3 52	29	5 00	18 48	42	24	63			
8	298	26.2		36.4	134	35.2	77		26.8	34	35	4 09	43	10	34	44	40	61			
9	313	26.2		35.8	149	01.9	79		23.4	35	30	23	4 54	20	18 21	46	3 53	60			
10	328	26.3		35.1	163	28.8	79		19.9	36	20	4 45	5 13	36	17 59	49	4 16	58			
11	343	26.3	+17	34.5	177	55.7	79	-23	16.3	37	10 N	5 02	5 28	5 50	17 40	51	4 36	56			
12	358	26.4	+17	33.8	192	22.6	80	-23	12.6	38	0	5 16	5 41	6 03	17 23	53	4 54	55			
13	13	26.4		33.2	206	49.6	81		08.8	40	10 S	28	5 54	16	17 05	55	5 13	52			
14	28	26.5		32.5	221	16.7	81		04.8	42	20	40	6 06	29	16 46	57	32	51			
15	43	26.5		31.9	235	43.8	82	-23	00.6	42	30	51	19	44	24	60	5 55	48			
16	58	26.6		31.2	250	11.0	83	-22	56.4	44	35	5 56	27	6 53	16 11	62	6 08	47			
17	73	26.6	+17	30.6	264	38.3	83	-22	52.0	45	40	6 02	6 35	7 03	15 57	63	6 23	46			
18	88	26.7	+17	29.9	279	05.6	84	-22	47.5	46	45	6 08	6 44	7 15	15 39	66	6 41	44			
19	103	26.7		29.3	293	33.0	84		42.9	48	50	15	54	29	17	69	7 03	42			
20	118	26.8		28.6	308	00.4	85		38.1	48	52	18	6 59	36	15 07	70	14	40			
21	133	26.8		28.0	322	27.9	86		33.3	50	54	21	7 04	43	14 55	72	26	38			
22	148	26.9		27.3	336	55.5	87		28.3	51	56	25	10	7 52	41	74	40	36			
23	163	26.9		26.7	351	23.2	87		23.2	53	58	28	16	8 01	14 25	77	7 56	34			
24	178	27.0	+17	26.0	5	50.9		-22	17.9		60 S	6 32	7 23	8 11	14 07	80	8 15	30			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 3 ^h 15 ^m 3		Mag: -4.5 PMG: 08 ^h 55 ^m				Mag: -1.1 PMG: 04 ^h 30 ^m				Mag: -2.7 PMG: 22 ^h 39 ^m				Mag: +0.2 PMG: 23 ^h 11 ^m						
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	311	02.8	226	19.8	+19	22.2	292	21.9	+3	44.0	19	19.3	-22	18.4	11	09.1	-20	51.1			
1	326	05.2	241	20.0		22.4	307	23.4		44.4	34	22.1		18.4	26	11.8		51.1			
2	341	07.7	256	20.2		22.6	322	24.8		44.8	49	24.8		18.5	41	14.4		51.2			
3	356	10.2	271	20.4		22.8	337	26.2		45.1	64	27.6		18.5	56	17.1		51.2			
4	11	12.6	286	20.6		23.0	352	27.7		45.5	79	30.4		18.6	71	19.7		51.3			
5	26	15.1	301	20.8	+19	23.2	7	29.1	+3	45.8	94	33.1	-22	18.6	86	22.4	-20	51.3			
6	41	17.6	316	21.0	+19	23.4	22	30.6	+3	46.2	109	35.9	-22	18.6	101	25.0	-20	51.3			
7	56	20.0	331	21.2		23.6	37	32.0		46.6	124	38.6		18.7	116	27.7		51.4			
8	71	22.5	346	21.4		23.8	52	33.4		46.9	139	41.4		18.7	131	30.3		51.4			
9	86	25.0	1	21.6		24.0	67	34.9		47.3	154	44.2		18.8	146	33.0		51.4			
10	101	27.4	16	21.8		24.2	82	36.3		47.7	169	46.9		18.8	161	35.6		51.5			
11	116	29.9	31	22.0	+19	24.4	97	37.8	+3	48.0	184	49.7	-22	18.9	176	38.3	-20	51.5			
12	131	32.3	46	22.2	+19	24.6	112	39.2	+3	48.4	199	52.5	-22	18.9	191	40.9	-20	51.6			
13	146	34.8	61	22.4		24.8	127	40.6		48.8	214	55.2		19.0	206	43.6		51.6			
14	161	37.3	76	22.6		25.0	142	42.1		49.1	229	58.0		19.0	221	46.2		51.6			
15	176	39.7	91	22.7		25.2	157	43.5		49.5	245	00.8		19.1	236	48.9		51.7			
16	191	42.2	106	22.9		25.4	172	45.0		49.8	260	03.5		19.1	251	51.5		51.7			
17	206	44.7	121	23.1	+19	25.6	187	46.4	+3	50.2	275	06.3	-22	19.1	266	54.2	-20	51.8			
18	221	47.1	136	23.3	+19	25.8	202	47.9	+3	50.6	290	09.1	-22	19.2	281	56.8	-20	51.8			
19	236	49.6	151	23.5		26.0	217	49.3		50.9	305	11.8		19.2	296	59.5		51.8			
20	251	52.1	166	23.6		26.3	232	50.8		51.3	320	14.6		19.3	312	02.1		51.9			
21	266	54.5	181	23.8		26.5	247	52.2		51.6	335	17.3		19.3	327	04.8		51.9			
22	281	57.0	196	24.0		26.7	262	53.7		52.0	350	20.1		19.4	342	07.4		51.9			
23	296	59.5	211	24.2		26.9	277	55.1		52.4	5	22.9		19.4	357	10.1		52.0			
24	312	01.9	226	24.3	+19	27.0	292	56.6	+3	52.7	20	25.6	-22	19.5	12	12.7	-20	52.0			
Dif.	—		+2		+2		+14		+4		+28		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 2			SD: 15'4 Edad: 13'3 PHE { 4^h: 56'5 12^h: 56'3 20^h: 56'2 PMG: ** ** Rº: **														
	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	27.0	+17	26.0	5	50.9	88	-22	17.9	53	60 N	20 24	21 22	23 11	20 59	14	2 43	83
1	193	27.0		25.3	20	18.7	89		12.6	55	58	13	21 04	22 26	44	19	3 00	80
2	208	27.1		24.7	34	46.6	89		07.1	56	56	20 03	20 50	21 58	32	22	15	77
3	223	27.2		24.0	49	14.5	90	-22	01.5	57	54	19 54	37	37	21	25	28	74
4	238	27.2		23.4	63	42.5	91	-21	55.8	58	52	46	26	20	12	26	39	72
5	253	27.3	+17	22.7	78	10.6	91	-21	50.0	60	50	19 39	20 17	21 06	20 03	29	3 49	70
6	268	27.3	+17	22.1	92	38.7	93	-21	44.0	60	45	19 24	19 57	20 39	19 45	32	4 10	66
7	283	27.4		21.4	107	07.0	93		38.0	62	40	11	41	18	30	35	27	63
8	298	27.4		20.7	121	35.3	94		31.8	62	35	19 01	28	20 02	18	37	41	61
9	313	27.5		20.1	136	03.7	94		25.6	64	30	18 51	19 17	19 48	19 07	39	4 53	60
10	328	27.5		19.4	150	32.1	96		19.2	65	20	36	18 59	27	18 48	43	5 14	56
11	343	27.6	+17	18.8	165	00.7	96	-21	12.7	66	10 N	18 22	18 44	19 10	18 31	47	5 32	53
12	358	27.7	+17	18.1	179	29.3	97	-21	06.1	67	0	18 10	18 31	18 56	18 16	49	5 49	51
13	13	27.7		17.4	193	58.0	97	-20	59.4	68	10 S	17 57	19	44	18 00	52	6 05	49
14	28	27.8		16.8	208	26.7	99		52.6	70	20	44	18 07	33	17 43	56	23	46
15	43	27.8		16.1	222	55.6	99		45.6	70	30	29	17 54	23	24	59	43	43
16	58	27.9		15.4	237	24.5	100		38.6	71	35	20	47	17	13	61	6 55	41
17	73	27.9	+17	14.8	251	53.5	101	-20	31.5	72	40	17 10	17 39	18 12	17 00	63	7 09	38
18	88	28.0	+17	14.1	266	22.6	101	-20	24.3	73	45	16 59	17 30	18 06	16 45	66	7 25	36
19	103	28.1		13.4	280	51.7	103		17.0	75	50	45	20	17 59	26	70	45	32
20	118	28.1		12.8	295	21.0	103		09.5	75	52	39	15	56	17	72	7 54	30
21	133	28.2		12.1	309	50.3	104	-20	02.0	76	54	31	10	53	16 07	74	8 04	28
22	148	28.2		11.4	324	19.7	105	-19	54.4	77	56	23	17 05	50	15 55	78	16	26
23	163	28.3		10.8	338	49.2	105		46.7	78	58	14	16 59	46	42	81	30	22
24	178	28.3	+17	10.1	353	18.7		-19	38.9		60 S	16 04	16 52	17 43	15 27	84	8 45	19
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 3 ^h 11 ^m 3		Mag: -4.5 PMG: 08 ^h 54 ^m			Mag: -1.1 PMG: 04 ^h 28 ^m			Mag: -2.7 PMG: 22 ^h 34 ^m			Mag: +0.2 PMG: 23 ^h 07 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	312	01.9	226	24.3	+19	27.0	292	56.6	+3	52.7	20	25.6	-22	-19.5	12	12.7	-20	52.0
1	327	04.4	241	24.5		27.2	307	58.0		53.1	35	28.4		-19.5	27	15.4		52.1
2	342	06.8	256	24.7		27.4	322	59.5		53.4	50	31.2		-19.6	42	18.0		52.1
3	357	09.3	271	24.9		27.6	338	00.9		53.8	65	33.9		-19.6	57	20.7		52.1
4	12	11.8	286	25.0		27.8	353	02.4		54.1	80	36.7		-19.7	72	23.3		52.2
5	27	14.2	301	25.2	+19	28.0	8	03.8	+3	54.5	95	39.4	-22	-19.7	87	26.0	-20	52.2
6	42	16.7	316	25.4	+19	28.2	23	05.3	+3	54.9	110	42.2	-22	-19.7	102	28.6	-20	52.3
7	57	19.2	331	25.5		28.4	38	06.7		55.2	125	45.0		-19.8	117	31.3		52.3
8	72	21.6	346	25.7		28.6	53	08.2		55.6	140	47.7		-19.8	132	33.9		52.3
9	87	24.1	1	25.9		28.8	68	09.7		55.9	155	50.5		-19.9	147	36.6		52.4
10	102	26.6	16	26.0		29.0	83	11.1		56.3	170	53.2		-19.9	162	39.2		52.4
11	117	29.0	31	26.2	+19	29.2	98	12.6	+3	56.6	185	56.0	-22	-20.0	177	41.9	-20	52.4
12	132	31.5	46	26.3	+19	29.4	113	14.0	+3	57.0	200	58.8	-22	-20.0	192	44.5	-20	52.5
13	147	34.0	61	26.5		29.6	128	15.5		57.3	216	01.5		-20.1	207	47.2		52.5
14	162	36.4	76	26.7		29.8	143	17.0		57.7	231	04.3		-20.1	222	49.8		52.6
15	177	38.9	91	26.8		30.0	158	18.4		58.1	246	07.0		-20.1	237	52.5		52.6
16	192	41.3	106	27.0		30.2	173	19.9		58.4	261	09.8		-20.2	252	55.1		52.6
17	207	43.8	121	27.1	+19	30.4	188	21.3	+3	58.8	276	12.6	-22	-20.2	267	57.8	-20	52.7
18	222	46.3	136	27.3	+19	30.6	203	22.8	+3	59.1	291	15.3	-22	-20.3	283	00.4	-20	52.7
19	237	48.7	151	27.4		30.8	218	24.3		59.5	306	18.1		-20.3	298	03.1		52.7
20	252	51.2	166	27.6		31.0	233	25.7	+3	59.8	321	20.8		-20.4	313	05.7		52.8
21	267	53.7	181	27.7		31.2	248	27.2	+4	00.2	336	23.6		-20.4	328	08.3		52.8
22	282	56.1	196	27.9		31.3	263	28.7		00.5	351	26.4		-20.5	343	11.0		52.9
23	297	58.6	211	28.0		31.5	278	30.1		00.9	6	29.1		-20.5	358	13.6		52.9
24	313	01.1	226	28.2	+19	31.7	293	31.6	+4	01.2	21	31.9	-22	-20.5	13	16.3	-20	52.9
Dif.	—		+2		+2		+15		+4		+28		0		+26		0	

UT	SOL				○ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8				SD: 15'3 Edad: 14 ^d 3												PHE { 4 ^h : 56'0 12 ^h : 55'8 20 ^h : 55'6
	PMG: 12 ^h 06 ^m 1				PMG: 00 ^h 28 ^m												
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.											
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	178	28.3	+17	10.1	353	18.7	106	-19	38.9	79	60 N	1 03	2 51	3 49	21 13	11	4 06 85
1	193	28.4		09.4	7	48.3	108		31.0	80	58	1 47	3 08	4 00	21 03	14	20 81
2	208	28.5		08.8	22	18.1	108		23.0	81	56	2 15	23	10	20 54	16	32 77
3	223	28.5		08.1	36	47.9	108		14.9	82	54	36	36	19	46	18	42 75
4	238	28.6		07.4	51	17.7	110	-19	06.7	83	52	2 52	47	27	38	21	51 73
5	253	28.6	+17	06.8	65	47.7	110	-18	58.4	83	50	3 06	3 56	4 34	20 32	22	4 59 71
6	268	28.7	+17	06.1	80	17.7	111	-18	50.1	84	45	3 34	4 16	4 49	20 17	27	5 16 67
7	283	28.8		05.4	94	47.8	112		41.7	86	40	3 55	31	5 01	20 05	31	30 64
8	298	28.8		04.8	109	18.0	113		33.1	86	35	4 11	44	12	19 55	33	42 61
9	313	28.9		04.1	123	48.3	114		24.5	87	30	24	4 55	21	46	36	5 53 58
10	328	29.0		03.4	138	18.7	114		15.8	88	20	4 46	5 13	37	31	39	6 10 54
11	343	29.0	+17	02.7	152	49.1	115	-18	07.0	88	10 N	5 02	5 28	5 50	19 18	42	6 25 51
12	358	29.1	+17	02.1	167	19.6	116	-17	58.2	89	0	5 16	5 41	6 03	19 05	46	6 40 47
13	13	29.1		01.4	181	50.2	117		49.3	91	10 S	28	5 53	15	18 52	50	6 54 45
14	28	29.2		00.7	196	20.9	118		40.2	91	20	39	6 05	28	39	53	7 09 41
15	43	29.3	+17	00.0	210	51.7	118		31.1	91	30	49	18	43	23	57	26 37
16	58	29.3	+16	59.4	225	22.5	119		22.0	93	35	5 55	25	6 51	14	59	36 35
17	73	29.4	+16	58.7	239	53.4	120	-17	12.7	93	40	6 00	6 33	7 01	18 03	63	7 47 33
18	88	29.5	+16	58.0	254	24.4	121	-17	03.4	94	45	6 06	6 41	7 13	17 51	66	8 01 29
19	103	29.5		57.3	268	55.5	121	-16	54.0	95	50	13	51	26	36	70	17 25
20	118	29.6		56.7	283	26.6	122		44.5	95	52	15	6 56	33	29	72	24 24
21	133	29.6		56.0	297	57.8	123		35.0	96	54	18	7 01	40	21	75	32 22
22	148	29.7		55.3	312	29.1	124		25.4	97	56	21	06	48	13	76	42 19
23	163	29.8		54.6	327	00.5	124		15.7	97	58	25	12	7 56	17 03	80	8 52 16
24	178	29.8	+16	54.0	341	31.9		-16	06.0		60 S	6 29	7 19	8 07	16 51	84	9 04 13

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 07 ^m 4		Mag: -4.5 PMG: 08 ^h 54 ^m				Mag: -1.2 PMG: 04 ^h 25 ^m				Mag: -2.7 PMG: 22 ^h 30 ^m				Mag: +0.2 PMG: 23 ^h 03 ^m			
	hG ♂	dec.	hG ♀	dec.	hG ♂	dec.	hG ♀	dec.	hG ♂	dec.	hG ♀	dec.	hG ♂	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	313	01.1	226	28.2	+19	31.7	293	31.6	+4	01.2	21	31.9	-22	20.5	13	16.3	-20	52.9
1	328	03.5	241	28.3		31.9	308	33.1		01.6	36	34.6		20.6	28	18.9		53.0
2	343	06.0	256	28.4		32.1	323	34.5		01.9	51	37.4		20.6	43	21.6		53.0
3	358	08.5	271	28.6		32.3	338	36.0		02.3	66	40.1		20.7	58	24.2		53.1
4	13	10.9	286	28.7		32.5	353	37.5		02.6	81	42.9		20.7	73	26.9		53.1
5	28	13.4	301	28.9	+19	32.7	8	39.0	+4	03.0	96	45.7	-22	20.8	88	29.5	-20	53.1
6	43	15.8	316	29.0	+19	32.9	23	40.4	+4	03.3	111	48.4	-22	20.8	103	32.2	-20	53.2
7	58	18.3	331	29.1		33.0	38	41.9		03.7	126	51.2		20.9	118	34.8		53.2
8	73	20.8	346	29.3		33.2	53	43.4		04.0	141	53.9		20.9	133	37.5		53.2
9	88	23.2	1	29.4		33.4	68	44.9		04.4	156	56.7		20.9	148	40.1		53.3
10	103	25.7	16	29.5		33.6	83	46.3		04.7	171	59.4		21.0	163	42.8		53.3
11	118	28.2	31	29.7	+19	33.8	98	47.8	+4	05.1	187	02.2	-22	21.0	178	45.4	-20	53.4
12	133	30.6	46	29.8	+19	34.0	113	49.3	+4	05.4	202	05.0	-22	21.1	193	48.1	-20	53.4
13	148	33.1	61	29.9		34.2	128	50.8		05.8	217	07.7		21.1	208	50.7		53.4
14	163	35.6	76	30.1		34.4	143	52.2		06.1	232	10.5		21.2	223	53.4		53.5
15	178	38.0	91	30.2		34.5	158	53.7		06.5	247	13.2		21.2	238	56.0		53.5
16	193	40.5	106	30.3		34.7	173	55.2		06.8	262	16.0		21.3	253	58.6		53.5
17	208	42.9	121	30.4	+19	34.9	188	56.7	+4	07.1	277	18.7	-22	21.3	269	01.3	-20	53.6
18	223	45.4	136	30.6	+19	35.1	203	58.2	+4	07.5	292	21.5	-22	21.3	284	03.9	-20	53.6
19	238	47.9	151	30.7		35.3	218	59.6		07.8	307	24.2		21.4	299	06.6		53.7
20	253	50.3	166	30.8		35.5	234	01.1		08.2	322	27.0		21.4	314	09.2		53.7
21	268	52.8	181	30.9		35.6	249	02.6		08.5	337	29.7		21.5	329	11.9		53.7
22	283	55.3	196	31.0		35.8	264	04.1		08.9	352	32.5		21.5	344	14.5		53.8
23	298	57.7	211	31.2		36.0	279	05.6		09.2	7	35.3		21.6	359	17.2		53.8
24	314	00.2	226	31.3	+19	36.2	294	07.1	+4	09.6	22	38.0	-22	21.6	14	19.8	-20	53.8
Dif.	—		+1		+2		+15		+3		+28		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 0			SD: 15'1 Edad: 15 ^d 3 PMG:01 ^h 16 ^m PHE { 4^h: 55'5 12^h: 55'3 20^h: 55'1 Rº: 46 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	Rº	Hora	Rº	
	h	°	'	°	'	°	'	°	'			h	m	h	m	h	m	m
0	178	29.8	+16	54.0	341	31.9	126	-16	06.0	98	60 N	20 19	21 16	22 55	21 24	7	5 31	83
1	193	29.9		53.3	356	03.5	126	-15	56.2	99	58	20 08	20 59	22 16	17 10		41 79	
2	208	30.0		52.6	10	35.1	126		46.3	99	56	19 58	45	21 51	10 13		49 77	
3	223	30.0		51.9	25	06.7	128		36.4	101	54	50	33	31	21 04	16	5 57	74
4	238	30.1		51.2	39	38.5	128		26.3	100	52	42	22	15	20 59	18	6 04	71
5	253	30.2	+16	50.6	54	10.3	129	-15	16.3	102	50	19 35	20 13	21 02	20 54	20	6 10	69
6	268	30.2	+16	49.9	68	42.2	130	-15	06.1	101	45	19 21	19 54	20 35	20 44	23	6 23	65
7	283	30.3		49.2	83	14.2	130	-14	56.0	103	40	19 09	39	20 15	36 26		34 61	
8	298	30.4		48.5	97	46.2	131		45.7	103	35	18 59	26	19 59	28 30		43 59	
9	313	30.4		47.8	112	18.3	132		35.4	104	30	50	19 16	46	22 32		6 51 56	
10	328	30.5		47.1	126	50.5	133		25.0	104	20	35	18 58	25	10 37		7 04 52	
11	343	30.6	+16	46.5	141	22.8	133	-14	14.6	105	10 N	18 22	18 44	19 09	20 00	40	7 16	49
12	358	30.7	+16	45.8	155	55.1	134	-14	04.1	105	0	18 09	18 31	18 56	19 51	44	7 27	45
13	13	30.7		45.1	170	27.5	135	-13	53.6	106	10 S	17 57	19	45	42 47		39 41	
14	28	30.8		44.4	185	00.0	135		43.0	106	20	45	18 08	34	32 50		7 50 38	
15	43	30.9		43.7	199	32.5	136		32.4	107	30	30	17 55	24	20 55		8 03 34	
16	58	30.9		43.0	214	05.1	137		21.7	107	35	22	48	19	13 58		11 31	
17	73	31.0	+16	42.3	228	37.8	137	-13	11.0	108	40	17 12	17 41	18 13	19 06	61	8 20	28
18	88	31.1	+16	41.7	243	10.5	138	-13	00.2	109	45	17 01	17 32	18 08	18 57	64	8 30	25
19	103	31.1		41.0	257	43.3	139	-12	49.3	109	50	16 48	23	18 01	46 69		42 21	
20	118	31.2		40.3	272	16.2	139		38.4	109	52	42	18	17 59	41 70		48 19	
21	133	31.3		39.6	286	49.1	140		27.5	110	54	35	13	56	36 72		8 54 17	
22	148	31.4		38.9	301	22.1	140		16.5	110	56	27	08	53	29 75		9 01 14	
23	163	31.4		38.2	315	55.1	142	-12	05.5	110	58	18	17 02	50	23 77		08 12	
24	178	31.5	+16	37.5	330	28.3		-11	54.5		60 S	16 09	16 56	17 46	18 15	81	9 17	9

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 03 ^m 5		Mag: -4.5 PMG: 08 ^h 54 ^m				Mag: -1.2 PMG: 04 ^h 23 ^m				Mag: -2.7 PMG: 22 ^h 25 ^m				Mag: +0.2 PMG: 22 ^h 59 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	314	00.2	226	31.3	+19	36.2	294	07.1	+4	09.6	22	38.0	-22	-21.6	14	19.8	-20	53.8
1	329	02.7	241	31.4		36.4	309	08.5		09.9	37	40.8		-21.7	29	22.5		53.9
2	344	05.1	256	31.5		36.5	324	10.0		10.2	52	43.5		-21.7	44	25.1		53.9
3	359	07.6	271	31.6		36.7	339	11.5		10.6	67	46.3		-21.7	59	27.8		54.0
4	14	10.1	286	31.7		36.9	354	13.0		10.9	82	49.0		-21.8	74	30.4		54.0
5	29	12.5	301	31.8	+19	37.1	9	14.5	+4	11.3	97	51.8	-22	-21.8	89	33.1	-20	54.0
6	44	15.0	316	31.9	+19	37.3	24	16.0	+4	11.6	112	54.5	-22	-21.9	104	35.7	-20	54.1
7	59	17.4	331	32.0		37.4	39	17.5		12.0	127	57.3		-21.9	119	38.3		54.1
8	74	19.9	346	32.2		37.6	54	19.0		12.3	143	00.0		-22.0	134	41.0		54.1
9	89	22.4	1	32.3		37.8	69	20.5		12.6	158	02.8		-22.0	149	43.6		54.2
10	104	24.8	16	32.4		38.0	84	22.0		13.0	173	05.5		-22.0	164	46.3		54.2
11	119	27.3	31	32.5	+19	38.1	99	23.4	+4	13.3	188	08.3	-22	-22.1	179	48.9	-20	54.3
12	134	29.8	46	32.6	+19	38.3	114	24.9	+4	13.7	203	11.0	-22	-22.1	194	51.6	-20	54.3
13	149	32.2	61	32.7		38.5	129	26.4		14.0	218	13.8		-22.2	209	54.2		54.3
14	164	34.7	76	32.8		38.7	144	27.9		14.3	233	16.5		-22.2	224	56.9		54.4
15	179	37.2	91	32.9		38.8	159	29.4		14.7	248	19.3		-22.3	239	59.5		54.4
16	194	39.6	106	33.0		39.0	174	30.9		15.0	263	22.0		-22.3	255	02.2		54.4
17	209	42.1	121	33.1	+19	39.2	189	32.4	+4	15.4	278	24.8	-22	-22.3	270	04.8	-20	54.5
18	224	44.6	136	33.2	+19	39.4	204	33.9	+4	15.7	293	27.5	-22	-22.4	285	07.4	-20	54.5
19	239	47.0	151	33.3		39.5	219	35.4		16.0	308	30.3		-22.4	300	10.1		54.6
20	254	49.5	166	33.3		39.7	234	36.9		16.4	323	33.0		-22.5	315	12.7		54.6
21	269	51.9	181	33.4		39.9	249	38.4		16.7	338	35.8		-22.5	330	15.4		54.6
22	284	54.4	196	33.5		40.0	264	39.9		17.0	353	38.5		-22.6	345	18.0		54.7
23	299	56.9	211	33.6		40.2	279	41.4		17.4	8	41.3		-22.6	0	20.7		54.7
24	314	59.3	226	33.7	+19	40.4	294	42.9	+4	17.7	23	44.0	-22	-22.6	15	23.3	-20	54.7
Dif.	—		+1		+2		+15		+3		+27		0		+26			

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			SD: 15 ^h 0		PHE { 4 ^h : 55 ^h 0 12 ^h : 54 ^h 9 20 ^h : 54 ^h 7					Edad: 16 ^d 3			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 05 ^m 8			PMG: 02 ^h 02 ^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	178	31.5	+16	330	28.3	141	-11	54.5	112	60 N	1 18	2 57	3 53	21 31	7	6 54	80
1	193	31.6		345	01.4	143		43.3	111	58	1 56	3 14	4 05	27 9		7 00	77
2	208	31.6		359	34.7	143		32.2	112	56	2 22	28	14	23 12		06 74	
3	223	31.7		14	08.0	143		21.0	112	54	41	40	23	20 13		11 71	
4	238	31.8		28	41.3	144	-11	09.8	113	52	2 57	50	30	17 15		15 70	
5	253	31.9	+16	43	14.7	145	-10	58.5	113	50	3 11	3 59	4 37	21 14	17	7 19	68
6	268	31.9	+16	57	48.2	146	-10	47.2	113	45	3 37	4 18	4 51	21 07	22	7 28	63
7	283	32.0		72	21.8	145		35.9	114	40	3 57	34	5 03	21 02	25	35 60	
8	298	32.1		86	55.3	147		24.5	114	35	4 13	46	13	20 58	27	42 56	
9	313	32.2		101	29.0	147		13.1	115	30	26	4 57	22	54 29		47 54	
10	328	32.2		116	02.7	147	-10	01.6	115	20	4 47	5 14	37	47 34		7 56	50
11	343	32.3	+16	130	36.4	148	-9	50.1	115	10 N	5 03	5 28	5 50	20 40	38	8 05	46
12	358	32.4	+16	145	10.2	149	-9	38.6	115	0	5 16	5 41	6 02	20 35	41	8 12	43
13	13	32.4		159	44.1	149		27.1	116	10 S	27	5 53	14	29 45		20 39	
14	28	32.5		174	18.0	150		15.5	116	20	38	6 04	27	22 50		28 35	
15	43	32.6		188	52.0	150	-9	03.9	116	30	48	16	41	15 54		37 31	
16	58	32.7		203	26.0	150	-8	52.3	117	35	53	23	50	11 56		42 28	
17	73	32.8	+16	218	00.0	151	-8	40.6	117	40	5 58	6 30	6 59	20 07	59	8 48	26
18	88	32.8	+16	232	34.1	152	-8	28.9	117	45	6 04	6 39	7 10	20 01	63	8 55	22
19	103	32.9		247	08.3	152		17.2	118	50	10	48	23	19 55	66	9 03	18
20	118	33.0		261	42.5	153	-8	05.4	117	52	12	53	29	51 69		07 16	
21	133	33.1		276	16.8	152	-7	53.7	118	54	15	6 57	36	48 71		11 14	
22	148	33.1		290	51.0	154		41.9	118	56	18	7 03	43	44 73		15 13	
23	163	33.2		305	25.4	154		30.1	119	58	21	08	7 52	19 40	76	9 20	10
24	178	33.3	+16	319	59.8		-7	18.2		60 S	6 24	7 15	8 02	19 36	78	9 26	7

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 2 ^h 59 ^m 6		Mag: -4.5 PMG: 08 ^h 54 ^m			Mag: -1.2 PMG: 04 ^h 21 ^m			Mag: -2.7 PMG: 22 ^h 21 ^m			Mag: +0.2 PMG: 22 ^h 54 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°		
0	314	59.3	226	33.7	+19	294	42.9	+4	23	44.0	-22	22.6	15	23.3	-20	54.7
1	330	01.8	241	33.8		309	44.4		38	46.8		22.7	30	26.0		54.8
2	345	04.3	256	33.9		324	45.9		53	49.5		22.7	45	28.6		54.8
3	0	06.7	271	34.0		339	47.5		68	52.3		22.8	60	31.3		54.9
4	15	09.2	286	34.1		354	49.0		83	55.0		22.8	75	33.9		54.9
5	30	11.7	301	34.1	+19	9	50.5	+4	98	57.8	-22	22.9	90	36.5	-20	54.9
6	45	14.1	316	34.2	+19	24	52.0	+4	114	00.5	-22	22.9	105	39.2	-20	55.0
7	60	16.6	331	34.3		39	53.5		129	03.3		22.9	120	41.8		55.0
8	75	19.0	346	34.4		54	55.0		144	06.0		23.0	135	44.5		55.0
9	90	21.5	1	34.5		69	56.5		159	08.7		23.0	150	47.1		55.1
10	105	24.0	16	34.5		84	58.0		174	11.5		23.1	165	49.8		55.1
11	120	26.4	31	34.6	+19	99	59.5	+4	189	14.2	-22	23.1	180	52.4	-20	55.2
12	135	28.9	46	34.7	+19	115	01.0	+4	204	17.0	-22	23.2	195	55.1	-20	55.2
13	150	31.4	61	34.8		130	02.6		219	19.7		23.2	210	57.7		55.2
14	165	33.8	76	34.8		145	04.1		234	22.5		23.2	226	00.3		55.3
15	180	36.3	91	34.9		160	05.6		249	25.2		23.3	241	03.0		55.3
16	195	38.8	106	35.0		175	07.1		264	28.0		23.3	256	05.6		55.3
17	210	41.2	121	35.0	+19	190	08.6	+4	279	30.7	-22	23.4	271	08.3	-20	55.4
18	225	43.7	136	35.1	+19	205	10.1	+4	294	33.5	-22	23.4	286	10.9	-20	55.4
19	240	46.2	151	35.2		220	11.6		309	36.2		23.4	301	13.6		55.4
20	255	48.6	166	35.2		235	13.2		324	38.9		23.5	316	16.2		55.5
21	270	51.1	181	35.3		250	14.7		339	41.7		23.5	331	18.8		55.5
22	285	53.5	196	35.4		265	16.2		354	44.4		23.6	346	21.5		55.6
23	300	56.0	211	35.4		280	17.7		9	47.2		23.6	1	24.1		55.6
24	315	58.5	226	35.5	+19	295	19.3	+4	24	49.9	-22	23.7	16	26.8	-20	55.6
Dif.	—		+1	+2		+15	+3		+27		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 05 ^m 7			SD: 14'9 Edad: 17 ^d 3 PHE { 4^h: 54'6 12^h: 54'5 20^h: 54'4																		
	PMG: 02 ^h 45 ^m			Rº: 41 ^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	33.3	+16	20.8	319	59.8	154	-7	18.2	118	60 N	20 14	21 09	22 41		21	38	6	8	14	77	
1	193	33.4		20.1	334	34.2	154	-7	06.4	119	58	20 03	20 53	22 07			36	9		17	75	
2	208	33.4		19.4	349	08.6	155	-6	54.5	119	56	19 54		40	21 44		35	10		20	72	
3	223	33.5		18.7	3	43.1	156		42.6	119	54		46	28	25		33	13		22	70	
4	238	33.6		18.0	18	17.7	156		30.7	120	52		39	18	21 10		32	15		25	68	
5	253	33.7	+16	17.3	32	52.3	156	-6	18.7	119	50	19 32	20 09	20 57		21	31	17		8	27	66
6	268	33.8	+16	16.6	47	26.9	156	-6	06.8	120	45	19 18	19 51	20 32		21	29	20		8	31	62
7	283	33.8		15.9	62	01.5	157	-5	54.8	120	40	19 07		36	20 12		27	23		35	59	
8	298	33.9		15.2	76	36.2	158		42.8	120	35	18 57		24	19 57		25	26		38	56	
9	313	34.0		14.5	91	11.0	157		30.8	120	30		48	19 14	44		23	29		41	53	
10	328	34.1		13.8	105	45.7	158		18.8	121	20		34	18 57	24		21	33		46	49	
11	343	34.2	+16	13.1	120	20.5	158	-5	06.7	120	10 N	18 21	18 43	19 09		21	18	37		8	51	44
12	358	34.2	+16	12.4	134	55.3	159	-4	54.7	121	0	18 09	18 31	18 56		21	16	41		8	55	41
13	13	34.3		11.7	149	30.2	159		42.6	121	10 S	17 58		19	45		14	44		8	59	37
14	28	34.4		11.0	164	05.1	159		30.5	121	20		45	18 08	34		12	48		9	03	34
15	43	34.5		10.3	178	40.0	160		18.4	121	30		31	17 56	25		09	53		08	29	
16	58	34.6		09.5	193	15.0	159	-4	06.3	121	35		23	50	20		07	56		10	27	
17	73	34.7	+16	08.8	207	49.9	160	-3	54.2	121	40	17 14	17 43	18 15		21	06	58		9	14	24
18	88	34.7	+16	08.1	222	24.9	161	-3	42.1	121	45	17 03	17 35	18 10		21	04	61		9	17	21
19	103	34.8		07.4	237	00.0	160		30.0	121	50	16 51		25	04		01	66		21	17	
20	118	34.9		06.7	251	35.0	161		17.9	122	52		45	21	18 01		21	00	68	23	15	
21	133	35.0		06.0	266	10.1	161	-3	05.7	121	54		38	16	17 59		20	59	69	25	14	
22	148	35.1		05.3	280	45.2	161	-2	53.6	122	56		31	11	56		57	72		28	11	
23	163	35.1		04.6	295	20.3	162		41.4	121	58		23	06	53		56	74		30	9	
24	178	35.2	+16	03.9	309	55.5		-2	29.3		60 S	16 13	17 00	17 50		20	54	77		9	33	6

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 55 ^m 6		Mag: -4.5 PMG: 08 ^h 54 ^m				Mag: -1.2 PMG: 04 ^h 18 ^m				Mag: -2.7 PMG: 22 ^h 17 ^m				Mag: +0.2 PMG: 22 ^h 50 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	315	58.5	226	35.5	+19	44.3	295	19.3	+4	25.7	24	49.9	-22	-23.7	16	26.8	-20	55.6
1	331	00.9	241	35.6		44.5	310	20.8		26.0	39	52.7		-23.7	31	29.4		55.7
2	346	03.4	256	35.6		44.7	325	22.3		26.3	54	55.4		-23.7	46	32.1		55.7
3	1	05.9	271	35.7		44.8	340	23.8		26.7	69	58.1		-23.8	61	34.7		55.7
4	16	08.3	286	35.7		45.0	355	25.3		27.0	85	00.9		-23.8	76	37.4		55.8
5	31	10.8	301	35.8	+19	45.1	10	26.9	+4	27.3	100	03.6	-22	-23.9	91	40.0	-20	55.8
6	46	13.3	316	35.8	+19	45.3	25	28.4	+4	27.6	115	06.4	-22	-23.9	106	42.6	-20	55.9
7	61	15.7	331	35.9		45.4	40	29.9		28.0	130	09.1		-23.9	121	45.3		55.9
8	76	18.2	346	35.9		45.6	55	31.5		28.3	145	11.9		-24.0	136	47.9		55.9
9	91	20.6	1	36.0		45.8	70	33.0		28.6	160	14.6		-24.0	151	50.6		56.0
10	106	23.1	16	36.1		45.9	85	34.5		29.0	175	17.3		-24.1	166	53.2		56.0
11	121	25.6	31	36.1	+19	46.1	100	36.0	+4	29.3	190	20.1	-22	-24.1	181	55.9	-20	56.0
12	136	28.0	46	36.1	+19	46.2	115	37.6	+4	29.6	205	22.8	-22	-24.2	196	58.5	-20	56.1
13	151	30.5	61	36.2		46.4	130	39.1		29.9	220	25.6		-24.2	212	01.1		56.1
14	166	33.0	76	36.2		46.5	145	40.6		30.3	235	28.3		-24.2	227	03.8		56.1
15	181	35.4	91	36.3		46.7	160	42.2		30.6	250	31.0		-24.3	242	06.4		56.2
16	196	37.9	106	36.3		46.8	175	43.7		30.9	265	33.8		-24.3	257	09.1		56.2
17	211	40.4	121	36.4	+19	47.0	190	45.2	+4	31.2	280	36.5	-22	-24.4	272	11.7	-20	56.3
18	226	42.8	136	36.4	+19	47.1	205	46.8	+4	31.5	295	39.3	-22	-24.4	287	14.4	-20	56.3
19	241	45.3	151	36.5		47.3	220	48.3		31.9	310	42.0		-24.4	302	17.0		56.3
20	256	47.8	166	36.5		47.4	235	49.9		32.2	325	44.7		-24.5	317	19.6		56.4
21	271	50.2	181	36.5		47.6	250	51.4		32.5	340	47.5		-24.5	332	22.3		56.4
22	286	52.7	196	36.6		47.7	265	52.9		32.8	355	50.2		-24.6	347	24.9		56.4
23	301	55.1	211	36.6		47.9	280	54.5		33.2	10	52.9		-24.6	2	27.6		56.5
24	316	57.6	226	36.6	+19	48.0	295	56.0	+4	33.5	25	55.7	-22	-24.6	17	30.2	-20	56.5
Dif.	—		+1		+2		+15		+3		+27		0		+26		0	

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			SD: 14 ^h 8 Edad: 18 ^d 3														
	PMG: 12 ^h 05 ^m 6			PMG: 03 ^h 26 ^m														
				Rº: 41 ^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	35.2	+16	309	55.5	161	-2	29.3	122	60 N	1 32	3 03	3 58	21 44 6	9 31 77			
1	193	35.3		324	30.6	162		17.1	121	58	2 05	19	4 09	45 8	32 74			
2	208	35.4		339	05.8	162	-2	05.0	122	56	28	32	18	45 11	32 72			
3	223	35.5		353	41.0	162	-1	52.8	122	54	2 47	44	26	46 13	32 70			
4	238	35.6		8	16.2	163		40.6	122	52	3 02	3 54	33	47 15	33 67			
5	253	35.7	+16	22	51.5	162	-1	28.4	121	50	3 15	4 03	4 40	21 48 16	9 33 65			
6	268	35.7	+15	37	26.7	163	-1	16.3	122	45	3 40	4 21	4 54	21 49 21	9 33 62			
7	283	35.8		52	02.0	163	-1	04.1	122	40	3 59	36	5 05	50 24	34 58			
8	298	35.9		66	37.3	163	-0	51.9	121	35	4 15	48	15	51 27	34 55			
9	313	36.0		81	12.6	163		39.8	122	30	27	4 58	23	52 29	34 53			
10	328	36.1		95	47.9	163		27.6	122	20	4 47	5 15	38	54 33	35 48			
11	343	36.2	+15	110	23.2	163	-0	15.4	121	10 N	5 03	5 29	5 51	21 55 37	9 35 45			
12	358	36.3	+15	124	58.5	164	-0	03.3	122	0	5 16	5 41	6 02	21 57 40	9 36 40			
13	13	36.3		139	33.9	163	+0	08.9	121	10 S	27	5 52	14	21 58 44	36 37			
14	28	36.4		154	09.2	164		21.0	122	20	37	6 03	26	22 00 48	37 33			
15	43	36.5		168	44.6	163		33.2	121	30	46	15	40	02 52	37 29			
16	58	36.6		183	19.9	164		45.3	122	35	51	21	48	03 55	37 27			
17	73	36.7	+15	197	55.3	164	+0	57.5	121	40	5 56	6 28	6 57	22 04 58	9 38 23			
18	88	36.8	+15	212	30.7	164	+1	09.6	121	45	6 01	6 36	7 07	22 05 61	9 38 20			
19	103	36.9		227	06.1	163		21.7	122	50	07	45	20	07 65	38 17			
20	118	37.0		241	41.4	164		33.9	121	52	09	49	26	08 67	38 15			
21	133	37.0		256	16.8	164		46.0	121	54	12	54	32	08 70	39 12			
22	148	37.1		270	52.2	164	+1	58.1	120	56	14	6 59	39	09 72	39 10			
23	163	37.2		285	27.6	163	+2	10.1	121	58	17	7 04	47	22 10 74	9 39 8			
24	178	37.3	+15	300	02.9		+2	22.2		60 S	6 20	7 10	7 57	22 11 78	9 39 6			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 51 ^m 7		Mag: -4.5 PMG: 08 ^h 54 ^m			Mag: -1.2 PMG: 04 ^h 16 ^m			Mag: -2.7 PMG: 22 ^h 12 ^m			Mag: +0.2 PMG: 22 ^h 46 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	316	57.6	226	36.6	+19	48.0	295	56.0	+4	33.5	25	55.7	-22	24.6	17	30.2	-20	56.5
1	332	00.1	241	36.7		48.2	310	57.6		33.8	40	58.4		24.7	32	32.8		56.5
2	347	02.5	256	36.7		48.3	325	59.1		34.1	56	01.2		24.7	47	35.5		56.6
3	2	05.0	271	36.7		48.5	341	00.6		34.4	71	03.9		24.8	62	38.1		56.6
4	17	07.5	286	36.8		48.6	356	02.2		34.8	86	06.6		24.8	77	40.8		56.7
5	32	09.9	301	36.8	+19	48.8	11	03.7	+4	35.1	101	09.4	-22	24.8	92	43.4	-20	56.7
6	47	12.4	316	36.8	+19	48.9	26	05.3	+4	35.4	116	12.1	-22	24.9	107	46.1	-20	56.7
7	62	14.9	331	36.9		49.0	41	06.8		35.7	131	14.8		24.9	122	48.7		56.8
8	77	17.3	346	36.9		49.2	56	08.4		36.0	146	17.6		25.0	137	51.3		56.8
9	92	19.8	1	36.9		49.3	71	09.9		36.3	161	20.3		25.0	152	54.0		56.8
10	107	22.3	16	36.9		49.5	86	11.5		36.7	176	23.1		25.0	167	56.6		56.9
11	122	24.7	31	37.0	+19	49.6	101	13.0	+4	37.0	191	25.8	-22	25.1	182	59.3	-20	56.9
12	137	27.2	46	37.0	+19	49.8	116	14.6	+4	37.3	206	28.5	-22	25.1	198	01.9	-20	56.9
13	152	29.6	61	37.0		49.9	131	16.1		37.6	221	31.3		25.2	213	04.5		57.0
14	167	32.1	76	37.0		50.0	146	17.7		37.9	236	34.0		25.2	228	07.2		57.0
15	182	34.6	91	37.1		50.2	161	19.2		38.2	251	36.7		25.3	243	09.8		57.1
16	197	37.0	106	37.1		50.3	176	20.8		38.6	266	39.5		25.3	258	12.5		57.1
17	212	39.5	121	37.1	+19	50.5	191	22.3	+4	38.9	281	42.2	-22	25.3	273	15.1	-20	57.1
18	227	42.0	136	37.1	+19	50.6	206	23.9	+4	39.2	296	44.9	-22	25.4	288	17.7	-20	57.2
19	242	44.4	151	37.1		50.7	221	25.5		39.5	311	47.7		25.4	303	20.4		57.2
20	257	46.9	166	37.1		50.9	236	27.0		39.8	326	50.4		25.5	318	23.0		57.2
21	272	49.4	181	37.2		51.0	251	28.6		40.1	341	53.1		25.5	333	25.7		57.3
22	287	51.8	196	37.2		51.1	266	30.1		40.4	356	55.9		25.5	348	28.3		57.3
23	302	54.3	211	37.2		51.3	281	31.7		40.8	11	58.6		25.6	3	30.9		57.3
24	317	56.7	226	37.2	+19	51.4	296	33.3	+4	41.1	27	01.3	-22	25.6	18	33.6	-20	57.4
Dif.	—		0		+1		+15		+3		+27		0		+26			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8			PHE { 4^h: 54'2 12^h: 54'2 20^h: 54'2														
	PMG: 12 ^h 05 ^m 4			Edad: 19 ^d 3														
				PMG: 04 ^h 07 ^m Rº: 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	178	37.3	+15	300	02.9	164	+2	22.2	121	60 N	20 08	21 02	22 29	21 50	7	10 48	78	
1	193	37.4		314	38.3	164		34.3	120	58	19 58	20 47	21 59	53	10	46	74	
2	208	37.5		329	13.7	164		46.3	121	56	50	35	37	56	13	44	7	
3	223	37.6		343	49.1	163	+2	58.4	120	54	42	24	19	21 59	15	42	69	
4	238	37.7		358	24.4	164	+3	10.4	120	52	35	14	21 05	22 02	16	40	67	
5	253	37.8	+15	12	59.8	163	+3	22.4	120	50	19 29	20 05	20 53	22 04	18	10 38	66	
6	268	37.9	+15	27	35.1	164	+3	34.4	120	45	19 15	19 48	20 28	22 10	22	10 35	61	
7	283	37.9		42	10.5	163		46.4	120	40	19 04	33	20 09	14	25	32	58	
8	298	38.0		56	45.8	163	+3	58.4	119	35	18 55	22	19 54	18	28	29	55	
9	313	38.1		71	21.1	164	+4	10.3	120	30	46	19 12	42	21	31	27	53	
10	328	38.2		85	56.5	163		22.3	119	20	32	18 55	23	27	35	23	48	
11	343	38.3	+15	100	31.8	163	+4	34.2	119	10 N	18 20	18 42	19 08	22 32	39	10 20	44	
12	358	38.4	+15	115	07.1	162	+4	46.1	119	0	18 09	18 30	18 55	22 37	42	10 16	41	
13	13	38.5		129	42.3	163	+4	58.0	118	10 S	17 58	19	45	42	46	13	38	
14	28	38.6		144	17.6	162	+5	09.8	119	20	46	18 09	35	48	49	10	33	
15	43	38.7		158	52.8	163		21.7	118	30	32	17 57	26	54	53	06	29	
16	58	38.8		173	28.1	162		33.5	118	35	25	51	21	22 58	55	04	27	
17	73	38.9	+15	188	03.3	162	+5	45.3	118	40	17 16	17 44	18 16	23 02	58	10 01	24	
18	88	39.0	+15	202	38.5	162	+5	57.1	118	45	17 06	17 37	18 12	23 06	62	9 58	21	
19	103	39.1		217	13.7	161	+6	08.9	117	50	16 54	28	06	12	66	55	17	
20	118	39.2		231	48.8	162		20.6	117	52	48	24	04	15	68	53	16	
21	133	39.3		246	24.0	161		32.3	117	54	42	20	18 02	18	70	51	14	
22	148	39.3		260	59.1	161		44.0	117	56	35	15	17 59	21	72	49	12	
23	163	39.4		275	34.2	160	+6	55.7	116	58	27	10	57	24	76	47	9	
24	178	39.5	+15	290	09.2		+7	07.3		60 S	16 18	17 04	17 54	23 29	78	9 45	6	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 47 ^m 8		Mag: -4.5 PMG: 08 ^h 54 ^m				Mag: -1.3 PMG: 04 ^h 13 ^m				Mag: -2.7 PMG: 22 ^h 08 ^m				Mag: +0.2 PMG: 22 ^h 42 ^m			
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.		hG ♀	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	317	56.7	226	37.2	+19	51.4	296	33.3	+4	41.1	27	01.3	-22	-25.6	18	33.6	-20	57.4
1	332	59.2	241	37.2		51.5	311	34.8		41.4	42	04.1		-25.6	33	36.2		57.4
2	348	01.7	256	37.2		51.7	326	36.4		41.7	57	06.8		-25.7	48	38.9		57.5
3	3	04.1	271	37.2		51.8	341	37.9		42.0	72	09.5		-25.7	63	41.5		57.5
4	18	06.6	286	37.2		52.0	356	39.5		42.3	87	12.3		-25.8	78	44.1		57.5
5	33	09.1	301	37.2	+19	52.1	11	41.1	+4	42.6	102	15.0	-22	-25.8	93	46.8	-20	57.6
6	48	11.5	316	37.2	+19	52.2	26	42.6	+4	42.9	117	17.7	-22	-25.8	108	49.4	-20	57.6
7	63	14.0	331	37.2		52.3	41	44.2		43.3	132	20.4		-25.9	123	52.1		57.6
8	78	16.5	346	37.2		52.5	56	45.8		43.6	147	23.2		-25.9	138	54.7		57.7
9	93	18.9	1	37.2		52.6	71	47.3		43.9	162	25.9		-26.0	153	57.3		57.7
10	108	21.4	16	37.2		52.7	86	48.9		44.2	177	28.6		-26.0	169	00.0		57.7
11	123	23.9	31	37.2	+19	52.9	101	50.5	+4	44.5	192	31.4	-22	-26.0	184	02.6	-20	57.8
12	138	26.3	46	37.2	+19	53.0	116	52.0	+4	44.8	207	34.1	-22	-26.1	199	05.3	-20	57.8
13	153	28.8	61	37.2		53.1	131	53.6		45.1	222	36.8		-26.1	214	07.9		57.8
14	168	31.2	76	37.2		53.3	146	55.2		45.4	237	39.6		-26.2	229	10.5		57.9
15	183	33.7	91	37.2		53.4	161	56.8		45.7	252	42.3		-26.2	244	13.2		57.9
16	198	36.2	106	37.2		53.5	176	58.3		46.0	267	45.0		-26.2	259	15.8		58.0
17	213	38.6	121	37.2	+19	53.6	191	59.9	+4	46.3	282	47.7	-22	-26.3	274	18.5	-20	58.0
18	228	41.1	136	37.2	+19	53.8	207	01.5	+4	46.6	297	50.5	-22	-26.3	289	21.1	-20	58.0
19	243	43.6	151	37.2		53.9	222	03.1		47.0	312	53.2		-26.4	304	23.7		58.1
20	258	46.0	166	37.2		54.0	237	04.6		47.3	327	55.9		-26.4	319	26.4		58.1
21	273	48.5	181	37.2		54.1	252	06.2		47.6	342	58.7		-26.4	334	29.0		58.1
22	288	51.0	196	37.2		54.3	267	07.8		47.9	358	01.4		-26.5	349	31.7		58.2
23	303	53.4	211	37.2		54.4	282	09.4		48.2	13	04.1		-26.5	4	34.3		58.2
24	318	55.9	226	37.1	+19	54.5	297	11.0	+4	48.5	28	06.8	-22	-26.6	19	36.9	-20	58.2
Dif.	—		0	+1		+16	+3			+27	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 : 54'2 12 ^h : 54'3 20 ^h : 54'3	
	PMG: 12 ^h 05 ^m 3				Edad: 20 ^d 3													
	hG ☉		Dec		hG ☾		Dif.			Dec			Dif.					
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	178	39.5	+15	29.2	290	09.2	161	+7	07.3	116	60 N	1 43	3 09	4 03	21 57	9	12 06	79
1	193	39.6		28.4	304	44.3	160		18.9	116	58	2 13	24	13	22 03	12	12 00	76
2	208	39.7		27.7	319	19.3	160		30.5	115	56	34	37	22	09 14		11 55	73
3	223	39.8		27.0	333	54.3	160		42.0	116	54	2 52	48	30	14 17		51 7	
4	238	39.9		26.2	348	29.3	159	+7	53.6	115	52	3 06	3 57	37	18 19		47 69	
5	253	40.0	+15	25.5	3	04.2	159	+8	05.1	114	50	3 19	4 06	4 43	22 22	21	11 44	66
6	268	40.1	+15	24.8	17	39.1	159	+8	16.5	115	45	3 43	4 24	4 56	22 32	24	11 36	62
7	283	40.2		24.0	32	14.0	158		28.0	114	40	4 02	38	5 07	39 28		30 59	
8	298	40.3		23.3	46	48.8	158		39.4	114	35	17	49	16	46 30		24 56	
9	313	40.4		22.5	61	23.6	158	+8	50.8	113	30	29	4 59	25	22 52	32	20 53	
10	328	40.5		21.8	75	58.4	158	+9	02.1	113	20	4 48	5 15	39	23 02	37	11 50	
11	343	40.6	+15	21.1	90	33.2	157	+9	13.4	113	10 N	5 03	5 29	5 51	23 11	40	11 04	46
12	358	40.7	+15	20.3	105	07.9	157	+9	24.7	113	0	5 16	5 40	6 02	23 19	44	10 57	43
13	13	40.8		19.6	119	42.6	156		36.0	112	10 S	26	5 51	13	28 46		51 39	
14	28	40.9		18.9	134	17.2	156		47.2	111	20	36	6 02	25	37 50		43 36	
15	43	41.0		18.1	148	51.8	156	+9	58.3	112	30	45	13	38	47 55		35 32	
16	58	41.1		17.4	163	26.4	155	+10	09.5	111	35	49	19	46	23 53	57	31 29	
17	73	41.2	+15	16.6	178	00.9	155	+10	20.6	111	40	5 54	6 26	6 54	** ** *	**	10 25	27
18	88	41.3	+15	15.9	192	35.4	154	+10	31.7	110	45	5 59	6 33	7 04	** ** *	**	10 19	23
19	103	41.4		15.2	207	09.8	154		42.7	110	50	6 04	42	16	** ** *	**	12 19	
20	118	41.5		14.4	221	44.2	154	+10	53.7	109	52	06	46	22	** ** *	**	09 17	
21	133	41.6		13.7	236	18.6	153	+11	04.6	109	54	08	50	28	** ** *	**	05 15	
22	148	41.7		12.9	250	52.9	153		15.5	109	56	11	6 55	35	** ** *	**	10 01	13
23	163	41.8		12.2	265	27.2	152		26.4	108	58	13	7 00	43	** ** *	**	9 56	11
24	178	41.9	+15	11.4	280	01.4		+11	37.2		60 S	6 16	7 06	7 51	** ** *	**	9 51	8
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 43 ^m 8		Mag: -4.5 PMG: 08 ^h 54 ^m				Mag: -1.3 PMG: 04 ^h 11 ^m				Mag: -2.7 PMG: 22 ^h 04 ^m				Mag: +0.2 PMG: 22 ^h 38 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	318	55.9	226	37.1	+19	54.5	297	11.0	+4	48.5	28	06.8	-22	26.6	19	36.9	-20	58.2
1	333	58.3	241	37.1		54.6	312	12.5		48.8	43	09.6		26.6	34	39.6		58.3
2	349	00.8	256	37.1		54.7	327	14.1		49.1	58	12.3		26.6	49	42.2		58.3
3	4	03.3	271	37.1		54.9	342	15.7		49.4	73	15.0		26.7	64	44.8		58.3
4	19	05.7	286	37.1		55.0	357	17.3		49.7	88	17.7		26.7	79	47.5		58.4
5	34	08.2	301	37.1	+19	55.1	12	18.9	+4	50.0	103	20.5	-22	26.7	94	50.1	-20	58.4
6	49	10.7	316	37.0	+19	55.2	27	20.5	+4	50.3	118	23.2	-22	26.8	109	52.8	-20	58.5
7	64	13.1	331	37.0		55.3	42	22.1		50.6	133	25.9		26.8	124	55.4		58.5
8	79	15.6	346	37.0		55.5	57	23.6		50.9	148	28.6		26.9	139	58.0		58.5
9	94	18.1	1	37.0		55.6	72	25.2		51.2	163	31.4		26.9	155	00.7		58.6
10	109	20.5	16	37.0		55.7	87	26.8		51.5	178	34.1		26.9	170	03.3		58.6
11	124	23.0	31	36.9	+19	55.8	102	28.4	+4	51.8	193	36.8	-22	27.0	185	05.9	-20	58.6
12	139	25.5	46	36.9	+19	55.9	117	30.0	+4	52.1	208	39.5	-22	27.0	200	08.6	-20	58.7
13	154	27.9	61	36.9		56.0	132	31.6		52.4	223	42.3		27.0	215	11.2		58.7
14	169	30.4	76	36.9		56.2	147	33.2		52.7	238	45.0		27.1	230	13.9		58.7
15	184	32.8	91	36.8		56.3	162	34.8		53.0	253	47.7		27.1	245	16.5		58.8
16	199	35.3	106	36.8		56.4	177	36.4		53.3	268	50.4		27.2	260	19.1		58.8
17	214	37.8	121	36.8	+19	56.5	192	38.0	+4	53.6	283	53.2	-22	27.2	275	21.8	-20	58.8
18	229	40.2	136	36.7	+19	56.6	207	39.6	+4	53.9	298	55.9	-22	27.2	290	24.4	-20	58.9
19	244	42.7	151	36.7		56.7	222	41.2		54.2	313	58.6		27.3	305	27.0		58.9
20	259	45.2	166	36.7		56.8	237	42.8		54.5	329	01.3		27.3	320	29.7		58.9
21	274	47.6	181	36.6		56.9	252	44.4		54.8	344	04.0		27.4	335	32.3		59.0
22	289	50.1	196	36.6		57.0	267	46.0		55.1	359	06.8		27.4	350	35.0		59.0
23	304	52.6	211	36.6		57.2	282	47.6		55.4	14	09.5		27.4	5	37.6		59.1
24	319	55.0	226	36.5	+19	57.3	297	49.2	+4	55.7	29	12.2	-22	27.5	20	40.2	-20	59.1
Dif.	—		0		+1		+16		+3		+27		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 05 ^m 1				SD: 14'8 Edad: 21 ^d 3 PMG: 05 ^h 29 ^m PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 Rº: 45 ^m															
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Civil	Náut.			Hora	Rº	Hora	Rº						
	°	'	°	'	°	'	h	m			h	m	h	m	h	m	m			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m				
0	178	41.9	+15	11.4	280	01.4	152	+11	37.2	108	60 N	20 03	20 56	22 17	22 06	12	13 25	80		
1	193	42.0		10.7	294	35.6	151		48.0	108	58	19 53	42	21 50	15	16	16	77		
2	208	42.1		10.0	309	09.7	151	+11	58.8	107	56	45	29	30	23	19	08	74		
3	223	42.2		09.2	323	43.8	150	+12	09.5	106	54	38	19	14	31	21	13	02	7	
4	238	42.3		08.5	338	17.8	150		20.1	106	52	31	10	21 00	37	24	12	56	69	
5	253	42.4	+15	07.7	352	51.8	150	+12	30.7	106	50	19 25	20 01	20 48	22 43	26	12	50	67	
6	268	42.5	+15	07.0	7	25.8	148	+12	41.3	105	45	19 12	19 44	20 24	22 56	29	12	38	64	
7	283	42.6		06.2	21	59.6	149	+12	51.8	105	40	19 02	31	20 06	23 07	32		29	60	
8	298	42.7		05.5	36	33.5	148	+13	02.3	104	35	18 52	19	19 52	16	35		20	58	
9	313	42.8		04.7	51	07.3	147		12.7	104	30	45	19 10	40	24	37		13	55	
10	328	42.9		04.0	65	41.0	147		23.1	103	20	31	18 54	21	39	40	12	01	51	
11	343	43.0	+15	03.2	80	14.7	146	+13	33.4	103	10 N	18 19	18 41	19 07	23 51	43	11	50	48	
12	358	43.1	+15	02.5	94	48.3	145	+13	43.7	102	0	18 09	18 30	18 55	** ** *	**		11	40	45
13	13	43.2		01.7	109	21.8	145	+13	53.9	102	10 S	17 58	19	45	** ** *	**		30	41	
14	28	43.3		01.0	123	55.3	145	+14	04.1	101	20	46	18 09	35	** ** *	**		19	38	
15	43	43.4	+15	00.2	138	28.8	144		14.2	101	30	34	17 58	27	** ** *	**		07	34	
16	58	43.6	+14	59.5	153	02.2	143		24.3	100	35	26	52	22	** ** *	**		11	00	32
17	73	43.7	+14	58.7	167	35.5	143	+14	34.3	100	40	17 18	17 46	18 18	0 00	60		10	52	29
18	88	43.8	+14	58.0	182	08.8	142	+14	44.3	99	45	17 08	17 39	18 14	0 08	63		10	42	27
19	103	43.9		57.2	196	42.0	141	+14	54.2	98	50	16 56	30	09	18	67		31	23	
20	118	44.0		56.5	211	15.1	141	+15	04.0	98	52	51	27	07	23	69		26	21	
21	133	44.1		55.7	225	48.2	140		13.8	98	54	45	23	05	28	71		20	19	
22	148	44.2		55.0	240	21.2	140		23.6	96	56	38	18	02	33	74		14	16	
23	163	44.3		54.2	254	54.2	139		33.2	96	58	31	13	18 00	40	76	10	07	14	
24	178	44.4	+14	53.5	269	27.1		+15	42.8		60 S	16 22	17 08	17 58	0 47	79		9	59	10
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 2 ^h 39 ^m 9		Mag: -4.5 PMG: 08 ^h 54 ^m				Mag: -1.3 PMG: 04 ^h 08 ^m				Mag: -2.7 PMG: 21 ^h 59 ^m				Mag: +0.2 PMG: 22 ^h 33 ^m					
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	319	55.0	226	36.5	+19	57.3	297	49.2	+4	55.7	29	12.2	-22	-27.5	20	40.2	-20	59.1		
1	334	57.5	241	36.5		57.4	312	50.8		56.0	44	14.9		-27.5	35	42.9		59.1		
2	350	00.0	256	36.5		57.5	327	52.4		56.3	59	17.6		-27.5	50	45.5		59.2		
3	5	02.4	271	36.4		57.6	342	54.0		56.6	74	20.4		-27.6	65	48.1		59.2		
4	20	04.9	286	36.4		57.7	357	55.6		56.9	89	23.1		-27.6	80	50.8		59.2		
5	35	07.3	301	36.3	+19	57.8	12	57.2	+4	57.2	104	25.8	-22	-27.7	95	53.4	-20	59.3		
6	50	09.8	316	36.3	+19	57.9	27	58.8	+4	57.5	119	28.5	-22	-27.7	110	56.0	-20	59.3		
7	65	12.3	331	36.3		58.0	43	00.4		57.8	134	31.2		-27.7	125	58.7		59.3		
8	80	14.7	346	36.2		58.1	58	02.0		58.1	149	34.0		-27.8	141	01.3		59.4		
9	95	17.2	1	36.2		58.2	73	03.6		58.3	164	36.7		-27.8	156	03.9		59.4		
10	110	19.7	16	36.1		58.3	88	05.2		58.6	179	39.4		-27.8	171	06.6		59.4		
11	125	22.1	31	36.1	+19	58.4	103	06.8	+4	58.9	194	42.1	-22	-27.9	186	09.2	-20	59.5		
12	140	24.6	46	36.0	+19	58.5	118	08.5	+4	59.2	209	44.8	-22	-27.9	201	11.9	-20	59.5		
13	155	27.1	61	36.0		58.6	133	10.1		59.5	224	47.6		-28.0	216	14.5		59.5		
14	170	29.5	76	35.9		58.7	148	11.7	+4	59.8	239	50.3		-28.0	231	17.1		59.6		
15	185	32.0	91	35.9		58.8	163	13.3	+5	00.1	254	53.0		-28.0	246	19.8		59.6		
16	200	34.4	106	35.8		58.9	178	14.9		00.4	269	55.7		-28.1	261	22.4		59.6		
17	215	36.9	121	35.8	+19	59.0	193	16.5	+5	00.7	284	58.4	-22	-28.1	276	25.0	-20	59.7		
18	230	39.4	136	35.7	+19	59.1	208	18.2	+5	01.0	300	01.1	-22	-28.1	291	27.7	-20	59.7		
19	245	41.8	151	35.7		59.2	223	19.8		01.3	315	03.9		-28.2	306	30.3		59.8		
20	260	44.3	166	35.6		59.3	238	21.4		01.6	330	06.6		-28.2	321	32.9		59.8		
21	275	46.8	181	35.5		59.4	253	23.0		01.8	345	09.3		-28.2	336	35.6		59.8		
22	290	49.2	196	35.5		59.5	268	24.6		02.1	0	12.0		-28.3	351	38.2		59.9		
23	305	51.7	211	35.4		59.6	283	26.3		02.4	15	14.7		-28.3	6	40.8		59.9		
24	320	54.2	226	35.4	+19	59.7	298	27.9	+5	02.7	30	17.4	-22	-28.4	21	43.5	-20	59.9		
Dif.	—		0		+1		+16		+3		+27		0		+26					

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8			SD: 14'9			PHE { 4 ^h : 54'7 12 ^h : 54'9 20 ^h : 55'1				Edad: 22 ^d 3			Rº: 47 ^m					
	PMG: 12 ^h 05 ^m 0			PMG: 06 ^h 14 ^m															
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	178	44.4	+14	53.5	269	27.1	138	+15	42.8	96	60 N	1 54	3 15	4 08	22 18	20	14 45 81		
1	193	44.5		52.7	283	59.9	137	+15	52.4	95	58	2 20	29	17	31	23	33 77		
2	208	44.6		52.0	298	32.6	137	+16	01.9	94	56	41	41	26	42	26	22 74		
3	223	44.7		51.2	313	05.3	137		11.3	94	54	2 57	3 52	33	22 52	28	13 72		
4	238	44.8		50.5	327	38.0	135		20.7	93	52	3 11	4 01	40	23 01	30	14 05 69		
5	253	44.9	+14	49.7	342	10.5	135	+16	30.0	92	50	3 23	4 09	4 46	23 09	31	13 57 68		
6	268	45.0	+14	48.9	356	43.0	134	+16	39.2	92	45	3 46	4 26	4 59	23 25	35	13 42 64		
7	283	45.2		48.2	11	15.4	134		48.4	91	40	4 04	40	5 09	39	38	29 61		
8	298	45.3		47.4	25	47.8	133	+16	57.5	91	35	19	4 51	18	23 51	40	18 59		
9	313	45.4		46.7	40	20.1	132	+17	06.6	89	30	30	5 01	26	** ** *	**	13 08 57		
10	328	45.5		45.9	54	52.3	131		15.5	89	20	4 49	16	39	** ** *	**	12 52 53		
11	343	45.6	+14	45.2	69	24.4	131	+17	24.4	89	10 N	5 04	5 29	5 51	** ** *	**	12 38 50		
12	358	45.7	+14	44.4	83	56.5	130	+17	33.3	87	0	5 15	5 40	6 02	0 03	46	12 25 47		
13	13	45.8		43.6	98	28.5	129		42.0	87	10 S	25	5 51	12	14	50	12 11 46		
14	28	45.9		42.9	113	00.4	128		50.7	86	20	35	6 01	23	27	52	11 57 43		
15	43	46.0		42.1	127	32.2	128	+17	59.3	86	30	43	11	36	42	56	41 39		
16	58	46.1		41.4	142	04.0	127	+18	07.9	84	35	47	17	43	0 50	58	32 37		
17	73	46.3	+14	40.6	156	35.7	126	+18	16.3	84	40	5 52	6 24	6 52	1 00	61	11 21 35		
18	88	46.4	+14	39.8	171	07.3	126	+18	24.7	84	45	5 56	6 31	7 01	1 11	64	11 09 32		
19	103	46.5		39.1	185	38.9	125		33.1	82	50	6 01	39	13	25	68	10 54 28		
20	118	46.6		38.3	200	10.4	123		41.3	82	52	03	42	18	32	69	47 26		
21	133	46.7		37.6	214	41.7	124		49.5	80	54	05	46	24	39	72	39 24		
22	148	46.8		36.8	229	13.1	122	+18	57.5	81	56	07	51	31	47	74	30 22		
23	163	46.9		36.0	243	44.3	122	+19	05.6	79	58	09	6 56	38	1 56	78	10 21 18		
24	178	47.0	+14	35.3	258	15.5		+19	13.5		60 S	6 11	7 01	7 46	2 06	82	10 09 16		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 36 ^m 0		Mag: -4.4 PMG: 08 ^h 54 ^m				Mag: -1.3 PMG: 04 ^h 06 ^m				Mag: -2.7 PMG: 21 ^h 55 ^m				Mag: +0.2 PMG: 22 ^h 29 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	320	54.2	226	35.4	+19	59.7	298	27.9	+5	02.7	30	17.4	-22	28.4	21	43.5	-20	59.9
1	335	56.6	241	35.3		59.8	313	29.5		03.0	45	20.2		28.4	36	46.1	-21	00.0
2	350	59.1	256	35.2	+19	59.9	328	31.1		03.3	60	22.9		28.4	51	48.7		00.0
3	6	01.6	271	35.2	+20	00.0	343	32.8		03.6	75	25.6		28.5	66	51.4		00.0
4	21	04.0	286	35.1		00.1	358	34.4		03.9	90	28.3		28.5	81	54.0		00.1
5	36	06.5	301	35.1	+20	00.2	13	36.0	+5	04.1	105	31.0	-22	28.5	96	56.6	-21	00.1
6	51	08.9	316	35.0	+20	00.3	28	37.6	+5	04.4	120	33.7	-22	28.6	111	59.3	-21	00.1
7	66	11.4	331	34.9		00.3	43	39.3		04.7	135	36.4		28.6	127	01.9		00.2
8	81	13.9	346	34.9		00.4	58	40.9		05.0	150	39.1		28.6	142	04.5		00.2
9	96	16.3	1	34.8		00.5	73	42.5		05.3	165	41.9		28.7	157	07.2		00.2
10	111	18.8	16	34.7		00.6	88	44.2		05.6	180	44.6		28.7	172	09.8		00.3
11	126	21.3	31	34.7	+20	00.7	103	45.8	+5	05.9	195	47.3	-22	28.8	187	12.4	-21	00.3
12	141	23.7	46	34.6	+20	00.8	118	47.4	+5	06.1	210	50.0	-22	28.8	202	15.1	-21	00.3
13	156	26.2	61	34.5		00.9	133	49.1		06.4	225	52.7		28.8	217	17.7		00.4
14	171	28.7	76	34.4		01.0	148	50.7		06.7	240	55.4		28.9	232	20.3		00.4
15	186	31.1	91	34.4		01.0	163	52.3		07.0	255	58.1		28.9	247	23.0		00.4
16	201	33.6	106	34.3		01.1	178	54.0		07.3	271	00.8		28.9	262	25.6		00.5
17	216	36.1	121	34.2	+20	01.2	193	55.6	+5	07.6	286	03.6	-22	29.0	277	28.2	-21	00.5
18	231	38.5	136	34.2	+20	01.3	208	57.2	+5	07.8	301	06.3	-22	29.0	292	30.9	-21	00.5
19	246	41.0	151	34.1		01.4	223	58.9		08.1	316	09.0		29.0	307	33.5		00.6
20	261	43.4	166	34.0		01.5	239	00.5		08.4	331	11.7		29.1	322	36.1		00.6
21	276	45.9	181	33.9		01.5	254	02.2		08.7	346	14.4		29.1	337	38.8		00.6
22	291	48.4	196	33.8		01.6	269	03.8		09.0	1	17.1		29.2	352	41.4		00.7
23	306	50.8	211	33.8		01.7	284	05.5		09.2	16	19.8		29.2	7	44.0		00.7
24	321	53.3	226	33.7	+20	01.8	299	07.1	+5	09.5	31	22.5	-22	29.2	22	46.7	-21	00.8
Dif.	—		-1		+1		+16		+3		+27		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: 12 ^h 04 ^m 8			Edad: 23 ^d 3																
	hG ☉		Dec	hG ☾		Dif.	Dec		Dif.			Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	°	'		°	'		º	h m	h m	h m	h m m		h m m				
0	178	47.0	+14	35.3	258	15.5	120	+19	13.5	78	60 N	19 58	20 49	22 07	22 38	30	16 06	77		
1	193	47.1		34.5	272	46.5	121		21.3	78	58	48	36	21 42	22 54	34	15 50	73		
2	208	47.3		33.7	287	17.6	119		29.1	77	56	40	24	23	23 08	36	36	71		
3	223	47.4		33.0	301	48.5	118		36.8	75	54	33	14	21 08	20	38	25	68		
4	238	47.5		32.2	316	19.3	118		44.3	75	52	27	20 05	20 55	31	39	14	67		
5	253	47.6	+14	31.4	330	50.1	117	+19	51.8	75	50	19 21	19 57	20 43	23 40	41	15 05	66		
6	268	47.7	+14	30.7	345	20.8	116	+19	59.3	73	45	19 09	19 41	20 21	** ** *	**	14 46	63		
7	283	47.8		29.9	359	51.4	115	+20	06.6	72	40	18 59	28	20 03	** ** *	**	30	61		
8	298	47.9		29.2	14	21.9	115		13.8	72	35	50	17	19 49	** ** *	**	17	59		
9	313	48.1		28.4	28	52.4	113		21.0	71	30	43	19 08	38	0 01	42	14 05	58		
10	328	48.2		27.6	43	22.7	113		28.1	69	20	30	18 53	20	19	44	13 45	56		
11	343	48.3	+14	26.8	57	53.0	112	+20	35.0	69	10 N	18 19	18 40	19 06	0 34	48	13 28	54		
12	358	48.4	+14	26.1	72	23.2	111	+20	41.9	68	0	18 08	18 30	18 54	0 49	50	13 12	52		
13	13	48.5		25.3	86	53.3	111		48.7	67	10 S	17 58	20	45	1 04	52	12 57	49		
14	28	48.6		24.5	101	23.4	109	+20	55.4	66	20	47	18 10	36	19	55	40	47		
15	43	48.7		23.8	115	53.3	109	+21	02.0	65	30	35	17 59	28	38	57	20	45		
16	58	48.9		23.0	130	23.2	108		08.5	64	35	28	54	24	1 48	60	12 09	43		
17	73	49.0	+14	22.2	144	53.0	107	+21	14.9	63	40	17 20	17 48	18 20	2 01	61	11 56	41		
18	88	49.1	+14	21.5	159	22.7	107	+21	21.2	62	45	17 10	17 41	18 16	2 15	64	11 41	38		
19	103	49.2		20.7	173	52.4	105		27.4	61	50	16 59	33	11	33	67	22	36		
20	118	49.3		19.9	188	21.9	105		33.5	60	52	54	30	10	41	69	13	34		
21	133	49.4		19.1	202	51.4	104		39.5	59	54	48	26	08	2 51	71	11 03	33		
22	148	49.6		18.4	217	20.8	103		45.4	58	56	42	22	06	3 01	74	10 52	30		
23	163	49.7		17.6	231	50.1	102		51.2	56	58	35	17	04	14	76	39	28		
24	178	49.8	+14	16.8	246	19.3		+21	56.8		60 S	16 27	17 12	18 02	3 28	80	10 25	23		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 2 ^h 32 ^m 0		Mag: -4.4 PMG: 08 ^h 54 ^m			Mag: -1.3 PMG: 04 ^h 03 ^m			Mag: -2.7 PMG: 21 ^h 51 ^m			Mag: +0.2 PMG: 22 ^h 25 ^m								
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄								
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	321	53.3	226	33.7	+20	01.8	299	07.1	+5	09.5	31	22.5	-22	-29.2	22	46.7	-21	00.8		
1	336	55.8	241	33.6		01.9	314	08.7		09.8	46	25.2		-29.3	37	49.3		00.8		
2	351	58.2	256	33.5		01.9	329	10.4		10.1	61	27.9		-29.3	52	51.9		00.8		
3	7	00.7	271	33.4		02.0	344	12.0		10.4	76	30.6		-29.3	67	54.6		00.9		
4	22	03.2	286	33.3		02.1	359	13.7		10.6	91	33.4		-29.4	82	57.2		00.9		
5	37	05.6	301	33.3	+20	02.2	14	15.3	+5	10.9	106	36.1	-22	-29.4	97	59.8	-21	00.9		
6	52	08.1	316	33.2	+20	02.3	29	17.0	+5	11.2	121	38.8	-22	-29.4	113	02.5	-21	01.0		
7	67	10.5	331	33.1		02.3	44	18.6		11.5	136	41.5		-29.5	128	05.1		01.0		
8	82	13.0	346	33.0		02.4	59	20.3		11.7	151	44.2		-29.5	143	07.7		01.0		
9	97	15.5	1	32.9		02.5	74	22.0		12.0	166	46.9		-29.5	158	10.4		01.1		
10	112	17.9	16	32.8		02.6	89	23.6		12.3	181	49.6		-29.6	173	13.0		01.1		
11	127	20.4	31	32.7	+20	02.6	104	25.3	+5	12.6	196	52.3	-22	-29.6	188	15.6	-21	01.1		
12	142	22.9	46	32.6	+20	02.7	119	26.9	+5	12.9	211	55.0	-22	-29.6	203	18.3	-21	01.2		
13	157	25.3	61	32.6		02.8	134	28.6		13.1	226	57.7		-29.7	218	20.9		01.2		
14	172	27.8	76	32.5		02.8	149	30.2		13.4	242	00.4		-29.7	233	23.5		01.2		
15	187	30.3	91	32.4		02.9	164	31.9		13.7	257	03.1		-29.8	248	26.2		01.3		
16	202	32.7	106	32.3		03.0	179	33.6		14.0	272	05.8		-29.8	263	28.8		01.3		
17	217	35.2	121	32.2	+20	03.1	194	35.2	+5	14.2	287	08.5	-22	-29.8	278	31.4	-21	01.3		
18	232	37.7	136	32.1	+20	03.1	209	36.9	+5	14.5	302	11.2	-22	-29.9	293	34.0	-21	01.4		
19	247	40.1	151	32.0		03.2	224	38.5		14.8	317	13.9		-29.9	308	36.7		01.4		
20	262	42.6	166	31.9		03.3	239	40.2		15.0	332	16.6		-29.9	323	39.3		01.4		
21	277	45.0	181	31.8		03.3	254	41.9		15.3	347	19.3		-30.0	338	41.9		01.5		
22	292	47.5	196	31.7		03.4	269	43.5		15.6	2	22.0		-30.0	353	44.6		01.5		
23	307	50.0	211	31.6		03.5	284	45.2		15.9	17	24.8		-30.0	8	47.2		01.5		
24	322	52.4	226	31.5	+20	03.5	299	46.9	+5	16.1	32	27.5	-22	-30.1	23	49.8	-21	01.6		
Dif.	—		-1			+1	+16			+3	+27			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 : 56'2 20 ^h : 56'4	
	PMG: 12 ^h 04 ^m 6				Edad: 24 ^d 3													
	PMG: 07 ^h 51 ^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	178	49.8	+14	16.8	246	19.3	101	+21	56.8	56	60 N	2 03	3 21	4 13	23 08	49	17 23	65
1	193	49.9		16.1	260	48.4	101	+22	02.4	55	58	28	34	22	28 50		17 03	65
2	208	50.0		15.3	275	17.5	100		07.9	54	56	2 47	46	30	44 51		16 47	63
3	223	50.2		14.5	289	46.5	99		13.3	52	54	3 02	3 56	37	23 58	52	33 63	
4	238	50.3		13.7	304	15.4	98		18.5	52	52	15	4 05	43	** ** *	**	21 62	
5	253	50.4	+14	13.0	318	44.2	98	+22	23.7	50	50	3 27	4 13	4 49	** ** *	**	16 11	61
6	268	50.5	+14	12.2	333	13.0	96	+22	28.7	50	45	3 49	4 29	5 01	0 00	44	15 49	59
7	283	50.6		11.4	347	41.6	96		33.7	48	40	4 07	42	11	17 45		31 59	
8	298	50.8		10.6	2	10.2	95		38.5	47	35	20	4 53	20	31 46		16 58	
9	313	50.9		09.9	16	38.7	95		43.2	46	30	32	5 02	27	0 43	48	15 03	57
10	328	51.0		09.1	31	07.2	93		47.8	44	20	4 50	17	40	1 03	50	14 41	56
11	343	51.1	+14	08.3	45	35.5	93	+22	52.2	44	10 N	5 04	5 29	5 51	1 22	51	14 22	55
12	358	51.2	+14	07.5	60	03.8	92	+22	56.6	42	0	5 15	5 40	6 01	1 39	53	14 04	54
13	13	51.4		06.7	74	32.0	91	+23	00.8	42	10 S	25	50	11	1 56	54	13 46	53
14	28	51.5		06.0	89	00.1	90		05.0	40	20	33	5 59	22	2 14	56	27 52	
15	43	51.6		05.2	103	28.1	90		09.0	38	30	41	6 10	34	35 58		13 05	51
16	58	51.7		04.4	117	56.1	89		12.8	38	35	45	15	41	2 48	58	12 52	50
17	73	51.8	+14	03.6	132	24.0	88	+23	16.6	36	40	5 49	6 21	6 49	3 02	60	12 37	49
18	88	52.0	+14	02.9	146	51.8	88	+23	20.2	35	45	5 53	6 28	6 58	3 19	62	12 19	48
19	103	52.1		02.1	161	19.6	86		23.7	34	50	57	35	7 09	40 64		11 58	46
20	118	52.2		01.3	175	47.2	86		27.1	33	52	5 59	39	14	3 50	65	47 46	
21	133	52.3	+14	00.5	190	14.8	86		30.4	31	54	6 01	43	20	4 02	66	36 44	
22	148	52.5	+13	59.7	204	42.4	84		33.5	31	56	03	47	26	15 68		22 43	
23	163	52.6		58.9	219	09.8	84		36.6	28	58	05	51	33	4 30	70	11 07	41
24	178	52.7	+13	58.2	233	37.2		+23	39.4		60 S	6 07	6 56	7 41	4 48	73	10 48	39

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 2 ^h 28 ^m 1		Mag: -4.4 PMG: 08 ^h 54 ^m				Mag: -1.4 PMG: 04 ^h 00 ^m				Mag: -2.7 PMG: 21 ^h 46 ^m				Mag: +0.2 PMG: 22 ^h 21 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	322	52.4	226	31.5	+20	03.5	299	46.9	+5	16.1	32	27.5	-22	30.1	23	49.8	-21	01.6
1	337	54.9	241	31.4		03.6	314	48.5		16.4	47	30.2		30.1	38	52.5		01.6
2	352	57.4	256	31.3		03.6	329	50.2		16.7	62	32.9		30.1	53	55.1		01.6
3	7	59.8	271	31.2		03.7	344	51.9		16.9	77	35.6		30.2	68	57.7		01.7
4	23	02.3	286	31.1		03.8	359	53.5		17.2	92	38.3		30.2	84	00.3		01.7
5	38	04.8	301	31.0	+20	03.8	14	55.2	+5	17.5	107	41.0	-22	30.2	99	03.0	-21	01.7
6	53	07.2	316	30.9	+20	03.9	29	56.9	+5	17.8	122	43.7	-22	30.3	114	05.6	-21	01.8
7	68	09.7	331	30.7		04.0	44	58.6		18.0	137	46.4		30.3	129	08.2		01.8
8	83	12.2	346	30.6		04.0	60	00.2		18.3	152	49.1		30.3	144	10.9		01.8
9	98	14.6	1	30.5		04.1	75	01.9		18.6	167	51.8		30.4	159	13.5		01.9
10	113	17.1	16	30.4		04.1	90	03.6		18.8	182	54.5		30.4	174	16.1		01.9
11	128	19.5	31	30.3	+20	04.2	105	05.3	+5	19.1	197	57.2	-22	30.4	189	18.8	-21	01.9
12	143	22.0	46	30.2	+20	04.2	120	06.9	+5	19.4	212	59.9	-22	30.5	204	21.4	-21	02.0
13	158	24.5	61	30.1		04.3	135	08.6		19.6	228	02.6		30.5	219	24.0		02.0
14	173	26.9	76	30.0		04.4	150	10.3		19.9	243	05.3		30.5	234	26.6		02.0
15	188	29.4	91	29.9		04.4	165	12.0		20.2	258	08.0		30.6	249	29.3		02.1
16	203	31.9	106	29.7		04.5	180	13.7		20.4	273	10.7		30.6	264	31.9		02.1
17	218	34.3	121	29.6	+20	04.5	195	15.4	+5	20.7	288	13.4	-22	30.6	279	34.5	-21	02.1
18	233	36.8	136	29.5	+20	04.6	210	17.0	+5	21.0	303	16.1	-22	30.7	294	37.2	-21	02.2
19	248	39.3	151	29.4		04.6	225	18.7		21.2	318	18.7		30.7	309	39.8		02.2
20	263	41.7	166	29.3		04.7	240	20.4		21.5	333	21.4		30.7	324	42.4		02.2
21	278	44.2	181	29.2		04.7	255	22.1		21.8	348	24.1		30.8	339	45.0		02.3
22	293	46.7	196	29.0		04.8	270	23.8		22.0	3	26.8		30.8	354	47.7		02.3
23	308	49.1	211	28.9		04.8	285	25.5		22.3	18	29.5		30.9	9	50.3		02.3
24	323	51.6	226	28.8	+20	04.9	300	27.2	+5	22.5	33	32.2	-22	30.9	24	52.9	-21	02.4
Dif.	—		-1		+1		+17		+3		+27		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 4			SD: 15°4 Edad: 25 ^d 3 PHE { 4 ^h : 56'7 12 ^h : 57'0 20 ^h : 57'2 PMG: 08 ^h 45 ^m Rº: 56 ^m																		
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.			Civil	Náut.	Hora	Rº	Hora	Rº					
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m					
0	178	52.7	+13	58.2	233	37.2	83	+23	39.4	28	60 N	19 52	20 43	21 57	23 57	70	18 28	49				
1	193	52.8		57.4	248	04.5	83		42.2	26	58	43	30	34	** ** *	**	18 08	50				
2	208	52.9		56.6	262	31.8	82		44.8	25	56	36	19	17	** ** *	**	17 50	51				
3	223	53.1		55.8	276	59.0	81		47.3	24	54	29	09	21 02	** ** *	**	36	52				
4	238	53.2		55.0	291	26.1	80		49.7	22	52	23	20 01	20 49	0 10	52	23	52				
5	253	53.3	+13	54.2	305	53.1	80	+23	51.9	21	50	19 18	19 53	20 39	0 21	53	17 12	53				
6	268	53.4	+13	53.5	320	20.1	79	+23	54.0	20	45	19 06	19 38	20 17	0 44	53	16 48	54				
7	283	53.6		52.7	334	47.0	79		56.0	18	40	18 56	25	20 00	1 02	54	30	54				
8	298	53.7		51.9	349	13.9	78		57.8	17	35	48	15	19 47	1 17	55	14	55				
9	313	53.8		51.1	3	40.7	77	+23	59.5	16	30	41	19 06	36	31	54	16 00	56				
10	328	53.9		50.3	18	07.4	77	+24	01.1	14	20	28	18 51	18	1 53	55	15 37	56				
11	343	54.1	+13	49.5	32	34.1	76	+24	02.5	13	10 N	18 18	18 39	19 05	2 13	56	15 17	56				
12	358	54.2	+13	48.7	47	00.7	76	+24	03.8	11	0	18 08	18 29	18 54	2 32	55	14 58	57				
13	13	54.3		48.0	61	27.3	75		04.9	11	10 S	17 58	20	44	2 50	56	39	57				
14	28	54.4		47.2	75	53.8	74		06.0	8	20	48	10	36	3 10	56	14 19	57				
15	43	54.6		46.4	90	20.2	74		06.8	8	30	36	18 00	29	33	57	13 56	57				
16	58	54.7		45.6	104	46.6	74		07.6	6	35	29	17 55	25	3 46	57	42	58				
17	73	54.8	+13	44.8	119	13.0	73	+24	08.2	4	40	17 22	17 50	18 21	4 02	57	13 26	58				
18	88	55.0	+13	44.0	133	39.3	72	+24	08.6	3	45	17 13	17 43	18 18	4 21	57	13 07	59				
19	103	55.1		43.2	148	05.5	72		08.9	2	50	17 02	36	14	44	57	12 44	58				
20	118	55.2		42.4	162	31.7	71		09.1	0	52	16 57	33	12	4 55	58	33	58				
21	133	55.3		41.6	176	57.8	71		09.1	1	54	52	29	11	5 08	58	20	58				
22	148	55.5		40.9	191	23.9	71		09.0	3	56	46	25	09	23	57	12 05	59				
23	163	55.6		40.1	205	50.0	70		08.7	4	58	39	21	07	5 40	58	11 48	59				
24	178	55.7	+13	39.3	220	16.0		+24	08.3		60 S	16 32	17 16	18 05	6 01	58	11 27	59				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 2 ^h 24 ^m 2		Mag: -4.4 PMG: 08 ^h 54 ^m				Mag: -1.4 PMG: 03 ^h 58 ^m				Mag: -2.7 PMG: 21 ^h 42 ^m				Mag: +0.2 PMG: 22 ^h 17 ^m							
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	323	51.6	226	28.8	+20	04.9	300	27.2	+5	22.5	33	32.2	-22	-30.9	24	52.9	-21	02.4				
1	338	54.0	241	28.7		04.9	315	28.9		22.8	48	34.9		-30.9	39	55.6		02.4				
2	353	56.5	256	28.5		05.0	330	30.6		23.1	63	37.6		-31.0	54	58.2		02.4				
3	8	59.0	271	28.4		05.0	345	32.3		23.3	78	40.3		-31.0	70	00.8		02.5				
4	24	01.4	286	28.3		05.1	0	33.9		23.6	93	43.0		-31.0	85	03.4		02.5				
5	39	03.9	301	28.2	+20	05.1	15	35.6	+5	23.8	108	45.7	-22	-31.1	100	06.1	-21	02.5				
6	54	06.4	316	28.0	+20	05.2	30	37.3	+5	24.1	123	48.4	-22	-31.1	115	08.7	-21	02.6				
7	69	08.8	331	27.9		05.2	45	39.0		24.4	138	51.1		-31.1	130	11.3		02.6				
8	84	11.3	346	27.8		05.3	60	40.7		24.6	153	53.8		-31.2	145	13.9		02.6				
9	99	13.8	1	27.7		05.3	75	42.4		24.9	168	56.5		-31.2	160	16.6		02.7				
10	114	16.2	16	27.5		05.3	90	44.1		25.1	183	59.2		-31.2	175	19.2		02.7				
11	129	18.7	31	27.4	+20	05.4	105	45.8	+5	25.4	199	01.9	-22	-31.3	190	21.8	-21	02.7				
12	144	21.1	46	27.3	+20	05.4	120	47.5	+5	25.7	214	04.6	-22	-31.3	205	24.5	-21	02.8				
13	159	23.6	61	27.1		05.5	135	49.2		25.9	229	07.3		-31.3	220	27.1		02.8				
14	174	26.1	76	27.0		05.5	150	50.9		26.2	244	09.9		-31.3	235	29.7		02.8				
15	189	28.5	91	26.9		05.5	165	52.7		26.4	259	12.6		-31.4	250	32.3		02.9				
16	204	31.0	106	26.7		05.6	180	54.4		26.7	274	15.3		-31.4	265	35.0		02.9				
17	219	33.5	121	26.6	+20	05.6	195	56.1	+5	26.9	289	18.0	-22	-31.4	280	37.6	-21	02.9				
18	234	35.9	136	26.5	+20	05.7	210	57.8	+5	27.2	304	20.7	-22	-31.5	295	40.2	-21	03.0				
19	249	38.4	151	26.3		05.7	225	59.5		27.5	319	23.4		-31.5	310	42.8		03.0				
20	264	40.9	166	26.2		05.7	241	01.2		27.7	334	26.1		-31.5	325	45.5		03.0				
21	279	43.3	181	26.1		05.8	256	02.9		28.0	349	28.8		-31.6	340	48.1		03.1				
22	294	45.8	196	25.9		05.8	271	04.6		28.2	4	31.5		-31.6	355	50.7		03.1				
23	309	48.3	211	25.8		05.8	286	06.3		28.5	19	34.2		-31.6	10	53.3		03.1				
24	324	50.7	226	25.6	+20	05.9	301	08.0	+5	28.7	34	36.9	-22	-31.7	25	56.0	-21	03.2				
Dif.	—		-1				+17				+27				0				+26			

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 15'8			SD: 15'6			PHE { 4 ^h : 57'5 12 ^h : 57'8 20 ^h : 58'1				Edad: 26 ^d 3			Rº: 58 ^m			Rº			Rº		
	PMG: 12 ^h 04 ^m 2			PMG: 09 ^h 41 ^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					
0	178	55.7	+13 39.3	220	16.0	70	+24 08.3	6	60 N	2 12	3 27	4 18	***	***	***	19 17	32					
1	193	55.9		234	42.0	69		07.7	7	58	35	40	26	0 18	68	18 58	35					
2	208	56.0		249	07.9	69		07.0	8	56	2 53	3 50	34		35	67	41 39					
3	223	56.1		263	33.8	68		06.2	10	54	3 07	4 00	40	0 50	66		28 40					
4	238	56.2		277	59.6	68		05.2	11	52	20	08	46	1 02	66		15 43					
5	253	56.4	+13 35.3	292	25.4	68	+24 04.1	13	50	3 31	4 16	4 52		1 14	64	18 05	43					
6	268	56.5	+13 34.5	306	51.2	67	+24 02.8	15	45	3 52	4 31	5 03		1 37	63	17 42	47					
7	283	56.6		321	16.9	67	+24 01.3	16	40	4 09	44	13		1 56	62		24 49					
8	298	56.8		335	42.6	67	+23 59.7	17	35	22	4 54	21		2 12	61	17 09	50					
9	313	56.9		350	08.3	67		58.0	19	30	33	5 03	28	25	61	16 56	51					
10	328	57.0		4	34.0	66		56.1	20	20	4 51	18	40	2 48	60		33 54					
11	343	57.2	+13 30.5	18	59.6	66	+23 54.1	22	10 N	5 04	5 29	5 51		3 09	58	16 13	56					
12	358	57.3	+13 29.7	33	25.2	65	+23 51.9	23	0	5 15	5 40	6 01		3 27	58	15 55	57					
13	13	57.4		47	50.7	66		49.6	25	10 S	24	49	11	3 46	57		36 59					
14	28	57.5		62	16.3	65		47.1	26	20	32	5 58	21	4 06	56	15 16	61					
15	43	57.7		76	41.8	65		44.5	28	30	40	6 08	32	30	53	14 53	63					
16	58	57.8		91	07.3	65		41.7	29	35	43	13	39	43	53	40	64					
17	73	57.9	+13 25.8	105	32.8	64	+23 38.8	31	40	5 47	6 18	6 46		4 59	52	14 24	66					
18	88	58.1	+13 25.0	119	58.2	65	+23 35.7	33	45	5 50	6 25	6 55		5 18	50	14 06	67					
19	103	58.2		134	23.7	64		32.4	33	50	54	32	7 05	41	49	13 42	70					
20	118	58.3		148	49.1	64		29.1	36	52	55	35	10	5 53	47	31	71					
21	133	58.5		163	14.5	64		25.5	37	54	57	39	16	6 06	46		18 73					
22	148	58.6		177	39.9	64		21.8	38	56	5 59	42	21	20	45	13 04	74					
23	163	58.7		192	05.3	64		18.0	40	58	6 00	46	28	6 38	42	12 47	76					
24	178	58.9	+13 20.2	206	30.7		+23 14.0		60 S	6 02	6 51	7 35		6 59	39	12 26	80					
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 2 ^h 20 ^m 2		Mag: -4.4 PMG: 08 ^h 54 ^m				Mag: -1.4 PMG: 03 ^h 55 ^m				Mag: -2.7 PMG: 21 ^h 38 ^m				Mag: +0.2 PMG: 22 ^h 12 ^m							
	hG ♂		hG ♀				hG ♂				hG ♃				hG ♄							
h	°	'	°	°	'	°	'	°	'	°	°	'	°	°	'	°	'					
0	324	50.7	226 25.6	+20 05.9	301 08.0	+5 28.7	34 36.9	-22 31.7	25 56.0	-21 03.2	32	31.7	40 58.6	03.2	32	31.7	40 58.6					
1	339	53.2	241 25.5	05.9	316 09.8	29.0	49 39.5	31.7	56 01.2	03.2	64	42.2	31.7	56 01.2	03.2	71 03.8	03.3					
2	354	55.6	256 25.4	05.9	331 11.5	29.2	64 42.2	31.7	86 06.5	03.3	79	44.9	31.8	86 06.5	03.3	101 09.1	-21 03.3					
3	9	58.1	271 25.2	06.0	346 13.2	29.5	94 47.6	31.8	116 11.7	-21 03.4	109	50.3	-22 31.8	116 11.7	-21 03.4	131 14.3	03.4					
4	25	00.6	286 25.1	06.0	1	14.9	94 47.6	31.8	146 17.0	03.4	124	53.0	-22 31.9	146 17.0	03.4	161 19.6	03.5					
5	40	03.0	301 24.9	+20 06.0	16 16.6	+5 30.0	109 50.3	-22 31.8	176 22.2	03.5	139	55.7	31.9	176 22.2	03.5	191 24.8	-21 03.5					
6	55	05.5	316 24.8	+20 06.0	31 18.4	+5 30.3	124 53.0	-22 31.9	206 27.5	-21 03.5	154	58.4	31.9	206 27.5	-21 03.5	221 30.1	03.6					
7	70	08.0	331 24.6	06.1	46 20.1	30.5	139 55.7	31.9	236 32.7	03.6	170	01.0	32.0	236 32.7	03.6	251 35.3	03.6					
8	85	10.4	346 24.5	06.1	61 21.8	30.8	154 58.4	31.9	266 38.0	03.7	185	03.7	32.0	266 38.0	03.7	281 40.6	-21 03.7					
9	100	12.9	1 24.3	06.1	76 23.5	31.0	170 01.0	32.0	296 43.2	-21 03.7	199	04.4	32.1	296 43.2	-21 03.7	311 45.8	03.8					
10	115	15.4	16 24.2	06.2	91 25.2	31.3	185 03.7	32.0	326 48.5	03.8	200	06.4	-22 32.0	326 48.5	03.8	341 51.1	03.8					
11	130	17.8	31 24.0	+20 06.2	106 27.0	+5 31.5	200 06.4	-22 32.0	356 53.7	03.9	215	09.1	-22 32.1	356 53.7	03.9	386 58.0	03.9					
12	145	20.3	46 23.9	+20 06.2	121 28.7	+5 31.8	215 09.1	-22 32.1	386 58.0	03.9	230	11.8	32.1	386 58.0	03.9	416 62.3	03.9					
13	160	22.8	61 23.7	06.2	136 30.4	32.0	230 11.8	32.1	446 66.6	03.9	245	14.5	32.1	446 66.6	03.9	476 70.9	03.9					
14	175	25.2	76 23.6	06.2	151 32.2	32.3	245 14.5	32.1	506 75.0	03.9	260	17.2	32.2	506 75.0	03.9	536 79.1	03.9					
15	190	27.7	91 23.4	06.3	166 33.9	32.5	260 17.2	32.2	566 83.2	03.9	275	19.8	32.2	566 83.2	03.9	596 87.3	03.9					
16	205	30.1	106 23.3	06.3	181 35.6	32.7	275 19.8	32.2	626 91.4	03.9	290	22.5	-22 32.2	626 91.4	03.9	656 95.5	03.9					
17	220	32.6	121 23.1	+20 06.3	196 37.3	+5 33.0	290 22.5	-22 32.2	686 99.6	03.9	305	25.2	-22 32.3	686 99.6	03.9	716 103.7	03.9					
18	235	35.1	136 23.0	+20 06.3	211 39.1	+5 33.2	305 25.2	-22 32.3	746 107.8	03.9	320	27.9	32.3	746 107.8	03.9	786 111.9	03.9					
19	250	37.5	151 22.8	06.4	226 40.8	33.5	320 27.9	32.3	806 111.9	03.9	335	30.6	32.3	806 111.9	03.9	846 116.0	03.9					
20	265	40.0	166 22.7	06.4	241 42.5	33.7	335 30.6	32.3	866 116.0	03.9	350	33.3	32.3	866 116.0	03.9	896 120.1	03.9					
21	280	42.5	181 22.5	06.4	256 44.3	34.0	350 33.3	32.3	926 120.1	03.9	5	35.9	32.4	926 120.1	03.9	956 124.2	03.9					
22	295	44.9	196 22.4	06.4	271 46.0	34.2	5 35.9	32.4	986 124.2	03.9	20	38.6	32.4	986 124.2	03.9	1016 128.3	03.9					
23	310	47.4	211 22.2	06.4	286 47.8	34.5	20 38.6	32.4	1046 128.3	03.9	35	41.3	-22 32.4	1046 128.3	03.9	1076 132.4	03.9					
24	325	49.9	226 22.0	+20 06.4	301 49.5	+5 34.7	35 41.3	-22 32.4	1096 132.4	03.9				1096 132.4	03.9	1116 136.5	03.9					
Dif.	—		-1				0				+27				0				+26			

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'8				SD: 15'9		PHE { 4 ^h : 58'3		Edad: 27 ^d 3										12 ^h : 58'6		20 ^h : 58'9	
	PMG: 12 ^h 04 ^m 0																					
	PMG: 10 ^h 39 ^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 m	h m m	h m m					
0	178	58.9	+13	20.2	206	30.7	64	+23	14.0	41	60 N	19 46	20 36	21 48	1 07	88	19 49	21				
1	193	59.0		19.4	220	56.1	63		09.9	43	58	38	24	27	26	84	33	25				
2	208	59.1		18.6	235	21.4	64		05.6	44	56	31	14	21 10	42	81	20	28				
3	223	59.3		17.8	249	46.8	63	+23	01.2	46	54	25	20 04	20 56	1 56	78	19 08	31				
4	238	59.4		17.0	264	12.1	64	+22	56.6	48	52	19	19 56	44	2 08	76	18 58	33				
5	253	59.6	+13	16.2	278	37.5	63	+22	51.8	48	50	19 14	19 49	20 34	2 18	75	18 48	36				
6	268	59.7	+13	15.4	293	02.8	64	+22	47.0	51	45	19 03	19 34	20 13	2 40	72	18 29	39				
7	283	59.8		14.6	307	28.2	64		41.9	52	40	18 53	22	19 57	2 58	69	18 13	42				
8	299	00.0		13.7	321	53.6	63		36.7	53	35	46	12	44	3 13	67	17 59	45				
9	314	00.1		12.9	336	18.9	64		31.4	55	30	39	19 04	33	26	65	47	47				
10	329	00.2		12.1	350	44.3	64		25.9	56	20	27	18 50	17	3 48	62	27	51				
11	344	00.4	+13	11.3	5	09.7	63	+22	20.3	58	10 N	18 17	18 38	19 04	4 07	60	17 09	54				
12	359	00.5	+13	10.5	19	35.0	64	+22	14.5	59	0	18 07	18 29	18 53	4 25	57	16 52	57				
13	14	00.6		09.7	34	00.4	64		08.6	61	10 S	17 58	20	44	4 43	55	35	60				
14	29	00.8		08.9	48	25.8	64	+22	02.5	62	20	48	11	37	5 02	52	16 17	63				
15	44	00.9		08.1	62	51.2	65	+21	56.3	64	30	37	18 02	30	23	50	15 56	67				
16	59	01.0		07.3	77	16.7	64		49.9	65	35	31	17 57	26	36	48	44	69				
17	74	01.2	+13	06.5	91	42.1	65	+21	43.4	66	40	17 23	17 51	18 23	5 51	45	15 30	71				
18	89	01.3	+13	05.7	106	07.6	64	+21	36.8	68	45	17 15	17 45	18 20	6 08	43	15 13	75				
19	104	01.5		04.9	120	33.0	65		30.0	69	50	05	39	17	30	39	14 52	79				
20	119	01.6		04.1	134	58.5	65		23.1	71	52	17 00	36	15	40	38	42	81				
21	134	01.7		03.3	149	24.0	66		16.0	73	54	16 55	32	14	6 52	35	31	83				
22	149	01.9		02.5	163	49.6	65		08.7	73	56	50	29	12	7 05	33	18	86				
23	164	02.0		01.7	178	15.1	66	+21	01.4	75	58	43	25	11	20	30	14 03	89				
24	179	02.2	+13	00.8	192	40.7		+20	53.9		60 S	16 36	17 20	18 09	7 38	26	13 46	93				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 2 ^h 16 ^m 3		Mag: -4.4 PMG: 08 ^h 55 ^m				Mag: -1.4 PMG: 03 ^h 52 ^m				Mag: -2.6 PMG: 21 ^h 33 ^m				Mag: +0.2 PMG: 22 ^h 08 ^m							
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	325	49.9	226	22.0	+20	06.4	301	49.5	+5	34.7	35	41.3	-22	-32.4	26	59.0	-21	03.9				
1	340	52.3	241	21.9		06.5	316	51.2		35.0	50	44.0		-32.5	42	01.6		04.0				
2	355	54.8	256	21.7		06.5	331	53.0		35.2	65	46.7		-32.5	57	04.2		04.0				
3	10	57.3	271	21.6		06.5	346	54.7		35.5	80	49.4		-32.5	72	06.8		04.0				
4	25	59.7	286	21.4		06.5	1	56.5		35.7	95	52.0		-32.6	87	09.4		04.1				
5	41	02.2	301	21.2	+20	06.5	16	58.2	+5	35.9	110	54.7	-22	-32.6	102	12.1	-21	04.1				
6	56	04.6	316	21.1	+20	06.5	31	59.9	+5	36.2	125	57.4	-22	-32.6	117	14.7	-21	04.1				
7	71	07.1	331	20.9		06.5	47	01.7		36.4	141	00.1		-32.7	132	17.3		04.2				
8	86	09.6	346	20.7		06.6	62	03.4		36.7	156	02.8		-32.7	147	19.9		04.2				
9	101	12.0	1	20.6		06.6	77	05.2		36.9	171	05.4		-32.7	162	22.6		04.2				
10	116	14.5	16	20.4		06.6	92	06.9		37.1	186	08.1		-32.8	177	25.2		04.3				
11	131	17.0	31	20.2	+20	06.6	107	08.7	+5	37.4	201	10.8	-22	-32.8	192	27.8	-21	04.3				
12	146	19.4	46	20.1	+20	06.6	122	10.4	+5	37.6	216	13.5	-22	-32.8	207	30.4	-21	04.3				
13	161	21.9	61	19.9		06.6	137	12.2		37.9	231	16.2		-32.8	222	33.1		04.4				
14	176	24.4	76	19.7		06.6	152	13.9		38.1	246	18.8		-32.9	237	35.7		04.4				
15	191	26.8	91	19.6		06.6	167	15.7		38.3	261	21.5		-32.9	252	38.3		04.4				
16	206	29.3	106	19.4		06.6	182	17.5		38.6	276	24.2		-32.9	267	40.9		04.4				
17	221	31.8	121	19.2	+20	06.6	197	19.2	+5	38.8	291	26.9	-22	-33.0	282	43.5	-21	04.5				
18	236	34.2	136	19.1	+20	06.6	212	21.0	+5	39.1	306	29.5	-22	-33.0	297	46.2	-21	04.5				
19	251	36.7	151	18.9		06.6	227	22.7		39.3	321	32.2		-33.0	312	48.8		04.5				
20	266	39.1	166	18.7		06.6	242	24.5		39.5	336	34.9		-33.1	327	51.4		04.6				
21	281	41.6	181	18.5		06.6	257	26.2		39.8	351	37.6		-33.1	342	54.0		04.6				
22	296	44.1	196	18.4		06.6	272	28.0		40.0	6	40.3		-33.1	357	56.6		04.6				
23	311	46.5	211	18.2		06.6	287	29.8		40.3	21	42.9		-33.2	12	59.3		04.7				
24	326	49.0	226	18.0	+20	06.6	302	31.5	+5	40.5	36	45.6	-22	-33.2	28	01.9	-21	04.7				
Dif.	—		-2		0		+17		+2		+27		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: 16'1 Edad: 28 ^d 3 PMG: 11 ^h 36 ^m PHE { 4 ^h : 59'1 12 ^h : 59'3 20 ^h : 59'5 Rº: 56 ^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	02.2	+13	00.8	192	40.7	66	+20	53.9	77	60 N	2 21	3 33	4 22	2 35	96	20 10	14		
1	194	02.3	+13	00.0	207	06.3	66		46.2	78	58	42	45	30	2 50	92	19 58	18		
2	209	02.4	+12	59.2	221	31.9	66		38.4	79	56	2 59	3 55	38	3 03	89	48	21		
3	224	02.6		58.4	235	57.5	67		30.5	81	54	3 12	4 04	44	14	86	39	24		
4	239	02.7		57.6	250	23.2	67		22.4	82	52	24	12	50	24	83	31	26		
5	254	02.9	+12	56.8	264	48.9	67	+20	14.2	83	50	3 35	4 19	4 55	3 33	81	19 24	28		
6	269	03.0	+12	56.0	279	14.6	68	+20	05.9	85	45	3 55	4 34	5 06	3 52	76	19 08	33		
7	284	03.1		55.2	293	40.4	68	+19	57.4	86	40	4 11	46	15	4 07	73	18 55	37		
8	299	03.3		54.4	308	06.2	68		48.8	87	35	24	4 56	23	20	70	44	40		
9	314	03.4		53.5	322	32.0	69		40.1	89	30	35	5 04	29	31	68	34	43		
10	329	03.6		52.7	336	57.9	68		31.2	90	20	4 51	18	41	4 50	63	18	47		
11	344	03.7	+12	51.9	351	23.7	70	+19	22.2	91	10 N	5 04	5 29	5 51	5 07	59	18 03	52		
12	359	03.8	+12	51.1	5	49.7	69	+19	13.1	93	0	5 15	5 39	6 00	5 22	56	17 49	56		
13	14	04.0		50.3	20	15.6	70	+19	03.8	94	10 S	23	48	10	38	53	35	59		
14	29	04.1		49.5	34	41.6	70	+18	54.4	95	20	31	5 57	19	5 54	49	20	63		
15	44	04.3		48.7	49	07.6	71		44.9	96	30	38	6 06	30	6 13	45	17 03	68		
16	59	04.4		47.9	63	33.7	71		35.3	98	35	41	11	37	24	43	16 53	71		
17	74	04.6	+12	47.0	77	59.8	71	+18	25.5	99	40	5 44	6 16	6 44	6 36	40	16 41	74		
18	89	04.7	+12	46.2	92	25.9	72	+18	15.6	100	45	5 47	6 22	6 52	6 51	36	16 28	77		
19	104	04.8		45.4	106	52.1	72	+18	05.6	102	50	50	28	7 02	7 09	32	11	82		
20	119	05.0		44.6	121	18.3	73	+17	55.4	102	52	52	31	06	18	29	16 03	85		
21	134	05.1		43.8	135	44.6	73		45.2	104	54	53	34	11	27	27	15 54	88		
22	149	05.3		43.0	150	10.9	73		34.8	105	56	54	38	17	38	24	44	91		
23	164	05.4		42.1	164	37.2	74		24.3	106	58	56	42	23	7 50	20	15 32	95		
24	179	05.6	+12	41.3	179	03.6		+17	13.7		60 S	5 57	6 46	7 30	8 04	16	15 19	99		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 2 ^h 12 ^m 4		Mag: -4.4 PMG: 08 ^h 55 ^m			Mag: -1.5 PMG: 03 ^h 49 ^m			Mag: -2.6 PMG: 21 ^h 29 ^m			Mag: +0.2 PMG: 22 ^h 04 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	326	49.0	226	18.0	+20	06.6	302	31.5	+5	40.5	36	45.6	-22	33.2	28	01.9	-21	04.7		
1	341	51.5	241	17.8		06.6	317	33.3		40.7	51	48.3		33.2	43	04.5		04.7		
2	356	53.9	256	17.7		06.6	332	35.1		41.0	66	51.0		33.2	58	07.1		04.8		
3	11	56.4	271	17.5		06.6	347	36.8		41.2	81	53.6		33.3	73	09.7		04.8		
4	26	58.9	286	17.3		06.6	2	38.6		41.4	96	56.3		33.3	88	12.4		04.8		
5	42	01.3	301	17.1	+20	06.6	17	40.4	+5	41.7	111	59.0	-22	33.3	103	15.0	-21	04.9		
6	57	03.8	316	16.9	+20	06.6	32	42.1	+5	41.9	127	01.7	-22	33.4	118	17.6	-21	04.9		
7	72	06.2	331	16.8		06.6	47	43.9		42.1	142	04.3		33.4	133	20.2		04.9		
8	87	08.7	346	16.6		06.6	62	45.7		42.4	157	07.0		33.4	148	22.8		05.0		
9	102	11.2	1	16.4		06.6	77	47.5		42.6	172	09.7		33.5	163	25.5		05.0		
10	117	13.6	16	16.2		06.6	92	49.2		42.8	187	12.3		33.5	178	28.1		05.0		
11	132	16.1	31	16.0	+20	06.6	107	51.0	+5	43.1	202	15.0	-22	33.5	193	30.7	-21	05.0		
12	147	18.6	46	15.8	+20	06.6	122	52.8	+5	43.3	217	17.7	-22	33.5	208	33.3	-21	05.1		
13	162	21.0	61	15.7		06.6	137	54.6		43.5	232	20.4		33.6	223	35.9		05.1		
14	177	23.5	76	15.5		06.5	152	56.3		43.8	247	23.0		33.6	238	38.6		05.1		
15	192	26.0	91	15.3		06.5	167	58.1		44.0	262	25.7		33.6	253	41.2		05.2		
16	207	28.4	106	15.1		06.5	182	59.9		44.2	277	28.4		33.7	268	43.8		05.2		
17	222	30.9	121	14.9	+20	06.5	198	01.7	+5	44.4	292	31.0	-22	33.7	283	46.4	-21	05.2		
18	237	33.4	136	14.7	+20	06.5	213	03.5	+5	44.7	307	33.7	-22	33.7	298	49.0	-21	05.3		
19	252	35.8	151	14.5		06.5	228	05.2		44.9	322	36.4		33.8	313	51.7		05.3		
20	267	38.3	166	14.3		06.5	243	07.0		45.1	337	39.1		33.8	328	54.3		05.3		
21	282	40.7	181	14.1		06.4	258	08.8		45.4	352	41.7		33.8	343	56.9		05.4		
22	297	43.2	196	14.0		06.4	273	10.6		45.6	7	44.4		33.8	358	59.5		05.4		
23	312	45.7	211	13.8		06.4	288	12.4		45.8	22	47.1		33.9	14	02.1		05.4		
24	327	48.1	226	13.6	+20	06.4	303	14.2	+5	46.0	37	49.7	-22	33.9	29	04.8	-21	05.5		
Dif.	—		-2			0	+18		+2		+27		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 03. ^m 5			SD: 16'2 Edad: 29 ^d 3 PHE { 4 ^h : 59'7 12 ^h : 59'9 20 ^h : 60'0 PMG: 12 ^h 32 ^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	179	05.6	+12 41.3	179	03.6	74	+17 13.7	107	60 N	19 41	20 30	21 38	4 11	100	20 24	10	
1	194	05.7		193	30.0	74	+17 03.0	109	58	33	18	19	22	95	16	14	
2	209	05.8		207	56.4	76	+16 52.1	109	56	26	08	21 03	32	91	09	17	
3	224	06.0		222	23.0	75		41.2 111	54	20	20 00	20 50	40	88	20 03	20	
4	239	06.1		236	49.5	76		30.1 112	52	15	19 52	39	47	86	19 57	22	
5	254	06.3	+12 37.2	251	16.1	76	+16 18.9	113	50	19 10	19 45	20 29	4 54	83	19 52	25	
6	269	06.4	+12 36.4	265	42.7	77	+16 07.6	114	45	18 59	19 31	20 09	5 08	79	19 41	30	
7	284	06.6		280	09.4	77	+15 56.2	115	40	51	19	19 54	20	74	32	33	
8	299	06.7		294	36.1	78		44.7 116	35	43	10	41	30	71	24	37	
9	314	06.9		309	02.9	78		33.1 117	30	37	19 02	31	39	67	17	40	
10	329	07.0		323	29.7	78		21.4 118	20	26	18 48	15	5 53	63	19 05	45	
11	344	07.2	+12 32.3	337	56.5	79	+15 09.6	119	10 N	18 16	18 37	19 03	6 06	59	18 55	49	
12	359	07.3	+12 31.5	352	23.4	80	+14 57.7	121	0	18 07	18 28	18 53	6 18	55	18 45	53	
13	14	07.5		6	50.4	79		45.6 121	10 S	17 58	19	44	31	50	34	58	
14	29	07.6		21	17.3	81		33.5 122	20	49	11	37	43	46	23	63	
15	44	07.7		35	44.4	80		21.3 123	30	38	18 03	31	6 58	41	11	68	
16	59	07.9		50	11.4	82	+14 09.0	124	35	32	17 58	28	7 07	38	18 04	70	
17	74	08.0	+12 27.4	64	38.6	81	+13 56.6	125	40	17 25	17 53	18 25	7 16	35	17 55	75	
18	89	08.2	+12 26.5	79	05.7	82	+13 44.1	126	45	17 17	17 48	18 22	7 27	31	17 45	79	
19	104	08.3		93	32.9	83		31.5 126	50	08	41	19	41	26	33	84	
20	119	08.5		108	00.2	83		18.9 128	52	17 04	39	18	47	24	28	86	
21	134	08.6		122	27.5	83	+13 06.1	128	54	16 59	36	17	7 54	21	22	88	
22	149	08.8		136	54.8	84	+12 53.3	130	56	53	32	16	8 02	18	15	92	
23	164	08.9		151	22.2	84		40.3 130	58	47	29	15	10	16	17 07	95	
24	179	09.1	+12 21.6	165	49.6		+12 27.3		60 S	16 41	17 25	18 14	8 20	12	16 58	99	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 2 ^h 08. ^m 4		Mag: -4.4 PMG: 08 ^h 55 ^m			Mag: -1.5 PMG: 03 ^h 47 ^m			Mag: -2.6 PMG: 21 ^h 25 ^m			Mag: +0.2 PMG: 22 ^h 00 ^m					
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	327	48.1	226	13.6	+20 06.4	303	14.2	+5 46.0	37	49.7	-22 -33.9	29	04.8	-21 05.5			
1	342	50.6	241	13.4	06.4	318	16.0	46.3	52	52.4	-33.9	44	07.4	05.5			
2	357	53.1	256	13.2	06.4	333	17.8	46.5	67	55.1	-34.0	59	10.0	05.5			
3	12	55.5	271	13.0	06.3	348	19.6	46.7	82	57.7	-34.0	74	12.6	05.5			
4	27	58.0	286	12.8	06.3	3	21.3	46.9	98	00.4	-34.0	89	15.2	05.6			
5	43	00.5	301	12.6	+20 06.3	18	23.1	+5 47.2	113	03.1	-22 -34.0	104	17.8	-21 05.6			
6	58	02.9	316	12.4	+20 06.3	33	24.9	+5 47.4	128	05.7	-22 -34.1	119	20.5	-21 05.6			
7	73	05.4	331	12.2	06.2	48	26.7	47.6	143	08.4	-34.1	134	23.1	05.7			
8	88	07.9	346	12.0	06.2	63	28.5	47.8	158	11.1	-34.1	149	25.7	05.7			
9	103	10.3	1	11.8	06.2	78	30.3	48.1	173	13.7	-34.2	164	28.3	05.7			
10	118	12.8	16	11.6	06.2	93	32.1	48.3	188	16.4	-34.2	179	30.9	05.8			
11	133	15.2	31	11.4	+20 06.1	108	33.9	+5 48.5	203	19.1	-22 -34.2	194	33.5	-21 05.8			
12	148	17.7	46	11.2	+20 06.1	123	35.7	+5 48.7	218	21.7	-22 -34.2	209	36.2	-21 05.8			
13	163	20.2	61	11.0	06.1	138	37.5	49.0	233	24.4	-34.3	224	38.8	05.9			
14	178	22.6	76	10.8	06.1	153	39.3	49.2	248	27.1	-34.3	239	41.4	05.9			
15	193	25.1	91	10.6	06.0	168	41.1	49.4	263	29.7	-34.3	254	44.0	05.9			
16	208	27.6	106	10.4	06.0	183	43.0	49.6	278	32.4	-34.4	269	46.6	05.9			
17	223	30.0	121	10.2	+20 06.0	198	44.8	+5 49.8	293	35.0	-22 -34.4	284	49.2	-21 06.0			
18	238	32.5	136	10.0	+20 05.9	213	46.6	+5 50.1	308	37.7	-22 -34.4	299	51.9	-21 06.0			
19	253	35.0	151	09.8	05.9	228	48.4	50.3	323	40.4	-34.4	314	54.5	06.0			
20	268	37.4	166	09.6	05.9	243	50.2	50.5	338	43.0	-34.5	329	57.1	06.1			
21	283	39.9	181	09.4	05.8	258	52.0	50.7	353	45.7	-34.5	344	59.7	06.1			
22	298	42.3	196	09.2	05.8	273	53.8	50.9	8	48.4	-34.5	0	02.3	06.1			
23	313	44.8	211	08.9	05.8	288	55.6	51.2	23	51.0	-34.6	15	04.9	06.2			
24	328	47.3	226	08.7	+20 05.7	303	57.4	+5 51.4	38	53.7	-22 -34.6	30	07.6	-21 06.2			
Dif.	—		-2 0			+18 +2			+27 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 3			SD: 16'4 Edad: 0 ^d 9			PHE { 4 ^h : 60'1 12 ^h : 60'2 20 ^h : 60'3										
	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	09.1	+12	21.6		165	49.6	85	+12	27.3	131	60 N	2 29	3 38	4 27	5 51	99
1	194	09.2		20.8		180	17.1	85		14.2	131	58	2 49	50	35	5 57	95
2	209	09.4		19.9		194	44.6	86	+12	01.1	133	56	3 04	3 59	41	6 03	92
3	224	09.5		19.1		209	12.2	85	+11	47.8	133	54	17	4 08	47	08	89
4	239	09.7		18.3		223	39.7	87		34.5	134	52	29	16	53	13	86
5	254	09.8	+12	17.5		238	07.4	87	+11	21.1	135	50	3 38	4 22	4 58	6 17	84
6	269	10.0	+12	16.6		252	35.1	87	+11	07.6	135	45	3 58	4 37	5 08	6 27	78
7	284	10.1		15.8		267	02.8	88	+10	54.1	136	40	4 14	48	17	34	74
8	299	10.3		15.0		281	30.6	88		40.5	137	35	26	4 58	24	41	70
9	314	10.4		14.1		295	58.4	88		26.8	138	30	36	5 06	30	46	68
10	329	10.6		13.3		310	26.2	89	+10	13.0	138	20	4 52	19	42	6 56	62
11	344	10.7	+12	12.5		324	54.1	89	+9	59.2	139	10 N	5 04	5 30	5 51	7 05	57
12	359	10.9	+12	11.7		339	22.0	90	+9	45.3	139	0	5 14	5 39	6 00	7 13	53
13	14	11.0		10.8		353	50.0	90		31.4	140	10 S	22	47	09	21	48
14	29	11.2		10.0		8	18.0	90		17.4	141	20	29	5 55	18	29	44
15	44	11.3		09.2		22	46.0	91	+9	03.3	141	30	36	6 04	28	39	38
16	59	11.5		08.3		37	14.1	91	+8	49.2	142	35	39	08	34	45	35
17	74	11.6	+12	07.5		51	42.2	92	+8	35.0	142	40	5 42	6 13	6 41	7 51	32
18	89	11.8	+12	06.7		66	10.4	92	+8	20.8	143	45	5 44	6 19	6 49	7 58	28
19	104	12.0		05.8		80	38.6	92	+8	06.5	143	50	47	25	6 58	8 07	23
20	119	12.1		05.0		95	06.8	92	+7	52.2	144	52	48	27	7 02	11	21
21	134	12.3		04.2		109	35.0	93		37.8	144	54	49	30	07	15	19
22	149	12.4		03.3		124	03.3	93		23.4	145	56	50	33	12	20	16
23	164	12.6		02.5		138	31.6	94	+7	08.9	145	58	51	37	18	8 26	12
24	179	12.7	+12	01.7		153	00.0		+6	54.4		60 S	5 52	6 41	7 24	8 32	9

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 04 ^m 5		Mag: -4.4 PMG: 08 ^h 56 ^m			Mag: -1.5 PMG: 03 ^h 44 ^m			Mag: -2.6 PMG: 21 ^h 21 ^m			Mag: +0.2 PMG: 21 ^h 56 ^m		
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	328	47.3	226	08.7	+20	303	57.4	+5	38	53.7	-22	30	07.6	-21
1	343	49.7	241	08.5		318	59.3		53	56.3		45	10.2	
2	358	52.2	256	08.3		334	01.1		68	59.0		60	12.8	
3	13	54.7	271	08.1		349	02.9		84	01.7		75	15.4	
4	28	57.1	286	07.9		4	04.7		99	04.3		90	18.0	
5	43	59.6	301	07.7	+20	19	06.5	+5	114	07.0	-22	105	20.6	-21
6	59	02.1	316	07.5	+20	34	08.4	+5	129	09.6	-22	120	23.2	-21
7	74	04.5	331	07.3		49	10.2		144	12.3		135	25.9	
8	89	07.0	346	07.0		64	12.0		159	15.0		150	28.5	
9	104	09.5	1	06.8		79	13.8		174	17.6		165	31.1	
10	119	11.9	16	06.6		94	15.7		189	20.3		180	33.7	
11	134	14.4	31	06.4	+20	109	17.5	+5	204	22.9	-22	195	36.3	-21
12	149	16.8	46	06.2	+20	124	19.3	+5	219	25.6	-22	210	38.9	-21
13	164	19.3	61	06.0		139	21.1		234	28.2		225	41.5	
14	179	21.8	76	05.7		154	23.0		249	30.9		240	44.2	
15	194	24.2	91	05.5		169	24.8		264	33.6		255	46.8	
16	209	26.7	106	05.3		184	26.6		279	36.2		270	49.4	
17	224	29.2	121	05.1	+20	199	28.5	+5	294	38.9	-22	285	52.0	-21
18	239	31.6	136	04.9	+20	214	30.3	+5	309	41.5	-22	300	54.6	-21
19	254	34.1	151	04.7		229	32.1		324	44.2		315	57.2	
20	269	36.6	166	04.4		244	34.0		339	46.8		330	59.8	
21	284	39.0	181	04.2		259	35.8		354	49.5		346	02.5	
22	299	41.5	196	04.0		274	37.7		9	52.1		1	05.1	
23	314	43.9	211	03.8		289	39.5		24	54.8		16	07.7	
24	329	46.4	226	03.5	+20	304	41.3	+5	39	57.5	-22	31	10.3	-21
Dif.	—		-2		0	+18		+2	+27		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 03 ^m 0			SD: 16°4 Edad: 1 ^d 9			PHE { 4 ^h : 60°3 12 ^h : 60°3 20 ^h : 60°3											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.	Rº: 51 ^m										
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	179	12.7	+12	01.7	153	00.0	94	+6	54.4	145	60 N	19 35	20 23	21 30	7 30	98	20 42	8
1	194	12.9		00.8	167	28.4	94		39.9	146	58	28	12	21 11	32	95	41	12
2	209	13.0	+12	00.0	181	56.8	95		25.3	147	56	21	20 03	20 57	35	91	41	14
3	224	13.2	+11	59.2	196	25.3	94	+6	10.6	146	54	16	19 55	44	37	88	40	17
4	239	13.3		58.3	210	53.7	95	+5	56.0	147	52	11	47	34	39	86	39	19
5	254	13.5	+11	57.5	225	22.2	96	+5	41.3	148	50	19 06	19 41	20 24	7 41	83	20 39	21
6	269	13.7	+11	56.7	239	50.8	95	+5	26.5	148	45	18 56	19 27	20 05	7 45	78	20 37	26
7	284	13.8		55.8	254	19.3	96	+5	11.7	148	40	48	16	19 50	48	74	36	30
8	299	14.0		55.0	268	47.9	97	+4	56.9	148	35	41	19 07	38	51	70	35	34
9	314	14.1		54.1	283	16.6	96		42.1	149	30	35	18 59	29	54	67	34	37
10	329	14.3		53.3	297	45.2	97		27.2	148	20	24	47	13	7 58	61	33	42
11	344	14.4	+11	52.5	312	13.9	97	+4	12.4	149	10 N	18 15	18 36	19 01	8 02	56	20 32	46
12	359	14.6	+11	51.6	326	42.6	97	+3	57.5	150	0	18 06	18 27	18 52	8 06	51	20 30	52
13	14	14.7		50.8	341	11.3	97		42.5	149	10 S	17 58	19	44	09	47	29	56
14	29	14.9		50.0	355	40.0	98		27.6	150	20	49	12	38	13	42	27	61
15	44	15.1		49.1	10	08.8	98	+3	12.6	150	30	39	18 04	32	17	37	26	66
16	59	15.2		48.3	24	37.6	98	+2	57.6	150	35	34	17 59	29	20	34	25	69
17	74	15.4	+11	47.4	39	06.4	98	+2	42.6	150	40	17 27	17 55	18 26	8 23	30	20 24	73
18	89	15.5	+11	46.6	53	35.2	98	+2	27.6	150	45	17 20	17 50	18 24	8 26	26	20 22	78
19	104	15.7		45.8	68	04.0	99	+2	12.6	151	50	11	44	22	30	21	21	82
20	119	15.8		44.9	82	32.9	98	+1	57.5	150	52	07	42	21	32	19	20	85
21	134	16.0		44.1	97	01.7	99		42.5	151	54	17 02	39	20	34	17	19	88
22	149	16.2		43.2	111	30.6	99		27.4	150	56	16 57	36	19	36	14	18	91
23	164	16.3		42.4	125	59.5	99	+1	12.4	151	58	52	33	18	38	12	17	94
24	179	16.5	+11	41.6	140	28.4		+0	57.3		60 S	16 45	17 29	18 18	8 41	8	20 16	97
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 2 ^h 00 ^m 6		Mag: -4.4 PMG: 08 ^h 56 ^m				Mag: -1.5 PMG: 03 ^h 41 ^m				Mag: -2.6 PMG: 21 ^h 16 ^m				Mag: +0.2 PMG: 21 ^h 52 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	329	46.4	226	03.5	+20	04.7	304	41.3	+5	56.5	39	57.5	-22	-35.3	31	10.3	-21	06.9
1	344	48.9	241	03.3		04.6	319	43.2		56.7	55	00.1		-35.3	46	12.9		06.9
2	359	51.3	256	03.1		04.5	334	45.0		56.9	70	02.8		-35.3	61	15.5		07.0
3	14	53.8	271	02.9		04.5	349	46.9		57.1	85	05.4		-35.3	76	18.1		07.0
4	29	56.3	286	02.6		04.4	4	48.7		57.3	100	08.1		-35.4	91	20.7		07.0
5	44	58.7	301	02.4	+20	04.4	19	50.6	+5	57.5	115	10.7	-22	-35.4	106	23.4	-21	07.1
6	60	01.2	316	02.2	+20	04.3	34	52.4	+5	57.7	130	13.4	-22	-35.4	121	26.0	-21	07.1
7	75	03.7	331	02.0		04.3	49	54.3		57.9	145	16.0		-35.4	136	28.6		07.1
8	90	06.1	346	01.7		04.2	64	56.1		58.1	160	18.7		-35.5	151	31.2		07.2
9	105	08.6	1	01.5		04.1	79	58.0		58.3	175	21.3		-35.5	166	33.8		07.2
10	120	11.1	16	01.3		04.1	94	59.8		58.5	190	24.0		-35.5	181	36.4		07.2
11	135	13.5	31	01.0	+20	04.0	110	01.7	+5	58.8	205	26.6	-22	-35.6	196	39.0	-21	07.2
12	150	16.0	46	00.8	+20	03.9	125	03.5	+5	59.0	220	29.3	-22	-35.6	211	41.6	-21	07.3
13	165	18.4	61	00.6		03.9	140	05.4		59.2	235	31.9		-35.6	226	44.2		07.3
14	180	20.9	76	00.3		03.8	155	07.2		59.4	250	34.6		-35.6	241	46.9		07.3
15	195	23.4	91	00.1		03.8	170	09.1		59.6	265	37.2		-35.7	256	49.5		07.4
16	210	25.8	105	59.9		03.7	185	11.0	+5	59.8	280	39.9		-35.7	271	52.1		07.4
17	225	28.3	120	59.6	+20	03.6	200	12.8	+6	00.0	295	42.5	-22	-35.7	286	54.7	-21	07.4
18	240	30.8	135	59.4	+20	03.6	215	14.7	+6	00.2	310	45.2	-22	-35.7	301	57.3	-21	07.5
19	255	33.2	150	59.2		03.5	230	16.5		00.4	325	47.8		-35.8	316	59.9		07.5
20	270	35.7	165	58.9		03.4	245	18.4		00.6	340	50.5		-35.8	332	02.5		07.5
21	285	38.2	180	58.7		03.3	260	20.3		00.8	355	53.1		-35.8	347	05.1		07.5
22	300	40.6	195	58.5		03.3	275	22.1		01.0	10	55.8		-35.8	2	07.7		07.6
23	315	43.1	210	58.2		03.2	290	24.0		01.2	25	58.4		-35.9	17	10.4		07.6
24	330	45.6	225	58.0	+20	03.1	305	25.9	+6	01.4	41	01.1	-22	-35.9	32	13.0	-21	07.6
Dif.	—		-2		-1		+18		+2		+26		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 8				SD: 16'4 Edad: 2 ^d 9 PHE { 4 ^h : 60'3 12 ^h : 60'2 20 ^h : 60'1 PMG: 15 ^h 09 ^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	
0	179	16.5	+11	41.6	140	28.4	99	+0	57.3	150	60 N	2 37	3 44	4 32	9 08	97	20 50	9
1	194	16.6		40.7	154	57.3	100		42.3	151	58	2 55	3 55	39	07	93	53	12
2	209	16.8		39.9	169	26.3	99		27.2	151	56	3 10	4 04	45	06	90	55	15
3	224	17.0		39.0	183	55.2	100	+0	12.1	150	54	22	12	51	05	88	57	1
4	239	17.1		38.2	198	24.2	100	-0	02.9	151	52	33	19	4 56	05	85	20 58	21
5	254	17.3	+11	37.3	212	53.2	99	-0	18.0	150	50	3 42	4 26	5 01	9 04	83	21 00	22
6	269	17.4	+11	36.5	227	22.1	100	-0	33.0	151	45	4 01	4 39	5 10	9 03	77	21 03	27
7	284	17.6		35.7	241	51.1	100	-0	48.1	150	40	16	50	19	02	73	06	31
8	299	17.8		34.8	256	20.1	100	-1	03.1	150	35	28	4 59	26	01	70	09	34
9	314	17.9		34.0	270	49.1	100		18.1	151	30	37	5 07	32	9 01	66	11	38
10	329	18.1		33.1	285	18.1	100		33.2	150	20	4 53	19	42	8 59	61	15	43
11	344	18.2	+11	32.3	299	47.1	100	-1	48.2	149	10 N	5 05	5 30	5 51	8 58	56	21 18	48
12	359	18.4	+11	31.4	314	16.1	100	-2	03.1	150	0	5 14	5 38	5 59	8 57	52	21 22	51
13	14	18.6		30.6	328	45.1	101		18.1	150	10 S	22	46	6 08	56	47	25	56
14	29	18.7		29.7	343	14.2	100		33.1	149	20	28	5 54	16	55	43	28	61
15	44	18.9		28.9	357	43.2	100	-2	48.0	149	30	34	6 02	26	54	37	32	66
16	59	19.1		28.0	12	12.2	100	-3	02.9	149	35	36	06	32	54	34	34	70
17	74	19.2	+11	27.2	26	41.2	100	-3	17.8	148	40	5 39	6 10	6 38	8 53	30	21 37	73
18	89	19.4	+11	26.3	41	10.2	100	-3	32.6	149	45	5 41	6 15	6 45	8 52	27	21 40	77
19	104	19.5		25.5	55	39.2	100	-3	47.5	148	50	43	21	54	51	22	43	83
20	119	19.7		24.7	70	08.2	100	-4	02.3	147	52	44	23	6 58	51	19	45	85
21	134	19.9		23.8	84	37.2	100		17.0	148	54	45	26	7 02	51	17	47	87
22	149	20.0		23.0	99	06.2	100		31.8	147	56	46	29	07	50	14	49	90
23	164	20.2		22.1	113	35.2	99	-4	46.5	147	58	46	32	13	8 50	11	21 51	93
24	179	20.4	+11	21.3	128	04.1		-5	01.2		60 S	5 47	6 36	7 19	8 49	8	21 53	98
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 56 ^m 6		Mag: -4.4 PMG: 08 ^h 56 ^m				Mag: -1.6 PMG: 03 ^h 38 ^m				Mag: -2.6 PMG: 21 ^h 12 ^m				Mag: +0.3 PMG: 21 ^h 47 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	330	45.6	225	58.0	+20	03.1	305	25.9	+6	01.4	41	01.1	-22	35.9	32	13.0	-21	07.6
1	345	48.0	240	57.7		03.1	320	27.7		01.6	56	03.7		35.9	47	15.6		07.7
2	0	50.5	255	57.5		03.0	335	29.6		01.8	71	06.3		35.9	62	18.2		07.7
3	15	52.9	270	57.3		02.9	350	31.5		02.0	86	09.0		36.0	77	20.8		07.7
4	30	55.4	285	57.0		02.8	5	33.4		02.2	101	11.6		36.0	92	23.4		07.7
5	45	57.9	300	56.8	+20	02.8	20	35.2	+6	02.4	116	14.3	-22	36.0	107	26.0	-21	07.8
6	61	00.3	315	56.5	+20	02.7	35	37.1	+6	02.6	131	16.9	-22	36.0	122	28.6	-21	07.8
7	76	02.8	330	56.3		02.6	50	39.0		02.8	146	19.6		36.1	137	31.2		07.8
8	91	05.3	345	56.1		02.5	65	40.9		03.0	161	22.2		36.1	152	33.8		07.9
9	106	07.7	0	55.8		02.4	80	42.7		03.2	176	24.9		36.1	167	36.4		07.9
10	121	10.2	15	55.6		02.4	95	44.6		03.3	191	27.5		36.2	182	39.1		07.9
11	136	12.7	30	55.3	+20	02.3	110	46.5	+6	03.5	206	30.1	-22	36.2	197	41.7	-21	07.9
12	151	15.1	45	55.1	+20	02.2	125	48.4	+6	03.7	221	32.8	-22	36.2	212	44.3	-21	08.0
13	166	17.6	60	54.8		02.1	140	50.3		03.9	236	35.4		36.2	227	46.9		08.0
14	181	20.0	75	54.6		02.0	155	52.2		04.1	251	38.1		36.3	242	49.5		08.0
15	196	22.5	90	54.3		02.0	170	54.0		04.3	266	40.7		36.3	257	52.1		08.1
16	211	25.0	105	54.1		01.9	185	55.9		04.5	281	43.4		36.3	272	54.7		08.1
17	226	27.4	120	53.8	+20	01.8	200	57.8	+6	04.7	296	46.0	-22	36.3	287	57.3	-21	08.1
18	241	29.9	135	53.6	+20	01.7	215	59.7	+6	04.9	311	48.6	-22	36.4	302	59.9	-21	08.2
19	256	32.4	150	53.4		01.6	231	01.6		05.1	326	51.3		36.4	318	02.5		08.2
20	271	34.8	165	53.1		01.5	246	03.5		05.3	341	53.9		36.4	333	05.1		08.2
21	286	37.3	180	52.9		01.4	261	05.4		05.5	356	56.6		36.4	348	07.7		08.2
22	301	39.8	195	52.6		01.3	276	07.3		05.7	11	59.2		36.5	3	10.4		08.3
23	316	42.2	210	52.4		01.2	291	09.2		05.9	27	01.8		36.5	18	13.0		08.3
24	331	44.7	225	52.1	+20	01.2	306	11.1	+6	06.0	42	04.5	-22	36.5	33	15.6	-21	08.3
Dif.	—		-2		-1		+19		+2		+26		0		+26			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8				SD: 16'4												PHE { 4 ^h : 60'0 12 ^h : 59'9 20 ^h : 59'8
	PMG: 12 ^h 02 ^m 5				Edad: 3 ^d 9												
	PMG: 16 ^h 01 ^m				Rº: 52 ^m												
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	
0	179	20.4	+11	21.3	128	04.1	100	-5	01.2	146	60 N	19	29	20	16	21	21
1	194	20.5		20.4	142	33.1	100		15.8	146	58	22	20	06	21	04	40
2	209	20.7		19.6	157	02.1	99		30.4	146	56	16	19	57	20	50	36
3	224	20.9		18.7	171	31.0	100		45.0	145	54	11	50	38	33	87	33
4	239	21.0		17.9	186	00.0	99	-5	59.5	145	52	06	43	28	30	84	30
5	254	21.2	+11	17.0	200	28.9	99	-6	14.0	144	50	19	02	19	36	20	19
6	269	21.3	+11	16.2	214	57.8	99	-6	28.4	144	45	18	53	19	24	20	01
7	284	21.5		15.3	229	26.7	99		42.8	144	40	45	13	19	47	15	73
8	299	21.7		14.5	243	55.6	98	-6	57.2	143	35	38	19	04	36	11	69
9	314	21.8		13.6	258	24.4	99	-7	11.5	142	30	32	18	57	26	07	66
10	329	22.0		12.7	272	53.3	98		25.7	142	20	22	45	11	10	00	61
11	344	22.2	+11	11.9	287	22.1	99	-7	39.9	142	10 N	18	14	18	35	19	00
12	359	22.3	+11	11.0	301	51.0	98	-7	54.1	141	0	18	06	18	27	18	51
13	14	22.5		10.2	316	19.8	97	-8	08.2	140	10 S	17	58	19	44	43	48
14	29	22.7		09.3	330	48.5	98		22.2	140	20	50	12	38	38	43	29
15	44	22.8		08.5	345	17.3	98		36.2	140	30	40	05	33	31	39	38
16	59	23.0		07.6	359	46.1	97	-8	50.2	138	35	35	18	01	30	28	35
17	74	23.2	+11	06.8	14	14.8	97	-9	04.0	138	40	17	29	17	57	18	28
18	89	23.3	+11	05.9	28	43.5	96	-9	17.8	138	45	17	22	17	52	18	26
19	104	23.5		05.1	43	12.1	97		31.6	137	50	14	47	24	13	23	23
20	119	23.7		04.2	57	40.8	96		45.3	136	52	10	45	24	10	22	10
21	134	23.8		03.4	72	09.4	96	-9	58.9	136	54	06	42	23	08	18	14
22	149	24.0		02.5	86	38.0	96	-10	12.5	135	56	17	01	39	04	17	19
23	164	24.2		01.6	101	06.6	96		26.0	134	58	16	56	36	22	9	01
24	179	24.3	+11	00.8	115	35.2		-10	39.4		60 S	16	50	17	33	18	22

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 1 ^h 52 ^m 7		Mag: -4.3 PMG: 08 ^h 57 ^m				Mag: -1.6 PMG: 03 ^h 35 ^m				Mag: -2.6 PMG: 21 ^h 08 ^m				Mag: +0.3 PMG: 21 ^h 43 ^m			
	hG ♂		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	331	44.7	225	52.1	+20	01.2	306	11.1	+6	06.0	42	04.5	-22	-36.5	33	15.6	-21	08.3
1	346	47.2	240	51.8		01.1	321	13.0		06.2	57	07.1		-36.5	48	18.2		08.4
2	1	49.6	255	51.6		01.0	336	14.9		06.4	72	09.7		-36.6	63	20.8		08.4
3	16	52.1	270	51.3		00.9	351	16.8		06.6	87	12.4		-36.6	78	23.4		08.4
4	31	54.5	285	51.1		00.8	6	18.7		06.8	102	15.0		-36.6	93	26.0		08.4
5	46	57.0	300	50.8	+20	00.7	21	20.6	+6	07.0	117	17.7	-22	-36.6	108	28.6	-21	08.5
6	61	59.5	315	50.6	+20	00.6	36	22.5	+6	07.2	132	20.3	-22	-36.7	123	31.2	-21	08.5
7	77	01.9	330	50.3		00.5	51	24.4		07.4	147	22.9		-36.7	138	33.8		08.5
8	92	04.4	345	50.1		00.4	66	26.3		07.5	162	25.6		-36.7	153	36.4		08.6
9	107	06.9	0	49.8		00.3	81	28.2		07.7	177	28.2		-36.7	168	39.0		08.6
10	122	09.3	15	49.5		00.2	96	30.1		07.9	192	30.8		-36.7	183	41.6		08.6
11	137	11.8	30	49.3	+20	00.1	111	32.0	+6	08.1	207	33.5	-22	-36.8	198	44.2	-21	08.6
12	152	14.3	45	49.0	+20	00.0	126	33.9	+6	08.3	222	36.1	-22	-36.8	213	46.8	-21	08.7
13	167	16.7	60	48.8	+19	59.9	141	35.8		08.5	237	38.7		-36.8	228	49.4		08.7
14	182	19.2	75	48.5		59.8	156	37.7		08.7	252	41.4		-36.8	243	52.1		08.7
15	197	21.6	90	48.3		59.7	171	39.6		08.8	267	44.0		-36.9	258	54.7		08.8
16	212	24.1	105	48.0		59.6	186	41.6		09.0	282	46.6		-36.9	273	57.3		08.8
17	227	26.6	120	47.7	+19	59.5	201	43.5	+6	09.2	297	49.3	-22	-36.9	288	59.9	-21	08.8
18	242	29.0	135	47.5	+19	59.4	216	45.4	+6	09.4	312	51.9	-22	-36.9	304	02.5	-21	08.8
19	257	31.5	150	47.2		59.3	231	47.3		09.6	327	54.5		-37.0	319	05.1		08.9
20	272	34.0	165	46.9		59.2	246	49.2		09.8	342	57.2		-37.0	334	07.7		08.9
21	287	36.4	180	46.7		59.1	261	51.1		09.9	357	59.8		-37.0	349	10.3		08.9
22	302	38.9	195	46.4		59.0	276	53.1		10.1	13	02.4		-37.0	4	12.9		08.9
23	317	41.4	210	46.2		58.8	291	55.0		10.3	28	05.1		-37.1	19	15.5		09.0
24	332	43.8	225	45.9	+19	58.7	306	56.9	+6	10.5	43	07.7	-22	-37.1	34	18.1	-21	09.0
Dif.	—		-3		-1		+19		+2		+26		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 2				SD: 16'3 Edad: 4 ^d 9 PHE { 4 ^h : 59'6 12 ^h : 59'5 20 ^h : 59'3 PMG: 16 ^h 53 ^m Rº: 54 ^m					Náut.	Civil		Hora	Rº	Hora	Rº		
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.												
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	24.3	+11	00.8	115	35.2	95	-10	39.4	133	60 N	2 45	3 49	4 37	12 22	96	21 10	15
1	194	24.5	+10	59.9	130	03.7	95	-10	52.7	133	58	3 01	3 59	43	14	92	19	19
2	209	24.7		59.1	144	32.2	95	-11	06.0	132	56	15	4 08	49	06	89	27	23
3	224	24.9		58.2	159	00.7	94		19.2	132	54	27	16	55	12 00	85	35	25
4	239	25.0		57.4	173	29.1	94		32.4	130	52	37	23	4 59	11 54	83	41	28
5	254	25.2	+10	56.5	187	57.5	94	-11	45.4	130	50	3 46	4 29	5 04	11 49	80	21 47	30
6	269	25.4	+10	55.6	202	25.9	94	-11	58.4	129	45	4 04	4 42	5 13	11 37	76	22 00	34
7	284	25.5		54.8	216	54.3	93	-12	11.3	128	40	18	4 52	20	28	72	11	37
8	299	25.7		53.9	231	22.6	93		24.1	128	35	30	5 01	27	20	69	20	41
9	314	25.9		53.1	245	50.9	92		36.9	127	30	39	08	33	13	66	28	43
10	329	26.0		52.2	260	19.1	93	-12	49.6	125	20	4 54	20	43	11 01	61	42	47
11	344	26.2	+10	51.3	274	47.4	92	-13	02.1	125	10 N	5 05	5 30	5 51	10 50	58	22 54	51
12	359	26.4	+10	50.5	289	15.6	91	-13	14.6	125	0	5 13	5 38	5 59	10 41	53	23 06	54
13	14	26.6		49.6	303	43.7	91		27.1	123	10 S	21	45	6 07	31	50	18	57
14	29	26.7		48.8	318	11.8	91		39.4	122	20	27	5 52	15	21	46	30	61
15	44	26.9		47.9	332	39.9	91	-13	51.6	122	30	32	6 00	24	10	41	44	66
16	59	27.1		47.0	347	08.0	90	-14	03.8	120	35	34	04	29	10 03	38	23 53	68
17	74	27.2	+10	46.2	1	36.0	90	-14	15.8	120	40	5 36	6 08	6 35	9 55	36	***	***
18	89	27.4	+10	45.3	16	04.0	90	-14	27.8	119	45	5 38	6 12	6 42	9 47	31	***	***
19	104	27.6		44.4	30	32.0	89		39.7	118	50	40	17	50	36	27	***	***
20	119	27.8		43.6	44	59.9	89	-14	51.5	116	52	40	19	54	32	24	***	***
21	134	27.9		42.7	59	27.8	88	-15	03.1	116	54	41	22	6 58	26	23	***	***
22	149	28.1		41.9	73	55.6	88		14.7	115	56	41	24	7 02	21	19	***	***
23	164	28.3		41.0	88	23.4	88		26.2	114	58	42	27	07	9 14	17	***	***
24	179	28.4	+10	40.1	102	51.2	-15	37.6			60 S	5 42	6 30	7 13	9 07	13	***	***

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 48 ^m 8		Mag: -4.3 PMG: 08 ^h 57 ^m				Mag: -1.6 PMG: 03 ^h 32 ^m				Mag: -2.6 PMG: 21 ^h 04 ^m				Mag: +0.3 PMG: 21 ^h 39 ^m			
	hG ♂		hG ♀	dec.			hG ♂	dec.			hG ♀	dec.			hG ♀	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	332	43.8	225	45.9	+19	58.7	306	56.9	+6	10.5	43	07.7	-22	37.1	34	18.1	-21	09.0
1	347	46.3	240	45.6		58.6	321	58.8		10.7	58	10.3		37.1	49	20.7		09.0
2	2	48.8	255	45.4		58.5	337	00.8		10.8	73	13.0		37.1	64	23.3		09.1
3	17	51.2	270	45.1		58.4	352	02.7		11.0	88	15.6		37.2	79	25.9		09.1
4	32	53.7	285	44.8		58.3	7	04.6		11.2	103	18.2		37.2	94	28.5		09.1
5	47	56.1	300	44.6	+19	58.2	22	06.6	+6	11.4	118	20.9	-22	37.2	109	31.1	-21	09.1
6	62	58.6	315	44.3	+19	58.1	37	08.5	+6	11.6	133	23.5	-22	37.2	124	33.7	-21	09.2
7	78	01.1	330	44.0		57.9	52	10.4		11.7	148	26.1		37.3	139	36.3		09.2
8	93	03.5	345	43.8		57.8	67	12.3		11.9	163	28.7		37.3	154	38.9		09.2
9	108	06.0	0	43.5		57.7	82	14.3		12.1	178	31.4		37.3	169	41.5		09.3
10	123	08.5	15	43.2		57.6	97	16.2		12.3	193	34.0		37.3	184	44.1		09.3
11	138	10.9	30	42.9	+19	57.5	112	18.2	+6	12.4	208	36.6	-22	37.3	199	46.7	-21	09.3
12	153	13.4	45	42.7	+19	57.3	127	20.1	+6	12.6	223	39.2	-22	37.4	214	49.3	-21	09.3
13	168	15.9	60	42.4		57.2	142	22.0		12.8	238	41.9		37.4	229	51.9		09.4
14	183	18.3	75	42.1		57.1	157	24.0		13.0	253	44.5		37.4	244	54.5		09.4
15	198	20.8	90	41.9		57.0	172	25.9		13.2	268	47.1		37.4	259	57.1		09.4
16	213	23.3	105	41.6		56.9	187	27.9		13.3	283	49.8		37.5	274	59.7		09.5
17	228	25.7	120	41.3	+19	56.7	202	29.8	+6	13.5	298	52.4	-22	37.5	290	02.3	-21	09.5
18	243	28.2	135	41.0	+19	56.6	217	31.7	+6	13.7	313	55.0	-22	37.5	305	05.0	-21	09.5
19	258	30.6	150	40.8		56.5	232	33.7		13.8	328	57.6		37.5	320	07.6		09.5
20	273	33.1	165	40.5		56.4	247	35.6		14.0	344	00.3		37.6	335	10.2		09.6
21	288	35.6	180	40.2		56.2	262	37.6		14.2	359	02.9		37.6	350	12.8		09.6
22	303	38.0	195	39.9		56.1	277	39.5		14.4	14	05.5		37.6	5	15.4		09.6
23	318	40.5	210	39.7		56.0	292	41.5		14.5	29	08.1		37.6	20	18.0		09.6
24	333	43.0	225	39.4	+19	55.8	307	43.4	+6	14.7	44	10.7	-22	37.6	35	20.6	-21	09.7
Dif.	—		-3		-1		+19		+2		+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 02 ^m 0				SD: 16'1 Edad: 5 ^d 9 PHE { 4 ^h : 59'1 12 ^h : 58'9 20 ^h : 58'7 PMG: 17 ^h 47 ^m Rº: 56 ^m																	
	hG ☉		Dec		hG ☾		Dif.		Dec				Dif.									
	h	°	'	°	'	°	'	°	'	°			'	h	m	h	m	h	m	m	h	m
0	179	28.4	+10	40.1	102	51.2	87	-15	37.6	113	60 N	19 23	20 10	21 13	13 58	93		21 25	22			
1	194	28.6		39.3	117	18.9	87	-15	48.9	112	58	17	20 00	20 57	46	87		38	27			
2	209	28.8		38.4	131	46.6	87	-16	00.1	111	56	11	19 52	44	35	84		21 50	29			
3	224	29.0		37.5	146	14.3	86		11.2	110	54	06	45	33	25	82		22 00	32			
4	239	29.1		36.7	160	41.9	86		22.2	109	52	19 02	38	23	17	79		09	34			
5	254	29.3	+10	35.8	175	09.5	85	-16	33.1	108	50	18 58	19 32	20 15	13 09	77		22 17	36			
6	269	29.5	+10	34.9	189	37.0	85	-16	43.9	106	45	18 49	19 20	19 57	12 53	73		22 34	40			
7	284	29.7		34.1	204	04.5	85	-16	54.5	106	40	42	10	44	40	69		22 48	44			
8	299	29.8		33.2	218	32.0	84	-17	05.1	105	35	36	19 02	33	29	67		23 01	45			
9	314	30.0		32.3	232	59.4	84		15.6	103	30	30	18 55	24	19	65		11	47			
10	329	30.2		31.5	247	26.8	84		25.9	103	20	21	43	19 10	12 02	61		29	51			
11	344	30.4	+10	30.6	261	54.2	83	-17	36.2	101	10 N	18 13	18 34	18 59	11 48	58		23 45	54			
12	359	30.5	+10	29.7	276	21.5	83	-17	46.3	100	0	18 05	18 26	18 51	11 34	55		***	***	***		
13	14	30.7		28.9	290	48.8	82	-17	56.3	99	10 S	17 58	19	44	21	52		***	***	***		
14	29	30.9		28.0	305	16.0	83	-18	06.2	98	20	50	12	38	11 07	49		***	***	***		
15	44	31.1		27.1	319	43.3	81		16.0	96	30	41	06	34	10 51	45		***	***	***		
16	59	31.2		26.3	334	10.4	82		25.6	96	35	36	18 02	32	41	43		***	***	***		
17	74	31.4	+10	25.4	348	37.6	80	-18	35.2	94	40	17 31	17 58	18 30	10 31	40		0 02	71			
18	89	31.6	+10	24.5	3	04.6	81	-18	44.6	94	45	17 24	17 54	18 28	10 18	37		0 13	75			
19	104	31.8		23.7	17	31.7	80	-18	54.0	92	50	17	50	27	10 03	33		27	79			
20	119	31.9		22.8	31	58.7	80	-19	03.2	90	52	13	48	27	9 56	31		33	82			
21	134	32.1		21.9	46	25.7	80		12.2	90	54	09	45	26	49	28		40	84			
22	149	32.3		21.1	60	52.7	79		21.2	88	56	05	43	26	40	26		48	87			
23	164	32.5		20.2	75	19.6	78		30.0	87	58	17 00	40	26	31	22		0 57	90			
24	179	32.7	+10	19.3	89	46.4		-19	38.7		60 S	16 55	17 38	18 26	9 20	18		1 07	95			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 1 ^h 44 ^m 8		Mag: -4.3 PMG: 08 ^h 58 ^m				Mag: -1.6 PMG: 03 ^h 29 ^m				Mag: -2.6 PMG: 21 ^h 00 ^m				Mag: +0.3 PMG: 21 ^h 35 ^m							
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	333	43.0	225	39.4	+19	55.8	307	43.4	+6	14.7	44	10.7	-22	-37.6	35	20.6	-21	09.7				
1	348	45.4	240	39.1		55.7	322	45.4		14.9	59	13.4		-37.7	50	23.2		09.7				
2	3	47.9	255	38.8		55.6	337	47.4		15.0	74	16.0		-37.7	65	25.8		09.7				
3	18	50.4	270	38.5		55.5	352	49.3		15.2	89	18.6		-37.7	80	28.4		09.8				
4	33	52.8	285	38.3		55.3	7	51.3		15.4	104	21.2		-37.7	95	31.0		09.8				
5	48	55.3	300	38.0	+19	55.2	22	53.2	+6	15.6	119	23.9	-22	-37.8	110	33.6	-21	09.8				
6	63	57.7	315	37.7	+19	55.1	37	55.2	+6	15.7	134	26.5	-22	-37.8	125	36.2	-21	09.8				
7	79	00.2	330	37.4		54.9	52	57.1		15.9	149	29.1		-37.8	140	38.8		09.9				
8	94	02.7	345	37.1		54.8	67	59.1		16.1	164	31.7		-37.8	155	41.4		09.9				
9	109	05.1	0	36.9		54.6	83	01.1		16.2	179	34.3		-37.8	170	44.0		09.9				
10	124	07.6	15	36.6		54.5	98	03.0		16.4	194	37.0		-37.9	185	46.6		09.9				
11	139	10.1	30	36.3	+19	54.4	113	05.0	+6	16.6	209	39.6	-22	-37.9	200	49.2	-21	10.0				
12	154	12.5	45	36.0	+19	54.2	128	07.0	+6	16.7	224	42.2	-22	-37.9	215	51.8	-21	10.0				
13	169	15.0	60	35.7		54.1	143	08.9		16.9	239	44.8		-37.9	230	54.4		10.0				
14	184	17.5	75	35.4		53.9	158	10.9		17.1	254	47.4		-38.0	245	57.0		10.1				
15	199	19.9	90	35.2		53.8	173	12.9		17.2	269	50.1		-38.0	260	59.6		10.1				
16	214	22.4	105	34.9		53.7	188	14.8		17.4	284	52.7		-38.0	276	02.2		10.1				
17	229	24.9	120	34.6	+19	53.5	203	16.8	+6	17.6	299	55.3	-22	-38.0	291	04.8	-21	10.1				
18	244	27.3	135	34.3	+19	53.4	218	18.8	+6	17.7	314	57.9	-22	-38.0	306	07.4	-21	10.2				
19	259	29.8	150	34.0		53.2	233	20.8		17.9	330	00.5		-38.1	321	10.0		10.2				
20	274	32.2	165	33.7		53.1	248	22.7		18.1	345	03.1		-38.1	336	12.6		10.2				
21	289	34.7	180	33.4		52.9	263	24.7		18.2	0	05.8		-38.1	351	15.2		10.2				
22	304	37.2	195	33.2		52.8	278	26.7		18.4	15	08.4		-38.1	6	17.7		10.3				
23	319	39.6	210	32.9		52.6	293	28.7		18.5	30	11.0		-38.2	21	20.3		10.3				
24	334	42.1	225	32.6	+19	52.5	308	30.7	+6	18.7	45	13.6	-22	-38.2	36	22.9	-21	10.3				
Dif.	—		-3				+20				+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 01. ^m 7				SD: 16'0 Edad: 6 ^d 9 PMG: 18 ^h 43 ^m												PHE { 4 ^h : 58'5 12 ^h : 58'3 20 ^h : 58'1	
	hG ☉		Dec		hG ☾		Dif. Dec Dif.											
	h	° ' °	° ' °	h	° ' °	h	° ' °	h		° ' °	h		m	h	m	h	m	h
0	179	32.7	+10	19.3	89	46.4	79	-19	38.7	86	60 N	2 52	3 55	4 42	15 31	81	21 47	35
1	194	32.8		18.4	104	13.3	78		47.3	85	58	3 08	4 04	48	15 13	79	22 05	38
2	209	33.0		17.6	118	40.1	78	-19	55.8	83	56	21	13	53	14 59	76	19	41
3	224	33.2		16.7	133	06.9	77	-20	04.1	82	54	32	20	4 58	47	73	32	43
4	239	33.4		15.8	147	33.6	77		12.3	81	52	41	26	5 03	36	72	43	45
5	254	33.5	+10	15.0	162	00.3	77	-20	20.4	80	50	3 50	4 32	5 07	14 26	70	22 53	46
6	269	33.7	+10	14.1	176	27.0	76	-20	28.4	78	45	4 07	4 44	5 15	14 06	67	23 14	48
7	284	33.9		13.2	190	53.6	76		36.2	77	40	20	4 54	22	13 49	66	32	49
8	299	34.1		12.3	205	20.2	76		43.9	76	35	31	5 02	29	36	64	46	51
9	314	34.3		11.5	219	46.8	76		51.5	74	30	40	09	34	24	62	23 58	52
10	329	34.4		10.6	234	13.4	75	-20	58.9	73	20	4 54	21	43	13 03	60	***	***
11	344	34.6	+10	09.7	248	39.9	75	-21	06.2	72	10 N	5 05	5 30	5 51	12 46	58	***	***
12	359	34.8	+10	08.8	263	06.4	74	-21	13.4	70	0	5 13	5 37	5 58	12 29	56	0 00	56
13	14	35.0		08.0	277	32.8	75		20.4	69	10 S	20	44	6 06	12 13	54	15	59
14	29	35.2		07.1	291	59.3	74		27.3	68	20	25	51	13	11 56	52	31	61
15	44	35.3		06.2	306	25.7	73		34.1	67	30	30	5 58	22	36	49	0 50	64
16	59	35.5		05.3	320	52.0	74		40.8	65	35	32	6 01	27	24	48	1 01	66
17	74	35.7	+10	04.5	335	18.4	73	-21	47.3	63	40	5 33	6 05	6 32	11 11	46	1 13	68
18	89	35.9	+10	03.6	349	44.7	73	-21	53.6	63	45	5 35	6 09	6 38	10 55	44	1 28	71
19	104	36.1		02.7	4	11.0	73	-21	59.9	60	50	36	13	46	36	41	46	74
20	119	36.2		01.8	18	37.3	73	-22	05.9	60	52	36	15	49	27	40	1 55	75
21	134	36.4		01.0	33	03.6	72		11.9	58	54	36	17	53	17	38	2 04	78
22	149	36.6	+10	00.1	47	29.8	72		17.7	57	56	37	20	6 58	10 06	35	15	80
23	164	36.8	+9	59.2	61	56.0	72		23.4	55	58	37	22	7 02	9 53	32	2 27	84
24	179	37.0	+9	58.3	76	22.2		-22	28.9		60 S	5 37	6 25	7 07	9 38	28	2 42	88

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 40. ^m 9		Mag: -4.3 PMG: 08 ^h 58 ^m				Mag: -1.7 PMG: 03 ^h 26 ^m				Mag: -2.6 PMG: 20 ^h 55 ^m				Mag: +0.3 PMG: 21 ^h 31 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	334	42.1	225	32.6	+19	52.5	308	30.7	+6	18.7	45	13.6	-22	38.2	36	22.9	-21	10.3
1	349	44.6	240	32.3		52.3	323	32.6		18.9	60	16.2		38.2	51	25.5		10.3
2	4	47.0	255	32.0		52.2	338	34.6		19.0	75	18.8		38.2	66	28.1		10.4
3	19	49.5	270	31.7		52.0	353	36.6		19.2	90	21.4		38.2	81	30.7		10.4
4	34	52.0	285	31.4		51.9	8	38.6		19.3	105	24.1		38.3	96	33.3		10.4
5	49	54.4	300	31.1	+19	51.7	23	40.6	+6	19.5	120	26.7	-22	38.3	111	35.9	-21	10.5
6	64	56.9	315	30.8	+19	51.6	38	42.6	+6	19.7	135	29.3	-22	38.3	126	38.5	-21	10.5
7	79	59.4	330	30.5		51.4	53	44.6		19.8	150	31.9		38.3	141	41.1		10.5
8	95	01.8	345	30.3		51.3	68	46.6		20.0	165	34.5		38.3	156	43.7		10.5
9	110	04.3	0	30.0		51.1	83	48.6		20.1	180	37.1		38.4	171	46.3		10.6
10	125	06.7	15	29.7		51.0	98	50.5		20.3	195	39.7		38.4	186	48.9		10.6
11	140	09.2	30	29.4	+19	50.8	113	52.5	+6	20.5	210	42.4	-22	38.4	201	51.5	-21	10.6
12	155	11.7	45	29.1	+19	50.6	128	54.5	+6	20.6	225	45.0	-22	38.4	216	54.1	-21	10.6
13	170	14.1	60	28.8		50.5	143	56.5		20.8	240	47.6		38.5	231	56.7		10.7
14	185	16.6	75	28.5		50.3	158	58.5		20.9	255	50.2		38.5	246	59.3		10.7
15	200	19.1	90	28.2		50.2	174	00.5		21.1	270	52.8		38.5	262	01.9		10.7
16	215	21.5	105	27.9		50.0	189	02.5		21.2	285	55.4		38.5	277	04.5		10.7
17	230	24.0	120	27.6	+19	49.8	204	04.5	+6	21.4	300	58.0	-22	38.5	292	07.1	-21	10.8
18	245	26.5	135	27.3	+19	49.7	219	06.5	+6	21.6	316	00.6	-22	38.6	307	09.7	-21	10.8
19	260	28.9	150	27.0		49.5	234	08.5		21.7	331	03.2		38.6	322	12.3		10.8
20	275	31.4	165	26.7		49.3	249	10.5		21.9	346	05.8		38.6	337	14.9		10.9
21	290	33.9	180	26.4		49.2	264	12.6		22.0	1	08.4		38.6	352	17.5		10.9
22	305	36.3	195	26.1		49.0	279	14.6		22.2	16	11.1		38.6	7	20.1		10.9
23	320	38.8	210	25.8		48.8	294	16.6		22.3	31	13.7		38.7	22	22.7		10.9
24	335	41.2	225	25.5	+19	48.7	309	18.6	+6	22.5	46	16.3	-22	38.7	37	25.3	-21	11.0
Dif.	—		-3		-2		+20		+2		+26		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 : 58'0 12 ^h : 57'8 20 ^h : 57'6																
	PMG: 12 ^h 01 ^m .4			Edad: 7 ^d 9																
	PMG: 19 ^h 39 ^m			Rº: 56 ^m																
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº					
h	°	'	°	°	'	°	'	°	'	h	m	h	m	h	m	m				
0	179	37.0	+9	58.3	76	22.2	72	-22	28.9	54	60 N	19 17	20 03	21 04	16 52	64	22 22	54		
1	194	37.1		57.5	90	48.4	71		34.3	53	58	11	19 54	20 50	32	62	22 43	54		
2	209	37.3		56.6	105	14.5	72		39.6	51	56	06	46	37	15	61	23 00	55		
3	224	37.5		55.7	119	40.7	71		44.7	50	54	19 02	39	27	16 00	61	15	55		
4	239	37.7		54.8	134	06.8	71		49.7	48	52	18 57	33	18	15 48	60	28	55		
5	254	37.9	+9	53.9	148	32.9	71	-22	54.5	47	50	18 54	19 28	20 10	15 36	61	23 39	55		
6	269	38.1	+9	53.1	162	59.0	71	-22	59.2	46	45	18 46	19 16	19 53	15 13	60	** ** *	**		
7	284	38.2		52.2	177	25.1	71	-23	03.8	44	40	39	19 07	40	14 55	59	** ** *	**		
8	299	38.4		51.3	191	51.2	70		08.2	42	35	33	18 59	30	40	58	** ** *	**		
9	314	38.6		50.4	206	17.2	71		12.4	42	30	28	52	21	26	58	** ** *	**		
10	329	38.8		49.5	220	43.3	70		16.6	39	20	19	42	19 08	14 03	58	0 20	54		
11	344	39.0	+9	48.7	235	09.3	71	-23	20.5	39	10 N	18 12	18 33	18 58	13 44	57	0 39	55		
12	359	39.1	+9	47.8	249	35.4	70	-23	24.4	37	0	18 05	18 26	18 50	13 25	57	0 56	56		
13	14	39.3		46.9	264	01.4	70		28.1	35	10 S	17 58	19	44	13 07	56	1 14	57		
14	29	39.5		46.0	278	27.4	70		31.6	34	20	51	13	39	12 48	55	32	59		
15	44	39.7		45.1	292	53.4	71		35.0	33	30	43	07	35	25	54	1 54	61		
16	59	39.9		44.3	307	19.5	70		38.3	31	35	38	04	33	12 12	54	2 07	61		
17	74	40.1	+9	43.4	321	45.5	70	-23	41.4	30	40	17 33	18 00	18 32	11 57	53	2 21	63		
18	89	40.3	+9	42.5	336	11.5	70	-23	44.4	28	45	17 27	17 56	18 31	11 39	52	2 39	64		
19	104	40.4		41.6	350	37.5	70		47.2	27	50	20	52	30	17	51	3 00	66		
20	119	40.6		40.7	5	03.5	71		49.9	25	52	16	51	30	11 07	49	10	67		
21	134	40.8		39.8	19	29.6	70		52.4	24	54	13	49	30	10 55	49	22	68		
22	149	41.0		39.0	33	55.6	70		54.8	22	56	09	47	30	41	48	35	70		
23	164	41.2		38.1	48	21.6	71		57.0	21	58	17 04	44	30	25	47	3 51	71		
24	179	41.4	+9	37.2	62	47.7		-23	59.1		60 S	16 59	17 42	18 30	10 06	44	4 10	73		

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO									
	PMG 1 ^h 37 ^m .0			Mag: -4.3 PMG: 08 ^h 58 ^m			Mag: -1.7 PMG: 03 ^h 22 ^m			Mag: -2.6 PMG: 20 ^h 51 ^m			Mag: +0.3 PMG: 21 ^h 27 ^m									
	hG ♂			hG ♀		dec.	hG ♂		dec.	hG ♃		dec.	hG ♄		dec.							
h	°	'	°	°	'	°	°	'	°	'	°	'	°	°	'	°	'					
0	335	41.2		225	25.5	+19	48.7		309	18.6	+6	22.5	46	16.3	-22	-38.7	37	25.3	-21	11.0		
1	350	43.7		240	25.2		48.5		324	20.6		22.6	61	18.9		-38.7	52	27.8		11.0		
2	5	46.2		255	24.9		48.3		339	22.6		22.8	76	21.5		-38.7	67	30.4		11.0		
3	20	48.6		270	24.6		48.2		354	24.6		22.9	91	24.1		-38.7	82	33.0		11.0		
4	35	51.1		285	24.3		48.0		9	26.6		23.1	106	26.7		-38.8	97	35.6		11.1		
5	50	53.6		300	24.0	+19	47.8		24	28.7	+6	23.2	121	29.3	-22	-38.8	112	38.2	-21	11.1		
6	65	56.0		315	23.7	+19	47.6		39	30.7	+6	23.4	136	31.9	-22	-38.8	127	40.8	-21	11.1		
7	80	58.5		330	23.4		47.5		54	32.7		23.5	151	34.5		-38.8	142	43.4		11.1		
8	96	01.0		345	23.1		47.3		69	34.7		23.7	166	37.1		-38.8	157	46.0		11.2		
9	111	03.4		0	22.8		47.1		84	36.7		23.8	181	39.7		-38.9	172	48.6		11.2		
10	126	05.9		15	22.5		46.9		99	38.8		24.0	196	42.3		-38.9	187	51.2		11.2		
11	141	08.3		30	22.2	+19	46.8		114	40.8	+6	24.1	211	44.9	-22	-38.9	202	53.8	-21	11.2		
12	156	10.8		45	21.9	+19	46.6		129	42.8	+6	24.3	226	47.5	-22	-38.9	217	56.4	-21	11.3		
13	171	13.3		60	21.6		46.4		144	44.8		24.4	241	50.1		-38.9	232	59.0		11.3		
14	186	15.7		75	21.3		46.2		159	46.9		24.6	256	52.7		-39.0	248	01.6		11.3		
15	201	18.2		90	21.0		46.0		174	48.9		24.7	271	55.3		-39.0	263	04.2		11.3		
16	216	20.7		105	20.6		45.9		189	50.9		24.9	286	57.9		-39.0	278	06.8		11.4		
17	231	23.1		120	20.3	+19	45.7		204	53.0	+6	25.0	302	00.5	-22	-39.0	293	09.3	-21	11.4		
18	246	25.6		135	20.0	+19	45.5		219	55.0	+6	25.2	317	03.1	-22	-39.0	308	11.9	-21	11.4		
19	261	28.1		150	19.7		45.3		234	57.0		25.3	332	05.7		-39.1	323	14.5		11.5		
20	276	30.5		165	19.4		45.1		249	59.1		25.4	347	08.3		-39.1	338	17.1		11.5		
21	291	33.0		180	19.1		44.9		265	01.1		25.6	2	10.9		-39.1	353	19.7		11.5		
22	306	35.5		195	18.8		44.7		280	03.1		25.7	17	13.5		-39.1	8	22.3		11.5		
23	321	37.9		210	18.5		44.6		295	05.2		25.9	32	16.1		-39.1	23	24.9		11.6		
24	336	40.4		225	18.2	+19	44.4		310	07.2	+6	26.0	47	18.7	-22	-39.2	38	27.5	-21	11.6		
Dif.	—			-3			-2	+20			+1			+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 01 ^m 1			SD: 15'7 Edad: 8 ^d 9			PHE { 4 ^h : 57'4 12 ^h : 57'2 20 ^h : 57'0				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	h m m			
0	179	41.4	+9	62	47.7	70	-23	59.1	20	60 N	2 59	4 00	4 46	17 56	42	23 16	71	
1	194	41.5		77	13.7	71	-24	01.1	18	58	3 14	09	52	34	45	37	69	
2	209	41.7		91	39.8	71		02.9	17	56	26	17	4 57	16	47	23 55	67	
3	224	41.9		106	05.9	70		04.6	15	54	36	24	5 02	17 01	48	***	***	
4	239	42.1		120	31.9	71		06.1	14	52	45	30	06	16 48	49	***	***	
5	254	42.3	+9	134	58.0	72	-24	07.5	12	50	3 53	4 35	5 10	16 37	49	***	***	
6	269	42.5	+9	149	24.2	71	-24	08.7	11	45	4 10	4 47	5 18	16 13	51	0 02	56	
7	284	42.7		163	50.3	71		09.8	9	40	23	4 56	24	15 54	52	21	56	
8	299	42.9		178	16.4	72		10.7	8	35	33	5 04	30	38	52	37	56	
9	314	43.0		192	42.6	72		11.5	7	30	42	10	35	24	53	0 50	56	
10	329	43.2		207	08.8	72		12.2	5	20	4 55	21	44	15 01	54	1 14	56	
11	344	43.4	+9	221	35.0	72	-24	12.7	4	10 N	5 05	5 30	5 51	14 41	54	1 34	56	
12	359	43.6	+9	236	01.2	73	-24	13.1	2	0	5 12	5 37	5 58	14 22	55	1 52	56	
13	14	43.8		250	27.5	73		13.3	1	10 S	19	43	6 05	14 03	56	2 11	56	
14	29	44.0		264	53.8	73		13.4	1	20	24	49	12	13 43	56	31	56	
15	44	44.2		279	20.1	73		13.3	2	30	28	55	19	19	58	2 55	55	
16	59	44.4		293	46.4	74		13.1	3	35	29	5 58	24	13 06	57	3 08	56	
17	74	44.5	+9	308	12.8	74	-24	12.8	5	40	5 30	6 02	6 29	12 50	58	3 24	55	
18	89	44.7	+9	322	39.2	74	-24	12.3	7	45	5 31	6 05	6 35	12 31	59	3 43	55	
19	104	44.9		337	05.6	75		11.6	7	50	32	09	42	12 08	59	4 06	55	
20	119	45.1		351	32.1	75		10.9	9	52	32	11	45	11 56	60	17	55	
21	134	45.3		5	58.6	75		10.0	11	54	32	13	49	44	60	30	54	
22	149	45.5		20	25.1	76		08.9	12	56	32	15	53	29	61	4 45	54	
23	164	45.7		34	51.7	76		07.7	13	58	32	17	6 57	11 12	61	5 02	53	
24	179	45.9	+9	49	18.3		-24	06.4		60 S	5 31	6 19	7 02	10 50	63	5 23	53	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 33 ^m 1		Mag: -4.3 PMG: 08 ^h 59 ^m				Mag: -1.7 PMG: 03 ^h 19 ^m				Mag: -2.6 PMG: 20 ^h 47 ^m				Mag: +0.3 PMG: 21 ^h 22 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	336	40.4	225	18.2	+19	44.4	310	07.2	+6	26.0	47	18.7	-22	39.2	38	27.5	-21	11.6
1	351	42.8	240	17.9		44.2	325	09.3		26.2	62	21.3		39.2	53	30.1		11.6
2	6	45.3	255	17.6		44.0	340	11.3		26.3	77	23.9		39.2	68	32.7		11.6
3	21	47.8	270	17.2		43.8	355	13.3		26.5	92	26.5		39.2	83	35.3		11.7
4	36	50.2	285	16.9		43.6	10	15.4		26.6	107	29.1		39.2	98	37.9		11.7
5	51	52.7	300	16.6	+19	43.4	25	17.4	+6	26.7	122	31.7	-22	39.3	113	40.4	-21	11.7
6	66	55.2	315	16.3	+19	43.2	40	19.5	+6	26.9	137	34.3	-22	39.3	128	43.0	-21	11.7
7	81	57.6	330	16.0		43.0	55	21.5		27.0	152	36.9		39.3	143	45.6		11.8
8	97	00.1	345	15.7		42.8	70	23.6		27.2	167	39.5		39.3	158	48.2		11.8
9	112	02.6	0	15.4		42.6	85	25.6		27.3	182	42.1		39.3	173	50.8		11.8
10	127	05.0	15	15.0		42.4	100	27.7		27.4	197	44.7		39.4	188	53.4		11.8
11	142	07.5	30	14.7	+19	42.2	115	29.7	+6	27.6	212	47.3	-22	39.4	203	56.0	-21	11.9
12	157	10.0	45	14.4	+19	42.0	130	31.8	+6	27.7	227	49.9	-22	39.4	218	58.6	-21	11.9
13	172	12.4	60	14.1		41.8	145	33.9		27.9	242	52.5		39.4	234	01.2		11.9
14	187	14.9	75	13.8		41.6	160	35.9		28.0	257	55.1		39.4	249	03.8		11.9
15	202	17.3	90	13.5		41.4	175	38.0		28.1	272	57.7		39.4	264	06.3		12.0
16	217	19.8	105	13.1		41.2	190	40.0		28.3	288	00.3		39.5	279	08.9		12.0
17	232	22.3	120	12.8	+19	41.0	205	42.1	+6	28.4	303	02.9	-22	39.5	294	11.5	-21	12.0
18	247	24.7	135	12.5	+19	40.8	220	44.2	+6	28.5	318	05.5	-22	39.5	309	14.1	-21	12.0
19	262	27.2	150	12.2		40.6	235	46.2		28.7	333	08.1		39.5	324	16.7		12.1
20	277	29.7	165	11.9		40.4	250	48.3		28.8	348	10.7		39.5	339	19.3		12.1
21	292	32.1	180	11.6		40.2	265	50.4		28.9	3	13.2		39.6	354	21.9		12.1
22	307	34.6	195	11.2		40.0	280	52.4		29.1	18	15.8		39.6	9	24.5		12.1
23	322	37.1	210	10.9		39.8	295	54.5		29.2	33	18.4		39.6	24	27.1		12.2
24	337	39.5	225	10.6	+19	39.6	310	56.6	+6	29.3	48	21.0	-22	39.6	39	29.6	-21	12.2
Dif.	—		-3		-2		+20		+1		+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: 56'8 12^h: 56'6 20^h: 56'5													
	PMG: 12 ^h 00 ^m 8			SD: 15'5 Edad: 9 ^d 9													
				PMG: 21 ^h 30 ^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	179	45.9	+9	49	18.3	76	-24	06.4	15	60 N	19 11	19 57	20 56	18 38	26	*** **	
1	194	46.1		63	44.9	77		04.9	16	58	06	48	43	19	30	*** **	
2	209	46.2		78	11.6	77		03.3	17	56	19 01	41	31	18 03	32	*** **	
3	224	46.4		92	38.3	78	-24	01.6	19	54	18 57	34	21	17 49	35	0 10 65	
4	239	46.6		107	05.1	78	-23	59.7	20	52	53	29	12	37	37	23 64	
5	254	46.8	+9	121	31.9	78	-23	57.7	22	50	18 50	19 23	20 05	17 26	38	0 34 64	
6	269	47.0	+9	135	58.7	79	-23	55.5	23	45	18 42	19 12	19 49	17 04	41	0 58 62	
7	284	47.2		150	25.6	80		53.2	24	40	36	19 04	37	16 46	43	1 17 60	
8	299	47.4		164	52.6	80		50.8	25	35	30	18 56	27	30	46	33 59	
9	314	47.6		179	19.6	80		48.3	27	30	26	50	19	16 17	47	1 46 59	
10	329	47.8		193	46.6	81		45.6	29	20	18	40	19 06	15 55	49	2 10 56	
11	344	48.0	+9	208	13.7	82	-23	42.7	29	10 N	18 11	18 32	18 57	15 35	51	2 30 55	
12	359	48.1	+9	222	40.9	82	-23	39.8	31	0	18 04	18 25	18 49	15 17	53	2 48 55	
13	14	48.3		237	08.1	82		36.7	32	10 S	17 58	19	44	14 59	54	3 07 53	
14	29	48.5		251	35.3	83		33.5	34	20	51	13	39	39	57	27 52	
15	44	48.7		266	02.6	84		30.1	34	30	44	08	36	17	58	3 50 50	
16	59	48.9		280	30.0	84		26.7	36	35	39	05	34	14 03	60	4 04 49	
17	74	49.1	+9	294	57.4	85	-23	23.1	38	40	17 35	18 02	18 33	13 48	62	4 19 48	
18	89	49.3	+8	309	24.9	85	-23	19.3	38	45	17 29	17 59	18 33	13 30	63	4 38 46	
19	104	49.5		323	52.4	86		15.5	40	50	23	55	33	13 07	66	5 01 44	
20	119	49.7		338	20.0	86		11.5	41	52	19	54	33	12 56	68	12 42	
21	134	49.9		352	47.6	87		07.4	43	54	16	52	33	44	69	24 42	
22	149	50.1		7	15.3	88	-23	03.1	43	56	13	50	33	30	71	39 39	
23	164	50.3		21	43.1	88	-22	58.8	45	58	08	48	34	12 13	74	5 55 38	
24	179	50.5	+8	36	10.9		-22	54.3		60 S	17 04	17 46	18 35	11 53	77	6 16 34	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 1 ^h 29 ^m 1		Mag: -4.3 PMG: 08 ^h 59 ^m			Mag: -1.7 PMG: 03 ^h 16 ^m			Mag: -2.6 PMG: 20 ^h 43 ^m			Mag: +0.3 PMG: 21 ^h 18 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	337	39.5	225	10.6	+19	310	56.6	+6	29.3	48	21.0	-22	-39.6	39	29.6	-21	12.2
1	352	42.0	240	10.3		325	58.6		29.5	63	23.6		-39.6	54	32.2		12.2
2	7	44.5	255	10.0		341	00.7		29.6	78	26.2		-39.6	69	34.8		12.2
3	22	46.9	270	09.6		356	02.8		29.7	93	28.8		-39.7	84	37.4		12.3
4	37	49.4	285	09.3		11	04.9		29.9	108	31.4		-39.7	99	40.0		12.3
5	52	51.8	300	09.0	+19	26	06.9	+6	30.0	123	34.0	-22	-39.7	114	42.6	-21	12.3
6	67	54.3	315	08.7	+19	41	09.0	+6	30.1	138	36.6	-22	-39.7	129	45.2	-21	12.3
7	82	56.8	330	08.3		56	11.1		30.3	153	39.2		-39.7	144	47.8		12.4
8	97	59.2	345	08.0		71	13.2		30.4	168	41.7		-39.8	159	50.3		12.4
9	113	01.7	0	07.7		86	15.3		30.5	183	44.3		-39.8	174	52.9		12.4
10	128	04.2	15	07.4		101	17.3		30.7	198	46.9		-39.8	189	55.5		12.4
11	143	06.6	30	07.0	+19	116	19.4	+6	30.8	213	49.5	-22	-39.8	204	58.1	-21	12.5
12	158	09.1	45	06.7	+19	131	21.5	+6	30.9	228	52.1	-22	-39.8	220	00.7	-21	12.5
13	173	11.6	60	06.4		146	23.6		31.0	243	54.7		-39.8	235	03.3		12.5
14	188	14.0	75	06.1		161	25.7		31.2	258	57.3		-39.9	250	05.9		12.5
15	203	16.5	90	05.7		176	27.8		31.3	273	59.8		-39.9	265	08.4		12.6
16	218	18.9	105	05.4		191	29.9		31.4	289	02.4		-39.9	280	11.0		12.6
17	233	21.4	120	05.1	+19	206	32.0	+6	31.6	304	05.0	-22	-39.9	295	13.6	-21	12.6
18	248	23.9	135	04.8	+19	221	34.1	+6	31.7	319	07.6	-22	-39.9	310	16.2	-21	12.6
19	263	26.3	150	04.4		236	36.1		31.8	334	10.2		-40.0	325	18.8		12.7
20	278	28.8	165	04.1		251	38.2		31.9	349	12.8		-40.0	340	21.4		12.7
21	293	31.3	180	03.8		266	40.3		32.1	4	15.4		-40.0	355	24.0		12.7
22	308	33.7	195	03.5		281	42.4		32.2	19	17.9		-40.0	10	26.5		12.7
23	323	36.2	210	03.1		296	44.5		32.3	34	20.5		-40.0	25	29.1		12.7
24	338	38.7	225	02.8	+19	311	46.6	+6	32.4	49	23.1	-22	-40.0	40	31.7	-21	12.8
Dif.	—		-3		-2		+21		+1		+26		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 00 ^m 5			SD: 15'4 Edad: 10 ^d 9 PHE { 4 ^h : 56'3 12 ^h : 56'1 20 ^h : 56'0 PMG: 22 ^h 22 ^m Rº: 49 ^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	50.5	+8	54.5	36	10.9	89	-22	54.3	46	60 N	3 06	4 06	4 51	19 04	17	0 27	81
1	194	50.6		53.6	50	38.8	90		49.7	47	58	19	14	4 56	18 49	20	0 46	77
2	209	50.8		52.7	65	06.8	90		45.0	49	56	31	21	5 01	35	24	1 02	74
3	224	51.0		51.8	79	34.8	91		40.1	49	54	41	28	05	24	26	15	72
4	239	51.2		50.9	94	02.9	91		35.2	51	52	50	34	09	14	28	27	70
5	254	51.4	+8	50.0	108	31.0	92	-22	30.1	52	50	3 57	4 39	5 13	18 04	30	1 38	68
6	269	51.6	+8	49.1	122	59.2	93	-22	24.9	53	45	4 13	4 50	5 20	17 45	34	2 00	65
7	284	51.8		48.2	137	27.5	94		19.6	55	40	25	4 58	26	29	37	17	63
8	299	52.0		47.3	151	55.9	94		14.1	55	35	35	5 06	31	16	39	32	61
9	314	52.2		46.4	166	24.3	94		08.6	57	30	43	12	36	17 04	41	2 45	59
10	329	52.4		45.5	180	52.7	96	-22	02.9	58	20	4 55	22	44	16 44	44	3 06	57
11	344	52.6	+8	44.6	195	21.3	96	-21	57.1	59	10 N	5 05	5 30	5 51	16 26	47	3 25	54
12	359	52.8	+8	43.7	209	49.9	97	-21	51.2	60	0	5 12	5 36	5 57	16 10	50	3 43	51
13	14	53.0		42.8	224	18.6	98		45.2	61	10 S	18	42	6 03	15 53	53	4 00	49
14	29	53.2		41.9	238	47.4	98		39.1	62	20	22	48	10	36	55	19	46
15	44	53.4		41.0	253	16.2	99		32.9	63	30	25	53	17	15	59	40	44
16	59	53.6		40.1	267	45.1	100		26.6	64	35	27	56	21	15 03	61	4 53	42
17	74	53.8	+8	39.2	282	14.1	100	-21	20.2	66	40	5 27	5 59	6 26	14 50	63	5 07	40
18	89	53.9	+8	38.3	296	43.1	101	-21	13.6	66	45	5 28	6 02	6 31	14 33	66	5 24	37
19	104	54.1		37.4	311	12.2	102		07.0	68	50	28	05	38	13	70	45	34
20	119	54.3		36.5	325	41.4	103	-21	00.2	68	52	28	07	41	14 04	71	5 54	33
21	134	54.5		35.6	340	10.7	103	-20	53.4	70	54	27	08	44	13 53	73	6 06	30
22	149	54.7		34.7	354	40.0	104		46.4	71	56	27	10	47	41	76	18	28
23	164	54.9		33.8	9	09.4	105		39.3	71	58	26	12	51	13 27	79	6 33	25
24	179	55.1	+8	32.9	23	38.9		-20	32.2		60 S	5 26	6 14	6 56	13 10	83	6 50	21

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 25 ^m 2		Mag: -4.3 PMG: 09 ^h 00 ^m			Mag: -1.8 PMG: 03 ^h 12 ^m			Mag: -2.6 PMG: 20 ^h 39 ^m			Mag: +0.3 PMG: 21 ^h 14 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	338	38.7	225	02.8	+19	34.3	311	46.6	+6	32.4	49	23.1	-22	40.0		
1	353	41.1	240	02.5		34.1	326	48.7		32.6	64	25.7		40.1		
2	8	43.6	255	02.1		33.9	341	50.9		32.7	79	28.3		40.1		
3	23	46.1	270	01.8		33.6	356	53.0		32.8	94	30.9		40.1		
4	38	48.5	285	01.5		33.4	11	55.1		32.9	109	33.4		40.1		
5	53	51.0	300	01.1	+19	33.2	26	57.2	+6	33.1	124	36.0	-22	40.1		
6	68	53.4	315	00.8	+19	32.9	41	59.3	+6	33.2	139	38.6	-22	40.1		
7	83	55.9	330	00.5		32.7	57	01.4		33.3	154	41.2		40.2		
8	98	58.4	345	00.1		32.5	72	03.5		33.4	169	43.8		40.2		
9	114	00.8	359	59.8		32.2	87	05.6		33.5	184	46.3		40.2		
10	129	03.3	14	59.5		32.0	102	07.7		33.7	199	48.9		40.2		
11	144	05.8	29	59.1	+19	31.7	117	09.8	+6	33.8	214	51.5	-22	40.2		
12	159	08.2	44	58.8	+19	31.5	132	12.0	+6	33.9	229	54.1	-22	40.2		
13	174	10.7	59	58.5		31.3	147	14.1		34.0	244	56.7		40.3		
14	189	13.2	74	58.1		31.0	162	16.2		34.1	259	59.2		40.3		
15	204	15.6	89	57.8		30.8	177	18.3		34.3	275	01.8		40.3		
16	219	18.1	104	57.5		30.5	192	20.4		34.4	290	04.4		40.3		
17	234	20.6	119	57.1	+19	30.3	207	22.6	+6	34.5	305	07.0	-22	40.3		
18	249	23.0	134	56.8	+19	30.0	222	24.7	+6	34.6	320	09.5	-22	40.3		
19	264	25.5	149	56.5		29.8	237	26.8		34.7	335	12.1		40.4		
20	279	27.9	164	56.1		29.6	252	29.0		34.8	350	14.7		40.4		
21	294	30.4	179	55.8		29.3	267	31.1		35.0	5	17.3		40.4		
22	309	32.9	194	55.4		29.1	282	33.2		35.1	20	19.8		40.4		
23	324	35.3	209	55.1		28.8	297	35.3		35.2	35	22.4		40.4		
24	339	37.8	224	54.8	+19	28.6	312	37.5	+6	35.3	50	25.0	-22	40.4		
Dif.	—		-3		-2		+21		+1		+26		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 00 ^m 2			SD: 15'2 Edad: 11 ^d 9 PHE { 4^h: 55'8 12^h: 55'7 20^h: 55'5 PMG: 23 ^h 11 ^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	179	55.1	+8 32.9	23	38.9	105	-20 32.2	73	60 N	19 05	19 50	20 49	19 21	11	1 48	85				
1	194	55.3	32.0	38	08.4	106	24.9	73	58	19 00	42	36	19 09	15	2 03	81				
2	209	55.5	31.1	52	38.0	107	17.6	75	56	18 56	35	25	18 59	17	16	77				
3	224	55.7	30.2	67	07.7	108	10.1	75	54	52	29	15	50	20	27	75				
4	239	55.9	29.3	81	37.5	109	-20 02.6	77	52	49	24	07	42	22	37	72				
5	254	56.1	+8 28.4	96	07.4	109	-19 54.9	77	50	18 45	19 19	20 00	18 34	24	2 46	70				
6	269	56.3	+8 27.5	110	37.3	110	-19 47.2	79	45	18 38	19 09	19 45	18 19	28	3 05	66				
7	284	56.5	26.6	125	07.3	110	39.3	79	40	33	19 00	33	18 06	31	20	63				
8	299	56.7	25.7	139	37.3	112	31.4	80	35	28	18 53	24	17 55	34	33	60				
9	314	56.9	24.8	154	07.5	112	23.4	81	30	23	48	16	45	36	3 44	58				
10	329	57.1	23.9	168	37.7	113	15.3	82	20	16	38	19 04	28	40	4 03	54				
11	344	57.3	+8 23.0	183	08.0	113	-19 07.1	83	10 N	18 09	18 31	18 55	17 13	44	4 19	51				
12	359	57.5	+8 22.1	197	38.3	115	-18 58.8	84	0	18 03	18 24	18 49	17 00	46	4 34	49				
13	14	57.7	21.2	212	08.8	115	50.4	84	10 S	17 58	19	43	16 46	50	4 49	46				
14	29	57.9	20.3	226	39.3	116	42.0	86	20	52	14	39	31	53	5 05	43				
15	44	58.1	19.4	241	09.9	116	33.4	86	30	45	09	37	14	57	24	39				
16	59	58.3	18.4	255	40.5	118	24.8	87	35	41	06	36	16 04	60	35	36				
17	74	58.5	+8 17.5	270	11.3	118	-18 16.1	88	40	17 36	18 04	18 35	15 53	62	5 47	34				
18	89	58.7	+8 16.6	284	42.1	119	-18 07.3	89	45	17 31	18 01	18 35	15 39	66	6 01	31				
19	104	58.9	15.7	299	13.0	119	-17 58.4	89	50	25	17 58	35	23	70	19	27				
20	119	59.1	14.8	313	43.9	120	49.5	91	52	23	57	36	15	72	27	25				
21	134	59.3	13.9	328	14.9	121	40.4	91	54	20	55	36	15 06	75	36	23				
22	149	59.5	13.0	342	46.0	122	31.3	92	56	16	54	37	14 57	77	46	21				
23	164	59.7	12.1	357	17.2	122	22.1	92	58	13	52	38	46	80	6 58	17				
24	179	59.9	+8 11.2	11	48.4		-17 12.9		60 S	17 09	17 51	18 39	14 33	83	7 11	14				

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 1 ^h 21 ^m 3		Mag: -4.3 PMG: 09 ^h 01 ^m				Mag: -1.8 PMG: 03 ^h 09 ^m				Mag: -2.6 PMG: 20 ^h 35 ^m				Mag: +0.3 PMG: 21 ^h 10 ^m				
	hG ♂		hG ♀	dec.			hG ♂	dec.			hG ♀	dec.			hG ♀	dec.			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°
0	339	37.8	224	54.8	+19 28.6	312	37.5	+6 35.3	50	25.0	-22 -40.4	41	33.7	-21 13.3					
1	354	40.3	239	54.4	28.3	327	39.6	35.4	65	27.6	-40.5	56	36.3	13.4					
2	9	42.7	254	54.1	28.1	342	41.7	35.5	80	30.1	-40.5	71	38.9	13.4					
3	24	45.2	269	53.8	27.8	357	43.9	35.6	95	32.7	-40.5	86	41.5	13.4					
4	39	47.7	284	53.4	27.6	12	46.0	35.8	110	35.3	-40.5	101	44.0	13.4					
5	54	50.1	299	53.1	+19 27.3	27	48.2	+6 35.9	125	37.9	-22 -40.5	116	46.6	-21 13.5					
6	69	52.6	314	52.7	+19 27.0	42	50.3	+6 36.0	140	40.4	-22 -40.5	131	49.2	-21 13.5					
7	84	55.1	329	52.4	26.8	57	52.4	36.1	155	43.0	-40.6	146	51.8	13.5					
8	99	57.5	344	52.0	26.5	72	54.6	36.2	170	45.6	-40.6	161	54.4	13.5					
9	115	00.0	359	51.7	26.3	87	56.7	36.3	185	48.2	-40.6	176	56.9	13.6					
10	130	02.4	14	51.4	26.0	102	58.9	36.4	200	50.7	-40.6	191	59.5	13.6					
11	145	04.9	29	51.0	+19 25.8	118	01.0	+6 36.5	215	53.3	-22 -40.6	207	02.1	-21 13.6					
12	160	07.4	44	50.7	+19 25.5	133	03.2	+6 36.6	230	55.9	-22 -40.6	222	04.7	-21 13.6					
13	175	09.8	59	50.3	25.2	148	05.3	36.8	245	58.4	-40.6	237	07.3	13.7					
14	190	12.3	74	50.0	25.0	163	07.5	36.9	261	01.0	-40.7	252	09.8	13.7					
15	205	14.8	89	49.7	24.7	178	09.6	37.0	276	03.6	-40.7	267	12.4	13.7					
16	220	17.2	104	49.3	24.5	193	11.8	37.1	291	06.1	-40.7	282	15.0	13.7					
17	235	19.7	119	49.0	+19 24.2	208	13.9	+6 37.2	306	08.7	-22 -40.7	297	17.6	-21 13.7					
18	250	22.2	134	48.6	+19 23.9	223	16.1	+6 37.3	321	11.3	-22 -40.7	312	20.1	-21 13.8					
19	265	24.6	149	48.3	23.7	238	18.3	37.4	336	13.8	-40.7	327	22.7	13.8					
20	280	27.1	164	47.9	23.4	253	20.4	37.5	351	16.4	-40.8	342	25.3	13.8					
21	295	29.5	179	47.6	23.1	268	22.6	37.6	6	19.0	-40.8	357	27.9	13.8					
22	310	32.0	194	47.2	22.9	283	24.7	37.7	21	21.6	-40.8	12	30.5	13.9					
23	325	34.5	209	46.9	22.6	298	26.9	37.8	36	24.1	-40.8	27	33.0	13.9					
24	340	36.9	224	46.5	+19 22.3	313	29.1	+6 37.9	51	26.7	-22 -40.8	42	35.6	-21 13.9					
Dif.	—		-3	-3		+21	+1		+26	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 8				SD: 15°1 Edad: 12 ^d 9 PHE { 4 ^h : 55°4 12 ^h : 55°2 20 ^h : 55°1 PMG: 23 ^h 57 ^m Rº: 44 ^m															
	hG ☉		Dec		hG ☾		Dif.		Dec			Dif.			Náut.	Civil	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	179	59.9	+8	11.2	11	48.4	123	-17	12.9	94	60 N	3 12	4 11	4 56	19 32	8	3 13	83		
1	195	00.1		10.3	26	19.7	124	-17	03.5	94	58	25	19	5 01	24 11		24	79		
2	210	00.3		09.4	40	51.1	125	-16	54.1	95	56	36	26	05	16 14		33	77		
3	225	00.5		08.5	55	22.6	125		44.6	95	54	45	32	09	10 16		42	74		
4	240	00.7		07.6	69	54.1	126		35.1	96	52	3 54	37	12	19 04	18	49	72		
5	255	00.9	+8	06.7	84	25.7	127	-16	25.5	97	50	4 01	4 42	5 16	18 58	21	3 56	70		
6	270	01.1	+8	05.7	98	57.4	127	-16	15.8	98	45	4 16	4 52	5 22	18 47	24	4 11	65		
7	285	01.3		04.8	113	29.1	128	-16	06.0	98	40	27	5 00	28	37 27		23	62		
8	300	01.5		03.9	128	00.9	129	-15	56.2	99	35	36	07	33	29 30		33	59		
9	315	01.7		03.0	142	32.8	129		46.3	100	30	44	13	37	21 33		42	57		
10	330	01.9		02.1	157	04.7	130		36.3	100	20	4 56	22	44	18 08	37	4 57	53		
11	345	02.1	+8	01.2	171	36.7	131	-15	26.3	101	10 N	5 05	5 30	5 51	17 57	41	5 10	49		
12	0	02.3	+8	00.3	186	08.8	132	-15	16.2	101	0	5 11	5 36	5 57	17 46	45	5 23	45		
13	15	02.5	+7	59.4	200	41.0	132	-15	06.1	103	10 S	17	41	6 02	36 47		35	42		
14	30	02.7		58.5	215	13.2	133	-14	55.8	102	20	20	46	08	24 52		5 48	38		
15	45	02.9		57.6	229	45.5	133		45.6	104	30	23	51	15	11 56		6 03	34		
16	60	03.1		56.7	244	17.8	134		35.2	103	35	24	53	19	17 04	58	11	32		
17	75	03.3	+7	55.7	258	50.2	135	-14	24.9	105	40	5 24	5 56	6 23	16 55	61	6 21	29		
18	90	03.5	+7	54.8	273	22.7	135	-14	14.4	105	45	5 24	5 58	6 28	16 45	65	6 32	26		
19	105	03.7		53.9	287	55.2	136	-14	03.9	106	50	24	6 01	34	33 69		46	22		
20	120	03.9		53.0	302	27.8	137	-13	53.3	106	52	23	02	36	27 71		52	20		
21	135	04.1		52.1	317	00.5	137		42.7	106	54	23	04	39	21 73		6 59	18		
22	150	04.3		51.2	331	33.2	138		32.1	108	56	22	05	42	14 75		7 07	15		
23	165	04.5		50.3	346	06.0	139		21.3	107	58	21	06	46	16 06	78	7 15	13		
24	180	04.7	+7	49.4	0	38.9		-13	10.6		60 S	5 20	6 08	6 50	15 56	82	7 25	10		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 17 ^m 3		Mag: -4.3 PMG: 09 ^h 01 ^m				Mag: -1.8 PMG: 03 ^h 06 ^m				Mag: -2.6 PMG: 20 ^h 31 ^m				Mag: +0.3 PMG: 21 ^h 06 ^m			
	hG ♂		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	340	36.9	224	46.5	+19	22.3	313	29.1	+6	37.9	51	26.7	-22	40.8	42	35.6	-21	13.9
1	355	39.4	239	46.2		22.0	328	31.2		38.0	66	29.3		40.8	57	38.2		13.9
2	10	41.9	254	45.8		21.8	343	33.4		38.1	81	31.8		40.8	72	40.8		14.0
3	25	44.3	269	45.5		21.5	358	35.6		38.3	96	34.4		40.9	87	43.4		14.0
4	40	46.8	284	45.2		21.2	13	37.7		38.4	111	36.9		40.9	102	45.9		14.0
5	55	49.3	299	44.8	+19	20.9	28	39.9	+6	38.5	126	39.5	-22	40.9	117	48.5	-21	14.0
6	70	51.7	314	44.5	+19	20.7	43	42.1	+6	38.6	141	42.1	-22	40.9	132	51.1	-21	14.0
7	85	54.2	329	44.1		20.4	58	44.3		38.7	156	44.6		40.9	147	53.7		14.1
8	100	56.7	344	43.8		20.1	73	46.4		38.8	171	47.2		40.9	162	56.2		14.1
9	115	59.1	359	43.4		19.8	88	48.6		38.9	186	49.8		40.9	177	58.8		14.1
10	131	01.6	14	43.1		19.6	103	50.8		39.0	201	52.3		41.0	193	01.4		14.1
11	146	04.0	29	42.7	+19	19.3	118	53.0	+6	39.1	216	54.9	-22	41.0	208	04.0	-21	14.2
12	161	06.5	44	42.4	+19	19.0	133	55.2	+6	39.2	231	57.5	-22	41.0	223	06.5	-21	14.2
13	176	09.0	59	42.0		18.7	148	57.3		39.3	247	00.0		41.0	238	09.1		14.2
14	191	11.4	74	41.7		18.4	163	59.5		39.4	262	02.6		41.0	253	11.7		14.2
15	206	13.9	89	41.3		18.2	179	01.7		39.5	277	05.1		41.0	268	14.3		14.2
16	221	16.4	104	41.0		17.9	194	03.9		39.6	292	07.7		41.0	283	16.8		14.3
17	236	18.8	119	40.6	+19	17.6	209	06.1	+6	39.7	307	10.3	-22	41.1	298	19.4	-21	14.3
18	251	21.3	134	40.3	+19	17.3	224	08.3	+6	39.8	322	12.8	-22	41.1	313	22.0	-21	14.3
19	266	23.8	149	39.9		17.0	239	10.5		39.9	337	15.4		41.1	328	24.6		14.3
20	281	26.2	164	39.5		16.7	254	12.6		40.0	352	17.9		41.1	343	27.1		14.4
21	296	28.7	179	39.2		16.4	269	14.8		40.1	7	20.5		41.1	358	29.7		14.4
22	311	31.1	194	38.8		16.1	284	17.0		40.2	22	23.1		41.1	13	32.3		14.4
23	326	33.6	209	38.5		15.9	299	19.2		40.2	37	25.6		41.1	28	34.9		14.4
24	341	36.1	224	38.1	+19	15.6	314	21.4	+6	40.3	52	28.2	-22	41.2	43	37.4	-21	14.4
Dif.	—		-3		-3		+22		+1		+26		0		+26		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 5			SD: 15'0 Edad: 13 ^d 9 PMG: ** ** R^o: ** PHE { 4^h: 54'9 12^h: 54'8 20^h: 54'7														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.	Hora	R ^o	Hora	R ^o	
	°	'	°	'	°	'	°	'	°			h	m	h	m	h	m	m
0	180	04.7	+7 49.4	0	38.9	139	-13 10.6	109	60 N	18 59	19 44	20 41	19 40 7	4 36 81				
1	195	04.9	48.4	15	11.8	140	-12 59.7	108	58	55	36	29	35 9	43 78				
2	210	05.1	47.5	29	44.8	140	48.9	110	56	51	30	19	30 12	50 75				
3	225	05.3	46.6	44	17.8	141	37.9	109	54	47	24	10	26 14	4 56 72				
4	240	05.5	45.7	58	50.9	141	27.0	110	52	44	19	20 02	22 16	5 01 70				
5	255	05.7	+7 44.8	73	24.0	143	-12 16.0	111	50	18 41	19 14	19 55	19 19 17	5 06 68				
6	270	05.9	+7 43.9	87	57.3	142	-12 04.9	111	45	18 35	19 05	19 41	19 11 21	5 16 64				
7	285	06.1	43.0	102	30.5	143	-11 53.8	112	40	29	18 57	30	19 04 25	25 60				
8	300	06.3	42.0	117	03.8	144	42.6	112	35	25	51	21	18 59 28	32 58				
9	315	06.5	41.1	131	37.2	145	31.4	112	30	21	45	14	54 30	39 54				
10	330	06.7	40.2	146	10.7	144	20.2	113	20	14	36	19 02	45 35	50 50				
11	345	06.9	+7 39.3	160	44.1	146	-11 08.9	113	10 N	18 08	18 29	18 54	18 38 38	5 59 47				
12	0	07.1	+7 38.4	175	17.7	146	-10 57.6	113	0	18 03	18 24	18 48	18 31 42	6 08 43				
13	15	07.3	37.5	189	51.3	146	46.3	114	10 S	17 58	19	43	23 46	17 39				
14	30	07.6	36.6	204	24.9	147	34.9	115	20	52	14	40	16 49	26 36				
15	45	07.8	35.6	218	58.6	148	23.4	114	30	46	10	38	07 54	37 31				
16	60	08.0	34.7	233	32.4	148	12.0	115	35	42	08	37	18 02 57	43 29				
17	75	08.2	+7 33.8	248	06.2	148	-10 00.5	116	40	17 38	18 06	18 37	17 56 60	6 50 26				
18	90	08.4	+7 32.9	262	40.0	149	-9 48.9	116	45	17 34	18 03	18 37	17 50 63	6 58 23				
19	105	08.6	32.0	277	13.9	150	37.3	116	50	28	01	38	42 67	7 08 18				
20	120	08.8	31.1	291	47.9	150	25.7	116	52	26	18 00	39	38 69	12 17				
21	135	09.0	30.1	306	21.9	150	14.1	117	54	23	17 59	40	34 71	17 15				
22	150	09.2	29.2	320	55.9	151	-9 02.4	117	56	20	58	41	29 74	22 13				
23	165	09.4	28.3	335	30.0	151	-8 50.7	117	58	17	56	42	24 76	28 10				
24	180	09.6	+7 27.4	350	04.1		-8 39.0		60 S	17 13	17 55	18 43	17 18 80	7 35 7				

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 13 ^m 4		Mag: -4.3 PMG: 09 ^h 02 ^m				Mag: -1.8 PMG: 03 ^h 02 ^m				Mag: -2.6 PMG: 20 ^h 27 ^m				Mag: +0.3 PMG: 21 ^h 02 ^m			
	hG ♂	dec.	hG ♀	dec.	hG ♂	dec.	hG ♀	dec.	hG ♂	dec.	hG ♀	dec.	hG ♂	dec.	hG ♀	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	341	36.1	224	38.1	+19	15.6	314	21.4	+6	40.3	52	28.2	-22	-41.2	43	37.4	-21	14.4
1	356	38.5	239	37.8		15.3	329	23.6		40.4	67	30.7		-41.2	58	40.0		14.5
2	11	41.0	254	37.4		15.0	344	25.8		40.5	82	33.3		-41.2	73	42.6		14.5
3	26	43.5	269	37.1		14.7	359	28.0		40.6	97	35.8		-41.2	88	45.2		14.5
4	41	45.9	284	36.7		14.4	14	30.2		40.7	112	38.4		-41.2	103	47.7		14.5
5	56	48.4	299	36.4	+19	14.1	29	32.4	+6	40.8	127	41.0	-22	-41.2	118	50.3	-21	14.6
6	71	50.9	314	36.0	+19	13.8	44	34.6	+6	40.9	142	43.5	-22	-41.2	133	52.9	-21	14.6
7	86	53.3	329	35.6		13.5	59	36.8		41.0	157	46.1		-41.3	148	55.5		14.6
8	101	55.8	344	35.3		13.2	74	39.1		41.1	172	48.6		-41.3	163	58.0		14.6
9	116	58.3	359	34.9		12.9	89	41.3		41.2	187	51.2		-41.3	179	00.6		14.6
10	132	00.7	14	34.6		12.6	104	43.5		41.3	202	53.7		-41.3	194	03.2		14.7
11	147	03.2	29	34.2	+19	12.3	119	45.7	+6	41.4	217	56.3	-22	-41.3	209	05.8	-21	14.7
12	162	05.6	44	33.9	+19	12.0	134	47.9	+6	41.5	232	58.8	-22	-41.3	224	08.3	-21	14.7
13	177	08.1	59	33.5		11.7	149	50.1		41.5	248	01.4		-41.3	239	10.9		14.7
14	192	10.6	74	33.1		11.4	164	52.3		41.6	263	04.0		-41.4	254	13.5		14.8
15	207	13.0	89	32.8		11.1	179	54.6		41.7	278	06.5		-41.4	269	16.0		14.8
16	222	15.5	104	32.4		10.8	194	56.8		41.8	293	09.1		-41.4	284	18.6		14.8
17	237	18.0	119	32.1	+19	10.5	209	59.0	+6	41.9	308	11.6	-22	-41.4	299	21.2	-21	14.8
18	252	20.4	134	31.7	+19	10.2	225	01.2	+6	42.0	323	14.2	-22	-41.4	314	23.8	-21	14.8
19	267	22.9	149	31.3		09.9	240	03.4		42.1	338	16.7		-41.4	329	26.3		14.9
20	282	25.4	164	31.0		09.6	255	05.7		42.2	353	19.3		-41.4	344	28.9		14.9
21	297	27.8	179	30.6		09.3	270	07.9		42.3	8	21.8		-41.4	359	31.5		14.9
22	312	30.3	194	30.3		08.9	285	10.1		42.3	23	24.4		-41.5	14	34.0		14.9
23	327	32.8	209	29.9		08.6	300	12.3		42.4	38	26.9		-41.5	29	36.6		15.0
24	342	35.2	224	29.5	+19	08.3	315	14.6	+6	42.5	53	29.5	-22	-41.5	44	39.2	-21	15.0
Dif.	—		-4		-3		+22		+1		+26		0		+26		0	

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9			SD: 14'9		PHE { 4^h: 54'6 12^h: 54'5 20^h: 54'4		Edad: 14 ^d 9			PMG: 00 ^h 41 ^m			R ^o : 42 ^m		R ^o		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		
0	180	09.6	+7 27.4	350	04.1	152	-8 39.0	118	60 N	3	19	4	16	5	01	19	47 5		
1	195	09.8	26.5	4	38.3	152	27.2	118	58	31	23	05	44	9	6	01	76		
2	210	10.0	25.6	19	12.5	153	15.4	118	56	41	30	09	42	11	05	73			
3	225	10.2	24.6	33	46.8	153	-8 03.6	118	54	50	35	12	40	13	08	71			
4	240	10.4	23.7	48	21.1	154	-7 51.8	119	52	3	58	16	38	15	11	69			
5	255	10.6	+7 22.8	62	55.5	153	-7 39.9	119	50	4	04	4	45	5	18	19	36 17		
6	270	10.8	+7 21.9	77	29.8	155	-7 28.0	119	45	4	18	4	55	5	25	19	32 21		
7	285	11.0	21.0	92	04.3	154	16.1	119	40	29	5	02	30	29	24	25	59		
8	300	11.2	20.0	106	38.7	155	-7 04.2	120	35	38	09	34	27	26	30	56			
9	315	11.5	19.1	121	13.2	156	-6 52.2	120	30	45	14	38	24	29	33	54			
10	330	11.7	18.2	135	47.8	156	40.2	120	20	4	57	23	45	20	33	40	49		
11	345	11.9	+7 17.3	150	22.4	156	-6 28.2	120	10 N	5	05	5	29	5	51	19	16 37		
12	0	12.1	+7 16.4	164	57.0	156	-6 16.2	121	0	5	11	5	35	5	56	19	13 41		
13	15	12.3	15.4	179	31.6	157	-6 04.1	120	10 S	15	40	6	01	09	45	6	56 38		
14	30	12.5	14.5	194	06.3	157	-5 52.1	121	20	19	44	06	05	49	7	02 34			
15	45	12.7	13.6	208	41.0	158	40.0	121	30	21	49	12	19	01	53	08	30		
16	60	12.9	12.7	223	15.8	158	27.9	121	35	21	51	16	18	59	55	12	27		
17	75	13.1	+7 11.8	237	50.6	158	-5 15.8	121	40	5	21	5	53	6	20	18	56 24		
18	90	13.3	+7 10.8	252	25.4	158	-5 03.7	122	45	5	21	5	55	6	24	18	53 62		
19	105	13.5	09.9	267	00.2	159	-4 51.5	121	50	20	57	29	49	66	26	17			
20	120	13.7	09.0	281	35.1	159	39.4	122	52	19	58	32	47	68	29	15			
21	135	13.9	08.1	296	10.0	159	27.2	122	54	18	5	59	34	45	70	32	13		
22	150	14.1	07.2	310	44.9	160	15.0	122	56	17	6	00	37	43	72	35	11		
23	165	14.4	06.2	325	19.9	160	-4 02.8	122	58	16	01	40	18	40	75	7	38 9		
24	180	14.6	+7 05.3	339	54.9	160	-3 50.6	122	60 S	5	14	6	02	6	44	18	38 78		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 09 ^m 5		Mag: -4.3 PMG: 09 ^h 02 ^m				Mag: -1.9 PMG: 02 ^h 59 ^m				Mag: -2.5 PMG: 20 ^h 23 ^m				Mag: +0.3 PMG: 20 ^h 58 ^m			
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.		hG ♀	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	342	35.2	224	29.5	+19 08.3	315	14.6	+6 42.5	53	29.5	-22 41.5	44	39.2	-21 15.0				
1	357	37.7	239	29.2	08.0	330	16.8	42.6	68	32.0	41.5	59	41.8	15.0				
2	12	40.1	254	28.8	07.7	345	19.0	42.7	83	34.6	41.5	74	44.3	15.0				
3	27	42.6	269	28.5	07.4	0	21.3	42.8	98	37.1	41.5	89	46.9	15.0				
4	42	45.1	284	28.1	07.1	15	23.5	42.9	113	39.7	41.5	104	49.5	15.1				
5	57	47.5	299	27.7	+19 06.8	30	25.7	+6 42.9	128	42.2	-22 41.5	119	52.0	-21 15.1				
6	72	50.0	314	27.4	+19 06.4	45	28.0	+6 43.0	143	44.8	-22 41.6	134	54.6	-21 15.1				
7	87	52.5	329	27.0	06.1	60	30.2	43.1	158	47.3	41.6	149	57.2	15.1				
8	102	54.9	344	26.6	05.8	75	32.5	43.2	173	49.9	41.6	164	59.8	15.1				
9	117	57.4	359	26.3	05.5	90	34.7	43.3	188	52.4	41.6	180	02.3	15.2				
10	132	59.9	14	25.9	05.2	105	37.0	43.4	203	54.9	41.6	195	04.9	15.2				
11	148	02.3	29	25.5	+19 04.8	120	39.2	+6 43.4	218	57.5	-22 41.6	210	07.5	-21 15.2				
12	163	04.8	44	25.2	+19 04.5	135	41.4	+6 43.5	234	00.0	-22 41.6	225	10.0	-21 15.2				
13	178	07.2	59	24.8	04.2	150	43.7	43.6	249	02.6	41.6	240	12.6	15.3				
14	193	09.7	74	24.5	03.9	165	45.9	43.7	264	05.1	41.7	255	15.2	15.3				
15	208	12.2	89	24.1	03.5	180	48.2	43.8	279	07.7	41.7	270	17.7	15.3				
16	223	14.6	104	23.7	03.2	195	50.4	43.8	294	10.2	41.7	285	20.3	15.3				
17	238	17.1	119	23.4	+19 02.9	210	52.7	+6 43.9	309	12.8	-22 41.7	300	22.9	-21 15.3				
18	253	19.6	134	23.0	+19 02.6	225	55.0	+6 44.0	324	15.3	-22 41.7	315	25.4	-21 15.4				
19	268	22.0	149	22.6	02.2	240	57.2	44.1	339	17.8	41.7	330	28.0	15.4				
20	283	24.5	164	22.3	01.9	255	59.5	44.1	354	20.4	41.7	345	30.6	15.4				
21	298	27.0	179	21.9	01.6	271	01.7	44.2	9	22.9	41.7	0	33.1	15.4				
22	313	29.4	194	21.5	01.2	286	04.0	44.3	24	25.5	41.8	15	35.7	15.4				
23	328	31.9	209	21.2	00.9	301	06.3	44.4	39	28.0	41.8	30	38.3	15.5				
24	343	34.4	224	20.8	+19 00.6	316	08.5	+6 44.5	54	30.6	-22 41.8	45	40.8	-21 15.5				
Dif.	—		-4	-3		+22	+1		+25		0	+26		0				

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 58 ^m 9			SD: 14'8 Edad: 15 ^d 9 PMG: 01 ^h 23 ^m			PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 Rº: 40 ^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	14.6	+7	05.3	339	54.9	160	-3	50.6	122	60 N	18 53	19 37	20 33	19 52	6	7 15	78		
1	195	14.8		04.4	354	29.9	160		38.4	122	58	49	30	22	53	8	17	74		
2	210	15.0		03.5	9	04.9	161		26.2	122	56	46	24	12	53	10	18	72		
3	225	15.2		02.5	23	40.0	161		14.0	122	54	42	19	20 04	53	12	19	70		
4	240	15.4		01.6	38	15.1	161	-3	01.8	123	52	39	14	19 57	53	14	20	68		
5	255	15.6	+7	00.7	52	50.2	161	-2	49.5	122	50	18 37	19 10	19 50	19 53	16	7 21	66		
6	270	15.8	+6	59.8	67	25.3	161	-2	37.3	123	45	18 31	19 01	19 37	19 53	20	7 23	61		
7	285	16.0		58.8	82	00.4	162		25.0	122	40	26	18 54	26	53	23	24	59		
8	300	16.2		57.9	96	35.6	162		12.8	123	35	22	48	18	53	26	26	55		
9	315	16.4		57.0	111	10.8	162	-2	00.5	123	30	18	43	11	53	29	27	53		
10	330	16.6		56.1	125	46.0	162	-1	48.2	122	20	12	35	19 01	53	33	29	48		
11	345	16.9	+6	55.1	140	21.2	162	-1	36.0	123	10 N	18 07	18 28	18 53	19 53	37	7 31	44		
12	0	17.1	+6	54.2	154	56.4	163	-1	23.7	123	0	18 02	18 23	18 47	19 54	40	7 33	40		
13	15	17.3		53.3	169	31.7	162	-1	11.4	122	10 S	17 57	18	43	54	44	34	37		
14	30	17.5		52.4	184	06.9	163	-0	59.2	123	20	52	15	40	54	48	36	33		
15	45	17.7		51.4	198	42.2	163		46.9	123	30	47	11	39	54	53	38	29		
16	60	17.9		50.5	213	17.5	163		34.6	122	35	44	09	38	54	55	39	26		
17	75	18.1	+6	49.6	227	52.8	163	-0	22.4	123	40	17 40	18 07	18 39	19 54	59	7 40	24		
18	90	18.3	+6	48.7	242	28.1	163	-0	10.1	123	45	17 36	18 06	18 40	19 55	61	7 42	20		
19	105	18.5		47.7	257	03.4	163	+0	02.2	122	50	31	04	41	55	65	43	17		
20	120	18.7		46.8	271	38.7	164		14.4	123	52	29	03	42	55	67	44	15		
21	135	19.0		45.9	286	14.1	163		26.7	122	54	27	02	43	55	70	45	13		
22	150	19.2		45.0	300	49.4	164		38.9	123	56	24	01	44	55	72	46	11		
23	165	19.4		44.0	315	24.8	163	+0	51.2	122	58	21	01	46	55	75	47	8		
24	180	19.6	+6	43.1	330	00.1		+1	03.4		60 S	17 18	18 00	18 48	19 56	77	7 48	6		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 05 ^m 5		Mag: -4.3 PMG: 09 ^h 03 ^m				Mag: -1.9 PMG: 02 ^h 55 ^m				Mag: -2.5 PMG: 20 ^h 19 ^m				Mag: +0.3 PMG: 20 ^h 54 ^m			
	hG ♂		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	343	34.4	224	20.8	+19	00.6	316	08.5	+6	44.5	54	30.6	-22	-41.8	45	40.8	-21	15.5
1	358	36.8	239	20.4	+19	00.2	331	10.8		44.5	69	33.1		-41.8	60	43.4		15.5
2	13	39.3	254	20.1	+18	59.9	346	13.0		44.6	84	35.6		-41.8	75	46.0		15.5
3	28	41.7	269	19.7		59.6	1	15.3		44.7	99	38.2		-41.8	90	48.5		15.5
4	43	44.2	284	19.3		59.2	16	17.6		44.8	114	40.7		-41.8	105	51.1		15.6
5	58	46.7	299	18.9	+18	58.9	31	19.9	+6	44.8	129	43.3	-22	-41.8	120	53.7	-21	15.6
6	73	49.1	314	18.6	+18	58.6	46	22.1	+6	44.9	144	45.8	-22	-41.8	135	56.2	-21	15.6
7	88	51.6	329	18.2		58.2	61	24.4		45.0	159	48.3		-41.9	150	58.8		15.6
8	103	54.1	344	17.8		57.9	76	26.7		45.1	174	50.9		-41.9	166	01.4		15.7
9	118	56.5	359	17.5		57.6	91	29.0		45.1	189	53.4		-41.9	181	03.9		15.7
10	133	59.0	14	17.1		57.2	106	31.2		45.2	204	56.0		-41.9	196	06.5		15.7
11	149	01.5	29	16.7	+18	56.9	121	33.5	+6	45.3	219	58.5	-22	-41.9	211	09.1	-21	15.7
12	164	03.9	44	16.4	+18	56.5	136	35.8	+6	45.3	235	01.0	-22	-41.9	226	11.6	-21	15.7
13	179	06.4	59	16.0		56.2	151	38.1		45.4	250	03.6		-41.9	241	14.2		15.8
14	194	08.8	74	15.6		55.8	166	40.4		45.5	265	06.1		-41.9	256	16.8		15.8
15	209	11.3	89	15.2		55.5	181	42.6		45.6	280	08.6		-42.0	271	19.3		15.8
16	224	13.8	104	14.9		55.1	196	44.9		45.6	295	11.2		-42.0	286	21.9		15.8
17	239	16.2	119	14.5	+18	54.8	211	47.2	+6	45.7	310	13.7	-22	-42.0	301	24.5	-21	15.8
18	254	18.7	134	14.1	+18	54.4	226	49.5	+6	45.8	325	16.2	-22	-42.0	316	27.0	-21	15.9
19	269	21.2	149	13.8		54.1	241	51.8		45.8	340	18.8		-42.0	331	29.6		15.9
20	284	23.6	164	13.4		53.7	256	54.1		45.9	355	21.3		-42.0	346	32.2		15.9
21	299	26.1	179	13.0		53.4	271	56.4		46.0	10	23.8		-42.0	1	34.7		15.9
22	314	28.6	194	12.6		53.0	286	58.7		46.0	25	26.4		-42.0	16	37.3		15.9
23	329	31.0	209	12.3		52.7	302	01.0		46.1	40	28.9		-42.0	31	39.9		16.0
24	344	33.5	224	11.9	+18	52.3	317	03.3	+6	46.2	55	31.4	-22	-42.0	46	42.4	-21	16.0
Dif.	—		-4		-3		+23		+1		+25		0		+26		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 5			SD: 14'8 Edad: 16 ^d 9 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 PMG: 02 ^h 03 ^m Rº: 41 ^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 19.6	+6 43.1		330 00.1	164	+1 03.4	122	60 N	3 25	4 21	5 05	19 58 6		8 33 77	
1	195 19.8	42.2		344 35.5	164	15.6	122	58	36	28	09	20 01 9		31 75	
2	210 20.0	41.3		359 10.9	163	27.8	122	56	46	34	13	03 12		30 72	
3	225 20.2	40.3		13 46.2	164	40.0	122	54	3 54	39	16	05 14		29 69	
4	240 20.4	39.4		28 21.6	164	+1 52.2	122	52	4 01	44	19	07 16		28 67	
5	255 20.6	+6 38.5		42 57.0	164	+2 04.4	122	50	4 08	4 48	5 21	20 09 17		8 27 65	
6	270 20.8	+6 37.5		57 32.4	163	+2 16.6	122	45	4 21	4 57	5 27	20 13 21		8 24 62	
7	285 21.1	36.6		72 07.7	164	28.8	121	40	32	5 04	32	16 25		23 58	
8	300 21.3	35.7		86 43.1	164	40.9	122	35	40	10	36	19 27		21 55	
9	315 21.5	34.8		101 18.5	163	+2 53.1	121	30	47	15	39	22 29		20 52	
10	330 21.7	33.8		115 53.8	164	+3 05.2	121	20	4 57	23	45	26 34		17 48	
11	345 21.9	+6 32.9		130 29.2	164	+3 17.3	121	10 N	5 05	5 29	5 51	20 30 38		8 15 44	
12	0 22.1	+6 32.0		145 04.6	163	+3 29.4	121	0	5 10	5 34	5 55	20 34 41		8 13 41	
13	15 22.3	31.0		159 39.9	164	41.5	121	10 S	14	39	6 00	38 45		11 37	
14	30 22.5	30.1		174 15.3	163	+3 53.6	120	20	17	43	05	42 48		09 33	
15	45 22.7	29.2		188 50.6	164	+4 05.6	121	30	18	46	10	47 52		07 29	
16	60 23.0	28.2		203 26.0	163	17.7	120	35	19	48	13	49 56		05 27	
17	75 23.2	+6 27.3		218 01.3	163	+4 29.7	120	40	5 18	5 49	6 17	20 53 58		8 04 23	
18	90 23.4	+6 26.4		232 36.6	163	+4 41.7	119	45	5 17	5 51	6 20	20 56 62		8 02 20	
19	105 23.6	25.5		247 11.9	163	+4 53.6	120	50	16	53	25	21 00 66		8 00 16	
20	120 23.8	24.5		261 47.2	163	+5 05.6	119	52	15	54	27	02 68		7 59 15	
21	135 24.0	23.6		276 22.5	163	17.5	120	54	13	54	30	05 69		58 13	
22	150 24.2	22.7		290 57.8	162	29.5	118	56	12	55	32	07 72		57 10	
23	165 24.4	21.7		305 33.0	163	41.3	119	58	10	56	35	21 10 74		7 55 9	
24	180 24.7	+6 20.8		320 08.3		+5 53.2		60 S	5 09	5 57	6 38	21 13 78		7 54 6	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 01 ^m 6		Mag: -4.3 PMG: 09 ^h 03 ^m			Mag: -1.9 PMG: 02 ^h 51 ^m			Mag: -2.5 PMG: 20 ^h 14 ^m			Mag: +0.3 PMG: 20 ^h 50 ^m			
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.		
h	° ' "		° ' "	° ' "		° ' "	° ' "		° ' "	° ' "		° ' "	° ' "		
0	344 33.5		224 11.9	+18 52.3		317 03.3	+6 46.2		55 31.4	-22 42.0		46 42.4	-21 16.0		
1	359 36.0		239 11.5	52.0		332 05.6	46.2		70 34.0	42.1		61 45.0	16.0		
2	14 38.4		254 11.1	51.6		347 07.9	46.3		85 36.5	42.1		76 47.5	16.0		
3	29 40.9		269 10.8	51.3		2 10.2	46.4		100 39.0	42.1		91 50.1	16.0		
4	44 43.3		284 10.4	50.9		17 12.5	46.4		115 41.6	42.1		106 52.7	16.1		
5	59 45.8		299 10.0	+18 50.6		32 14.8	+6 46.5		130 44.1	-22 42.1		121 55.2	-21 16.1		
6	74 48.3		314 09.6	+18 50.2		47 17.1	+6 46.6		145 46.6	-22 42.1		136 57.8	-21 16.1		
7	89 50.7		329 09.3	49.8		62 19.4	46.6		160 49.2	42.1		152 00.4	16.1		
8	104 53.2		344 08.9	49.5		77 21.7	46.7		175 51.7	42.1		167 02.9	16.1		
9	119 55.7		359 08.5	49.1		92 24.0	46.7		190 54.2	42.1		182 05.5	16.2		
10	134 58.1		14 08.1	48.8		107 26.3	46.8		205 56.8	42.2		197 08.0	16.2		
11	150 00.6		29 07.8	+18 48.4		122 28.6	+6 46.9		220 59.3	-22 42.2		212 10.6	-21 16.2		
12	165 03.1		44 07.4	+18 48.0		137 30.9	+6 46.9		236 01.8	-22 42.2		227 13.2	-21 16.2		
13	180 05.5		59 07.0	47.7		152 33.3	47.0		251 04.3	42.2		242 15.7	16.2		
14	195 08.0		74 06.6	47.3		167 35.6	47.1		266 06.9	42.2		257 18.3	16.3		
15	210 10.4		89 06.3	46.9		182 37.9	47.1		281 09.4	42.2		272 20.9	16.3		
16	225 12.9		104 05.9	46.6		197 40.2	47.2		296 11.9	42.2		287 23.4	16.3		
17	240 15.4		119 05.5	+18 46.2		212 42.5	+6 47.2		311 14.5	-22 42.2		302 26.0	-21 16.3		
18	255 17.8		134 05.1	+18 45.8		227 44.9	+6 47.3		326 17.0	-22 42.2		317 28.5	-21 16.3		
19	270 20.3		149 04.8	45.5		242 47.2	47.3		341 19.5	42.2		332 31.1	16.4		
20	285 22.8		164 04.4	45.1		257 49.5	47.4		356 22.0	42.3		347 33.7	16.4		
21	300 25.2		179 04.0	44.7		272 51.8	47.5		11 24.6	42.3		2 36.2	16.4		
22	315 27.7		194 03.6	44.3		287 54.2	47.5		26 27.1	42.3		17 38.8	16.4		
23	330 30.2		209 03.2	44.0		302 56.5	47.6		41 29.6	42.3		32 41.3	16.4		
24	345 32.6		224 02.9	+18 43.6		317 58.8	+6 47.6		56 32.1	-22 42.3		47 43.9	-21 16.5		
Dif.	—		-4		-4	+23		+1	+25		0	+26			

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9			SD: 14'7 Edad: 17 ^d 9													
	PMG: 11 ^h 58 ^m 2			PMG: 02 ^h 44 ^m R ^o : 41 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.									
h	°	'	°	'	°	'	°	'	°		h m	h m	h m	h m	h m	h m	
0	180	24.7	+6	20.8	320	08.3	162	+5	53.2	119	60 N	18 47	19 31	20 26	20 04	8	9 50
1	195	24.9		19.9	334	43.5	162	+6	05.1	118	58	44	24	15	10	10	46
2	210	25.1		18.9	349	18.7	162		16.9	118	56	40	19	20 06	15	13	42
3	225	25.3		18.0	3	53.9	162		28.7	118	54	37	14	19 58	19	15	38
4	240	25.5		17.1	18	29.1	161		40.5	117	52	35	09	51	23	17	35
5	255	25.7	+6	16.1	33	04.2	162	+6	52.2	117	50	18 32	19 05	19 45	20 26	20	9 32
6	270	25.9	+6	15.2	47	39.4	161	+7	03.9	117	45	18 27	18 57	19 33	20 34	23	9 26
7	285	26.1		14.3	62	14.5	161		15.6	117	40	23	50	23	41	26	21
8	300	26.4		13.3	76	49.6	160		27.3	116	35	19	45	15	46	30	16
9	315	26.6		12.4	91	24.6	161		38.9	116	30	16	40	19 09	20 51	32	12
10	330	26.8		11.5	105	59.7	160	+7	50.5	116	20	11	33	18 59	21 00	36	9 05
11	345	27.0	+6	10.5	120	34.7	160	+8	02.1	116	10 N	18 06	18 27	18 52	21 08	39	8 59
12	0	27.2	+6	09.6	135	09.7	160	+8	13.7	115	0	18 01	18 22	18 46	21 15	43	8 54
13	15	27.4		08.7	149	44.7	160		25.2	115	10 S	17 57	18	43	23	45	48
14	30	27.6		07.7	164	19.7	159		36.7	114	20	53	15	40	30	50	42
15	45	27.9		06.8	178	54.6	159		48.1	114	30	48	12	40	39	54	36
16	60	28.1		05.9	193	29.5	158	+8	59.5	114	35	45	10	40	45	56	32
17	75	28.3	+6	04.9	208	04.3	159	+9	10.9	114	40	17 42	18 09	18 41	21 51	59	8 27
18	90	28.5	+6	04.0	222	39.2	158	+9	22.3	113	45	17 38	18 08	18 42	21 58	62	8 22
19	105	28.7		03.1	237	14.0	158		33.6	113	50	34	07	44	22 06	66	16
20	120	28.9		02.1	251	48.8	157		44.9	112	52	32	06	45	10	68	14
21	135	29.1		01.2	266	23.5	157	+9	56.1	112	54	30	06	47	14	71	11
22	150	29.3	+6	00.3	280	58.2	157	+10	07.3	112	56	28	05	48	19	73	07
23	165	29.6	+5	59.3	295	32.9	156		18.5	111	58	25	05	50	24	76	04
24	180	29.8	+5	58.4	310	07.5		+10	29.6		60 S	17 22	18 04	18 52	22 31	78	8 00

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 57 ^m 7		Mag: -4.2 PMG: 09 ^h 04 ^m			Mag: -1.9 PMG: 02 ^h 48 ^m			Mag: -2.5 PMG: 20 ^h 10 ^m			Mag: +0.3 PMG: 20 ^h 46 ^m						
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	345	32.6	224	02.9	+18	43.6	317	58.8	+6	47.6	56	32.1	-22	-42.3	47	43.9	-21	16.5
1	0	35.1	239	02.5		43.2	333	01.2		47.7	71	34.7		-42.3	62	46.5		16.5
2	15	37.6	254	02.1		42.8	348	03.5		47.7	86	37.2		-42.3	77	49.0		16.5
3	30	40.0	269	01.7		42.5	3	05.8		47.8	101	39.7		-42.3	92	51.6		16.5
4	45	42.5	284	01.3		42.1	18	08.2		47.9	116	42.2		-42.3	107	54.1		16.5
5	60	44.9	299	01.0	+18	41.7	33	10.5	+6	47.9	131	44.7	-22	-42.3	122	56.7	-21	16.6
6	75	47.4	314	00.6	+18	41.3	48	12.9	+6	48.0	146	47.3	-22	-42.3	137	59.3	-21	16.6
7	90	49.9	329	00.2		40.9	63	15.2		48.0	161	49.8		-42.4	153	01.8		16.6
8	105	52.3	343	59.8		40.6	78	17.5		48.1	176	52.3		-42.4	168	04.4		16.6
9	120	54.8	358	59.4		40.2	93	19.9		48.1	191	54.8		-42.4	183	06.9		16.6
10	135	57.3	13	59.1		39.8	108	22.2		48.2	206	57.4		-42.4	198	09.5		16.6
11	150	59.7	28	58.7	+18	39.4	123	24.6	+6	48.2	221	59.9	-22	-42.4	213	12.0	-21	16.7
12	166	02.2	43	58.3	+18	39.0	138	26.9	+6	48.3	237	02.4	-22	-42.4	228	14.6	-21	16.7
13	181	04.7	58	57.9		38.6	153	29.3		48.3	252	04.9		-42.4	243	17.2		16.7
14	196	07.1	73	57.5		38.3	168	31.6		48.4	267	07.4		-42.4	258	19.7		16.7
15	211	09.6	88	57.1		37.9	183	34.0		48.4	282	10.0		-42.4	273	22.3		16.7
16	226	12.0	103	56.8		37.5	198	36.3		48.5	297	12.5		-42.4	288	24.8		16.8
17	241	14.5	118	56.4	+18	37.1	213	38.7	+6	48.5	312	15.0	-22	-42.4	303	27.4	-21	16.8
18	256	17.0	133	56.0	+18	36.7	228	41.1	+6	48.6	327	17.5	-22	-42.5	318	30.0	-21	16.8
19	271	19.4	148	55.6		36.3	243	43.4		48.6	342	20.0		-42.5	333	32.5		16.8
20	286	21.9	163	55.2		35.9	258	45.8		48.7	357	22.5		-42.5	348	35.1		16.8
21	301	24.4	178	54.9		35.5	273	48.1		48.7	12	25.1		-42.5	3	37.6		16.9
22	316	26.8	193	54.5		35.1	288	50.5		48.8	27	27.6		-42.5	18	40.2		16.9
23	331	29.3	208	54.1		34.7	303	52.9		48.8	42	30.1		-42.5	33	42.7		16.9
24	346	31.8	223	53.7	+18	34.3	318	55.2	+6	48.9	57	32.6	-22	-42.5	48	45.3	-21	16.9
Dif.	—		-4			-4	+23			+1	+25			0	+26			

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: 14'7 Edad: 18 ^d 9 PMG: 03 ^h 25 ^m Rº: 43 ^m																									
	hG ☉		Dec		hG ☾		Dif.			Dec			Dif.																	
	h	°	'	°	'	h	°	'		h	°		'	h	°	'	h	°	'											
0	180	29.8	+5	58.4	310	07.5	156	+10	29.6	111	60 N	3 31	4 26	5 10	20 12	11	11 08	80												
1	195	30.0		57.4	324	42.1	156		40.7	110	58	42	33	13	20 14		11 01	76												
2	210	30.2		56.5	339	16.7	155	+10	51.7	110	56	51	38	17	28 16		10 54	73												
3	225	30.4		55.6	353	51.2	155	+11	02.7	110	54	3 58	43	20	34 19		48 7													
4	240	30.6		54.6	8	25.7	155		13.7	109	52	4 05	47	22	40 21		43 68													
5	255	30.8	+5	53.7	23	00.2	154	+11	24.6	109	50	4 11	4 51	5 24	20 46	23	10 38	66												
6	270	31.1	+5	52.8	37	34.6	154	+11	35.5	109	45	4 24	5 00	5 29	20 57	27	10 28	62												
7	285	31.3		51.8	52	09.0	153		46.4	107	40	34	06	34	21 07	30	19 59													
8	300	31.5		50.9	66	43.3	153	+11	57.1	108	35	41	12	37	16 32		12 56													
9	315	31.7		49.9	81	17.6	153	+12	07.9	107	30	48	16	40	23 34		10 05	54												
10	330	31.9		49.0	95	51.9	152		18.6	107	20	4 58	24	46	36 38		9 54	50												
11	345	32.1	+5	48.1	110	26.1	152	+12	29.3	106	10 N	5 05	5 29	5 50	21 47	42	9 45	46												
12	0	32.4	+5	47.1	125	00.3	151	+12	39.9	105	0	5 10	5 34	5 55	21 58	44	9 35	44												
13	15	32.6		46.2	139	34.4	151	+12	50.4	105	10 S	13	38	5 59	22 08	48	26 41													
14	30	32.8		45.3	154	08.5	150	+13	00.9	105	20	15	41	6 03	20 51		17 37													
15	45	33.0		44.3	168	42.5	150		11.4	104	30	16	44	08	33 55		06 33													
16	60	33.2		43.4	183	16.5	149		21.8	104	35	16	45	10	41 57		9 00	30												
17	75	33.4	+5	42.4	197	50.4	149	+13	32.2	103	40	5 15	5 46	6 13	22 50	59	8 53	27												
18	90	33.6	+5	41.5	212	24.3	149	+13	42.5	103	45	5 14	5 47	6 17	23 00	63	8 44	25												
19	105	33.9		40.6	226	58.2	147	+13	52.8	102	50	11	49	21	12 67		35 20													
20	120	34.1		39.6	241	31.9	148	+14	03.0	101	52	10	49	23	18 69		30 19													
21	135	34.3		38.7	256	05.7	147		13.1	101	54	09	49	25	25 71		25 17													
22	150	34.5		37.7	270	39.4	146		23.2	101	56	07	50	27	32 74		19 15													
23	165	34.7		36.8	285	13.0	146		33.3	100	58	05	50	29	23 40	77	8 13	12												
24	180	34.9	+5	35.9	299	46.6		+14	43.3		60 S	5 03	5 51	6 32	23 49	81	8 06	9												
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG: 0 ^h 53 ^m 7		Mag: -4.2 PMG: 09 ^h 05 ^m				Mag: -2.0 PMG: 02 ^h 44 ^m				Mag: -2.5 PMG: 20 ^h 06 ^m				Mag: +0.3 PMG: 20 ^h 41 ^m															
	hG ♈		hG ♀				hG ♂				hG ♃				hG ♄															
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'												
0	346	31.8	223	53.7	+18	34.3	318	55.2	+6	48.9	57	32.6	-22	42.5	48	45.3	-21	16.9												
1	1	34.2	238	53.3		33.9	333	57.6		48.9	72	35.1		42.5	63	47.8		16.9												
2	16	36.7	253	52.9		33.5	349	00.0		49.0	87	37.6		42.5	78	50.4		16.9												
3	31	39.2	268	52.5		33.1	4	02.3		49.0	102	40.2		42.5	93	53.0		17.0												
4	46	41.6	283	52.2		32.8	19	04.7		49.1	117	42.7		42.5	108	55.5		17.0												
5	61	44.1	298	51.8	+18	32.4	34	07.1	+6	49.1	132	45.2	-22	42.5	123	58.1	-21	17.0												
6	76	46.5	313	51.4	+18	32.0	49	09.5	+6	49.1	147	47.7	-22	42.6	139	00.6	-21	17.0												
7	91	49.0	328	51.0		31.5	64	11.8		49.2	162	50.2		42.6	154	03.2		17.0												
8	106	51.5	343	50.6		31.1	79	14.2		49.2	177	52.7		42.6	169	05.7		17.1												
9	121	53.9	358	50.2		30.7	94	16.6		49.3	192	55.2		42.6	184	08.3		17.1												
10	136	56.4	13	49.9		30.3	109	19.0		49.3	207	57.8		42.6	199	10.8		17.1												
11	151	58.9	28	49.5	+18	29.9	124	21.4	+6	49.4	223	00.3	-22	42.6	214	13.4	-21	17.1												
12	167	01.3	43	49.1	+18	29.5	139	23.7	+6	49.4	238	02.8	-22	42.6	229	16.0	-21	17.1												
13	182	03.8	58	48.7		29.1	154	26.1		49.4	253	05.3		42.6	244	18.5		17.2												
14	197	06.3	73	48.3		28.7	169	28.5		49.5	268	07.8		42.6	259	21.1		17.2												
15	212	08.7	88	47.9		28.3	184	30.9		49.5	283	10.3		42.6	274	23.6		17.2												
16	227	11.2	103	47.5		27.9	199	33.3		49.6	298	12.8		42.6	289	26.2		17.2												
17	242	13.7	118	47.1	+18	27.5	214	35.7	+6	49.6	313	15.3	-22	42.6	304	28.7	-21	17.2												
18	257	16.1	133	46.8	+18	27.1	229	38.1	+6	49.6	328	17.8	-22	42.7	319	31.3	-21	17.2												
19	272	18.6	148	46.4		26.7	244	40.5		49.7	343	20.3		42.7	334	33.8		17.3												
20	287	21.0	163	46.0		26.2	259	42.9		49.7	358	22.9		42.7	349	36.4		17.3												
21	302	23.5	178	45.6		25.8	274	45.3		49.8	13	25.4		42.7	4	38.9		17.3												
22	317	26.0	193	45.2		25.4	289	47.7		49.8	28	27.9		42.7	19	41.5		17.3												
23	332	28.4	208	44.8		25.0	304	50.1		49.8	43	30.4		42.7	34	44.0		17.3												
24	347	30.9	223	44.4	+18	24.6	319	52.5	+6	49.9	58	32.9	-22	42.7	49	46.6	-21	17.4												
Dif.	—		-4				-4				+24				0				+25				0				+26			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9			SD: 14°8 Edad: 19 ^d 9														
	PMG: 11 ^h 57 ^m 5			PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5														
	PMG: 04 ^h 08 ^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	180	34.9	+5 35.9	299	46.6	145	+14 43.3	99	60 N	18 41	19 24	20 18	20 23 15		12 28 80			
1	195	35.2	34.9	314	20.1	145	+14 53.2	99	58	38	18	09	34 19		17 76			
2	210	35.4	34.0	328	53.6	144	+15 03.1	98	56	35	13	20 00	44 22		12 07 74			
3	225	35.6	33.0	343	27.0	144	12.9	98	54	33	09	19 53	20 53 25		11 59 71			
4	240	35.8	32.1	358	00.4	143	22.7	97	52	30	05	46	21 01 27		51 69			
5	255	36.0	+5 31.2	12	33.7	143	+15 32.4	96	50	18 28	19 01	19 41	21 09 28		11 44 67			
6	270	36.2	+5 30.2	27	07.0	142	+15 42.0	96	45	18 23	18 53	19 29	21 24 32		11 30 63			
7	285	36.5	29.3	41	40.2	141	+15 51.6	95	40	20	47	19	37 34		18 60			
8	300	36.7	28.3	56	13.3	141	+16 01.1	95	35	16	42	12	48 37		11 08 58			
9	315	36.9	27.4	70	46.4	140	10.6	94	30	14	38	19 06	21 57 39		10 59 56			
10	330	37.1	26.5	85	19.4	140	20.0	93	20	09	31	18 57	22 14 42		44 52			
11	345	37.3	+5 25.5	99	52.4	139	+16 29.3	93	10 N	18 05	18 26	18 50	22 29 44		10 31 49			
12	0	37.5	+5 24.6	114	25.3	138	+16 38.6	91	0	18 01	18 22	18 46	22 42 48		10 19 46			
13	15	37.8	23.6	128	58.1	138	47.7	92	10 S	17 57	18	43	22 56 50		10 07 43			
14	30	38.0	22.7	143	30.9	137	+16 56.9	90	20	53	15	41	23 11 53		9 54 40			
15	45	38.2	21.7	158	03.6	137	+17 05.9	90	30	49	13	41	28 56		39 36			
16	60	38.4	20.8	172	36.3	136	14.9	90	35	47	12	41	38 58		30 35			
17	75	38.6	+5 19.9	187	08.9	135	+17 23.9	88	40	17 44	18 11	18 42	23 49 61		9 20 32			
18	90	38.8	+5 18.9	201	41.4	135	+17 32.7	88	45	17 41	18 10	18 44	** ** *	**	9 09 29			
19	105	39.1	18.0	216	13.9	134	41.5	87	50	37	09	47	** ** *	**	8 55 25			
20	120	39.3	17.0	230	46.3	133	50.2	87	52	36	09	48	** ** *	**	49 23			
21	135	39.5	16.1	245	18.6	133	+17 58.9	86	54	34	09	50	** ** *	**	42 21			
22	150	39.7	15.1	259	50.9	132	+18 07.5	85	56	32	09	52	** ** *	**	34 19			
23	165	39.9	14.2	274	23.1	131	16.0	84	58	29	09	54	** ** *	**	25 16			
24	180	40.1	+5 13.3	288	55.2		+18 24.4		60 S	17 27	18 09	18 57	** ** *	**	8 15 12			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 0 ^h 49 ^m 8		Mag: -4.2 PMG: 09 ^h 05 ^m				Mag: -2.0 PMG: 02 ^h 40 ^m				Mag: -2.5 PMG: 20 ^h 02 ^m				Mag: +0.3 PMG: 20 ^h 37 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	347	30.9	223	44.4	+18 24.6	319	52.5	+6 49.9	58	32.9	-22 -42.7	49	46.6	-21 17.4				
1	2	33.4	238	44.0	24.2	334	54.9	49.9	73	35.4	-42.7	64	49.1	17.4				
2	17	35.8	253	43.7	23.8	349	57.3	49.9	88	37.9	-42.7	79	51.7	17.4				
3	32	38.3	268	43.3	23.3	4	59.7	50.0	103	40.4	-42.7	94	54.3	17.4				
4	47	40.8	283	42.9	22.9	20	02.1	50.0	118	42.9	-42.7	109	56.8	17.4				
5	62	43.2	298	42.5	+18 22.5	35	04.5	+6 50.1	133	45.4	-22 -42.7	124	59.4	-21 17.4				
6	77	45.7	313	42.1	+18 22.1	50	06.9	+6 50.1	148	47.9	-22 -42.7	140	01.9	-21 17.5				
7	92	48.1	328	41.7	21.6	65	09.3	50.1	163	50.4	-42.7	155	04.5	17.5				
8	107	50.6	343	41.3	21.2	80	11.7	50.2	178	52.9	-42.8	170	07.0	17.5				
9	122	53.1	358	40.9	20.8	95	14.1	50.2	193	55.4	-42.8	185	09.6	17.5				
10	137	55.5	13	40.5	20.4	110	16.6	50.2	208	57.9	-42.8	200	12.1	17.5				
11	152	58.0	28	40.2	+18 20.0	125	19.0	+6 50.3	224	00.4	-22 -42.8	215	14.7	-21 17.5				
12	168	00.5	43	39.8	+18 19.5	140	21.4	+6 50.3	239	02.9	-22 -42.8	230	17.2	-21 17.6				
13	183	02.9	58	39.4	19.1	155	23.8	50.3	254	05.5	-42.8	245	19.8	17.6				
14	198	05.4	73	39.0	18.7	170	26.2	50.4	269	08.0	-42.8	260	22.3	17.6				
15	213	07.9	88	38.6	18.2	185	28.7	50.4	284	10.5	-42.8	275	24.9	17.6				
16	228	10.3	103	38.2	17.8	200	31.1	50.4	299	13.0	-42.8	290	27.4	17.6				
17	243	12.8	118	37.8	+18 17.4	215	33.5	+6 50.4	314	15.5	-22 -42.8	305	30.0	-21 17.7				
18	258	15.3	133	37.4	+18 16.9	230	35.9	+6 50.5	329	18.0	-22 -42.8	320	32.5	-21 17.7				
19	273	17.7	148	37.0	16.5	245	38.4	50.5	344	20.5	-42.8	335	35.1	17.7				
20	288	20.2	163	36.6	16.1	260	40.8	50.5	359	23.0	-42.8	350	37.6	17.7				
21	303	22.6	178	36.2	15.6	275	43.2	50.6	14	25.5	-42.8	5	40.2	17.7				
22	318	25.1	193	35.9	15.2	290	45.7	50.6	29	28.0	-42.8	20	42.7	17.7				
23	333	27.6	208	35.5	14.8	305	48.1	50.6	44	30.5	-42.9	35	45.3	17.8				
24	348	30.0	223	35.1	+18 14.3	320	50.5	+6 50.6	59	33.0	-22 -42.9	50	47.8	-21 17.8				
Dif.	—		-4		-4	+24		0	+25		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 2			SD: 14'9 Edad: 20 ^d 9 PMG: 04 ^h 53 ^m			PHE { 4 ^h : 54'7 12 ^h : 54'8 20 ^h : 55'0 Rº: 49 ^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	40.1	+5	13.3	288	55.2	131	+18	24.4	83	60 N	3 37	4 31	5 15	20 38	24	13 48	78
1	195	40.4		12.3	303	27.3	130		32.7	83	58	47	37	18	20 53	28	33	74
2	210	40.6		11.4	317	59.3	129		41.0	82	56	3 55	42	21	21 06	31	21	7
3	225	40.8		10.4	332	31.2	129		49.2	81	54	4 03	47	23	18	32	10	69
4	240	41.0		09.5	347	03.1	128	+18	57.3	81	52	09	51	25	28	34	13 00	67
5	255	41.2	+5	08.5	1	34.9	127	+19	05.4	79	50	4 15	4 54	5 27	21 37	36	12 51	66
6	270	41.5	+5	07.6	16	06.6	127	+19	13.3	79	45	4 27	5 02	5 32	21 56	39	12 33	63
7	285	41.7		06.6	30	38.3	126		21.2	78	40	36	08	36	22 11	42	18	60
8	300	41.9		05.7	45	09.9	125		29.0	77	35	43	13	39	25	42	12 06	58
9	315	42.1		04.8	59	41.4	125		36.7	77	30	49	17	41	36	44	11 55	56
10	330	42.3		03.8	74	12.9	123		44.4	75	20	4 58	24	46	22 56	47	36	54
11	345	42.5	+5	02.9	88	44.2	123	+19	51.9	75	10 N	5 05	5 29	5 50	23 13	49	11 20	51
12	0	42.8	+5	01.9	103	15.5	123	+19	59.4	74	0	5 09	5 33	5 54	23 30	50	11 05	49
13	15	43.0		01.0	117	46.8	121	+20	06.8	72	10 S	12	36	5 57	23 46	52	10 50	46
14	30	43.2	+5	00.0	132	17.9	121		14.0	73	20	14	39	6 01	** ** *	**	34	44
15	45	43.4	+4	59.1	146	49.0	120		21.3	71	30	14	41	05	** ** *	**	15	42
16	60	43.6		58.1	161	20.0	120		28.4	70	35	13	42	08	** ** *	**	10 05	39
17	75	43.9	+4	57.2	175	51.0	119	+20	35.4	69	40	5 12	5 43	6 10	** ** *	**	9 52	38
18	90	44.1	+4	56.2	190	21.9	118	+20	42.3	69	45	5 10	5 44	6 13	0 03	63	9 38	35
19	105	44.3		55.3	204	52.7	117		49.2	67	50	07	44	17	19	67	20	32
20	120	44.5		54.3	219	23.4	116	+20	55.9	67	52	06	45	18	27	69	12	30
21	135	44.7		53.4	233	54.0	116	+21	02.6	66	54	04	45	20	36	70	9 03	28
22	150	44.9		52.4	248	24.6	115		09.2	65	56	5 02	45	22	46	73	8 53	25
23	165	45.2		51.5	262	55.1	115		15.7	63	58	4 59	45	24	0 57	76	8 41	23
24	180	45.4	+4	50.6	277	25.6		+21	22.0		60 S	4 57	5 45	6 26	1 10	80	8 27	19
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 0 ^h 45 ^m 9		Mag: -4.2 PMG: 09 ^h 06 ^m				Mag: -2.0 PMG: 02 ^h 36 ^m				Mag: -2.5 PMG: 19 ^h 58 ^m				Mag: +0.4 PMG: 20 ^h 33 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	348	30.0	223	35.1	+18	14.3	320	50.5	+6	50.6	59	33.0	-22	42.9	50	47.8	-21	17.8
1	3	32.5	238	34.7		13.9	335	53.0		50.7	74	35.5		42.9	65	50.4		17.8
2	18	35.0	253	34.3		13.5	350	55.4		50.7	89	38.0		42.9	80	52.9		17.8
3	33	37.4	268	33.9		13.0	5	57.9		50.7	104	40.5		42.9	95	55.4		17.8
4	48	39.9	283	33.5		12.6	21	00.3		50.7	119	42.9		42.9	110	58.0		17.8
5	63	42.4	298	33.1	+18	12.1	36	02.7	+6	50.8	134	45.4	-22	42.9	126	00.5	-21	17.9
6	78	44.8	313	32.7	+18	11.7	51	05.2	+6	50.8	149	47.9	-22	42.9	141	03.1	-21	17.9
7	93	47.3	328	32.3		11.2	66	07.6		50.8	164	50.4		42.9	156	05.6		17.9
8	108	49.8	343	31.9		10.8	81	10.1		50.8	179	52.9		42.9	171	08.2		17.9
9	123	52.2	358	31.5		10.4	96	12.5		50.9	194	55.4		42.9	186	10.7		17.9
10	138	54.7	13	31.1		09.9	111	15.0		50.9	209	57.9		42.9	201	13.3		17.9
11	153	57.1	28	30.8	+18	09.5	126	17.4	+6	50.9	225	00.4	-22	42.9	216	15.8	-21	18.0
12	168	59.6	43	30.4	+18	09.0	141	19.9	+6	50.9	240	02.9	-22	42.9	231	18.4	-21	18.0
13	184	02.1	58	30.0		08.6	156	22.4		51.0	255	05.4		42.9	246	20.9		18.0
14	199	04.5	73	29.6		08.1	171	24.8		51.0	270	07.9		42.9	261	23.5		18.0
15	214	07.0	88	29.2		07.7	186	27.3		51.0	285	10.4		43.0	276	26.0		18.0
16	229	09.5	103	28.8		07.2	201	29.7		51.0	300	12.9		43.0	291	28.6		18.1
17	244	11.9	118	28.4	+18	06.8	216	32.2	+6	51.0	315	15.4	-22	43.0	306	31.1	-21	18.1
18	259	14.4	133	28.0	+18	06.3	231	34.7	+6	51.1	330	17.9	-22	43.0	321	33.7	-21	18.1
19	274	16.9	148	27.6		05.9	246	37.1		51.1	345	20.4		43.0	336	36.2		18.1
20	289	19.3	163	27.2		05.4	261	39.6		51.1	0	22.9		43.0	351	38.7		18.1
21	304	21.8	178	26.8		04.9	276	42.1		51.1	15	25.3		43.0	6	41.3		18.1
22	319	24.2	193	26.4		04.5	291	44.5		51.1	30	27.8		43.0	21	43.8		18.2
23	334	26.7	208	26.0		04.0	306	47.0		51.2	45	30.3		43.0	36	46.4		18.2
24	349	29.2	223	25.6	+18	03.6	321	49.5	+6	51.2	60	32.8	-22	43.0	51	48.9	-21	18.2
Dif.	—		-4		-4		+24		0		+25		0		+25			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 56 ^m 8			SD: 15'0 Edad: 21 ^d 9 PMG: 05 ^h 42 ^m PHE { 4^h: 55'2 12^h: 55'4 20^h: 55'6 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	180	45.4	+4	50.6	277	25.6	113	+21	22.0	63	60 N	18 35	19 18	20 11	21 02	39	15 06	70		
1	195	45.6		49.6	291	55.9	113		28.3	62	58	32	13	20 02	21 42		14 47	68		
2	210	45.8		48.7	306	26.2	112		34.5	61	56	30	08	19 54	37 43		32	66		
3	225	46.0		47.7	320	56.4	112		40.6	60	54	28	04	47	21 50	45	19	64		
4	240	46.3		46.8	335	26.6	110		46.6	59	52	26	19 00	41	22 02	46	14 07	63		
5	255	46.5	+4	45.8	349	56.6	110	+21	52.5	58	50	18 24	18 56	19 36	22 13	46	13 57	62		
6	270	46.7	+4	44.9	4	26.6	109	+21	58.3	57	45	18 20	18 49	19 25	22 35	47	13 36	60		
7	285	46.9		43.9	18	56.5	109	+22	04.0	56	40	16	44	16	22 53	48	18	59		
8	300	47.1		43.0	33	26.4	108		09.6	55	35	14	39	09	23 07	50	13 04	57		
9	315	47.4		42.0	47	56.2	106		15.1	53	30	11	35	19 03	20 51		12 51	57		
10	330	47.6		41.1	62	25.8	107		20.4	53	20	07	29	18 55	23 43	51	30	54		
11	345	47.8	+4	40.1	76	55.5	105	+22	25.7	52	10 N	18 03	18 24	18 49	***	***	12 11	53		
12	0	48.0	+4	39.2	91	25.0	105	+22	30.9	51	0	18 00	18 21	18 45	***	***	11 54	52		
13	15	48.2		38.2	105	54.5	104		36.0	49	10 S	17 57	18	42	***	***	36	51		
14	30	48.5		37.3	120	23.9	103		40.9	49	20	54	16	41	0 04	54	11 18	49		
15	45	48.7		36.3	134	53.2	103		45.8	47	30	50	14	42	24	57	10 57	47		
16	60	48.9		35.4	149	22.5	102		50.5	46	35	48	13	43	36	58	44	46		
17	75	49.1	+4	34.4	163	51.7	101	+22	55.1	45	40	17 46	18 13	18 44	0 50	59	10 30	44		
18	90	49.3	+4	33.5	178	20.8	100	+22	59.6	44	45	17 43	18 12	18 46	1 06	62	10 13	43		
19	105	49.5		32.5	192	49.8	100	+23	04.0	43	50	40	12	50	26	64	9 52	41		
20	120	49.8		31.6	207	18.8	99		08.3	42	52	39	12	52	36	65	42	39		
21	135	50.0		30.6	221	47.7	98		12.5	41	54	37	12	54	46	68	31	38		
22	150	50.2		29.7	236	16.5	98		16.6	39	56	36	13	56	1 59	69	18	36		
23	165	50.4		28.7	250	45.3	97		20.5	39	58	34	13	18 59	2 13	72	9 04	33		
24	180	50.6	+4	27.8	265	14.0		+23	24.4		60 S	17 32	18 13	19 02	2 30	76	8 46	31		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 0 ^h 41 ^m 9		Mag: -4.2 PMG: 09 ^h 07 ^m				Mag: -2.0 PMG: 02 ^h 32 ^m				Mag: -2.5 PMG: 19 ^h 55 ^m				Mag: +0.4 PMG: 20 ^h 29 ^m			
	hG ♂		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	349	29.2	223	25.6	+18	03.6	321	49.5	+6	51.2	60	32.8	-22	-43.0	51	48.9	-21	18.2
1	4	31.6	238	25.2		03.1	336	51.9		51.2	75	35.3		-43.0	66	51.5		18.2
2	19	34.1	253	24.8		02.7	351	54.4		51.2	90	37.8		-43.0	81	54.0		18.2
3	34	36.6	268	24.4		02.2	6	56.9		51.2	105	40.3		-43.0	96	56.6		18.2
4	49	39.0	283	24.0		01.7	21	59.4		51.2	120	42.8		-43.0	111	59.1		18.2
5	64	41.5	298	23.6	+18	01.3	37	01.9	+6	51.3	135	45.3	-22	-43.0	127	01.6	-21	18.3
6	79	44.0	313	23.3	+18	00.8	52	04.3	+6	51.3	150	47.8	-22	-43.0	142	04.2	-21	18.3
7	94	46.4	328	22.9	+18	00.3	67	06.8		51.3	165	50.2		-43.0	157	06.7		18.3
8	109	48.9	343	22.5	+17	59.9	82	09.3		51.3	180	52.7		-43.0	172	09.3		18.3
9	124	51.4	358	22.1		59.4	97	11.8		51.3	195	55.2		-43.0	187	11.8		18.3
10	139	53.8	13	21.7		58.9	112	14.3		51.3	210	57.7		-43.0	202	14.4		18.3
11	154	56.3	28	21.3	+17	58.5	127	16.8	+6	51.3	226	00.2	-22	-43.1	217	16.9	-21	18.4
12	169	58.7	43	20.9	+17	58.0	142	19.3	+6	51.4	241	02.7	-22	-43.1	232	19.4	-21	18.4
13	185	01.2	58	20.5		57.5	157	21.8		51.4	256	05.2		-43.1	247	22.0		18.4
14	200	03.7	73	20.1		57.1	172	24.2		51.4	271	07.6		-43.1	262	24.5		18.4
15	215	06.1	88	19.7		56.6	187	26.7		51.4	286	10.1		-43.1	277	27.1		18.4
16	230	08.6	103	19.3		56.1	202	29.2		51.4	301	12.6		-43.1	292	29.6		18.4
17	245	11.1	118	18.9	+17	55.7	217	31.7	+6	51.4	316	15.1	-22	-43.1	307	32.2	-21	18.5
18	260	13.5	133	18.5	+17	55.2	232	34.2	+6	51.4	331	17.6	-22	-43.1	322	34.7	-21	18.5
19	275	16.0	148	18.1		54.7	247	36.7		51.4	346	20.1		-43.1	337	37.2		18.5
20	290	18.5	163	17.7		54.2	262	39.2		51.4	1	22.6		-43.1	352	39.8		18.5
21	305	20.9	178	17.3		53.8	277	41.7		51.4	16	25.0		-43.1	7	42.3		18.5
22	320	23.4	193	16.9		53.3	292	44.2		51.5	31	27.5		-43.1	22	44.9		18.5
23	335	25.9	208	16.5		52.8	307	46.8		51.5	46	30.0		-43.1	37	47.4		18.6
24	350	28.3	223	16.1	+17	52.3	322	49.3	+6	51.5	61	32.5	-22	-43.1	52	49.9	-21	18.6
Dif.	—		-4		-5		+25		0		+25		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: 15'2 Edad: 22 ^d 9 PMG: 06 ^h 33 ^m 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	50.6	+4	27.8	265	14.0	96	+23	24.4	37	60 N	3 43	4 36	5 19	21 41	60	16 16	55				
1	195	50.9		26.8	279	42.6	95		28.1	36	58	3 52	42	22	22 03	59	15 55	55				
2	210	51.1		25.9	294	11.1	95		31.7	35	56	4 00	46	24	20	59	38	55				
3	225	51.3		24.9	308	39.6	94		35.2	33	54	07	51	27	35	58	23	55				
4	240	51.5		24.0	323	08.0	94		38.5	33	52	13	54	29	48	58	15 10	56				
5	255	51.7	+4	23.0	337	36.4	92	+23	41.8	31	50	4 18	4 58	5 30	22 59	58	14 59	55				
6	270	52.0	+4	22.1	352	04.6	93	+23	44.9	30	45	4 29	5 05	5 34	23 22	58	14 36	55				
7	285	52.2		21.1	6	32.9	91		47.9	28	40	38	10	37	41	58	17	55				
8	300	52.4		20.2	21	01.0	91		50.7	28	35	45	15	40	23 57	57	14 01	55				
9	315	52.6		19.2	35	29.1	90		53.5	26	30	50	18	43	** ** *	**	13 48	55				
10	330	52.8		18.2	49	57.1	90		56.1	25	20	4 59	24	47	** ** *	**	24	55				
11	345	53.1	+4	17.3	64	25.1	88	+23	58.6	24	10 N	5 04	5 29	5 50	0 02	53	13 04	55				
12	0	53.3	+4	16.3	78	52.9	89	+24	01.0	22	0	5 08	5 32	5 53	0 20	54	12 46	54				
13	15	53.5		15.4	93	20.8	87		03.2	22	10 S	11	35	56	38	55	27	54				
14	30	53.7		14.4	107	48.5	87		05.4	20	20	12	37	5 59	0 58	55	12 07	54				
15	45	54.0		13.5	122	16.2	87		07.4	18	30	11	39	6 03	1 21	56	11 44	53				
16	60	54.2		12.5	136	43.9	86		09.2	17	35	10	39	05	34	57	30	53				
17	75	54.4	+4	11.6	151	11.5	85	+24	10.9	16	40	5 09	5 40	6 07	1 49	58	11 14	53				
18	90	54.6	+4	10.6	165	39.0	84	+24	12.5	15	45	5 06	5 40	6 09	2 08	58	10 56	52				
19	105	54.8		09.7	180	06.4	85		14.0	14	50	03	40	12	30	60	33	51				
20	120	55.1		08.7	194	33.9	83		15.4	12	52	5 01	40	14	41	60	21	52				
21	135	55.3		07.8	209	01.2	83		16.6	10	54	4 59	40	15	2 54	60	10 09	51				
22	150	55.5		06.8	223	28.5	82		17.6	10	56	57	40	17	3 08	61	9 54	51				
23	165	55.7		05.9	237	55.7	82		18.6	8	58	54	39	18	3 25	62	9 37	50				
24	180	55.9	+4	04.9	252	22.9		+24	19.4		60 S	4 51	5 39	6 20	3 46	63	9 17	48				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 0 ^h 38 ^m 0		Mag: -4.2 PMG: 09 ^h 07 ^m				Mag: -2.1 PMG: 02 ^h 28 ^m				Mag: -2.5 PMG: 19 ^h 51 ^m				Mag: +0.4 PMG: 20 ^h 25 ^m							
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°			
0	350	28.3	223	16.1	+17	52.3	322	49.3	+6	51.5	61	32.5	-22	43.1	52	49.9	-21	18.6				
1	5	30.8	238	15.7		51.8	337	51.8		51.5	76	35.0		43.1	67	52.5		18.6				
2	20	33.2	253	15.3		51.4	352	54.3		51.5	91	37.4		43.1	82	55.0		18.6				
3	35	35.7	268	14.9		50.9	7	56.8		51.5	106	39.9		43.1	97	57.6		18.6				
4	50	38.2	283	14.5		50.4	22	59.3		51.5	121	42.4		43.1	113	00.1		18.6				
5	65	40.6	298	14.1	+17	49.9	38	01.8	+6	51.5	136	44.9	-22	43.1	128	02.6	-21	18.7				
6	80	43.1	313	13.7	+17	49.4	53	04.3	+6	51.5	151	47.4	-22	43.1	143	05.2	-21	18.7				
7	95	45.6	328	13.3		48.9	68	06.9		51.5	166	49.8		43.1	158	07.7		18.7				
8	110	48.0	343	12.9		48.5	83	09.4		51.5	181	52.3		43.1	173	10.3		18.7				
9	125	50.5	358	12.5		48.0	98	11.9		51.5	196	54.8		43.1	188	12.8		18.7				
10	140	53.0	13	12.1		47.5	113	14.4		51.5	211	57.3		43.2	203	15.3		18.7				
11	155	55.4	28	11.7	+17	47.0	128	17.0	+6	51.5	226	59.8	-22	43.2	218	17.9	-21	18.7				
12	170	57.9	43	11.3	+17	46.5	143	19.5	+6	51.5	242	02.2	-22	43.2	233	20.4	-21	18.8				
13	186	00.4	58	10.9		46.0	158	22.0		51.5	257	04.7		43.2	248	23.0		18.8				
14	201	02.8	73	10.5		45.5	173	24.5		51.5	272	07.2		43.2	263	25.5		18.8				
15	216	05.3	88	10.1		45.0	188	27.1		51.5	287	09.7		43.2	278	28.0		18.8				
16	231	07.7	103	09.7		44.5	203	29.6		51.5	302	12.1		43.2	293	30.6		18.8				
17	246	10.2	118	09.3	+17	44.0	218	32.1	+6	51.5	317	14.6	-22	43.2	308	33.1	-21	18.8				
18	261	12.7	133	08.9	+17	43.6	233	34.7	+6	51.5	332	17.1	-22	43.2	323	35.6	-21	18.9				
19	276	15.1	148	08.5		43.1	248	37.2		51.5	347	19.6		43.2	338	38.2		18.9				
20	291	17.6	163	08.1		42.6	263	39.8		51.5	2	22.0		43.2	353	40.7		18.9				
21	306	20.1	178	07.7		42.1	278	42.3		51.5	17	24.5		43.2	8	43.3		18.9				
22	321	22.5	193	07.3		41.6	293	44.8		51.5	32	27.0		43.2	23	45.8		18.9				
23	336	25.0	208	06.9		41.1	308	47.4		51.5	47	29.5		43.2	38	48.3		18.9				
24	351	27.5	223	06.5	+17	40.6	323	49.9	+6	51.5	62	31.9	-22	43.2	53	50.9	-21	18.9				
Dif.	—		-4				-5				+25				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 : 57'3	
	PMG: 11 ^h 56 ^m 1				Edad: 23 ^d 9													
	PMG: 07 ^h 27 ^m				Rº: 56 ^m													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.			Civil	Naut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°		h	m	h	m	h	m		
0	180	55.9	+4	04.9	252	22.9	82	+24	19.4	6	18	29	19	12	22	41		
1	195	56.2		03.9	266	50.1	80		20.0	6	27	07	19	56	23	02		
2	210	56.4		03.0	281	17.1	81		20.6	4	25	19	02	48	19	74		
3	225	56.6		02.0	295	44.2	80		21.0	2	23	18	58	42	33	72		
4	240	56.8		01.1	310	11.2	79		21.2	2	21	55	36	46	70	16		
5	255	57.0	+4	00.1	324	38.1	79	+24	21.4	1	18	19	18	52	23	57		
6	270	57.3	+3	59.2	339	05.0	78	+24	21.3	1	18	16	18	45	***	***		
7	285	57.5		58.2	353	31.8	78		21.2	3	13	40	12	***	***	***		
8	300	57.7		57.3	7	58.6	78		20.9	4	11	36	06	***	***	***		
9	315	57.9		56.3	22	25.4	77		20.5	6	09	33	19	01	0	11		
10	330	58.1		55.4	36	52.1	76		19.9	7	05	27	18	53	34	57		
11	345	58.4	+3	54.4	51	18.7	76	+24	19.2	9	18	02	18	23	0	55		
12	0	58.6	+3	53.4	65	45.3	76	+24	18.3	10	17	59	18	20	1	14		
13	15	58.8		52.5	80	11.9	76		17.3	11	57	18	42		33	55		
14	30	59.0		51.5	94	38.5	75		16.2	13	54	16	42		1	53		
15	45	59.3		50.6	109	05.0	74		14.9	14	51	15	43		2	17		
16	60	59.5		49.6	123	31.4	75		13.5	16	49	15	44		31	53		
17	75	59.7	+3	48.7	137	57.9	74	+24	11.9	17	17	48	18	15	2	47		
18	90	59.9	+3	47.7	152	24.3	73	+24	10.2	19	17	46	18	15	3	06		
19	106	00.1		46.7	166	50.6	73		08.3	20	43	15	53		30	51		
20	121	00.4		45.8	181	16.9	73		06.3	21	42	16	55		41	51		
21	136	00.6		44.8	195	43.2	73		04.2	23	41	16	57		3	54		
22	151	00.8		43.9	210	09.5	73	+24	01.9	25	39	16	19	00	4	09		
23	166	01.0		42.9	224	35.8	72	+23	59.4	26	38	17	03		27	49		
24	181	01.2	+3	42.0	239	02.0		+23	56.8		17	36	18	18	4	49		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 0 ^h 34 ^m 1		Mag: -4.2 PMG: 09 ^h 08 ^m				Mag: -2.1 PMG: 02 ^h 24 ^m				Mag: -2.5 PMG: 19 ^h 47 ^m				Mag: +0.4 PMG: 20 ^h 21 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	351	27.5	223	06.5	+17	40.6	323	49.9	+6	51.5	62	31.9	-22	-43.2	53	50.9	-21	18.9
1	6	29.9	238	06.1		40.1	338	52.5		51.5	77	34.4		-43.2	68	53.4		19.0
2	21	32.4	253	05.7		39.6	353	55.0		51.5	92	36.9		-43.2	83	55.9		19.0
3	36	34.8	268	05.3		39.1	8	57.6		51.5	107	39.3		-43.2	98	58.5		19.0
4	51	37.3	283	04.9		38.6	24	00.1		51.5	122	41.8		-43.2	114	01.0		19.0
5	66	39.8	298	04.5	+17	38.1	39	02.7	+6	51.5	137	44.3	-22	-43.2	129	03.6	-21	19.0
6	81	42.2	313	04.1	+17	37.6	54	05.2	+6	51.5	152	46.8	-22	-43.2	144	06.1	-21	19.0
7	96	44.7	328	03.7		37.0	69	07.8		51.5	167	49.2		-43.2	159	08.6		19.1
8	111	47.2	343	03.3		36.5	84	10.3		51.5	182	51.7		-43.2	174	11.2		19.1
9	126	49.6	358	02.9		36.0	99	12.9		51.5	197	54.2		-43.2	189	13.7		19.1
10	141	52.1	13	02.5		35.5	114	15.4		51.5	212	56.6		-43.2	204	16.2		19.1
11	156	54.6	28	02.1	+17	35.0	129	18.0	+6	51.5	227	59.1	-22	-43.2	219	18.8	-21	19.1
12	171	57.0	43	01.7	+17	34.5	144	20.6	+6	51.5	243	01.6	-22	-43.2	234	21.3	-21	19.1
13	186	59.5	58	01.3		34.0	159	23.1		51.5	258	04.0		-43.2	249	23.8		19.1
14	202	02.0	73	00.9		33.5	174	25.7		51.5	273	06.5		-43.2	264	26.4		19.2
15	217	04.4	88	00.5		33.0	189	28.3		51.5	288	09.0		-43.2	279	28.9		19.2
16	232	06.9	103	00.1		32.5	204	30.8		51.5	303	11.4		-43.2	294	31.4		19.2
17	247	09.3	117	59.7	+17	31.9	219	33.4	+6	51.4	318	13.9	-22	-43.2	309	34.0	-21	19.2
18	262	11.8	132	59.3	+17	31.4	234	36.0	+6	51.4	333	16.4	-22	-43.2	324	36.5	-21	19.2
19	277	14.3	147	58.9		30.9	249	38.6		51.4	348	18.8		-43.2	339	39.0		19.2
20	292	16.7	162	58.5		30.4	264	41.1		51.4	3	21.3		-43.3	354	41.6		19.2
21	307	19.2	177	58.1		29.9	279	43.7		51.4	18	23.8		-43.3	9	44.1		19.3
22	322	21.7	192	57.7		29.4	294	46.3		51.4	33	26.2		-43.3	24	46.6		19.3
23	337	24.1	207	57.3		28.8	309	48.9		51.4	48	28.7		-43.3	39	49.2		19.3
24	352	26.6	222	56.9	+17	28.3	324	51.4	+6	51.4	63	31.2	-22	-43.3	54	51.7	-21	19.3
Dif.	—		-4		-5		+25		0		+25		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 55 ^m 7				SD: 15°7 Edad: 24 ^d 9 PHE { 4 ^h : 57°6 12 ^h : 57°9 20 ^h : 58°2 PMG: 08 ^h 23 ^m Rº: 56 ^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	181	01.2	+3	42.0	239	02.0	71	+23	56.8	27	60 N	3 49	4 41	5 24	** ** *	**		17 49	24	
1	196	01.5		41.0	253	28.1	72		54.1	29	58	3 57	46	26	** ** *	**		31	29	
2	211	01.7		40.0	267	54.3	71		51.2	30	56	4 05	51	28	** ** *	**		16	32	
3	226	01.9		39.1	282	20.4	72		48.2	32	54	11	54	30	** ** *	**		17 03	34	
4	241	02.1		38.1	296	46.6	70		45.0	33	52	17	4 58	32	** ** *	**		16 51	37	
5	256	02.4	+3	37.2	311	12.6	71	+23	41.7	34	50	4 22	5 01	5 33	** ** *	**		16 41	39	
6	271	02.6	+3	36.2	325	38.7	71	+23	38.3	36	45	4 32	5 07	5 37	0 20	67		16 20	42	
7	286	02.8		35.3	340	04.8	70		34.7	38	40	40	12	39	39	65		16 02	45	
8	301	03.0		34.3	354	30.8	70		30.9	39	35	46	16	42	0 54	64		15 48	47	
9	316	03.2		33.3	8	56.8	70		27.0	41	30	52	20	44	1 08	62		35	49	
10	331	03.5		32.4	23	22.8	70		22.9	42	20	4 59	25	47	31	60		15 13	52	
11	346	03.7	+3	31.4	37	48.8	70	+23	18.7	43	10 N	5 04	5 29	5 50	1 51	58		14 54	54	
12	1	03.9	+3	30.5	52	14.8	69	+23	14.4	45	0	5 08	5 32	5 53	2 09	57		14 36	57	
13	16	04.1		29.5	66	40.7	70		09.9	46	10 S	10	34	55	28	55		14 18	59	
14	31	04.3		28.5	81	06.7	69		05.3	48	20	10	36	5 58	2 48	53		13 59	62	
15	46	04.6		27.6	95	32.6	70	+23	00.5	50	30	09	36	6 00	3 11	50		37	64	
16	61	04.8		26.6	109	58.6	69	+22	55.5	50	35	07	37	02	24	49		24	66	
17	76	05.0	+3	25.7	124	24.5	69	+22	50.5	53	40	5 05	5 37	6 04	3 40	47		13 09	68	
18	91	05.2	+3	24.7	138	50.4	69	+22	45.2	53	45	5 02	5 36	6 06	3 58	46		12 51	70	
19	106	05.5		23.8	153	16.3	70		39.9	55	50	4 58	36	08	4 21	43		28	74	
20	121	05.7		22.8	167	42.3	69		34.4	57	52	56	35	09	32	41		17	76	
21	136	05.9		21.8	182	08.2	69		28.7	58	54	54	35	10	45	39		12 05	78	
22	151	06.1		20.9	196	34.1	69		22.9	60	56	51	34	11	4 59	37		11 51	80	
23	166	06.3		19.9	211	00.0	69		16.9	61	58	48	34	13	5 16	34		11 35	83	
24	181	06.6	+3	19.0	225	25.9		+22	10.8		60 S	4 44	5 33	6 14	5 36	30		11 15	87	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 0 ^h 30 ^m 1		Mag: -4.2 PMG: 09 ^h 08 ^m				Mag: -2.1 PMG: 02 ^h 20 ^m				Mag: -2.5 PMG: 19 ^h 43 ^m				Mag: +0.4 PMG: 20 ^h 17 ^m					
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	352	26.6	222	56.9	+17	28.3	324	51.4	+6	51.4	63	31.2	-22	43.3	54	51.7	-21	19.3		
1	7	29.1	237	56.5		27.8	339	54.0		51.4	78	33.6		43.3	69	54.2		19.3		
2	22	31.5	252	56.1		27.3	354	56.6		51.3	93	36.1		43.3	84	56.8		19.3		
3	37	34.0	267	55.7		26.8	9	59.2		51.3	108	38.6		43.3	99	59.3		19.3		
4	52	36.5	282	55.3		26.2	25	01.8		51.3	123	41.0		43.3	115	01.8		19.4		
5	67	38.9	297	54.9	+17	25.7	40	04.4	+6	51.3	138	43.5	-22	43.3	130	04.4	-21	19.4		
6	82	41.4	312	54.5	+17	25.2	55	07.0	+6	51.3	153	46.0	-22	43.3	145	06.9	-21	19.4		
7	97	43.8	327	54.1		24.7	70	09.6		51.3	168	48.4		43.3	160	09.4		19.4		
8	112	46.3	342	53.7		24.1	85	12.1		51.3	183	50.9		43.3	175	12.0		19.4		
9	127	48.8	357	53.3		23.6	100	14.7		51.2	198	53.3		43.3	190	14.5		19.4		
10	142	51.2	12	52.9		23.1	115	17.3		51.2	213	55.8		43.3	205	17.0		19.4		
11	157	53.7	27	52.5	+17	22.5	130	19.9	+6	51.2	228	58.3	-22	43.3	220	19.6	-21	19.5		
12	172	56.2	42	52.1	+17	22.0	145	22.5	+6	51.2	244	00.7	-22	43.3	235	22.1	-21	19.5		
13	187	58.6	57	51.7		21.5	160	25.1		51.2	259	03.2		43.3	250	24.6		19.5		
14	203	01.1	72	51.3		20.9	175	27.7		51.2	274	05.6		43.3	265	27.1		19.5		
15	218	03.6	87	50.8		20.4	190	30.3		51.1	289	08.1		43.3	280	29.7		19.5		
16	233	06.0	102	50.4		19.9	205	32.9		51.1	304	10.6		43.3	295	32.2		19.5		
17	248	08.5	117	50.0	+17	19.3	220	35.5	+6	51.1	319	13.0	-22	43.3	310	34.7	-21	19.5		
18	263	11.0	132	49.6	+17	18.8	235	38.2	+6	51.1	334	15.5	-22	43.3	325	37.3	-21	19.6		
19	278	13.4	147	49.2		18.3	250	40.8		51.1	349	17.9		43.3	340	39.8		19.6		
20	293	15.9	162	48.8		17.7	265	43.4		51.1	4	20.4		43.3	355	42.3		19.6		
21	308	18.3	177	48.4		17.2	280	46.0		51.0	19	22.8		43.3	10	44.9		19.6		
22	323	20.8	192	48.0		16.7	295	48.6		51.0	34	25.3		43.3	25	47.4		19.6		
23	338	23.3	207	47.6		16.1	310	51.2		51.0	49	27.8		43.3	40	49.9		19.6		
24	353	25.7	222	47.2	+17	15.6	325	53.8	+6	51.0	64	30.2	-22	43.3	55	52.4	-21	19.6		
Dif.	—		-4		-5		+26		0		+25		0		+25					

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 55 ^m 4			SD: 15°9 Edad: 25 ^d 9 PHE 4^h: 58°5 12^h: 58°8 20^h: 59°1 PMG: 09 ^h 19 ^m Rº: 57^m														
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.											
	h	°	'	°	'	°	'	°	'			h	m	h	m	h	m	m
0	181	06.6	+3	19.0	225	25.9	69	+22	10.8	62	60 N	18 23	19 05	19 57	0 00	93	18 13	16
1	196	06.8		18.0	239	51.8	69	+22	04.6	64	58	21	19 01	49	18	88	18 00	20
2	211	07.0		17.0	254	17.7	69	+21	58.2	66	56	19	18 57	42	33	85	17 48	23
3	226	07.2		16.1	268	43.6	69		51.6	66	54	18	53	36	45	83	37	27
4	241	07.5		15.1	283	09.5	70		45.0	69	52	16	50	31	0 56	80	28	29
5	256	07.7	+3	14.2	297	35.5	69	+21	38.1	69	50	18 15	18 47	19 26	1 06	78	17 20	31
6	271	07.9	+3	13.2	312	01.4	69	+21	31.2	71	45	18 12	18 42	19 16	1 27	74	17 02	35
7	286	08.1		12.2	326	27.3	70		24.1	73	40	10	37	09	44	71	16 47	39
8	301	08.3		11.3	340	53.3	70		16.8	74	35	08	33	19 03	1 58	68	35	42
9	316	08.6		10.3	355	19.3	69		09.4	75	30	06	30	18 58	2 10	66	24	44
10	331	08.8		09.3	9	45.2	70	+21	01.9	77	20	03	25	51	31	62	16 05	49
11	346	09.0	+3	08.4	24	11.2	70	+20	54.2	78	10 N	18 01	18 22	18 46	2 49	59	15 48	53
12	1	09.2	+3	07.4	38	37.2	70	+20	46.4	79	0	17 59	18 19	18 43	3 06	56	15 33	56
13	16	09.5		06.5	53	03.2	70		38.5	81	10 S	57	18	42	23	53	17	60
14	31	09.7		05.5	67	29.2	71		30.4	83	20	54	16	42	3 41	50	15 01	63
15	46	09.9		04.5	81	55.3	70		22.1	83	30	52	16	44	4 01	47	14 41	67
16	61	10.1		03.6	96	21.3	71		13.8	85	35	51	16	46	13	45	30	70
17	76	10.3	+3	02.6	110	47.4	71	+20	05.3	87	40	17 49	18 16	18 48	4 27	42	14 17	73
18	91	10.6	+3	01.7	125	13.5	71	+19	56.6	88	45	17 48	18 17	18 51	4 44	38	14 01	77
19	106	10.8	+3	00.7	139	39.6	71		47.8	89	50	46	18	56	5 04	34	13 42	81
20	121	11.0	+2	59.7	154	05.7	72		38.9	90	52	45	19	18 58	13	33	33	83
21	136	11.2		58.8	168	31.9	72		29.9	92	54	44	20	19 01	24	30	32	86
22	151	11.5		57.8	182	58.1	71		20.7	93	56	43	20	04	36	27	13 11	89
23	166	11.7		56.8	197	24.2	72		11.4	94	58	42	21	07	5 50	23	12 58	92
24	181	11.9	+2	55.9	211	50.4		+19	02.0		60 S	17 41	18 22	19 11	6 06	19	12 42	97

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 0 ^h 26 ^m 2		Mag: -4.2 PMG: 09 ^h 09 ^m				Mag: -2.1 PMG: 02 ^h 16 ^m				Mag: -2.5 PMG: 19 ^h 39 ^m				Mag: +0.4 PMG: 20 ^h 13 ^m			
	hG ♂		hG ♀	dec.			hG ♂	dec.			hG ♀	dec.			hG ♀	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	353	25.7	222	47.2	+17	15.6	325	53.8	+6	51.0	64	30.2	-22	-43.3	55	52.4	-21	19.6
1	8	28.2	237	46.8		15.0	340	56.5		51.0	79	32.7		-43.3	70	55.0		19.7
2	23	30.7	252	46.4		14.5	355	59.1		50.9	94	35.1		-43.3	85	57.5		19.7
3	38	33.1	267	46.0		13.9	11	01.7		50.9	109	37.6		-43.3	101	00.0		19.7
4	53	35.6	282	45.6		13.4	26	04.3		50.9	124	40.0		-43.3	116	02.6		19.7
5	68	38.1	297	45.2	+17	12.9	41	06.9	+6	50.9	139	42.5	-22	-43.3	131	05.1	-21	19.7
6	83	40.5	312	44.8	+17	12.3	56	09.6	+6	50.8	154	44.9	-22	-43.3	146	07.6	-21	19.7
7	98	43.0	327	44.4		11.8	71	12.2		50.8	169	47.4		-43.3	161	10.1		19.7
8	113	45.4	342	44.0		11.2	86	14.8		50.8	184	49.8		-43.3	176	12.7		19.7
9	128	47.9	357	43.6		10.7	101	17.5		50.8	199	52.3		-43.3	191	15.2		19.8
10	143	50.4	12	43.2		10.1	116	20.1		50.7	214	54.7		-43.3	206	17.7		19.8
11	158	52.8	27	42.8	+17	09.6	131	22.7	+6	50.7	229	57.2	-22	-43.3	221	20.2	-21	19.8
12	173	55.3	42	42.4	+17	09.0	146	25.4	+6	50.7	244	59.6	-22	-43.3	236	22.8	-21	19.8
13	188	57.8	57	42.0		08.5	161	28.0		50.7	260	02.1		-43.3	251	25.3		19.8
14	204	00.2	72	41.6		07.9	176	30.6		50.6	275	04.5		-43.3	266	27.8		19.8
15	219	02.7	87	41.2		07.4	191	33.3		50.6	290	07.0		-43.3	281	30.3		19.8
16	234	05.2	102	40.8		06.8	206	35.9		50.6	305	09.4		-43.3	296	32.9		19.9
17	249	07.6	117	40.3	+17	06.3	221	38.6	+6	50.6	320	11.9	-22	-43.3	311	35.4	-21	19.9
18	264	10.1	132	39.9	+17	05.7	236	41.2	+6	50.5	335	14.3	-22	-43.3	326	37.9	-21	19.9
19	279	12.6	147	39.5		05.1	251	43.8		50.5	350	16.8		-43.3	341	40.5		19.9
20	294	15.0	162	39.1		04.6	266	46.5		50.5	5	19.2		-43.3	356	43.0		19.9
21	309	17.5	177	38.7		04.0	281	49.1		50.4	20	21.7		-43.3	11	45.5		19.9
22	324	19.9	192	38.3		03.5	296	51.8		50.4	35	24.1		-43.3	26	48.0		19.9
23	339	22.4	207	37.9		02.9	311	54.4		50.4	50	26.6		-43.3	41	50.6		19.9
24	354	24.9	222	37.5	+17	02.3	326	57.1	+6	50.3	65	29.0	-22	-43.3	56	53.1	-21	20.0
Dif.	—		-4		-6		+26		0		+24		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 0			SD: 16'2 Edad: 26 ^d 9			PHE { 4 ^h : 59'4 12 ^h : 59'7 20 ^h : 60'0										
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.		Civil	Hora		Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	181	11.9	+2	55.9	211	50.4	73	+19	02.0	96	60 N	3 54	4 46	5 29	1 33	100	18 29 12
1	196	12.1		54.9	226	16.7	72	+18	52.4	97	58	4 02	51	31	46	95	20 15
2	211	12.3		54.0	240	42.9	73		42.7	98	56	09	55	32	1 58	91	11 19
3	226	12.6		53.0	255	09.2	73		32.9	100	54	15	4 58	34	2 08	88	18 04 2
4	241	12.8		52.0	269	35.5	74		22.9	101	52	20	5 01	35	16	86	17 57 24
5	256	13.0	+2	51.1	284	01.9	73	+18	12.8	102	50	4 25	5 04	5 36	2 24	83	17 51 26
6	271	13.2	+2	50.1	298	28.2	74	+18	02.6	103	45	4 35	5 10	5 39	2 41	78	17 37 31
7	286	13.5		49.1	312	54.6	74	+17	52.3	105	40	42	14	41	2 55	74	26 35
8	301	13.7		48.2	327	21.0	74		41.8	106	35	48	18	43	3 06	71	17 38
9	316	13.9		47.2	341	47.4	75		31.2	107	30	4 53	21	45	16	68	17 08 42
10	331	14.1		46.3	356	13.9	75		20.5	108	20	5 00	25	47	33	64	16 54 46
11	346	14.3	+2	45.3	10	40.4	75	+17	09.7	109	10 N	5 04	5 29	5 50	3 48	60	16 41 51
12	1	14.6	+2	44.3	25	06.9	75	+16	58.8	111	0	5 07	5 31	5 52	4 02	56	16 29 55
13	16	14.8		43.4	39	33.4	76		47.7	112	10 S	08	33	54	16	52	17 59
14	31	15.0		42.4	54	00.0	76		36.5	112	20	08	34	56	31	48	16 04 63
15	46	15.2		41.4	68	26.6	76		25.3	115	30	06	34	58	48	43	15 48 69
16	61	15.5		40.5	82	53.2	77		13.8	115	35	04	34	5 59	4 58	40	40 71
17	76	15.7	+2	39.5	97	19.9	77	+16	02.3	116	40	5 02	5 33	6 00	5 09	37	15 30 74
18	91	15.9	+2	38.5	111	46.6	77	+15	50.7	118	45	4 59	5 33	6 02	5 22	33	15 18 79
19	106	16.1		37.6	126	13.3	77		38.9	118	50	54	31	03	38	28	15 03 84
20	121	16.3		36.6	140	40.0	78		27.1	120	52	51	31	04	46	26	14 56 87
21	136	16.6		35.7	155	06.8	78		15.1	120	54	49	30	05	5 54	23	49 89
22	151	16.8		34.7	169	33.6	78	+15	03.1	122	56	46	29	06	6 03	21	40 93
23	166	17.0		33.7	184	00.4	79	+14	50.9	123	58	42	28	07	6 13	18	14 30 97
24	181	17.2	+2	32.8	198	27.3		+14	38.6		60 S	4 38	5 27	6 08	6 25	13	14 19 101

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 0 ^h 22 ^m 3		Mag: -4.2 PMG: 09 ^h 10 ^m				Mag: -2.1 PMG: 02 ^h 12 ^m				Mag: -2.5 PMG: 19 ^h 35 ^m				Mag: +0.4 PMG: 20 ^h 09 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	354	24.9	222	37.5	+17	02.3	326	57.1	+6	50.3	65	29.0	-22	43.3	56	53.1	-21	20.0
1	9	27.3	237	37.1		01.8	341	59.7		50.3	80	31.5		43.3	71	55.6		20.0
2	24	29.8	252	36.7		01.2	357	02.4		50.3	95	33.9		43.3	86	58.1		20.0
3	39	32.3	267	36.3		00.7	12	05.1		50.3	110	36.4		43.3	102	00.6		20.0
4	54	34.7	282	35.9	+17	00.1	27	07.7		50.2	125	38.8		43.3	117	03.2		20.0
5	69	37.2	297	35.5	+16	59.5	42	10.4	+6	50.2	140	41.3	-22	43.3	132	05.7	-21	20.0
6	84	39.7	312	35.1	+16	59.0	57	13.0	+6	50.2	155	43.7	-22	43.3	147	08.2	-21	20.0
7	99	42.1	327	34.7		58.4	72	15.7		50.1	170	46.2		43.3	162	10.7		20.0
8	114	44.6	342	34.3		57.8	87	18.4		50.1	185	48.6		43.3	177	13.3		20.1
9	129	47.1	357	33.9		57.3	102	21.0		50.1	200	51.0		43.3	192	15.8		20.1
10	144	49.5	12	33.5		56.7	117	23.7		50.0	215	53.5		43.3	207	18.3		20.1
11	159	52.0	27	33.1	+16	56.1	132	26.4	+6	50.0	230	55.9	-22	43.3	222	20.8	-21	20.1
12	174	54.4	42	32.7	+16	55.5	147	29.0	+6	49.9	245	58.4	-22	43.3	237	23.4	-21	20.1
13	189	56.9	57	32.3		55.0	162	31.7		49.9	261	00.8		43.3	252	25.9		20.1
14	204	59.4	72	31.9		54.4	177	34.4		49.9	276	03.3		43.3	267	28.4		20.1
15	220	01.8	87	31.4		53.8	192	37.1		49.8	291	05.7		43.3	282	30.9		20.1
16	235	04.3	102	31.0		53.3	207	39.7		49.8	306	08.1		43.3	297	33.4		20.2
17	250	06.8	117	30.6	+16	52.7	222	42.4	+6	49.8	321	10.6	-22	43.3	312	36.0	-21	20.2
18	265	09.2	132	30.2	+16	52.1	237	45.1	+6	49.7	336	13.0	-22	43.3	327	38.5	-21	20.2
19	280	11.7	147	29.8		51.5	252	47.8		49.7	351	15.5		43.3	342	41.0		20.2
20	295	14.2	162	29.4		50.9	267	50.5		49.7	6	17.9		43.3	357	43.5		20.2
21	310	16.6	177	29.0		50.4	282	53.2		49.6	21	20.3		43.3	12	46.1		20.2
22	325	19.1	192	28.6		49.8	297	55.8		49.6	36	22.8		43.3	27	48.6		20.2
23	340	21.5	207	28.2		49.2	312	58.5		49.5	51	25.2		43.3	42	51.1		20.2
24	355	24.0	222	27.8	+16	48.6	328	01.2	+6	49.5	66	27.7	-22	43.3	57	53.6	-21	20.3
Dif.	—		-4		-6		+27		0		+24		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 : 60'2 12 ^h : 60'4 20 ^h : 60'6														
	Edad: 27 ^d 9																	
	PMG: 11 ^h 54 ^m 7			PMG: 11 ^h 11 ^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	181	17.2	+2 32.8	198	27.3	79	+14 38.6	124	60 N	18 17	18 59	19 50	3 13 101	18 41 9				
1	196	17.5	31.8	212	54.2	79	26.2	125	58	15	55	43	21 97	35 12				
2	211	17.7	30.8	227	21.1	80	13.7	126	56	14	51	36	29 93	30 15				
3	226	17.9	29.9	241	48.1	80	+14 01.1	126	54	13	48	31	36 90	25 18				
4	241	18.1	28.9	256	15.1	80	+13 48.5	128	52	12	45	26	42 87	21 20				
5	256	18.3	+2 27.9	270	42.1	80	+13 35.7	129	50	18 11	18 43	19 21	3 47 85	18 17 23				
6	271	18.6	+2 27.0	285	09.1	81	+13 22.8	130	45	18 08	18 38	19 12	3 59 80	18 08 28				
7	286	18.8	26.0	299	36.2	81	+13 09.8	130	40	07	34	05	4 09 75	18 01 32				
8	301	19.0	25.0	314	03.3	82	+12 56.8	132	35	05	30	19 00	17 72	17 55 36				
9	316	19.2	24.1	328	30.5	81	43.6	132	30	04	28	18 56	24 69	50 38				
10	331	19.5	23.1	342	57.6	82	30.4	134	20	01	23	49	37 63	40 44				
11	346	19.7	+2 22.1	357	24.8	82	+12 17.0	134	10 N	18 00	18 21	18 45	4 48 58	17 32 49				
12	1	19.9	+2 21.2	11	52.0	83	+12 03.6	135	0	17 58	18 19	18 43	4 58 54	17 24 53				
13	16	20.1	20.2	26	19.3	83	+11 50.1	136	10 S	56	17	42	5 08 50	16 58				
14	31	20.3	19.2	40	46.6	83	36.5	137	20	55	17	42	19 45	17 07 63				
15	46	20.6	18.3	55	13.9	83	22.8	138	30	53	17	45	31 40	16 57 69				
16	61	20.8	17.3	69	41.2	84	+11 09.0	138	35	52	18	47	38 37	51 72				
17	76	21.0	+2 16.3	84	08.6	84	+10 55.2	139	40	17 51	18 18	18 50	5 46 33	16 44 76				
18	91	21.2	+2 15.4	98	36.0	84	+10 41.3	140	45	17 50	18 20	18 54	5 55 30	16 37 80				
19	106	21.5	14.4	113	03.4	84	27.3	141	50	49	21	18 59	6 06 25	27 86				
20	121	21.7	13.4	127	30.8	85	+10 13.2	141	52	48	22	19 02	12 22	23 88				
21	136	21.9	12.5	141	58.3	85	+9 59.1	142	54	48	23	04	17 20	18 91				
22	151	22.1	11.5	156	25.8	85	44.9	143	56	47	24	08	24 16	13 94				
23	166	22.4	10.5	170	53.3	86	30.6	143	58	46	26	12	31 13	07 97				
24	181	22.6	+2 09.6	185	20.9		+9 16.3		60 S	17 46	18 27	19 16	6 38 10	16 00 101				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 0 ^h 18 ^m 3		Mag: -4.2 PMG: 09 ^h 10 ^m				Mag: -2.2 PMG: 02 ^h 08 ^m				Mag: -2.5 PMG: 19 ^h 31 ^m				Mag: +0.4 PMG: 20 ^h 05 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	355	24.0	222	27.8	+16 48.6	328	01.2	+6 49.5	66	27.7	-22 -43.3	57	53.6	-21 20.3				
1	10	26.5	237	27.4	48.0	343	03.9	49.5	81	30.1	-43.3	72	56.1	20.3				
2	25	28.9	252	27.0	47.5	358	06.6	49.4	96	32.5	-43.3	87	58.7	20.3				
3	40	31.4	267	26.6	46.9	13	09.3	49.4	111	35.0	-43.3	103	01.2	20.3				
4	55	33.9	282	26.2	46.3	28	12.0	49.3	126	37.4	-43.3	118	03.7	20.3				
5	70	36.3	297	25.8	+16 45.7	43	14.7	+6 49.3	141	39.8	-22 -43.3	133	06.2	-21 20.3				
6	85	38.8	312	25.4	+16 45.1	58	17.4	+6 49.2	156	42.3	-22 -43.3	148	08.7	-21 20.3				
7	100	41.3	327	25.0	44.5	73	20.1	49.2	171	44.7	-43.3	163	11.3	20.3				
8	115	43.7	342	24.6	44.0	88	22.8	49.2	186	47.1	-43.3	178	13.8	20.4				
9	130	46.2	357	24.2	43.4	103	25.5	49.1	201	49.6	-43.3	193	16.3	20.4				
10	145	48.7	12	23.8	42.8	118	28.2	49.1	216	52.0	-43.3	208	18.8	20.4				
11	160	51.1	27	23.3	+16 42.2	133	30.9	+6 49.0	231	54.4	-22 -43.3	223	21.3	-21 20.4				
12	175	53.6	42	22.9	+16 41.6	148	33.6	+6 49.0	246	56.9	-22 -43.3	238	23.8	-21 20.4				
13	190	56.0	57	22.5	41.0	163	36.3	48.9	261	59.3	-43.3	253	26.4	20.4				
14	205	58.5	72	22.1	40.4	178	39.0	48.9	277	01.7	-43.3	268	28.9	20.4				
15	221	01.0	87	21.7	39.8	193	41.7	48.9	292	04.2	-43.3	283	31.4	20.4				
16	236	03.4	102	21.3	39.2	208	44.4	48.8	307	06.6	-43.3	298	33.9	20.5				
17	251	05.9	117	20.9	+16 38.6	223	47.2	+6 48.8	322	09.0	-22 -43.3	313	36.4	-21 20.5				
18	266	08.4	132	20.5	+16 38.0	238	49.9	+6 48.7	337	11.5	-22 -43.3	328	39.0	-21 20.5				
19	281	10.8	147	20.1	37.4	253	52.6	48.7	352	13.9	-43.3	343	41.5	20.5				
20	296	13.3	162	19.7	36.8	268	55.3	48.6	7	16.3	-43.3	358	44.0	20.5				
21	311	15.8	177	19.3	36.2	283	58.0	48.6	22	18.8	-43.3	13	46.5	20.5				
22	326	18.2	192	18.9	35.6	299	00.7	48.5	37	21.2	-43.3	28	49.0	20.5				
23	341	20.7	207	18.5	35.0	314	03.5	48.5	52	23.6	-43.2	43	51.5	20.5				
24	356	23.1	222	18.1	+16 34.4	329	06.2	+6 48.4	67	26.1	-22 -43.2	58	54.1	-21 20.5				
Dif.	—		-4		-6	+27		0	+24		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 3			SD: 16°5 Edad: 28 ^d 9			PHE { 4 ^h : 60°8 12 ^h : 60°9 20 ^h : 61°0											
	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	181	22.6	+2 09.6	185	20.9	86	+9 16.3	145	60 N	4 00	4 51	5 33	4 54	101	18 50	8		
1	196	22.8	08.6	199	48.5	86	+9 01.8	144	58	07	55	35	4 58	97	47	12		
2	211	23.0	07.6	214	16.1	86	+8 47.4	146	56	14	4 59	36	5 02	94	45	14		
3	226	23.2	06.7	228	43.7	86	32.8	146	54	19	5 02	37	06	91	43	17		
4	241	23.5	05.7	243	11.3	87	18.2	146	52	24	04	38	09	88	41	20		
5	256	23.7	+2 04.7	257	39.0	87	+8 03.6	148	50	4 28	5 07	5 39	5 12	86	18 40	22		
6	271	23.9	+2 03.8	272	06.7	87	+7 48.8	147	45	4 37	5 12	5 41	5 19	80	18 36	27		
7	286	24.1	02.8	286	34.4	87	34.1	149	40	44	16	43	24	76	33	31		
8	301	24.4	01.8	301	02.1	88	19.2	149	35	50	19	45	29	72	31	34		
9	316	24.6	+2 00.9	315	29.9	88	+7 04.3	149	30	4 54	22	46	33	69	28	38		
10	331	24.8	+1 59.9	329	57.7	88	+6 49.4	150	20	5 00	26	48	40	63	24	44		
11	346	25.0	+1 58.9	344	25.5	88	+6 34.4	150	10 N	5 04	5 29	5 50	5 46	58	18 21	48		
12	1	25.2	+1 58.0	358	53.3	88	+6 19.4	151	0	5 06	5 30	5 51	5 52	53	18 17	53		
13	16	25.5	57.0	13	21.1	89	+6 04.3	151	10 S	07	32	52	5 58	48	14	58		
14	31	25.7	56.0	27	49.0	88	+5 49.2	152	20	06	32	54	6 04	44	10	63		
15	46	25.9	55.1	42	16.8	89	34.0	152	30	04	31	55	11	38	06	68		
16	61	26.1	54.1	56	44.7	89	18.8	152	35	5 02	31	56	15	35	03	72		
17	76	26.4	+1 53.1	71	12.6	89	+5 03.6	153	40	4 59	5 30	5 57	6 19	32	18 00	76		
18	91	26.6	+1 52.2	85	40.5	90	+4 48.3	153	45	4 55	5 29	5 58	6 25	27	17 57	80		
19	106	26.8	51.2	100	08.5	89	33.0	153	50	49	27	5 59	31	22	53	85		
20	121	27.0	50.2	114	36.4	90	17.7	154	52	47	26	6 00	34	20	51	88		
21	136	27.2	49.3	129	04.4	89	+4 02.3	154	54	44	25	00	37	17	49	91		
22	151	27.5	48.3	143	32.3	90	+3 46.9	154	56	40	24	01	40	15	47	93		
23	166	27.7	47.3	158	00.3	90	31.5	155	58	36	22	01	6 44	12	17 44	97		
24	181	27.9	+1 46.4	172	28.3		+3 16.0		60 S	4 32	5 21	6 02	6 48	8	17 41	101		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 0 ^h 14 ^m 4		Mag: -4.2 PMG: 09 ^h 11 ^m				Mag: -2.2 PMG: 02 ^h 03 ^m				Mag: -2.5 PMG: 19 ^h 27 ^m				Mag: +0.4 PMG: 20 ^h 01 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	356	23.1	222 18.1	+16 34.4		329 06.2	+6 48.4		67 26.1	-22 43.2		58 54.1	-21 20.5					
1	11	25.6	237 17.7	33.8		344 08.9	48.4		82 28.5	43.2		73 56.6	20.6					
2	26	28.1	252 17.3	33.2		359 11.6	48.3		97 30.9	43.2		88 59.1	20.6					
3	41	30.5	267 16.9	32.6		14 14.4	48.3		112 33.3	43.2		104 01.6	20.6					
4	56	33.0	282 16.5	32.0		29 17.1	48.2		127 35.8	43.2		119 04.1	20.6					
5	71	35.5	297 16.1	+16 31.4		44 19.8	+6 48.2		142 38.2	-22 43.2		134 06.6	-21 20.6					
6	86	37.9	312 15.6	+16 30.8		59 22.6	+6 48.1		157 40.6	-22 43.2		149 09.1	-21 20.6					
7	101	40.4	327 15.2	30.2		74 25.3	48.1		172 43.1	43.2		164 11.7	20.6					
8	116	42.9	342 14.8	29.6		89 28.0	48.0		187 45.5	43.2		179 14.2	20.6					
9	131	45.3	357 14.4	29.0		104 30.8	48.0		202 47.9	43.2		194 16.7	20.6					
10	146	47.8	12 14.0	28.4		119 33.5	47.9		217 50.3	43.2		209 19.2	20.7					
11	161	50.3	27 13.6	+16 27.8		134 36.3	+6 47.9		232 52.8	-22 43.2		224 21.7	-21 20.7					
12	176	52.7	42 13.2	+16 27.2		149 39.0	+6 47.8		247 55.2	-22 43.2		239 24.2	-21 20.7					
13	191	55.2	57 12.8	26.5		164 41.7	47.8		262 57.6	43.2		254 26.7	20.7					
14	206	57.6	72 12.4	25.9		179 44.5	47.7		278 00.0	43.2		269 29.3	20.7					
15	222	00.1	87 12.0	25.3		194 47.2	47.6		293 02.5	43.2		284 31.8	20.7					
16	237	02.6	102 11.6	24.7		209 50.0	47.6		308 04.9	43.2		299 34.3	20.7					
17	252	05.0	117 11.2	+16 24.1		224 52.7	+6 47.5		323 07.3	-22 43.2		314 36.8	-21 20.7					
18	267	07.5	132 10.8	+16 23.5		239 55.5	+6 47.5		338 09.7	-22 43.2		329 39.3	-21 20.7					
19	282	10.0	147 10.4	22.9		254 58.2	47.4		353 12.2	43.2		344 41.8	20.8					
20	297	12.4	162 10.0	22.2		270 01.0	47.4		8 14.6	43.2		359 44.3	20.8					
21	312	14.9	177 09.6	21.6		285 03.8	47.3		23 17.0	43.2		14 46.9	20.8					
22	327	17.4	192 09.2	21.0		300 06.5	47.3		38 19.4	43.2		29 49.4	20.8					
23	342	19.8	207 08.8	20.4		315 09.3	47.2		53 21.8	43.2		44 51.9	20.8					
24	357	22.3	222 08.4	+16 19.8		330 12.0	+6 47.1		68 24.3	-22 43.2		59 54.4	-21 20.8					
Dif.	—		-4	-6		+27	-1		+24	0		+25						

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9			PHE { 4 ^h : 61'0 12 ^h : 61'1 20 ^h : 61'1													
	PMG: 11 ^h 54 ^m 0			Edad: 0 ^d 5													
				PMG: 12 ^h 58 ^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	h m m		
0	181	27.9	+1 46.4	172	28.3	90	+3 16.0	155	60 N	18 11	18 53	19 43	6 35	101	18 58	8	
1	196	28.1	45.4	186	56.3	90	+3 00.5	155	58	10	49	36	35	98	59	11	
2	211	28.4	44.4	201	24.3	90	+2 45.0	155	56	09	46	31	36	94	18 59	15	
3	226	28.6	43.5	215	52.3	90	29.5	155	54	08	43	25	37	91	19 00	18	
4	241	28.8	42.5	230	20.3	91	+2 14.0	156	52	07	41	21	37	89	01	20	
5	256	29.0	+1 41.5	244	48.4	90	+1 58.4	155	50	18 06	18 38	19 17	6 38	86	19 02	22	
6	271	29.2	+1 40.5	259	16.4	91	+1 42.9	156	45	18 05	18 34	19 08	6 39	80	19 03	27	
7	286	29.5	39.6	273	44.5	90	27.3	156	40	03	30	19 02	40	76	04	31	
8	301	29.7	38.6	288	12.5	91	+1 11.7	156	35	02	27	18 57	41	72	05	35	
9	316	29.9	37.6	302	40.6	90	+0 56.1	156	30	01	25	53	42	68	06	38	
10	331	30.1	36.7	317	08.6	91	40.5	156	20	18 00	22	47	43	63	08	43	
11	346	30.4	+1 35.7	331	36.7	90	+0 24.9	157	10 N	17 58	18 19	18 44	6 44	58	19 09	49	
12	1	30.6	+1 34.7	346	04.7	91	+0 09.2	156	0	17 57	18 18	18 42	6 45	53	19 10	53	
13	16	30.8	33.8	0	32.8	91	-0 06.4	156	10 S	56	17	42	46	49	12	57	
14	31	31.0	32.8	15	00.9	90	22.0	156	20	55	17	43	48	43	13	63	
15	46	31.2	31.8	29	28.9	91	37.6	156	30	54	18	46	49	38	14	69	
16	61	31.5	30.9	43	57.0	91	-0 53.2	156	35	54	19	48	50	34	15	72	
17	76	31.7	+1 29.9	58	25.1	90	-1 08.8	156	40	17 53	18 20	18 52	6 51	31	19 16	76	
18	91	31.9	+1 28.9	72	53.1	91	-1 24.4	156	45	17 53	18 22	18 56	6 52	26	19 17	80	
19	106	32.1	27.9	87	21.2	90	40.0	156	50	52	24	19 02	53	22	18	86	
20	121	32.4	27.0	101	49.2	91	-1 55.6	155	52	52	25	05	54	19	19	88	
21	136	32.6	26.0	116	17.3	90	-2 11.1	156	54	51	27	08	54	17	20	91	
22	151	32.8	25.0	130	45.3	90	26.7	155	56	51	28	12	55	14	20	94	
23	166	33.0	24.1	145	13.3	91	42.2	155	58	51	30	16	56	11	21	98	
24	181	33.2	+1 23.1	159	41.4		-2 57.7		60 S	17 50	18 32	19 21	6 56	8	19 22	101	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 0 ^h 10 ^m 5		Mag: -4.2 PMG: 09 ^h 12 ^m			Mag: -2.2 PMG: 01 ^h 59 ^m			Mag: -2.4 PMG: 19 ^h 23 ^m			Mag: +0.4 PMG: 19 ^h 57 ^m					
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	357	22.3	222	08.4	+16 19.8	330	12.0	+6 47.1	68	24.3	-22 -43.2	59	54.4	-21 20.8			
1	12	24.7	237	08.0	19.1	345	14.8	47.1	83	26.7	-43.2	74	56.9	20.8			
2	27	27.2	252	07.5	18.5	0	17.5	47.0	98	29.1	-43.2	89	59.4	20.8			
3	42	29.7	267	07.1	17.9	15	20.3	47.0	113	31.5	-43.2	105	01.9	20.8			
4	57	32.1	282	06.7	17.3	30	23.1	46.9	128	33.9	-43.2	120	04.4	20.9			
5	72	34.6	297	06.3	+16 16.6	45	25.8	+6 46.8	143	36.4	-22 -43.2	135	06.9	-21 20.9			
6	87	37.1	312	05.9	+16 16.0	60	28.6	+6 46.8	158	38.8	-22 -43.2	150	09.5	-21 20.9			
7	102	39.5	327	05.5	15.4	75	31.4	46.7	173	41.2	-43.2	165	12.0	20.9			
8	117	42.0	342	05.1	14.8	90	34.2	46.7	188	43.6	-43.1	180	14.5	20.9			
9	132	44.5	357	04.7	14.1	105	36.9	46.6	203	46.0	-43.1	195	17.0	20.9			
10	147	46.9	12	04.3	13.5	120	39.7	46.5	218	48.5	-43.1	210	19.5	20.9			
11	162	49.4	27	03.9	+16 12.9	135	42.5	+6 46.5	233	50.9	-22 -43.1	225	22.0	-21 20.9			
12	177	51.9	42	03.5	+16 12.2	150	45.3	+6 46.4	248	53.3	-22 -43.1	240	24.5	-21 20.9			
13	192	54.3	57	03.1	11.6	165	48.0	46.4	263	55.7	-43.1	255	27.0	20.9			
14	207	56.8	72	02.7	11.0	180	50.8	46.3	278	58.1	-43.1	270	29.5	21.0			
15	222	59.2	87	02.3	10.3	195	53.6	46.2	294	00.5	-43.1	285	32.1	21.0			
16	238	01.7	102	01.9	09.7	210	56.4	46.2	309	02.9	-43.1	300	34.6	21.0			
17	253	04.2	117	01.5	+16 09.1	225	59.2	+6 46.1	324	05.4	-22 -43.1	315	37.1	-21 21.0			
18	268	06.6	132	01.1	+16 08.4	241	01.9	+6 46.0	339	07.8	-22 -43.1	330	39.6	-21 21.0			
19	283	09.1	147	00.7	07.8	256	04.7	46.0	354	10.2	-43.1	345	42.1	21.0			
20	298	11.6	162	00.3	07.2	271	07.5	45.9	9	12.6	-43.1	0	44.6	21.0			
21	313	14.0	176	59.9	06.5	286	10.3	45.8	24	15.0	-43.1	15	47.1	21.0			
22	328	16.5	191	59.5	05.9	301	13.1	45.8	39	17.4	-43.1	30	49.6	21.0			
23	343	19.0	206	59.0	05.3	316	15.9	45.7	54	19.8	-43.1	45	52.1	21.0			
24	358	21.4	221	58.6	+16 04.6	331	18.7	+6 45.6	69	22.3	-22 -43.1	60	54.6	-21 21.1			
Dif.	—		-4 -6			+28 -1			+24 0			+25 0					

UT	SOL			 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°9'			PHE { 4 ^h : 61°0' 12 ^h : 60°9' 20 ^h : 60°8'															
	PMG: 11 ^h 53 ^m 6			SD: 16°6' Edad: 1 ^d 5					PMG: 13 ^h 51 ^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		
0	181	33.2	+1	23.1	159	41.4	90	-2	57.7	155	60 N	4 05	4 56	5 38	8 16	101	19 06	10	
1	196	33.5		22.1	174	09.4	90	-3	13.2	155	58	12	5 00	39	13	97	10	14	
2	211	33.7		21.2	188	37.4	90		28.7	154	56	18	03	40	10	94	14	17	
3	226	33.9		20.2	203	05.4	90		44.1	154	54	23	05	41	08	90	18	19	
4	241	34.1		19.2	217	33.4	89	-3	59.5	154	52	28	08	42	06	88	21	22	
5	256	34.4	+1	18.2	232	01.3	90	-4	14.9	154	50	4 32	5 10	5 42	8 04	85	19 24	24	
6	271	34.6	+1	17.3	246	29.3	90	-4	30.3	153	45	4 40	5 14	5 44	7 59	81	19 30	29	
7	286	34.8		16.3	260	57.3	89	-4	45.6	153	40	46	18	45	56	76	35	34	
8	301	35.0		15.3	275	25.2	89	-5	00.9	152	35	51	21	46	53	72	40	37	
9	316	35.2		14.4	289	53.1	89		16.1	152	30	4 55	23	47	50	69	44	40	
10	331	35.5		13.4	304	21.0	89		31.3	152	20	5 01	26	48	46	63	51	45	
11	346	35.7	+1	12.4	318	48.9	89	-5	46.5	152	10 N	5 04	5 28	5 49	7 42	58	19 58	49	
12	1	35.9	+1	11.5	333	16.8	89	-6	01.7	151	0	5 06	5 30	5 50	7 38	54	20 03	55	
13	16	36.1		10.5	347	44.7	88		16.8	150	10 S	06	30	51	35	49	09	59	
14	31	36.3		09.5	2	12.5	88		31.8	150	20	05	30	52	31	44	16	63	
15	46	36.6		08.5	16	40.3	88	-6	46.8	150	30	5 01	29	53	27	38	23	69	
16	61	36.8		07.6	31	08.1	88	-7	01.8	149	35	4 59	28	53	24	36	27	72	
17	76	37.0	+1	06.6	45	35.9	88	-7	16.7	148	40	4 55	5 27	5 54	7 22	32	20 32	75	
18	91	37.2	+1	05.6	60	03.7	87	-7	31.5	148	45	4 51	5 25	5 54	7 18	28	20 37	80	
19	106	37.5		04.7	74	31.4	87	-7	46.3	148	50	45	23	55	15	23	44	85	
20	121	37.7		03.7	88	59.1	87	-8	01.1	147	52	42	21	55	13	21	47	88	
21	136	37.9		02.7	103	26.8	87		15.8	146	54	39	20	55	11	18	51	90	
22	151	38.1		01.7	117	54.5	87		30.4	146	56	35	18	55	09	16	54	94	
23	166	38.3	+1	00.8	132	22.2	86		45.0	145	58	30	17	56	7 07	12	20 59	97	
24	181	38.6	+0	59.8	146	49.8		-8	59.5		60 S	4 25	5 15	5 56	7 04	9	21 03	101	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 0 ^h 06 ^m 6		Mag: -4.2 PMG: 09 ^h 12 ^m			Mag: -2.2 PMG: 01 ^h 54 ^m			Mag: -2.4 PMG: 19 ^h 19 ^m			Mag: +0.4 PMG: 19 ^h 53 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	358	21.4	221	58.6	+16	04.6	331	18.7	+6	45.6	69	22.3	-22	43.1	60	54.6	-21	21.1	
1	13	23.9	236	58.2		04.0	346	21.5		45.6	84	24.7		43.1	75	57.1		21.1	
2	28	26.4	251	57.8		03.3	1	24.3		45.5	99	27.1		43.1	90	59.6		21.1	
3	43	28.8	266	57.4		02.7	16	27.1		45.4	114	29.5		43.1	106	02.2		21.1	
4	58	31.3	281	57.0		02.0	31	29.9		45.4	129	31.9		43.1	121	04.7		21.1	
5	73	33.7	296	56.6	+16	01.4	46	32.7	+6	45.3	144	34.3	-22	43.1	136	07.2	-21	21.1	
6	88	36.2	311	56.2	+16	00.8	61	35.5	+6	45.2	159	36.7	-22	43.1	151	09.7	-21	21.1	
7	103	38.7	326	55.8	+16	00.1	76	38.3		45.2	174	39.1		43.0	166	12.2		21.1	
8	118	41.1	341	55.4	+15	59.5	91	41.1		45.1	189	41.5		43.0	181	14.7		21.1	
9	133	43.6	356	55.0		58.8	106	43.9		45.0	204	44.0		43.0	196	17.2		21.1	
10	148	46.1	11	54.6		58.2	121	46.7		45.0	219	46.4		43.0	211	19.7		21.2	
11	163	48.5	26	54.2	+15	57.5	136	49.5	+6	44.9	234	48.8	-22	43.0	226	22.2	-21	21.2	
12	178	51.0	41	53.8	+15	56.9	151	52.3	+6	44.8	249	51.2	-22	43.0	241	24.7	-21	21.2	
13	193	53.5	56	53.4		56.2	166	55.1		44.7	264	53.6		43.0	256	27.2		21.2	
14	208	55.9	71	53.0		55.6	181	58.0		44.7	279	56.0		43.0	271	29.7		21.2	
15	223	58.4	86	52.6		54.9	197	00.8		44.6	294	58.4		43.0	286	32.2		21.2	
16	239	00.8	101	52.2		54.3	212	03.6		44.5	310	00.8		43.0	301	34.7		21.2	
17	254	03.3	116	51.8	+15	53.6	227	06.4	+6	44.5	325	03.2	-22	43.0	316	37.2	-21	21.2	
18	269	05.8	131	51.4	+15	52.9	242	09.2	+6	44.4	340	05.6	-22	43.0	331	39.7	-21	21.2	
19	284	08.2	146	51.0		52.3	257	12.1		44.3	355	08.0		43.0	346	42.2		21.2	
20	299	10.7	161	50.6		51.6	272	14.9		44.2	10	10.4		43.0	1	44.7		21.2	
21	314	13.2	176	50.2		51.0	287	17.7		44.2	25	12.8		43.0	16	47.3		21.3	
22	329	15.6	191	49.8		50.3	302	20.5		44.1	40	15.2		43.0	31	49.8		21.3	
23	344	18.1	206	49.4		49.7	317	23.3		44.0	55	17.6		43.0	46	52.3		21.3	
24	359	20.6	221	48.9	+15	49.0	332	26.2	+6	43.9	70	20.0	-22	43.0	61	54.8	-21	21.3	
Dif.	—		-4			-7	+28			-1	+24			0	+25				

UT	SOL			 LUNA						Latitud	Puesta de Sol				Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9			SD: 16°6 Edad: 2°5																
	PMG: 11 ^h 53 ^m 3			PMG: 14 ^h 45 ^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	181	38.6	+0 59.8	146	49.8	86	-8 59.5	145	60 N	18 05	18 46	19 37	9 57	101	19 16	13				
1	196	38.8	58.8	161	17.4	86	-9 14.0	143	58	04	43	30	50	97	24	17				
2	211	39.0	57.9	175	45.0	85	28.3	144	56	03	40	25	44	93	31	20				
3	226	39.2	56.9	190	12.5	85	42.7	142	54	03	38	20	38	90	37	24				
4	241	39.4	55.9	204	40.0	85	-9 56.9	142	52	02	36	16	34	86	43	26				
5	256	39.7	+0 55.0	219	07.5	85	-10 11.1	141	50	18 02	18 34	19 12	9 29	85	19 48	28				
6	271	39.9	+0 54.0	233	35.0	85	-10 25.2	140	45	18 01	18 30	19 04	9 20	79	19 59	34				
7	286	40.1	53.0	248	02.5	84	39.2	140	40	18 00	27	18 59	12	75	20 09	37				
8	301	40.3	52.0	262	29.9	84	-10 53.2	139	35	17 59	24	54	9 05	71	17	40				
9	316	40.6	51.1	276	57.3	83	-11 07.1	138	30	59	23	50	8 59	69	24	43				
10	331	40.8	50.1	291	24.6	83	20.9	137	20	58	20	45	49	63	36	48				
11	346	41.0	+0 49.1	305	51.9	83	-11 34.6	137	10 N	17 57	18 18	18 42	8 40	59	20 47	52				
12	1	41.2	+0 48.1	320	19.2	83	-11 48.3	135	0	17 57	18 17	18 41	8 32	55	20 58	55				
13	16	41.4	47.2	334	46.5	82	-12 01.8	135	10 S	56	17	41	24	50	21 08	59				
14	31	41.7	46.2	349	13.7	82	15.3	134	20	56	18	43	15	46	19	63				
15	46	41.9	45.2	3	40.9	82	28.7	133	30	55	19	47	05	42	32	68				
16	61	42.1	44.3	18	08.1	81	42.0	133	35	55	21	50	8 00	38	39	71				
17	76	42.3	+0 43.3	32	35.2	82	-12 55.3	131	40	17 55	18 22	18 54	7 54	35	21 47	75				
18	91	42.5	+0 42.3	47	02.4	80	-13 08.4	130	45	17 55	18 24	18 59	7 46	31	21 57	79				
19	106	42.8	41.3	61	29.4	81	21.4	130	50	55	27	19 05	38	26	22 09	83				
20	121	43.0	40.4	75	56.5	80	34.4	128	52	55	29	08	34	24	15	85				
21	136	43.2	39.4	90	23.5	80	-13 47.2	128	54	55	30	12	29	22	21	88				
22	151	43.4	38.4	104	50.5	79	-14 00.0	126	56	55	32	16	25	18	28	91				
23	166	43.7	37.5	119	17.4	79	12.6	126	58	55	34	21	19	15	36	95				
24	181	43.9	+0 36.5	133	44.3		-14 25.2		60 S	17 55	18 37	19 26	7 13	12	22 44	100				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 0 ^h 02 ^m 6		Mag: -4.2 PMG: 09 ^h 13 ^m				Mag: -2.3 PMG: 01 ^h 50 ^m				Mag: -2.4 PMG: 19 ^h 16 ^m				Mag: +0.4 PMG: 19 ^h 49 ^m					
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	359	20.6	221 48.9	+15 49.0		332 26.2	+6 43.9		70 20.0	-22 -43.0		61 54.8	-21 21.3							
1	14 23.0	236 48.5	48.3		347 29.0	43.9		85 22.4	-43.0		76 57.3	21.3								
2	29 25.5	251 48.1	47.7		2 31.8	43.8		100 24.8	-43.0		91 59.8	21.3								
3	44 28.0	266 47.7	47.0		17 34.7	43.7		115 27.2	-42.9		107 02.3	21.3								
4	59 30.4	281 47.3	46.4		32 37.5	43.6		130 29.7	-42.9		122 04.8	21.3								
5	74 32.9	296 46.9	+15 45.7		47 40.3	+6 43.6		145 32.1	-22 -42.9		137 07.3	-21 21.3								
6	89 35.3	311 46.5	+15 45.0		62 43.2	+6 43.5		160 34.5	-22 -42.9		152 09.8	-21 21.3								
7	104 37.8	326 46.1	44.4		77 46.0	43.4		175 36.9	-42.9		167 12.3	21.3								
8	119 40.3	341 45.7	43.7		92 48.9	43.3		190 39.3	-42.9		182 14.8	21.4								
9	134 42.7	356 45.3	43.0		107 51.7	43.3		205 41.7	-42.9		197 17.3	21.4								
10	149 45.2	11 44.9	42.4		122 54.5	43.2		220 44.1	-42.9		212 19.8	21.4								
11	164 47.7	26 44.5	+15 41.7		137 57.4	+6 43.1		235 46.5	-22 -42.9		227 22.3	-21 21.4								
12	179 50.1	41 44.1	+15 41.0		153 00.2	+6 43.0		250 48.9	-22 -42.9		242 24.8	-21 21.4								
13	194 52.6	56 43.7	40.4		168 03.1	42.9		265 51.3	-42.9		257 27.3	21.4								
14	209 55.1	71 43.3	39.7		183 05.9	42.9		280 53.7	-42.9		272 29.8	21.4								
15	224 57.5	86 42.9	39.0		198 08.8	42.8		295 56.1	-42.9		287 32.3	21.4								
16	240 00.0	101 42.5	38.3		213 11.6	42.7		310 58.4	-42.9		302 34.8	21.4								
17	255 02.4	116 42.1	+15 37.7		228 14.5	+6 42.6		326 00.8	-22 -42.9		317 37.3	-21 21.4								
18	270 04.9	131 41.7	+15 37.0		243 17.3	+6 42.5		341 03.2	-22 -42.9		332 39.8	-21 21.4								
19	285 07.4	146 41.3	36.3		258 20.2	42.5		356 05.6	-42.8		347 42.3	21.5								
20	300 09.8	161 40.9	35.6		273 23.0	42.4		11 08.0	-42.8		2 44.8	21.5								
21	315 12.3	176 40.5	35.0		288 25.9	42.3		26 10.4	-42.8		17 47.3	21.5								
22	330 14.8	191 40.1	34.3		303 28.7	42.2		41 12.8	-42.8		32 49.8	21.5								
23	345 17.2	206 39.7	33.6		318 31.6	42.1		56 15.2	-42.8		47 52.3	21.5								
24	0 19.7	221 39.3	+15 32.9		333 34.5	+6 42.0		71 17.6	-22 -42.8		62 54.8	-21 21.5								
Dif.	—		-4		-7	+28		-1	+24		0		+25		0					

UT	SOL			 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9			SD: 16 ^h 4			PHE { 4 ^h : 60 ^m 2 12 ^h : 59 ^m 9 20 ^h : 59 ^m 7										
	PMG: 11 ^h 52 ^m 9			Edad: 3 ^d 5													
				PMG: 15 ^h 40 ^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 m		h m m		
0	181	43.9	+0	133	44.3	79	-14	25.2	125	60 N	4 11	5 01	5 43	11 38	98	19 29	19
1	196	44.1		148	11.2	78		37.7	123	58	17	04	43	27	93	41	24
2	211	44.3		162	38.0	78	-14	50.0	123	56	22	07	44	17	89	19 51	28
3	226	44.5		177	04.8	78	-15	02.3	121	54	27	09	44	08	86	20 01	30
4	241	44.8		191	31.6	77		14.4	121	52	31	11	45	11 00	84	09	33
5	256	45.0	+0	205	58.3	77	-15	26.5	119	50	4 35	5 13	5 45	10 54	81	20 16	35
6	271	45.2	+0	220	25.0	77	-15	38.4	119	45	4 42	5 17	5 46	10 39	76	20 33	39
7	286	45.4		234	51.7	76	-15	50.3	117	40	48	20	47	27	73	46	42
8	301	45.6		249	18.3	76	-16	02.0	116	35	53	22	47	16	71	20 57	45
9	316	45.9		263	44.9	76		13.6	115	30	4 56	24	48	10 08	67	21 07	47
10	331	46.1		278	11.5	75		25.1	114	20	5 01	27	49	9 52	64	24	51
11	346	46.3	+0	292	38.0	75	-16	36.5	113	10 N	5 04	5 28	5 49	9 39	60	21 39	54
12	1	46.5	+0	307	04.5	75	-16	47.8	111	0	5 05	5 29	5 50	9 27	56	21 53	57
13	16	46.7		321	31.0	74	-16	58.9	111	10 S	05	29	50	14	53	22 07	60
14	31	47.0		335	57.4	74	-17	10.0	109	20	5 03	28	50	9 01	50	22	63
15	46	47.2		350	23.8	74		20.9	108	30	4 59	26	50	8 47	45	40	66
16	61	47.4		4	50.2	73		31.7	107	35	56	25	50	38	43	22 50	69
17	76	47.6	+0	19	16.5	73	-17	42.4	105	40	4 52	5 23	5 50	8 29	39	23 02	71
18	91	47.8	+0	33	42.8	73	-17	52.9	105	45	4 47	5 21	5 50	8 17	36	23 16	74
19	106	48.1		48	09.1	72	-18	03.4	103	50	40	18	50	8 04	31	32	79
20	121	48.3		62	35.3	72		13.7	102	52	37	17	50	7 58	29	40	81
21	136	48.5		77	01.5	72		23.9	101	54	33	15	50	51	26	49	83
22	151	48.7		91	27.7	71		34.0	99	56	29	13	50	43	24	23 59	86
23	166	48.9		105	53.8	71		43.9	98	58	24	11	50	7 34	21	***	***
24	181	49.2	+0	120	19.9		-18	53.7		60 S	4 19	5 08	5 50	7 25	16	***	***
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 54 ^m 8		Mag: -4.1 PMG: 09 ^h 14 ^m			Mag: -2.3 PMG: 01 ^h 45 ^m			Mag: -2.4 PMG: 19 ^h 12 ^m			Mag: +0.4 PMG: 19 ^h 45 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'
0	0	19.7	221	39.3	+15	333	34.5	+6	42.0	71	17.6	-22	42.8	62	54.8	-21	21.5
1	15	22.2	236	38.9		348	37.3		42.0	86	20.0		42.8	77	57.3		21.5
2	30	24.6	251	38.5		3	40.2		41.9	101	22.4		42.8	92	59.8		21.5
3	45	27.1	266	38.1		18	43.1		41.8	116	24.8		42.8	108	02.3		21.5
4	60	29.6	281	37.7		33	45.9		41.7	131	27.2		42.8	123	04.8		21.5
5	75	32.0	296	37.3	+15	48	48.8	+6	41.6	146	29.6	-22	42.8	138	07.3	-21	21.5
6	90	34.5	311	36.9	+15	63	51.7	+6	41.5	161	32.0	-22	42.8	153	09.8	-21	21.5
7	105	36.9	326	36.5		78	54.5		41.5	176	34.4		42.8	168	12.3		21.6
8	120	39.4	341	36.1		93	57.4		41.4	191	36.8		42.8	183	14.8		21.6
9	135	41.9	356	35.7		109	00.3		41.3	206	39.2		42.8	198	17.3		21.6
10	150	44.3	11	35.3		124	03.2		41.2	221	41.5		42.7	213	19.8		21.6
11	165	46.8	26	34.9	+15	139	06.0	+6	41.1	236	43.9	-22	42.7	228	22.3	-21	21.6
12	180	49.3	41	34.5	+15	154	08.9	+6	41.0	251	46.3	-22	42.7	243	24.8	-21	21.6
13	195	51.7	56	34.1		169	11.8		40.9	266	48.7		42.7	258	27.3		21.6
14	210	54.2	71	33.7		184	14.7		40.9	281	51.1		42.7	273	29.8		21.6
15	225	56.7	86	33.3		199	17.6		40.8	296	53.5		42.7	288	32.3		21.6
16	240	59.1	101	32.9		214	20.4		40.7	311	55.9		42.7	303	34.8		21.6
17	256	01.6	116	32.5	+15	229	23.3	+6	40.6	326	58.3	-22	42.7	318	37.3	-21	21.6
18	271	04.1	131	32.1	+15	244	26.2	+6	40.5	342	00.7	-22	42.7	333	39.8	-21	21.6
19	286	06.5	146	31.7		259	29.1		40.4	357	03.1		42.7	348	42.3		21.6
20	301	09.0	161	31.2		274	32.0		40.3	12	05.4		42.7	3	44.7		21.7
21	316	11.4	176	30.8		289	34.9		40.2	27	07.8		42.7	18	47.2		21.7
22	331	13.9	191	30.4		304	37.8		40.1	42	10.2		42.7	33	49.7		21.7
23	346	16.4	206	30.0		319	40.7		40.1	57	12.6		42.6	48	52.2		21.7
24	1	18.8	221	29.6	+15	334	43.6	+6	40.0	72	15.0	-22	42.6	63	54.7	-21	21.7
Dif.	—		-4	-7		+29	-1			+24		0		+25			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'9			SD: 16'2			PHE { 4 ^h : 59'4 12 ^h : 59'2 20 ^h : 58'9													
	PMG: 11 ^h 52 ^m 5			Edad: 4 ^d 5																
	PMG: 16 ^h 36 ^m			Rº: 58 ^m																
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº					
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m					
0	181	49.2	+0 13.1	120	19.9	71	-18 53.7	97	60 N	17 59	18 40	19 30	13 16	88	19 48	31				
1	196	49.4	12.2	134	46.0	70	-19 03.4	96	58	58	37	24	13 00	84	20 05	34				
2	211	49.6	11.2	149	12.0	70	13.0	94	56	58	35	19	12 46	81	19	37				
3	226	49.8	10.2	163	38.0	70	22.4	93	54	58	33	15	34	79	31	40				
4	241	50.0	09.3	178	04.0	70	31.7	91	52	58	31	11	24	77	42	41				
5	256	50.3	+0 08.3	192	30.0	69	-19 40.8	91	50	17 57	18 29	19 07	12 15	75	20 51	44				
6	271	50.5	+0 07.3	206	55.9	69	-19 49.9	89	45	17 57	18 26	19 00	11 55	72	21 12	46				
7	286	50.7	06.3	221	21.8	69	-19 58.8	87	40	57	24	18 55	40	69	28	48				
8	301	50.9	05.4	235	47.7	68	-20 07.5	87	35	56	22	51	27	66	42	50				
9	316	51.1	04.4	250	13.5	68	16.2	84	30	56	20	48	11 15	65	21 54	52				
10	331	51.4	03.4	264	39.3	68	24.6	84	20	56	18	43	10 56	62	22 15	54				
11	346	51.6	+0 02.4	279	05.1	68	-20 33.0	82	10 N	17 56	18 17	18 41	10 39	59	22 33	56				
12	1	51.8	+0 01.5	293	30.9	68	-20 41.2	81	0	17 56	18 16	18 40	10 23	57	22 50	58				
13	16	52.0	+0 00.5	307	56.7	67	49.3	79	10 S	56	17	41	10 07	55	23 07	59				
14	31	52.2	-0 00.5	322	22.4	67	-20 57.2	78	20	56	18	44	9 51	52	25	61				
15	46	52.5	01.5	336	48.1	67	-21 05.0	77	30	56	20	48	32	49	46	64				
16	61	52.7	02.4	351	13.8	66	12.7	75	35	57	22	52	21	47	23 59	64				
17	76	52.9	-0 03.4	5	39.4	67	-21 20.2	74	40	17 57	18 24	18 56	9 08	45	***	***				
18	91	53.1	-0 04.4	20	05.1	66	-21 27.6	72	45	17 57	18 27	19 01	8 53	43	***	***				
19	106	53.3	05.3	34	30.7	66	34.8	71	50	58	30	08	35	39	***	***				
20	121	53.6	06.3	48	56.3	66	41.9	69	52	58	32	12	27	37	***	***				
21	136	53.8	07.3	63	21.9	66	48.8	68	54	59	34	16	17	35	***	***				
22	151	54.0	08.3	77	47.5	65	-21 55.6	67	56	59	36	20	8 07	32	***	***				
23	166	54.2	09.2	92	13.0	66	-22 02.3	65	58	17 59	39	26	7 55	29	0 11	89				
24	181	54.4	-0 10.2	106	38.6		-22 08.8		60 S	18 00	18 41	19 32	7 41	24	0 24	94				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 23 ^h 50 ^m 8		Mag: -4.1 PMG: 09 ^h 14 ^m				Mag: -2.3 PMG: 01 ^h 41 ^m				Mag: -2.4 PMG: 19 ^h 08 ^m				Mag: +0.4 PMG: 19 ^h 41 ^m					
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	1	18.8	221	29.6	+15 16.4	334	43.6	+6 40.0	72	15.0	-22 -42.6	63	54.7	-21 21.7						
1	16	21.3	236	29.2	15.7	349	46.4	39.9	87	17.4	-42.6	78	57.2	21.7						
2	31	23.8	251	28.8	15.0	4	49.3	39.8	102	19.8	-42.6	93	59.7	21.7						
3	46	26.2	266	28.4	14.3	19	52.2	39.7	117	22.1	-42.6	109	02.2	21.7						
4	61	28.7	281	28.0	13.6	34	55.1	39.6	132	24.5	-42.6	124	04.7	21.7						
5	76	31.2	296	27.6	+15 12.9	49	58.0	+6 39.5	147	26.9	-22 -42.6	139	07.2	-21 21.7						
6	91	33.6	311	27.2	+15 12.2	65	00.9	+6 39.4	162	29.3	-22 -42.6	154	09.7	-21 21.7						
7	106	36.1	326	26.8	11.5	80	03.8	39.3	177	31.7	-42.6	169	12.2	21.7						
8	121	38.5	341	26.4	10.8	95	06.7	39.2	192	34.1	-42.6	184	14.7	21.7						
9	136	41.0	356	26.0	10.1	110	09.7	39.1	207	36.5	-42.6	199	17.2	21.8						
10	151	43.5	11	25.6	09.4	125	12.6	39.0	222	38.8	-42.6	214	19.7	21.8						
11	166	45.9	26	25.2	+15 08.7	140	15.5	+6 39.0	237	41.2	-22 -42.6	229	22.2	-21 21.8						
12	181	48.4	41	24.8	+15 08.0	155	18.4	+6 38.9	252	43.6	-22 -42.5	244	24.7	-21 21.8						
13	196	50.9	56	24.4	07.3	170	21.3	38.8	267	46.0	-42.5	259	27.1	21.8						
14	211	53.3	71	24.0	06.5	185	24.2	38.7	282	48.4	-42.5	274	29.6	21.8						
15	226	55.8	86	23.6	05.8	200	27.1	38.6	297	50.7	-42.5	289	32.1	21.8						
16	241	58.3	101	23.2	05.1	215	30.0	38.5	312	53.1	-42.5	304	34.6	21.8						
17	257	00.7	116	22.8	+15 04.4	230	32.9	+6 38.4	327	55.5	-22 -42.5	319	37.1	-21 21.8						
18	272	03.2	131	22.4	+15 03.7	245	35.9	+6 38.3	342	57.9	-22 -42.5	334	39.6	-21 21.8						
19	287	05.7	146	22.0	03.0	260	38.8	38.2	358	00.3	-42.5	349	42.1	21.8						
20	302	08.1	161	21.6	02.3	275	41.7	38.1	13	02.6	-42.5	4	44.6	21.8						
21	317	10.6	176	21.2	01.6	290	44.6	38.0	28	05.0	-42.5	19	47.1	21.8						
22	332	13.0	191	20.8	00.9	305	47.5	37.9	43	07.4	-42.5	34	49.6	21.8						
23	347	15.5	206	20.4	+15 00.1	320	50.5	37.8	58	09.8	-42.4	49	52.1	21.9						
24	2	18.0	221	20.0	+14 59.4	335	53.4	+6 37.7	73	12.2	-22 -42.4	64	54.6	-21 21.9						
Dif.	—		-4 -7				+29 -1				+24 0				+25 0					

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9'				SD: 16°0'												PHE { 4 ^h : 58'7"	
	PMG: 11 ^h 52 ^m 2				Edad: 5 ^d 5					{ 12 ^h : 58'4"								
					20 ^h : 58'1"													
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.							
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	181	54.4	-0	10.2	106	38.6	65	-22	08.8	63	60 N	4 16	5 06	5 47	14 44	71	20 19	48
1	196	54.6		11.2	121	04.1	65		15.1	62	58	22	08	48	24	68	39	50
2	211	54.9		12.2	135	29.6	65		21.3	61	56	27	11	48	14 07	67	20 56	51
3	226	55.1		13.1	149	55.1	65		27.4	59	54	31	13	48	13 53	66	21 11	52
4	241	55.3		14.1	164	20.6	65		33.3	58	52	35	15	48	41	65	23	53
5	256	55.5	-0	15.1	178	46.1	65	-22	39.1	56	50	4 38	5 16	5 48	13 30	64	21 35	53
6	271	55.7	-0	16.1	193	11.6	65	-22	44.7	55	45	4 45	5 19	5 49	13 07	63	21 58	54
7	286	56.0		17.0	207	37.1	64		50.2	53	40	50	22	49	12 49	62	22 16	55
8	301	56.2		18.0	222	02.5	65	-22	55.5	52	35	54	24	49	33	62	32	55
9	316	56.4		19.0	236	28.0	65	-23	00.7	51	30	4 57	25	49	12 20	61	22 46	55
10	331	56.6		19.9	250	53.5	64		05.8	48	20	5 02	27	49	11 58	59	23 09	56
11	346	56.8	-0	20.9	265	18.9	65	-23	10.6	48	10 N	5 04	5 28	5 49	11 38	58	23 29	56
12	1	57.1	-0	21.9	279	44.4	64	-23	15.4	45	0	5 04	5 28	5 49	11 20	57	23 48	56
13	16	57.3		22.9	294	09.8	65		19.9	45	10 S	03	28	49	11 02	56	***	***
14	31	57.5		23.8	308	35.3	64		24.4	43	20	5 01	26	48	10 43	55	***	***
15	46	57.7		24.8	323	00.7	65		28.7	41	30	4 56	24	48	21	53	***	***
16	61	57.9		25.8	337	26.2	65		32.8	40	35	53	22	47	10 08	53	***	***
17	76	58.1	-0	26.8	351	51.7	64	-23	36.8	38	40	4 48	5 20	5 47	9 53	52	0 13	66
18	91	58.4	-0	27.7	6	17.1	65	-23	40.6	37	45	4 43	5 17	5 47	9 36	50	0 30	68
19	106	58.6		28.7	20	42.6	65		44.3	35	50	36	14	46	14	48	0 51	70
20	121	58.8		29.7	35	08.1	65		47.8	34	52	32	12	46	9 04	47	1 01	71
21	136	59.0		30.7	49	33.6	65		51.2	32	54	28	10	45	8 52	46	12	73
22	151	59.2		31.6	63	59.1	65		54.4	31	56	23	08	45	39	44	25	75
23	166	59.4		32.6	78	24.6	66	-23	57.5	29	58	18	05	44	8 24	42	1 40	77
24	181	59.7	-0	33.6	92	50.2		-24	00.4		60 S	4 12	5 02	5 44	8 05	39	1 58	80
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -4.1				Mag: -2.3				Mag: -2.4				Mag: +0.4			
	23 ^h 46 ^m 9		PMG: 09 ^h 15 ^m				PMG: 01 ^h 36 ^m				PMG: 19 ^h 04 ^m				PMG: 19 ^h 37 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	2	18.0	221	20.0	+14	59.4	335	53.4	+6	37.7	73	12.2	-22	42.4	64	54.6	-21	21.9
1	17	20.4	236	19.6		58.7	350	56.3		37.6	88	14.5		42.4	79	57.0		21.9
2	32	22.9	251	19.2		58.0	5	59.3		37.5	103	16.9		42.4	94	59.5		21.9
3	47	25.4	266	18.8		57.3	21	02.2		37.4	118	19.3		42.4	110	02.0		21.9
4	62	27.8	281	18.5		56.5	36	05.1		37.3	133	21.7		42.4	125	04.5		21.9
5	77	30.3	296	18.1	+14	55.8	51	08.0	+6	37.2	148	24.0	-22	42.4	140	07.0	-21	21.9
6	92	32.8	311	17.7	+14	55.1	66	11.0	+6	37.1	163	26.4	-22	42.4	155	09.5	-21	21.9
7	107	35.2	326	17.3		54.4	81	13.9		37.0	178	28.8		42.4	170	12.0		21.9
8	122	37.7	341	16.9		53.7	96	16.8		36.9	193	31.2		42.4	185	14.5		21.9
9	137	40.2	356	16.5		52.9	111	19.8		36.8	208	33.5		42.4	200	17.0		21.9
10	152	42.6	11	16.1		52.2	126	22.7		36.7	223	35.9		42.4	215	19.5		21.9
11	167	45.1	26	15.7	+14	51.5	141	25.7	+6	36.6	238	38.3	-22	42.3	230	21.9	-21	21.9
12	182	47.5	41	15.3	+14	50.8	156	28.6	+6	36.5	253	40.7	-22	42.3	245	24.4	-21	21.9
13	197	50.0	56	14.9		50.0	171	31.5		36.4	268	43.0		42.3	260	26.9		21.9
14	212	52.5	71	14.5		49.3	186	34.5		36.3	283	45.4		42.3	275	29.4		22.0
15	227	54.9	86	14.1		48.6	201	37.4		36.2	298	47.8		42.3	290	31.9		22.0
16	242	57.4	101	13.7		47.9	216	40.4		36.1	313	50.2		42.3	305	34.4		22.0
17	257	59.9	116	13.3	+14	47.1	231	43.3	+6	36.0	328	52.5	-22	42.3	320	36.9	-21	22.0
18	273	02.3	131	12.9	+14	46.4	246	46.3	+6	35.9	343	54.9	-22	42.3	335	39.4	-21	22.0
19	288	04.8	146	12.5		45.7	261	49.2		35.8	358	57.3		42.3	350	41.8		22.0
20	303	07.3	161	12.1		44.9	276	52.2		35.7	13	59.6		42.3	5	44.3		22.0
21	318	09.7	176	11.7		44.2	291	55.1		35.6	29	02.0		42.2	20	46.8		22.0
22	333	12.2	191	11.3		43.5	306	58.1		35.5	44	04.4		42.2	35	49.3		22.0
23	348	14.7	206	10.9		42.7	322	01.0		35.4	59	06.7		42.2	50	51.8		22.0
24	3	17.1	221	10.5	+14	42.0	337	04.0	+6	35.3	74	09.1	-22	42.2	65	54.3	-21	22.0
Dif.	—		-4		-7		+29		-1		+24		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 51 ^m 9				SD: 15'8 Edad: 6 ^d 5 PMG: 18 ^h 31 ^m														
	hG ☉		Dec		hG ☾		Dif.				Dec		Dif.						
	h	°	'	°	'	°	'	°			'	°	'	h	m	h	m	h	m
0	181	59.7	-0	33.6	92	50.2	65	-24	00.4	28	60 N	17 53	18 34	19 23	15 55	48	21 07	67	
1	196	59.9		34.5	107	15.7	66		03.2	26	58	53	32	18	32	50	29	66	
2	212	00.1		35.5	121	41.3	66		05.8	25	56	53	30	13	15 14	51	21 47	64	
3	227	00.3		36.5	136	06.9	66		08.3	23	54	53	28	09	14 59	51	22 03	63	
4	242	00.5		37.5	150	32.5	66		10.6	22	52	53	26	06	46	52	16	62	
5	257	00.8	-0	38.4	164	58.1	66	-24	12.8	20	50	17 53	18 25	19 03	14 34	53	22 28	61	
6	272	01.0	-0	39.4	179	23.7	67	-24	14.8	19	45	17 53	18 22	18 57	14 10	53	22 52	60	
7	287	01.2		40.4	193	49.4	67		16.7	17	40	53	20	52	13 51	54	23 11	59	
8	302	01.4		41.4	208	15.1	67		18.4	16	35	53	19	48	35	54	27	59	
9	317	01.6		42.3	222	40.8	68		20.0	14	30	54	18	45	13 21	54	23 41	58	
10	332	01.8		43.3	237	06.6	67		21.4	13	20	54	16	42	12 57	55	***	***	
11	347	02.1	-0	44.3	251	32.3	68	-24	22.7	11	10 N	17 55	18 16	18 40	12 36	56	***	***	
12	2	02.3	-0	45.3	265	58.1	68	-24	23.8	10	0	17 55	18 16	18 40	12 17	56	***	***	
13	17	02.5		46.2	280	23.9	69		24.8	8	10 S	56	17	41	11 58	57	0 06	57	
14	32	02.7		47.2	294	49.8	69		25.6	7	20	57	19	44	38	56	26	58	
15	47	02.9		48.2	309	15.7	69		26.3	5	30	58	21	49	14	57	0 50	57	
16	62	03.1		49.2	323	41.6	70		26.8	4	35	58	24	53	11 01	57	1 03	58	
17	77	03.4	-0	50.1	338	07.6	70	-24	27.2	3	40	17 59	18 26	18 58	10 45	57	1 19	58	
18	92	03.6	-0	51.1	352	33.6	70	-24	27.5	1	45	18 00	18 29	19 04	10 26	57	1 38	58	
19	107	03.8		52.1	6	59.6	71		27.6	1	50	01	33	12	10 02	58	2 01	59	
20	122	04.0		53.0	21	25.7	71		27.5	2	52	02	35	15	9 51	57	12	59	
21	137	04.2		54.0	35	51.8	72		27.3	3	54	02	38	20	38	57	25	59	
22	152	04.4		55.0	50	18.0	72		27.0	5	56	03	40	25	23	58	40	59	
23	167	04.7		56.0	64	44.2	72		26.5	6	58	04	43	30	9 06	57	2 57	59	
24	182	04.9	-0	56.9	79	10.4		-24	25.9		60 S	18 04	18 46	19 37	8 44	58	3 18	60	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 23 ^h 43 ^m 0		Mag: -4.1 PMG: 09 ^h 16 ^m				Mag: -2.4 PMG: 01 ^h 31 ^m				Mag: -2.4 PMG: 19 ^h 00 ^m				Mag: +0.4 PMG: 19 ^h 33 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	3	17.1	221	10.5	+14	42.0	337	04.0	+6	35.3	74	09.1	-22	-42.2	65	54.3	-21	22.0
1	18	19.6	236	10.1		41.3	352	06.9		35.2	89	11.5		-42.2	80	56.8		22.0
2	33	22.0	251	09.7		40.5	7	09.9		35.1	104	13.9		-42.2	95	59.2		22.0
3	48	24.5	266	09.3		39.8	22	12.9		35.0	119	16.2		-42.2	111	01.7		22.0
4	63	27.0	281	08.9		39.1	37	15.8		34.9	134	18.6		-42.2	126	04.2		22.0
5	78	29.4	296	08.5	+14	38.3	52	18.8	+6	34.8	149	21.0	-22	-42.2	141	06.7	-21	22.0
6	93	31.9	311	08.1	+14	37.6	67	21.8	+6	34.6	164	23.3	-22	-42.2	156	09.2	-21	22.1
7	108	34.4	326	07.7		36.8	82	24.7		34.5	179	25.7		-42.1	171	11.7		22.1
8	123	36.8	341	07.3		36.1	97	27.7		34.4	194	28.1		-42.1	186	14.2		22.1
9	138	39.3	356	06.9		35.4	112	30.6		34.3	209	30.4		-42.1	201	16.6		22.1
10	153	41.8	11	06.5		34.6	127	33.6		34.2	224	32.8		-42.1	216	19.1		22.1
11	168	44.2	26	06.1	+14	33.9	142	36.6	+6	34.1	239	35.2	-22	-42.1	231	21.6	-21	22.1
12	183	46.7	41	05.7	+14	33.1	157	39.6	+6	34.0	254	37.5	-22	-42.1	246	24.1	-21	22.1
13	198	49.1	56	05.3		32.4	172	42.5		33.9	269	39.9		-42.1	261	26.6		22.1
14	213	51.6	71	04.9		31.6	187	45.5		33.8	284	42.2		-42.1	276	29.1		22.1
15	228	54.1	86	04.5		30.9	202	48.5		33.7	299	44.6		-42.1	291	31.6		22.1
16	243	56.5	101	04.1		30.1	217	51.5		33.6	314	47.0		-42.1	306	34.0		22.1
17	258	59.0	116	03.7	+14	29.4	232	54.4	+6	33.5	329	49.3	-22	-42.0	321	36.5	-21	22.1
18	274	01.5	131	03.4	+14	28.6	247	57.4	+6	33.3	344	51.7	-22	-42.0	336	39.0	-21	22.1
19	289	03.9	146	03.0		27.9	263	00.4		33.2	359	54.1		-42.0	351	41.5		22.1
20	304	06.4	161	02.6		27.1	278	03.4		33.1	14	56.4		-42.0	6	44.0		22.1
21	319	08.9	176	02.2		26.4	293	06.3		33.0	29	58.8		-42.0	21	46.4		22.1
22	334	11.3	191	01.8		25.6	308	09.3		32.9	45	01.1		-42.0	36	48.9		22.1
23	349	13.8	206	01.4		24.9	323	12.3		32.8	60	03.5		-42.0	51	51.4		22.1
24	4	16.3	221	01.0	+14	24.1	338	15.3	+6	32.7	75	05.9	-22	-42.0	66	53.9	-21	22.2
Dif.	—		-4		-7		+30		-1		+24		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 51 ^m 5			SD: 15'6 Edad: 7 ^d 5 PMG: 19 ^h 26 ^m PHE { 4 ^h : 57'1 12 ^h : 56'9 20 ^h : 56'6 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	182	04.9	-0	56.9	79	10.4	73	-24	25.9	8	60 N	4 21	5 11	5 52	16 43	29	22 14 79	
1	197	05.1		57.9	93	36.7	73		25.1	9	58	26	13	52	22	33	35 75	
2	212	05.3		58.9	108	03.0	74		24.2	10	56	31	15	52	16 05	36	22 51 73	
3	227	05.5	-0	59.9	122	29.4	74		23.2	12	54	35	16	52	15 50	38	23 06 70	
4	242	05.7	-1	00.8	136	55.8	75		22.0	14	52	38	18	52	38	39	18 69	
5	257	06.0	-1	01.8	151	22.3	75	-24	20.6	14	50	4 41	5 19	5 51	15 27	41	23 29 67	
6	272	06.2	-1	02.8	165	48.8	76	-24	19.2	16	45	4 47	5 22	5 51	15 03	44	23 52 64	
7	287	06.4		03.8	180	15.4	76		17.6	18	40	52	24	51	14 45	45	*** ** *	
8	302	06.6		04.7	194	42.0	77		15.8	19	35	56	25	50	29	47	*** ** *	
9	317	06.8		05.7	209	08.7	77		13.9	20	30	4 58	26	50	14 15	49	*** ** *	
10	332	07.0		06.7	223	35.4	78		11.9	22	20	5 02	28	50	13 52	50	0 05 57	
11	347	07.2	-1	07.7	238	02.2	79	-24	09.7	23	10 N	5 04	5 28	5 49	13 32	52	0 25 56	
12	2	07.5	-1	08.6	252	29.1	79	-24	07.4	24	0	5 04	5 28	5 48	13 13	54	0 44 55	
13	17	07.7		09.6	266	56.0	79		05.0	26	10 S	5 02	26	47	12 55	55	1 03 54	
14	32	07.9		10.6	281	22.9	81	-24	02.4	27	20	4 59	25	47	34	57	24 53	
15	47	08.1		11.5	295	50.0	80	-23	59.7	28	30	54	21	45	12 11	59	1 47 52	
16	62	08.3		12.5	310	17.0	82		56.9	30	35	50	19	45	11 58	59	2 01 51	
17	77	08.5	-1	13.5	324	44.2	82	-23	53.9	31	40	4 45	5 17	5 44	11 42	61	2 17 50	
18	92	08.8	-1	14.5	339	11.4	82	-23	50.8	32	45	4 39	5 13	5 43	11 23	63	2 36 49	
19	107	09.0		15.4	353	38.6	84		47.6	34	50	31	09	41	11 00	64	3 00 47	
20	122	09.2		16.4	8	06.0	84		44.2	34	52	27	07	41	10 48	66	11 46	
21	137	09.4		17.4	22	33.4	84		40.8	37	54	23	05	40	35	68	24 45	
22	152	09.6		18.4	37	00.8	85		37.1	37	56	18	5 02	39	21	68	39 43	
23	167	09.8		19.3	51	28.3	86		33.4	39	58	12	4 59	39	10 03	71	3 56 42	
24	182	10.0	-1	20.3	65	55.9		-23	29.5		60 S	4 06	4 56	5 38	9 42	74	4 18 38	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 23 ^h 39 ^m 0		Mag: -4.1 PMG: 09 ^h 16 ^m				Mag: -2.4 PMG: 01 ^h 27 ^m				Mag: -2.4 PMG: 18 ^h 57 ^m				Mag: +0.4 PMG: 19 ^h 29 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	4	16.3	221	01.0	+14	24.1	338	15.3	+6	32.7	75	05.9	-22	42.0	66	53.9	-21	22.2
1	19	18.7	236	00.6		23.4	353	18.3		32.6	90	08.2		42.0	81	56.4		22.2
2	34	21.2	251	00.2		22.6	8	21.3		32.5	105	10.6		41.9	96	58.9		22.2
3	49	23.6	265	59.8		21.9	23	24.3		32.4	120	13.0		41.9	112	01.3		22.2
4	64	26.1	280	59.4		21.1	38	27.3		32.2	135	15.3		41.9	127	03.8		22.2
5	79	28.6	295	59.0	+14	20.4	53	30.2	+6	32.1	150	17.7	-22	41.9	142	06.3	-21	22.2
6	94	31.0	310	58.6	+14	19.6	68	33.2	+6	32.0	165	20.0	-22	41.9	157	08.8	-21	22.2
7	109	33.5	325	58.2		18.9	83	36.2		31.9	180	22.4		41.9	172	11.3		22.2
8	124	36.0	340	57.8		18.1	98	39.2		31.8	195	24.7		41.9	187	13.7		22.2
9	139	38.4	355	57.4		17.3	113	42.2		31.7	210	27.1		41.9	202	16.2		22.2
10	154	40.9	10	57.0		16.6	128	45.2		31.6	225	29.5		41.9	217	18.7		22.2
11	169	43.4	25	56.6	+14	15.8	143	48.2	+6	31.4	240	31.8	-22	41.8	232	21.2	-21	22.2
12	184	45.8	40	56.2	+14	15.1	158	51.2	+6	31.3	255	34.2	-22	41.8	247	23.7	-21	22.2
13	199	48.3	55	55.8		14.3	173	54.2		31.2	270	36.5		41.8	262	26.1		22.2
14	214	50.8	70	55.5		13.5	188	57.2		31.1	285	38.9		41.8	277	28.6		22.2
15	229	53.2	85	55.1		12.8	204	00.2		31.0	300	41.2		41.8	292	31.1		22.2
16	244	55.7	100	54.7		12.0	219	03.2		30.9	315	43.6		41.8	307	33.6		22.2
17	259	58.1	115	54.3	+14	11.2	234	06.2	+6	30.8	330	46.0	-22	41.8	322	36.1	-21	22.2
18	275	00.6	130	53.9	+14	10.5	249	09.2	+6	30.6	345	48.3	-22	41.8	337	38.5	-21	22.2
19	290	03.1	145	53.5		09.7	264	12.3		30.5	0	50.7		41.7	352	41.0		22.2
20	305	05.5	160	53.1		08.9	279	15.3		30.4	15	53.0		41.7	7	43.5		22.3
21	320	08.0	175	52.7		08.2	294	18.3		30.3	30	55.4		41.7	22	46.0		22.3
22	335	10.5	190	52.3		07.4	309	21.3		30.2	45	57.7		41.7	37	48.5		22.3
23	350	12.9	205	51.9		06.6	324	24.3		30.1	61	00.1		41.7	52	50.9		22.3
24	5	15.4	220	51.5	+14	05.9	339	27.3	+6	29.9	76	02.4	-22	41.7	67	53.4	-21	22.3
Dif.	—		-4		-8		+30		-1		+24		0		+25			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'0			SD: 15'4 Edad: 8 ^d 5	PHE { 4 ^h : 56'4 12 ^h : 56'2 20 ^h : 56'0	Rº: 50 ^m												
	PMG: 11 ^h 51. ^m 2					PMG: 20 ^h 19 ^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	10.0	-1	20.3	65	55.9	87	-23	29.5	40	60 N	17 46	18 28	19 17	17 12	19	23 33	84
1	197	10.3		21.3	80	23.6	87		25.5	41	58	47	26	12	16 55	23	23 50	80
2	212	10.5		22.3	94	51.3	88		21.4	42	56	47	24	08	41	25	***	***
3	227	10.7		23.2	109	19.1	88		17.2	44	54	48	23	04	28	28	***	***
4	242	10.9		24.2	123	46.9	90		12.8	45	52	48	22	19 01	17	30	***	***
5	257	11.1	-1	25.2	138	14.9	90	-23	08.3	46	50	17 49	18 21	18 58	16 08	31	***	***
6	272	11.3	-1	26.1	152	42.9	90	-23	03.7	47	45	17 49	18 18	18 53	15 47	35	***	***
7	287	11.5		27.1	167	10.9	92	-22	59.0	49	40	50	17	48	30	38	0 10	62
8	302	11.8		28.1	181	39.1	92		54.1	50	35	51	16	45	16	40	26	60
9	317	12.0		29.1	196	07.3	93		49.1	50	30	51	15	43	15 04	42	0 39	59
10	332	12.2		30.0	210	35.6	93		44.1	52	20	52	14	40	14 42	46	1 02	56
11	347	12.4	-1	31.0	225	03.9	94	-22	38.9	54	10 N	17 53	18 14	18 39	14 24	48	1 21	54
12	2	12.6	-1	32.0	239	32.3	95	-22	33.5	54	0	17 54	18 15	18 39	14 07	50	1 39	52
13	17	12.8		33.0	254	00.8	96		28.1	55	10 S	56	17	41	13 50	52	1 57	50
14	32	13.0		33.9	268	29.4	97		22.6	57	20	57	19	45	31	55	2 17	48
15	47	13.3		34.9	282	58.1	97		16.9	58	30	17 59	23	51	13 10	58	39	45
16	62	13.5		35.9	297	26.8	98		11.1	59	35	18 00	25	18 55	12 57	60	2 52	44
17	77	13.7	-1	36.9	311	55.6	99	-22	05.2	60	40	18 01	18 28	19 00	12 43	62	3 07	42
18	92	13.9	-1	37.8	326	24.5	99	-21	59.2	61	45	18 02	18 32	19 06	12 26	65	3 25	39
19	107	14.1		38.8	340	53.4	100		53.1	62	50	04	36	15	12 04	69	47	36
20	122	14.3		39.8	355	22.4	101		46.9	63	52	05	39	19	11 54	70	3 57	35
21	137	14.5		40.7	9	51.5	102		40.6	64	54	06	41	24	43	72	4 09	32
22	152	14.7		41.7	24	20.7	102		34.2	65	56	07	44	29	29	75	22	31
23	167	15.0		42.7	38	49.9	104		27.7	67	58	08	47	35	11 14	78	38	27
24	182	15.2	-1	43.7	53	19.3		-21	21.0		60 S	18 09	18 51	19 42	10 56	82	4 56	24
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 23 ^h 35. ^m 1		Mag: -4.1 PMG: 09 ^h 17 ^m				Mag: -2.4 PMG: 01 ^h 22 ^m				Mag: -2.4 PMG: 18 ^h 53 ^m				Mag: +0.4 PMG: 19 ^h 25 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	5	15.4	220	51.5	+14	05.9	339	27.3	+6	29.9	76	02.4	-22	-41.7	67	53.4	-21	22.3
1	20	17.9	235	51.1		05.1	354	30.3		29.8	91	04.8		-41.7	82	55.9		22.3
2	35	20.3	250	50.7		04.3	9	33.3		29.7	106	07.1		-41.7	97	58.4		22.3
3	50	22.8	265	50.3		03.5	24	36.4		29.6	121	09.5		-41.7	113	00.8		22.3
4	65	25.3	280	49.9		02.8	39	39.4		29.5	136	11.8		-41.6	128	03.3		22.3
5	80	27.7	295	49.5	+14	02.0	54	42.4	+6	29.4	151	14.2	-22	-41.6	143	05.8	-21	22.3
6	95	30.2	310	49.2	+14	01.2	69	45.4	+6	29.2	166	16.5	-22	-41.6	158	08.3	-21	22.3
7	110	32.6	325	48.8	+14	00.4	84	48.4		29.1	181	18.9		-41.6	173	10.7		22.3
8	125	35.1	340	48.4	+13	59.7	99	51.5		29.0	196	21.2		-41.6	188	13.2		22.3
9	140	37.6	355	48.0		58.9	114	54.5		28.9	211	23.6		-41.6	203	15.7		22.3
10	155	40.0	10	47.6		58.1	129	57.5		28.8	226	25.9		-41.6	218	18.2		22.3
11	170	42.5	25	47.2	+13	57.3	145	00.5	+6	28.6	241	28.3	-22	-41.6	233	20.7	-21	22.3
12	185	45.0	40	46.8	+13	56.6	160	03.6	+6	28.5	256	30.6	-22	-41.5	248	23.1	-21	22.3
13	200	47.4	55	46.4		55.8	175	06.6		28.4	271	33.0		-41.5	263	25.6		22.3
14	215	49.9	70	46.0		55.0	190	09.6		28.3	286	35.3		-41.5	278	28.1		22.3
15	230	52.4	85	45.6		54.2	205	12.7		28.2	301	37.7		-41.5	293	30.6		22.3
16	245	54.8	100	45.2		53.4	220	15.7		28.0	316	40.0		-41.5	308	33.0		22.3
17	260	57.3	115	44.8	+13	52.6	235	18.7	+6	27.9	331	42.4	-22	-41.5	323	35.5	-21	22.3
18	275	59.7	130	44.5	+13	51.9	250	21.8	+6	27.8	346	44.7	-22	-41.5	338	38.0	-21	22.3
19	291	02.2	145	44.1		51.1	265	24.8		27.7	1	47.1		-41.5	353	40.5		22.4
20	306	04.7	160	43.7		50.3	280	27.8		27.5	16	49.4		-41.4	8	42.9		22.4
21	321	07.1	175	43.3		49.5	295	30.9		27.4	31	51.7		-41.4	23	45.4		22.4
22	336	09.6	190	42.9		48.7	310	33.9		27.3	46	54.1		-41.4	38	47.9		22.4
23	351	12.1	205	42.5		47.9	325	36.9		27.2	61	56.4		-41.4	53	50.3		22.4
24	6	14.5	220	42.1	+13	47.1	340	40.0	+6	27.1	76	58.8	-22	-41.4	68	52.8	-21	22.4
Dif.	—		-4		-8		+30		-1		+23		0		+25			

UT	SOL			☉ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0			SD: 15'2 Edad: 9 ^d 5	PHE { 4 ^h : 55'8 12 ^h : 55'6 20 ^h : 55'5												
	PMG: 11 ^h 50 ^m 8				PMG: 21 ^h 09 ^m			Rº: 46 ^m									
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	15.2	-1	43.7	53	19.3	104	-21	21.0	67	60 N	4 26	5 15	5 57	17 31	12	
1	197	15.4		44.6	67	48.7	104		14.3	69	58	31	17	56	18 15		
2	212	15.6		45.6	82	18.1	106		07.4	69	56	35	19	56	17 06	19	
3	227	15.8		46.6	96	47.7	106	-21	00.5	70	54	39	20	55	16 56	21	
4	242	16.0		47.6	111	17.3	107	-20	53.5	72	52	42	21	55	47 23		
5	257	16.2	-1	48.5	125	47.0	108	-20	46.3	72	50	4 44	5 22	5 54	16 39	25	
6	272	16.4	-1	49.5	140	16.8	109	-20	39.1	73	45	4 50	5 24	5 53	16 22	29	
7	287	16.7		50.5	154	46.7	109		31.8	75	40	54	26	53	16 08	32	
8	302	16.9		51.4	169	16.6	110		24.3	75	35	4 57	27	52	15 56	35	
9	317	17.1		52.4	183	46.6	111		16.8	76	30	5 00	27	51	46 37		
10	332	17.3		53.4	198	16.7	112		09.2	77	20	02	28	50	28 41		
11	347	17.5	-1	54.4	212	46.9	112	-20	01.5	78	10 N	5 03	5 28	5 49	15 12	44	
12	2	17.7	-1	55.3	227	17.1	113	-19	53.7	79	0	5 03	5 27	5 48	14 57	47	
13	17	17.9		56.3	241	47.4	114		45.8	80	10 S	5 01	25	46	42 51		
14	32	18.1		57.3	256	17.8	115		37.8	81	20	4 57	23	45	26 54		
15	47	18.3		58.3	270	48.3	115		29.7	82	30	51	19	43	14 08	57	
16	62	18.6	-1	59.2	285	18.8	117		21.5	82	35	47	16	42	13 57	60	
17	77	18.8	-2	00.2	299	49.5	117	-19	13.3	83	40	4 42	5 13	5 40	13 45	62	
18	92	19.0	-2	01.2	314	20.2	117	-19	05.0	85	45	4 35	5 10	5 39	13 31	65	
19	107	19.2		02.1	328	50.9	119	-18	56.5	85	50	26	05	37	13 69		
20	122	19.4		03.1	343	21.8	119		48.0	86	52	22	02	36	13 04	72	
21	137	19.6		04.1	357	52.7	120		39.4	86	54	17	5 00	35	12 55	74	
22	152	19.8		05.1	12	23.7	121		30.8	88	56	12	4 57	34	44 77		
23	167	20.0		06.0	26	54.8	121		22.0	88	58	4 06	54	33	12 32	80	
24	182	20.2	-2	07.0	41	25.9		-18	13.2		60 S	3 59	4 50	5 32	12 18	83	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 23 ^h 31 ^m 2		Mag: -4.1 PMG: 09 ^h 17 ^m				Mag: -2.4 PMG: 01 ^h 17 ^m				Mag: -2.4 PMG: 18 ^h 49 ^m				Mag: +0.4 PMG: 19 ^h 21 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	6	14.5	220	42.1	+13	47.1	340	40.0	+6	27.1	76	58.8	-22	41.4	68	52.8	-21	22.4
1	21	17.0	235	41.7		46.4	355	43.0		26.9	92	01.1		41.4	83	55.3		22.4
2	36	19.5	250	41.3		45.6	10	46.1		26.8	107	03.5		41.4	98	57.8		22.4
3	51	21.9	265	40.9		44.8	25	49.1		26.7	122	05.8		41.3	114	00.2		22.4
4	66	24.4	280	40.5		44.0	40	52.2		26.6	137	08.1		41.3	129	02.7		22.4
5	81	26.9	295	40.1	+13	43.2	55	55.2	+6	26.4	152	10.5	-22	41.3	144	05.2	-21	22.4
6	96	29.3	310	39.8	+13	42.4	70	58.3	+6	26.3	167	12.8	-22	41.3	159	07.7	-21	22.4
7	111	31.8	325	39.4		41.6	86	01.3		26.2	182	15.2		41.3	174	10.1		22.4
8	126	34.2	340	39.0		40.8	101	04.4		26.1	197	17.5		41.3	189	12.6		22.4
9	141	36.7	355	38.6		40.0	116	07.4		25.9	212	19.9		41.3	204	15.1		22.4
10	156	39.2	10	38.2		39.2	131	10.5		25.8	227	22.2		41.3	219	17.5		22.4
11	171	41.6	25	37.8	+13	38.4	146	13.5	+6	25.7	242	24.5	-22	41.2	234	20.0	-21	22.4
12	186	44.1	40	37.4	+13	37.6	161	16.6	+6	25.6	257	26.9	-22	41.2	249	22.5	-21	22.4
13	201	46.6	55	37.0		36.8	176	19.6		25.4	272	29.2		41.2	264	25.0		22.4
14	216	49.0	70	36.6		36.0	191	22.7		25.3	287	31.6		41.2	279	27.4		22.4
15	231	51.5	85	36.2		35.2	206	25.7		25.2	302	33.9		41.2	294	29.9		22.4
16	246	54.0	100	35.9		34.4	221	28.8		25.1	317	36.2		41.2	309	32.4		22.4
17	261	56.4	115	35.5	+13	33.6	236	31.9	+6	24.9	332	38.6	-22	41.2	324	34.8	-21	22.4
18	276	58.9	130	35.1	+13	32.8	251	34.9	+6	24.8	347	40.9	-22	41.1	339	37.3	-21	22.4
19	292	01.4	145	34.7		32.0	266	38.0		24.7	2	43.2		41.1	354	39.8		22.4
20	307	03.8	160	34.3		31.2	281	41.0		24.5	17	45.6		41.1	9	42.2		22.4
21	322	06.3	175	33.9		30.4	296	44.1		24.4	32	47.9		41.1	24	44.7		22.4
22	337	08.7	190	33.5		29.6	311	47.2		24.3	47	50.3		41.1	39	47.2		22.4
23	352	11.2	205	33.1		28.8	326	50.2		24.2	62	52.6		41.1	54	49.7		22.5
24	7	13.7	220	32.7	+13	28.0	341	53.3	+6	24.0	77	54.9	-22	41.1	69	52.1	-21	22.5
Dif.	—		-4		-8		+30		-1		+23		0		+25		0	

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 : 55'3 12 ^h : 55'1 20 ^h : 55'0											
	PMG: 11 ^h 50 ^m 5			Edad: 10 ^d 5														
				PMG: 21 ^h 55 ^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	182	20.2	-2 07.0	41	25.9	122	-18 13.2	89	60 N	17 40	18 22	19 11	17 43	8	0 57	84		
1	197	20.5	08.0	55	57.1	123	-18 04.3	90	58	41	20	06	33	11	1 10	79		
2	212	20.7	08.9	70	28.4	124	-17 55.3	91	56	42	19	19 02	25	14	21	76		
3	227	20.9	09.9	84	59.8	124	46.2	91	54	43	18	18 59	17	17	30	74		
4	242	21.1	10.9	99	31.2	125	37.1	92	52	44	17	56	10	19	38	72		
5	257	21.3	-2 11.9	114	02.7	126	-17 27.9	93	50	17 44	18 16	18 54	17 04	21	1 46	69		
6	272	21.5	-2 12.8	128	34.3	127	-17 18.6	94	45	17 46	18 15	18 49	16 51	25	2 02	65		
7	287	21.7	13.8	143	06.0	127	-17 09.2	94	40	47	14	45	40	28	15	62		
8	302	21.9	14.8	157	37.7	128	-16 59.8	95	35	48	13	42	31	31	26	59		
9	317	22.1	15.8	172	09.5	128	50.3	96	30	49	13	40	23	33	36	57		
10	332	22.3	16.7	186	41.3	130	40.7	97	20	50	12	38	16 09	37	2 52	53		
11	347	22.6	-2 17.7	201	13.3	130	-16 31.0	97	10 N	17 52	18 13	18 37	15 56	41	3 07	49		
12	2	22.8	-2 18.7	215	45.3	130	-16 21.3	98	0	17 54	18 14	18 38	15 44	45	3 20	46		
13	17	23.0	19.6	230	17.3	132	11.5	98	10 S	55	17	41	33	47	34	42		
14	32	23.2	20.6	244	49.5	132	-16 01.7	99	20	17 57	20	45	20	51	3 48	39		
15	47	23.4	21.6	259	21.7	132	-15 51.8	100	30	18 00	24	52	15 05	56	4 04	35		
16	62	23.6	22.6	273	53.9	134	41.8	101	35	01	27	18 56	14 57	58	13	33		
17	77	23.8	-2 23.5	288	26.3	134	-15 31.7	101	40	18 03	18 30	19 02	14 47	62	4 24	30		
18	92	24.0	-2 24.5	302	58.7	134	-15 21.6	101	45	18 05	18 34	19 09	14 36	65	4 36	27		
19	107	24.2	25.5	317	31.1	136	11.5	103	50	07	40	18	22	69	51	23		
20	122	24.4	26.4	332	03.7	136	-15 01.2	103	52	08	42	23	16	71	4 58	21		
21	137	24.6	27.4	346	36.3	136	-14 50.9	103	54	09	45	28	09	73	5 06	18		
22	152	24.8	28.4	1	08.9	138	40.6	104	56	11	48	34	14 01	75	14	17		
23	167	25.1	29.4	15	41.7	138	30.2	105	58	12	52	40	13 52	78	24	13		
24	182	25.3	-2 30.3	30	14.5		-14 19.7		60 S	18 14	18 56	19 48	13 41	82	5 35	10		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 27 ^m 2		Mag: -4.1 PMG: 09 ^h 18 ^m			Mag: -2.4 PMG: 01 ^h 12 ^m			Mag: -2.4 PMG: 18 ^h 45 ^m			Mag: +0.5 PMG: 19 ^h 17 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'
0	7	13.7	220	32.7	+13 28.0	341	53.3	+6 24.0	77	54.9	-22 -41.1	69	52.1	-21 22.5	
1	22	16.1	235	32.4	27.2	356	56.4	23.9	92	57.3	-41.0	84	54.6	22.5	
2	37	18.6	250	32.0	26.4	11	59.4	23.8	107	59.6	-41.0	99	57.1	22.5	
3	52	21.1	265	31.6	25.6	27	02.5	23.6	123	01.9	-41.0	114	59.5	22.5	
4	67	23.5	280	31.2	24.8	42	05.6	23.5	138	04.3	-41.0	130	02.0	22.5	
5	82	26.0	295	30.8	+13 24.0	57	08.7	+6 23.4	153	06.6	-22 -41.0	145	04.5	-21 22.5	
6	97	28.5	310	30.4	+13 23.2	72	11.7	+6 23.3	168	08.9	-22 -41.0	160	06.9	-21 22.5	
7	112	30.9	325	30.0	22.4	87	14.8	23.1	183	11.3	-41.0	175	09.4	22.5	
8	127	33.4	340	29.6	21.6	102	17.9	23.0	198	13.6	-40.9	190	11.9	22.5	
9	142	35.8	355	29.3	20.7	117	21.0	22.9	213	15.9	-40.9	205	14.3	22.5	
10	157	38.3	10	28.9	19.9	132	24.0	22.7	228	18.3	-40.9	220	16.8	22.5	
11	172	40.8	25	28.5	+13 19.1	147	27.1	+6 22.6	243	20.6	-22 -40.9	235	19.3	-21 22.5	
12	187	43.2	40	28.1	+13 18.3	162	30.2	+6 22.5	258	22.9	-22 -40.9	250	21.7	-21 22.5	
13	202	45.7	55	27.7	17.5	177	33.3	22.3	273	25.3	-40.9	265	24.2	22.5	
14	217	48.2	70	27.3	16.7	192	36.4	22.2	288	27.6	-40.9	280	26.7	22.5	
15	232	50.6	85	26.9	15.9	207	39.4	22.1	303	29.9	-40.8	295	29.1	22.5	
16	247	53.1	100	26.5	15.0	222	42.5	21.9	318	32.3	-40.8	310	31.6	22.5	
17	262	55.6	115	26.2	+13 14.2	237	45.6	+6 21.8	333	34.6	-22 -40.8	325	34.1	-21 22.5	
18	277	58.0	130	25.8	+13 13.4	252	48.7	+6 21.7	348	36.9	-22 -40.8	340	36.5	-21 22.5	
19	293	00.5	145	25.4	12.6	267	51.8	21.5	3	39.2	-40.8	355	39.0	22.5	
20	308	03.0	160	25.0	11.8	282	54.9	21.4	18	41.6	-40.8	10	41.5	22.5	
21	323	05.4	175	24.6	11.0	297	58.0	21.3	33	43.9	-40.8	25	43.9	22.5	
22	338	07.9	190	24.2	10.1	313	01.1	21.1	48	46.2	-40.7	40	46.4	22.5	
23	353	10.3	205	23.8	09.3	328	04.1	21.0	63	48.6	-40.7	55	48.9	22.5	
24	8	12.8	220	23.4	+13 08.5	343	07.2	+6 20.9	78	50.9	-22 -40.7	70	51.3	-21 22.5	
Dif.	—		-4	-8		+31	-1		+23		0		+25		

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 50 ^m 2			SD: 15'0 Edad: 11 ^d 5		PHE { 4 ^h : 54'9 12 ^h : 54'7 20 ^h : 54'6		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			
0	182	25.3	-2	30.3	30	14.5	138	-14	19.7	105	60 N	4 31	5 20	6 02	17 51	6 2 21 81		
1	197	25.5		31.3	44	47.3	139	-14	09.2	106	58	35	22	01	44	10 29 78		
2	212	25.7		32.3	59	20.2	140	-13	58.6	106	56	39	23	6 00	39	12 37 75		
3	227	25.9		33.2	73	53.2	140		48.0	107	54	42	24	5 59	34	14 44 72		
4	242	26.1		34.2	88	26.2	141		37.3	107	52	45	25	58	29	16 50 70		
5	257	26.3	-2	35.2	102	59.3	142	-13	26.6	108	50	4 48	5 25	5 57	17 25	18 2 55 69		
6	272	26.5	-2	36.2	117	32.5	142	-13	15.8	108	45	4 53	5 27	5 56	17 16	22 3 07 64		
7	287	26.7		37.1	132	05.7	142	-13	05.0	109	40	56	28	55	08	26 17 61		
8	302	26.9		38.1	146	38.9	144	-12	54.1	110	35	4 59	28	53	17 02	28 25 58		
9	317	27.1		39.1	161	12.3	143		43.1	109	30	5 01	29	52	16 56	31 33 55		
10	332	27.3		40.0	175	45.6	145		32.2	111	20	03	28	50	46	35 45 51		
11	347	27.5	-2	41.0	190	19.1	145	-12	21.1	111	10 N	5 03	5 28	5 49	16 37	39 3 56 47		
12	2	27.7	-2	42.0	204	52.6	145	-12	10.0	111	0	5 02	5 26	5 47	16 29	42 4 06 43		
13	17	28.0		42.9	219	26.1	146	-11	58.9	111	10 S	5 00	24	45	20	46 16 40		
14	32	28.2		43.9	233	59.7	147		47.8	112	20	4 55	21	43	11	50 27 36		
15	47	28.4		44.9	248	33.4	147		36.6	113	30	48	16	40	16 01	54 39 32		
16	62	28.6		45.9	263	07.1	147		25.3	113	35	44	14	39	15 55	57 46 29		
17	77	28.8	-2	46.8	277	40.8	148	-11	14.0	113	40	4 38	5 10	5 37	15 49	59 4 54 26		
18	92	29.0	-2	47.8	292	14.6	149	-11	02.7	114	45	4 31	5 06	5 35	15 41	63 5 03 23		
19	107	29.2		48.8	306	48.5	149	-10	51.3	114	50	22	5 00	33	31	68 14 19		
20	122	29.4		49.7	321	22.4	149		39.9	115	52	17	4 58	32	27	69 19 17		
21	137	29.6		50.7	335	56.3	150		28.4	115	54	12	55	30	22	71 24 16		
22	152	29.8		51.7	350	30.3	151		16.9	115	56	06	51	29	16	74 31 13		
23	167	30.0		52.7	5	04.4	151	-10	05.4	116	58	4 00	48	27	15 10	77 5 37 11		
24	182	30.2	-2	53.6	19	38.5		-9	53.8		60 S	3 52	4 43	5 26	15 03	80 5 45 8		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 23 ^h 23 ^m 3		Mag: -4.1 PMG: 09 ^h 19 ^m				Mag: -2.4 PMG: 01 ^h 07 ^m				Mag: -2.4 PMG: 18 ^h 42 ^m				Mag: +0.5 PMG: 19 ^h 13 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	8	12.8	220	23.4	+13	08.5	343	07.2	+6	20.9	78	50.9	-22	40.7	70	51.3	-21	22.5
1	23	15.3	235	23.1		07.7	358	10.3		20.7	93	53.2		40.7	85	53.8		22.5
2	38	17.7	250	22.7		06.8	13	13.4		20.6	108	55.5		40.7	100	56.3		22.5
3	53	20.2	265	22.3		06.0	28	16.5		20.5	123	57.9		40.7	115	58.7		22.5
4	68	22.7	280	21.9		05.2	43	19.6		20.3	139	00.2		40.6	131	01.2		22.5
5	83	25.1	295	21.5	+13	04.4	58	22.7	+6	20.2	154	02.5	-22	40.6	146	03.6	-21	22.5
6	98	27.6	310	21.1	+13	03.5	73	25.8	+6	20.1	169	04.8	-22	40.6	161	06.1	-21	22.5
7	113	30.1	325	20.7		02.7	88	28.9		19.9	184	07.2		40.6	176	08.6		22.5
8	128	32.5	340	20.4		01.9	103	32.0		19.8	199	09.5		40.6	191	11.0		22.5
9	143	35.0	355	20.0		01.1	118	35.1		19.7	214	11.8		40.6	206	13.5		22.5
10	158	37.5	10	19.6	+13	00.2	133	38.2		19.5	229	14.1		40.6	221	16.0		22.5
11	173	39.9	25	19.2	+12	59.4	148	41.3	+6	19.4	244	16.5	-22	40.5	236	18.4	-21	22.5
12	188	42.4	40	18.8	+12	58.6	163	44.4	+6	19.3	259	18.8	-22	40.5	251	20.9	-21	22.5
13	203	44.8	55	18.4		57.7	178	47.5		19.1	274	21.1		40.5	266	23.4		22.5
14	218	47.3	70	18.1		56.9	193	50.6		19.0	289	23.4		40.5	281	25.8		22.5
15	233	49.8	85	17.7		56.1	208	53.7		18.9	304	25.8		40.5	296	28.3		22.5
16	248	52.2	100	17.3		55.2	223	56.8		18.7	319	28.1		40.5	311	30.7		22.6
17	263	54.7	115	16.9	+12	54.4	239	00.0	+6	18.6	334	30.4	-22	40.4	326	33.2	-21	22.6
18	278	57.2	130	16.5	+12	53.6	254	03.1	+6	18.4	349	32.7	-22	40.4	341	35.7	-21	22.6
19	293	59.6	145	16.1		52.7	269	06.2		18.3	4	35.0		40.4	356	38.1		22.6
20	309	02.1	160	15.7		51.9	284	09.3		18.2	19	37.4		40.4	11	40.6		22.6
21	324	04.6	175	15.4		51.1	299	12.4		18.0	34	39.7		40.4	26	43.0		22.6
22	339	07.0	190	15.0		50.2	314	15.5		17.9	49	42.0		40.4	41	45.5		22.6
23	354	09.5	205	14.6		49.4	329	18.6		17.8	64	44.3		40.3	56	48.0		22.6
24	9	11.9	220	14.2	+12	48.6	344	21.7	+6	17.6	79	46.6	-22	40.3	71	50.4	-21	22.6
Dif.	—		-4	-8			+31	-1			+23	0			+25	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 : 54'5 12 ^h : 54'4 20 ^h : 54'3																			
	PMG: 11 ^h 49 ^m 8			Edad: 12 ^d 5																						
	PMG: 23 ^h 21 ^m			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	182	30.2	-2	53.6	19	38.5	151	-9	53.8	116	60 N	17 34	18 16	19 04	17 57	6	3 42	79								
1	197	30.4		54.6	34	12.6	152		42.2	116	58	36	15	19 00	54	8	47	76								
2	212	30.6		55.6	48	46.8	152		30.6	117	56	37	14	18 57	51	10	52	74								
3	227	30.8		56.5	63	21.0	153		18.9	117	54	38	13	54	48	12	3 56	71								
4	242	31.0		57.5	77	55.3	153	-9	07.2	117	52	39	12	52	45	15	4 00	69								
5	257	31.2	-2	58.5	92	29.6	154	-8	55.5	117	50	17 40	18 12	18 49	17 43	16	4 04	67								
6	272	31.5	-2	59.4	107	04.0	154	-8	43.8	118	45	17 42	18 11	18 45	17 38	20	4 11	63								
7	287	31.7	-3	00.4	121	38.4	154		32.0	119	40	43	10	42	34	23	18	59								
8	302	31.9		01.4	136	12.8	155		20.1	118	35	45	10	39	30	26	23	56								
9	317	32.1		02.4	150	47.3	155	-8	08.3	119	30	46	10	38	27	29	28	53								
10	332	32.3		03.3	165	21.8	155	-7	56.4	119	20	49	11	36	21	33	36	49								
11	347	32.5	-3	04.3	179	56.3	156	-7	44.5	119	10 N	17 51	18 12	18 36	17 16	37	4 43	45								
12	2	32.7	-3	05.3	194	30.9	156	-7	32.6	120	0	17 53	18 14	18 38	17 11	41	4 49	42								
13	17	32.9		06.2	209	05.5	157		20.6	120	10 S	55	16	41	06	45	4 56	38								
14	32	33.1		07.2	223	40.2	157	-7	08.6	120	20	17 58	20	46	17 01	49	5 03	34								
15	47	33.3		08.2	238	14.9	157	-6	56.6	120	30	18 01	25	53	16 55	54	11	29								
16	62	33.5		09.1	252	49.6	158		44.6	120	35	03	28	18 58	52	56	15	27								
17	77	33.7	-3	10.1	267	24.4	158	-6	32.6	121	40	18 05	18 32	19 04	16 48	59	5 20	24								
18	92	33.9	-3	11.1	281	59.2	158	-6	20.5	121	45	18 07	18 37	19 12	16 44	62	5 26	21								
19	107	34.1		12.0	296	34.0	159	-6	08.4	121	50	10	43	22	39	66	33	17								
20	122	34.3		13.0	311	08.9	159	-5	56.3	121	52	12	46	27	36	68	36	15								
21	137	34.5		14.0	325	43.8	159		44.2	122	54	13	49	32	33	71	40	13								
22	152	34.7		14.9	340	18.7	159		32.0	121	56	15	52	38	30	73	44	11								
23	167	34.9		15.9	354	53.6	160		19.9	122	58	17	18 56	45	27	75	48	8								
24	182	35.1	-3	16.9	9	28.6		-5	07.7		60 S	18 19	19 01	19 53	16 23	79	5 53	5								
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO											
	PMG: 23 ^h 19 ^m 4		Mag: -4.1 PMG: 09 ^h 19 ^m				Mag: -2.5 PMG: 01 ^h 02 ^m				Mag: -2.4 PMG: 18 ^h 38 ^m				Mag: +0.5 PMG: 19 ^h 09 ^m											
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	9	11.9	220	14.2	+12	48.6	344	21.7	+6	17.6	79	46.6	-22	-40.3	71	50.4	-21	22.6								
1	24	14.4	235	13.8		47.7	359	24.9		17.5	94	49.0		-40.3	86	52.9		22.6								
2	39	16.9	250	13.4		46.9	14	28.0		17.3	109	51.3		-40.3	101	55.3		22.6								
3	54	19.3	265	13.1		46.0	29	31.1		17.2	124	53.6		-40.3	116	57.8		22.6								
4	69	21.8	280	12.7		45.2	44	34.2		17.1	139	55.9		-40.3	132	00.3		22.6								
5	84	24.3	295	12.3	+12	44.4	59	37.3	+6	16.9	154	58.2	-22	-40.2	147	02.7	-21	22.6								
6	99	26.7	310	11.9	+12	43.5	74	40.5	+6	16.8	170	00.5	-22	-40.2	162	05.2	-21	22.6								
7	114	29.2	325	11.5		42.7	89	43.6		16.6	185	02.9		-40.2	177	07.6		22.6								
8	129	31.7	340	11.1		41.8	104	46.7		16.5	200	05.2		-40.2	192	10.1		22.6								
9	144	34.1	355	10.8		41.0	119	49.8		16.4	215	07.5		-40.2	207	12.6		22.6								
10	159	36.6	10	10.4		40.1	134	53.0		16.2	230	09.8		-40.2	222	15.0		22.6								
11	174	39.1	25	10.0	+12	39.3	149	56.1	+6	16.1	245	12.1	-22	-40.1	237	17.5	-21	22.6								
12	189	41.5	40	09.6	+12	38.4	164	59.2	+6	15.9	260	14.4	-22	-40.1	252	19.9	-21	22.6								
13	204	44.0	55	09.2		37.6	180	02.3		15.8	275	16.8		-40.1	267	22.4		22.6								
14	219	46.4	70	08.8		36.7	195	05.5		15.7	290	19.1		-40.1	282	24.9		22.6								
15	234	48.9	85	08.5		35.9	210	08.6		15.5	305	21.4		-40.1	297	27.3		22.6								
16	249	51.4	100	08.1		35.0	225	11.7		15.4	320	23.7		-40.1	312	29.8		22.6								
17	264	53.8	115	07.7	+12	34.2	240	14.9	+6	15.2	335	26.0	-22	-40.0	327	32.2	-21	22.6								
18	279	56.3	130	07.3	+12	33.3	255	18.0	+6	15.1	350	28.3	-22	-40.0	342	34.7	-21	22.6								
19	294	58.8	145	06.9		32.5	270	21.1		15.0	5	30.6		-40.0	357	37.1		22.6								
20	310	01.2	160	06.6		31.6	285	24.3		14.8	20	33.0		-40.0	12	39.6		22.6								
21	325	03.7	175	06.2		30.8	300	27.4		14.7	35	35.3		-40.0	27	42.1		22.6								
22	340	06.2	190	05.8		29.9	315	30.5		14.5	50	37.6		-40.0	42	44.5		22.6								
23	355	08.6	205	05.4		29.1	330	33.7		14.4	65	39.9		-39.9	57	47.0		22.6								
24	10	11.1	220	05.0	+12	28.2	345	36.8	+6	14.3	80	42.2	-22	-39.9	72	49.4	-21	22.6								
Dif.	—		-4				-8				+31				-1				+23				0			

UT	SOL			○ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'0			SD: 14'8 Edad: 13 ^d 5															
	PMG: 11 ^h 49 ^m 5			PMG: ** ** Rº: **															
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.	Náut.		Civil	Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	182	35.1	-3	16.9	9	28.6	160	-5	07.7	122	60 N	4 36	5 25	6 06	18 03	5	5 01 78		
1	197	35.3			24	03.6	160	-4	55.5	122	58	40	26	05	02	8	03 75		
2	212	35.5			38	38.6	161		43.3	123	56	43	27	04	01	10	06 72		
3	227	35.7			53	13.7	160		31.0	122	54	46	27	03	00	13	07 70		
4	242	35.9			67	48.7	161		18.8	122	52	49	28	01	18 00	14	09 68		
5	257	36.1	-3	21.7	82	23.8	162	-4	06.6	123	50	4 51	5 28	6 01	17 59	16	5 11 66		
6	272	36.3	-3	22.7	96	59.0	161	-3	54.3	123	45	4 55	5 29	5 58	17 58	20	5 14 62		
7	287	36.5		23.7	111	34.1	162		42.0	123	40	4 58	30	57	57	23	17 58		
8	302	36.7		24.6	126	09.3	162		29.7	123	35	5 00	30	55	56	26	19 56		
9	317	36.9		25.6	140	44.5	162		17.4	123	30	02	30	54	56	28	21 53		
10	332	37.1		26.6	155	19.7	162	-3	05.1	123	20	03	29	51	54	33	25 48		
11	347	37.3	-3	27.5	169	54.9	162	-2	52.8	123	10 N	5 03	5 28	5 49	17 53	37	5 28 44		
12	2	37.5	-3	28.5	184	30.1	163	-2	40.5	123	0	5 02	5 26	5 46	17 52	40	5 31 41		
13	17	37.7		29.5	199	05.4	163		28.2	124	10 S	4 58	23	44	51	44	34 37		
14	32	37.9		30.4	213	40.7	163		15.8	123	20	53	19	41	50	48	37 33		
15	47	38.1		31.4	228	16.0	163	-2	03.5	124	30	46	14	38	49	52	40 29		
16	62	38.3		32.4	242	51.3	163	-1	51.1	123	35	41	11	36	48	55	42 26		
17	77	38.5	-3	33.3	257	26.6	163	-1	38.8	124	40	4 35	5 07	5 34	17 47	58	5 44 24		
18	92	38.7	-3	34.3	272	01.9	164	-1	26.4	123	45	4 27	5 02	5 31	17 46	62	5 47 20		
19	107	38.9		35.3	286	37.3	163		14.1	124	50	17	4 56	28	45	66	50 16		
20	122	39.1		36.2	301	12.6	164	-1	01.7	123	52	12	53	27	44	68	51 15		
21	137	39.3		37.2	315	48.0	163	-0	49.4	124	54	07	50	25	44	70	53 12		
22	152	39.5		38.2	330	23.3	164		37.0	124	56	4 00	46	24	43	72	55 10		
23	167	39.7		39.1	344	58.7	164		24.6	123	58	3 53	42	22	17 42	75	5 56 8		
24	182	39.9	-3	40.1	359	34.1		-0	12.3		60 S	3 45	4 37	5 19	17 42	77	5 58 6		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG		Mag: -4.1				Mag: -2.5				Mag: -2.4				Mag: +0.5				
	23 ^h 15 ^m 4		PMG: 09 ^h 20 ^m				PMG: 00 ^h 57 ^m				PMG: 18 ^h 34 ^m				PMG: 19 ^h 06 ^m				
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°		
0	10	11.1	220	05.0	+12	28.2	345	36.8	+6	14.3	80	42.2	-22	39.9	72	49.4	-21	22.6	
1	25	13.5	235	04.6		27.4	0	39.9		14.1	95	44.5		39.9	87	51.9		22.6	
2	40	16.0	250	04.3		26.5	15	43.1		14.0	110	46.8		39.9	102	54.3		22.6	
3	55	18.5	265	03.9		25.7	30	46.2		13.8	125	49.1		39.9	117	56.8		22.6	
4	70	20.9	280	03.5		24.8	45	49.4		13.7	140	51.4		39.8	132	59.2		22.6	
5	85	23.4	295	03.1	+12	23.9	60	52.5	+6	13.5	155	53.8	-22	39.8	148	01.7	-21	22.6	
6	100	25.9	310	02.7	+12	23.1	75	55.7	+6	13.4	170	56.1	-22	39.8	163	04.2	-21	22.6	
7	115	28.3	325	02.4		22.2	90	58.8		13.3	185	58.4		39.8	178	06.6		22.6	
8	130	30.8	340	02.0		21.4	106	01.9		13.1	201	00.7		39.8	193	09.1		22.6	
9	145	33.3	355	01.6		20.5	121	05.1		13.0	216	03.0		39.8	208	11.5		22.6	
10	160	35.7	10	01.2		19.6	136	08.2		12.8	231	05.3		39.7	223	14.0		22.6	
11	175	38.2	25	00.8	+12	18.8	151	11.4	+6	12.7	246	07.6	-22	39.7	238	16.4	-21	22.6	
12	190	40.7	40	00.5	+12	17.9	166	14.5	+6	12.5	261	09.9	-22	39.7	253	18.9	-21	22.6	
13	205	43.1	55	00.1		17.1	181	17.7		12.4	276	12.2		39.7	268	21.3		22.6	
14	220	45.6	69	59.7		16.2	196	20.8		12.2	291	14.5		39.7	283	23.8		22.6	
15	235	48.0	84	59.3		15.3	211	24.0		12.1	306	16.8		39.7	298	26.2		22.6	
16	250	50.5	99	58.9		14.5	226	27.1		12.0	321	19.1		39.6	313	28.7		22.6	
17	265	53.0	114	58.6	+12	13.6	241	30.3	+6	11.8	336	21.4	-22	39.6	328	31.1	-21	22.6	
18	280	55.4	129	58.2	+12	12.7	256	33.4	+6	11.7	351	23.7	-22	39.6	343	33.6	-21	22.6	
19	295	57.9	144	57.8		11.9	271	36.6		11.5	6	26.0		39.6	358	36.0		22.6	
20	311	00.4	159	57.4		11.0	286	39.7		11.4	21	28.4		39.6	13	38.5		22.6	
21	326	02.8	174	57.0		10.1	301	42.9		11.2	36	30.7		39.5	28	41.0		22.6	
22	341	05.3	189	56.7		09.3	316	46.1		11.1	51	33.0		39.5	43	43.4		22.6	
23	356	07.8	204	56.3		08.4	331	49.2		10.9	66	35.3		39.5	58	45.9		22.6	
24	11	10.2	219	55.9	+12	07.5	346	52.4	+6	10.8	81	37.6	-22	39.5	73	48.3	-21	22.6	
Dif.	—		-4				-9	+31				-1	+23		0	+25			

UT	SOL			○ LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'0			SD: 14'7 Edad: 14 ^d 5														
	PMG: 11 ^h 49 ^m 2			PMG: 00 ^h 02 ^m Rº: 40 ^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	39.9	-3	40.1	359	34.1	164	-0	12.3	124	60 N	17 28	18 10	18 58	18 08	5	6 19	77
1	197	40.1		41.1	14	09.5	164	+0	00.1	123	58	30	09	55	10	8	18	75
2	212	40.3		42.0	28	44.9	164		12.4	124	56	32	09	52	11	11	18	72
3	227	40.5		43.0	43	20.3	165		24.8	123	54	33	08	49	13	13	17	70
4	242	40.7		44.0	57	55.8	164		37.1	124	52	34	08	47	14	15	17	68
5	257	40.9	-3	44.9	72	31.2	164	+0	49.5	123	50	17 35	18 08	18 45	18 15	17	6 17	65
6	272	41.1	-3	45.9	87	06.6	164	+1	01.8	123	45	17 38	18 07	18 41	18 18	20	6 16	61
7	287	41.3		46.9	101	42.0	165		14.1	123	40	40	07	38	20	24	15	58
8	302	41.5		47.8	116	17.5	164		26.4	124	35	42	07	37	22	27	15	55
9	317	41.7		48.8	130	52.9	164		38.8	123	30	44	08	35	24	29	14	53
10	332	41.9		49.8	145	28.3	165	+1	51.1	123	20	47	09	34	27	33	13	48
11	347	42.1	-3	50.7	160	03.8	164	+2	03.4	122	10 N	17 50	18 11	18 35	18 30	37	6 12	44
12	2	42.3	-3	51.7	174	39.2	164	+2	15.6	123	0	17 52	18 13	18 37	18 32	41	6 12	40
13	17	42.5		52.7	189	14.6	164		27.9	123	10 S	55	16	41	35	44	11	37
14	32	42.7		53.6	203	50.0	165		40.2	122	20	17 58	21	46	38	48	10	33
15	47	42.9		54.6	218	25.5	164	+2	52.4	123	30	18 02	26	18 54	41	53	09	29
16	62	43.1		55.6	233	00.9	164	+3	04.7	122	35	04	30	19 00	43	55	08	27
17	77	43.3	-3	56.5	247	36.3	164	+3	16.9	122	40	18 07	18 34	19 06	18 45	58	6 08	23
18	92	43.5	-3	57.5	262	11.7	164	+3	29.1	122	45	18 10	18 39	19 15	18 48	61	6 07	20
19	107	43.7		58.5	276	47.1	164		41.3	122	50	13	46	25	51	65	06	16
20	122	43.9	-3	59.4	291	22.5	164	+3	53.5	122	52	15	49	30	52	68	06	14
21	137	44.1	-4	00.4	305	57.9	163	+4	05.7	121	54	17	53	36	54	69	05	13
22	152	44.3		01.4	320	33.2	164		17.8	122	56	19	18 57	43	55	72	05	10
23	167	44.5		02.3	335	08.6	163		30.0	121	58	21	19 01	50	57	75	04	8
24	182	44.7	-4	03.3	349	43.9		+4	42.1		60 S	18 23	19 06	19 59	18 59	78	6 04	5
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 23 ^h 11 ^m 5		Mag: -4.1 PMG: 09 ^h 21 ^m				Mag: -2.5 PMG: 00 ^h 52 ^m				Mag: -2.4 PMG: 18 ^h 31 ^m				Mag: +0.5 PMG: 19 ^h 02 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	11	10.2	219	55.9	+12	07.5	346	52.4	+6	10.8	81	37.6	-22	-39.5	73	48.3	-21	22.6
1	26	12.7	234	55.5		06.6	1	55.5		10.7	96	39.9		-39.5	88	50.8		22.6
2	41	15.1	249	55.2		05.8	16	58.7		10.5	111	42.2		-39.5	103	53.2		22.6
3	56	17.6	264	54.8		04.9	32	01.9		10.4	126	44.5		-39.4	118	55.7		22.6
4	71	20.1	279	54.4		04.0	47	05.0		10.2	141	46.8		-39.4	133	58.1		22.6
5	86	22.5	294	54.0	+12	03.2	62	08.2	+6	10.1	156	49.1	-22	-39.4	149	00.6	-21	22.6
6	101	25.0	309	53.6	+12	02.3	77	11.3	+6	09.9	171	51.4	-22	-39.4	164	03.0	-21	22.6
7	116	27.5	324	53.3		01.4	92	14.5		09.8	186	53.7		-39.4	179	05.5		22.6
8	131	29.9	339	52.9	+12	00.5	107	17.7		09.6	201	56.0		-39.3	194	07.9		22.6
9	146	32.4	354	52.5	+11	59.7	122	20.8		09.5	216	58.3		-39.3	209	10.4		22.6
10	161	34.9	9	52.1		58.8	137	24.0		09.3	232	00.6		-39.3	224	12.8		22.6
11	176	37.3	24	51.8	+11	57.9	152	27.2	+6	09.2	247	02.9	-22	-39.3	239	15.3	-21	22.6
12	191	39.8	39	51.4	+11	57.0	167	30.3	+6	09.0	262	05.2	-22	-39.3	254	17.7	-21	22.6
13	206	42.3	54	51.0		56.1	182	33.5		08.9	277	07.5		-39.2	269	20.2		22.6
14	221	44.7	69	50.6		55.3	197	36.7		08.7	292	09.8		-39.2	284	22.6		22.6
15	236	47.2	84	50.2		54.4	212	39.8		08.6	307	12.1		-39.2	299	25.1		22.6
16	251	49.6	99	49.9		53.5	227	43.0		08.4	322	14.4		-39.2	314	27.5		22.6
17	266	52.1	114	49.5	+11	52.6	242	46.2	+6	08.3	337	16.7	-22	-39.2	329	30.0	-21	22.6
18	281	54.6	129	49.1	+11	51.7	257	49.4	+6	08.1	352	19.0	-22	-39.1	344	32.4	-21	22.6
19	296	57.0	144	48.7		50.9	272	52.5		08.0	7	21.3		-39.1	359	34.9		22.6
20	311	59.5	159	48.4		50.0	287	55.7		07.9	22	23.6		-39.1	14	37.3		22.6
21	327	02.0	174	48.0		49.1	302	58.9		07.7	37	25.9		-39.1	29	39.7		22.6
22	342	04.4	189	47.6		48.2	318	02.1		07.6	52	28.2		-39.1	44	42.2		22.6
23	357	06.9	204	47.2		47.3	333	05.2		07.4	67	30.4		-39.0	59	44.6		22.6
24	12	09.4	219	46.9	+11	46.4	348	08.4	+6	07.3	82	32.7	-22	-39.0	74	47.1	-21	22.6
Dif.	—		-4		-9		+32		-1		+23		0		+24		0	

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0			SD: 14'7		PHE { 4^h: 54'0 12^h: 54'0 20^h: 54'0					Edad: 15 ^d 5			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 48 ^m 9			PMG: 00 ^h 42 ^m		Rº: 41 ^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	44.7	-4 03.3	349	43.9	164	+4 42.1	121	60 N	4 41	5 30	6 11	18 13	7	7 36	79	
1	197	44.9	04.3	4	19.3	163	+4 54.2	121	58	44	30	09	18 9		33	75	
2	212	45.1	05.2	18	54.6	163	+5 06.3	120	56	47	31	08	22 12		30	72	
3	227	45.3	06.2	33	29.9	163	18.3	121	54	50	31	06	26 14		27	70	
4	242	45.5	07.2	48	05.2	163	30.4	120	52	52	31	05	29 16		25	67	
5	257	45.7	-4 08.1	62	40.5	163	+5 42.4	120	50	4 54	5 31	6 04	18 32	18	7 22	66	
6	272	45.8	-4 09.1	77	15.8	162	+5 54.4	119	45	4 58	5 32	6 01	18 38	23	7 17	62	
7	287	46.0	10.1	91	51.0	162	+6 06.3	120	40	5 00	32	5 59	44 25		13	59	
8	302	46.2	11.0	106	26.2	163	18.3	119	35	02	31	57	49 28		10	55	
9	317	46.4	12.0	121	01.5	162	30.2	119	30	03	31	55	18 53	31	07	53	
10	332	46.6	12.9	135	36.7	161	42.1	119	20	04	29	51	19 00	35	7 01	49	
11	347	46.8	-4 13.9	150	11.8	162	+6 54.0	118	10 N	5 03	5 27	5 48	19 07	38	6 56	45	
12	2	47.0	-4 14.9	164	47.0	161	+7 05.8	118	0	5 01	5 25	5 46	19 13	42	6 52	41	
13	17	47.2	15.8	179	22.1	162	17.6	118	10 S	4 57	22	43	19 46		48	37	
14	32	47.4	16.8	193	57.3	160	29.4	118	20	52	17	39	26 49		43	34	
15	47	47.6	17.8	208	32.3	161	41.2	117	30	43	11	36	34 53		38	29	
16	62	47.8	18.7	223	07.4	161	+7 52.9	117	35	38	08	33	38 56		35	27	
17	77	48.0	-4 19.7	237	42.5	160	+8 04.6	117	40	4 31	5 03	5 31	19 43	59	6 31	24	
18	92	48.2	-4 20.7	252	17.5	160	+8 16.3	116	45	4 23	4 58	5 28	19 49	62	6 27	21	
19	107	48.4	21.6	266	52.5	159	27.9	116	50	12	51	24	19 56	67	22	18	
20	122	48.6	22.6	281	27.4	160	39.5	116	52	07	48	22	20 00	68	20	16	
21	137	48.8	23.6	296	02.4	159	+8 51.1	116	54	4 01	44	20	03 71		18	13	
22	152	48.9	24.5	310	37.3	159	+9 02.7	115	56	3 54	40	18	07 73		15	11	
23	167	49.1	25.5	325	12.2	159	14.2	114	58	47	36	16	20 12	76	6 12	9	
24	182	49.3	-4 26.4	339	47.1		+9 25.6		60 S	3 38	4 31	5 13	20 17	79	6 09	6	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 07 ^m 6		Mag: -4.1 PMG: 09 ^h 21 ^m			Mag: -2.5 PMG: 00 ^h 47 ^m			Mag: -2.3 PMG: 18 ^h 27 ^m			Mag: +0.5 PMG: 18 ^h 58 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	12	09.4	219	46.9	+11 46.4	348	08.4	+6 07.3	82	32.7	-22 39.0	74	47.1	-21 22.6	
1	27	11.8	234	46.5	45.5	3	11.6	07.1	97	35.0	39.0	89	49.5	22.6	
2	42	14.3	249	46.1	44.7	18	14.8	07.0	112	37.3	39.0	104	52.0	22.6	
3	57	16.7	264	45.7	43.8	33	18.0	06.8	127	39.6	39.0	119	54.4	22.6	
4	72	19.2	279	45.4	42.9	48	21.1	06.7	142	41.9	38.9	134	56.9	22.6	
5	87	21.7	294	45.0	+11 42.0	63	24.3	+6 06.5	157	44.2	-22 38.9	149	59.3	-21 22.6	
6	102	24.1	309	44.6	+11 41.1	78	27.5	+6 06.4	172	46.5	-22 38.9	165	01.8	-21 22.6	
7	117	26.6	324	44.2	40.2	93	30.7	06.2	187	48.8	38.9	180	04.2	22.6	
8	132	29.1	339	43.9	39.3	108	33.9	06.1	202	51.1	38.9	195	06.7	22.6	
9	147	31.5	354	43.5	38.4	123	37.0	05.9	217	53.4	38.8	210	09.1	22.6	
10	162	34.0	9	43.1	37.5	138	40.2	05.8	232	55.7	38.8	225	11.6	22.6	
11	177	36.5	24	42.7	+11 36.6	153	43.4	+6 05.6	247	58.0	-22 38.8	240	14.0	-21 22.6	
12	192	38.9	39	42.4	+11 35.7	168	46.6	+6 05.5	263	00.3	-22 38.8	255	16.4	-21 22.6	
13	207	41.4	54	42.0	34.9	183	49.8	05.3	278	02.5	38.8	270	18.9	22.6	
14	222	43.9	69	41.6	34.0	198	53.0	05.2	293	04.8	38.7	285	21.3	22.6	
15	237	46.3	84	41.2	33.1	213	56.2	05.0	308	07.1	38.7	300	23.8	22.6	
16	252	48.8	99	40.9	32.2	228	59.4	04.9	323	09.4	38.7	315	26.2	22.6	
17	267	51.2	114	40.5	+11 31.3	244	02.5	+6 04.7	338	11.7	-22 38.7	330	28.7	-21 22.6	
18	282	53.7	129	40.1	+11 30.4	259	05.7	+6 04.6	353	14.0	-22 38.7	345	31.1	-21 22.6	
19	297	56.2	144	39.7	29.5	274	08.9	04.4	8	16.3	38.6	0	33.6	22.6	
20	312	58.6	159	39.4	28.6	289	12.1	04.3	23	18.6	38.6	15	36.0	22.6	
21	328	01.1	174	39.0	27.7	304	15.3	04.1	38	20.9	38.6	30	38.4	22.6	
22	343	03.6	189	38.6	26.8	319	18.5	04.0	53	23.1	38.6	45	40.9	22.6	
23	358	06.0	204	38.2	25.9	334	21.7	03.8	68	25.4	38.6	60	43.3	22.6	
24	13	08.5	219	37.9	+11 25.0	349	24.9	+6 03.6	83	27.7	-22 38.5	75	45.8	-21 22.6	
Dif.	—		-4			-9	+32			-2			+24		

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 48 ^m 3			SD: 14'7 Edad: 17 ^d 5			PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2												
	PMG: 02 ^h 05 ^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		h m m	h m m				
0	182	53.9	-4	49.5	329	33.1	149	+13	48.6	103	60 N	4 46	5 34	6 16	18 29	13	10 14	80	
1	197	54.1		50.5	344	07.0	149	+13	58.9	104	58	49	34	14	39	17	10 04	77	
2	212	54.3		51.4	358	40.9	148	+14	09.3	102	56	51	35	12	49	19	9 55	77	
3	227	54.5		52.4	13	14.7	147		19.5	102	54	54	35	10	18 57	22	48	71	
4	242	54.7		53.4	27	48.4	147		29.7	101	52	55	34	08	19 04	24	41	69	
5	257	54.8	-4	54.3	42	22.1	147	+14	39.8	101	50	4 57	5 34	6 07	19 11	26	9 35	67	
6	272	55.0	-4	55.3	56	55.8	146	+14	49.9	101	45	5 00	5 34	6 03	19 26	29	9 22	62	
7	287	55.2		56.2	71	29.4	146	+15	00.0	99	40	02	33	6 01	38	32	11	59	
8	302	55.4		57.2	86	03.0	145		09.9	99	35	03	33	5 58	48	34	9 01	57	
9	317	55.6		58.2	100	36.5	145		19.8	99	30	04	32	5 56	19 57	37	8 53	55	
10	332	55.8	-4	59.1	115	10.0	144		29.7	98	20	04	30	5 52	20 12	41	39	51	
11	347	56.0	-5	00.1	129	43.4	144	+15	39.5	97	10 N	5 03	5 27	5 48	20 26	43	8 27	48	
12	2	56.1	-5	01.0	144	16.8	143	+15	49.2	97	0	5 00	5 24	5 45	20 39	46	8 16	45	
13	17	56.3		02.0	158	50.1	142	+15	58.9	96	10 S	4 56	20	41	20 52	49	8 05	41	
14	32	56.5		03.0	173	23.3	142	+16	08.5	95	20	50	15	38	21 06	51	7 53	38	
15	47	56.7		03.9	187	56.5	142		18.0	95	30	41	09	33	22	55	39	35	
16	62	56.9		04.9	202	29.7	141		27.5	94	35	35	05	30	31	57	31	33	
17	77	57.1	-5	05.8	217	02.8	140	+16	36.9	93	40	4 28	5 00	5 27	21 42	59	7 22	30	
18	92	57.3	-5	06.8	231	35.8	140	+16	46.2	93	45	4 19	4 54	5 24	21 54	63	7 12	26	
19	107	57.4		07.8	246	08.8	139	+16	55.5	92	50	07	47	20	22 10	66	6 59	23	
20	122	57.6		08.7	260	41.7	139	+17	04.7	91	52	4 02	43	18	17	68	53	21	
21	137	57.8		09.7	275	14.6	138		13.8	91	54	3 56	39	15	25	71	47	19	
22	152	58.0		10.6	289	47.4	138		22.9	90	56	48	35	13	34	73	40	16	
23	167	58.2		11.6	304	20.2	137		31.9	89	58	40	30	10	22 44	77	6 31	14	
24	182	58.4	-5	12.6	318	52.9		+17	40.8		60 S	3 31	4 24	5 07	22 56	81	6 22	11	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 59 ^m 7		Mag: -4.1 PMG: 09 ^h 22 ^m			Mag: -2.5 PMG: 00 ^h 37 ^m			Mag: -2.3 PMG: 18 ^h 20 ^m			Mag: +0.5 PMG: 18 ^h 50 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	14	07.6	219	28.9	+11	03.2	350	41.8	+6	00.0	84	22.5	-22	38.0	76	44.3	-21	22.5
1	29	10.1	234	28.6		02.2	5	45.0	+5	59.8	99	24.8		38.0	91	46.8		22.5
2	44	12.6	249	28.2		01.3	20	48.2		59.7	114	27.1		38.0	106	49.2		22.5
3	59	15.0	264	27.8	+11	00.4	35	51.4		59.5	129	29.3		38.0	121	51.7		22.5
4	74	17.5	279	27.5	+10	59.5	50	54.6		59.4	144	31.6		37.9	136	54.1		22.5
5	89	20.0	294	27.1	+10	58.6	65	57.8	+5	59.2	159	33.9	-22	37.9	151	56.5	-21	22.5
6	104	22.4	309	26.7	+10	57.6	81	01.0	+5	59.1	174	36.2	-22	37.9	166	59.0	-21	22.5
7	119	24.9	324	26.3		56.7	96	04.3		58.9	189	38.5		37.9	182	01.4		22.5
8	134	27.3	339	26.0		55.8	111	07.5		58.8	204	40.7		37.9	197	03.8		22.5
9	149	29.8	354	25.6		54.9	126	10.7		58.6	219	43.0		37.8	212	06.3		22.5
10	164	32.3	9	25.2		54.0	141	13.9		58.4	234	45.3		37.8	227	08.7		22.5
11	179	34.7	24	24.9	+10	53.0	156	17.1	+5	58.3	249	47.6	-22	37.8	242	11.2	-21	22.5
12	194	37.2	39	24.5	+10	52.1	171	20.3	+5	58.1	264	49.8	-22	37.8	257	13.6	-21	22.5
13	209	39.7	54	24.1		51.2	186	23.6		58.0	279	52.1		37.7	272	16.0		22.5
14	224	42.1	69	23.8		50.3	201	26.8		57.8	294	54.4		37.7	287	18.5		22.5
15	239	44.6	84	23.4		49.3	216	30.0		57.7	309	56.7		37.7	302	20.9		22.5
16	254	47.1	99	23.0		48.4	231	33.2		57.5	324	58.9		37.7	317	23.3		22.5
17	269	49.5	114	22.6	+10	47.5	246	36.4	+5	57.4	340	01.2	-22	37.7	332	25.8	-21	22.5
18	284	52.0	129	22.3	+10	46.6	261	39.7	+5	57.2	355	03.5	-22	37.6	347	28.2	-21	22.5
19	299	54.4	144	21.9		45.6	276	42.9		57.1	10	05.7		37.6	2	30.6		22.5
20	314	56.9	159	21.5		44.7	291	46.1		56.9	25	08.0		37.6	17	33.1		22.5
21	329	59.4	174	21.2		43.8	306	49.3		56.7	40	10.3		37.6	32	35.5		22.5
22	345	01.8	189	20.8		42.8	321	52.5		56.6	55	12.6		37.5	47	37.9		22.4
23	0	04.3	204	20.4		41.9	336	55.8		56.4	70	14.8		37.5	62	40.4		22.4
24	15	06.8	219	20.1	+10	41.0	351	59.0	+5	56.3	85	17.1	-22	37.5	77	42.8	-21	22.4
Dif.	—		-4		-9		+32		-2		+23		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		PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9											
	PMG: 11 ^h 47 ^m 7				Edad: 19 ^d 5													
	PMG: 03 ^h 36 ^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		
0	183	02.7	-5	35.5	307	39.4	122	+20	51.7	69	60 N	4 51	5 39	6 21	19 01	32	12 53	74
1	198	02.9		36.5	322	10.6	121	+20	58.6	68	58	53	39	18	19 35		36	70
2	213	03.1		37.4	336	41.7	120	+21	05.4	67	56	55	39	16	34 37		21	68
3	228	03.3		38.4	351	12.7	119		12.1	66	54	57	38	14	47 39		12 08	66
4	243	03.5		39.3	5	43.6	119		18.7	66	52	4 59	38	12	19 59	40	11 57	64
5	258	03.6	-5	40.3	20	14.5	119	+21	25.3	64	50	5 00	5 37	6 10	20 09	41	11 47	63
6	273	03.8	-5	41.2	34	45.4	117	+21	31.7	63	45	5 02	5 37	6 06	20 30	44	11 27	60
7	288	04.0		42.2	49	16.1	117		38.0	63	40	04	35	03	20 48	45	11 10	58
8	303	04.2		43.2	63	46.8	117		44.3	61	35	05	34	6 00	21 02	46	10 56	57
9	318	04.4		44.1	78	17.5	116		50.4	60	30	05	33	5 57	15 47		44	55
10	333	04.5		45.1	92	48.1	115	+21	56.4	60	20	05	30	52	37 49		23	53
11	348	04.7	-5	46.0	107	18.6	114	+22	02.4	58	10 N	5 03	5 27	5 48	21 56	50	10 05	52
12	3	04.9	-5	47.0	121	49.0	114	+22	08.2	58	0	5 00	5 24	5 44	22 14	51	9 48	50
13	18	05.1		47.9	136	19.4	113		14.0	56	10 S	4 55	19	40	31 53		31	48
14	33	05.2		48.9	150	49.7	113		19.6	56	20	48	14	36	22 51	53	9 13	47
15	48	05.4		49.8	165	20.0	111		25.2	54	30	38	07	31	23 13	55	8 53	44
16	63	05.6		50.8	179	50.1	112		30.6	53	35	32	5 02	28	26 56		41	42
17	78	05.8	-5	51.7	194	20.3	110	+22	35.9	53	40	4 24	4 57	5 24	23 41	57	8 27	41
18	93	05.9	-5	52.7	208	50.3	110	+22	41.2	51	45	4 15	4 50	5 20	23 59	58	8 10	40
19	108	06.1		53.6	223	20.3	110		46.3	50	50	4 03	42	15	** ** *	**	7 50	37
20	123	06.3		54.6	237	50.3	108		51.3	49	52	3 57	39	13	** ** *	**	41	35
21	138	06.5		55.6	252	20.1	109	+22	56.2	48	54	50	34	11	** ** *	**	30	33
22	153	06.7		56.5	266	50.0	107	+23	01.0	47	56	42	30	08	** ** *	**	18	31
23	168	06.8		57.5	281	19.7	107		05.7	46	58	34	24	05	0 01	73	7 04	29
24	183	07.0	-5	58.4	295	49.4		+23	10.3		60 S	3 23	4 18	5 01	0 17	77	6 48	24
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 22 ^h 51 ^m 9		Mag: -4.1 PMG: 09 ^h 23 ^m				Mag: -2.6 PMG: 00 ^h 27 ^m				Mag: -2.3 PMG: 18 ^h 12 ^m				Mag: +0.5 PMG: 18 ^h 42 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	16	05.9	219	11.3	+10	18.5	353	16.5	+5	52.5	86	11.5	-22	36.9	78	41.2	-21	22.4
1	31	08.4	234	10.9		17.5	8	19.8		52.4	101	13.8		36.9	93	43.6		22.4
2	46	10.8	249	10.5		16.6	23	23.0		52.2	116	16.0		36.9	108	46.0		22.3
3	61	13.3	264	10.2		15.6	38	26.3		52.1	131	18.3		36.9	123	48.5		22.3
4	76	15.8	279	09.8		14.7	53	29.5		51.9	146	20.6		36.8	138	50.9		22.3
5	91	18.2	294	09.4	+10	13.7	68	32.7	+5	51.8	161	22.8	-22	36.8	153	53.3	-21	22.3
6	106	20.7	309	09.1	+10	12.8	83	36.0	+5	51.6	176	25.1	-22	36.8	168	55.8	-21	22.3
7	121	23.2	324	08.7		11.8	98	39.2		51.4	191	27.4		36.8	183	58.2		22.3
8	136	25.6	339	08.3		10.9	113	42.4		51.3	206	29.6		36.7	199	00.6		22.3
9	151	28.1	354	08.0		10.0	128	45.7		51.1	221	31.9		36.7	214	03.0		22.3
10	166	30.5	9	07.6		09.0	143	48.9		51.0	236	34.1		36.7	229	05.5		22.3
11	181	33.0	24	07.2	+10	08.0	158	52.2	+5	50.8	251	36.4	-22	36.7	244	07.9	-21	22.3
12	196	35.5	39	06.9	+10	07.1	173	55.4	+5	50.7	266	38.7	-22	36.6	259	10.3	-21	22.3
13	211	37.9	54	06.5		06.1	188	58.7		50.5	281	40.9		36.6	274	12.7		22.3
14	226	40.4	69	06.2		05.2	204	01.9		50.3	296	43.2		36.6	289	15.2		22.3
15	241	42.9	84	05.8		04.2	219	05.1		50.2	311	45.4		36.6	304	17.6		22.3
16	256	45.3	99	05.4		03.3	234	08.4		50.0	326	47.7		36.5	319	20.0		22.3
17	271	47.8	114	05.1	+10	02.3	249	11.6	+5	49.9	341	49.9	-22	36.5	334	22.5	-21	22.3
18	286	50.3	129	04.7	+10	01.4	264	14.9	+5	49.7	356	52.2	-22	36.5	349	24.9	-21	22.3
19	301	52.7	144	04.3	+10	00.4	279	18.1		49.6	11	54.5		36.5	4	27.3		22.3
20	316	55.2	159	04.0	+9	59.5	294	21.4		49.4	26	56.7		36.4	19	29.7		22.3
21	331	57.7	174	03.6		58.5	309	24.6		49.2	41	59.0		36.4	34	32.2		22.3
22	347	00.1	189	03.2		57.6	324	27.9		49.1	57	01.2		36.4	49	34.6		22.3
23	2	02.6	204	02.9		56.6	339	31.1		48.9	72	03.5		36.4	64	37.0		22.3
24	17	05.0	219	02.5	+9	55.6	354	34.3	+5	48.8	87	05.7	-22	36.3	79	39.4	-21	22.3
Dif.	—		-4	-10			+32	-2			+23		0		+24			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0			SD: 15'0 PHE { 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'5													
	PMG: 11 ^h 47 ^m 4			Edad: 20 ^d 5													
	PMG: 04 ^h 26 ^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	183	07.0	-5 58.4	295	49.4	106	+23 10.3	45	60 N	17 10	17 52	18 40	19 33	49	14 07	60	
1	198	07.2	-5 59.4	310	19.0	106		14.8	43	58	13	53	38	19 54	50	13 46	59
2	213	07.4	-6 00.3	324	48.6	105		19.1	43	56	16	53	36	20 11	51	29	58
3	228	07.5	01.3	339	18.1	104		23.4	41	54	18	54	35	26	51	14	58
4	243	07.7	02.2	353	47.5	104		27.5	41	52	21	54	33	39	51	13 01	58
5	258	07.9	-6 03.2	8	16.9	103	+23 31.6	39	50	17 23	17 55	18 32	20 50	52	12 50	57	
6	273	08.1	-6 04.1	22	46.2	103	+23 35.5	38	45	17 27	17 56	18 30	21 14	52	12 27	56	
7	288	08.2	05.1	37	15.5	102		39.3	37	40	31	58	29	33	52	12 08	56
8	303	08.4	06.0	51	44.7	102		43.0	35	35	34	17 59	28	21 48	53	11 53	55
9	318	08.6	07.0	66	13.9	101		46.5	35	30	37	18 01	28	22 02	53	39	55
10	333	08.7	07.9	80	43.0	100		50.0	33	20	42	04	29	26	53	11 16	54
11	348	08.9	-6 08.9	95	12.0	100	+23 53.3	33	10 N	17 46	18 07	18 32	22 46	53	10 57	53	
12	3	09.1	-6 09.8	109	41.0	99	+23 56.6	31	0	17 51	18 11	18 36	23 05	53	10 38	52	
13	18	09.3	10.8	124	09.9	98	+23 59.7	29	10 S	17 55	16	41	24	53	19	52	
14	33	09.4	11.7	138	38.7	98	+24 02.6	29	20	18 00	22	48	23 44	54	10 00	51	
15	48	09.6	12.7	153	07.5	98		05.5	27	30	06	30	18 58	** ** *	**	9 37	50
16	63	09.8	13.6	167	36.3	97		08.2	27	35	09	35	19 05	** ** *	**	23	50
17	78	10.0	-6 14.6	182	05.0	96	+24 10.9	25	40	18 13	18 40	19 13	** ** *	**	9 08	48	
18	93	10.1	-6 15.5	196	33.6	96	+24 13.4	24	45	18 17	18 47	19 23	** ** *	**	8 50	47	
19	108	10.3	16.5	211	02.2	96		15.8	22	50	23	18 56	36	0 21	60	27	46
20	123	10.5	17.4	225	30.8	95		18.0	21	52	25	19 00	42	32	61	16	45
21	138	10.6	18.4	239	59.3	94		20.1	20	54	28	04	49	44	62	8 03	45
22	153	10.8	19.3	254	27.7	94		22.1	19	56	31	10	19 57	0 58	64	7 49	43
23	168	11.0	20.3	268	56.1	93		24.0	18	58	34	15	20 07	1 14	66	33	41
24	183	11.2	-6 21.2	283	24.4		+24 25.8		60 S	18 38	19 22	20 18	1 34	68	7 12	40	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 47 ^m 9		Mag: -4.1 PMG: 09 ^h 24 ^m			Mag: -2.6 PMG: 00 ^h 22 ^m			Mag: -2.3 PMG: 18 ^h 09 ^m			Mag: +0.5 PMG: 18 ^h 38 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	17	05.0	219	02.5	+9 55.6	354	34.3	+5 48.8	87	05.7	-22 -36.3	79	39.4	-21 22.3			
1	32	07.5	234	02.2	54.7	9	37.6	48.6	102	08.0	-36.3	94	41.9	22.2			
2	47	10.0	249	01.8	53.7	24	40.8	48.5	117	10.3	-36.3	109	44.3	22.2			
3	62	12.4	264	01.4	52.8	39	44.1	48.3	132	12.5	-36.3	124	46.7	22.2			
4	77	14.9	279	01.1	51.8	54	47.3	48.2	147	14.8	-36.2	139	49.1	22.2			
5	92	17.4	294	00.7	+9 50.8	69	50.6	+5 48.0	162	17.0	-22 -36.2	154	51.6	-21 22.2			
6	107	19.8	309	00.3	+9 49.9	84	53.8	+5 47.8	177	19.3	-22 -36.2	169	54.0	-21 22.2			
7	122	22.3	324	00.0	48.9	99	57.1	47.7	192	21.5	-36.2	184	56.4	22.2			
8	137	24.8	338	59.6	47.9	115	00.3	47.5	207	23.8	-36.1	199	58.8	22.2			
9	152	27.2	353	59.3	47.0	130	03.6	47.4	222	26.0	-36.1	215	01.3	22.2			
10	167	29.7	8	58.9	46.0	145	06.8	47.2	237	28.3	-36.1	230	03.7	22.2			
11	182	32.2	23	58.5	+9 45.1	160	10.1	+5 47.1	252	30.5	-22 -36.1	245	06.1	-21 22.2			
12	197	34.6	38	58.2	+9 44.1	175	13.3	+5 46.9	267	32.8	-22 -36.0	260	08.5	-21 22.2			
13	212	37.1	53	57.8	43.1	190	16.6	46.7	282	35.0	-36.0	275	10.9	22.2			
14	227	39.5	68	57.4	42.2	205	19.8	46.6	297	37.3	-36.0	290	13.4	22.2			
15	242	42.0	83	57.1	41.2	220	23.1	46.4	312	39.5	-36.0	305	15.8	22.2			
16	257	44.5	98	56.7	40.2	235	26.3	46.3	327	41.8	-35.9	320	18.2	22.2			
17	272	46.9	113	56.4	+9 39.3	250	29.6	+5 46.1	342	44.0	-22 -35.9	335	20.6	-21 22.2			
18	287	49.4	128	56.0	+9 38.3	265	32.8	+5 46.0	357	46.3	-22 -35.9	350	23.1	-21 22.2			
19	302	51.9	143	55.6	37.3	280	36.1	45.8	12	48.5	-35.9	5	25.5	22.2			
20	317	54.3	158	55.3	36.4	295	39.4	45.6	27	50.8	-35.8	20	27.9	22.2			
21	332	56.8	173	54.9	35.4	310	42.6	45.5	42	53.0	-35.8	35	30.3	22.1			
22	347	59.3	188	54.6	34.4	325	45.9	45.3	57	55.3	-35.8	50	32.7	22.1			
23	3	01.7	203	54.2	33.4	340	49.1	45.2	72	57.5	-35.7	65	35.2	22.1			
24	18	04.2	218	53.8	+9 32.5	355	52.4	+5 45.0	87	59.8	-22 -35.7	80	37.6	-21 22.1			
Dif.	—		-4	-10		+32		-2	+22		0	+24		0			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0				SD: 15'2					PHE { 4 ^h : 55'8 12 ^h : 56'0 20 ^h : 56'3			Edad: 21 ^d 5					
	PMG: 11 ^h 47 ^m 1				PMG: 05 ^h 18 ^m					Rº: 53 ^m								
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m			
0	183	11.2	-6	21.2	283	24.4	93	+24	25.8	16	60 N	4 56	5 44	6 26	20 22	70	15 07	43
1	198	11.3		22.2	297	52.7	93		27.4	15	58	58	43	22	20 44	68	14 45	45
2	213	11.5		23.1	312	21.0	92		28.9	14	56	4 59	42	20	21 02	66		27 47
3	228	11.7		24.1	326	49.2	91		30.3	13	54	5 01	42	17	17 65	14 12	47	
4	243	11.8		25.0	341	17.3	91		31.6	11	52	02	41	15	30 64	13 59	48	
5	258	12.0	-6	26.0	355	45.4	91	+24	32.7	10	50	5 03	5 41	6 13	21 42	63	13 47	49
6	273	12.2	-6	26.9	10	13.5	90	+24	33.7	8	45	5 05	5 39	6 08	22 06	61	13 23	50
7	288	12.3		27.9	24	41.5	89		34.5	8	40	06	37	05	25 60	13 04	51	
8	303	12.5		28.8	39	09.4	90		35.3	6	35	07	36	6 01	41 59	12 48	51	
9	318	12.7		29.8	53	37.4	89		35.9	4	30	07	34	5 58	22 55	58	34	52
10	333	12.9		30.7	68	05.3	88		36.3	4	20	05	31	53	23 19	57	12 10	53
11	348	13.0	-6	31.7	82	33.1	88	+24	36.7	2	10 N	5 03	5 27	5 48	23 39	56	11 50	53
12	3	13.2	-6	32.6	97	00.9	88	+24	36.9	1	0	4 59	5 23	5 44	23 58	55	11 30	54
13	18	13.4		33.6	111	28.7	87		37.0	1	10 S	53	18	39	** ** *	**	11 11	55
14	33	13.5		34.5	125	56.4	87		36.9	2	20	46	12	34	** ** *	**	10 51	55
15	48	13.7		35.4	140	24.1	86		36.7	3	30	36	5 04	28	0 08	54	27	55
16	63	13.9		36.4	154	51.7	87		36.4	4	35	29	4 59	25	22 54	10 13	56	
17	78	14.0	-6	37.3	169	19.4	85	+24	36.0	6	40	4 21	4 54	5 21	0 38	54	9 56	57
18	93	14.2	-6	38.3	183	46.9	86	+24	35.4	8	45	4 11	4 47	5 17	0 57	54	9 37	57
19	108	14.4		39.2	198	14.5	85		34.6	8	50	3 58	38	11	1 21	54	13	57
20	123	14.5		40.2	212	42.0	85		33.8	10	52	52	34	08	33 53	9 01	58	
21	138	14.7		41.1	227	09.5	84		32.8	11	54	44	29	06	1 46	53	8 48	58
22	153	14.9		42.1	241	36.9	85		31.7	13	56	36	24	5 03	2 02	53	32	59
23	168	15.0		43.0	256	04.4	84		30.4	14	58	27	18	4 59	2 20	52	8 14	59
24	183	15.2	-6	44.0	270	31.8		+24	29.0		60 S	3 16	4 12	4 55	2 42	52	7 52	59
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 44 ^m 0		Mag: -4.1 PMG: 09 ^h 25 ^m			Mag: -2.6 PMG: 00 ^h 16 ^m			Mag: -2.3 PMG: 18 ^h 05 ^m			Mag: +0.5 PMG: 18 ^h 34 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	18	04.2	218	53.8	+9	32.5	355	52.4	+5	45.0	87	59.8	-22	35.7	80	37.6	-21	22.1
1	33	06.7	233	53.5		31.5	10	55.6		44.9	103	02.0		35.7	95	40.0		22.1
2	48	09.1	248	53.1		30.5	25	58.9		44.7	118	04.3		35.7	110	42.4		22.1
3	63	11.6	263	52.7		29.6	41	02.1		44.5	133	06.5		35.6	125	44.9		22.1
4	78	14.0	278	52.4		28.6	56	05.4		44.4	148	08.8		35.6	140	47.3		22.1
5	93	16.5	293	52.0	+9	27.6	71	08.7	+5	44.2	163	11.0	-22	35.6	155	49.7	-21	22.1
6	108	19.0	308	51.7	+9	26.6	86	11.9	+5	44.1	178	13.3	-22	35.6	170	52.1	-21	22.1
7	123	21.4	323	51.3		25.7	101	15.2		43.9	193	15.5		35.5	185	54.5		22.1
8	138	23.9	338	50.9		24.7	116	18.4		43.8	208	17.8		35.5	200	57.0		22.1
9	153	26.4	353	50.6		23.7	131	21.7		43.6	223	20.0		35.5	215	59.4		22.1
10	168	28.8	8	50.2		22.7	146	24.9		43.5	238	22.2		35.5	231	01.8		22.1
11	183	31.3	23	49.9	+9	21.7	161	28.2	+5	43.3	253	24.5	-22	35.4	246	04.2	-21	22.1
12	198	33.8	38	49.5	+9	20.8	176	31.5	+5	43.1	268	26.7	-22	35.4	261	06.6	-21	22.1
13	213	36.2	53	49.1		19.8	191	34.7		43.0	283	29.0		35.4	276	09.0		22.1
14	228	38.7	68	48.8		18.8	206	38.0		42.8	298	31.2		35.3	291	11.5		22.0
15	243	41.1	83	48.4		17.8	221	41.2		42.7	313	33.5		35.3	306	13.9		22.0
16	258	43.6	98	48.1		16.9	236	44.5		42.5	328	35.7		35.3	321	16.3		22.0
17	273	46.1	113	47.7	+9	15.9	251	47.8	+5	42.4	343	37.9	-22	35.3	336	18.7	-21	22.0
18	288	48.5	128	47.4	+9	14.9	266	51.0	+5	42.2	358	40.2	-22	35.2	351	21.1	-21	22.0
19	303	51.0	143	47.0		13.9	281	54.3		42.0	13	42.4		35.2	6	23.6		22.0
20	318	53.5	158	46.6		12.9	296	57.5		41.9	28	44.7		35.2	21	26.0		22.0
21	333	55.9	173	46.3		11.9	312	00.8		41.7	43	46.9		35.2	36	28.4		22.0
22	348	58.4	188	45.9		11.0	327	04.1		41.6	58	49.2		35.1	51	30.8		22.0
23	4	00.9	203	45.6		10.0	342	07.3		41.4	73	51.4		35.1	66	33.2		22.0
24	19	03.3	218	45.2	+9	09.0	357	10.6	+5	41.3	88	53.6	-22	35.1	81	35.6	-21	22.0
Dif.	—		-4		-10		+33		-2		+22		0		+24			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0			PHE { 4 ^h : 56'5 12 ^h : 56'8 20 ^h : 57'1													
	PMG: 11 ^h 46 ^m 9			Edad: 22 ^d 5													
	PMG: 06 ^h 11 ^m			Rº: 55 ^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 15.2	-6 44.0		270 31.8	83	+24 29.0	16	60 N	17 05	17 46	18 34	21 32	86	15 50	28		
1	198 15.4	44.9		284 59.1	84	27.4	16	58	08	47	32	21 52	82	30	32		
2	213 15.5	45.9		299 26.5	83	25.8	19	56	11	48	31	22 08	79	15 14	34		
3	228 15.7	46.8		313 53.8	83	23.9	19	54	14	49	30	22 76	76	14 59	37		
4	243 15.9	47.7		328 21.1	82	22.0	21	52	16	50	29	34 74	74	47	39		
5	258 16.0	-6 48.7		342 48.3	83	+24 19.9	22	50	17 18	17 51	18 28	22 45	72	14 36	41		
6	273 16.2	-6 49.6		357 15.6	82	+24 17.7	24	45	17 23	17 53	18 27	23 07	69	14 13	44		
7	288 16.3	50.6		11 42.8	82	15.3	25	40	28	55	26	25 67	67	13 55	45		
8	303 16.5	51.5		26 10.0	81	12.8	26	35	31	57	26	40 65	65	39	48		
9	318 16.7	52.5		40 37.1	82	10.2	28	30	34	17 58	26	23 53	63	26	49		
10	333 16.8	53.4		55 04.3	81	07.4	29	20	40	18 02	28	*** **	**	13 03	51		
11	348 17.0	-6 54.4		69 31.4	81	+24 04.5	31	10 N	17 45	18 06	18 31	*** **	**	12 43	53		
12	3 17.2	-6 55.3		83 58.5	81	+24 01.4	32	0	17 50	18 11	18 35	*** **	**	12 24	55		
13	18 17.3	56.2		98 25.6	81	+23 58.2	34	10 S	17 55	16	41	0 17	54	12 06	56		
14	33 17.5	57.2		112 52.7	81	54.8	34	20	18 01	23	18 49	0 38	52	11 46	58		
15	48 17.7	58.1		127 19.8	81	51.4	36	30	07	31	19 00	1 02	50	22	61		
16	63 17.8	-6 59.1		141 46.9	80	47.8	38	35	11	36	07	16 49	49	11 09	62		
17	78 18.0	-7 00.0		156 13.9	80	+23 44.0	39	40	18 15	18 43	19 15	1 32	48	10 53	63		
18	93 18.1	-7 01.0		170 40.9	81	+23 40.1	40	45	18 20	18 50	19 26	1 51	47	10 34	65		
19	108 18.3	01.9		185 08.0	80	36.1	42	50	26	18 59	40	2 15	44	10 10	68		
20	123 18.5	02.8		199 35.0	80	31.9	43	52	29	19 04	46	26 44	44	9 59	69		
21	138 18.6	03.8		214 02.0	80	27.6	45	54	32	08	19 54	39 43	43	46	71		
22	153 18.8	04.7		228 29.0	79	23.1	46	56	35	14	20 02	2 55	40	31	73		
23	168 18.9	05.7		242 55.9	80	18.5	47	58	39	20	12	3 12	39	9 13	75		
24	183 19.1	-7 06.6		257 22.9		+23 13.8		60 S	18 43	19 27	20 24	3 34	35	8 51	79		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 40 ^m 1		Mag: -4.1 PMG: 09 ^h 25 ^m			Mag: -2.6 PMG: 00 ^h 11 ^m			Mag: -2.3 PMG: 18 ^h 02 ^m			Mag: +0.5 PMG: 18 ^h 31 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	° ' "	° ' "	° ' "		° ' "	° ' "		° ' "	° ' "	° ' "		° ' "	° ' "	° ' "			
0	19 03.3	218 45.2	+9 09.0		357 10.6	+5 41.3		88 53.6	-22 -35.1			81 35.6	-21 22.0				
1	34 05.8	233 44.8	08.0		12 13.8	41.1		103 55.9	-35.1			96 38.1	22.0				
2	49 08.3	248 44.5	07.0		27 17.1	41.0		118 58.1	-35.0			111 40.5	22.0				
3	64 10.7	263 44.1	06.0		42 20.4	40.8		134 00.4	-35.0			126 42.9	22.0				
4	79 13.2	278 43.8	05.0		57 23.6	40.6		149 02.6	-35.0			141 45.3	22.0				
5	94 15.6	293 43.4	+9 04.1		72 26.9	+5 40.5		164 04.8	-22 -34.9			156 47.7	-21 22.0				
6	109 18.1	308 43.1	+9 03.1		87 30.1	+5 40.3		179 07.1	-22 -34.9			171 50.1	-21 22.0				
7	124 20.6	323 42.7	02.1		102 33.4	40.2		194 09.3	-34.9			186 52.6	21.9				
8	139 23.0	338 42.3	01.1		117 36.7	40.0		209 11.5	-34.9			201 55.0	21.9				
9	154 25.5	353 42.0	+9 00.1		132 39.9	39.9		224 13.8	-34.8			216 57.4	21.9				
10	169 28.0	8 41.6	+8 59.1		147 43.2	39.7		239 16.0	-34.8			231 59.8	21.9				
11	184 30.4	23 41.3	+8 58.1		162 46.5	+5 39.6		254 18.3	-22 -34.8			247 02.2	-21 21.9				
12	199 32.9	38 40.9	+8 57.1		177 49.7	+5 39.4		269 20.5	-22 -34.7			262 04.6	-21 21.9				
13	214 35.4	53 40.6	56.1		192 53.0	39.2		284 22.7	-34.7			277 07.0	21.9				
14	229 37.8	68 40.2	55.2		207 56.3	39.1		299 25.0	-34.7			292 09.5	21.9				
15	244 40.3	83 39.8	54.2		222 59.5	38.9		314 27.2	-34.7			307 11.9	21.9				
16	259 42.8	98 39.5	53.2		238 02.8	38.8		329 29.4	-34.6			322 14.3	21.9				
17	274 45.2	113 39.1	+8 52.2		253 06.0	+5 38.6		344 31.7	-22 -34.6			337 16.7	-21 21.9				
18	289 47.7	128 38.8	+8 51.2		268 09.3	+5 38.5		359 33.9	-22 -34.6			352 19.1	-21 21.9				
19	304 50.1	143 38.4	50.2		283 12.6	38.3		14 36.1	-34.5			7 21.5	21.9				
20	319 52.6	158 38.1	49.2		298 15.8	38.2		29 38.4	-34.5			22 23.9	21.9				
21	334 55.1	173 37.7	48.2		313 19.1	38.0		44 40.6	-34.5			37 26.3	21.9				
22	349 57.5	188 37.3	47.2		328 22.4	37.8		59 42.8	-34.5			52 28.8	21.8				
23	5 00.0	203 37.0	46.2		343 25.6	37.7		74 45.1	-34.4			67 31.2	21.8				
24	20 02.5	218 36.6	+8 45.2		358 28.9	+5 37.5		89 47.3	-22 -34.4			82 33.6	-21 21.8				
Dif.	—	-4	-10		+33	-2		+22	0			+24					

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'0			SD: 15'6 Edad: 23 ^d 5							PMG: 07 ^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 m	m	h m m	m			
0	183	19.1	-7	06.6	257	22.9	80	+23	13.8	49	60 N	5 00	5 49	6 30	22 58	95	16 18	18	
1	198	19.3		07.6	271	49.9	80		08.9	50	58	02	47	27	23 14	90	16 02	22	
2	213	19.4		08.5	286	16.9	79	+23	03.9	52	56	03	46	24	27 87		15 48	26	
3	228	19.6		09.4	300	43.8	80	+22	58.7	53	54	04	45	21	38 84		36 29		
4	243	19.7		10.4	315	10.8	79		53.4	54	52	05	45	18	48 82		26 31		
5	258	19.9	-7	11.3	329	37.7	80	+22	48.0	56	50	5 06	5 44	6 16	23 57	79	15 17	32	
6	273	20.1	-7	12.3	344	04.7	80	+22	42.4	57	45	5 07	5 41	6 11	***	***	14 57	37	
7	288	20.2		13.2	358	31.7	79		36.7	58	40	08	39	07	***	***	40	41	
8	303	20.4		14.1	12	58.6	80		30.9	60	35	08	37	03	***	***	27	42	
9	318	20.5		15.1	27	25.6	79		24.9	61	30	08	35	6 00	***	***	14 15	45	
10	333	20.7		16.0	41	52.5	80		18.8	63	20	06	31	5 54	0 16	59	13 54	49	
11	348	20.9	-7	17.0	56	19.5	80	+22	12.5	64	10 N	5 03	5 27	5 48	0 35	57	13 36	52	
12	3	21.0	-7	17.9	70	46.5	79	+22	06.1	65	0	4 58	5 22	5 43	0 53	55	13 19	55	
13	18	21.2		18.8	85	13.4	80	+21	59.6	67	10 S	52	17	38	1 11	52	13 02	58	
14	33	21.3		19.8	99	40.4	80		52.9	68	20	44	10	33	30	50	12 44	61	
15	48	21.5		20.7	114	07.4	80		46.1	69	30	33	5 02	26	1 52	47	23	64	
16	63	21.6		21.7	128	34.4	80		39.2	71	35	26	4 57	22	2 05	45	12 11	66	
17	78	21.8	-7	22.6	143	01.4	80	+21	32.1	72	40	4 18	4 50	5 18	2 20	43	11 56	69	
18	93	22.0	-7	23.5	157	28.4	80	+21	24.9	74	45	4 07	4 43	5 13	2 38	40	11 39	72	
19	108	22.1		24.5	171	55.4	80		17.5	75	50	3 53	33	07	2 59	37	18	76	
20	123	22.3		25.4	186	22.4	81		10.0	76	52	46	29	04	3 10	34	11 08	78	
21	138	22.4		26.3	200	49.5	80	+21	02.4	77	54	39	24	5 01	22	32	10 57	80	
22	153	22.6		27.3	215	16.5	80	+20	54.7	79	56	30	19	4 57	35	30	44	83	
23	168	22.7		28.2	229	43.5	81		46.8	80	58	20	12	54	3 51	26	10 28	87	
24	183	22.9	-7	29.2	244	10.6		+20	38.8		60 S	3 09	4 05	4 49	4 09	22	10 10	92	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 22 ^h 36 ^m 1		Mag: -4.1 PMG: 09 ^h 26 ^m			Mag: -2.6 PMG: 00 ^h 06 ^m			Mag: -2.3 PMG: 17 ^h 58 ^m			Mag: +0.5 PMG: 18 ^h 27 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'					
0	20	02.5	218	36.6	+8	45.2	358	28.9	+5	37.5	89	47.3	-22	34.4	82	33.6	-21	21.8	
1	35	04.9	233	36.3		44.2	13	32.2		37.4	104	49.5		34.4	97	36.0		21.8	
2	50	07.4	248	35.9		43.2	28	35.4		37.2	119	51.8		34.4	112	38.4		21.8	
3	65	09.9	263	35.6		42.2	43	38.7		37.1	134	54.0		34.3	127	40.8		21.8	
4	80	12.3	278	35.2		41.2	58	42.0		36.9	149	56.2		34.3	142	43.2		21.8	
5	95	14.8	293	34.9	+8	40.2	73	45.2	+5	36.8	164	58.5	-22	34.3	157	45.6	-21	21.8	
6	110	17.3	308	34.5	+8	39.2	88	48.5	+5	36.6	180	00.7	-22	34.2	172	48.1	-21	21.8	
7	125	19.7	323	34.1		38.2	103	51.8		36.5	195	02.9		34.2	187	50.5		21.8	
8	140	22.2	338	33.8		37.2	118	55.0		36.3	210	05.2		34.2	202	52.9		21.8	
9	155	24.6	353	33.4		36.2	133	58.3		36.1	225	07.4		34.2	217	55.3		21.8	
10	170	27.1	8	33.1		35.2	149	01.6		36.0	240	09.6		34.1	232	57.7		21.8	
11	185	29.6	23	32.7	+8	34.2	164	04.8	+5	35.8	255	11.8	-22	34.1	248	00.1	-21	21.8	
12	200	32.0	38	32.4	+8	33.2	179	08.1	+5	35.7	270	14.1	-22	34.1	263	02.5	-21	21.7	
13	215	34.5	53	32.0		32.2	194	11.4		35.5	285	16.3		34.0	278	04.9		21.7	
14	230	37.0	68	31.7		31.2	209	14.6		35.4	300	18.5		34.0	293	07.3		21.7	
15	245	39.4	83	31.3		30.2	224	17.9		35.2	315	20.8		34.0	308	09.7		21.7	
16	260	41.9	98	30.9		29.2	239	21.2		35.1	330	23.0		33.9	323	12.2		21.7	
17	275	44.4	113	30.6	+8	28.2	254	24.4	+5	34.9	345	25.2	-22	33.9	338	14.6	-21	21.7	
18	290	46.8	128	30.2	+8	27.2	269	27.7	+5	34.8	0	27.4	-22	33.9	353	17.0	-21	21.7	
19	305	49.3	143	29.9		26.2	284	31.0		34.6	15	29.7		33.9	8	19.4		21.7	
20	320	51.7	158	29.5		25.2	299	34.2		34.5	30	31.9		33.8	23	21.8		21.7	
21	335	54.2	173	29.2		24.2	314	37.5		34.3	45	34.1		33.8	38	24.2		21.7	
22	350	56.7	188	28.8		23.1	329	40.8		34.2	60	36.3		33.8	53	26.6		21.7	
23	5	59.1	203	28.5		22.1	344	44.0		34.0	75	38.6		33.7	68	29.0		21.7	
24	21	01.6	218	28.1	+8	21.1	359	47.3	+5	33.8	90	40.8	-22	33.7	83	31.4	-21	21.7	
Dif.	—		-4			-10	+33			-2			+22			0	+24		

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0			SD: 15 ^h 9 Edad: 24 ^d 5			PHE { 4 ^h : 58 ^m 4 12 ^h : 58 ^m 7 20 ^h : 59 ^m 0											
	PMG: 11 ^h 46 ^m 4			PMG: 08 ^h 01 ^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	h m m		h m m	
0	183	22.9	-7 29.2	244	10.6	81	+20 38.8	82	60 N	16 59	17 41	18 28	** ** *				16 36	12
1	198	23.0	30.1	258	37.7	81	30.6	83	58	17 02	42	27	** ** *				24	17
2	213	23.2	31.0	273	04.8	81	22.3	84	56	06	43	26	** ** *				14	20
3	228	23.4	32.0	287	31.9	81	13.9	85	54	09	44	25	** ** *				16 05	22
4	243	23.5	32.9	301	59.0	81	+20 05.4	87	52	12	46	25	** ** *				15 57	25
5	258	23.7	-7 33.8	316	26.1	81	+19 56.7	88	50	17 14	17 47	18 24	** ** *				15 49	28
6	273	23.8	-7 34.8	330	53.2	82	+19 47.9	89	45	17 20	17 49	18 23	0 16	75			15 34	31
7	288	24.0	35.7	345	20.4	82	39.0	91	40	24	52	23	32	71			21	35
8	303	24.1	36.7	359	47.6	82	29.9	92	35	29	54	23	45	68			09	39
9	318	24.3	37.6	14	14.8	82	20.7	93	30	32	17 56	24	0 56	66			15 00	41
10	333	24.4	38.5	28	42.0	82	11.4	94	20	39	18 01	26	1 15	62			14 43	46
11	348	24.6	-7 39.5	43	09.2	82	+19 02.0	96	10 N	17 44	18 05	18 30	1 32	58			14 28	50
12	3	24.7	-7 40.4	57	36.4	83	+18 52.4	97	0	17 50	18 11	18 35	1 48	54			14 14	54
13	18	24.9	41.3	72	03.7	82	42.7	98	10 S	17 55	16	41	2 03	51			14 00	57
14	33	25.0	42.3	86	30.9	83	32.9	99	20	18 01	24	18 50	20	47			13 45	61
15	48	25.2	43.2	100	58.2	83	23.0	101	30	08	33	19 01	39	43			27	66
16	63	25.3	44.1	115	25.5	84	12.9	102	35	12	38	09	2 50	41			17	69
17	78	25.5	-7 45.1	129	52.9	83	+18 02.7	102	40	18 17	18 45	19 18	3 03	38			13 05	72
18	93	25.6	-7 46.0	144	20.2	83	+17 52.5	105	45	18 22	18 53	19 29	3 18	34			12 51	76
19	108	25.8	46.9	158	47.5	84	42.0	105	50	29	19 03	44	36	30			34	81
20	123	25.9	47.9	173	14.9	84	31.5	107	52	32	07	51	44	28			26	84
21	138	26.1	48.8	187	42.3	84	20.8	107	54	35	13	19 59	3 54	25			17	86
22	153	26.2	49.7	202	09.7	85	+17 10.1	109	56	39	18	20 08	4 05	22			12 07	89
23	168	26.4	50.7	216	37.2	84	+16 59.2	110	58	43	25	18	17	19			11 55	93
24	183	26.5	-7 51.6	231	04.6		+16 48.2		60 S	18 48	19 33	20 31	4 31	15			11 42	97
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 22 ^h 32 ^m 2		Mag: -4.0 PMG: 09 ^h 26 ^m			Mag: -2.6 PMG: 00 ^h 01 ^m			Mag: -2.3 PMG: 17 ^h 55 ^m			Mag: +0.5 PMG: 18 ^h 23 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	''	°	'	''	°	'	''	°	'	''				
0	21	01.6	218	28.1	+8 21.1	359	47.3	+5 33.8	90	40.8	-22 -33.7	83	31.4	-21 21.7				
1	36	04.1	233	27.8	20.1	14	50.6	33.7	105	43.0	-33.7	98	33.8	21.6				
2	51	06.5	248	27.4	19.1	29	53.8	33.5	120	45.2	-33.7	113	36.2	21.6				
3	66	09.0	263	27.1	18.1	44	57.1	33.4	135	47.5	-33.6	128	38.6	21.6				
4	81	11.5	278	26.7	17.1	60	00.4	33.2	150	49.7	-33.6	143	41.1	21.6				
5	96	13.9	293	26.3	+8 16.1	75	03.7	+5 33.1	165	51.9	-22 -33.6	158	43.5	-21 21.6				
6	111	16.4	308	26.0	+8 15.1	90	06.9	+5 32.9	180	54.1	-22 -33.5	173	45.9	-21 21.6				
7	126	18.9	323	25.6	14.1	105	10.2	32.8	195	56.4	-33.5	188	48.3	21.6				
8	141	21.3	338	25.3	13.0	120	13.5	32.6	210	58.6	-33.5	203	50.7	21.6				
9	156	23.8	353	24.9	12.0	135	16.7	32.5	226	00.8	-33.4	218	53.1	21.6				
10	171	26.2	8	24.6	11.0	150	20.0	32.3	241	03.0	-33.4	233	55.5	21.6				
11	186	28.7	23	24.2	+8 10.0	165	23.3	+5 32.2	256	05.2	-22 -33.4	248	57.9	-21 21.6				
12	201	31.2	38	23.9	+8 09.0	180	26.5	+5 32.0	271	07.5	-22 -33.4	264	00.3	-21 21.6				
13	216	33.6	53	23.5	08.0	195	29.8	31.9	286	09.7	-33.3	279	02.7	21.5				
14	231	36.1	68	23.2	07.0	210	33.1	31.7	301	11.9	-33.3	294	05.1	21.5				
15	246	38.6	83	22.8	05.9	225	36.3	31.6	316	14.1	-33.3	309	07.5	21.5				
16	261	41.0	98	22.5	04.9	240	39.6	31.4	331	16.4	-33.2	324	09.9	21.5				
17	276	43.5	113	22.1	+8 03.9	255	42.9	+5 31.3	346	18.6	-22 -33.2	339	12.3	-21 21.5				
18	291	46.0	128	21.8	+8 02.9	270	46.1	+5 31.1	1	20.8	-22 -33.2	354	14.7	-21 21.5				
19	306	48.4	143	21.4	01.9	285	49.4	31.0	16	23.0	-33.1	9	17.1	21.5				
20	321	50.9	158	21.1	+8 00.9	300	52.7	30.8	31	25.2	-33.1	24	19.5	21.5				
21	336	53.4	173	20.7	+7 59.8	315	55.9	30.7	46	27.4	-33.1	39	22.0	21.5				
22	351	55.8	188	20.4	58.8	330	59.2	30.5	61	29.7	-33.1	54	24.4	21.5				
23	6	58.3	203	20.0	57.8	346	02.5	30.4	76	31.9	-33.0	69	26.8	21.5				
24	22	00.7	218	19.7	+7 56.8	1	05.7	+5 30.2	91	34.1	-22 -33.0	84	29.2	-21 21.5				
Dif.	—		-4	-10		+33	-2		+22		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: 16'1 Edad: 25 ^d 5 PMG: 08 ^h 55 ^m											PHE { 4 ^h : 59'3 12 ^h : 59'6 20 ^h : 59'9 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	183	26.5	-7	51.6	231	04.6	85	+16	48.2	111	60 N	5 05	5 53	6 35	0 33	99	16 48	10	
1	198	26.7		52.5	245	32.1	85		37.1	113	58	06	52	31	44	95	41	12	
2	213	26.8		53.5	259	59.6	85		25.8	113	56	07	50	28	0 54	91	34	16	
3	228	27.0		54.4	274	27.1	85		14.5	115	54	08	49	25	1 02	88	27	19	
4	243	27.1		55.3	288	54.6	86	+16	03.0	115	52	09	48	22	10	85	22	21	
5	258	27.3	-7	56.3	303	22.2	85	+15	51.5	117	50	5 09	5 47	6 19	1 16	83	16 17	23	
6	273	27.4	-7	57.2	317	49.7	86	+15	39.8	118	45	5 10	5 44	6 14	1 31	78	16 05	29	
7	288	27.6		58.1	332	17.3	86		28.0	119	40	10	41	09	43	73	15 56	33	
8	303	27.7	-7	59.1	346	44.9	87		16.1	120	35	10	39	05	1 53	70	48	36	
9	318	27.9	-8	00.0	1	12.6	86	+15	04.1	121	30	09	37	6 01	2 02	67	41	39	
10	333	28.0		00.9	15	40.2	87	+14	52.0	122	20	06	32	5 54	17	62	29	44	
11	348	28.2	-8	01.9	30	07.9	86	+14	39.8	123	10 N	5 03	5 27	5 48	2 30	58	15 18	49	
12	3	28.3	-8	02.8	44	35.5	87	+14	27.5	124	0	4 58	5 22	5 43	2 42	54	15 08	53	
13	18	28.5		03.7	59	03.2	88		15.1	125	10 S	51	16	37	2 54	50	14 57	58	
14	33	28.6		04.7	73	31.0	87	+14	02.6	126	20	43	5 09	31	3 07	46	46	62	
15	48	28.8		05.6	87	58.7	87	+13	50.0	127	30	31	4 59	24	22	40	33	68	
16	63	28.9		06.5	102	26.4	88		37.3	128	35	23	54	20	31	37	26	71	
17	78	29.1	-8	07.5	116	54.2	88	+13	24.5	129	40	4 14	4 47	5 15	3 41	34	14 17	75	
18	93	29.2	-8	08.4	131	22.0	88	+13	11.6	130	45	4 03	4 39	5 09	3 52	30	14 07	79	
19	108	29.3		09.3	145	49.8	88	+12	58.6	131	50	3 48	29	5 03	4 06	25	13 55	84	
20	123	29.5		10.2	160	17.6	89		45.5	132	52	41	24	4 59	12	23	50	86	
21	138	29.6		11.2	174	45.5	88		32.3	133	54	33	19	56	19	20	43	89	
22	153	29.8		12.1	189	13.3	89		19.0	133	56	24	13	52	27	17	36	92	
23	168	29.9		13.0	203	41.2	89	+12	05.7	135	58	13	4 06	48	4 36	14	13 28	96	
24	183	30.1	-8	14.0	218	09.1		+11	52.2		60 S	3 01	3 59	4 43	4 46	10	13 19	100	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 22 ^h 28 ^m 3		Mag: -4.0 PMG: 09 ^h 27 ^m			Mag: -2.6 PMG: 23 ^h 50 ^m			Mag: -2.3 PMG: 17 ^h 51 ^m			Mag: +0.5 PMG: 18 ^h 19 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	22	00.7	218	19.7	+7	56.8	1	05.7	+5	30.2	91	34.1	-22	33.0	84	29.2	-21	21.5	
1	37	03.2	233	19.3		55.8	16	09.0		30.1	106	36.3		33.0	99	31.6		21.4	
2	52	05.7	248	18.9		54.7	31	12.3		29.9	121	38.5		32.9	114	34.0		21.4	
3	67	08.1	263	18.6		53.7	46	15.5		29.8	136	40.8		32.9	129	36.4		21.4	
4	82	10.6	278	18.2		52.7	61	18.8		29.6	151	43.0		32.9	144	38.8		21.4	
5	97	13.1	293	17.9	+7	51.7	76	22.1	+5	29.5	166	45.2	-22	32.8	159	41.2	-21	21.4	
6	112	15.5	308	17.5	+7	50.6	91	25.4	+5	29.3	181	47.4	-22	32.8	174	43.6	-21	21.4	
7	127	18.0	323	17.2		49.6	106	28.6		29.2	196	49.6		32.8	189	46.0		21.4	
8	142	20.5	338	16.8		48.6	121	31.9		29.0	211	51.8		32.7	204	48.4		21.4	
9	157	22.9	353	16.5		47.6	136	35.2		28.9	226	54.0		32.7	219	50.8		21.4	
10	172	25.4	8	16.1		46.5	151	38.4		28.7	241	56.3		32.7	234	53.2		21.4	
11	187	27.8	23	15.8	+7	45.5	166	41.7	+5	28.6	256	58.5	-22	32.6	249	55.6	-21	21.4	
12	202	30.3	38	15.4	+7	44.5	181	45.0	+5	28.4	272	00.7	-22	32.6	264	58.0	-21	21.4	
13	217	32.8	53	15.1		43.5	196	48.2		28.3	287	02.9		32.6	280	00.4		21.3	
14	232	35.2	68	14.7		42.4	211	51.5		28.1	302	05.1		32.6	295	02.8		21.3	
15	247	37.7	83	14.4		41.4	226	54.8		28.0	317	07.3		32.5	310	05.2		21.3	
16	262	40.2	98	14.0		40.4	241	58.0		27.8	332	09.5		32.5	325	07.6		21.3	
17	277	42.6	113	13.7	+7	39.4	257	01.3	+5	27.7	347	11.8	-22	32.5	340	10.0	-21	21.3	
18	292	45.1	128	13.3	+7	38.3	272	04.6	+5	27.5	2	14.0	-22	32.4	355	12.4	-21	21.3	
19	307	47.6	143	13.0		37.3	287	07.8		27.4	17	16.2		32.4	10	14.8		21.3	
20	322	50.0	158	12.6		36.3	302	11.1		27.2	32	18.4		32.4	25	17.2		21.3	
21	337	52.5	173	12.3		35.2	317	14.4		27.1	47	20.6		32.3	40	19.6		21.3	
22	352	55.0	188	11.9		34.2	332	17.6		26.9	62	22.8		32.3	55	22.0		21.3	
23	7	57.4	203	11.6		33.2	347	20.9		26.8	77	25.0		32.3	70	24.4		21.3	
24	22	59.9	218	11.2	+7	32.1	2	24.2	+5	26.6	92	27.2	-22	32.2	85	26.8	-21	21.2	
Dif.	—		-4			-10	+33			-1	+22			0	+24				

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 45 ^m 9			SD: 16'4 Edad: 26 ^d 5 PHE { 4 ^h : 60'2 12 ^h : 60'4 20 ^h : 60'7 PMG: 09 ^h 48 ^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	183	30.1	-8	14.0	218	09.1	89	+11	52.2	135	60 N	16 53	17 35	18 23	2 12	100	16 58	7
1	198	30.2		14.9	232	37.0	89		38.7	137	58	16 57	37	22	19	96	53	11
2	213	30.4		15.8	247	04.9	89		25.0	137	56	17 01	38	21	25	93	50	14
3	228	30.5		16.7	261	32.8	89	+11	11.3	137	54	04	40	21	30	90	46	17
4	243	30.6		17.7	276	00.7	90	+10	57.6	139	52	07	41	20	35	87	43	19
5	258	30.8	-8	18.6	290	28.7	89	+10	43.7	140	50	17 10	17 43	18 20	2 39	85	16 40	22
6	273	30.9	-8	19.5	304	56.6	90	+10	29.7	140	45	17 16	17 46	18 20	2 49	79	16 34	27
7	288	31.1		20.5	319	24.6	90		15.7	141	40	21	49	20	2 56	75	29	31
8	303	31.2		21.4	333	52.6	90	+10	01.6	142	35	26	51	21	3 03	71	24	35
9	318	31.3		22.3	348	20.6	90	+9	47.4	142	30	30	54	22	09	68	20	38
10	333	31.5		23.2	2	48.6	90		33.2	144	20	37	17 59	25	19	62	13	43
11	348	31.6	-8	24.2	17	16.6	91	+9	18.8	144	10 N	17 43	18 04	18 29	3 28	57	16 07	48
12	3	31.8	-8	25.1	31	44.7	90	+9	04.4	144	0	17 49	18 10	18 34	3 36	53	16 01	53
13	18	31.9		26.0	46	12.7	90	+8	50.0	146	10 S	17 55	17	41	44	48	15 55	58
14	33	32.1		26.9	60	40.7	91		35.4	146	20	18 02	24	18 50	3 53	43	48	63
15	48	32.2		27.9	75	08.8	91		20.8	147	30	10	34	19 03	4 02	39	41	68
16	63	32.3		28.8	89	36.9	90	+8	06.1	147	35	14	40	11	08	35	37	72
17	78	32.5	-8	29.7	104	04.9	91	+7	51.4	148	40	18 19	18 47	19 20	4 15	31	15 32	75
18	93	32.6	-8	30.6	118	33.0	91	+7	36.6	148	45	18 25	18 56	19 32	4 22	27	15 26	80
19	108	32.8		31.6	133	01.1	91		21.8	150	50	32	19 06	47	31	22	19	86
20	123	32.9		32.5	147	29.2	91	+7	06.8	149	52	36	11	19 55	35	20	16	88
21	138	33.0		33.4	161	57.3	90	+6	51.9	151	54	39	17	20 03	39	18	12	91
22	153	33.2		34.3	176	25.3	91		36.8	150	56	43	23	13	44	15	08	94
23	168	33.3		35.3	190	53.4	91		21.8	152	58	48	30	24	50	12	15 04	97
24	183	33.4	-8	36.2	205	21.5		+6	06.6		60 S	18 53	19 38	20 37	4 56	8	14 59	101
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 22 ^h 24 ^m 3		Mag: -4.0 PMG: 09 ^h 27 ^m				Mag: -2.6 PMG: 23 ^h 45 ^m				Mag: -2.3 PMG: 17 ^h 48 ^m				Mag: +0.5 PMG: 18 ^h 15 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	22	59.9	218	11.2	+7	32.1	2	24.2	+5	26.6	92	27.2	-22	-32.2	85	26.8	-21	21.2
1	38	02.3	233	10.9		31.1	17	27.4		26.5	107	29.4		-32.2	100	29.2		21.2
2	53	04.8	248	10.5		30.1	32	30.7		26.3	122	31.6		-32.2	115	31.6		21.2
3	68	07.3	263	10.2		29.0	47	34.0		26.2	137	33.9		-32.1	130	34.0		21.2
4	83	09.7	278	09.8		28.0	62	37.2		26.0	152	36.1		-32.1	145	36.4		21.2
5	98	12.2	293	09.5	+7	27.0	77	40.5	+5	25.9	167	38.3	-22	-32.1	160	38.8	-21	21.2
6	113	14.7	308	09.1	+7	25.9	92	43.7	+5	25.8	182	40.5	-22	-32.0	175	41.2	-21	21.2
7	128	17.1	323	08.8		24.9	107	47.0		25.6	197	42.7		-32.0	190	43.6		21.2
8	143	19.6	338	08.4		23.9	122	50.3		25.5	212	44.9		-32.0	205	46.0		21.2
9	158	22.1	353	08.1		22.8	137	53.5		25.3	227	47.1		-32.0	220	48.4		21.2
10	173	24.5	8	07.7		21.8	152	56.8		25.2	242	49.3		-31.9	235	50.8		21.1
11	188	27.0	23	07.4	+7	20.8	168	00.1	+5	25.0	257	51.5	-22	-31.9	250	53.2	-21	21.1
12	203	29.5	38	07.1	+7	19.7	183	03.3	+5	24.9	272	53.7	-22	-31.9	265	55.6	-21	21.1
13	218	31.9	53	06.7		18.7	198	06.6		24.7	287	55.9		-31.8	280	58.0		21.1
14	233	34.4	68	06.4		17.7	213	09.9		24.6	302	58.1		-31.8	296	00.4		21.1
15	248	36.8	83	06.0		16.6	228	13.1		24.4	318	00.3		-31.8	311	02.8		21.1
16	263	39.3	98	05.7		15.6	243	16.4		24.3	333	02.5		-31.7	326	05.2		21.1
17	278	41.8	113	05.3	+7	14.5	258	19.7	+5	24.2	348	04.8	-22	-31.7	341	07.6	-21	21.1
18	293	44.2	128	05.0	+7	13.5	273	22.9	+5	24.0	3	07.0	-22	-31.7	356	10.0	-21	21.1
19	308	46.7	143	04.6		12.5	288	26.2		23.9	18	09.2		-31.6	11	12.3		21.1
20	323	49.2	158	04.3		11.4	303	29.4		23.7	33	11.4		-31.6	26	14.7		21.1
21	338	51.6	173	03.9		10.4	318	32.7		23.6	48	13.6		-31.6	41	17.1		21.0
22	353	54.1	188	03.6		09.3	333	36.0		23.4	63	15.8		-31.5	56	19.5		21.0
23	8	56.6	203	03.2		08.3	348	39.2		23.3	78	18.0		-31.5	71	21.9		21.0
24	23	59.0	218	02.9	+7	07.2	3	42.5	+5	23.1	93	20.2	-22	-31.5	86	24.3	-21	21.0
Dif.	—		-3		-10		+33		-1		+22		0		+24			

UT	SOL			 LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 45 ^m 7			SD: 16'6 Edad: 27 ^d 5 PHE { 4^h: 60'9 12^h: 61'1 20^h: 61'2								PMG: 10 ^h 41 ^m Rº: 54 ^m			Náut.	Civil	Hora	Rº	Hora	Rº
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.													
h	°	'	°	°	'	°	'			°	h	m	h	m	h	m	h	m		
0	183	33.4	-8	36.2	205	21.5	91	+6	06.6	151	60 N	5 10	5 58	6 40	3 52	102	17 05	8		
1	198	33.6		37.1	219	49.6	91	+5	51.5	153	58	11	56	36	55	98	04	11		
2	213	33.7		38.0	234	17.7	91		36.2	153	56	11	54	32	3 58	94	04	14		
3	228	33.9		39.0	248	45.8	91		20.9	153	54	12	53	29	4 00	92	03	17		
4	243	34.0		39.9	263	13.9	91	+5	05.6	154	52	12	51	25	02	89	02	20		
5	258	34.1	-8	40.8	277	42.0	91	+4	50.2	154	50	5 12	5 50	6 22	4 04	86	17 02	21		
6	273	34.3	-8	41.7	292	10.1	91	+4	34.8	154	45	5 12	5 46	6 16	4 08	81	17 01	26		
7	288	34.4		42.7	306	38.2	91		19.4	155	40	12	43	11	11	77	17 00	30		
8	303	34.5		43.6	321	06.3	91	+4	03.9	155	35	11	41	06	14	73	16 59	34		
9	318	34.7		44.5	335	34.4	90	+3	48.4	156	30	10	38	6 02	17	69	58	38		
10	333	34.8		45.4	350	02.4	91		32.8	156	20	07	33	5 55	21	63	56	44		
11	348	34.9	-8	46.3	4	30.5	91	+3	17.2	156	10 N	5 03	5 27	5 48	4 25	58	16 55	49		
12	3	35.1	-8	47.3	18	58.6	90	+3	01.6	157	0	4 57	5 21	5 42	4 29	53	16 54	53		
13	18	35.2		48.2	33	26.6	91	+2	45.9	157	10 S	50	15	36	32	49	53	58		
14	33	35.3		49.1	47	54.7	90		30.2	157	20	41	5 07	29	36	44	51	64		
15	48	35.5		50.0	62	22.7	90	+2	14.5	157	30	28	4 57	22	41	37	49	70		
16	63	35.6		50.9	76	50.7	90	+1	58.8	158	35	20	51	17	43	35	49	72		
17	78	35.8	-8	51.9	91	18.7	90	+1	43.0	157	40	4 11	4 44	5 12	4 46	31	16 47	77		
18	93	35.9	-8	52.8	105	46.7	90	+1	27.3	158	45	3 59	4 35	5 06	4 49	27	16 46	81		
19	108	36.0		53.7	120	14.7	90	+1	11.5	158	50	43	25	4 58	53	22	45	86		
20	123	36.2		54.6	134	42.7	90	+0	55.7	159	52	36	20	55	55	19	44	89		
21	138	36.3		55.5	149	10.7	89		39.8	158	54	28	14	51	57	17	43	92		
22	153	36.4		56.5	163	38.6	90		24.0	159	56	18	08	47	4 59	14	42	95		
23	168	36.5		57.4	178	06.6	89	+0	08.1	158	58	3 07	4 00	43	5 02	11	16 41	99		
24	183	36.7	-8	58.3	192	34.5		-0	07.7		60 S	2 53	3 52	4 37	5 04	8	16 40	103		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 20 ^m 4		Mag: -4.0 PMG: 09 ^h 28 ^m			Mag: -2.6 PMG: 23 ^h 40 ^m			Mag: -2.3 PMG: 17 ^h 44 ^m			Mag: +0.5 PMG: 18 ^h 11 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	23	59.0	218	02.9	+7	07.2	3	42.5	+5	23.1	93	20.2	-22	31.5		
1	39	01.5	233	02.5		06.2	18	45.8		23.0	108	22.4		31.4		
2	54	03.9	248	02.2		05.2	33	49.0		22.9	123	24.6		31.4		
3	69	06.4	263	01.8		04.1	48	52.3		22.7	138	26.8		31.4		
4	84	08.9	278	01.5		03.1	63	55.5		22.6	153	29.0		31.3		
5	99	11.3	293	01.1	+7	02.0	78	58.8	+5	22.4	168	31.2	-22	31.3		
6	114	13.8	308	00.8	+7	01.0	94	02.1	+5	22.3	183	33.4	-22	31.3		
7	129	16.3	323	00.4	+6	59.9	109	05.3		22.1	198	35.6		31.2		
8	144	18.7	338	00.1		58.9	124	08.6		22.0	213	37.8		31.2		
9	159	21.2	352	59.7		57.8	139	11.8		21.9	228	40.0		31.2		
10	174	23.7	7	59.4		56.8	154	15.1		21.7	243	42.2		31.1		
11	189	26.1	22	59.1	+6	55.8	169	18.4	+5	21.6	258	44.4	-22	31.1		
12	204	28.6	37	58.7	+6	54.7	184	21.6	+5	21.4	273	46.6	-22	31.1		
13	219	31.1	52	58.4		53.7	199	24.9		21.3	288	48.8		31.0		
14	234	33.5	67	58.0		52.6	214	28.1		21.2	303	51.0		31.0		
15	249	36.0	82	57.7		51.6	229	31.4		21.0	318	53.2		31.0		
16	264	38.4	97	57.3		50.5	244	34.7		20.9	333	55.4		30.9		
17	279	40.9	112	57.0	+6	49.5	259	37.9	+5	20.7	348	57.6	-22	30.9		
18	294	43.4	127	56.6	+6	48.4	274	41.2	+5	20.6	3	59.8	-22	30.9		
19	309	45.8	142	56.3		47.4	289	44.4		20.5	19	02.0		30.8		
20	324	48.3	157	55.9		46.3	304	47.7		20.3	34	04.2		30.8		
21	339	50.8	172	55.6		45.3	319	50.9		20.2	49	06.4		30.8		
22	354	53.2	187	55.2		44.2	334	54.2		20.0	64	08.6		30.7		
23	9	55.7	202	54.9		43.2	349	57.4		19.9	79	10.8		30.7		
24	24	58.2	217	54.6	+6	42.1	5	00.7	+5	19.8	94	13.0	-22	30.7		
Dif.	—		-3	-10			+33	-1			+22	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 45 ^m 5			SD: 16'7 Edad: 28 ^d 5		PHE { 4^h: 61'3 12^h: 61'4 20^h: 61'4		PMG: 11 ^h 35 ^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	h m m			
0	183	36.7	-8	58.3		192	34.5	89	-0	07.7	159	60 N	16 47	17 29	18 17	5 34 103	17 13 8		
1	198	36.8	-8	59.2		207	02.4	89		23.6	159	58	52	32	17	33 100	15 12		
2	213	36.9	-9	00.1		221	30.3	88		39.5	158	56	16 56	34	16	32 96	18 15		
3	228	37.1		01.1		235	58.1	89	-0	55.3	159	54	17 00	35	16	32 92	20 18		
4	243	37.2		02.0		250	26.0	88	-1	11.2	159	52	03	37	16	31 90	22 20		
5	258	37.3	-9	02.9		264	53.8	88	-1	27.1	159	50	17 06	17 39	18 16	5 30 87	17 23 24		
6	273	37.5	-9	03.8		279	21.6	88	-1	43.0	158	45	17 13	17 42	18 16	5 29 82	17 27 28		
7	288	37.6		04.7		293	49.4	87	-1	58.8	159	40	18	46	17	28 77	30 33		
8	303	37.7		05.6		308	17.1	88	-2	14.7	158	35	23	49	18	27 73	33 36		
9	318	37.9		06.6		322	44.9	87		30.5	159	30	28	52	20	26 70	36 39		
10	333	38.0		07.5		337	12.6	86	-2	46.4	158	20	35	17 58	23	24 64	40 45		
11	348	38.1	-9	08.4		351	40.2	87	-3	02.2	158	10 N	17 42	18 03	18 28	5 23 59	17 44 50		
12	3	38.2	-9	09.3		6	07.9	86	-3	18.0	158	0	17 49	18 10	18 34	5 22 54	17 47 55		
13	18	38.4		10.2		20	35.5	86		33.8	158	10 S	17 55	17	42	21 49	51 59		
14	33	38.5		11.1		35	03.1	86	-3	49.6	158	20	18 03	25	18 51	20 44	55 64		
15	48	38.6		12.1		49	30.7	86	-4	05.4	157	30	11	35	19 04	18 39	17 59 70		
16	63	38.8		13.0		63	58.3	85		21.1	158	35	16	42	13	18 35	18 01 74		
17	78	38.9	-9	13.9		78	25.8	85	-4	36.9	156	40	18 21	18 49	19 23	5 17 31	18 04 78		
18	93	39.0	-9	14.8		92	53.3	84	-4	52.5	157	45	18 28	18 58	19 35	5 16 27	18 07 83		
19	108	39.1		15.7		107	20.7	84	-5	08.2	156	50	36	19 10	51	15 22	11 88		
20	123	39.3		16.6		121	48.1	84		23.8	156	52	39	15	19 59	14 20	13 90		
21	138	39.4		17.5		136	15.5	84		39.4	156	54	43	21	20 08	14 17	15 93		
22	153	39.5		18.5		150	42.9	83	-5	55.0	155	56	48	28	18	13 15	17 97		
23	168	39.6		19.4		165	10.2	83	-6	10.5	155	58	53	35	30	13 11	20 100		
24	183	39.8	-9	20.3		179	37.5		-6	26.0		60 S	18 58	19 44	20 45	5 12 8	18 23 103		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 22 ^h 16 ^m 5		Mag: -4.0 PMG: 09 ^h 29 ^m			Mag: -2.6 PMG: 23 ^h 35 ^m			Mag: -2.3 PMG: 17 ^h 41 ^m			Mag: +0.5 PMG: 18 ^h 08 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°					
0	24	58.2	217	54.6	+6	42.1		5	00.7	+5	19.8	94	13.0	-22	-30.7	87	21.7	-21	20.8
1	40	00.6	232	54.2		41.1		20	04.0		19.6	109	15.2		-30.6	102	24.1		20.7
2	55	03.1	247	53.9		40.0		35	07.2		19.5	124	17.3		-30.6	117	26.5		20.7
3	70	05.5	262	53.5		38.9		50	10.5		19.3	139	19.5		-30.6	132	28.9		20.7
4	85	08.0	277	53.2		37.9		65	13.7		19.2	154	21.7		-30.5	147	31.3		20.7
5	100	10.5	292	52.8	+6	36.8		80	17.0	+5	19.1	169	23.9	-22	-30.5	162	33.7	-21	20.7
6	115	12.9	307	52.5	+6	35.8		95	20.2	+5	18.9	184	26.1	-22	-30.5	177	36.1	-21	20.7
7	130	15.4	322	52.1		34.7		110	23.5		18.8	199	28.3		-30.4	192	38.5		20.7
8	145	17.9	337	51.8		33.7		125	26.7		18.7	214	30.5		-30.4	207	40.9		20.7
9	160	20.3	352	51.4		32.6		140	30.0		18.5	229	32.7		-30.3	222	43.3		20.7
10	175	22.8	7	51.1		31.6		155	33.2		18.4	244	34.9		-30.3	237	45.6		20.6
11	190	25.3	22	50.8	+6	30.5		170	36.5	+5	18.2	259	37.1	-22	-30.3	252	48.0	-21	20.6
12	205	27.7	37	50.4	+6	29.4		185	39.7	+5	18.1	274	39.3	-22	-30.2	267	50.4	-21	20.6
13	220	30.2	52	50.1		28.4		200	43.0		18.0	289	41.5		-30.2	282	52.8		20.6
14	235	32.7	67	49.7		27.3		215	46.2		17.8	304	43.7		-30.2	297	55.2		20.6
15	250	35.1	82	49.4		26.3		230	49.5		17.7	319	45.9		-30.1	312	57.6		20.6
16	265	37.6	97	49.0		25.2		245	52.7		17.6	334	48.0		-30.1	328	00.0		20.6
17	280	40.0	112	48.7	+6	24.1		260	56.0	+5	17.4	349	50.2	-22	-30.1	343	02.4	-21	20.6
18	295	42.5	127	48.3	+6	23.1		275	59.2	+5	17.3	4	52.4	-22	-30.0	358	04.7	-21	20.6
19	310	45.0	142	48.0		22.0		291	02.5		17.2	19	54.6		-30.0	13	07.1		20.5
20	325	47.4	157	47.7		21.0		306	05.7		17.0	34	56.8		-30.0	28	09.5		20.5
21	340	49.9	172	47.3		19.9		321	09.0		16.9	49	59.0		-29.9	43	11.9		20.5
22	355	52.4	187	47.0		18.8		336	12.2		16.7	65	01.2		-29.9	58	14.3		20.5
23	10	54.8	202	46.6		17.8		351	15.5		16.6	80	03.4		-29.9	73	16.7		20.5
24	25	57.3	217	46.3	+6	16.7		6	18.7	+5	16.5	95	05.6	-22	-29.8	88	19.1	-21	20.5
Dif.	—		-3		-11			+32		-1		+22		0		+24			

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 11 ^h 45 ^m 3			SD: 16'7 Edad: 0 ^d 2 PHE { 4 ^h : 61'4 12 ^h : 61'4 20 ^h : 61'3 PMG: 12 ^h 29 ^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 m		h m m			
0	183	39.8	-9	20.3	179	37.5	83	-6	26.0	155	60 N	5 14	6 03	6 45	7 17	105	17 21	11
1	198	39.9		21.2	194	04.8	82		41.5	154	58	15	6 00	40	13	100	27	15
2	213	40.0		22.1	208	32.0	82	-6	56.9	154	56	15	5 58	36	08	97	33	18
3	228	40.1		23.0	222	59.2	81	-7	12.3	153	54	15	56	32	04	94	38	21
4	243	40.3		23.9	237	26.3	81		27.6	153	52	15	55	29	7 01	90	42	25
5	258	40.4	-9	24.9	251	53.4	81	-7	42.9	152	50	5 15	5 53	6 26	6 57	88	17 47	26
6	273	40.5	-9	25.8	266	20.5	80	-7	58.1	152	45	5 15	5 49	6 19	6 51	82	17 55	32
7	288	40.6		26.7	280	47.5	80	-8	13.3	151	40	14	46	13	45	78	18 03	36
8	303	40.8		27.6	295	14.5	79		28.4	151	35	13	42	08	40	74	09	40
9	318	40.9		28.5	309	41.4	80		43.5	150	30	11	39	6 03	36	70	15	43
10	333	41.0		29.4	324	08.4	78	-8	58.5	149	20	08	33	5 56	28	65	25	48
11	348	41.1	-9	30.3	338	35.2	79	-9	13.4	149	10 N	5 03	5 27	5 49	6 22	60	18 34	52
12	3	41.3	-9	31.2	353	02.1	77	-9	28.3	148	0	4 57	5 21	5 42	6 16	56	18 42	57
13	18	41.4		32.1	7	28.8	78		43.1	148	10 S	49	14	35	10	51	50	61
14	33	41.5		33.1	21	55.6	77	-9	57.9	147	20	39	5 05	28	6 04	46	18 59	66
15	48	41.6		34.0	36	22.3	76	-10	12.6	146	30	26	4 55	19	5 57	41	19 09	71
16	63	41.7		34.9	50	48.9	77		27.2	145	35	18	48	14	53	37	15	74
17	78	41.9	-9	35.8	65	15.6	75	-10	41.7	145	40	4 08	4 41	5 09	5 48	34	19 22	78
18	93	42.0	-9	36.7	79	42.1	75	-10	56.2	144	45	3 55	4 32	5 02	5 43	30	19 30	82
19	108	42.1		37.6	94	08.6	75	-11	10.6	143	50	39	20	4 54	37	25	39	88
20	123	42.2		38.5	108	35.1	75		24.9	143	52	31	15	51	34	22	43	90
21	138	42.4		39.4	123	01.6	74		39.2	141	54	22	09	47	31	20	48	93
22	153	42.5		40.3	137	28.0	73	-11	53.3	141	56	12	4 02	42	28	16	19 54	96
23	168	42.6		41.2	151	54.3	73	-12	07.4	140	58	3 00	3 55	37	5 24	13	20 00	100
24	183	42.7	-9	42.1	166	20.6		-12	21.4		60 S	2 45	3 46	4 32	5 20	9	20 06	105
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 12 ^m 5		Mag: -4.0 PMG: 09 ^h 29 ^m			Mag: -2.6 PMG: 23 ^h 30 ^m			Mag: -2.3 PMG: 17 ^h 37 ^m			Mag: +0.5 PMG: 18 ^h 04 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	25	57.3	217	46.3	+6	16.7	6	18.7	+5	16.5	95	05.6	-22	29.8	88	19.1	-21	20.5
1	40	59.8	232	45.9		15.7	21	22.0		16.3	110	07.7		29.8	103	21.5		20.5
2	56	02.2	247	45.6		14.6	36	25.2		16.2	125	09.9		29.8	118	23.8		20.5
3	71	04.7	262	45.2		13.5	51	28.5		16.1	140	12.1		29.7	133	26.2		20.5
4	86	07.1	277	44.9		12.5	66	31.7		15.9	155	14.3		29.7	148	28.6		20.4
5	101	09.6	292	44.6	+6	11.4	81	35.0	+5	15.8	170	16.5	-22	29.6	163	31.0	-21	20.4
6	116	12.1	307	44.2	+6	10.3	96	38.2	+5	15.7	185	18.7	-22	29.6	178	33.4	-21	20.4
7	131	14.5	322	43.9		09.3	111	41.5		15.5	200	20.9		29.6	193	35.8		20.4
8	146	17.0	337	43.5		08.2	126	44.7		15.4	215	23.1		29.5	208	38.2		20.4
9	161	19.5	352	43.2		07.1	141	47.9		15.3	230	25.2		29.5	223	40.5		20.4
10	176	21.9	7	42.8		06.1	156	51.2		15.2	245	27.4		29.5	238	42.9		20.4
11	191	24.4	22	42.5	+6	05.0	171	54.4	+5	15.0	260	29.6	-22	29.4	253	45.3	-21	20.4
12	206	26.9	37	42.2	+6	03.9	186	57.7	+5	14.9	275	31.8	-22	29.4	268	47.7	-21	20.3
13	221	29.3	52	41.8		02.9	202	00.9		14.8	290	34.0		29.4	283	50.1		20.3
14	236	31.8	67	41.5		01.8	217	04.2		14.6	305	36.2		29.3	298	52.5		20.3
15	251	34.3	82	41.1	+6	00.7	232	07.4		14.5	320	38.3		29.3	313	54.8		20.3
16	266	36.7	97	40.8	+5	59.7	247	10.6		14.4	335	40.5		29.3	328	57.2		20.3
17	281	39.2	112	40.4	+5	58.6	262	13.9	+5	14.2	350	42.7	-22	29.2	343	59.6	-21	20.3
18	296	41.6	127	40.1	+5	57.5	277	17.1	+5	14.1	5	44.9	-22	29.2	359	02.0	-21	20.3
19	311	44.1	142	39.7		56.5	292	20.4		14.0	20	47.1		29.1	14	04.4		20.3
20	326	46.6	157	39.4		55.4	307	23.6		13.8	35	49.3		29.1	29	06.8		20.2
21	341	49.0	172	39.1		54.3	322	26.8		13.7	50	51.4		29.1	44	09.1		20.2
22	356	51.5	187	38.7		53.2	337	30.1		13.6	65	53.6		29.0	59	11.5		20.2
23	11	54.0	202	38.4		52.2	352	33.3		13.5	80	55.8		29.0	74	13.9		20.2
24	26	56.4	217	38.0	+5	51.1	7	36.5	+5	13.3	95	58.0	-22	29.0	89	16.3	-21	20.2
Dif.	—		-3		-11		+32		-1		+22		0		+24		0	

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1			PHE { 4 ^h : 61:2 12 ^h : 61:1 20 ^h : 60:9													
	Edad: 1 ^d 2																
	PMG: 11 ^h 45 ^m 1			PMG: 13 ^h 25 ^m 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	183	42.7	-9	42.1	166	20.6	72	-12	21.4	139	60 N	16 41	17 24	18 12	9 02	105	
1	198	42.8		43.0	180	46.8	72		35.3	138	58	46	26	12	8 53	99	
2	213	43.0		44.0	195	13.0	72	-12	49.1	138	56	51	29	12	45	95	
3	228	43.1		44.9	209	39.2	71	-13	02.9	136	54	55	31	12	38	92	
4	243	43.2		45.8	224	05.3	71		16.5	136	52	16 59	33	12	31	89	
5	258	43.3	-9	46.7	238	31.4	70	-13	30.1	134	50	17 02	17 35	18 12	8 25	87	
6	273	43.4	-9	47.6	252	57.4	70	-13	43.5	134	45	17 09	17 39	18 13	8 13	81	
7	288	43.5		48.5	267	23.4	69	-13	56.9	132	40	16	43	14	8 03	77	
8	303	43.7		49.4	281	49.3	69	-14	10.1	132	35	21	47	16	7 54	74	
9	318	43.8		50.3	296	15.2	68		23.3	130	30	26	50	18	46	71	
10	333	43.9		51.2	310	41.0	68		36.3	130	20	34	17 56	22	33	66	
11	348	44.0	-9	52.1	325	06.8	67	-14	49.3	128	10 N	17 41	18 03	18 27	7 22	62	
12	3	44.1	-9	53.0	339	32.5	67	-15	02.1	128	0	17 48	18 09	18 34	7 12	57	
13	18	44.2		53.9	353	58.2	67		14.9	126	10 S	17 56	17	42	7 01	54	
14	33	44.4		54.8	8	23.9	66		27.5	125	20	18 03	26	18 52	6 50	50	
15	48	44.5		55.7	22	49.5	65		40.0	124	30	12	37	19 06	38	44	
16	63	44.6		56.6	37	15.0	65	-15	52.4	123	35	17	44	15	30	42	
17	78	44.7	-9	57.5	51	40.5	65	-16	04.7	122	40	18 23	18 52	19 25	6 22	39	
18	93	44.8	-9	58.4	66	06.0	64	-16	16.9	120	45	18 30	19 01	19 38	6 13	34	
19	108	44.9	-9	59.3	80	31.4	63		28.9	120	50	39	13	19 55	6 02	29	
20	123	45.0	-10	00.2	94	56.7	64		40.9	118	52	43	19	20 04	5 56	27	
21	138	45.2		01.1	109	22.1	62	-16	52.7	117	54	47	25	13	51	24	
22	153	45.3		02.0	123	47.3	63	-17	04.4	116	56	52	32	24	44	22	
23	168	45.4		02.9	138	12.6	62		16.0	114	58	18 57	40	37	37	18	
24	183	45.5	-10	03.8	152	37.8		-17	27.4		60 S	19 03	19 50	20 52	5 29	14	
																21 51	102
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 08 ^m 6		Mag: -4.0 PMG: 09 ^h 30 ^m			Mag: -2.5 PMG: 23 ^h 25 ^m			Mag: -2.2 PMG: 17 ^h 34 ^m			Mag: +0.5 PMG: 18 ^h 00 ^m					
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	26	56.4	217	38.0	+5	51.1	7	36.5	+5	13.3	95	58.0	-22	-29.0	89	16.3	-21
1	41	58.9	232	37.7		50.0	22	39.8		13.2	111	00.2		-28.9	104	18.7	
2	57	01.4	247	37.4		49.0	37	43.0		13.1	126	02.3		-28.9	119	21.1	
3	72	03.8	262	37.0		47.9	52	46.3		12.9	141	04.5		-28.9	134	23.4	
4	87	06.3	277	36.7		46.8	67	49.5		12.8	156	06.7		-28.8	149	25.8	
5	102	08.8	292	36.3	+5	45.7	82	52.7	+5	12.7	171	08.9	-22	-28.8	164	28.2	-21
6	117	11.2	307	36.0	+5	44.7	97	56.0	+5	12.6	186	11.1	-22	-28.7	179	30.6	-21
7	132	13.7	322	35.6		43.6	112	59.2		12.4	201	13.2		-28.7	194	33.0	
8	147	16.1	337	35.3		42.5	128	02.4		12.3	216	15.4		-28.7	209	35.3	
9	162	18.6	352	35.0		41.4	143	05.7		12.2	231	17.6		-28.6	224	37.7	
10	177	21.1	7	34.6		40.4	158	08.9		12.1	246	19.8		-28.6	239	40.1	
11	192	23.5	22	34.3	+5	39.3	173	12.1	+5	11.9	261	22.0	-22	-28.6	254	42.5	-21
12	207	26.0	37	33.9	+5	38.2	188	15.4	+5	11.8	276	24.1	-22	-28.5	269	44.9	-21
13	222	28.5	52	33.6		37.1	203	18.6		11.7	291	26.3		-28.5	284	47.2	
14	237	30.9	67	33.2		36.1	218	21.8		11.6	306	28.5		-28.4	299	49.6	
15	252	33.4	82	32.9		35.0	233	25.0		11.4	321	30.7		-28.4	314	52.0	
16	267	35.9	97	32.6		33.9	248	28.3		11.3	336	32.8		-28.4	329	54.4	
17	282	38.3	112	32.2	+5	32.8	263	31.5	+5	11.2	351	35.0	-22	-28.3	344	56.8	-21
18	297	40.8	127	31.9	+5	31.8	278	34.7	+5	11.1	6	37.2	-22	-28.3	359	59.1	-21
19	312	43.2	142	31.5		30.7	293	38.0		10.9	21	39.4		-28.3	15	01.5	
20	327	45.7	157	31.2		29.6	308	41.2		10.8	36	41.5		-28.2	30	03.9	
21	342	48.2	172	30.9		28.5	323	44.4		10.7	51	43.7		-28.2	45	06.3	
22	357	50.6	187	30.5		27.4	338	47.6		10.6	66	45.9		-28.2	60	08.6	
23	12	53.1	202	30.2		26.4	353	50.9		10.4	81	48.1		-28.1	75	11.0	
24	27	55.6	217	29.8	+5	25.3	8	54.1	+5	10.3	96	50.2	-22	-28.1	90	13.4	-21
Dif.	—		-3	-11			+32	-1			+22	0			+24		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna										
	SD: 16'1				SD: 16'6					PHE { 4 ^h : 60'7 12 ^h : 60'4 20 ^h : 60'2			Edad: 2 ^d													
	PMG: 11 ^h 44 ^m 9				PMG: 14 ^h 23 ^m					Rº: 60 ^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	45.5	-10	03.8	152	37.8	61	-17	27.4	114		60 N	5	19	6	07	6	50		10	47	98	17	48	26	
1	198	45.6		04.8	167	02.9	61		38.8	112		58		19	05	45		32	93		18	03	30			
2	213	45.7		05.7	181	28.0	61	-17	50.0	110		56		19	02	40		20	90		16	34				
3	228	45.8		06.6	195	53.1	60	-18	01.0	110		54		19	6	00	36		10	86		27	37			
4	243	46.0		07.5	210	18.1	60		12.0	108		52		19	5	58	32		10	00	84	37	39			
5	258	46.1	-10	08.4	224	43.1	59	-18	22.8	106		50		5	18	5	56	6	29		9	52	82	18	46	41
6	273	46.2	-10	09.3	239	08.0	59	-18	33.4	106		45		5	17	5	52	6	21		9	34	78	19	05	44
7	288	46.3		10.2	253	32.9	58		44.0	104		40		16	48	15		20	74		20	47				
8	303	46.4		11.1	267	57.7	59	-18	54.4	103		35		14	44	10		9	08	71		33	50			
9	318	46.5		12.0	282	22.6	57	-19	04.7	101		30		13	41	6	05		8	57	69		19	44	52	
10	333	46.6		12.9	296	47.3	58		14.8	100		20		08	34	5	56		39	66		20	04	55		
11	348	46.7	-10	13.8	311	12.1	57	-19	24.8	98		10 N	5	03	5	27	5	49		8	24	62	20	21	57	
12	3	46.8	-10	14.6	325	36.8	57	-19	34.6	97		0	4	56	5	21	5	42		8	09	59	20	37	60	
13	18	46.9		15.5	340	01.5	56		44.3	96		10 S		48	13	34		7	55	56		20	53	62		
14	33	47.1		16.4	354	26.1	56	-19	53.9	94		20		38	5	04	26		40	53		21	11	64		
15	48	47.2		17.3	8	50.7	56	-20	03.3	93		30		24	4	53	17		22	49		30	68			
16	63	47.3		18.2	23	15.3	55		12.6	92		35		15	46	12		12	47		42	69				
17	78	47.4	-10	19.1	37	39.8	55	-20	21.8	89		40		4	04	4	38	5	06		7	01	44	21	56	71
18	93	47.5	-10	20.0	52	04.3	55	-20	30.7	89		45		3	51	4	28	4	59		6	47	41	22	11	74
19	108	47.6		20.9	66	28.8	54		39.6	87		50		34	16	50		31	36		31	77				
20	123	47.7		21.8	80	53.2	55		48.3	85		52		26	10	46		23	35		40	79				
21	138	47.8		22.7	95	17.7	53	-20	56.8	84		54		16	4	04	42		15	32		22	51	81		
22	153	47.9		23.6	109	42.0	54	-21	05.2	82		56		3	05	3	57	37		6	06	28	23	03	83	
23	168	48.0		24.5	124	06.4	54		13.4	81		58		2	52	49	32		5	55	25	23	17	86		
24	183	48.1	-10	25.4	138	30.8		-21	21.5			60 S	2	37	3	39	4	26		5	43	20	23	33	91	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO											
	PMG: 22 ^h 04 ^m 7		Mag: -4.0 PMG: 09 ^h 30 ^m				Mag: -2.5 PMG: 23 ^h 19 ^m				Mag: -2.2 PMG: 17 ^h 30 ^m				Mag: +0.5 PMG: 17 ^h 56 ^m											
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	27	55.6	217	29.8	+5	25.3	8	54.1	+5	10.3	96	50.2	-22	28.1	90	13.4	-21	19.9								
1	42	58.0	232	29.5		24.2	23	57.3		10.2	111	52.4		28.0	105	15.8		19.9								
2	58	00.5	247	29.1		23.1	39	00.5		10.1	126	54.6		28.0	120	18.2		19.9								
3	73	03.0	262	28.8		22.0	54	03.7		10.0	141	56.8		28.0	135	20.5		19.9								
4	88	05.4	277	28.5		20.9	69	07.0		09.8	156	58.9		27.9	150	22.9		19.8								
5	103	07.9	292	28.1	+5	19.9	84	10.2	+5	09.7	172	01.1	-22	27.9	165	25.3	-21	19.8								
6	118	10.4	307	27.8	+5	18.8	99	13.4	+5	09.6	187	03.3	-22	27.8	180	27.7	-21	19.8								
7	133	12.8	322	27.4		17.7	114	16.6		09.5	202	05.5		27.8	195	30.0		19.8								
8	148	15.3	337	27.1		16.6	129	19.9		09.4	217	07.6		27.8	210	32.4		19.8								
9	163	17.7	352	26.8		15.5	144	23.1		09.2	232	09.8		27.7	225	34.8		19.8								
10	178	20.2	7	26.4		14.4	159	26.3		09.1	247	12.0		27.7	240	37.2		19.8								
11	193	22.7	22	26.1	+5	13.4	174	29.5	+5	09.0	262	14.1	-22	27.7	255	39.5	-21	19.7								
12	208	25.1	37	25.7	+5	12.3	189	32.7	+5	08.9	277	16.3	-22	27.6	270	41.9	-21	19.7								
13	223	27.6	52	25.4		11.2	204	35.9		08.8	292	18.5		27.6	285	44.3		19.7								
14	238	30.1	67	25.1		10.1	219	39.2		08.6	307	20.6		27.5	300	46.7		19.7								
15	253	32.5	82	24.7		09.0	234	42.4		08.5	322	22.8		27.5	315	49.0		19.7								
16	268	35.0	97	24.4		07.9	249	45.6		08.4	337	25.0		27.5	330	51.4		19.7								
17	283	37.5	112	24.0	+5	06.9	264	48.8	+5	08.3	352	27.2	-22	27.4	345	53.8	-21	19.7								
18	298	39.9	127	23.7	+5	05.8	279	52.0	+5	08.2	7	29.3	-22	27.4	0	56.2	-21	19.6								
19	313	42.4	142	23.4		04.7	294	55.2		08.1	22	31.5		27.4	15	58.5		19.6								
20	328	44.9	157	23.0		03.6	309	58.4		07.9	37	33.7		27.3	31	00.9		19.6								
21	343	47.3	172	22.7		02.5	325	01.7		07.8	52	35.8		27.3	46	03.3		19.6								
22	358	49.8	187	22.3		01.4	340	04.9		07.7	67	38.0		27.2	61	05.7		19.6								
23	13	52.2	202	22.0	+5	00.3	355	08.1		07.6	82	40.2		27.2	76	08.0		19.6								
24	28	54.7	217	21.7	+4	59.2	10	11.3	+5	07.5	97	42.3	-22	27.2	91	10.4	-21	19.6								
Dif.	—		-3		-11		+32		-1		+22		0		+24											

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna										
	SD: 16'1				SD: 16'4		PHE { 4 ^h : 59'9 12 ^h : 59'6 20 ^h : 59'3		Rº: 59 ^m				Fin del crepúsculo			Salida de Luna			Puesta de Luna									
	PMG: 11 ^h 44 ^m 7				Edad: 3 ^d 2								Civil			Náut.			Hora			Rº			Hora			Rº
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.					Civil	Náut.		Hora	Rº		Hora	Rº		Hora	Rº						
h	°	'	°	°	'	°	'	°				h m	h m	h m	h m	m		h m	m	h m	m	m						
0	183	48.1	-10 25.4	138	30.8	53	-21 21.5	80	60 N			16 36	17 19	18 07	12 25	82		18 14	42									
1	198	48.2	26.3	152	55.1	53	29.5	78	58			41	21	07	12 05	79		33	45									
2	213	48.3	27.2	167	19.4	52	37.3	76	56			46	24	07	11 50	76		18 50	47									
3	228	48.5	28.1	181	43.6	53	44.9	74	54			50	27	08	36	74		19 04	48									
4	243	48.6	29.0	196	07.9	52	52.3	74	52			54	29	08	24	73		16	50									
5	258	48.7	-10 29.9	210	32.1	53	-21 59.7	71	50			16 58	17 31	18 09	11 14	71		19 27	51									
6	273	48.8	-10 30.8	224	56.4	52	-22 06.8	70	45			17 06	17 36	18 10	10 52	69		19 49	53									
7	288	48.9	31.7	239	20.6	52	13.8	69	40			13	40	12	34	68		20 07	55									
8	303	49.0	32.6	253	44.8	51	20.7	67	35			18	44	14	19	66		23	55									
9	318	49.1	33.5	268	08.9	52	27.4	65	30			24	48	16	10 06	65		36	56									
10	333	49.2	34.4	282	33.1	52	33.9	64	20			33	17 55	21	9 45	63		20 59	57									
11	348	49.3	-10 35.2	296	57.3	51	-22 40.3	62	10 N			17 40	18 02	18 27	9 26	61		21 18	59									
12	3	49.4	-10 36.1	311	21.4	52	-22 46.5	60	0			17 48	18 09	18 34	9 08	60		21 37	59									
13	18	49.5	37.0	325	45.6	51	52.5	59	10 S			17 56	17	42	8 51	58		21 55	61									
14	33	49.6	37.9	340	09.7	51	-22 58.4	57	20			18 04	27	18 53	33	56		22 15	61									
15	48	49.7	38.8	354	33.8	52	-23 04.1	56	30			14	38	19 07	8 11	54		38	62									
16	63	49.8	39.7	8	58.0	51	09.7	54	35			19	45	17	7 59	52		22 51	63									
17	78	49.9	-10 40.6	23	22.1	51	-23 15.1	52	40			18 26	18 54	19 28	7 45	51		23 07	63									
18	93	50.0	-10 41.5	37	46.2	52	-23 20.3	51	45			18 33	19 04	19 42	7 28	49		23 25	65									
19	108	50.1	42.4	52	10.4	51	25.4	49	50			42	17	19 59	7 07	46		48	66									
20	123	50.2	43.3	66	34.5	51	30.3	48	52			46	23	20 08	6 58	44		23 59	67									
21	138	50.3	44.2	80	58.6	52	35.1	46	54			51	29	18	47	42		***	***									
22	153	50.4	45.0	95	22.8	51	39.7	44	56			18 56	37	30	34	41		***	***									
23	168	50.5	45.9	109	46.9	52	44.1	43	58			19 02	46	20 43	20	37		***	***									
24	183	50.6	-10 46.8	124	11.1		-23 48.4		60 S			19 08	19 56	21 00	6 03	34		***	***									
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO													
	PMG: 22 ^h 00 ^m 7		Mag: -4.0 PMG: 09 ^h 31 ^m				Mag: -2.5 PMG: 23 ^h 14 ^m				Mag: -2.2 PMG: 17 ^h 27 ^m				Mag: +0.5 PMG: 17 ^h 52 ^m													
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'										
0	28	54.7	217	21.7	+4	59.2	10	11.3	+5	07.5	97	42.3	-22 -27.2	91	10.4	-21	19.6											
1	43	57.2	232	21.3		58.1	25	14.5		07.4	112	44.5	-27.1	106	12.8		19.5											
2	58	59.6	247	21.0		57.1	40	17.7		07.3	127	46.7	-27.1	121	15.2		19.5											
3	74	02.1	262	20.6		56.0	55	20.9		07.1	142	48.8	-27.0	136	17.5		19.5											
4	89	04.6	277	20.3		54.9	70	24.1		07.0	157	51.0	-27.0	151	19.9		19.5											
5	104	07.0	292	20.0	+4	53.8	85	27.3	+5	06.9	172	53.2	-22 -27.0	166	22.3	-21	19.5											
6	119	09.5	307	19.6	+4	52.7	100	30.5	+5	06.8	187	55.3	-22 -26.9	181	24.7	-21	19.5											
7	134	12.0	322	19.3		51.6	115	33.7		06.7	202	57.5	-26.9	196	27.0		19.5											
8	149	14.4	337	18.9		50.5	130	36.9		06.6	217	59.7	-26.8	211	29.4		19.4											
9	164	16.9	352	18.6		49.4	145	40.2		06.5	233	01.8	-26.8	226	31.8		19.4											
10	179	19.4	7	18.3		48.3	160	43.4		06.3	248	04.0	-26.8	241	34.1		19.4											
11	194	21.8	22	17.9	+4	47.2	175	46.6	+5	06.2	263	06.2	-22 -26.7	256	36.5	-21	19.4											
12	209	24.3	37	17.6	+4	46.1	190	49.8	+5	06.1	278	08.3	-22 -26.7	271	38.9	-21	19.4											
13	224	26.7	52	17.2		45.0	205	53.0		06.0	293	10.5	-26.7	286	41.3		19.4											
14	239	29.2	67	16.9		44.0	220	56.2		05.9	308	12.6	-26.6	301	43.6		19.4											
15	254	31.7	82	16.6		42.9	235	59.4		05.8	323	14.8	-26.6	316	46.0		19.3											
16	269	34.1	97	16.2		41.8	251	02.6		05.7	338	17.0	-26.5	331	48.4		19.3											
17	284	36.6	112	15.9	+4	40.7	266	05.8	+5	05.6	353	19.1	-22 -26.5	346	50.7	-21	19.3											
18	299	39.1	127	15.5	+4	39.6	281	09.0	+5	05.5	8	21.3	-22 -26.5	1	53.1	-21	19.3											
19	314	41.5	142	15.2		38.5	296	12.2		05.3	23	23.5	-26.4	16	55.5		19.3											
20	329	44.0	157	14.9		37.4	311	15.4		05.2	38	25.6	-26.4	31	57.9		19.3											
21	344	46.5	172	14.5		36.3	326	18.5		05.1	53	27.8	-26.3	47	00.2		19.3											
22	359	48.9	187	14.2		35.2	341	21.7		05.0	68	29.9	-26.3	62	02.6		19.2											
23	14	51.4	202	13.8		34.1	356	24.9		04.9	83	32.1	-26.3	77	05.0		19.2											
24	29	53.8	217	13.5	+4	33.0	11	28.1	+5	04.8	98	34.3	-22 -26.2	92	07.3	-21	19.2											
Dif.	—		-3	-11			+32		-1		+22		0		+24													

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 11 ^h 44 ^m 5				SD: 16'1 Edad: 4 ^d 2		PHE { 4 ^h : 59'0 12 ^h : 58'7 20 ^h : 58'4		Rº: 58 ^m									
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil	Hora	Rº		Hora	Rº					
	h	°	'	°	'	°	'	h	m	h		m	h		m	m	h	m
0	183	50.6	-10	46.8	124	11.1	52	-23	48.4	41	60 N	5 24	6 12	6 55	13 47	58	18 56	62
1	198	50.7		47.7	138	35.3	52		52.5	39	58	23	09	50	24 58	58	19 18	62
2	213	50.8		48.6	152	59.5	52	-23	56.4	38	56	23	06	45	13 06	58	37	61
3	228	50.9		49.5	167	23.7	52	-24	00.2	36	54	23	04	40	12 50	59	19 52	62
4	243	51.0		50.4	181	47.9	52		03.8	35	52	22	6 01	36	37 59	59	20 06	61
5	258	51.1	-10	51.3	196	12.1	53	-24	07.3	32	50	5 21	5 59	6 32	12 25	59	20 18	60
6	273	51.2	-10	52.1	210	36.4	53	-24	10.5	32	45	5 20	5 54	6 24	12 01	59	20 42	60
7	288	51.3		53.0	225	00.7	53		13.7	29	40	18	50	17	11 42	59	21 02	59
8	303	51.4		53.9	239	25.0	53		16.6	28	35	16	46	11	25 59	59	18 59	
9	318	51.5		54.8	253	49.3	53		19.4	27	30	14	42	6 06	11 11	59	32 59	
10	333	51.6		55.7	268	13.6	54		22.1	24	20	09	35	5 57	10 48	58	21 56	58
11	348	51.7	-10	56.6	282	38.0	54	-24	24.5	24	10 N	5 03	5 28	5 49	10 27	59	22 17	58
12	3	51.8	-10	57.5	297	02.4	55	-24	26.9	21	0	4 56	5 20	5 41	10 08	58	22 36	58
13	18	51.9		58.3	311	26.9	54		29.0	20	10 S	47	12	33	9 49	58	22 56	56
14	33	52.0	-10	59.2	325	51.3	55		31.0	18	20	36	5 02	25	29 58	58	23 16	56
15	48	52.1	-11	00.1	340	15.8	56		32.8	17	30	21	4 51	15	9 05	58	40 56	
16	63	52.2		01.0	354	40.4	55		34.5	15	35	12	43	10	8 51	58	23 54	55
17	78	52.3	-11	01.9	9	04.9	57	-24	36.0	14	40	4 01	4 35	5 03	8 36	57	***	***
18	93	52.4	-11	02.8	23	29.6	56	-24	37.4	11	45	3 47	4 25	4 55	8 17	56	***	***
19	108	52.5		03.7	37	54.2	57		38.5	11	50	29	12	46	7 53	56	***	***
20	123	52.6		04.5	52	18.9	57		39.6	8	52	20	4 06	42	42 55	55	***	***
21	138	52.6		05.4	66	43.6	58		40.4	8	54	3 10	3 59	37	29 55	55	0 12	67
22	153	52.7		06.3	81	08.4	59		41.2	5	56	2 59	51	32	7 15	54	26 68	
23	168	52.8		07.2	95	33.3	58		41.7	4	58	45	43	26	6 57	54	0 43	69
24	183	52.9	-11	08.1	109	58.1		-24	42.1		60 S	2 29	3 33	4 20	6 37	52	1 04	71
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 56 ^m 8		Mag: -4.0 PMG: 09 ^h 31 ^m				Mag: -2.5 PMG: 23 ^h 09 ^m				Mag: -2.2 PMG: 17 ^h 23 ^m				Mag: +0.5 PMG: 17 ^h 49 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	29	53.8	217	13.5	+4	33.0	11	28.1	+5	04.8	98	34.3	-22	26.2	92	07.3	-21	19.2
1	44	56.3	232	13.2		31.9	26	31.3		04.7	113	36.4		26.2	107	09.7		19.2
2	59	58.8	247	12.8		30.8	41	34.5		04.6	128	38.6		26.1	122	12.1		19.2
3	75	01.2	262	12.5		29.7	56	37.7		04.5	143	40.7		26.1	137	14.4		19.2
4	90	03.7	277	12.1		28.6	71	40.9		04.4	158	42.9		26.1	152	16.8		19.2
5	105	06.2	292	11.8	+4	27.5	86	44.1	+5	04.3	173	45.1	-22	26.0	167	19.2	-21	19.1
6	120	08.6	307	11.5	+4	26.4	101	47.3	+5	04.2	188	47.2	-22	26.0	182	21.5	-21	19.1
7	135	11.1	322	11.1		25.3	116	50.5		04.1	203	49.4		25.9	197	23.9		19.1
8	150	13.6	337	10.8		24.2	131	53.7		04.0	218	51.5		25.9	212	26.3		19.1
9	165	16.0	352	10.4		23.1	146	56.8		03.8	233	53.7		25.9	227	28.6		19.1
10	180	18.5	7	10.1		22.0	162	00.0		03.7	248	55.8		25.8	242	31.0		19.1
11	195	21.0	22	09.8	+4	20.9	177	03.2	+5	03.6	263	58.0	-22	25.8	257	33.4	-21	19.1
12	210	23.4	37	09.4	+4	19.8	192	06.4	+5	03.5	279	00.2	-22	25.7	272	35.7	-21	19.0
13	225	25.9	52	09.1		18.7	207	09.6		03.4	294	02.3		25.7	287	38.1		19.0
14	240	28.3	67	08.8		17.6	222	12.8		03.3	309	04.5		25.7	302	40.5		19.0
15	255	30.8	82	08.4		16.5	237	16.0		03.2	324	06.6		25.6	317	42.8		19.0
16	270	33.3	97	08.1		15.4	252	19.1		03.1	339	08.8		25.6	332	45.2		19.0
17	285	35.7	112	07.7	+4	14.3	267	22.3	+5	03.0	354	10.9	-22	25.5	347	47.6	-21	19.0
18	300	38.2	127	07.4	+4	13.2	282	25.5	+5	02.9	9	13.1	-22	25.5	2	49.9	-21	18.9
19	315	40.7	142	07.1		12.1	297	28.7		02.8	24	15.2		25.4	17	52.3		18.9
20	330	43.1	157	06.7		11.0	312	31.9		02.7	39	17.4		25.4	32	54.7		18.9
21	345	45.6	172	06.4		09.9	327	35.0		02.6	54	19.6		25.4	47	57.0		18.9
22	0	48.1	187	06.0		08.8	342	38.2		02.5	69	21.7		25.3	62	59.4		18.9
23	15	50.5	202	05.7		07.7	357	41.4		02.4	84	23.9		25.3	78	01.8		18.9
24	30	53.0	217	05.4	+4	06.6	12	44.6	+5	02.3	99	26.0	-22	25.2	93	04.1	-21	18.9
Dif.	—		-3		-11		+32		-1		+22		0		+24			

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 44 ^m 4				Edad: 5 ^d 2																					
	PMG: 17 ^h 20 ^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	183	52.9	-11	08.1	109	58.1	60	-24	42.1	3	60 N	16	30	17	13	18	02	14	45	35	19	58	79			
1	198	53.0		08.9	124	23.1	59		42.4	1	58	36	17	02			22	39		20	20	75				
2	213	53.1		09.8	138	48.0	61		42.5	1	56	41	20	03			14	04	42		38	73				
3	228	53.2		10.7	153	13.1	61		42.4	2	54	46	22	03			13	49	43		20	54	70			
4	243	53.3		11.6	167	38.2	61		42.2	4	52	50	25	04			36	44		21	07	68				
5	258	53.4	-11	12.5	182	03.3	62	-24	41.8	5	50	16	54	17	27	18	05	13	24	46		21	18	67		
6	273	53.5	-11	13.4	196	28.5	62	-24	41.3	7	45	17	03	17	33	18	07	13	00	48		21	42	65		
7	288	53.6		14.2	210	53.7	64		40.6	8	40	10	38	09			12	41	49		22	01	63			
8	303	53.7		15.1	225	19.1	63		39.8	10	35	16	42	11			24	51			17	61				
9	318	53.8		16.0	239	44.4	65		38.8	12	30	22	46	14			12	10	52			31	60			
10	333	53.8		16.9	254	09.9	65		37.6	12	20	31	17	54	19			11	46	54			22	54	58	
11	348	53.9	-11	17.7	268	35.4	65	-24	36.4	15	10 N	17	40	18	01	18	26	11	26	54			23	15	56	
12	3	54.0	-11	18.6	283	00.9	66	-24	34.9	15	0	17	48	18	09	18	33	11	06	56			23	34	54	
13	18	54.1		19.5	297	26.5	67		33.4	18	10 S	17	56	17		42		10	47	57			23	52	53	
14	33	54.2		20.4	311	52.2	68		31.6	18	20	18	05	27	18	54			27	58			***	***	***	
15	48	54.3		21.3	326	18.0	68		29.8	20	30	15	40	19	09			10	03	59			***	***	***	
16	63	54.4		22.1	340	43.8	69		27.8	22	35	21	47	19				9	49	60			***	***	***	
17	78	54.5	-11	23.0	355	09.7	70	-24	25.6	23	40	18	28	18	56	19	30		9	33	61			0	10	55
18	93	54.6	-11	23.9	9	35.7	70	-24	23.3	24	45	18	36	19	07	19	45		9	13	63			0	30	53
19	108	54.6		24.8	24	01.7	71		20.9	26	50	45	20	20	04				8	49	64			0	54	52
20	123	54.7		25.6	38	27.8	72		18.3	27	52	50	27	13					37	65			1	06	51	
21	138	54.8		26.5	52	54.0	73		15.6	29	54	18	55	34	23				24	66			19	51		
22	153	54.9		27.4	67	20.3	73		12.7	30	56	19	00	42	36				8	09	67			34	50	
23	168	55.0		28.3	81	46.6	74		09.7	32	58	07	19	51	20	50			7	51	69			1	52	49
24	183	55.1	-11	29.1	96	13.0		-24	06.5		60 S	19	14	20	02	21	08		7	29	71			2	15	46
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO											
	PMG		Mag: -4.0				Mag: -2.4				Mag: -2.2				Mag: +0.6											
	21 ^h 52 ^m 9		PMG: 09 ^h 32 ^m				PMG: 23 ^h 04 ^m				PMG: 17 ^h 20 ^m				PMG: 17 ^h 45 ^m											
	hG ♈	hG ♀			dec.			hG ♂			dec.			hG ♃			dec.									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	30	53.0	217	05.4	+4	06.6	12	44.6	+5	02.3	99	26.0	-22	-25.2	93	04.1	-21	18.9								
1	45	55.5	232	05.0		05.5	27	47.7		02.2	114	28.2		-25.2	108	06.5		18.8								
2	60	57.9	247	04.7		04.4	42	50.9		02.1	129	30.3		-25.2	123	08.9		18.8								
3	76	00.4	262	04.4		03.3	57	54.1		02.0	144	32.5		-25.1	138	11.2		18.8								
4	91	02.8	277	04.0		02.2	72	57.3		01.9	159	34.6		-25.1	153	13.6		18.8								
5	106	05.3	292	03.7	+4	01.1	88	00.4	+5	01.8	174	36.8	-22	-25.0	168	16.0	-21	18.8								
6	121	07.8	307	03.3	+4	00.0	103	03.6	+5	01.7	189	38.9	-22	-25.0	183	18.3	-21	18.8								
7	136	10.2	322	03.0	+3	58.8	118	06.8		01.6	204	41.1		-25.0	198	20.7		18.7								
8	151	12.7	337	02.7		57.7	133	09.9		01.5	219	43.2		-24.9	213	23.1		18.7								
9	166	15.2	352	02.3		56.6	148	13.1		01.4	234	45.4		-24.9	228	25.4		18.7								
10	181	17.6	7	02.0		55.5	163	16.3		01.3	249	47.5		-24.8	243	27.8		18.7								
11	196	20.1	22	01.6	+3	54.4	178	19.5	+5	01.2	264	49.7	-22	-24.8	258	30.1	-21	18.7								
12	211	22.6	37	01.3	+3	53.3	193	22.6	+5	01.1	279	51.8	-22	-24.7	273	32.5	-21	18.7								
13	226	25.0	52	01.0		52.2	208	25.8		01.0	294	54.0		-24.7	288	34.9		18.7								
14	241	27.5	67	00.6		51.1	223	29.0		00.9	309	56.1		-24.7	303	37.2		18.6								
15	256	30.0	82	00.3		50.0	238	32.1		00.8	324	58.3		-24.6	318	39.6		18.6								
16	271	32.4	97	00.0		48.9	253	35.3		00.8	340	00.4		-24.6	333	42.0		18.6								
17	286	34.9	111	59.6	+3	47.8	268	38.4	+5	00.7	355	02.6	-22	-24.5	348	44.3	-21	18.6								
18	301	37.3	126	59.3	+3	46.7	283	41.6	+5	00.6	10	04.7	-22	-24.5	3	46.7	-21	18.6								
19	316	39.8	141	58.9		45.5	298	44.8		00.5	25	06.9		-24.5	18	49.0		18.6								
20	331	42.3	156	58.6		44.4	313	47.9		00.4	40	09.0		-24.4	33	51.4		18.5								
21	346	44.7	171	58.3		43.3	328	51.1		00.3	55	11.2		-24.4	48	53.8		18.5								
22	1	47.2	186	57.9		42.2	343	54.2		00.2	70	13.3		-24.3	63	56.1		18.5								
23	16	49.7	201	57.6		41.1	358	57.4		00.1	85	15.5		-24.3	78	58.5		18.5								
24	31	52.1	216	57.2	+3	40.0	14	00.6	+5	00.0	100	17.6	-22	-24.2	94	00.9	-21	18.5								
Dif.	—		-3		-11		+32		-1		+21		0		+24											

No usar para navegación

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1			SD: 15'4 Edad: 7'2													
	PMG: 11 ^h 44 ^m 1			PMG: 19 ^h 06 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m		
0	183	57.1	-11 50.0	83	11.6	95	-22 12.7	62	60 N	16 24	17 08	17 56	15 41	13	22 41	85	
1	198	57.1	50.9	97	40.1	96	06.5	64	58	31	12	57	26	17	22 56	80	
2	213	57.2	51.8	112	08.7	97	-22 00.1	64	56	37	15	58	14	20	23 08	77	
3	228	57.3	52.6	126	37.4	98	-21 53.7	66	54	42	18	17 59	15 03	22	18	75	
4	243	57.4	53.5	141	06.2	99	47.1	67	52	46	21	18 00	14 53	25	27	72	
5	258	57.5	-11 54.4	155	35.1	100	-21 40.4	67	50	16 50	17 24	18 01	14 44	27	23 36	70	
6	273	57.5	-11 55.2	170	04.1	100	-21 33.7	69	45	17 00	17 30	18 04	14 26	30	23 53	66	
7	288	57.6	56.1	184	33.1	102	26.8	70	40	07	35	07	14 11	33	***	***	
8	303	57.7	57.0	199	02.3	102	19.8	70	35	14	40	09	13 58	36	***	***	
9	318	57.8	57.8	213	31.5	103	12.8	72	30	20	44	12	46	39	***	***	
10	333	57.8	58.7	228	00.8	104	-21 05.6	73	20	30	17 52	18	27	42	***	***	
11	348	57.9	-11 59.6	242	30.2	105	-20 58.3	74	10 N	17 39	18 00	18 25	13 10	46	0 11	53	
12	3	58.0	-12 00.4	256	59.7	106	-20 50.9	74	0	17 48	18 09	18 33	12 54	49	0 28	50	
13	18	58.1	01.3	271	29.3	107	43.5	76	10 S	17 56	18	43	38	52	0 45	47	
14	33	58.1	02.2	285	59.0	108	35.9	77	20	18 06	28	18 55	21	55	1 03	45	
15	48	58.2	03.0	300	28.8	108	28.2	77	30	17	41	19 11	12 02	58	24	41	
16	63	58.3	03.9	314	58.6	110	20.5	79	35	23	49	21	11 50	61	36	39	
17	78	58.4	-12 04.7	329	28.6	110	-20 12.6	79	40	18 30	18 59	19 33	11 37	63	1 50	37	
18	93	58.4	-12 05.6	343	58.6	111	-20 04.7	80	45	18 39	19 10	19 48	11 22	66	2 06	34	
19	108	58.5	06.5	358	28.7	113	-19 56.7	82	50	49	24	20 08	11 02	70	26	31	
20	123	58.6	07.3	12	59.0	112	48.5	82	52	54	31	18	10 53	72	36	29	
21	138	58.7	08.2	27	29.2	114	40.3	83	54	18 59	38	29	43	74	47	26	
22	153	58.7	09.0	41	59.6	115	32.0	83	56	19 05	47	41	31	77	2 59	24	
23	168	58.8	09.9	56	30.1	116	23.7	85	58	11	19 56	20 57	18	80	3 13	20	
24	183	58.9	-12 10.8	71	00.7		-19 15.2		60 S	19 19	20 08	21 16	10 02	84	3 29	17	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 21 ^h 45 ^m 0		Mag: -4.0 PMG: 09 ^h 33 ^m			Mag: -2.4 PMG: 22 ^h 54 ^m			Mag: -2.2 PMG: 17 ^h 13 ^m			Mag: +0.6 PMG: 17 ^h 37 ^m					
	hG ♈	hG ♀	dec.	hG ♂	dec.	hG ♎	dec.	hG ♏	dec.	hG ♏	dec.	hG ♏	dec.	hG ♏	dec.	hG ♏	dec.
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	32	51.3	216 49.1	+3 13.2	15 16.1	+4 57.9	101 09.0	-22 -23.2	94 57.5	-21 18.1							
1	47	53.7	231 48.8	12.1	30 19.2	57.8	116 11.2	-23.2	109 59.8	18.1							
2	62	56.2	246 48.5	11.0	45 22.3	57.7	131 13.3	-23.1	125 02.2	18.0							
3	77	58.7	261 48.1	09.9	60 25.5	57.7	146 15.5	-23.1	140 04.5	18.0							
4	93	01.1	276 47.8	08.8	75 28.6	57.6	161 17.6	-23.0	155 06.9	18.0							
5	108	03.6	291 47.4	+3 07.6	90 31.7	+4 57.5	176 19.7	-22 -23.0	170 09.2	-21 18.0							
6	123	06.1	306 47.1	+3 06.5	105 34.9	+4 57.4	191 21.9	-22 -23.0	185 11.6	-21 18.0							
7	138	08.5	321 46.8	05.4	120 38.0	57.3	206 24.0	-22.9	200 14.0	18.0							
8	153	11.0	336 46.4	04.3	135 41.1	57.3	221 26.2	-22.9	215 16.3	17.9							
9	168	13.4	351 46.1	03.2	150 44.2	57.2	236 28.3	-22.8	230 18.7	17.9							
10	183	15.9	6 45.8	02.0	165 47.4	57.1	251 30.4	-22.8	245 21.0	17.9							
11	198	18.4	21 45.4	+3 00.9	180 50.5	+4 57.0	266 32.6	-22 -22.7	260 23.4	-21 17.9							
12	213	20.8	36 45.1	+2 59.8	195 53.6	+4 56.9	281 34.7	-22 -22.7	275 25.7	-21 17.9							
13	228	23.3	51 44.7	58.7	210 56.7	56.9	296 36.8	-22.7	290 28.1	17.9							
14	243	25.8	66 44.4	57.6	225 59.9	56.8	311 39.0	-22.6	305 30.4	17.8							
15	258	28.2	81 44.1	56.4	241 03.0	56.7	326 41.1	-22.6	320 32.8	17.8							
16	273	30.7	96 43.7	55.3	256 06.1	56.6	341 43.2	-22.5	335 35.1	17.8							
17	288	33.2	111 43.4	+2 54.2	271 09.2	+4 56.5	356 45.4	-22 -22.5	350 37.5	-21 17.8							
18	303	35.6	126 43.0	+2 53.1	286 12.4	+4 56.5	11 47.5	-22 -22.4	5 39.9	-21 17.8							
19	318	38.1	141 42.7	52.0	301 15.5	56.4	26 49.6	-22.4	20 42.2	17.7							
20	333	40.6	156 42.4	50.8	316 18.6	56.3	41 51.8	-22.3	35 44.6	17.7							
21	348	43.0	171 42.0	49.7	331 21.7	56.2	56 53.9	-22.3	50 46.9	17.7							
22	3	45.5	186 41.7	48.6	346 24.8	56.2	71 56.1	-22.3	65 49.3	17.7							
23	18	47.9	201 41.4	47.5	1 27.9	56.1	86 58.2	-22.2	80 51.6	17.7							
24	33	50.4	216 41.0	+2 46.3	16 31.0	+4 56.0	102 00.3	-22 -22.2	95 54.0	-21 17.7							
Dif.	—		-3	-11	+31	-1	+21	0	+24	0							

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1				SD: 15'2 Edad: 8 ^d 2												PHE { 4 ^h : 55'6 12 ^h : 55'4 20 ^h : 55'2	
	PMG: 11 ^h 44 ^m 0				PMG: 19 ^h 54 ^m												Rº: 44 ^m	
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	hG ☾	Dif.										
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m		
0	183	58.9	-12	10.8	71	00.7	116	-19	15.2	86	60 N	5 33	6 22	7 05	15 54	9	*** ** **	
1	198	58.9		11.6	85	31.3	117	-19	06.6	86	58	32	18	6 59	43	12	*** ** **	
2	213	59.0		12.5	100	02.0	118	-18	58.0	87	56	31	14	53	34	15	*** ** **	
3	228	59.1		13.3	114	32.8	119		49.3	88	54	30	11	48	25	18	*** ** **	
4	243	59.2		14.2	129	03.7	120		40.5	89	52	29	08	43	18	19	*** ** **	
5	258	59.2	-12	15.1	143	34.7	121	-18	31.6	89	50	5 27	6 05	6 39	15 11	21	*** ** **	
6	273	59.3	-12	15.9	158	05.8	121	-18	22.7	91	45	5 25	5 59	6 29	14 56	26	*** ** **	
7	288	59.4		16.8	172	36.9	122		13.6	91	40	22	54	22	44	29	0 07 63	
8	303	59.4		17.6	187	08.1	123	-18	04.5	91	35	19	49	15	34	32	20 59	
9	318	59.5		18.5	201	39.4	124	-17	55.4	93	30	16	44	6 09	25	34	30 57	
10	333	59.6		19.3	216	10.8	125		46.1	93	20	10	36	5 59	14 09	39	0 48 53	
11	348	59.6	-12	20.2	230	42.3	125	-17	36.8	94	10 N	5 03	5 28	5 49	13 56	41	1 04 50	
12	3	59.7	-12	21.1	245	13.8	127	-17	27.4	95	0	4 55	5 19	5 41	13 43	45	1 18 47	
13	18	59.8		21.9	259	45.5	127		17.9	96	10 S	45	10	32	30	48	32 44	
14	33	59.8		22.8	274	17.2	127	-17	08.3	96	20	33	5 00	22	16	52	1 48 40	
15	48	59.9		23.6	288	48.9	129	-16	58.7	97	30	17	4 46	11	13 00	56	2 05 37	
16	64	00.0		24.5	303	20.8	129		49.0	97	35	4 07	38	5 05	12 51	59	15 34	
17	79	00.0	-12	25.3	317	52.7	131	-16	39.3	98	40	3 55	4 29	4 58	12 40	62	2 27 31	
18	94	00.1	-12	26.2	332	24.8	130	-16	29.5	99	45	3 39	4 18	4 49	12 28	65	2 40 28	
19	109	00.2		27.0	346	56.8	132		19.6	100	50	20	4 03	39	12	70	2 57 24	
20	124	00.2		27.9	1	29.0	133	-16	09.6	100	52	3 10	3 57	34	12 05	72	3 05 22	
21	139	00.3		28.7	16	01.3	133	-15	59.6	101	54	2 59	49	28	11 57	74	13 20	
22	154	00.4		29.6	30	33.6	133		49.5	101	56	46	41	23	48	77	23 17	
23	169	00.4		30.4	45	05.9	135		39.4	102	58	30	31	16	11 38	79	3 33 15	
24	184	00.5	-12	31.3	59	38.4		-15	29.2		60 S	2 11	3 20	4 08	11 26	83	3 46 11	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 41 ^m 1		Mag: -4.0 PMG: 09 ^h 33 ^m			Mag: -2.4 PMG: 22 ^h 49 ^m			Mag: -2.2 PMG: 17 ^h 10 ^m			Mag: +0.6 PMG: 17 ^h 34 ^m						
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	33	50.4	216	41.0	+2	46.3	16	31.0	+4	56.0	102	00.3	-22	22.2	95	54.0	-21	17.7
1	48	52.9	231	40.7		45.2	31	34.2		55.9	117	02.5		22.1	110	56.3		17.6
2	63	55.3	246	40.3		44.1	46	37.3		55.9	132	04.6		22.1	125	58.7		17.6
3	78	57.8	261	40.0		43.0	61	40.4		55.8	147	06.7		22.0	141	01.0		17.6
4	94	00.3	276	39.7		41.8	76	43.5		55.7	162	08.8		22.0	156	03.4		17.6
5	109	02.7	291	39.3	+2	40.7	91	46.6	+4	55.7	177	11.0	-22	21.9	171	05.7	-21	17.6
6	124	05.2	306	39.0	+2	39.6	106	49.7	+4	55.6	192	13.1	-22	21.9	186	08.1	-21	17.5
7	139	07.7	321	38.6		38.5	121	52.8		55.5	207	15.2		21.9	201	10.4		17.5
8	154	10.1	336	38.3		37.3	136	55.9		55.4	222	17.4		21.8	216	12.8		17.5
9	169	12.6	351	38.0		36.2	151	59.0		55.4	237	19.5		21.8	231	15.1		17.5
10	184	15.0	6	37.6		35.1	167	02.1		55.3	252	21.6		21.7	246	17.5		17.5
11	199	17.5	21	37.3	+2	34.0	182	05.2	+4	55.2	267	23.8	-22	21.7	261	19.8	-21	17.5
12	214	20.0	36	37.0	+2	32.8	197	08.3	+4	55.2	282	25.9	-22	21.6	276	22.2	-21	17.4
13	229	22.4	51	36.6		31.7	212	11.4		55.1	297	28.0		21.6	291	24.5		17.4
14	244	24.9	66	36.3		30.6	227	14.5		55.0	312	30.2		21.5	306	26.9		17.4
15	259	27.4	81	35.9		29.4	242	17.6		55.0	327	32.3		21.5	321	29.2		17.4
16	274	29.8	96	35.6		28.3	257	20.7		54.9	342	34.4		21.4	336	31.6		17.4
17	289	32.3	111	35.3	+2	27.2	272	23.8	+4	54.8	357	36.5	-22	21.4	351	33.9	-21	17.4
18	304	34.8	126	34.9	+2	26.1	287	26.9	+4	54.7	12	38.7	-22	21.4	6	36.3	-21	17.3
19	319	37.2	141	34.6		24.9	302	30.0		54.7	27	40.8		21.3	21	38.6		17.3
20	334	39.7	156	34.2		23.8	317	33.1		54.6	42	42.9		21.3	36	41.0		17.3
21	349	42.2	171	33.9		22.7	332	36.2		54.5	57	45.1		21.2	51	43.3		17.3
22	4	44.6	186	33.6		21.6	347	39.3		54.5	72	47.2		21.2	66	45.7		17.3
23	19	47.1	201	33.2		20.4	2	42.4		54.4	87	49.3		21.1	81	48.0		17.2
24	34	49.5	216	32.9	+2	19.3	17	45.5	+4	54.4	102	51.4	-22	21.1	96	50.4	-21	17.2
Dif.	—		-3 -11			+31 -1			+21 0			+23 0						

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1				SD: 15 ^h 0		PHE { 4 ^h : 55 ^h 0 12 ^h : 54 ^h 9 20 ^h : 54 ^h 7		Edad: 9 ^d 2										
	PMG: 11 ^h 43 ^m 9				PMG: 20 ^h 38 ^m		Rº: 43 ^m		Civil	Náut.			Hora	Rº	Hora	Rº			
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.								
h	°	'	°	'	°	'		°	'			h	m	h	m	h	m	m	
0	184	00.5	-12	31.3	59	38.4	135	-15	29.2	103	60 N	16 19	17 03	17 52	16 03	6	0 06	82	
1	199	00.6		32.2	74	10.9	136		18.9	103	58	26	07	53	15 55	9	16	79	
2	214	00.6		33.0	88	43.5	137	-15	08.6	103	56	32	11	54	49	11	25	75	
3	229	00.7		33.9	103	16.2	137	-14	58.3	105	54	37	14	55	43	14	33	73	
4	244	00.8		34.7	117	48.9	139		47.8	105	52	42	17	57	37	17	39	71	
5	259	00.8	-12	35.6	132	21.8	138	-14	37.3	105	50	16 47	17 20	17 58	15 32	19	0 46	68	
6	274	00.9	-12	36.4	146	54.6	140	-14	26.8	106	45	16 56	17 27	18 01	15 22	22	0 59	64	
7	289	00.9		37.3	161	27.6	140		16.2	107	40	17 05	32	04	13	26	1 10	61	
8	304	01.0		38.1	176	00.6	141	-14	05.5	107	35	12	38	07	15 06	28	19	58	
9	319	01.1		38.9	190	33.7	141	-13	54.8	107	30	18	42	10	14 59	31	27	56	
10	334	01.1		39.8	205	06.8	142		44.1	108	20	29	17 51	17	48	35	41	51	
11	349	01.2	-12	40.6	219	40.0	143	-13	33.3	109	10 N	17 38	18 00	18 25	14 37	39	1 54	47	
12	4	01.3	-12	41.5	234	13.3	143	-13	22.4	109	0	17 47	18 09	18 33	14 28	43	2 05	44	
13	19	01.3		42.3	248	46.6	144		11.5	109	10 S	17 57	18	43	18	47	16	40	
14	34	01.4		43.2	263	20.0	144	-13	00.6	110	20	18 06	29	18 56	14 08	50	28	37	
15	49	01.4		44.0	277	53.4	145	-12	49.6	111	30	18	43	19 13	13 56	55	42	32	
16	64	01.5		44.9	292	26.9	146		38.5	111	35	25	18 51	23	50	57	49	30	
17	79	01.6	-12	45.7	307	00.5	146	-12	27.4	111	40	18 32	19 01	19 36	13 42	60	2 58	27	
18	94	01.6	-12	46.6	321	34.1	147	-12	16.3	112	45	18 41	19 13	19 52	13 33	63	3 08	24	
19	109	01.7		47.4	336	07.8	148	-12	05.1	112	50	52	28	20 12	22	67	21	20	
20	124	01.7		48.3	350	41.6	148	-11	53.9	113	52	18 57	35	22	17	69	27	17	
21	139	01.8		49.1	5	15.4	148		42.6	113	54	19 03	43	34	11	72	33	16	
22	154	01.8		49.9	19	49.2	149		31.3	113	56	09	19 52	20 48	13 05	74	40	13	
23	169	01.9		50.8	34	23.1	150		20.0	114	58	16	20 02	21 04	12 57	78	48	10	
24	184	02.0	-12	51.6	48	57.1		-11	08.6		60 S	19 24	20 14	21 24	12 49	81	3 57	7	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG 21 ^h 37 ^m 1		Mag: -4.0 PMG: 09 ^h 34 ^m				Mag: -2.3 PMG: 22 ^h 44 ^m				Mag: -2.2 PMG: 17 ^h 06 ^m				Mag: +0.6 PMG: 17 ^h 30 ^m				
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.		
h	°	'	°	'		°	'		°	'	°	'		°	'		°	'	
0	34	49.5	216	32.9	+2 19.3	17	45.5	+4 54.4	102	51.4	-22 -21.1	96	50.4	-21 17.2					
1	49	52.0	231	32.6	18.2	32	48.6	54.3	117	53.6	-21.0	111	52.7	17.2					
2	64	54.5	246	32.2	17.0	47	51.7	54.2	132	55.7	-21.0	126	55.1	17.2					
3	79	56.9	261	31.9	15.9	62	54.8	54.2	147	57.8	-20.9	141	57.4	17.2					
4	94	59.4	276	31.5	14.8	77	57.8	54.1	162	59.9	-20.9	156	59.8	17.1					
5	110	01.9	291	31.2	+2 13.6	93	00.9	+4 54.0	178	02.1	-22 -20.9	172	02.1	-21 17.1					
6	125	04.3	306	30.9	+2 12.5	108	04.0	+4 54.0	193	04.2	-22 -20.8	187	04.5	-21 17.1					
7	140	06.8	321	30.5	11.4	123	07.1	53.9	208	06.3	-20.8	202	06.8	17.1					
8	155	09.3	336	30.2	10.2	138	10.2	53.8	223	08.4	-20.7	217	09.2	17.1					
9	170	11.7	351	29.8	09.1	153	13.3	53.8	238	10.6	-20.7	232	11.5	17.1					
10	185	14.2	6	29.5	08.0	168	16.3	53.7	253	12.7	-20.6	247	13.9	17.0					
11	200	16.7	21	29.2	+2 06.9	183	19.4	+4 53.7	268	14.8	-22 -20.6	262	16.2	-21 17.0					
12	215	19.1	36	28.8	+2 05.7	198	22.5	+4 53.6	283	16.9	-22 -20.5	277	18.6	-21 17.0					
13	230	21.6	51	28.5	04.6	213	25.6	53.5	298	19.1	-20.5	292	20.9	17.0					
14	245	24.0	66	28.1	03.5	228	28.6	53.5	313	21.2	-20.4	307	23.3	17.0					
15	260	26.5	81	27.8	02.3	243	31.7	53.4	328	23.3	-20.4	322	25.6	16.9					
16	275	29.0	96	27.5	01.2	258	34.8	53.4	343	25.4	-20.3	337	27.9	16.9					
17	290	31.4	111	27.1	+2 00.1	273	37.9	+4 53.3	358	27.6	-22 -20.3	352	30.3	-21 16.9					
18	305	33.9	126	26.8	+1 58.9	288	40.9	+4 53.2	13	29.7	-22 -20.3	7	32.6	-21 16.9					
19	320	36.4	141	26.5	57.8	303	44.0	53.2	28	31.8	-20.2	22	35.0	16.9					
20	335	38.8	156	26.1	56.7	318	47.1	53.1	43	33.9	-20.2	37	37.3	16.8					
21	350	41.3	171	25.8	55.5	333	50.2	53.1	58	36.0	-20.1	52	39.7	16.8					
22	5	43.8	186	25.4	54.4	348	53.2	53.0	73	38.2	-20.1	67	42.0	16.8					
23	20	46.2	201	25.1	53.3	3	56.3	53.0	88	40.3	-20.0	82	44.4	16.8					
24	35	48.7	216	24.8	+1 52.1	18	59.4	+4 52.9	103	42.4	-22 -20.0	97	46.7	-21 16.8					
Dif.	—		-3	-11		+31	-1		+21		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			PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4										
	PMG: 11 ^h 43 ^m 8			Edad: 10 ^d 2													
				PMG: 21 ^h 21 ^m			Rº: 40 ^m										
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Náut.	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m
0	184	02.0	-12	51.6	48	57.1	150	-11	08.6	115	60 N	5	37	6	26	7	10
1	199	02.0		52.5	63	31.1	151	-10	57.1	114	58	36	22	7	03	16	09
2	214	02.1		53.3	78	05.2	151		45.7	115	56	34	18	6	57	04	5
3	229	02.1		54.2	92	39.3	151		34.2	116	54	33	15	52	16	00	11
4	244	02.2		55.0	107	13.4	153		22.6	115	52	32	11	47	15	57	12
5	259	02.2	-12	55.8	121	47.7	152	-10	11.1	117	50	5	31	6	08	54	14
6	274	02.3	-12	56.7	136	21.9	153	-9	59.4	116	45	5	27	6	02	15	51
7	289	02.3		57.5	150	56.2	154		47.8	117	40	24	5	56	6	42	16
8	304	02.4		58.4	165	30.6	154		36.1	117	35	21	51	17	15	44	21
9	319	02.5	-12	59.2	180	05.0	154		24.4	117	30	18	46	6	10	39	24
10	334	02.5	-13	00.0	194	39.4	155		12.7	118	20	11	37	5	59	30	29
11	349	02.6	-13	00.9	209	13.9	155	-9	00.9	118	10 N	5	03	5	50	23	33
12	4	02.6	-13	01.7	223	48.4	156	-8	49.1	118	0	4	55	5	40	32	50
13	19	02.7		02.6	238	23.0	156		37.3	119	10 S	44	5	09	15	16	38
14	34	02.7		03.4	252	57.6	157		25.4	119	20	31	4	58	15	11	41
15	49	02.8		04.2	267	32.3	157		13.5	119	30	15	44	09	31	05	44
16	64	02.8		05.1	282	07.0	157	-8	01.6	119	35	4	04	36	51	05	44
17	79	02.9	-13	05.9	296	41.7	158	-7	49.7	120	40	3	52	4	26	47	09
18	94	02.9	-13	06.8	311	16.5	158	-7	37.7	120	45	3	36	4	14	51	53
19	109	03.0		07.6	325	51.3	158		25.7	120	50	15	3	59	47	55	14
20	124	03.0		08.4	340	26.1	159		13.7	121	52	3	05	52	14	42	58
21	139	03.1		09.3	355	01.0	159	-7	01.6	120	54	2	53	44	14	36	62
22	154	03.1		10.1	9	35.9	159	-6	49.6	121	56	39	35	18	29	67	41
23	169	03.2		10.9	24	10.8	160		37.5	121	58	23	25	11	26	69	44
24	184	03.2	-13	11.8	38	45.8		-6	25.4		60 S	2	02	3	13	23	70

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 21 ^h 33 ^m 2		Mag: -4.0 PMG: 09 ^h 35 ^m			Mag: -2.3 PMG: 22 ^h 39 ^m			Mag: -2.2 PMG: 17 ^h 03 ^m			Mag: +0.6 PMG: 17 ^h 26 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	35	48.7	216	24.8	+1	52.1	18	59.4	+4	52.9	103	42.4	-22	20.0	
1	50	51.1	231	24.4		51.0	34	02.4		52.9	118	44.5		19.9	
2	65	53.6	246	24.1		49.8	49	05.5		52.8	133	46.6		19.9	
3	80	56.1	261	23.7		48.7	64	08.5		52.7	148	48.8		19.8	
4	95	58.5	276	23.4		47.6	79	11.6		52.7	163	50.9		19.8	
5	111	01.0	291	23.1	+1	46.4	94	14.7	+4	52.6	178	53.0	-22	19.7	
6	126	03.5	306	22.7	+1	45.3	109	17.7	+4	52.6	193	55.1	-22	19.7	
7	141	05.9	321	22.4		44.2	124	20.8		52.5	208	57.2		19.6	
8	156	08.4	336	22.0		43.0	139	23.8		52.5	223	59.4		19.6	
9	171	10.9	351	21.7		41.9	154	26.9		52.4	239	01.5		19.5	
10	186	13.3	6	21.4		40.8	169	30.0		52.4	254	03.6		19.5	
11	201	15.8	21	21.0	+1	39.6	184	33.0	+4	52.3	269	05.7	-22	19.5	
12	216	18.3	36	20.7	+1	38.5	199	36.1	+4	52.3	284	07.8	-22	19.4	
13	231	20.7	51	20.3		37.4	214	39.1		52.2	299	09.9		19.4	
14	246	23.2	66	20.0		36.2	229	42.2		52.2	314	12.1		19.3	
15	261	25.6	81	19.7		35.1	244	45.2		52.1	329	14.2		19.3	
16	276	28.1	96	19.3		33.9	259	48.3		52.1	344	16.3		19.2	
17	291	30.6	111	19.0	+1	32.8	274	51.3	+4	52.0	359	18.4	-22	19.2	
18	306	33.0	126	18.6	+1	31.7	289	54.4	+4	52.0	14	20.5	-22	19.1	
19	321	35.5	141	18.3		30.5	304	57.4		51.9	29	22.6		19.1	
20	336	38.0	156	18.0		29.4	320	00.4		51.9	44	24.8		19.0	
21	351	40.4	171	17.6		28.2	335	03.5		51.8	59	26.9		19.0	
22	6	42.9	186	17.3		27.1	350	06.5		51.8	74	29.0		18.9	
23	21	45.4	201	16.9		26.0	5	09.6		51.7	89	31.1		18.9	
24	36	47.8	216	16.6	+1	24.8	20	12.6	+4	51.7	104	33.2	-22	18.8	
Dif.	—		-3		-11		+30		-1		+21		0		+23

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 : 54'3											
	PMG: 11 ^h 43 ^m 7				Edad: 11 ^d 2				12 ^h : 54'2											
					PMG: 22 ^h 01 ^m		Rº: 41 ^m		20 ^h : 54'1											
	hG ☉		Dec		hG ☾		Dif.		Dec		Dif.			Civil	Náut.	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'		°	'			°	h	m	h	m	h	m	m	
0	184	03.2	-13	11.8	38	45.8	160	-6	25.4	121	60 N	16	14	16	58	17	47	16	14 5	
1	199	03.3		12.6	53	20.8	161		13.3	122	58	21	17	02		48		12 8		
2	214	03.3		13.4	67	55.9	160	-6	01.1	122	56	27		06		50		11 10		
3	229	03.4		14.3	82	30.9	161	-5	48.9	121	54	33		10		52		09 12		
4	244	03.4		15.1	97	06.0	161		36.8	122	52	38		14		53		08 14		
5	259	03.5	-13	15.9	111	41.1	162	-5	24.6	123	50	16	43	17	17	17	55	16	07 16	
6	274	03.5	-13	16.8	126	16.3	162	-5	12.3	122	45	16	53	17	24	17	58	16	05 19	
7	289	03.6		17.6	140	51.5	162	-5	00.1	122	40	17	02		30	18	02		03 22	
8	304	03.6		18.4	155	26.7	162	-4	47.9	123	35		09		35		05	16	01 25	
9	319	03.7		19.3	170	01.9	162		35.6	123	30		16		41		09	15	59 28	
10	334	03.7		20.1	184	37.1	163		23.3	123	20		27		50		16		56 33	
11	349	03.7	-13	20.9	199	12.4	163	-4	11.0	123	10 N	17	38	17	59	18	24	15	54 36	
12		4 03.8	-13	21.8	213	47.7	163	-3	58.7	123	0	17	47	18	08	18	33	15	52 40	
13	19	03.8		22.6	228	23.0	164		46.4	123	10 S	17	57		19		44		49 44	
14	34	03.9		23.4	242	58.4	163		34.1	124	20	18	07		30	18	57		47 48	
15	49	03.9		24.2	257	33.7	164		21.7	123	30		19		45	19	14		44 52	
16	64	04.0		25.1	272	09.1	164	-3	09.4	124	35		27	18	53		25		42 55	
17	79	04.0	-13	25.9	286	44.5	164	-2	57.0	123	40	18	35	19	04	19	38	15	40 59	
18	94	04.1	-13	26.7	301	19.9	164	-2	44.7	124	45	18	44	19	16	19	55	15	38 62	
19	109	04.1		27.6	315	55.3	164		32.3	124	50	18	56		31	20	16		36 66	
20	124	04.1		28.4	330	30.7	165		19.9	124	52	19	01		39		27		35 67	
21	139	04.2		29.2	345	06.2	164	-2	07.5	124	54		07		47		39		33 70	
22	154	04.2		30.0	359	41.6	165	-1	55.1	124	56		13	19	56	20	54		32 72	
23	169	04.3		30.9	14	17.1	165		42.7	124	58		21	20	07	21	11		30 75	
24	184	04.3	-13	31.7	28	52.6		-1	30.3		60 S	19	29	20	20	21	34	15	29 77	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG		Mag: -4.0				Mag: -2.3				Mag: -2.2				Mag: +0.6					
	21 ^h 29 ^m 3		PMG: 09 ^h 35 ^m				PMG: 22 ^h 35 ^m				PMG: 16 ^h 59 ^m				PMG: 17 ^h 22 ^m					
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	36	47.8	216	16.6	+1	24.8	20	12.6	+4	51.7	104	33.2	-22	-18.8	98	42.9	-21	16.3		
1	51	50.3	231	16.3		23.7	35	15.7		51.7	119	35.3		-18.8	113	45.3		16.3		
2	66	52.7	246	15.9		22.6	50	18.7		51.6	134	37.4		-18.7	128	47.6		16.3		
3	81	55.2	261	15.6		21.4	65	21.7		51.6	149	39.6		-18.7	143	50.0		16.2		
4	96	57.7	276	15.2		20.3	80	24.8		51.5	164	41.7		-18.6	158	52.3		16.2		
5	112	00.1	291	14.9	+1	19.1	95	27.8	+4	51.5	179	43.8	-22	-18.6	173	54.6	-21	16.2		
6	127	02.6	306	14.6	+1	18.0	110	30.8	+4	51.4	194	45.9	-22	-18.5	188	57.0	-21	16.2		
7	142	05.1	321	14.2		16.9	125	33.9		51.4	209	48.0		-18.5	203	59.3		16.2		
8	157	07.5	336	13.9		15.7	140	36.9		51.3	224	50.1		-18.4	219	01.6		16.1		
9	172	10.0	351	13.5		14.6	155	39.9		51.3	239	52.2		-18.4	234	04.0		16.1		
10	187	12.5	6	13.2		13.4	170	43.0		51.3	254	54.3		-18.3	249	06.3		16.1		
11	202	14.9	21	12.8	+1	12.3	185	46.0	+4	51.2	269	56.5	-22	-18.3	264	08.7	-21	16.1		
12	217	17.4	36	12.5	+1	11.1	200	49.0	+4	51.2	284	58.6	-22	-18.3	279	11.0	-21	16.1		
13	232	19.9	51	12.2		10.0	215	52.0		51.1	300	00.7		-18.2	294	13.3		16.0		
14	247	22.3	66	11.8		08.9	230	55.1		51.1	315	02.8		-18.2	309	15.7		16.0		
15	262	24.8	81	11.5		07.7	245	58.1		51.1	330	04.9		-18.1	324	18.0		16.0		
16	277	27.2	96	11.1		06.6	261	01.1		51.0	345	07.0		-18.1	339	20.4		16.0		
17	292	29.7	111	10.8	+1	05.4	276	04.1	+4	51.0	0	09.1	-22	-18.0	354	22.7	-21	16.0		
18	307	32.2	126	10.5	+1	04.3	291	07.1	+4	50.9	15	11.2	-22	-18.0	9	25.0	-21	15.9		
19	322	34.6	141	10.1		03.2	306	10.2		50.9	30	13.3		-17.9	24	27.4		15.9		
20	337	37.1	156	09.8		02.0	321	13.2		50.9	45	15.5		-17.9	39	29.7		15.9		
21	352	39.6	171	09.4	+1	00.9	336	16.2		50.8	60	17.6		-17.8	54	32.0		15.9		
22	7	42.0	186	09.1	+0	59.7	351	19.2		50.8	75	19.7		-17.8	69	34.4		15.8		
23	22	44.5	201	08.7		58.6	6	22.2		50.8	90	21.8		-17.7	84	36.7		15.8		
24	37	47.0	216	08.4	+0	57.4	21	25.2	+4	50.7	105	23.9	-22	-17.7	99	39.1	-21	15.8		
Dif.	—		-3		-11		+30		0		+21		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 7				SD: 14'7 Edad: 12 ^d 2 PMG: 22 ^h 42 ^m Rº: 40 ^m													
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	Náut.	Civil		Hora	Rº	Hora	Rº					
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	184	04.3	-13	31.7	28	52.6	165	-1	30.3	124	60 N	5 42	6 31	7 16	16 19	5	4 06	77
1	199	04.4		32.5	43	28.1	165		17.9	124	58	40	26	08	20	7	06	75
2	214	04.4		33.3	58	03.6	165	-1	05.5	124	56	38	22	7 01	21	10	07	72
3	229	04.4		34.2	72	39.1	165	-0	53.1	124	54	37	18	6 55	21	13	07	70
4	244	04.5		35.0	87	14.6	165		40.7	124	52	35	15	50	22	14	07	68
5	259	04.5	-13	35.8	101	50.1	166	-0	28.3	124	50	5 34	6 12	6 45	16 23	16	4 08	65
6	274	04.6	-13	36.6	116	25.7	165	-0	15.9	124	45	5 30	6 04	6 35	16 24	20	4 08	62
7	289	04.6		37.5	131	01.2	166	-0	03.5	125	40	26	5 58	26	25	24	09	58
8	304	04.6		38.3	145	36.8	165	+0	09.0	124	35	23	52	19	26	26	09	55
9	319	04.7		39.1	160	12.3	166		21.4	124	30	19	47	12	27	29	09	53
10	334	04.7		39.9	174	47.9	165		33.8	124	20	12	38	6 00	29	33	10	48
11	349	04.7	-13	40.8	189	23.4	166	+0	46.2	124	10 N	5 03	5 28	5 50	16 30	37	4 10	44
12	4	04.8	-13	41.6	203	59.0	165	+0	58.6	124	0	4 54	5 19	5 40	16 32	40	4 11	40
13	19	04.8		42.4	218	34.5	166	+1	11.0	124	10 S	43	5 09	30	33	44	11	37
14	34	04.9		43.2	233	10.1	165		23.4	123	20	30	4 57	20	35	48	12	33
15	49	04.9		44.0	247	45.6	165		35.7	124	30	13	43	08	36	53	12	29
16	64	04.9		44.9	262	21.1	166	+1	48.1	124	35	4 02	34	5 00	37	56	13	25
17	79	05.0	-13	45.7	276	56.7	165	+2	00.5	123	40	3 48	4 23	4 52	16 39	58	4 13	23
18	94	05.0	-13	46.5	291	32.2	166	+2	12.8	124	45	3 32	4 11	4 43	16 40	62	4 13	20
19	109	05.0		47.3	306	07.8	165		25.2	123	50	10	3 55	31	42	65	14	16
20	124	05.1		48.1	320	43.3	165		37.5	124	52	3 00	48	26	42	68	14	14
21	139	05.1		49.0	335	18.8	165	+2	49.9	123	54	2 47	40	20	43	70	14	12
22	154	05.1		49.8	349	54.3	165	+3	02.2	123	56	33	30	13	44	72	15	9
23	169	05.2		50.6	4	29.8	165		14.5	123	58	2 15	19	4 06	16 45	75	4 15	7
24	184	05.2	-13	51.4	19	05.3		+3	26.8		60 S	1 53	3 07	3 57	16 46	78	4 15	5
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 25 ^m 4		Mag: -4.0 PMG: 09 ^h 36 ^m			Mag: -2.2 PMG: 22 ^h 30 ^m			Mag: -2.2 PMG: 16 ^h 56 ^m			Mag: +0.6 PMG: 17 ^h 19 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	37	47.0	216	08.4	+0	57.4	21	25.2	+4	50.7	105	23.9	-22	17.7	99	39.1	-21	15.8
1	52	49.4	231	08.1		56.3	36	28.3		50.7	120	26.0		17.6	114	41.4		15.8
2	67	51.9	246	07.7		55.1	51	31.3		50.7	135	28.1		17.6	129	43.7		15.8
3	82	54.3	261	07.4		54.0	66	34.3		50.6	150	30.2		17.5	144	46.1		15.7
4	97	56.8	276	07.0		52.9	81	37.3		50.6	165	32.3		17.5	159	48.4		15.7
5	112	59.3	291	06.7	+0	51.7	96	40.3	+4	50.6	180	34.4	-22	17.4	174	50.7	-21	15.7
6	128	01.7	306	06.4	+0	50.6	111	43.3	+4	50.5	195	36.5	-22	17.4	189	53.1	-21	15.7
7	143	04.2	321	06.0		49.4	126	46.3		50.5	210	38.6		17.3	204	55.4		15.7
8	158	06.7	336	05.7		48.3	141	49.3		50.5	225	40.7		17.3	219	57.7		15.6
9	173	09.1	351	05.3		47.1	156	52.3		50.4	240	42.8		17.2	235	00.1		15.6
10	188	11.6	6	05.0		46.0	171	55.3		50.4	255	45.0		17.2	250	02.4		15.6
11	203	14.1	21	04.6	+0	44.8	186	58.3	+4	50.4	270	47.1	-22	17.1	265	04.7	-21	15.6
12	218	16.5	36	04.3	+0	43.7	202	01.3	+4	50.3	285	49.2	-22	17.1	280	07.1	-21	15.6
13	233	19.0	51	04.0		42.6	217	04.3		50.3	300	51.3		17.0	295	09.4		15.5
14	248	21.5	66	03.6		41.4	232	07.3		50.3	315	53.4		17.0	310	11.8		15.5
15	263	23.9	81	03.3		40.3	247	10.3		50.2	330	55.5		16.9	325	14.1		15.5
16	278	26.4	96	02.9		39.1	262	13.3		50.2	345	57.6		16.9	340	16.4		15.5
17	293	28.8	111	02.6	+0	38.0	277	16.3	+4	50.2	0	59.7	-22	16.8	355	18.8	-21	15.4
18	308	31.3	126	02.2	+0	36.8	292	19.3	+4	50.2	16	01.8	-22	16.8	10	21.1	-21	15.4
19	323	33.8	141	01.9		35.7	307	22.3		50.1	31	03.9		16.7	25	23.4		15.4
20	338	36.2	156	01.6		34.5	322	25.3		50.1	46	06.0		16.7	40	25.8		15.4
21	353	38.7	171	01.2		33.4	337	28.3		50.1	61	08.1		16.6	55	28.1		15.4
22	8	41.2	186	00.9		32.2	352	31.3		50.1	76	10.2		16.6	70	30.4		15.3
23	23	43.6	201	00.5		31.1	7	34.2		50.0	91	12.3		16.5	85	32.8		15.3
24	38	46.1	216	00.2	+0	29.9	22	37.2	+4	50.0	106	14.4	-22	16.5	100	35.1	-21	15.3
Dif.	—		-3		-11		+30		0		+21		0		+23		0	

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'1			SD: 14'7 Edad: 13 ^d 2																
	PMG: 11 ^h 43 ^m 6			PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0																
	PMG: 23 ^h 22 ^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	184	05.2	-13	19	05.3	165	+3	26.8	123	60 N	16 08	16 53	17 42	16 24	6	5 23 79				
1	199	05.2		33	40.8	165		39.1	122	58	16	16 58	44	27	9	21 75				
2	214	05.3		48	16.3	164	+3	51.3	123	56	23	17 02	46	31	11	19 72				
3	229	05.3		62	51.7	165	+4	03.6	122	54	29	06	48	34	13	17 70				
4	244	05.3		77	27.2	164		15.8	122	52	35	10	50	36	16	15 68				
5	259	05.4	-13	92	02.6	165	+4	28.0	122	50	16 40	17 13	17 51	16 39	17	5 13 66				
6	274	05.4	-13	106	38.1	164	+4	40.2	122	45	16 51	17 21	17 56	16 44	21	5 10 61				
7	289	05.4		121	13.5	164	+4	52.4	122	40	17 00	28	17 59	49	24	07 58				
8	304	05.5		135	48.9	163	+5	04.6	122	35	07	33	18 03	52	28	04 55				
9	319	05.5		150	24.2	164		16.8	121	30	14	39	07	16 56	30	5 02 53				
10	334	05.5	-13	164	59.6	163		28.9	121	20	26	49	15	17 02	34	4 58 48				
11	349	05.5	-14	179	34.9	164	+5	41.0	121	10 N	17 37	17 59	18 24	17 07	38	4 54 45				
12	4	05.6	-14	194	10.3	163	+5	53.1	121	0	17 47	18 08	18 33	17 12	42	4 51 41				
13	19	05.6		208	45.6	162	+6	05.2	120	10 S	17 57	19	44	17	45	48 37				
14	34	05.6		223	20.8	163		17.2	120	20	18 08	31	18 58	23	49	45 33				
15	49	05.7		237	56.1	162		29.2	120	30	21	46	19 16	29	53	41 29				
16	64	05.7		252	31.3	163		41.2	120	35	28	18 55	27	33	55	38 27				
17	79	05.7	-14	267	06.6	162	+6	53.2	120	40	18 37	19 06	19 41	17 37	58	4 36 24				
18	94	05.7	-14	281	41.8	161	+7	05.2	119	45	18 47	19 19	19 58	17 42	62	4 33 20				
19	109	05.8		296	16.9	162		17.1	119	50	18 59	35	20 21	47	67	30 16				
20	124	05.8		310	52.1	161		29.0	119	52	19 05	43	32	50	68	28 15				
21	139	05.8		325	27.2	161		40.9	118	54	11	19 52	20 45	53	70	26 13				
22	154	05.9		340	02.3	161	+7	52.7	118	56	18	20 01	21 00	17 56	73	24 11				
23	169	05.9		354	37.4	160	+8	04.5	118	58	26	13	19	18 00	76	22 8				
24	184	05.9	-14	9	12.4		+8	16.3		60 S	19 35	20 26	21 43	18 04	79	4 20 5				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 21 ^h 21 ^m 4		Mag: -4.0 PMG: 09 ^h 36 ^m			Mag: -2.2 PMG: 22 ^h 25 ^m			Mag: -2.2 PMG: 16 ^h 53 ^m			Mag: +0.6 PMG: 17 ^h 15 ^m								
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.							
h	°	'	°	'	°	°	'	°	°	'	°	°	'							
0	38	46.1	216	00.2	+0	29.9	22	37.2	+4	50.0	106	14.4	-22	-16.5	100	35.1	-21	15.3		
1	53	48.6	230	59.8		28.8	37	40.2		50.0	121	16.5		-16.4	115	37.4		15.3		
2	68	51.0	245	59.5		27.6	52	43.2		50.0	136	18.6		-16.4	130	39.8		15.3		
3	83	53.5	260	59.1		26.5	67	46.2		49.9	151	20.7		-16.3	145	42.1		15.2		
4	98	56.0	275	58.8		25.4	82	49.2		49.9	166	22.8		-16.3	160	44.4		15.2		
5	113	58.4	290	58.5	+0	24.2	97	52.1	+4	49.9	181	24.9	-22	-16.2	175	46.7	-21	15.2		
6	129	00.9	305	58.1	+0	23.1	112	55.1	+4	49.9	196	27.0	-22	-16.2	190	49.1	-21	15.2		
7	144	03.3	320	57.8		21.9	127	58.1		49.8	211	29.1		-16.1	205	51.4		15.1		
8	159	05.8	335	57.4		20.8	143	01.1		49.8	226	31.2		-16.1	220	53.7		15.1		
9	174	08.3	350	57.1		19.6	158	04.1		49.8	241	33.3		-16.0	235	56.1		15.1		
10	189	10.7	5	56.7		18.5	173	07.0		49.8	256	35.4		-16.0	250	58.4		15.1		
11	204	13.2	20	56.4	+0	17.3	188	10.0	+4	49.8	271	37.5	-22	-15.9	266	00.7	-21	15.1		
12	219	15.7	35	56.0	+0	16.2	203	13.0	+4	49.7	286	39.6	-22	-15.9	281	03.1	-21	15.0		
13	234	18.1	50	55.7		15.0	218	16.0		49.7	301	41.7		-15.8	296	05.4		15.0		
14	249	20.6	65	55.4		13.9	233	18.9		49.7	316	43.8		-15.8	311	07.7		15.0		
15	264	23.1	80	55.0		12.7	248	21.9		49.7	331	45.9		-15.7	326	10.1		15.0		
16	279	25.5	95	54.7		11.6	263	24.9		49.7	346	48.0		-15.7	341	12.4		15.0		
17	294	28.0	110	54.3	+0	10.4	278	27.8	+4	49.6	1	50.1	-22	-15.6	356	14.7	-21	14.9		
18	309	30.4	125	54.0	+0	09.3	293	30.8	+4	49.6	16	52.2	-22	-15.5	11	17.0	-21	14.9		
19	324	32.9	140	53.6		08.1	308	33.8		49.6	31	54.3		-15.5	26	19.4		14.9		
20	339	35.4	155	53.3		07.0	323	36.7		49.6	46	56.4		-15.4	41	21.7		14.9		
21	354	37.8	170	52.9		05.8	338	39.7		49.6	61	58.5		-15.4	56	24.0		14.8		
22	9	40.3	185	52.6		04.7	353	42.6		49.6	77	00.6		-15.3	71	26.4		14.8		
23	24	42.8	200	52.3		03.5	8	45.6		49.5	92	02.7		-15.3	86	28.7		14.8		
24	39	45.2	215	51.9	+0	02.4	23	48.6	+4	49.5	107	04.8	-22	-15.2	101	31.0	-21	14.8		
Dif.	—		-3	-11		+30	0				+21		+1		+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 6				SD: 14'7 Edad: 14. ^d 2												PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0
	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	184	05.9	-14	10.9	9	12.4	160	+8	16.3	118	5 46	6 36	7 21	16 30	7	6 42	79
1	199	05.9		11.7	23	47.4	160		28.1	117	44	31	13	36	11	36	76
2	214	06.0		12.5	38	22.4	159		39.8	117	42	26	7 06	42	13	31	74
3	229	06.0		13.3	52	57.3	159	+8	51.5	116	40	22	6 59	47	16	27	71
4	244	06.0		14.1	67	32.2	159	+9	03.1	117	38	18	54	52	18	23	68
5	259	06.0	-14	14.9	82	07.1	159	+9	14.8	115	5 36	6 15	6 49	16 56	20	6 19	67
6	274	06.0	-14	15.7	96	42.0	158	+9	26.3	116	5 32	6 07	6 38	17 05	24	6 11	63
7	289	06.1		16.5	111	16.8	158		37.9	115	28	6 00	28	13	27	6 05	59
8	304	06.1		17.3	125	51.6	158	+9	49.4	115	24	5 54	20	20	30	5 59	57
9	319	06.1		18.2	140	26.4	157	+10	00.9	115	20	49	13	26	32	55	53
10	334	06.1		19.0	155	01.1	157		12.4	114	12	38	6 01	36	36	46	50
11	349	06.2	-14	19.8	169	35.8	156	+10	23.8	113	5 04	5 29	5 50	17 45	40	5 39	46
12	4	06.2	-14	20.6	184	10.4	156	+10	35.1	114	4 54	5 19	5 40	17 54	43	5 32	42
13	19	06.2		21.4	198	45.0	156		46.5	113	43	5 08	30	18 02	47	25	39
14	34	06.2		22.2	213	19.6	155	+10	57.8	112	29	4 56	19	12	50	18	35
15	49	06.2		23.0	227	54.1	155	+11	09.0	112	4 11	41	5 06	22	54	10	31
16	64	06.3		23.8	242	28.6	155		20.2	112	3 59	32	4 58	28	57	05	28
17	79	06.3	-14	24.6	257	03.1	154	+11	31.4	111	3 46	4 21	4 50	18 35	60	5 00	25
18	94	06.3	-14	25.4	271	37.5	154	+11	42.5	111	3 28	4 08	4 40	18 44	63	4 53	23
19	109	06.3		26.2	286	11.9	153	+11	53.6	110	3 06	3 51	28	54	67	46	18
20	124	06.3		27.0	300	46.2	153	+12	04.6	110	2 54	44	22	18 58	69	43	16
21	139	06.4		27.8	315	20.5	152		15.6	110	41	35	16	19 03	72	39	14
22	154	06.4		28.6	329	54.7	153		26.6	109	26	25	09	09	74	35	12
23	169	06.4		29.4	344	29.0	151		37.5	108	2 07	13	4 01	19 16	76	4 30	10
24	184	06.4	-14	30.2	359	03.1		+12	48.3		1 43	3 00	3 52	19 23	80	4 25	7

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 21 ^h 17. ^m 5		Mag: -4.0 PMG: 09 ^h 37. ^m			Mag: -2.2 PMG: 22 ^h 20. ^m			Mag: -2.2 PMG: 16 ^h 49. ^m			Mag: +0.6 PMG: 17 ^h 11. ^m			
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	39	45.2	215	51.9	+0	23	48.6	+4	107	04.8	-22	101	31.0	-21	14.8
1	54	47.7	230	51.6		38	51.5		122	06.9		116	33.4		14.8
2	69	50.2	245	51.2	+0	53	54.5		137	09.0		131	35.7		14.7
3	84	52.6	260	50.9	-0	68	57.4		152	11.1		146	38.0		14.7
4	99	55.1	275	50.5		84	00.4		167	13.2		161	40.3		14.7
5	114	57.6	290	50.2	-0	99	03.3	+4	182	15.2	-22	176	42.7	-21	14.7
6	130	00.0	305	49.8	-0	114	06.3	+4	197	17.3	-22	191	45.0	-21	14.6
7	145	02.5	320	49.5		129	09.2		212	19.4		206	47.3		14.6
8	160	04.9	335	49.1		144	12.2		227	21.5		221	49.6		14.6
9	175	07.4	350	48.8		159	15.1		242	23.6		236	52.0		14.6
10	190	09.9	5	48.4		174	18.1		257	25.7		251	54.3		14.5
11	205	12.3	20	48.1	-0	189	21.0	+4	272	27.8	-22	266	56.6	-21	14.5
12	220	14.8	35	47.8	-0	204	24.0	+4	287	29.9	-22	281	59.0	-21	14.5
13	235	17.3	50	47.4		219	26.9		302	32.0		297	01.3		14.5
14	250	19.7	65	47.1		234	29.8		317	34.1		312	03.6		14.5
15	265	22.2	80	46.7		249	32.8		332	36.2		327	05.9		14.4
16	280	24.7	95	46.4		264	35.7		347	38.3		342	08.3		14.4
17	295	27.1	110	46.0	-0	279	38.7	+4	2	40.4	-22	357	10.6	-21	14.4
18	310	29.6	125	45.7	-0	294	41.6	+4	17	42.5	-22	12	12.9	-21	14.4
19	325	32.0	140	45.3		309	44.5		32	44.5		27	15.2		14.3
20	340	34.5	155	45.0		324	47.5		47	46.6		42	17.6		14.3
21	355	37.0	170	44.6		339	50.4		62	48.7		57	19.9		14.3
22	10	39.4	185	44.3		354	53.3		77	50.8		72	22.2		14.3
23	25	41.9	200	43.9		9	56.3		92	52.9		87	24.5		14.3
24	40	44.4	215	43.6	-0	24	59.2	+4	107	55.0	-22	102	26.9	-21	14.2
Dif.	—		-3	-12		+29	0		+21		+1	+23			

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'1			SD: 14'7 Edad: 15 ^d 2																
	PMG: 11 ^h 43 ^m 6			PHE { 4 ^h : 54'0 12 ^h : 54'1 20 ^h : 54'1																
	PMG: 00 ^h 04 ^m			Rº: 44 ^m																
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	184	06.4	-14	30.2	359	03.1	151	+12	48.3	108	60 N	16	03	16	48	17	37	11		
1	199	06.4		31.0	13	37.2	151	+12	59.1	108	58		11	54	40		47	14		
2	214	06.4		31.8	28	11.3	150	+13	09.9	107	56	19	16	58	42	16	55	18		
3	229	06.5		32.6	42	45.3	150		20.6	106	54	25	17	03	44	17	03	20		
4	244	06.5		33.4	57	19.3	149		31.2	106	52	31	07	46		10	22	31		
5	259	06.5	-14	34.2	71	53.2	149	+13	41.8	106	50	16	36	17	10	17	16	24		
6	274	06.5	-14	34.9	86	27.1	149	+13	52.4	105	45	16	48	17	18	17	29	28		
7	289	06.5		35.7	101	01.0	147	+14	02.9	104	40	16	57	25	17	57	40	31		
8	304	06.5		36.5	115	34.7	148		13.3	104	35	17	05	32	18	01	50	33		
9	319	06.5		37.3	130	08.5	147		23.7	103	30	13	37	06		17	58	35		
10	334	06.6		38.1	144	42.2	146		34.0	103	20	25	48	14		18	12	39		
11	349	06.6	-14	38.9	159	15.8	146	+14	44.3	102	10 N	17	36	17	58	18	25	42		
12	4	06.6	-14	39.7	173	49.4	145	+14	54.5	102	0	17	47	18	08	18	37	45		
13	19	06.6		40.5	188	22.9	145	+15	04.7	101	10 S	17	58	19		45	18	49		
14	34	06.6		41.3	202	56.4	145		14.8	100	20	18	09	32	18	59	19	02		
15	49	06.6		42.1	217	29.9	143		24.8	100	30	23	48	19	18		16	56		
16	64	06.6		42.9	232	03.2	144		34.8	99	35	30	18	57	30		25	58		
17	79	06.6	-14	43.7	246	36.6	142	+15	44.7	99	40	18	39	19	08	19	44	19		
18	94	06.6	-14	44.5	261	09.8	143	+15	54.6	98	45	18	50	19	22	20	02	19		
19	109	06.7		45.3	275	43.1	141	+16	04.4	97	50	19	02		39	25	20	01		
20	124	06.7		46.0	290	16.2	141		14.1	96	52	08		47	37		07	70		
21	139	06.7		46.8	304	49.3	141		23.7	96	54	15	19	56	20	51	15	71		
22	154	06.7		47.6	319	22.4	140		33.3	96	56	22	20	07	21	07	23	74		
23	169	06.7		48.4	333	55.4	139		42.9	94	58	31	19	27			32	78		
24	184	06.7	-14	49.2	348	28.3		+16	52.3		60 S	19	40	20	33	21	54	20		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 21 ^h 13 ^m 6		Mag: -4.0 PMG: 09 ^h 37 ^m			Mag: -2.1 PMG: 22 ^h 16 ^m			Mag: -2.2 PMG: 16 ^h 46 ^m			Mag: +0.6 PMG: 17 ^h 08 ^m		
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	40	44.4	215	43.6	-0	25.3	24	59.2	+4	49.3	107	55.0	-22	-14.0
1	55	46.8	230	43.2		26.4	40	02.1		49.3	122	57.1	-13.9	
2	70	49.3	245	42.9		27.6	55	05.0		49.3	137	59.2	-13.9	
3	85	51.8	260	42.5		28.7	70	08.0		49.3	153	01.3	-13.8	
4	100	54.2	275	42.2		29.9	85	10.9		49.3	168	03.4	-13.8	
5	115	56.7	290	41.8	-0	31.0	100	13.8	+4	49.3	183	05.4	-22	-13.7
6	130	59.2	305	41.5	-0	32.2	115	16.7	+4	49.3	198	07.5	-22	-13.7
7	146	01.6	320	41.1		33.3	130	19.7		49.3	213	09.6	-13.6	
8	161	04.1	335	40.8		34.5	145	22.6		49.3	228	11.7	-13.6	
9	176	06.5	350	40.4		35.7	160	25.5		49.3	243	13.8	-13.5	
10	191	09.0	5	40.1		36.8	175	28.4		49.3	258	15.9	-13.5	
11	206	11.5	20	39.7	-0	38.0	190	31.3	+4	49.3	273	18.0	-22	-13.4
12	221	13.9	35	39.4	-0	39.1	205	34.2	+4	49.3	288	20.1	-22	-13.3
13	236	16.4	50	39.0		40.3	220	37.2		49.3	303	22.1	-13.3	
14	251	18.9	65	38.7		41.4	235	40.1		49.3	318	24.2	-13.2	
15	266	21.3	80	38.3		42.6	250	43.0		49.3	333	26.3	-13.2	
16	281	23.8	95	38.0		43.7	265	45.9		49.3	348	28.4	-13.1	
17	296	26.3	110	37.6	-0	44.9	280	48.8	+4	49.3	3	30.5	-22	-13.1
18	311	28.7	125	37.3	-0	46.0	295	51.7	+4	49.3	18	32.6	-22	-13.0
19	326	31.2	140	36.9		47.2	310	54.6		49.3	33	34.7	-13.0	
20	341	33.7	155	36.6		48.4	325	57.5		49.3	48	36.7	-12.9	
21	356	36.1	170	36.2		49.5	341	00.4		49.3	63	38.8	-12.9	
22	11	38.6	185	35.9		50.7	356	03.3		49.3	78	40.9	-12.8	
23	26	41.0	200	35.5		51.8	11	06.2		49.3	93	43.0	-12.8	
24	41	43.5	215	35.2	-0	53.0	26	09.1	+4	49.3	108	45.1	-22	-12.7
Dif.	—		-3	-12			+29		0		+21		+1	

UT	SOL			○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			SD: 14'8		PHE { 4^h: 54'2 12^h: 54'3 20^h: 54'4					Edad: 16 ^d 2			Rº: 46 ^m		PMG: 00 ^h 48 ^m		Rº	
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.				Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m		
0	184	06.7	-14	49.2	348	28.3	139	+16	52.3	94	60 N	5 51	6 40	7 26	16 48	17	9 22 81		
1	199	06.7		50.0	3	01.2	139	+17	01.7	94	58	48	35	17	17 01	21	9 09 77		
2	214	06.7		50.8	17	34.1	137		11.1	92	56	46	30	10	13 23		8 59 73		
3	229	06.7		51.6	32	06.8	138		20.3	92	54	44	26	7 03	23 26		49 71		
4	244	06.7		52.3	46	39.6	136		29.5	91	52	41	22	6 57	32 28		41 68		
5	259	06.7	-14	53.1	61	12.2	136	+17	38.6	91	50	5 39	6 18	6 52	17 40	29	8 33 67		
6	274	06.7	-14	53.9	75	44.8	136	+17	47.7	89	45	5 35	6 10	6 40	17 57	33	8 17 63		
7	289	06.8		54.7	90	17.4	134	+17	56.6	89	40	30	6 02	31	18 11	36	8 04 60		
8	304	06.8		55.5	104	49.8	135	+18	05.5	89	35	26	5 56	22	23 38		7 53 58		
9	319	06.8		56.3	119	22.3	133		14.4	87	30	22	50	15	33 40		43 56		
10	334	06.8		57.1	133	54.6	133		23.1	87	20	13	39	6 02	18 51	43	26 53		
11	349	06.8	-14	57.8	148	26.9	133	+18	31.8	86	10 N	5 04	5 29	5 51	19 07	46	7 12 49		
12	4	06.8	-14	58.6	162	59.2	132	+18	40.4	85	0	4 54	5 19	5 40	19 22	48	6 58 47		
13	19	06.8	-14	59.4	177	31.4	131		48.9	84	10 S	42	5 07	29	37 51		45 44		
14	34	06.8	-15	00.2	192	03.5	131	+18	57.3	84	20	28	4 55	18	19 53	53	31 41		
15	49	06.8		01.0	206	35.6	130	+19	05.7	83	30	4 09	39	5 04	20 12	56	14 38		
16	64	06.8		01.8	221	07.6	129		14.0	82	35	3 57	29	4 56	23 57		6 05 35		
17	79	06.8	-15	02.5	235	39.5	129	+19	22.2	81	40	3 43	4 18	4 47	20 35	60	5 54 33		
18	94	06.8	-15	03.3	250	11.4	128	+19	30.3	80	45	3 25	4 05	4 37	20 50	63	5 41 30		
19	109	06.8		04.1	264	43.2	128		38.3	80	50	3 01	3 48	24	21 08	66	26 26		
20	124	06.8		04.9	279	15.0	127		46.3	78	52	2 49	39	18	17 68		19 24		
21	139	06.8		05.7	293	46.7	126	+19	54.1	78	54	36	30	11	26 70		11 22		
22	154	06.8		06.4	308	18.3	126	+20	01.9	77	56	2 19	20	4 04	37 73		5 02 20		
23	169	06.8		07.2	322	49.9	125		09.6	76	58	1 59	3 08	3 56	21 50	76	4 52 17		
24	184	06.8	-15	08.0	337	21.4		+20	17.2		60 S	1 32	2 53	3 46	22 05	79	4 40 13		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 21 ^h 09 ^m 6		Mag: -4.0 PMG: 09 ^h 38 ^m				Mag: -2.1 PMG: 22 ^h 11 ^m				Mag: -2.2 PMG: 16 ^h 43 ^m				Mag: +0.6 PMG: 17 ^h 04 ^m				
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	41	43.5	215	35.2	-0	53.0	26	09.1	+4	49.3	108	45.1	-22	12.7	103	22.6	-21	13.7	
1	56	46.0	230	34.8		54.1	41	12.0		49.3	123	47.2		12.6	118	24.9		13.6	
2	71	48.4	245	34.5		55.3	56	14.9		49.3	138	49.3		12.6	133	27.3		13.6	
3	86	50.9	260	34.1		56.4	71	17.8		49.3	153	51.3		12.5	148	29.6		13.6	
4	101	53.4	275	33.8		57.6	86	20.7		49.3	168	53.4		12.5	163	31.9		13.6	
5	116	55.8	290	33.4	-0	58.8	101	23.6	+4	49.4	183	55.5	-22	12.4	178	34.2	-21	13.5	
6	131	58.3	305	33.1	-0	59.9	116	26.5	+4	49.4	198	57.6	-22	12.4	193	36.5	-21	13.5	
7	147	00.8	320	32.7	-1	01.1	131	29.4		49.4	213	59.7		12.3	208	38.9		13.5	
8	162	03.2	335	32.4		02.2	146	32.3		49.4	229	01.7		12.3	223	41.2		13.5	
9	177	05.7	350	32.0		03.4	161	35.2		49.4	244	03.8		12.2	238	43.5		13.5	
10	192	08.1	5	31.7		04.5	176	38.1		49.4	259	05.9		12.2	253	45.8		13.4	
11	207	10.6	20	31.3	-1	05.7	191	40.9	+4	49.4	274	08.0	-22	12.1	268	48.1	-21	13.4	
12	222	13.1	35	31.0	-1	06.9	206	43.8	+4	49.4	289	10.1	-22	12.0	283	50.5	-21	13.4	
13	237	15.5	50	30.6		08.0	221	46.7		49.4	304	12.2		12.0	298	52.8		13.4	
14	252	18.0	65	30.3		09.2	236	49.6		49.5	319	14.2		11.9	313	55.1		13.3	
15	267	20.5	80	29.9		10.3	251	52.5		49.5	334	16.3		11.9	328	57.4		13.3	
16	282	22.9	95	29.6		11.5	266	55.4		49.5	349	18.4		11.8	343	59.7		13.3	
17	297	25.4	110	29.2	-1	12.6	281	58.2	+4	49.5	4	20.5	-22	11.8	359	02.1	-21	13.3	
18	312	27.9	125	28.9	-1	13.8	297	01.1	+4	49.5	19	22.6	-22	11.7	14	04.4	-21	13.2	
19	327	30.3	140	28.5		14.9	312	04.0		49.5	34	24.6		11.7	29	06.7		13.2	
20	342	32.8	155	28.2		16.1	327	06.9		49.5	49	26.7		11.6	44	09.0		13.2	
21	357	35.3	170	27.8		17.3	342	09.7		49.6	64	28.8		11.6	59	11.3		13.2	
22	12	37.7	185	27.4		18.4	357	12.6		49.6	79	30.9		11.5	74	13.6		13.1	
23	27	40.2	200	27.1		19.6	12	15.5		49.6	94	33.0		11.4	89	16.0		13.1	
24	42	42.6	215	26.7	-1	20.7	27	18.4	+4	49.6	109	35.0	-22	11.4	104	18.3	-21	13.1	
Dif.	—		-4		-12		+29		0		+21		+1		+23		0		

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 5			SD: 14'8 Edad: 17 ^d 2 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'7 PMG: 01 ^h 34 ^m Rº: 48 ^m																
	hG ☉	Dec		hG ☾	Dif.		Dec		Dif.			Civil	Náut.	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	184	06.8	-15	08.0	337	21.4	125	+20	17.2	75	60 N	15 58	16 44	17 33	17 05	26	10 43 76			
1	199	06.8		08.8	351	52.9	124		24.7	74	58	16 07	49	36	22 30		26 73			
2	214	06.8		09.5	6	24.3	123		32.1	74	56	14	54	39	36 33		12 70			
3	229	06.8		10.3	20	55.6	123		39.5	72	54	21	16 59	41	17 49	34	10 00 68			
4	244	06.8		11.1	35	26.9	122		46.7	72	52	27	17 03	43	18 00	36	9 49 66			
5	259	06.8	-15	11.9	49	58.1	122	+20	53.9	71	50	16 33	17 07	17 45	18 09	38	9 40 64			
6	274	06.8	-15	12.7	64	29.3	121	+21	01.0	69	45	16 45	17 16	17 50	18 30	40	9 20 62			
7	289	06.8		13.4	79	00.4	120		07.9	69	40	16 55	23	17 55	18 47	42	9 04 59			
8	304	06.8		14.2	93	31.4	120		14.8	68	35	17 04	30	18 00	19 01	44	8 51 57			
9	319	06.8		15.0	108	02.4	119		21.6	67	30	11	36	04	13 45		39 56			
10	334	06.8		15.7	122	33.3	118		28.3	66	20	24	47	13	34 47		19 53			
11	349	06.8	-15	16.5	137	04.1	118	+21	34.9	65	10 N	17 36	17 58	18 23	19 53	49	8 01 51			
12	4	06.8	-15	17.3	151	34.9	117	+21	41.4	64	0	17 47	18 08	18 33	20 10	51	7 45 49			
13	19	06.8		18.1	166	05.6	117		47.8	63	10 S	17 58	20	18 46	28 51		29 47			
14	34	06.8		18.8	180	36.3	116	+21	54.1	62	20	18 10	33	19 01	20 46	54	7 12 44			
15	49	06.8		19.6	195	06.9	116	+22	00.3	61	30	24	50	20	21 08	55	6 52 42			
16	64	06.8		20.4	209	37.5	115		06.4	60	35	32	18 59	32	20 57		40 41			
17	79	06.7	-15	21.2	224	08.0	114	+22	12.4	59	40	18 42	19 11	19 47	21 35	58	6 27 39			
18	94	06.7	-15	21.9	238	38.4	113	+22	18.3	58	45	18 53	19 25	20 05	21 53	59	6 11 37			
19	109	06.7		22.7	253	08.7	114		24.1	57	50	19 06	43	30	22 14	62	5 52 33			
20	124	06.7		23.5	267	39.1	112		29.8	56	52	12	19 51	42	25 63		43 32			
21	139	06.7		24.2	282	09.3	112		35.4	55	54	19	20 01	20 57	36 65		33 30			
22	154	06.7		25.0	296	39.5	111		40.9	53	56	27	12	21 14	22 50	66	22 27			
23	169	06.7		25.8	311	09.6	111		46.2	53	58	35	24	21 36	23 06	68	5 09 24			
24	184	06.7	-15	26.5	325	39.7		+22	51.5		60 S	19 45	20 39	22 05	23 24	73	4 53 21			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 21 ^h 05 ^m 7		Mag: -4.0 PMG: 09 ^h 38 ^m			Mag: -2.1 PMG: 22 ^h 07 ^m			Mag: -2.2 PMG: 16 ^h 39 ^m			Mag: +0.6 PMG: 17 ^h 00 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	42	42.6	215	26.7	-1	20.7	27	18.4	+4	49.6	109	35.0	-22	-11.4	104	18.3	-21	13.1	
1	57	45.1	230	26.4		21.9	42	21.2		49.6	124	37.1		-11.3	119	20.6		13.1	
2	72	47.6	245	26.0		23.0	57	24.1		49.6	139	39.2		-11.3	134	22.9		13.0	
3	87	50.0	260	25.7		24.2	72	27.0		49.7	154	41.3		-11.2	149	25.2		13.0	
4	102	52.5	275	25.3		25.4	87	29.8		49.7	169	43.3		-11.2	164	27.5		13.0	
5	117	55.0	290	25.0	-1	26.5	102	32.7	+4	49.7	184	45.4	-22	-11.1	179	29.9	-21	13.0	
6	132	57.4	305	24.6	-1	27.7	117	35.5	+4	49.7	199	47.5	-22	-11.1	194	32.2	-21	12.9	
7	147	59.9	320	24.3		28.8	132	38.4		49.7	214	49.6		-11.0	209	34.5		12.9	
8	163	02.4	335	23.9		30.0	147	41.3		49.8	229	51.6		-10.9	224	36.8		12.9	
9	178	04.8	350	23.6		31.2	162	44.1		49.8	244	53.7		-10.9	239	39.1		12.9	
10	193	07.3	5	23.2		32.3	177	47.0		49.8	259	55.8		-10.8	254	41.4		12.8	
11	208	09.8	20	22.8	-1	33.5	192	49.8	+4	49.8	274	57.9	-22	-10.8	269	43.8	-21	12.8	
12	223	12.2	35	22.5	-1	34.6	207	52.7	+4	49.8	289	59.9	-22	-10.7	284	46.1	-21	12.8	
13	238	14.7	50	22.1		35.8	222	55.5		49.9	305	02.0		-10.7	299	48.4		12.8	
14	253	17.1	65	21.8		36.9	237	58.4		49.9	320	04.1		-10.6	314	50.7		12.7	
15	268	19.6	80	21.4		38.1	253	01.3		49.9	335	06.2		-10.5	329	53.0		12.7	
16	283	22.1	95	21.1		39.3	268	04.1		49.9	350	08.2		-10.5	344	55.3		12.7	
17	298	24.5	110	20.7	-1	40.4	283	06.9	+4	50.0	5	10.3	-22	-10.4	359	57.6	-21	12.7	
18	313	27.0	125	20.3	-1	41.6	298	09.8	+4	50.0	20	12.4	-22	-10.4	15	00.0	-21	12.6	
19	328	29.5	140	20.0		42.7	313	12.6		50.0	35	14.5		-10.3	30	02.3		12.6	
20	343	31.9	155	19.6		43.9	328	15.5		50.0	50	16.5		-10.3	45	04.6		12.6	
21	358	34.4	170	19.3		45.0	343	18.3		50.1	65	18.6		-10.2	60	06.9		12.6	
22	13	36.9	185	18.9		46.2	358	21.2		50.1	80	20.7		-10.2	75	09.2		12.5	
23	28	39.3	200	18.6		47.4	13	24.0		50.1	95	22.8		-10.1	90	11.5		12.5	
24	43	41.8	215	18.2	-1	48.5	28	26.9	+4	50.1	110	24.8	-22	-10.0	105	13.8	-21	12.5	
Dif.	—		-4			-12	+28			0	+21			+1	+23				

UT	SOL			LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			SD: 14'9			PHE { 4^h: 54'8 12^h: 54'9 20^h: 55'1											
	PMG: 11 ^h 43 ^m 6			Edad: 18 ^d 2			Rº: 51 ^m											
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº		Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	184	06.7	-15	26.5	325	39.7	110	+22	51.5	52	60 N	5 55	6 45	7 31	17 31	42	11 59	65
1	199	06.7		27.3	340	09.7	110	+22	56.7	51	58	52	39	22	17 52	44	39	63
2	214	06.7		28.1	354	39.7	109	+23	01.8	49	56	49	34	14	18 09	45	22	62
3	229	06.7		28.8	9	09.6	109		06.7	49	54	47	29	07	23	47	11 08	60
4	244	06.7		29.6	23	39.5	108		11.6	47	52	45	25	7 01	36	47	10 55	60
5	259	06.6	-15	30.4	38	09.3	107	+23	16.3	46	50	5 42	6 21	6 55	18 47	48	10 44	59
6	274	06.6	-15	31.1	52	39.0	107	+23	20.9	45	45	5 37	6 12	6 43	19 10	49	10 22	57
7	289	06.6		31.9	67	08.7	106		25.4	44	40	32	6 05	33	29	49	10 03	57
8	304	06.6		32.7	81	38.3	106		29.8	43	35	28	5 58	24	45	50	9 48	55
9	319	06.6		33.4	96	07.9	105		34.1	42	30	23	52	16	19 58	51	35	54
10	334	06.6		34.2	110	37.4	105		38.3	41	20	14	40	6 03	20 21	52	9 12	53
11	349	06.6	-15	35.0	125	06.9	104	+23	42.4	39	10 N	5 04	5 30	5 51	20 42	51	8 52	53
12	4	06.6	-15	35.7	139	36.3	104	+23	46.3	39	0	4 54	5 19	5 40	21 01	52	8 34	52
13	19	06.5		36.5	154	05.7	103		50.2	37	10 S	41	5 07	29	19	53	8 16	50
14	34	06.5		37.2	168	35.0	103		53.9	36	20	26	4 54	17	21 40	53	7 56	50
15	49	06.5		38.0	183	04.3	102	+23	57.5	35	30	4 07	37	5 03	22 03	54	34	48
16	64	06.5		38.8	197	33.5	102	+24	01.0	33	35	3 55	27	4 54	17	54	21	47
17	79	06.5	-15	39.5	212	02.7	101	+24	04.3	33	40	3 40	4 16	4 45	22 33	55	7 06	45
18	94	06.5	-15	40.3	226	31.8	101	+24	07.6	31	45	3 21	4 02	4 34	22 52	55	6 48	44
19	109	06.5		41.0	241	00.9	100		10.7	30	50	2 57	3 44	21	23 16	56	25	43
20	124	06.4		41.8	255	29.9	100		13.7	29	52	44	35	14	28	56	15	41
21	139	06.4		42.6	269	58.9	99		16.6	28	54	30	26	07	41	56	6 03	40
22	154	06.4		43.3	284	27.8	99		19.4	26	56	2 13	15	4 00	23 56	57	5 49	38
23	169	06.4		44.1	298	56.7	99		22.0	26	58	1 51	3 02	3 51	** ** *	**	5 33	36
24	184	06.4	-15	44.8	313	25.6		+24	24.6		60 S	1 21	2 47	3 41	** ** *	**	5 14	33

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 01 ^m 8		Mag: -4.0 PMG: 09 ^h 39 ^m			Mag: -2.0 PMG: 22 ^h 02 ^m			Mag: -2.1 PMG: 16 ^h 36 ^m			Mag: +0.6 PMG: 16 ^h 56 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	43	41.8	215	18.2	-1	48.5	28	26.9	+4	50.1	110	24.8	-22	10.0	105	13.8	-21	12.5
1	58	44.3	230	17.9		49.7	43	29.7		50.2	125	26.9		10.0	120	16.2		12.5
2	73	46.7	245	17.5		50.8	58	32.5		50.2	140	29.0		09.9	135	18.5		12.4
3	88	49.2	260	17.1		52.0	73	35.4		50.2	155	31.1		09.9	150	20.8		12.4
4	103	51.6	275	16.8		53.2	88	38.2		50.3	170	33.1		09.8	165	23.1		12.4
5	118	54.1	290	16.4	-1	54.3	103	41.0	+4	50.3	185	35.2	-22	09.8	180	25.4	-21	12.4
6	133	56.6	305	16.1	-1	55.5	118	43.9	+4	50.3	200	37.3	-22	09.7	195	27.7	-21	12.3
7	148	59.0	320	15.7		56.6	133	46.7		50.3	215	39.3		09.6	210	30.0		12.3
8	164	01.5	335	15.3		57.8	148	49.5		50.4	230	41.4		09.6	225	32.3		12.3
9	179	04.0	350	15.0	-1	59.0	163	52.4		50.4	245	43.5		09.5	240	34.7		12.3
10	194	06.4	5	14.6	-2	00.1	178	55.2		50.4	260	45.5		09.5	255	37.0		12.2
11	209	08.9	20	14.3	-2	01.3	193	58.0	+4	50.5	275	47.6	-22	09.4	270	39.3	-21	12.2
12	224	11.4	35	13.9	-2	02.4	209	00.8	+4	50.5	290	49.7	-22	09.4	285	41.6	-21	12.2
13	239	13.8	50	13.6		03.6	224	03.7		50.5	305	51.8		09.3	300	43.9		12.2
14	254	16.3	65	13.2		04.7	239	06.5		50.6	320	53.8		09.2	315	46.2		12.1
15	269	18.8	80	12.8		05.9	254	09.3		50.6	335	55.9		09.2	330	48.5		12.1
16	284	21.2	95	12.5		07.1	269	12.1		50.6	350	58.0		09.1	345	50.8		12.1
17	299	23.7	110	12.1	-2	08.2	284	14.9	+4	50.7	6	00.0	-22	09.1	0	53.1	-21	12.1
18	314	26.1	125	11.8	-2	09.4	299	17.7	+4	50.7	21	02.1	-22	09.0	15	55.5	-21	12.0
19	329	28.6	140	11.4		10.5	314	20.6		50.8	36	04.2		09.0	30	57.8		12.0
20	344	31.1	155	11.0		11.7	329	23.4		50.8	51	06.2		08.9	46	00.1		12.0
21	359	33.5	170	10.7		12.9	344	26.2		50.8	66	08.3		08.8	61	02.4		12.0
22	14	36.0	185	10.3		14.0	359	29.0		50.9	81	10.4		08.8	76	04.7		11.9
23	29	38.5	200	10.0		15.2	14	31.8		50.9	96	12.4		08.7	91	07.0		11.9
24	44	40.9	215	09.6	-2	16.3	29	34.6	+4	50.9	111	14.5	-22	08.7	106	09.3	-21	11.9
Dif.	—		-4	-12			+28		0		+21		+1		+23			

UT	SOL			LUNA							Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'1			SD: 15'0			PHE { 4 ^h : 55'2 12 ^h : 55'4 20 ^h : 55'6											
	PMG: 11 ^h 43. ^m 6			Edad: 19 ^d 2														
	PMG: 03 ^h 13 ^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	m		
0	184	06.4	-15	313	25.6	98	+24	24.6	24	60 N	15 53	16 39	17 29	18 13	62	13 04	49	
1	199	06.4		327	54.4	97		27.0	23	58	16 02	45	32	36	61	12 42	49	
2	214	06.3		342	23.1	98		29.3	21	56	10	51	35	18 54	60	24	50	
3	229	06.3		356	51.9	96		31.4	21	54	17	16 55	38	19 10	59	12 08	51	
4	244	06.3		11	20.5	97		33.5	19	52	24	17 00	40	23	58	11 55	51	
5	259	06.3	-15	25	49.2	96	+24	35.4	18	50	16 30	17 04	17 43	19 35	58	11 43	51	
6	274	06.3	-15	40	17.8	95	+24	37.2	16	45	16 42	17 13	17 48	19 59	57	11 19	52	
7	289	06.2		54	46.3	96		38.8	16	40	16 53	21	53	20 18	57	11 00	52	
8	304	06.2		69	14.9	95		40.4	14	35	17 02	28	17 58	35	56	10 43	53	
9	319	06.2		83	43.4	94		41.8	13	30	10	35	18 03	20 49	55	29	53	
10	334	06.2		98	11.8	94		43.1	11	20	23	46	13	21 13	54	10 05	53	
11	349	06.2	-15	112	40.2	94	+24	44.2	11	10 N	17 36	17 57	18 23	21 33	54	9 45	53	
12	4	06.1	-15	127	08.6	94	+24	45.3	9	0	17 47	18 09	18 34	21 53	53	9 26	52	
13	19	06.1		141	37.0	93		46.2	7	10 S	17 59	21	18 46	22 12	53	9 06	53	
14	34	06.1		156	05.3	93		46.9	7	20	18 11	34	19 02	33	52	8 46	53	
15	49	06.1		170	33.6	92		47.6	5	30	26	18 51	22	22 57	51	22	53	
16	64	06.0		185	01.8	93		48.1	4	35	34	19 01	34	23 11	50	8 08	53	
17	79	06.0	-15	199	30.1	92	+24	48.5	3	40	18 44	19 14	19 50	23 28	49	7 51	53	
18	94	06.0	-15	213	58.3	91	+24	48.8	1	45	18 55	19 28	20 09	23 47	48	7 32	53	
19	109	06.0		228	26.4	92		48.9	0	50	19 09	46	34	***	***	7 08	52	
20	124	06.0	-15	242	54.6	91		48.9	1	52	16	19 55	20 47	***	***	6 56	53	
21	139	05.9	-16	257	22.7	91		48.8	3	54	23	20 05	21 03	***	***	43	52	
22	154	05.9		271	50.8	91		48.5	4	56	31	17	21	***	***	27	53	
23	169	05.9		286	18.9	90		48.1	5	58	40	30	21 44	0 14	57	6 09	52	
24	184	05.8	-16	300	46.9		+24	47.6		60 S	19 51	20 46	22 17	0 37	57	5 47	51	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 57. ^m 8		Mag: -4.0 PMG: 09 ^h 40 ^m			Mag: -2.0 PMG: 21 ^h 58 ^m			Mag: -2.1 PMG: 16 ^h 33 ^m			Mag: +0.6 PMG: 16 ^h 53 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	44	40.9	215	09.6	-2	16.3	29	34.6	+4	50.9	111	14.5	-22	-08.7	106	09.3	-21	11.9
1	59	43.4	230	09.2		17.5	44	37.4		51.0	126	16.6		-08.6	121	11.6		11.8
2	74	45.9	245	08.9		18.7	59	40.2		51.0	141	18.6		-08.6	136	13.9		11.8
3	89	48.3	260	08.5		19.8	74	43.0		51.1	156	20.7		-08.5	151	16.2		11.8
4	104	50.8	275	08.1		21.0	89	45.8		51.1	171	22.8		-08.4	166	18.6		11.8
5	119	53.2	290	07.8	-2	22.1	104	48.6	+4	51.1	186	24.8	-22	-08.4	181	20.9	-21	11.7
6	134	55.7	305	07.4	-2	23.3	119	51.4	+4	51.2	201	26.9	-22	-08.3	196	23.2	-21	11.7
7	149	58.2	320	07.1		24.5	134	54.2		51.2	216	29.0		-08.3	211	25.5		11.7
8	165	00.6	335	06.7		25.6	149	57.0		51.3	231	31.0		-08.2	226	27.8		11.7
9	180	03.1	350	06.3		26.8	164	59.8		51.3	246	33.1		-08.1	241	30.1		11.6
10	195	05.6	5	06.0		27.9	180	02.6		51.4	261	35.2		-08.1	256	32.4		11.6
11	210	08.0	20	05.6	-2	29.1	195	05.4	+4	51.4	276	37.2	-22	-08.0	271	34.7	-21	11.6
12	225	10.5	35	05.3	-2	30.3	210	08.2	+4	51.4	291	39.3	-22	-08.0	286	37.0	-21	11.6
13	240	13.0	50	04.9		31.4	225	11.0		51.5	306	41.4		-07.9	301	39.3		11.5
14	255	15.4	65	04.5		32.6	240	13.8		51.5	321	43.4		-07.9	316	41.6		11.5
15	270	17.9	80	04.2		33.7	255	16.6		51.6	336	45.5		-07.8	331	43.9		11.5
16	285	20.4	95	03.8		34.9	270	19.4		51.6	351	47.5		-07.7	346	46.3		11.5
17	300	22.8	110	03.4	-2	36.0	285	22.2	+4	51.7	6	49.6	-22	-07.7	1	48.6	-21	11.4
18	315	25.3	125	03.1	-2	37.2	300	25.0	+4	51.7	21	51.7	-22	-07.6	16	50.9	-21	11.4
19	330	27.7	140	02.7		38.4	315	27.7		51.8	36	53.7		-07.6	31	53.2		11.4
20	345	30.2	155	02.3		39.5	330	30.5		51.8	51	55.8		-07.5	46	55.5		11.3
21	0	32.7	170	02.0		40.7	345	33.3		51.9	66	57.9		-07.4	61	57.8		11.3
22	15	35.1	185	01.6		41.8	0	36.1		51.9	81	59.9		-07.4	77	00.1		11.3
23	30	37.6	200	01.2		43.0	15	38.9		52.0	97	02.0		-07.3	92	02.4		11.3
24	45	40.1	215	00.9	-2	44.2	30	41.6	+4	52.0	112	04.0	-22	-07.3	107	04.7	-21	11.2
Dif.	—		-4		-12		+28		0		+21		+1		+23		0	

UT	SOL			LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			SD: 15'2		PHE { 4^h: 55'8 12^h: 56'0 20^h: 56'2			Edad: 20 ^d 2			PMG: 04 ^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		
0	184	05.8	-16	02.9	300	46.9	90	+24	47.6	7	60 N	5 59	6 49	7 36	19 15	79	13 53	31		
1	199	05.8		03.6	315	14.9	90		46.9	8	58	56	43	27	37	75	31	35		
2	214	05.8		04.4	329	42.9	90		46.1	9	56	53	38	18	19 54	73	13 14	37		
3	229	05.8		05.1	344	10.9	90		45.2	10	54	50	33	11	20 09	70	12 59	39		
4	244	05.7		05.8	358	38.9	89		44.2	12	52	48	28	7 05	21	69	46	41		
5	259	05.7	-16	06.6	13	06.8	90	+24	43.0	13	50	5 45	6 24	6 59	20 33	67	12 34	43		
6	274	05.7	-16	07.3	27	34.8	89	+24	41.7	15	45	5 40	6 15	6 46	20 56	65	12 11	44		
7	289	05.7		08.1	42	02.7	89		40.2	16	40	34	07	35	21 15	63	11 52	46		
8	304	05.6		08.8	56	30.6	89		38.6	17	35	29	6 00	26	31	61	36	47		
9	319	05.6		09.6	70	58.5	88		36.9	18	30	25	5 53	18	21 44	60	11 22	49		
10	334	05.6		10.3	85	26.3	89		35.1	20	20	15	41	6 04	22 07	58	10 58	51		
11	349	05.5	-16	11.0	99	54.2	88	+24	33.1	21	10 N	5 05	5 30	5 52	22 27	56	10 38	52		
12	4	05.5	-16	11.8	114	22.0	89	+24	31.0	23	0	4 54	5 19	5 40	22 46	54	10 18	54		
13	19	05.5		12.5	128	49.9	88		28.7	23	10 S	41	5 06	28	23 05	51	9 59	55		
14	34	05.4		13.3	143	17.7	88		26.4	26	20	25	4 53	16	25	49	39	56		
15	49	05.4		14.0	157	45.5	88		23.8	26	30	4 05	36	5 01	23 48	47	15	57		
16	64	05.4		14.7	172	13.3	88		21.2	28	35	3 52	25	4 53	** ** *	**	9 01	58		
17	79	05.3	-16	15.5	186	41.1	88	+24	18.4	29	40	3 37	4 13	4 43	** ** *	**	8 44	60		
18	94	05.3	-16	16.2	201	08.9	88	+24	15.5	31	45	3 18	3 59	4 31	** ** *	**	8 25	61		
19	109	05.3		17.0	215	36.7	88		12.4	31	50	2 52	40	17	0 12	47	8 00	64		
20	124	05.2		17.7	230	04.5	88		09.3	34	52	39	31	11	24	46	7 49	64		
21	139	05.2		18.4	244	32.3	87		05.9	34	54	24	21	4 04	37	45	35	65		
22	154	05.2		19.2	259	00.0	88	+24	02.5	36	56	2 06	3 10	3 55	0 53	43	20	66		
23	169	05.1		19.9	273	27.8	88	+23	58.9	37	58	1 42	2 56	46	1 11	42	7 01	69		
24	184	05.1	-16	20.6	287	55.6		+23	55.2		60 S	1 09	2 40	3 36	1 34	40	6 38	72		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 20 ^h 53 ^m 9		Mag: -4.0 PMG: 09 ^h 40 ^m			Mag: -2.0 PMG: 21 ^h 53 ^m			Mag: -2.1 PMG: 16 ^h 29 ^m			Mag: +0.6 PMG: 16 ^h 49 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'						
0	45	40.1	215	00.9	-2	44.2	30	41.6	+4	52.0	112	04.0	-22	07.3	107	04.7	-21	11.2		
1	60	42.5	230	00.5		45.3	45	44.4		52.1	127	06.1		07.2	122	07.0		11.2		
2	75	45.0	245	00.2		46.5	60	47.2		52.1	142	08.2		07.2	137	09.3		11.2		
3	90	47.5	259	59.8		47.6	75	50.0		52.2	157	10.2		07.1	152	11.6		11.2		
4	105	49.9	274	59.4		48.8	90	52.7		52.2	172	12.3		07.0	167	13.9		11.1		
5	120	52.4	289	59.1	-2	50.0	105	55.5	+4	52.3	187	14.3	-22	07.0	182	16.2	-21	11.1		
6	135	54.9	304	58.7	-2	51.1	120	58.3	+4	52.3	202	16.4	-22	06.9	197	18.5	-21	11.1		
7	150	57.3	319	58.3		52.3	136	01.0		52.4	217	18.5		06.9	212	20.8		11.1		
8	165	59.8	334	58.0		53.4	151	03.8		52.4	232	20.5		06.8	227	23.1		11.0		
9	181	02.2	349	57.6		54.6	166	06.6		52.5	247	22.6		06.7	242	25.5		11.0		
10	196	04.7	4	57.2		55.8	181	09.3		52.5	262	24.6		06.7	257	27.8		11.0		
11	211	07.2	19	56.9	-2	56.9	196	12.1	+4	52.6	277	26.7	-22	06.6	272	30.1	-21	10.9		
12	226	09.6	34	56.5	-2	58.1	211	14.9	+4	52.6	292	28.8	-22	06.6	287	32.4	-21	10.9		
13	241	12.1	49	56.1	-2	59.2	226	17.6		52.7	307	30.8		06.5	302	34.7		10.9		
14	256	14.6	64	55.8	-3	00.4	241	20.4		52.7	322	32.9		06.4	317	37.0		10.9		
15	271	17.0	79	55.4		01.6	256	23.1		52.8	337	34.9		06.4	332	39.3		10.8		
16	286	19.5	94	55.0		02.7	271	25.9		52.9	352	37.0		06.3	347	41.6		10.8		
17	301	22.0	109	54.7	-3	03.9	286	28.7	+4	52.9	7	39.0	-22	06.3	2	43.9	-21	10.8		
18	316	24.4	124	54.3	-3	05.0	301	31.4	+4	53.0	22	41.1	-22	06.2	17	46.2	-21	10.8		
19	331	26.9	139	53.9		06.2	316	34.2		53.0	37	43.2		06.1	32	48.5		10.7		
20	346	29.4	154	53.5		07.4	331	36.9		53.1	52	45.2		06.1	47	50.8		10.7		
21	1	31.8	169	53.2		08.5	346	39.7		53.1	67	47.3		06.0	62	53.1		10.7		
22	16	34.3	184	52.8		09.7	1	42.4		53.2	82	49.3		06.0	77	55.4		10.6		
23	31	36.7	199	52.4		10.8	16	45.2		53.3	97	51.4		05.9	92	57.7		10.6		
24	46	39.2	214	52.1	-3	12.0	31	47.9	+4	53.3	112	53.4	-22	05.8	108	00.0	-21	10.6		
Dif.	—		-4	-12			+27	+1			+21		+1		+23					

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'1				SD: 15'3												PHE { 4 ^h : 56'4 12 ^h : 56'7 20 ^h : 56'9	
	PMG: 11 ^h 43 ^m 7				Edad: 21 ^d 2													
	PMG: 04 ^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	h m m	h m m	h m m			
0	184	05.1	-16	20.6	287	55.6	88	+23	55.2	39	60 N	15 48	16 35	17 25	20 34	90	14 24	20
1	199	05.1		21.4	302	23.4	88		51.3	39	58	15 58	41	28	20 52	85	14 06	25
2	214	05.0		22.1	316	51.2	87		47.4	42	56	16 06	47	32	21 07	81	13 51	28
3	229	05.0		22.8	331	18.9	88		43.2	42	54	14	52	34	19	79	38	30
4	244	05.0		23.6	345	46.7	88		39.0	44	52	20	16 57	37	30	77	27	32
5	259	04.9	-16	24.3	0	14.5	88	+23	34.6	45	50	16 27	17 01	17 40	21 40	75	13 17	34
6	274	04.9	-16	25.0	14	42.3	88	+23	30.1	47	45	16 40	17 11	17 46	22 01	70	12 55	38
7	289	04.9		25.8	29	10.1	88		25.4	47	40	16 51	19	51	18	67	38	41
8	304	04.8		26.5	43	37.9	88		20.7	49	35	17 00	26	17 57	32	64	23	43
9	319	04.8		27.2	58	05.7	88		15.8	51	30	08	33	18 02	22 44	62	12 11	44
10	334	04.7		28.0	72	33.5	88		10.7	52	20	23	45	12	23 05	58	11 49	48
11	349	04.7	-16	28.7	87	01.3	89	+23	05.5	53	10 N	17 35	17 57	18 22	23 23	55	11 30	50
12	4	04.7	-16	29.4	101	29.2	88	+23	00.2	54	0	17 47	18 09	18 34	23 40	52	11 12	53
13	19	04.6		30.1	115	57.0	89	+22	54.8	56	10 S	17 59	21	18 47	23 56	50	10 54	55
14	34	04.6		30.9	130	24.9	88		49.2	57	20	18 12	36	19 03	** ** *	**	35	58
15	49	04.5		31.6	144	52.7	89		43.5	58	30	27	18 53	24	** ** *	**	10 12	61
16	64	04.5		32.3	159	20.6	89		37.7	60	35	36	19 04	37	0 01	46	9 59	63
17	79	04.5	-16	33.1	173	48.5	89	+22	31.7	61	40	18 46	19 16	19 53	0 17	43	9 44	65
18	94	04.4	-16	33.8	188	16.4	89	+22	25.6	62	45	18 58	19 31	20 13	0 35	42	9 26	68
19	109	04.4		34.5	202	44.3	89		19.4	63	50	19 13	50	39	0 59	38	9 04	71
20	124	04.3		35.2	217	12.2	90		13.1	65	52	19	19 59	20 53	1 10	36	8 53	73
21	139	04.3		36.0	231	40.2	89		06.6	66	54	27	20 10	21 09	22	35	40	76
22	154	04.2		36.7	246	08.1	90	+22	00.0	67	56	35	22	28	36	33	26	78
23	169	04.2		37.4	260	36.1	90	+21	53.3	69	58	45	36	21 54	1 53	29	8 10	81
24	184	04.2	-16	38.1	275	04.1		+21	46.4		60 S	19 56	20 53	22 31	2 14	24	7 50	85
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 50 ^m 0		Mag: -4.0 PMG: 09 ^h 41 ^m			Mag: -1.9 PMG: 21 ^h 49 ^m			Mag: -2.1 PMG: 16 ^h 26 ^m			Mag: +0.6 PMG: 16 ^h 45 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	46	39.2	214	52.1	-3	12.0	31	47.9	+4	53.3	112	53.4	-22	-05.8	108	00.0	-21	10.6
1	61	41.7	229	51.7		13.2	46	50.7		53.4	127	55.5		-05.8	123	02.3		10.6
2	76	44.1	244	51.3		14.3	61	53.4		53.4	142	57.5		-05.7	138	04.6		10.5
3	91	46.6	259	51.0		15.5	76	56.1		53.5	157	59.6		-05.7	153	06.9		10.5
4	106	49.1	274	50.6		16.6	91	58.9		53.6	173	01.7		-05.6	168	09.2		10.5
5	121	51.5	289	50.2	-3	17.8	107	01.6	+4	53.6	188	03.7	-22	-05.5	183	11.5	-21	10.5
6	136	54.0	304	49.9	-3	18.9	122	04.4	+4	53.7	203	05.8	-22	-05.5	198	13.8	-21	10.4
7	151	56.5	319	49.5		20.1	137	07.1		53.8	218	07.8		-05.4	213	16.1		10.4
8	166	58.9	334	49.1		21.3	152	09.8		53.8	233	09.9		-05.4	228	18.4		10.4
9	182	01.4	349	48.7		22.4	167	12.6		53.9	248	11.9		-05.3	243	20.7		10.3
10	197	03.8	4	48.4		23.6	182	15.3		53.9	263	14.0		-05.2	258	23.0		10.3
11	212	06.3	19	48.0	-3	24.7	197	18.0	+4	54.0	278	16.0	-22	-05.2	273	25.3	-21	10.3
12	227	08.8	34	47.6	-3	25.9	212	20.8	+4	54.1	293	18.1	-22	-05.1	288	27.6	-21	10.3
13	242	11.2	49	47.3		27.1	227	23.5		54.1	308	20.1		-05.1	303	29.9		10.2
14	257	13.7	64	46.9		28.2	242	26.2		54.2	323	22.2		-05.0	318	32.2		10.2
15	272	16.2	79	46.5		29.4	257	28.9		54.3	338	24.2		-04.9	333	34.5		10.2
16	287	18.6	94	46.1		30.5	272	31.7		54.3	353	26.3		-04.9	348	36.8		10.1
17	302	21.1	109	45.8	-3	31.7	287	34.4	+4	54.4	8	28.3	-22	-04.8	3	39.1	-21	10.1
18	317	23.6	124	45.4	-3	32.9	302	37.1	+4	54.5	23	30.4	-22	-04.7	18	41.4	-21	10.1
19	332	26.0	139	45.0		34.0	317	39.8		54.6	38	32.5		-04.7	33	43.7		10.1
20	347	28.5	154	44.6		35.2	332	42.6		54.6	53	34.5		-04.6	48	46.0		10.0
21	2	31.0	169	44.3		36.3	347	45.3		54.7	68	36.6		-04.6	63	48.3		10.0
22	17	33.4	184	43.9		37.5	2	48.0		54.8	83	38.6		-04.5	78	50.6		10.0
23	32	35.9	199	43.5		38.7	17	50.7		54.8	98	40.7		-04.4	93	52.9		10.0
24	47	38.3	214	43.2	-3	39.8	32	53.4	+4	54.9	113	42.7	-22	-04.4	108	55.2	-21	09.9
Dif.	—		-4		-12		+27		+1		+21		+1		+23			

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1				SD: 15'5		PHE {		4 ^h : 57'2									
	PMG: 11 ^h 43. ^m 8				Edad: 22. ^d 2				12 ^h : 57'5									
									20 ^h : 57'7									
	PMG: 05 ^h 52. ^m				R ^o : 53. ^m													
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	R ^o	Hora	R ^o		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	184	04.2	-16	38.1	275	04.1	90	+21	46.4	70	60 N	6 03	6 54	7 41	22 04	94	14 44	14
1	199	04.1		38.9	289	32.1	90		39.4	71	58	6 00	48	31	17	90	31	17
2	214	04.1		39.6	304	00.1	91		32.3	72	56	5 57	42	23	28	87	19	20
3	229	04.0		40.3	318	28.2	90		25.1	74	54	54	36	15	38	84	14 08	24
4	244	04.0		41.0	332	56.2	91		17.7	75	52	51	32	08	47	81	13 59	26
5	259	03.9	-16	41.7	347	24.3	91	+21	10.2	76	50	5 48	6 27	7 02	22 55	78	13 51	28
6	274	03.9	-16	42.5	1	52.4	91	+21	02.6	77	45	5 42	6 17	6 49	23 11	74	13 33	32
7	289	03.8		43.2	16	20.5	91	+20	54.9	79	40	36	09	37	25	70	19	35
8	304	03.8		43.9	30	48.6	92		47.0	80	35	31	6 01	28	36	67	13 06	39
9	319	03.7		44.6	45	16.8	91		39.0	81	30	26	5 55	20	23 46	64	12 55	41
10	334	03.7		45.3	59	44.9	92		30.9	82	20	16	42	6 05	** ** *	**	37	45
11	349	03.6	-16	46.1	74	13.1	92	+20	22.7	83	10 N	5 05	5 30	5 52	** ** *	**	12 20	49
12	4	03.6	-16	46.8	88	41.3	93	+20	14.4	85	0	4 54	5 19	5 40	** ** *	**	12 05	52
13	19	03.5		47.5	103	09.6	92	+20	05.9	86	10 S	40	5 06	28	** ** *	**	11 49	56
14	34	03.5		48.2	117	37.8	93	+19	57.3	87	20	24	4 52	15	0 14	47	33	59
15	49	03.4		48.9	132	06.1	93		48.6	88	30	4 03	34	5 00	35	43	13	64
16	64	03.4		49.6	146	34.4	93		39.8	90	35	3 50	23	4 51	0 47	40	11 02	66
17	79	03.3	-16	50.4	161	02.7	94	+19	30.8	91	40	3 34	4 11	4 41	1 00	39	10 49	69
18	94	03.3	-16	51.1	175	31.1	93	+19	21.7	91	45	3 14	3 56	4 29	1 17	35	10 34	72
19	109	03.2		51.8	189	59.4	94		12.6	93	50	2 48	37	14	37	30	15	77
20	124	03.2		52.5	204	27.8	94	+19	03.3	94	52	34	27	07	46	29	10 06	79
21	139	03.1		53.2	218	56.2	95	+18	53.9	96	54	2 18	17	4 00	1 57	26	9 56	81
22	154	03.1		53.9	233	24.7	94		44.3	96	56	1 59	3 05	3 51	2 09	23	44	85
23	169	03.0		54.6	247	53.1	95		34.7	98	58	1 33	2 51	42	2 22	21	9 31	88
24	184	03.0	-16	55.3	262	21.6		+18	24.9		60 S	0 55	2 34	3 30	2 38	16	9 15	93
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 46. ^m 0		Mag: -4.0 PMG: 09 ^h 41. ^m			Mag: -1.9 PMG: 21 ^h 45. ^m			Mag: -2.1 PMG: 16 ^h 23. ^m			Mag: +0.6 PMG: 16 ^h 42. ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	47	38.3	214	43.2	-3	39.8	32	53.4	+4	54.9	113	42.7	-22	04.4	108	55.2	-21	09.9
1	62	40.8	229	42.8		41.0	47	56.1		55.0	128	44.8		04.3	123	57.5		09.9
2	77	43.3	244	42.4		42.1	62	58.9		55.0	143	46.8		04.3	138	59.8		09.9
3	92	45.7	259	42.0		43.3	78	01.6		55.1	158	48.9		04.2	154	02.1		09.8
4	107	48.2	274	41.7		44.4	93	04.3		55.2	173	50.9		04.1	169	04.4		09.8
5	122	50.7	289	41.3	-3	45.6	108	07.0	+4	55.3	188	53.0	-22	04.1	184	06.7	-21	09.8
6	137	53.1	304	40.9	-3	46.8	123	09.7	+4	55.3	203	55.0	-22	04.0	199	09.0	-21	09.8
7	152	55.6	319	40.5		47.9	138	12.4		55.4	218	57.1		04.0	214	11.3		09.7
8	167	58.1	334	40.2		49.1	153	15.1		55.5	233	59.1		03.9	229	13.6		09.7
9	183	00.5	349	39.8		50.2	168	17.8		55.6	249	01.1		03.8	244	15.9		09.7
10	198	03.0	4	39.4		51.4	183	20.5		55.6	264	03.2		03.8	259	18.2		09.6
11	213	05.5	19	39.0	-3	52.6	198	23.2	+4	55.7	279	05.2	-22	03.7	274	20.5	-21	09.6
12	228	07.9	34	38.7	-3	53.7	213	25.9	+4	55.8	294	07.3	-22	03.6	289	22.8	-21	09.6
13	243	10.4	49	38.3		54.9	228	28.6		55.9	309	09.3		03.6	304	25.1		09.6
14	258	12.8	64	37.9		56.0	243	31.3		55.9	324	11.4		03.5	319	27.4		09.5
15	273	15.3	79	37.5		57.2	258	34.0		56.0	339	13.4		03.5	334	29.7		09.5
16	288	17.8	94	37.1		58.3	273	36.7		56.1	354	15.5		03.4	349	32.0		09.5
17	303	20.2	109	36.8	-3	59.5	288	39.4	+4	56.2	9	17.5	-22	03.3	4	34.3	-21	09.4
18	318	22.7	124	36.4	-4	00.7	303	42.1	+4	56.3	24	19.6	-22	03.3	19	36.6	-21	09.4
19	333	25.2	139	36.0		01.8	318	44.8		56.3	39	21.6		03.2	34	38.9		09.4
20	348	27.6	154	35.6		03.0	333	47.4		56.4	54	23.7		03.1	49	41.2		09.4
21	3	30.1	169	35.3		04.1	348	50.1		56.5	69	25.7		03.1	64	43.5		09.3
22	18	32.6	184	34.9		05.3	3	52.8		56.6	84	27.8		03.0	79	45.7		09.3
23	33	35.0	199	34.5		06.4	18	55.5		56.7	99	29.8		03.0	94	48.0		09.3
24	48	37.5	214	34.1	-4	07.6	33	58.2	+4	56.7	114	31.8	-22	02.9	109	50.3	-21	09.2
Dif.	—		-4		-12		+27		+1		+20		+1		+23			

UT	SOL			LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'1			SD: 15'8 Edad: 23 ^d 2																
	PMG: 11 ^h 43 ^m 8			PMG: 06 ^h 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	03.0	-16	55.3	262	21.6	95	+18	24.9	98	60 N	15 43	16 31	17 21	23 38	97	14 58	9		
1	199	02.9		56.1	276	50.1	95		15.1	100	58	15 53	37	25	47	93	48	13		
2	214	02.9		56.8	291	18.6	95	+18	05.1	101	56	16 02	43	28	23	55	89	39	17	
3	229	02.8		57.5	305	47.1	96	+17	55.0	102	54	10	49	31	**	**	**	32	19	
4	244	02.8		58.2	320	15.7	96		44.8	103	52	17	54	34	**	**	**	25	21	
5	259	02.7	-16	58.9	334	44.3	96	+17	34.5	104	50	16 24	16 58	17 37	**	**	**	14	19	24
6	274	02.7	-16	59.6	349	12.9	96	+17	24.1	106	45	16 37	17 09	17 44	**	**	**	14	05	29
7	289	02.6	-17	00.3	3	41.5	97		13.5	106	40	49	17	50	**	**	**	13	54	33
8	304	02.5		01.0	18	10.2	96	+17	02.9	108	35	16 58	25	17 55	**	**	**	45	35	
9	319	02.5		01.7	32	38.8	97	+16	52.1	108	30	17 07	32	18 01	**	**	**	36	39	
10	334	02.4		02.4	47	07.5	98		41.3	110	20	22	45	11	0	03	60	22	43	
11	349	02.4	-17	03.1	61	36.3	97	+16	30.3	110	10 N	17 35	17 57	18 22	0	18	56	13	09	48
12	4	02.3	-17	03.8	76	05.0	98	+16	19.3	112	0	17 47	18 09	18 34	0	32	52	12	57	51
13	19	02.3		04.6	90	33.8	97	+16	08.1	113	10 S	18 00	22	18 48	0	46	48	45	55	
14	34	02.2		05.3	105	02.5	98	+15	56.8	113	20	13	37	19 04	1	01	44	32	59	
15	49	02.1		06.0	119	31.3	99		45.5	115	30	29	18 55	26	18	39	17	64		
16	64	02.1		06.7	134	00.2	98		34.0	116	35	38	19 06	39	27	37	12	08	67	
17	79	02.0	-17	07.4	148	29.0	99	+15	22.4	116	40	18 49	19 19	19 55	1	39	34	11	58	71
18	94	02.0	-17	08.1	162	57.9	98	+15	10.8	118	45	19 01	19 34	20 16	1	52	30	11	46	75
19	109	01.9		08.8	177	26.7	99	+14	59.0	119	50	16	19 54	44	2	07	26	32	79	
20	124	01.8		09.5	191	55.6	99		47.1	119	52	23	20 04	20 58	15	23	25	82		
21	139	01.8		10.2	206	24.5	100		35.2	121	54	31	15	21 15	23	21	17	85		
22	154	01.7		10.9	220	53.5	99		23.1	121	56	40	27	21 36	32	18	11	09	88	
23	169	01.7		11.6	235	22.4	100	+14	11.0	123	58	19 50	20 42	22 03	43	14	10	59	92	
24	184	01.6	-17	12.3	249	51.4		+13	58.7		60 S	20 02	21 00	22 48	2	54	11	10	48	96
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG		Mag: -4.0				Mag: -1.9				Mag: -2.1				Mag: +0.6					
	20 ^h 42 ^m 1		PMG: 09 ^h 42 ^m				PMG: 21 ^h 40 ^m				PMG: 16 ^h 20 ^m				PMG: 16 ^h 38 ^m					
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	48	37.5	214	34.1	-4	07.6	33	58.2	+4	56.7	114	31.8	-22	-02.9	109	50.3	-21	09.2		
1	63	40.0	229	33.7		08.8	49	00.9		56.8	129	33.9		-02.8	124	52.6		09.2		
2	78	42.4	244	33.4		09.9	64	03.5		56.9	144	35.9		-02.8	139	54.9		09.2		
3	93	44.9	259	33.0		11.1	79	06.2		57.0	159	38.0		-02.7	154	57.2		09.2		
4	108	47.3	274	32.6		12.2	94	08.9		57.1	174	40.0		-02.6	169	59.5		09.1		
5	123	49.8	289	32.2	-4	13.4	109	11.6	+4	57.2	189	42.1	-22	-02.6	185	01.8	-21	09.1		
6	138	52.3	304	31.8	-4	14.5	124	14.3	+4	57.2	204	44.1	-22	-02.5	200	04.1	-21	09.1		
7	153	54.7	319	31.5		15.7	139	16.9		57.3	219	46.2		-02.5	215	06.4		09.0		
8	168	57.2	334	31.1		16.9	154	19.6		57.4	234	48.2		-02.4	230	08.7		09.0		
9	183	59.7	349	30.7		18.0	169	22.3		57.5	249	50.2		-02.3	245	11.0		09.0		
10	199	02.1	4	30.3		19.2	184	24.9		57.6	264	52.3		-02.3	260	13.3		08.9		
11	214	04.6	19	29.9	-4	20.3	199	27.6	+4	57.7	279	54.3	-22	-02.2	275	15.6	-21	08.9		
12	229	07.1	34	29.6	-4	21.5	214	30.3	+4	57.8	294	56.4	-22	-02.1	290	17.9	-21	08.9		
13	244	09.5	49	29.2		22.6	229	32.9		57.8	309	58.4		-02.1	305	20.2		08.9		
14	259	12.0	64	28.8		23.8	244	35.6		57.9	325	00.5		-02.0	320	22.5		08.8		
15	274	14.4	79	28.4		25.0	259	38.3		58.0	340	02.5		-01.9	335	24.7		08.8		
16	289	16.9	94	28.0		26.1	274	40.9		58.1	355	04.5		-01.9	350	27.0		08.8		
17	304	19.4	109	27.6	-4	27.3	289	43.6	+4	58.2	10	06.6	-22	-01.8	5	29.3	-21	08.7		
18	319	21.8	124	27.3	-4	28.4	304	46.2	+4	58.3	25	08.6	-22	-01.8	20	31.6	-21	08.7		
19	334	24.3	139	26.9		29.6	319	48.9		58.4	40	10.7		-01.7	35	33.9		08.7		
20	349	26.8	154	26.5		30.7	334	51.6		58.5	55	12.7		-01.6	50	36.2		08.7		
21	4	29.2	169	26.1		31.9	349	54.2		58.6	70	14.7		-01.6	65	38.5		08.6		
22	19	31.7	184	25.7		33.0	4	56.9		58.7	85	16.8		-01.5	80	40.8		08.6		
23	34	34.2	199	25.3		34.2	19	59.5		58.7	100	18.8		-01.4	95	43.1		08.6		
24	49	36.6	214	25.0	-4	35.4	35	02.2	+4	58.8	115	20.9	-22	-01.4	110	45.4	-21	08.5		
Dif.	—		-4		-12		+27		+1		+20		+1		+23					
</																				

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 43 ^m 9				SD: 16'0 Edad: 24 ^d 2 PMG: 07 ^h 36 ^m PHE { 4 ^h : 58'9 12 ^h : 59'2 20 ^h : 59'5 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	184	01.6	-17	12.3	249	51.4	100	+13 58.7	123	6 08	6 59	7 46	** ** *	**	15 07	7
1	199	01.5		13.0	264	20.4	100		124	04	52	36	** ** *	**	15 01	11
2	214	01.5		13.7	278	49.4	100		125	6 00	46	27	** ** *	**	14 56	14
3	229	01.4		14.4	293	18.4	100		126	5 57	40	19	0 02	86	51	16
4	244	01.3		15.1	307	47.4	101	+13 08.9	127	54	35	12	08	83	46	20
5	259	01.3	-17	15.8	322	16.5	100	+12 56.2	128	5 51	6 30	7 05	0 13	81	14 43	21
6	274	01.2	-17	16.5	336	45.5	101	+12 43.4	129	5 45	6 20	6 51	0 25	76	14 34	26
7	289	01.1		17.2	351	14.6	101		129	39	11	40	35	72	27	30
8	304	01.1		17.9	5	43.7	101		130	33	6 03	30	43	68	20	34
9	319	01.0		18.6	20	12.8	101	+12 04.6	132	27	5 56	21	0 50	66	15	36
10	334	01.0		19.2	34	41.9	101	+11 51.4	132	17	43	6 06	1 03	60	14 05	42
11	349	00.9	-17	19.9	49	11.0	102	+11 38.2	132	5 06	5 31	5 53	1 14	55	13 57	46
12	4	00.8	-17	20.6	63	40.2	101	+11 25.0	134	4 54	5 19	5 40	1 24	51	13 48	51
13	19	00.8		21.3	78	09.3	102	+11 11.6	134	40	5 06	28	34	47	40	56
14	34	00.7		22.0	92	38.5	101	+10 58.2	136	23	4 51	5 14	45	43	31	61
15	49	00.6		22.7	107	07.6	102		135	4 02	33	4 58	1 57	38	21	66
16	64	00.5		23.4	121	36.8	102		137	3 48	22	49	2 04	35	15	69
17	79	00.5	-17	24.1	136	06.0	102	+10 17.4	138	3 32	4 09	4 39	2 13	31	13 09	72
18	94	00.4	-17	24.8	150	35.2	102	+10 03.6	138	3 11	3 53	4 26	2 22	27	13 01	77
19	109	00.3		25.5	165	04.4	102	+9 49.8	138	2 43	33	11	33	22	12 51	82
20	124	00.3		26.2	179	33.6	102		140	29	23	4 04	38	20	47	84
21	139	00.2		26.9	194	02.8	102		140	2 12	13	3 56	44	18	42	87
22	154	00.1		27.5	208	32.0	102	+9 08.0	141	1 51	3 00	47	50	15	37	90
23	169	00.1		28.2	223	01.2	102	+8 53.9	142	1 24	2 45	37	2 57	12	12 31	93
24	184	00.0	-17	28.9	237	30.4		+8 39.7		0 38	2 27	3 25	3 05	8	12 24	97

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 38 ^m 2		Mag: -3.9 PMG: 09 ^h 43 ^m		Mag: -1.8 PMG: 21 ^h 36 ^m		Mag: -2.1 PMG: 16 ^h 16 ^m		Mag: +0.6 PMG: 16 ^h 34 ^m	
	hG ♈	dec.	hG ♀	dec.	hG ♂	dec.	hG ♃	dec.	hG ♄	dec.
h	°	'	°	'	°	'	°	'	°	'
0	49	36.6	214	25.0	35	02.2	115	20.9	110	45.4
1	64	39.1	229	24.6	50	04.8	130	22.9	125	47.7
2	79	41.6	244	24.2	65	07.5	145	24.9	140	50.0
3	94	44.0	259	23.8	80	10.1	160	27.0	155	52.2
4	109	46.5	274	23.4	95	12.8	175	29.0	170	54.5
5	124	48.9	289	23.0	110	15.4	190	31.1	185	56.8
6	139	51.4	304	22.7	125	18.1	205	33.1	200	59.1
7	154	53.9	319	22.3	140	20.7	220	35.1	216	01.4
8	169	56.3	334	21.9	155	23.3	235	37.2	231	03.7
9	184	58.8	349	21.5	170	26.0	250	39.2	246	06.0
10	200	01.3	4	21.1	185	28.6	265	41.2	261	08.3
11	215	03.7	19	20.7	200	31.2	280	43.3	276	10.6
12	230	06.2	34	20.3	215	33.9	295	45.3	291	12.9
13	245	08.7	49	19.9	230	36.5	310	47.4	306	15.1
14	260	11.1	64	19.6	245	39.1	325	49.4	321	17.4
15	275	13.6	79	19.2	260	41.8	340	51.4	336	19.7
16	290	16.1	94	18.8	275	44.4	355	53.5	351	22.0
17	305	18.5	109	18.4	290	47.0	10	55.5	6	24.3
18	320	21.0	124	18.0	305	49.7	25	57.5	21	26.6
19	335	23.4	139	17.6	320	52.3	40	59.6	36	28.9
20	350	25.9	154	17.2	335	54.9	56	01.6	51	31.2
21	5	28.4	169	16.8	350	57.5	71	03.6	66	33.5
22	20	30.8	184	16.4	6	00.2	86	05.7	81	35.7
23	35	33.3	199	16.1	21	02.8	101	07.7	96	38.0
24	50	35.8	214	15.7	36	05.4	116	09.7	111	40.3
Dif.	—		-4	-12	+26	+1	+20	+1	+23	0

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2			PHE { 4 ^h : 59'7 12 ^h : 60'0 20 ^h : 60'2						Edad: 25'2		Rº: 52 ^m					
	PMG: 11 ^h 44 ^m 1			PMG: 08 ^h 27 ^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 00.0	-17 28.9		237 30.4	102	+8 39.7	142	60 N	15 39	16 26	17 18	1 15 98		15 14 7			
1	198 59.9	29.6		251 59.6	102	25.5	143	58	49	34	22	20 94		12 10			
2	213 59.8	30.3		266 28.8	102	+8 11.2	143	56	15 58	40	25	24 91		10 13			
3	228 59.8	31.0		280 58.0	103	+7 56.9	144	54	16 07	46	29	28 88		07 16			
4	243 59.7	31.7		295 27.3	102	42.5	145	52	14	51	32	31 85		06 18			
5	258 59.6	-17 32.3		309 56.5	102	+7 28.0	145	50	16 21	16 56	17 35	1 34 83		15 04 20			
6	273 59.6	-17 33.0		324 25.7	102	+7 13.5	146	45	16 35	17 06	17 42	1 41 78		15 00 25			
7	288 59.5	33.7		338 54.9	102	+6 58.9	147	40	47	16	48	47 73		14 57 29			
8	303 59.4	34.4		353 24.1	102	44.2	147	35	16 57	24	17 54	51 70		54 33			
9	318 59.3	35.1		7 53.3	102	29.5	147	30	17 06	31	18 00	1 56 66		51 37			
10	333 59.3	35.8		22 22.5	102	14.8	148	20	21	44	11	2 03 61		47 42			
11	348 59.2	-17 36.4		36 51.7	101	+6 00.0	149	10 N	17 35	17 57	18 22	2 09 56		14 43 47			
12	3 59.1	-17 37.1		51 20.8	102	+5 45.1	149	0	17 48	18 09	18 35	2 15 51		14 39 52			
13	18 59.0	37.8		65 50.0	102	30.2	149	10 S	18 01	23	18 49	21 47		36 56			
14	33 59.0	38.5		80 19.2	101	15.3	150	20	15	38	19 06	28 41		32 61			
15	48 58.9	39.2		94 48.3	101	+5 00.3	151	30	31	18 57	28	35 36		27 67			
16	63 58.8	39.8		109 17.4	102	+4 45.2	150	35	40	19 08	41	39 33		24 71			
17	78 58.7	-17 40.5		123 46.6	101	+4 30.2	152	40	18 51	19 21	19 58	2 44 29		14 21 74			
18	93 58.6	-17 41.2		138 15.7	101	+4 15.0	151	45	19 04	19 37	20 20	2 49 26		14 18 78			
19	108 58.6	41.9		152 44.8	101	+3 59.9	152	50	19	19 58	20 48	55 21		13 84			
20	123 58.5	42.6		167 13.9	100	44.7	153	52	27	20 08	21 03	2 58 19		11 86			
21	138 58.4	43.2		181 42.9	101	29.4	152	54	35	19	21	3 02 16		09 89			
22	153 58.3	43.9		196 12.0	100	+3 14.2	154	56	44	32	21 43	05 13		07 92			
23	168 58.2	44.6		210 41.0	100	+2 58.8	153	58	19 55	20 48	22 14	09 10		04 95			
24	183 58.2	-17 45.3		225 10.0		+2 43.5		60 S	20 07	21 07	23 12	3 13 8		14 01 99			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG		Mag: -3.9			Mag: -1.8			Mag: -2.1			Mag: +0.6					
	20 ^h 34 ^m 2		PMG: 09 ^h 43 ^m			PMG: 21 ^h 32 ^m			PMG: 16 ^h 13 ^m			PMG: 16 ^h 31 ^m					
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.				
h	° ' "		° ' "	° ' "		° ' "	° ' "		° ' "	° ' "		° ' "	° ' "				
0	50 35.8		214 15.7	-5 03.1		36 05.4	+5 01.2		116 09.7	-21 -59.8		111 40.3	-21 07.8				
1	65 38.2		229 15.3	04.2		51 08.0	01.3		131 11.8	-59.8		126 42.6	07.8				
2	80 40.7		244 14.9	05.4		66 10.6	01.4		146 13.8	-59.7		141 44.9	07.8				
3	95 43.2		259 14.5	06.5		81 13.2	01.5		161 15.8	-59.6		156 47.2	07.7				
4	110 45.6		274 14.1	07.7		96 15.9	01.6		176 17.9	-59.6		171 49.5	07.7				
5	125 48.1		289 13.7	-5 08.8		111 18.5	+5 01.7		191 19.9	-21 -59.5		186 51.8	-21 07.7				
6	140 50.5		304 13.3	-5 10.0		126 21.1	+5 01.8		206 21.9	-21 -59.4		201 54.0	-21 07.6				
7	155 53.0		319 12.9	11.1		141 23.7	01.9		221 24.0	-59.4		216 56.3	07.6				
8	170 55.5		334 12.5	12.3		156 26.3	02.0		236 26.0	-59.3		231 58.6	07.6				
9	185 57.9		349 12.2	13.4		171 28.9	02.2		251 28.0	-59.2		247 00.9	07.5				
10	201 00.4		4 11.8	14.6		186 31.5	02.3		266 30.1	-59.2		262 03.2	07.5				
11	216 02.9		19 11.4	-5 15.7		201 34.1	+5 02.4		281 32.1	-21 -59.1		277 05.5	-21 07.5				
12	231 05.3		34 11.0	-5 16.9		216 36.7	+5 02.5		296 34.1	-21 -59.0		292 07.8	-21 07.5				
13	246 07.8		49 10.6	18.0		231 39.3	02.6		311 36.2	-59.0		307 10.1	07.4				
14	261 10.3		64 10.2	19.2		246 41.9	02.7		326 38.2	-58.9		322 12.3	07.4				
15	276 12.7		79 09.8	20.3		261 44.5	02.8		341 40.2	-58.8		337 14.6	07.4				
16	291 15.2		94 09.4	21.5		276 47.1	02.9		356 42.3	-58.8		352 16.9	07.3				
17	306 17.7		109 09.0	-5 22.6		291 49.7	+5 03.0		11 44.3	-21 -58.7		7 19.2	-21 07.3				
18	321 20.1		124 08.6	-5 23.8		306 52.3	+5 03.1		26 46.3	-21 -58.6		22 21.5	-21 07.3				
19	336 22.6		139 08.2	24.9		321 54.9	03.3		41 48.4	-58.6		37 23.8	07.2				
20	351 25.0		154 07.8	26.1		336 57.5	03.4		56 50.4	-58.5		52 26.0	07.2				
21	6 27.5		169 07.4	27.2		352 00.1	03.5		71 52.4	-58.4		67 28.3	07.2				
22	21 30.0		184 07.0	28.4		7 02.7	03.6		86 54.4	-58.4		82 30.6	07.1				
23	36 32.4		199 06.6	29.5		22 05.3	03.7		101 56.5	-58.3		97 32.9	07.1				
24	51 34.9		214 06.2	-5 30.7		37 07.8	+5 03.8		116 58.5	-21 -58.2		112 35.2	-21 07.1				
Dif.	—		-4	-12		+26	+1		+20	+1		+23	0				

UT	SOL			 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2			SD: 16'4 Edad: 26 ^d 2					PHE { 4 ^h : 60'5 12 ^h : 60'7 20 ^h : 60'8									
	PMG: 11 ^h 44 ^m 2			PMG: 09 ^h 19 ^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	183	58.2	-17	45.3	225	10.0	100	+2	43.5	154	60 N	6 12	7 03	7 51	2 53 100	15 21 7		
1	198	58.1		45.9	239	39.0	100		28.1	154	58	08	6 56	41	54 96	22 11		
2	213	58.0		46.6	254	08.0	100	+2	12.7	154	56	04	49	31	55 93	23 13		
3	228	57.9		47.3	268	37.0	99	+1	57.3	155	54	6 00	43	23	56 90	23 17		
4	243	57.8		47.9	283	05.9	99		41.8	155	52	5 57	38	15	56 88	24 19		
5	258	57.8	-17	48.6	297	34.8	99	+1	26.3	155	50	5 54	6 33	7 08	2 57 85	15 24 22		
6	273	57.7	-17	49.3	312	03.7	98	+1	10.8	155	45	5 47	6 22	6 54	2 59 79	15 25 27		
7	288	57.6		50.0	326	32.5	99	+0	55.3	156	40	41	13	42	3 00 75	26 31		
8	303	57.5		50.6	341	01.4	98		39.7	155	35	35	6 05	32	01 71	27 34		
9	318	57.4		51.3	355	30.2	97		24.2	156	30	29	5 58	23	02 68	28 37		
10	333	57.3		52.0	9	58.9	98	+0	08.6	156	20	18	44	6 07	04 62	29 43		
11	348	57.3	-17	52.6	24	27.7	97	-0	07.0	156	10 N	5 06	5 32	5 54	3 05 57	15 30 48		
12	3	57.2	-17	53.3	38	56.4	97	-0	22.6	156	0	4 54	5 19	5 41	3 06 53	15 31 53		
13	18	57.1		54.0	53	25.1	97		38.2	157	10 S	39	5 05	28	08 47	32 58		
14	33	57.0		54.6	67	53.8	96	-0	53.9	156	20	22	4 50	5 14	09 43	33 63		
15	48	56.9		55.3	82	22.4	96	-1	09.5	157	30	4 00	31	4 57	11 37	34 69		
16	63	56.8		56.0	96	51.0	95		25.2	156	35	3 46	20	48	12 34	35 72		
17	78	56.7	-17	56.6	111	19.5	95	-1	40.8	157	40	3 29	4 07	4 37	3 13 30	15 35 76		
18	93	56.7	-17	57.3	125	48.0	95	-1	56.5	156	45	3 08	3 50	4 24	3 15 25	15 36 81		
19	108	56.6		58.0	140	16.5	94	-2	12.1	157	50	2 39	30	08	16 21	37 86		
20	123	56.5		58.6	154	44.9	94		27.8	156	52	24	20	4 01	17 18	37 89		
21	138	56.4	-17	59.3	169	13.3	94		43.4	157	54	2 07	3 08	3 53	18 16	38 91		
22	153	56.3	-18	00.0	183	41.7	93	-2	59.1	156	56	1 44	2 55	43	18 14	39 94		
23	168	56.2		00.6	198	10.0	93	-3	14.7	157	58	1 13	40	33	3 19 11	15 39 98		
24	183	56.1	-18	01.3	212	38.3		-3	30.4		60 S	0 14	2 21	3 21	3 21 7	15 40 101		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 30 ^m 3		Mag: -3.9 PMG: 09 ^h 44 ^m			Mag: -1.8 PMG: 21 ^h 28 ^m			Mag: -2.1 PMG: 16 ^h 10 ^m			Mag: +0.6 PMG: 16 ^h 27 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'			
0	51	34.9	214	06.2	-5	30.7	37	07.8	+5	03.8	116	58.5	-21	58.2	112	35.2	-21	07.1
1	66	37.4	229	05.8		31.8	52	10.4		03.9	132	00.5		58.2	127	37.5		07.1
2	81	39.8	244	05.4		33.0	67	13.0		04.0	147	02.6		58.1	142	39.8		07.0
3	96	42.3	259	05.1		34.1	82	15.6		04.2	162	04.6		58.0	157	42.0		07.0
4	111	44.8	274	04.7		35.3	97	18.2		04.3	177	06.6		58.0	172	44.3		07.0
5	126	47.2	289	04.3	-5	36.4	112	20.8	+5	04.4	192	08.6	-21	57.9	187	46.6	-21	06.9
6	141	49.7	304	03.9	-5	37.6	127	23.3	+5	04.5	207	10.7	-21	57.8	202	48.9	-21	06.9
7	156	52.1	319	03.5		38.7	142	25.9		04.6	222	12.7		57.8	217	51.2		06.9
8	171	54.6	334	03.1		39.9	157	28.5		04.7	237	14.7		57.7	232	53.5		06.8
9	186	57.1	349	02.7		41.0	172	31.1		04.9	252	16.8		57.6	247	55.7		06.8
10	201	59.5	4	02.3		42.2	187	33.6		05.0	267	18.8		57.6	262	58.0		06.8
11	217	02.0	19	01.9	-5	43.3	202	36.2	+5	05.1	282	20.8	-21	57.5	278	00.3	-21	06.7
12	232	04.5	34	01.5	-5	44.5	217	38.8	+5	05.2	297	22.8	-21	57.4	293	02.6	-21	06.7
13	247	06.9	49	01.1		45.6	232	41.4		05.3	312	24.9		57.4	308	04.9		06.7
14	262	09.4	64	00.7		46.8	247	43.9		05.5	327	26.9		57.3	323	07.2		06.6
15	277	11.9	79	00.3		47.9	262	46.5		05.6	342	28.9		57.2	338	09.4		06.6
16	292	14.3	93	59.9		49.1	277	49.1		05.7	357	30.9		57.2	353	11.7		06.6
17	307	16.8	108	59.5	-5	50.2	292	51.6	+5	05.8	12	33.0	-21	57.1	8	14.0	-21	06.5
18	322	19.3	123	59.1	-5	51.4	307	54.2	+5	05.9	27	35.0	-21	57.0	23	16.3	-21	06.5
19	337	21.7	138	58.7		52.5	322	56.7		06.1	42	37.0		57.0	38	18.6		06.5
20	352	24.2	153	58.3		53.7	337	59.3		06.2	57	39.0		56.9	53	20.8		06.5
21	7	26.6	168	57.9		54.8	353	01.9		06.3	72	41.1		56.8	68	23.1		06.4
22	22	29.1	183	57.5		56.0	8	04.4		06.4	87	43.1		56.8	83	25.4		06.4
23	37	31.6	198	57.1		57.1	23	07.0		06.6	102	45.1		56.7	98	27.7		06.4
24	52	34.0	213	56.7	-5	58.3	38	09.5	+5	06.7	117	47.1	-21	56.6	113	30.0	-21	06.3
Dif.	—		-4		-11		+26		+1		+20		+1		+23			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 44 ^m 3			SD: 16'6 Edad: 27 ^d 2 PMG: 10 ^h 11 ^m PHE { 4 ^h : 61'0 12 ^h : 61'1 20 ^h : 61'2 Rº: 55 ^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	56.1	-18	01.3	212	38.3	92	-3	30.4	156	60 N	15 34	16 23	17 14	4 33	104	15 28	9
1	198	56.0		02.0	227	06.5	92	-3	46.0	156	58	45	30	18	30	100	33	12
2	213	56.0		02.6	241	34.7	92	-4	01.6	156	56	15 55	37	22	28	96	36	16
3	228	55.9		03.3	256	02.9	91		17.2	156	54	16 03	43	26	26	92	40	19
4	243	55.8		03.9	270	31.0	90		32.8	156	52	11	48	29	24	89	43	21
5	258	55.7	-18	04.6	284	59.0	91	-4	48.4	155	50	16 18	16 53	17 33	4 22	87	15 46	24
6	273	55.6	-18	05.2	299	27.1	89	-5	03.9	155	45	16 33	17 04	17 40	4 18	82	15 52	29
7	288	55.5		05.9	313	55.0	89		19.4	155	40	45	14	47	15	77	15 57	33
8	303	55.4		06.6	328	22.9	89		34.9	155	35	16 55	22	53	12	73	16 01	37
9	318	55.3		07.2	342	50.8	88	-5	50.4	155	30	17 05	30	17 59	10	69	05	41
10	333	55.2		07.9	357	18.6	88	-6	05.9	154	20	21	44	18 10	06	63	12	46
11	348	55.1	-18	08.5	11	46.4	87	-6	21.3	154	10 N	17 35	17 57	18 22	4 02	59	16 18	51
12	3	55.0	-18	09.2	26	14.1	87	-6	36.7	153	0	17 48	18 10	18 35	3 59	54	16 24	55
13	18	54.9		09.8	40	41.8	86	-6	52.0	154	10 S	18 01	23	18 49	55	50	30	59
14	33	54.8		10.5	55	09.4	85	-7	07.4	153	20	16	39	19 07	52	44	36	65
15	48	54.7		11.2	69	36.9	85		22.7	152	30	32	18 58	30	48	39	43	70
16	63	54.7		11.8	84	04.4	84		37.9	152	35	42	19 10	19 44	46	35	47	74
17	78	54.6	-18	12.5	98	31.8	84	-7	53.1	152	40	18 53	19 24	20 01	3 43	32	16 51	78
18	93	54.5	-18	13.1	112	59.2	84	-8	08.3	151	45	19 07	19 40	20 23	3 40	28	16 57	82
19	108	54.4		13.8	127	26.6	82		23.4	151	50	23	20 02	20 53	37	22	17 03	88
20	123	54.3		14.4	141	53.8	82		38.5	150	52	30	12	21 09	35	21	06	90
21	138	54.2		15.1	156	21.0	82	-8	53.5	150	54	39	24	27	34	17	09	93
22	153	54.1		15.7	170	48.2	81	-9	08.5	149	56	19 49	38	21 51	32	15	13	96
23	168	54.0		16.4	185	15.3	80		23.4	149	58	20 00	20 54	22 25	30	11	17	100
24	183	53.9	-18	17.0	199	42.3		-9	38.3		60 S	20 12	21 14	** **	3 28	8	17 21	105
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 26 ^m 4		Mag: -3.9 PMG: 09 ^h 44 ^m			Mag: -1.7 PMG: 21 ^h 24 ^m			Mag: -2.1 PMG: 16 ^h 07 ^m			Mag: +0.6 PMG: 16 ^h 24 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	52	34.0	213	56.7	-5	58.3	38	09.5	+5	06.7	117	47.1	-21	-56.6	113	30.0	-21	06.3
1	67	36.5	228	56.3	-5	59.4	53	12.1		06.8	132	49.2		-56.6	128	32.2		06.3
2	82	39.0	243	55.9	-6	00.6	68	14.6		06.9	147	51.2		-56.5	143	34.5		06.3
3	97	41.4	258	55.5		01.7	83	17.2		07.1	162	53.2		-56.4	158	36.8		06.2
4	112	43.9	273	55.1		02.9	98	19.7		07.2	177	55.2		-56.4	173	39.1		06.2
5	127	46.4	288	54.6	-6	04.0	113	22.3	+5	07.3	192	57.3	-21	-56.3	188	41.4	-21	06.2
6	142	48.8	303	54.2	-6	05.1	128	24.8	+5	07.5	207	59.3	-21	-56.2	203	43.6	-21	06.1
7	157	51.3	318	53.8		06.3	143	27.4		07.6	223	01.3		-56.2	218	45.9		06.1
8	172	53.8	333	53.4		07.4	158	29.9		07.7	238	03.3		-56.1	233	48.2		06.1
9	187	56.2	348	53.0		08.6	173	32.5		07.8	253	05.3		-56.0	248	50.5		06.0
10	202	58.7	3	52.6		09.7	188	35.0		08.0	268	07.4		-56.0	263	52.8		06.0
11	218	01.1	18	52.2	-6	10.9	203	37.5	+5	08.1	283	09.4	-21	-55.9	278	55.0	-21	06.0
12	233	03.6	33	51.8	-6	12.0	218	40.1	+5	08.2	298	11.4	-21	-55.8	293	57.3	-21	05.9
13	248	06.1	48	51.4		13.2	233	42.6		08.4	313	13.4		-55.8	308	59.6		05.9
14	263	08.5	63	51.0		14.3	248	45.2		08.5	328	15.5		-55.7	324	01.9		05.9
15	278	11.0	78	50.6		15.4	263	47.7		08.6	343	17.5		-55.6	339	04.2		05.8
16	293	13.5	93	50.2		16.6	278	50.2		08.8	358	19.5		-55.5	354	06.4		05.8
17	308	15.9	108	49.8	-6	17.7	293	52.8	+5	08.9	13	21.5	-21	-55.5	9	08.7	-21	05.8
18	323	18.4	123	49.4	-6	18.9	308	55.3	+5	09.0	28	23.5	-21	-55.4	24	11.0	-21	05.8
19	338	20.9	138	49.0		20.0	323	57.8		09.1	43	25.6		-55.3	39	13.3		05.7
20	353	23.3	153	48.6		21.2	339	00.3		09.3	58	27.6		-55.3	54	15.6		05.7
21	8	25.8	168	48.2		22.3	354	02.9		09.4	73	29.6		-55.2	69	17.8		05.7
22	23	28.2	183	47.7		23.5	9	05.4		09.6	88	31.6		-55.1	84	20.1		05.6
23	38	30.7	198	47.3		24.6	24	07.9		09.7	103	33.6		-55.1	99	22.4		05.6
24	53	33.2	213	46.9	-6	25.7	39	10.4	+5	09.8	118	35.7	-21	-55.0	114	24.7	-21	05.6
Dif.	—		-4		-11		+25		+1		+20		+1		+23		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 16'2				SD: 16'7 Edad: 28 ^d 2														PHE { 4 ^h : 61'3 12 ^h : 61'3 20 ^h : 61'3	
	PMG: 11 ^h 44 ^m 5				PMG: 11 ^h 06 ^m														R ^o : 57 ^m	
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.												
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	183	53.9	-18	17.0	199	42.3	80	-9	38.3	148	60 N	6 16	7 08	7 56	6 17	106	15 37	13		
1	198	53.8		17.7	214	09.3	79	-9	53.1	148	58	11	7 00	45	10	101	45	17		
2	213	53.7		18.3	228	36.2	78	-10	07.9	146	56	07	6 53	35	6 04	97	52	21		
3	228	53.6		19.0	243	03.0	78		22.5	147	54	04	47	27	5 58	94	15 59	23		
4	243	53.5		19.6	257	29.8	77		37.2	146	52	6 00	41	19	53	91	16 04	27		
5	258	53.4	-18	20.2	271	56.5	77	-10	51.8	145	50	5 57	6 36	7 12	5 49	88	16 10	29		
6	273	53.3	-18	20.9	286	23.2	76	-11	06.3	144	45	5 49	6 25	6 57	5 40	82	16 21	34		
7	288	53.2		21.5	300	49.8	75		20.7	144	40	43	15	44	32	78	30	39		
8	303	53.1		22.2	315	16.3	75		35.1	142	35	36	6 07	34	25	75	38	42		
9	318	53.0		22.8	329	42.8	74	-11	49.3	143	30	30	5 59	24	19	72	46	44		
10	333	52.9		23.5	344	09.2	73	-12	03.6	141	20	19	45	6 08	09	66	16 58	50		
11	348	52.8	-18	24.1	358	35.5	73	-12	17.7	141	10 N	5 07	5 32	5 54	5 01	61	17 09	54		
12	3	52.7	-18	24.8	13	01.8	72	-12	31.8	139	0	4 54	5 19	5 41	4 53	56	17 19	58		
13	18	52.6		25.4	27	28.0	71		45.7	139	10 S	39	5 05	27	45	52	29	63		
14	33	52.5		26.0	41	54.1	71	-12	59.6	139	20	4 22	4 49	5 13	36	48	41	66		
15	48	52.4		26.7	56	20.2	70	-13	13.5	137	30	3 59	30	4 56	27	42	17 53	72		
16	63	52.3		27.3	70	46.2	69		27.2	136	35	45	18	46	21	40	18 01	74		
17	78	52.2	-18	28.0	85	12.1	69	-13	40.8	136	40	3 27	4 05	4 35	4 15	36	18 09	78		
18	93	52.0	-18	28.6	99	38.0	68	-13	54.4	134	45	3 05	3 48	4 22	4 08	31	18 19	82		
19	108	51.9		29.2	114	03.8	67	-14	07.8	134	50	2 35	27	4 05	3 59	27	31	88		
20	123	51.8		29.9	128	29.5	66		21.2	133	52	20	16	3 58	56	24	36	91		
21	138	51.7		30.5	142	55.1	66		34.5	131	54	2 01	3 04	49	51	22	42	94		
22	153	51.6		31.1	157	20.7	66	-14	47.6	131	56	1 37	2 51	40	47	18	49	97		
23	168	51.5		31.8	171	46.3	64	-15	00.7	130	58	1 02	34	29	3 41	15	18 57	101		
24	183	51.4	-18	32.4	186	11.7		-15	13.7		60 S	** **	2 14	3 16	3 36	10	19 06	106		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 20 ^h 22 ^m 4		Mag: -3.9 PMG: 09 ^h 45 ^m			Mag: -1.7 PMG: 21 ^h 20 ^m			Mag: -2.1 PMG: 16 ^h 03 ^m			Mag: +0.6 PMG: 16 ^h 20 ^m								
	hG ♈		hG ♀		dec.	hG ♂		dec.	hG ♃		dec.	hG ♄		dec.						
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'						
0	53	33.2	213	46.9	-6	39	10.4	+5	118	35.7	-21	114	24.7	-21	05.6					
1	68	35.6	228	46.5	26.9	54	13.0	10.0	133	37.7		129	26.9		05.5					
2	83	38.1	243	46.1	28.0	69	15.5	10.1	148	39.7		144	29.2		05.5					
3	98	40.6	258	45.7	29.2	84	18.0	10.2	163	41.7		159	31.5		05.5					
4	113	43.0	273	45.3	30.3	99	20.5	10.4	178	43.7		174	33.8		05.4					
5	128	45.5	288	44.9	-6	114	23.0	+5	193	45.7	-21	189	36.0	-21	05.4					
6	143	48.0	303	44.5	-6	129	25.5	+5	208	47.8	-21	204	38.3	-21	05.4					
7	158	50.4	318	44.1	33.7	144	28.1	10.8	223	49.8		219	40.6		05.3					
8	173	52.9	333	43.7	34.9	159	30.6	10.9	238	51.8		234	42.9		05.3					
9	188	55.4	348	43.2	36.0	174	33.1	11.1	253	53.8		249	45.2		05.3					
10	203	57.8	3	42.8	37.2	189	35.6	11.2	268	55.8		264	47.4		05.2					
11	219	00.3	18	42.4	-6	204	38.1	+5	283	57.9	-21	279	49.7	-21	05.2					
12	234	02.7	33	42.0	-6	219	40.6	+5	298	59.9	-21	294	52.0	-21	05.2					
13	249	05.2	48	41.6	40.6	234	43.1	11.6	314	01.9		309	54.3		05.1					
14	264	07.7	63	41.2	41.7	249	45.6	11.8	329	03.9		324	56.5		05.1					
15	279	10.1	78	40.8	42.9	264	48.1	11.9	344	05.9		339	58.8		05.1					
16	294	12.6	93	40.4	44.0	279	50.6	12.1	359	07.9		355	01.1		05.0					
17	309	15.1	108	39.9	-6	294	53.1	+5	14	10.0	-21	10	03.4	-21	05.0					
18	324	17.5	123	39.5	-6	309	55.6	+5	29	12.0	-21	25	05.6	-21	05.0					
19	339	20.0	138	39.1	47.4	324	58.1	12.5	44	14.0		40	07.9		04.9					
20	354	22.5	153	38.7	48.6	340	00.6	12.6	59	16.0		55	10.2		04.9					
21	9	24.9	168	38.3	49.7	355	03.1	12.8	74	18.0		70	12.5		04.9					
22	24	27.4	183	37.9	50.8	10	05.6	12.9	89	20.0		85	14.7		04.8					
23	39	29.9	198	37.5	52.0	25	08.1	13.1	104	22.0		100	17.0		04.8					
24	54	32.3	213	37.0	-6	40	10.6	+5	119	24.1	-21	115	19.3	-21	04.8					
Dif.	—		-4		-11	+25		+1	+20		+1	+23		0						

UT	SOL				LUNA								Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2				SD: 16'7				PHE { 4 ^h : 61'2 12 ^h : 61'1 20 ^h : 61'0											
	PMG: 11 ^h 44 ^m 7				Edad: 29 ^d 2															
	PMG: 12 ^h 03 ^m				Rº: 60 ^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		
0	183	51.4	-18	32.4	186	11.7	64	-15	13.7	128		60 N	15 30	16 19	17 11	8 03	105	15 50	19	
1	198	51.3		33.0	200	37.1	63		26.5	128		58	41	27	15	7 51	100	16 02	25	
2	213	51.2		33.7	215	02.4	63		39.3	127		56	15 51	34	19	41	96	13	29	
3	228	51.1		34.3	229	27.7	62	-15	52.0	125		54	16 00	40	23	32	92	22	32	
4	243	51.0		34.9	243	52.9	61	-16	04.5	124		52	08	46	27	24	90	31	34	
5	258	50.9	-18	35.6	258	18.0	61	-16	16.9	123		50	16 15	16 51	17 30	7 17	87	16 39	36	
6	273	50.8	-18	36.2	272	43.1	59	-16	29.2	123		45	16 31	17 03	17 38	7 02	82	16 55	41	
7	288	50.7		36.8	287	08.0	60		41.5	120		40	43	12	45	6 50	78	17 09	44	
8	303	50.5		37.5	301	33.0	58	-16	53.5	120		35	16 54	21	52	40	74	20	48	
9	318	50.4		38.1	315	57.8	58	-17	05.5	118		30	17 04	29	17 58	31	72	30	50	
10	333	50.3		38.7	330	22.6	58		17.3	118		20	20	43	18 10	15	67	17 48	54	
11	348	50.2	-18	39.4	344	47.4	56	-17	29.1	116		10 N	17 35	17 57	18 22	6 02	63	18 03	58	
12	3	50.1	-18	40.0	359	12.0	56	-17	40.7	115		0	17 48	18 10	18 35	5 49	60	18 17	61	
13	18	50.0		40.6	13	36.6	56	-17	52.2	113		10 S	18 02	24	18 50	37	56	32	64	
14	33	49.9		41.2	28	01.2	54	-18	03.5	112		20	17	18 40	19 08	24	52	18 47	67	
15	48	49.8		41.9	42	25.6	55		14.7	111		30	34	19 00	32	09	47	19 05	71	
16	63	49.6		42.5	56	50.1	53		25.8	110		35	44	12	19 46	5 01	44	15	74	
17	78	49.5	-18	43.1	71	14.4	53	-18	36.8	108		40	18 56	19 26	20 04	4 51	41	19 27	76	
18	93	49.4	-18	43.7	85	38.7	52	-18	47.6	107		45	19 09	19 44	20 27	4 39	38	19 41	80	
19	108	49.3		44.4	100	02.9	52	-18	58.3	105		50	26	20 05	20 58	26	32	19 59	84	
20	123	49.2		45.0	114	27.1	51	-19	08.8	104		52	34	16	21 14	20	30	20 07	86	
21	138	49.1		45.6	128	51.2	51		19.2	103		54	43	28	34	13	27	16	89	
22	153	49.0		46.2	143	15.3	50		29.5	101		56	19 53	20 43	21 59	4 05	24	26	92	
23	168	48.8		46.9	157	39.3	50		39.6	100		58	20 04	21 00	22 38	3 56	21	38	96	
24	183	48.7	-18	47.5	172	03.3		-19	49.6			60 S	20 18	21 21	** **	3 46	16	20 52	101	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 18 ^m 5		Mag: -3.9 PMG: 09 ^h 46 ^m				Mag: -1.7 PMG: 21 ^h 16 ^m				Mag: -2.1 PMG: 16 ^h 00 ^m				Mag: +0.6 PMG: 16 ^h 16 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	54	32.3	213	37.0	-6	53.1	40	10.6	+5	13.2	119	24.1	-21	-53.3	115	19.3	-21	04.8
1	69	34.8	228	36.6		54.3	55	13.1		13.4	134	26.1		-53.3	130	21.6		04.7
2	84	37.2	243	36.2		55.4	70	15.6		13.5	149	28.1		-53.2	145	23.8		04.7
3	99	39.7	258	35.8		56.5	85	18.0		13.7	164	30.1		-53.1	160	26.1		04.7
4	114	42.2	273	35.4		57.7	100	20.5		13.8	179	32.1		-53.0	175	28.4		04.6
5	129	44.6	288	35.0	-6	58.8	115	23.0	+5	13.9	194	34.1	-21	-53.0	190	30.6	-21	04.6
6	144	47.1	303	34.5	-6	59.9	130	25.5	+5	14.1	209	36.1	-21	-52.9	205	32.9	-21	04.6
7	159	49.6	318	34.1	-7	01.1	145	28.0		14.2	224	38.1		-52.8	220	35.2		04.5
8	174	52.0	333	33.7		02.2	160	30.5		14.4	239	40.2		-52.8	235	37.5		04.5
9	189	54.5	348	33.3		03.4	175	32.9		14.5	254	42.2		-52.7	250	39.7		04.5
10	204	57.0	3	32.9		04.5	190	35.4		14.7	269	44.2		-52.6	265	42.0		04.4
11	219	59.4	18	32.5	-7	05.6	205	37.9	+5	14.8	284	46.2	-21	-52.6	280	44.3	-21	04.4
12	235	01.9	33	32.0	-7	06.8	220	40.4	+5	15.0	299	48.2	-21	-52.5	295	46.6	-21	04.4
13	250	04.3	48	31.6		07.9	235	42.8		15.2	314	50.2		-52.4	310	48.8		04.3
14	265	06.8	63	31.2		09.0	250	45.3		15.3	329	52.2		-52.3	325	51.1		04.3
15	280	09.3	78	30.8		10.2	265	47.8		15.5	344	54.2		-52.3	340	53.4		04.3
16	295	11.7	93	30.4		11.3	280	50.3		15.6	359	56.3		-52.2	355	55.6		04.2
17	310	14.2	108	29.9	-7	12.4	295	52.7	+5	15.8	14	58.3	-21	-52.1	10	57.9	-21	04.2
18	325	16.7	123	29.5	-7	13.6	310	55.2	+5	15.9	30	00.3	-21	-52.1	26	00.2	-21	04.2
19	340	19.1	138	29.1		14.7	325	57.7		16.1	45	02.3		-52.0	41	02.5		04.1
20	355	21.6	153	28.7		15.8	341	00.1		16.2	60	04.3		-51.9	56	04.7		04.1
21	10	24.1	168	28.2		17.0	356	02.6		16.4	75	06.3		-51.8	71	07.0		04.1
22	25	26.5	183	27.8		18.1	11	05.0		16.5	90	08.3		-51.8	86	09.3		04.0
23	40	29.0	198	27.4		19.2	26	07.5		16.7	105	10.3		-51.7	101	11.5		04.0
24	55	31.5	213	27.0	-7	20.4	41	10.0	+5	16.9	120	12.3	-21	-51.6	116	13.8	-21	04.0
Dif.	—		-4		-11		+25		+2		+20		+1		+23		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 44 ^m 8				SD: 16'6 Edad: 0'8					PHE { 4 ^h : 60'8 12 ^h : 60'6 20 ^h : 60'4			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		
0	183	48.7	-18	47.5	172	03.3	49	-19	49.6	99	60 N	6 20	7 12	8 01	9 48	95	16 09	34
1	198	48.6		48.1	186	27.2	48	-19	59.5	97	58	15	7 04	7 50	31	90	27	38
2	213	48.5		48.7	200	51.0	48	-20	09.2	95	56	11	6 57	39	17	87	42	41
3	228	48.4		49.3	215	14.8	48		18.7	94	54	07	50	30	9 04	85	16 54	44
4	243	48.3		50.0	229	38.6	46		28.1	93	52	03	45	22	8 54	82	17 05	46
5	258	48.1	-18	50.6	244	02.2	47	-20	37.4	91	50	6 00	6 39	7 15	8 44	80	17 15	48
6	273	48.0	-18	51.2	258	25.9	46	-20	46.5	89	45	5 52	6 28	6 59	8 24	77	17 36	51
7	288	47.9		51.8	272	49.5	46	-20	55.4	88	40	45	18	47	8 08	74	17 53	53
8	303	47.8		52.4	287	13.1	45	-21	04.2	86	35	38	09	36	7 54	72	18 08	54
9	318	47.7		53.1	301	36.6	44		12.8	85	30	32	6 01	26	43	69	20	56
10	333	47.6		53.7	316	00.0	45		21.3	83	20	20	5 46	6 10	22	67	18 42	58
11	348	47.4	-18	54.3	330	23.5	44	-21	29.6	82	10 N	5 07	5 33	5 55	7 05	64	19 01	60
12	3	47.3	-18	54.9	344	46.9	43	-21	37.8	80	0	4 54	5 19	5 41	6 49	61	19 18	62
13	18	47.2		55.5	359	10.2	43		45.8	79	10 S	39	5 05	27	33	59	36	63
14	33	47.1		56.1	13	33.5	43	-21	53.7	77	20	4 21	4 49	5 12	6 16	56	19 54	66
15	48	47.0		56.7	27	56.8	43	-22	01.4	75	30	3 58	29	4 55	5 56	53	20 16	68
16	63	46.8		57.3	42	20.1	42		08.9	73	35	43	17	45	45	51	29	69
17	78	46.7	-18	58.0	56	43.3	42	-22	16.2	72	40	3 25	4 03	4 33	5 32	49	20 43	71
18	93	46.6	-18	58.6	71	06.5	41	-22	23.4	71	45	3 02	3 46	4 20	5 17	46	21 01	72
19	108	46.5		59.2	85	29.6	42		30.5	68	50	2 31	23	4 03	4 58	42	23	74
20	123	46.3	-18	59.8	99	52.8	41		37.3	67	52	2 15	13	3 55	50	40	33	76
21	138	46.2	-19	00.4	114	15.9	40		44.0	66	54	1 55	3 00	46	40	37	45	77
22	153	46.1		01.0	128	38.9	41		50.6	63	56	1 29	2 46	36	29	35	21 58	80
23	168	46.0		01.6	143	02.0	41	-22	56.9	62	58	0 50	29	24	4 17	31	22 14	82
24	183	45.8	-19	02.2	157	25.1		-23	03.1		60 S	** **	2 08	3 11	4 02	26	22 33	85

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 14 ^m 6		Mag: -3.9 PMG: 09 ^h 46 ^m			Mag: -1.6 PMG: 21 ^h 12 ^m			Mag: -2.1 PMG: 15 ^h 57 ^m			Mag: +0.6 PMG: 16 ^h 13 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	55	31.5	213	27.0	-7	20.4	41	10.0	+5	16.9	120	12.3	-21	51.6	116	13.8	-21	04.0
1	70	33.9	228	26.6		21.5	56	12.4		17.0	135	14.3		51.6	131	16.1		03.9
2	85	36.4	243	26.1		22.6	71	14.9		17.2	150	16.4		51.5	146	18.4		03.9
3	100	38.8	258	25.7		23.8	86	17.3		17.3	165	18.4		51.4	161	20.6		03.9
4	115	41.3	273	25.3		24.9	101	19.8		17.5	180	20.4		51.3	176	22.9		03.8
5	130	43.8	288	24.9	-7	26.0	116	22.2	+5	17.6	195	22.4	-21	51.3	191	25.2	-21	03.8
6	145	46.2	303	24.4	-7	27.2	131	24.7	+5	17.8	210	24.4	-21	51.2	206	27.4	-21	03.8
7	160	48.7	318	24.0		28.3	146	27.1		18.0	225	26.4		51.1	221	29.7		03.7
8	175	51.2	333	23.6		29.4	161	29.6		18.1	240	28.4		51.1	236	32.0		03.7
9	190	53.6	348	23.2		30.6	176	32.0		18.3	255	30.4		51.0	251	34.2		03.7
10	205	56.1	3	22.7		31.7	191	34.5		18.4	270	32.4		50.9	266	36.5		03.6
11	220	58.6	18	22.3	-7	32.8	206	36.9	+5	18.6	285	34.4	-21	50.8	281	38.8	-21	03.6
12	236	01.0	33	21.9	-7	34.0	221	39.4	+5	18.8	300	36.4	-21	50.8	296	41.0	-21	03.6
13	251	03.5	48	21.5		35.1	236	41.8		18.9	315	38.4		50.7	311	43.3		03.5
14	266	06.0	63	21.0		36.2	251	44.2		19.1	330	40.4		50.6	326	45.6		03.5
15	281	08.4	78	20.6		37.4	266	46.7		19.3	345	42.5		50.6	341	47.9		03.4
16	296	10.9	93	20.2		38.5	281	49.1		19.4	0	44.5		50.5	356	50.1		03.4
17	311	13.3	108	19.8	-7	39.6	296	51.6	+5	19.6	15	46.5	-21	50.4	11	52.4	-21	03.4
18	326	15.8	123	19.3	-7	40.7	311	54.0	+5	19.7	30	48.5	-21	50.3	26	54.7	-21	03.3
19	341	18.3	138	18.9		41.9	326	56.4		19.9	45	50.5		50.3	41	56.9		03.3
20	356	20.7	153	18.5		43.0	341	58.9		20.1	60	52.5		50.2	56	59.2		03.3
21	11	23.2	168	18.0		44.1	357	01.3		20.2	75	54.5		50.1	72	01.5		03.2
22	26	25.7	183	17.6		45.3	12	03.7		20.4	90	56.5		50.0	87	03.7		03.2
23	41	28.1	198	17.2		46.4	27	06.1		20.6	105	58.5		50.0	102	06.0		03.2
24	56	30.6	213	16.7	-7	47.5	42	08.6	+5	20.7	121	00.5	-21	49.9	117	08.3	-21	03.1
Dif.	—		-4		-11		+24		+2		+20		+1		+23			0

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2				PHE { 4 ^h : 59'3 12 ^h : 59'0 20 ^h : 58'7													
	Edad: 2 ^d 8																	
	PMG: 15 ^h 06 ^m				R ^o : 59 ^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	183	42.8	-19	16.6	142	37.6	42	-24	40.1	19	6 24	7 16	8 06	12 36	46	17 37	76	
1	198	42.6		17.2	157	00.8	42		42.0	17	19	08	7 54	12 12	49	18 01	72	
2	213	42.5		17.8	171	24.0	43		43.7	16	14	7 00	43	11 54	50	19	71	
3	228	42.4		18.4	185	47.3	43		45.3	13	10	6 54	34	38	51	35	70	
4	243	42.2		19.0	200	10.6	44		46.6	12	06	48	26	24	53	18 49	68	
5	258	42.1	-19	19.6	214	34.0	44	-24	47.8	10	6 02	6 42	7 18	11 12	53	19 01	67	
6	273	41.9	-19	20.2	228	57.4	45	-24	48.8	9	5 54	6 30	7 02	10 47	55	19 26	65	
7	288	41.8		20.8	243	20.9	45		49.7	7	47	20	6 49	27	56	19 45	64	
8	303	41.7		21.3	257	44.4	45		50.4	5	40	11	38	10 11	56	20 02	63	
9	318	41.5		21.9	272	07.9	46		50.9	3	33	6 02	28	9 57	57	16	62	
10	333	41.4		22.5	286	31.5	47		51.2	2	21	5 47	6 11	32	58	20 40	61	
11	348	41.3	-19	23.1	300	55.2	47	-24	51.4	0	5 08	5 34	5 56	9 11	59	21 01	59	
12	3	41.1	-19	23.7	315	18.9	47	-24	51.4	1	4 54	5 20	5 42	8 52	59	21 21	57	
13	18	41.0		24.3	329	42.6	49		51.3	4	39	5 05	27	32	60	21 40	56	
14	33	40.9		24.9	344	06.5	48		50.9	5	20	4 48	5 12	8 11	61	22 01	55	
15	48	40.7		25.5	358	30.3	50		50.4	6	30	3 56	4 54	7 47	62	25	53	
16	63	40.6		26.0	12	54.3	50		49.8	8	35	41	16	33	62	39	52	
17	78	40.4	-19	26.6	27	18.3	50	-24	49.0	10	40	3 23	4 01	7 17	62	22 55	50	
18	93	40.3	-19	27.2	41	42.3	52	-24	48.0	11	45	2 59	3 43	6 57	63	23 14	49	
19	108	40.2		27.8	56	06.5	52		46.9	13	50	27	21	4 00	33	63	38	47
20	123	40.0		28.4	70	30.7	52		45.6	15	52	2 10	3 09	3 52	21	64	23 50	45
21	138	39.9		28.9	84	54.9	54		44.1	16	54	1 49	2 57	43	6 08	64	***	***
22	153	39.7		29.5	99	19.3	54		42.5	18	56	1 21	42	33	5 52	65	***	***
23	168	39.6		30.1	113	43.7	55		40.7	19	58	0 36	24	21	5 34	65	***	***
24	183	39.5	-19	30.7	128	08.2		-24	38.8		60 S	** **	2 02	3 07	5 12	65	***	***
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 20 ^h 06 ^m 7		Mag: -3.9 PMG: 09 ^h 48 ^m			Mag: -1.6 PMG: 21 ^h 04 ^m			Mag: -2.1 PMG: 15 ^h 51 ^m			Mag: +0.6 PMG: 16 ^h 05 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	57	29.7	213	06.3	-8	14.5	43	06.4	+5	24.9	121	48.6	-21	48.1	118	02.6	-21	02.3
1	72	32.2	228	05.9		15.6	58	08.8		25.1	136	50.6		48.1	133	04.9		02.3
2	87	34.7	243	05.5		16.7	73	11.2		25.2	151	52.6		48.0	148	07.2		02.2
3	102	37.1	258	05.0		17.9	88	13.6		25.4	166	54.6		47.9	163	09.4		02.2
4	117	39.6	273	04.6		19.0	103	16.0		25.6	181	56.6		47.8	178	11.7		02.2
5	132	42.1	288	04.1	-8	20.1	118	18.4	+5	25.8	196	58.6	-21	47.8	193	14.0	-21	02.1
6	147	44.5	303	03.7	-8	21.2	133	20.8	+5	26.0	212	00.6	-21	47.7	208	16.2	-21	02.1
7	162	47.0	318	03.3		22.4	148	23.2		26.1	227	02.6		47.6	223	18.5		02.0
8	177	49.5	333	02.8		23.5	163	25.5		26.3	242	04.5		47.5	238	20.7		02.0
9	192	51.9	348	02.4		24.6	178	27.9		26.5	257	06.5		47.5	253	23.0		02.0
10	207	54.4	3	01.9		25.7	193	30.3		26.7	272	08.5		47.4	268	25.3		01.9
11	222	56.8	18	01.5	-8	26.8	208	32.7	+5	26.9	287	10.5	-21	47.3	283	27.5	-21	01.9
12	237	59.3	33	01.1	-8	27.9	223	35.1	+5	27.0	302	12.5	-21	47.2	298	29.8	-21	01.9
13	253	01.8	48	00.6		29.1	238	37.5		27.2	317	14.5		47.2	313	32.1		01.8
14	268	04.2	63	00.2		30.2	253	39.8		27.4	332	16.5		47.1	328	34.3		01.8
15	283	06.7	77	59.7		31.3	268	42.2		27.6	347	18.5		47.0	343	36.6		01.8
16	298	09.2	92	59.3		32.4	283	44.6		27.8	2	20.5		46.9	358	38.8		01.7
17	313	11.6	107	58.8	-8	33.5	298	47.0	+5	28.0	17	22.5	-21	46.9	13	41.1	-21	01.7
18	328	14.1	122	58.4	-8	34.7	313	49.3	+5	28.2	32	24.5	-21	46.8	28	43.4	-21	01.7
19	343	16.6	137	58.0		35.8	328	51.7		28.3	47	26.5		46.7	43	45.6		01.6
20	358	19.0	152	57.5		36.9	343	54.1		28.5	62	28.5		46.6	58	47.9		01.6
21	13	21.5	167	57.1		38.0	358	56.4		28.7	77	30.5		46.6	73	50.2		01.5
22	28	24.0	182	56.6		39.1	13	58.8		28.9	92	32.5		46.5	88	52.4		01.5
23	43	26.4	197	56.2		40.2	29	01.2		29.1	107	34.5		46.4	103	54.7		01.5
24	58	28.9	212	55.7	-8	41.3	44	03.5	+5	29.3	122	36.5	-21	46.3	118	56.9	-21	01.4
Dif.	—		-4		-11		+24		+2		+20		+1		+23		0	

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'2			PHE { 4 ^h : 58'4 12 ^h : 58'0 20 ^h : 57'7																
	PMG: 11 ^h 45 ^m 5			SD: 15'9 Edad: 3 ^d 8 PMG: 16 ^h 05 ^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			
0	183	39.5	-19	30.7	128	08.2	55	-24	38.8	21	60 N	15 21	16 12	17 05	13 22	26	18 53	86		
1	198	39.3		31.3	142	32.7	57		36.7	22	58	34	21	10	13 01	31	19 13	82		
2	213	39.2		31.8	156	57.4	57		34.5	24	56	45	28	14	12 44	34	30	79		
3	228	39.0		32.4	171	22.1	58		32.1	26	54	15 55	35	19	29	37	45	76		
4	243	38.9		33.0	185	46.9	59		29.5	27	52	16 03	41	23	17	38	19 57	74		
5	258	38.7	-19	33.6	200	11.8	59	-24	26.8	28	50	16 11	16 47	17 27	12 05	40	20 08	72		
6	273	38.6	-19	34.1	214	36.7	61	-24	24.0	30	45	16 27	16 59	17 35	11 42	43	20 31	68		
7	288	38.5		34.7	229	01.8	61		21.0	32	40	41	17 10	43	23	46	20 49	66		
8	303	38.3		35.3	243	26.9	62		17.8	33	35	16 52	19	50	11 07	48	21 05	63		
9	318	38.2		35.9	257	52.1	63		14.5	34	30	17 02	28	17 57	10 54	49	18	62		
10	333	38.0		36.4	272	17.4	64		11.1	36	20	19	43	18 10	30	52	21 41	58		
11	348	37.9	-19	37.0	286	42.8	65	-24	07.5	37	10 N	17 35	17 57	18 23	10 10	54	22 00	56		
12	3	37.7	-19	37.6	301	08.3	66	-24	03.8	39	0	17 49	18 11	18 37	9 51	56	22 18	54		
13	18	37.6		38.1	315	33.9	66	-23	59.9	40	10 S	18 04	26	18 52	32	58	36	51		
14	33	37.4		38.7	329	59.5	68		55.9	41	20	19	18 43	19 11	9 12	59	22 56	48		
15	48	37.3		39.3	344	25.3	68		51.8	43	30	37	19 04	36	8 49	61	23 18	45		
16	63	37.1		39.9	358	51.1	70		47.5	45	35	18 48	16	19 51	35	63	31	43		
17	78	37.0	-19	40.4	13	17.1	70	-23	43.0	45	40	19 00	19 31	20 10	8 19	65	23 45	42		
18	93	36.9	-19	41.0	27	43.1	72	-23	38.5	47	45	19 15	19 50	20 34	8 00	67	***	***		
19	108	36.7		41.6	42	09.3	72		33.8	48	50	33	20 13	21 07	7 36	70	***	***		
20	123	36.6		42.1	56	35.5	73		29.0	50	52	41	24	25	25	71	***	***		
21	138	36.4		42.7	71	01.8	74		24.0	51	54	19 51	38	21 47	7 12	73	0 03	44		
22	153	36.3		43.3	85	28.2	76		18.9	52	56	20 01	20 53	22 17	6 57	75	18	42		
23	168	36.1		43.8	99	54.8	76		13.7	54	58	14	21 12	23 14	39	78	36	39		
24	183	36.0	-19	44.4	114	21.4		-23	08.3		60 S	20 28	21 35	** **	6 17	82	0 58	36		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 20 ^h 02 ^m 8		Mag: -3.9 PMG: 09 ^h 49 ^m			Mag: -1.5 PMG: 21 ^h 00 ^m			Mag: -2.1 PMG: 15 ^h 47 ^m			Mag: +0.6 PMG: 16 ^h 02 ^m								
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	58	28.9	212	55.7	-8	41.3	44	03.5	+5	29.3	122	36.5	-21	-46.3	118	56.9	-21	01.4		
1	73	31.3	227	55.3		42.5	59	05.9		29.5	137	38.5		-46.3	133	59.2		01.4		
2	88	33.8	242	54.8		43.6	74	08.3		29.6	152	40.5		-46.2	149	01.5		01.4		
3	103	36.3	257	54.4		44.7	89	10.6		29.8	167	42.5		-46.1	164	03.7		01.3		
4	118	38.7	272	53.9		45.8	104	13.0		30.0	182	44.5		-46.0	179	06.0		01.3		
5	133	41.2	287	53.5	-8	46.9	119	15.3	+5	30.2	197	46.5	-21	-46.0	194	08.2	-21	01.3		
6	148	43.7	302	53.0	-8	48.0	134	17.7	+5	30.4	212	48.5	-21	-45.9	209	10.5	-21	01.2		
7	163	46.1	317	52.6		49.1	149	20.1		30.6	227	50.5		-45.8	224	12.8		01.2		
8	178	48.6	332	52.1		50.3	164	22.4		30.8	242	52.5		-45.7	239	15.0		01.2		
9	193	51.1	347	51.7		51.4	179	24.8		31.0	257	54.4		-45.7	254	17.3		01.1		
10	208	53.5	2	51.2		52.5	194	27.1		31.2	272	56.4		-45.6	269	19.5		01.1		
11	223	56.0	17	50.8	-8	53.6	209	29.5	+5	31.4	287	58.4	-21	-45.5	284	21.8	-21	01.0		
12	238	58.4	32	50.3	-8	54.7	224	31.8	+5	31.6	303	00.4	-21	-45.4	299	24.1	-21	01.0		
13	254	00.9	47	49.9		55.8	239	34.2		31.7	318	02.4		-45.4	314	26.3		01.0		
14	269	03.4	62	49.4		56.9	254	36.5		31.9	333	04.4		-45.3	329	28.6		00.9		
15	284	05.8	77	49.0		58.0	269	38.9		32.1	348	06.4		-45.2	344	30.8		00.9		
16	299	08.3	92	48.5	-8	59.1	284	41.2		32.3	3	08.4		-45.1	359	33.1		00.9		
17	314	10.8	107	48.1	-9	00.3	299	43.5	+5	32.5	18	10.4	-21	-45.1	14	35.3	-21	00.8		
18	329	13.2	122	47.6	-9	01.4	314	45.9	+5	32.7	33	12.4	-21	-45.0	29	37.6	-21	00.8		
19	344	15.7	137	47.2		02.5	329	48.2		32.9	48	14.4		-44.9	44	39.9		00.8		
20	359	18.2	152	46.7		03.6	344	50.6		33.1	63	16.4		-44.8	59	42.1		00.7		
21	14	20.6	167	46.3		04.7	359	52.9		33.3	78	18.4		-44.8	74	44.4		00.7		
22	29	23.1	182	45.8		05.8	14	55.2		33.5	93	20.4		-44.7	89	46.6		00.6		
23	44	25.6	197	45.4		06.9	29	57.6		33.7	108	22.3		-44.6	104	48.9		00.6		
24	59	28.0	212	44.9	-9	08.0	44	59.9	+5	33.9	123	24.3	-21	-44.5	119	51.2	-21	00.6		
Dif.	—		-4		-11		+23		+2		+20		+1		+23					

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 45 ^m 7				SD: 15'7 Edad: 4 ^d 8 PHE { 4 ^h : 57'4 12 ^h : 57'1 20 ^h : 56'8 PMG: 16 ^h 59 ^m Rº: 51 ^m											
	hG ☉		Dec		hG ☾		Dif. Dec Dif.			Náut.	Civil		Hora	Rº	Hora	Rº
	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	°	h m		h m	h m		h m m	h m m		
h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	°	h m	h m	h m	h m m	h m m	h m m		
0	183 36.0	-19 44.4	114 21.4	77 -23 08.3	54 60 N	6 28	7 20	8 11	13 48 16	20 19 88						
1	198 35.8	44.9	128 48.1	79 -23 02.9	56 58	22	12	7 58	32 20	35 83						
2	213 35.7	45.5	143 15.0	79 -22 57.3	58 56	18	7 04	47	18 23	20 49 79						
3	228 35.5	46.1	157 41.9	80 51.5	58 54	13	6 57	38	13 06 25	21 01 76						
4	243 35.4	46.6	172 08.9	81 45.7	60 52	09	51	29	12 55 28	11 74						
5	258 35.2	-19 47.2	186 36.0	83 -22 39.7	61 50	6 05	6 45	7 21	12 45 30	21 20 72						
6	273 35.1	-19 47.8	201 03.3	83 -22 33.6	62 45	5 57	6 32	7 05	12 25 34	21 39 68						
7	288 34.9	48.3	215 30.6	84 27.4	63 40	49	22	6 51	12 09 37	21 55 65						
8	303 34.7	48.9	229 58.0	86 21.1	64 35	42	12	40	11 55 39	22 08 62						
9	318 34.6	49.4	244 25.6	86 14.7	66 30	35	6 04	29	43 41	20 59						
10	333 34.4	50.0	258 53.2	88 08.1	67 20	22	5 49	6 12	22 45	39 56						
11	348 34.3	-19 50.5	273 21.0	88 -22 01.4	67 10 N	5 09	5 34	5 57	11 04 48	22 56 52						
12	3 34.1	-19 51.1	287 48.8	90 -21 54.7	69 0	4 55	5 20	5 42	10 47 51	23 12 49						
13	18 34.0	51.7	302 16.8	90 47.8	70 10 S	39	5 05	27	30 54	27 47						
14	33 33.8	52.2	316 44.8	92 40.8	71 20	4 20	4 48	5 12	10 11 57	23 44 43						
15	48 33.7	52.8	331 13.0	93 33.7	72 30	3 55	27	4 54	9 50 61	*** **						
16	63 33.5	53.3	345 41.3	93 26.5	74 35	40	4 14	43	38 63	*** **						
17	78 33.4	-19 53.9	0 09.6	95 -21 19.1	74 40	3 21	3 59	4 31	9 24 65	*** **						
18	93 33.2	-19 54.4	14 38.1	96 -21 11.7	75 45	2 57	3 41	4 16	9 07 68	0 03 39						
19	108 33.0	55.0	29 06.7	96 -21 04.2	77 50	24	18	3 58	8 46 72	25 35						
20	123 32.9	55.5	43 35.3	98 -20 56.5	77 52	2 06	3 06	50	36 74	35 33						
21	138 32.7	56.1	58 04.1	99 48.8	78 54	1 44	2 53	40	25 76	0 47 31						
22	153 32.6	56.6	72 33.0	100 41.0	79 56	1 13	38	29	8 12 79	1 00 28						
23	168 32.4	57.2	87 02.0	101 33.1	81 58	0 15	2 19	17	7 57 82	1 15 25						
24	183 32.3	-19 57.7	101 31.1	-20 25.0	60 S	** **	1 55	3 02	7 39 87	1 34 20						
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 19 ^h 58 ^m 8		Mag: -3.9 PMG: 09 ^h 49 ^m			Mag: -1.5 PMG: 20 ^h 57 ^m			Mag: -2.1 PMG: 15 ^h 44 ^m			Mag: +0.6 PMG: 15 ^h 58 ^m				
	hG ♈	dec.	hG ♀	dec.	hG ♂	dec.	hG ♃	dec.	hG ♄	dec.						
h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "						
0	59 28.0	212 44.9	-9 08.0	44 59.9	+5 33.9	123 24.3	-21 44.5	119 51.2	-21 00.6							
1	74 30.5	227 44.5	09.1	60 02.2	34.1	138 26.3	44.4	134 53.4	00.5							
2	89 32.9	242 44.0	10.2	75 04.6	34.3	153 28.3	44.4	149 55.7	00.5							
3	104 35.4	257 43.6	11.3	90 06.9	34.5	168 30.3	44.3	164 57.9	00.5							
4	119 37.9	272 43.1	12.4	105 09.2	34.7	183 32.3	44.2	180 00.2	00.4							
5	134 40.3	287 42.6	-9 13.6	120 11.6	+5 34.9	198 34.3	-21 44.1	195 02.4	-21 00.4							
6	149 42.8	302 42.2	-9 14.7	135 13.9	+5 35.1	213 36.3	-21 44.1	210 04.7	-21 00.3							
7	164 45.3	317 41.7	15.8	150 16.2	35.3	228 38.3	44.0	225 07.0	00.3							
8	179 47.7	332 41.3	16.9	165 18.5	35.5	243 40.3	43.9	240 09.2	00.3							
9	194 50.2	347 40.8	18.0	180 20.9	35.7	258 42.2	43.8	255 11.5	00.2							
10	209 52.7	2 40.4	19.1	195 23.2	35.9	273 44.2	43.8	270 13.7	00.2							
11	224 55.1	17 39.9	-9 20.2	210 25.5	+5 36.1	288 46.2	-21 43.7	285 16.0	-21 00.2							
12	239 57.6	32 39.4	-9 21.3	225 27.8	+5 36.3	303 48.2	-21 43.6	300 18.2	-21 00.1							
13	255 00.1	47 39.0	22.4	240 30.1	36.5	318 50.2	43.5	315 20.5	00.1							
14	270 02.5	62 38.5	23.5	255 32.4	36.7	333 52.2	43.4	330 22.7	00.1							
15	285 05.0	77 38.1	24.6	270 34.8	36.9	348 54.2	43.4	345 25.0	00.0							
16	300 07.4	92 37.6	25.7	285 37.1	37.1	3 56.2	43.3	0 27.3	-21 00.0							
17	315 09.9	107 37.1	-9 26.8	300 39.4	+5 37.3	18 58.2	-21 43.2	15 29.5	-20 59.9							
18	330 12.4	122 36.7	-9 27.9	315 41.7	+5 37.5	34 00.1	-21 43.1	30 31.8	-20 59.9							
19	345 14.8	137 36.2	29.0	330 44.0	37.7	49 02.1	43.1	45 34.0	59.9							
20	0 17.3	152 35.8	30.1	345 46.3	37.9	64 04.1	43.0	60 36.3	59.8							
21	15 19.8	167 35.3	31.2	0 48.6	38.1	79 06.1	42.9	75 38.5	59.8							
22	30 22.2	182 34.8	32.3	15 50.9	38.3	94 08.1	42.8	90 40.8	59.8							
23	45 24.7	197 34.4	33.4	30 53.2	38.6	109 10.1	42.7	105 43.0	59.7							
24	60 27.2	212 33.9	-9 34.5	45 55.5	+5 38.8	124 12.1	-21 42.7	120 45.3	-20 59.7							
Dif.	—	-5	-11	+23	+2	+20	+1	+23	0							

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2			PHE { 4 ^h : 56'5 12 ^h : 56'2 20 ^h : 56'0														
	PMG: 11 ^h 46 ^m 0			Edad: 5 ^d 8														
	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	32.3	-19	57.7	101	31.1	102	-20	25.0	81	60 N	15 18	16 09	17 02	14 04	10	21 47 85	
1	198	32.1		58.3	116	00.3	103		16.9	82	58	31	18	07	13 52	13	21 58 81	
2	213	31.9		58.8	130	29.6	104		08.7	83	56	42	26	12	41 16		22 08 78	
3	228	31.8		59.4	144	59.0	105	-20	00.4	84	54	15 52	33	17	31 20		17 75	
4	243	31.6	-19	59.9	159	28.5	106	-19	52.0	85	52	16 01	39	21	23 21		25 73	
5	258	31.5	-20	00.5	173	58.1	107	-19	43.5	85	50	16 09	16 45	17 25	13 15	24	22 32 71	
6	273	31.3	-20	01.0	188	27.8	108	-19	35.0	87	45	16 25	16 58	17 34	12 59	28	22 47 66	
7	288	31.1		01.5	202	57.6	109		26.3	87	40	39	17 09	42	46 31		23 00 62	
8	303	31.0		02.1	217	27.5	110		17.6	89	35	16 51	18	49	34 34		10 60	
9	318	30.8		02.6	231	57.5	110	-19	08.7	89	30	17 01	27	17 56	24 37		19 57	
10	333	30.7		03.2	246	27.5	112	-18	59.8	90	20	19	43	18 10	12 07	40	35 52	
11	348	30.5	-20	03.7	260	57.7	113	-18	50.8	91	10 N	17 35	17 57	18 23	11 52	44	23 48 49	
12	3	30.3	-20	04.3	275	28.0	114	-18	41.7	91	0	17 50	18 12	18 37	11 38	47	*** ** *	
13	18	30.2		04.8	289	58.4	115		32.6	92	10 S	18 04	27	18 53	24 50		*** ** *	
14	33	30.0		05.3	304	28.9	116		23.4	94	20	21	18 44	19 13	11 08	54	*** ** *	
15	48	29.9		05.9	318	59.5	117		14.0	94	30	39	19 06	38	10 51	58	0 03 39	
16	63	29.7		06.4	333	30.2	117	-18	04.6	94	35	18 50	19	19 53	41 60		14 37	
17	78	29.5	-20	07.0	348	00.9	119	-17	55.2	96	40	19 03	19 34	20 13	10 29	63	0 27 34	
18	93	29.4	-20	07.5	2	31.8	119	-17	45.6	96	45	19 18	19 53	20 37	10 15	67	0 42 30	
19	108	29.2		08.0	17	02.7	121		36.0	97	50	36	20 17	21 12	9 58	71	1 00 26	
20	123	29.0		08.6	31	33.8	121		26.3	97	52	45	28	30	50 73		08 25	
21	138	28.9		09.1	46	04.9	123		16.6	98	54	19 54	42	21 54	41 76		18 22	
22	153	28.7		09.6	60	36.2	123	-17	06.8	99	56	20 05	20 58	22 27	31 78		28 20	
23	168	28.5		10.2	75	07.5	124	-16	56.9	100	58	18	21 18	*** **	19 82		40 17	
24	183	28.4	-20	10.7	89	38.9		-16	46.9		60 S	20 33	21 43	*** **	9 06	86	1 54 13	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 54 ^m 9		Mag: -3.9 PMG: 09 ^h 50 ^m				Mag: -1.5 PMG: 20 ^h 53 ^m				Mag: -2.1 PMG: 15 ^h 41 ^m				Mag: +0.6 PMG: 15 ^h 55 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	60	27.2	212	33.9	-9	34.5	45	55.5	+5	38.8	124	12.1	-21	-42.7	120	45.3	-20	59.7
1	75	29.6	227	33.5		35.6	60	57.8		39.0	139	14.1		-42.6	135	47.6		59.6
2	90	32.1	242	33.0		36.7	76	00.1		39.2	154	16.0		-42.5	150	49.8		59.6
3	105	34.6	257	32.5		37.8	91	02.4		39.4	169	18.0		-42.4	165	52.1		59.6
4	120	37.0	272	32.1		38.9	106	04.7		39.6	184	20.0		-42.4	180	54.3		59.5
5	135	39.5	287	31.6	-9	40.0	121	07.0	+5	39.8	199	22.0	-21	-42.3	195	56.6	-20	59.5
6	150	41.9	302	31.1	-9	41.1	136	09.3	+5	40.0	214	24.0	-21	-42.2	210	58.8	-20	59.5
7	165	44.4	317	30.7		42.2	151	11.6		40.2	229	26.0		-42.1	226	01.1		59.4
8	180	46.9	332	30.2		43.3	166	13.9		40.4	244	28.0		-42.0	241	03.3		59.4
9	195	49.3	347	29.7		44.4	181	16.2		40.6	259	29.9		-42.0	256	05.6		59.3
10	210	51.8	2	29.3		45.5	196	18.5		40.9	274	31.9		-41.9	271	07.8		59.3
11	225	54.3	17	28.8	-9	46.6	211	20.8	+5	41.1	289	33.9	-21	-41.8	286	10.1	-20	59.3
12	240	56.7	32	28.3	-9	47.7	226	23.1	+5	41.3	304	35.9	-21	-41.7	301	12.3	-20	59.2
13	255	59.2	47	27.9		48.8	241	25.4		41.5	319	37.9		-41.7	316	14.6		59.2
14	271	01.7	62	27.4		49.9	256	27.7		41.7	334	39.9		-41.6	331	16.8		59.2
15	286	04.1	77	26.9		51.0	271	30.0		41.9	349	41.8		-41.5	346	19.1		59.1
16	301	06.6	92	26.5		52.1	286	32.2		42.1	4	43.8		-41.4	1	21.4		59.1
17	316	09.0	107	26.0	-9	53.2	301	34.5	+5	42.3	19	45.8	-21	-41.3	16	23.6	-20	59.0
18	331	11.5	122	25.5	-9	54.3	316	36.8	+5	42.6	34	47.8	-21	-41.3	31	25.9	-20	59.0
19	346	14.0	137	25.1		55.3	331	39.1		42.8	49	49.8		-41.2	46	28.1		59.0
20	1	16.4	152	24.6		56.4	346	41.4		43.0	64	51.8		-41.1	61	30.4		58.9
21	16	18.9	167	24.1		57.5	1	43.6		43.2	79	53.7		-41.0	76	32.6		58.9
22	31	21.4	182	23.6		58.6	16	45.9		43.4	94	55.7		-40.9	91	34.9		58.9
23	46	23.8	197	23.2	-9	59.7	31	48.2		43.6	109	57.7		-40.9	106	37.1		58.8
24	61	26.3	212	22.7	-10	00.8	46	50.5	+5	43.9	124	59.7	-21	-40.8	121	39.4	-20	58.8
Dif.	—		-5		-11		+23		+2		+20		+1		+23		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2				PHE {	4 ^h : 55'7 12 ^h : 55'5 20 ^h : 55'3												
	PMG: 11 ^h 46 ^m 2																	
	Edad: 6 ^d 8				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	183	28.4	-20	10.7	89	38.9	125	-16	46.9	100	6 31	7 25	8 16	14 14	7	23 12	81	
1	198	28.2		11.2	104	10.4	126		36.9	101	26	16	8 03	14 05	10	19 78		
2	213	28.0		11.8	118	42.0	127		26.8	102	21	08	7 51	13 57	13	26 75		
3	228	27.9		12.3	133	13.7	127		16.6	102	16	7 00	41	51	15	32 73		
4	243	27.7		12.8	147	45.4	129	-16	06.4	102	12	6 54	32	44	18	38 70		
5	258	27.5	-20	13.4	162	17.3	129	-15	56.2	104	6 08	6 48	7 24	13 39	19	23 43	68	
6	273	27.4	-20	13.9	176	49.2	131	-15	45.8	104	5 59	6 35	7 07	13 27	23	23 53	64	
7	288	27.2		14.4	191	21.3	131		35.4	104	51	24	6 53	17	27	***	***	
8	303	27.0		14.9	205	53.4	131		25.0	106	43	14	42	08	30	***	***	
9	318	26.9		15.5	220	25.5	133		14.4	105	36	6 05	31	13 01	32	***	***	
10	333	26.7		16.0	234	57.8	134	-15	03.9	107	23	5 50	6 13	12 47	37	***	***	
11	348	26.5	-20	16.5	249	30.2	134	-14	53.2	106	5 09	5 35	5 57	12 36	40	***	***	
12	3	26.4	-20	17.0	264	02.6	135	-14	42.6	108	4 55	5 21	5 43	12 25	44	0 01	45	
13	18	26.2		17.6	278	35.1	136		31.8	108	39	5 05	28	14	48	14	42	
14	33	26.0		18.1	293	07.7	136		21.0	108	4 19	4 48	5 12	12 02	52	27	38	
15	48	25.8		18.6	307	40.3	138	-14	10.2	109	3 54	26	4 53	11 49	56	42	34	
16	63	25.7		19.1	322	13.1	138	-13	59.3	109	39	4 13	42	41	59	0 51	31	
17	78	25.5	-20	19.7	336	45.9	139	-13	48.4	110	3 19	3 58	4 29	11 32	62	1 01	28	
18	93	25.3	-20	20.2	351	18.8	139	-13	37.4	111	2 54	3 39	4 14	11 22	65	1 12	26	
19	108	25.2		20.7	5	51.7	141		26.3	111	20	15	3 56	09	69	26	22	
20	123	25.0		21.2	20	24.8	141		15.2	111	2 01	3 03	47	11 03	72	33	19	
21	138	24.8		21.7	34	57.9	141	-13	04.1	112	1 38	2 50	37	10 57	73	40	17	
22	153	24.6		22.3	49	31.0	143	-12	52.9	112	1 05	34	26	49	77	48	15	
23	168	24.5		22.8	64	04.3	143		41.7	113	***	2 14	3 13	10 41	79	1 57	12	
24	183	24.3	-20	23.3	78	37.6		-12	30.4		***	1 49	2 58	10 32	82	2 07	9	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 51 ^m 0		Mag: -3.9 PMG: 09 ^h 51 ^m				Mag: -1.4 PMG: 20 ^h 49 ^m				Mag: -2.1 PMG: 15 ^h 38 ^m				Mag: +0.6 PMG: 15 ^h 51 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	61	26.3	212	22.7	-10	00.8	46	50.5	+5	43.9	124	59.7	-21	40.8	121	39.4	-20	58.8
1	76	28.8	227	22.2		01.9	61	52.7		44.1	140	01.7		40.7	136	41.6		58.7
2	91	31.2	242	21.8		03.0	76	55.0		44.3	155	03.7		40.6	151	43.9		58.7
3	106	33.7	257	21.3		04.1	91	57.3		44.5	170	05.6		40.6	166	46.1		58.7
4	121	36.2	272	20.8		05.2	106	59.5		44.7	185	07.6		40.5	181	48.4		58.6
5	136	38.6	287	20.3	-10	06.3	122	01.8	+5	44.9	200	09.6	-21	40.4	196	50.6	-20	58.6
6	151	41.1	302	19.9	-10	07.3	137	04.1	+5	45.2	215	11.6	-21	40.3	211	52.9	-20	58.5
7	166	43.5	317	19.4		08.4	152	06.3		45.4	230	13.6		40.2	226	55.1		58.5
8	181	46.0	332	18.9		09.5	167	08.6		45.6	245	15.5		40.2	241	57.4		58.5
9	196	48.5	347	18.4		10.6	182	10.9		45.8	260	17.5		40.1	256	59.6		58.4
10	211	50.9	2	18.0		11.7	197	13.1		46.0	275	19.5		40.0	272	01.9		58.4
11	226	53.4	17	17.5	-10	12.8	212	15.4	+5	46.3	290	21.5	-21	39.9	287	04.1	-20	58.4
12	241	55.9	32	17.0	-10	13.9	227	17.7	+5	46.5	305	23.5	-21	39.8	302	06.4	-20	58.3
13	256	58.3	47	16.5		15.0	242	19.9		46.7	320	25.4		39.8	317	08.6		58.3
14	272	00.8	62	16.1		16.1	257	22.2		46.9	335	27.4		39.7	332	10.9		58.2
15	287	03.3	77	15.6		17.1	272	24.4		47.2	350	29.4		39.6	347	13.1		58.2
16	302	05.7	92	15.1		18.2	287	26.7		47.4	5	31.4		39.5	2	15.4		58.2
17	317	08.2	107	14.6	-10	19.3	302	28.9	+5	47.6	20	33.4	-21	39.4	17	17.6	-20	58.1
18	332	10.7	122	14.1	-10	20.4	317	31.2	+5	47.8	35	35.3	-21	39.4	32	19.9	-20	58.1
19	347	13.1	137	13.7		21.5	332	33.4		48.0	50	37.3		39.3	47	22.1		58.0
20	2	15.6	152	13.2		22.6	347	35.7		48.3	65	39.3		39.2	62	24.4		58.0
21	17	18.0	167	12.7		23.6	2	37.9		48.5	80	41.3		39.1	77	26.6		58.0
22	32	20.5	182	12.2		24.7	17	40.2		48.7	95	43.3		39.0	92	28.9		57.9
23	47	23.0	197	11.7		25.8	32	42.4		48.9	110	45.2		39.0	107	31.1		57.9
24	62	25.4	212	11.3	-10	26.9	47	44.7	+5	49.2	125	47.2	-21	38.9	122	33.4	-20	57.9
Dif.	—		-5		-11		+22		+2		+20		+1		+22			

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 46 ^m 5			SD: 15'0 Edad: 7'8 PHE { 4 ^h : 55'1 12 ^h : 54'9 20 ^h : 54'7 PMG: 19 ^h 19 ^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	h m	h m	h m	h m		
0	183	24.3	-20	23.3	78	37.6	144	-12	30.4	113	60 N	15 14	16 06	16 59	14 21	5		
1	198	24.1		23.8	93	11.0	144		19.1	113	58	28	15	17 05	15	8		
2	213	23.9		24.3	107	44.4	145	-12	07.8	114	56	39	23	10	10	11		
3	228	23.8		24.8	122	17.9	146	-11	56.4	114	54	50	31	15	06	13		
4	243	23.6		25.4	136	51.5	147		45.0	115	52	15 59	37	19	14 02	15		
5	258	23.4	-20	25.9	151	25.2	147	-11	33.5	115	50	16 07	16 43	17 23	13 58	17		
6	273	23.2	-20	26.4	165	58.9	147	-11	22.0	115	45	16 24	16 57	17 33	13 50	21		
7	288	23.1		26.9	180	32.6	149	-11	10.5	116	40	38	17 08	41	44	24		
8	303	22.9		27.4	195	06.5	149	-10	58.9	116	35	16 50	18	49	38	27		
9	318	22.7		27.9	209	40.4	149		47.3	117	30	17 01	27	17 56	33	29		
10	333	22.5		28.4	224	14.3	150		35.6	117	20	19	43	18 10	24	34		
11	348	22.4	-20	29.0	238	48.3	151	-10	23.9	117	10 N	17 35	17 57	18 23	13 16	38		
12	3	22.2	-20	29.5	253	22.4	151	-10	12.2	117	0	17 50	18 12	18 38	13 09	41		
13	18	22.0		30.0	267	56.5	151	-10	00.5	118	10 S	18 05	28	18 54	13 02	45		
14	33	21.8		30.5	282	30.6	153	-9	48.7	118	20	22	18 46	19 14	12 54	49		
15	48	21.6		31.0	297	04.9	152		36.9	119	30	41	19 07	39	45	54		
16	63	21.5		31.5	311	39.1	154		25.0	118	35	18 52	21	19 56	40	56		
17	78	21.3	-20	32.0	326	13.5	154	-9	13.2	119	40	19 05	19 36	20 15	12 34	59		
18	93	21.1	-20	32.5	340	47.9	154	-9	01.3	119	45	19 20	19 55	20 41	12 27	63		
19	108	20.9		33.0	355	22.3	155	-8	49.4	120	50	39	20 20	21 16	18	68		
20	123	20.7		33.5	9	56.8	155		37.4	120	52	48	32	21 36	15	69		
21	138	20.6		34.0	24	31.3	156		25.4	120	54	19 58	20 46	22 00	10	72		
22	153	20.4		34.5	39	05.9	156		13.4	120	56	20 10	21 03	22 37	06	73		
23	168	20.2		35.0	53	40.5	156	-8	01.4	121	58	23	23	*** **	12 00	77		
24	183	20.0	-20	35.5	68	15.1		-7	49.3		60 S	20 38	21 50	*** **	11 54	80		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 47 ^m 1		Mag: -3.9 PMG: 09 ^h 52 ^m				Mag: -1.4 PMG: 20 ^h 46 ^m				Mag: -2.1 PMG: 15 ^h 35 ^m				Mag: +0.6 PMG: 15 ^h 47 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	62	25.4	212	11.3	-10	26.9	47	44.7	+5	49.2	125	47.2	-21	-38.9	122	33.4	-20	
1	77	27.9	227	10.8		28.0	62	46.9		49.4	140	49.2		-38.8	137	35.6		
2	92	30.4	242	10.3		29.1	77	49.2		49.6	155	51.2		-38.7	152	37.9		
3	107	32.8	257	09.8		30.1	92	51.4		49.9	170	53.1		-38.6	167	40.1		
4	122	35.3	272	09.3		31.2	107	53.6		50.1	185	55.1		-38.6	182	42.4		
5	137	37.8	287	08.9	-10	32.3	122	55.9	+5	50.3	200	57.1	-21	-38.5	197	44.6	-20	
6	152	40.2	302	08.4	-10	33.4	137	58.1	+5	50.5	215	59.1	-21	-38.4	212	46.9	-20	
7	167	42.7	317	07.9		34.5	153	00.3		50.8	231	01.1		-38.3	227	49.1		
8	182	45.1	332	07.4		35.5	168	02.6		51.0	246	03.0		-38.2	242	51.3		
9	197	47.6	347	06.9		36.6	183	04.8		51.2	261	05.0		-38.2	257	53.6		
10	212	50.1	2	06.4		37.7	198	07.1		51.5	276	07.0		-38.1	272	55.8		
11	227	52.5	17	05.9	-10	38.8	213	09.3	+5	51.7	291	09.0	-21	-38.0	287	58.1	-20	
12	242	55.0	32	05.5	-10	39.9	228	11.5	+5	51.9	306	10.9	-21	-37.9	303	00.3	-20	
13	257	57.5	47	05.0		40.9	243	13.7		52.1	321	12.9		-37.8	318	02.6		
14	272	59.9	62	04.5		42.0	258	16.0		52.4	336	14.9		-37.7	333	04.8		
15	288	02.4	77	04.0		43.1	273	18.2		52.6	351	16.9		-37.7	348	07.1		
16	303	04.9	92	03.5		44.2	288	20.4		52.8	6	18.8		-37.6	3	09.3		
17	318	07.3	107	03.0	-10	45.2	303	22.6	+5	53.1	21	20.8	-21	-37.5	18	11.6	-20	
18	333	09.8	122	02.5	-10	46.3	318	24.9	+5	53.3	36	22.8	-21	-37.4	33	13.8	-20	
19	348	12.3	137	02.0		47.4	333	27.1		53.5	51	24.8		-37.3	48	16.1		
20	3	14.7	152	01.6		48.5	348	29.3		53.8	66	26.7		-37.3	63	18.3		
21	18	17.2	167	01.1		49.5	3	31.5		54.0	81	28.7		-37.2	78	20.6		
22	33	19.6	182	00.6		50.6	18	33.7		54.2	96	30.7		-37.1	93	22.8		
23	48	22.1	197	00.1		51.7	33	36.0		54.5	111	32.7		-37.0	108	25.0		
24	63	24.6	211	59.6	-10	52.8	48	38.2	+5	54.7	126	34.6	-21	-36.9	123	27.3	-20	
Dif.	—		-5		-11		+22		+2		+20		+1		+22			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2				SD: 14'9 Edad: 8 ^d 8												PHE { 4 ^h : 54'6 12 ^h : 54'4 20 ^h : 54'3	
	PMG: 11 ^h 46 ^m 8				PMG: 20 ^h 00 ^m					Rº: 41 ^m								
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.		Náut.	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'		h	m	h	m	h	m	m		
0	183	20.0	-20	35.5	68	15.1	157	-7	49.3	120	60 N	6 35	7 29	8 21	14 26	5	0 33	79
1	198	19.8		36.0	82	49.8	158		37.3	121	58	29	19	8 07	23	8	37	76
2	213	19.6		36.5	97	24.6	158		25.2	121	56	24	11	7 55	21	10	41	73
3	228	19.5		37.0	111	59.4	158		13.1	122	54	19	7 04	45	19	12	45	70
4	243	19.3		37.5	126	34.2	159	-7	00.9	121	52	15	6 57	36	17	14	48	69
5	258	19.1	-20	38.0	141	09.1	159	-6	48.8	122	50	6 10	6 51	7 27	14 15	16	0 51	66
6	273	18.9	-20	38.5	155	44.0	159	-6	36.6	122	45	6 01	6 37	7 10	14 11	20	0 57	63
7	288	18.7		39.0	170	18.9	160		24.4	122	40	5 53	26	6 56	08	23	1 02	59
8	303	18.5		39.5	184	53.9	160	-6	12.2	123	35	45	16	43	05	26	07	56
9	318	18.4		40.0	199	28.9	161	-5	59.9	122	30	38	6 07	33	14 02	29	11	53
10	333	18.2		40.5	214	04.0	160		47.7	123	20	24	5 51	6 14	13 58	33	18	48
11	348	18.0	-20	41.0	228	39.0	162	-5	35.4	123	10 N	5 10	5 36	5 58	13 54	37	1 24	44
12	3	17.8	-20	41.5	243	14.2	161	-5	23.1	123	0	4 55	5 21	5 43	13 50	41	1 29	41
13	18	17.6		42.0	257	49.3	162	-5	10.8	123	10 S	39	5 05	28	47	44	35	37
14	33	17.4		42.5	272	24.5	162	-4	58.5	123	20	4 19	4 47	5 11	43	48	40	34
15	48	17.2		43.0	286	59.7	162		46.2	123	30	3 54	26	4 52	39	52	47	29
16	63	17.1		43.5	301	34.9	163		33.9	124	35	37	4 12	41	36	55	51	26
17	78	16.9	-20	44.0	316	10.2	163	-4	21.5	123	40	3 18	3 57	4 28	13 33	58	1 55	23
18	93	16.7	-20	44.4	330	45.5	163	-4	09.2	124	45	2 52	3 38	4 13	13 30	61	2 00	20
19	108	16.5		44.9	345	20.8	163	-3	56.8	124	50	2 17	13	3 54	26	66	06	16
20	123	16.3		45.4	359	56.1	164		44.4	124	52	1 57	3 01	45	24	68	08	15
21	138	16.1		45.9	14	31.5	164		32.0	124	54	1 32	2 46	35	22	70	11	12
22	153	15.9		46.4	29	06.9	164		19.6	124	56	0 56	30	23	19	73	14	10
23	168	15.7		46.9	43	42.3	164	-3	07.2	124	58	** **	2 09	3 10	13 17	75	2 18	8
24	183	15.6	-20	47.4	58	17.7		-2	54.8		60 S	** **	1 43	2 54	13 14	78	2 22	5
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 19 ^h 43 ^m 1		Mag: -3.9 PMG: 09 ^h 52 ^m				Mag: -1.4 PMG: 20 ^h 42 ^m				Mag: -2.1 PMG: 15 ^h 32 ^m				Mag: +0.6 PMG: 15 ^h 44 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	63	24.6	211	59.6	-10	52.8	48	38.2	+5	54.7	126	34.6	-21	36.9	123	27.3	-20	56.9
1	78	27.0	226	59.1		53.8	63	40.4		55.0	141	36.6		36.9	138	29.5		56.9
2	93	29.5	241	58.6		54.9	78	42.6		55.2	156	38.6		36.8	153	31.8		56.8
3	108	32.0	256	58.1		56.0	93	44.8		55.4	171	40.6		36.7	168	34.0		56.8
4	123	34.4	271	57.6		57.1	108	47.0		55.7	186	42.5		36.6	183	36.3		56.8
5	138	36.9	286	57.1	-10	58.1	123	49.2	+5	55.9	201	44.5	-21	36.5	198	38.5	-20	56.7
6	153	39.4	301	56.6	-10	59.2	138	51.5	+5	56.1	216	46.5	-21	36.4	213	40.8	-20	56.7
7	168	41.8	316	56.2	-11	00.3	153	53.7		56.4	231	48.5		36.4	228	43.0		56.6
8	183	44.3	331	55.7		01.3	168	55.9		56.6	246	50.4		36.3	243	45.3		56.6
9	198	46.8	346	55.2		02.4	183	58.1		56.8	261	52.4		36.2	258	47.5		56.6
10	213	49.2	1	54.7		03.5	199	00.3		57.1	276	54.4		36.1	273	49.7		56.5
11	228	51.7	16	54.2	-11	04.6	214	02.5	+5	57.3	291	56.3	-21	36.0	288	52.0	-20	56.5
12	243	54.1	31	53.7	-11	05.6	229	04.7	+5	57.6	306	58.3	-21	36.0	303	54.2	-20	56.4
13	258	56.6	46	53.2		06.7	244	06.9		57.8	322	00.3		35.9	318	56.5		56.4
14	273	59.1	61	52.7		07.8	259	09.1		58.0	337	02.3		35.8	333	58.7		56.4
15	289	01.5	76	52.2		08.8	274	11.3		58.3	352	04.2		35.7	349	01.0		56.3
16	304	04.0	91	51.7		09.9	289	13.5		58.5	7	06.2		35.6	4	03.2		56.3
17	319	06.5	106	51.2	-11	11.0	304	15.7	+5	58.8	22	08.2	-21	35.5	19	05.4	-20	56.2
18	334	08.9	121	50.7	-11	12.0	319	17.9	+5	59.0	37	10.1	-21	35.5	34	07.7	-20	56.2
19	349	11.4	136	50.2		13.1	334	20.1		59.3	52	12.1		35.4	49	09.9		56.2
20	4	13.9	151	49.7		14.2	349	22.3		59.5	67	14.1		35.3	64	12.2		56.1
21	19	16.3	166	49.2		15.2	4	24.4	+5	59.7	82	16.1		35.2	79	14.4		56.1
22	34	18.8	181	48.7		16.3	19	26.6	+6	00.0	97	18.0		35.1	94	16.7		56.0
23	49	21.2	196	48.2		17.3	34	28.8		00.2	112	20.0		35.0	109	18.9		56.0
24	64	23.7	211	47.7	-11	18.4	49	31.0	+6	00.5	127	22.0	-21	35.0	124	21.1	-20	56.0
Dif.	—		-5		-11		+22		+2		+20		+1		+22			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2			SD: 14'8 Edad: 9'8								PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'1							
	PMG: 11 ^h 47 ^m 1			PMG: 20 ^h 41 ^m Rº: 40 ^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	15.6	-20 47.4	58	17.7	164	-2 54.8	124	60 N	15 11	16 03	16 57	14 31	4	1 52	77			
1	198	15.4	47.9	72	53.1	165	42.4	124	58	25	13	17 03	31	7	53	75			
2	213	15.2	48.3	87	28.6	165	30.0	125	56	37	21	08	31	9	54	72			
3	228	15.0	48.8	102	04.1	165	17.5	124	54	47	29	13	31	11	55	70			
4	243	14.8	49.3	116	39.6	165	-2 05.1	124	52	15 57	36	18	31	13	57	67			
5	258	14.6	-20 49.8	131	15.1	165	-1 52.7	125	50	16 05	16 42	17 22	14 31	15	1 57	66			
6	273	14.4	-20 50.3	145	50.6	165	-1 40.2	124	45	16 23	16 55	17 32	14 31	19	2 00	61			
7	288	14.2	50.7	160	26.1	166	27.8	125	40	37	17 07	40	31	22	01	58			
8	303	14.0	51.2	175	01.7	166	15.3	124	35	16 50	17	48	31	25	03	55			
9	318	13.8	51.7	189	37.3	165	-1 02.9	125	30	17 00	26	17 55	31	28	04	52			
10	333	13.6	52.2	204	12.8	166	-0 50.4	124	20	19	43	18 10	31	32	06	48			
11	348	13.4	-20 52.7	218	48.4	166	-0 38.0	125	10 N	17 35	17 58	18 24	14 31	36	2 08	44			
12	3	13.3	-20 53.1	233	24.0	166	-0 25.5	124	0	17 51	18 13	18 39	14 31	40	2 10	40			
13	18	13.1	53.6	247	59.6	166	13.1	125	10 S	18 06	29	18 55	31	44	12	36			
14	33	12.9	54.1	262	35.2	166	-0 00.6	124	20	23	18 47	19 16	31	48	14	32			
15	48	12.7	54.6	277	10.8	166	+0 11.8	124	30	42	19 09	41	31	52	16	28			
16	63	12.5	55.0	291	46.4	166	24.2	125	35	18 54	23	19 58	31	55	17	26			
17	78	12.3	-20 55.5	306	22.0	167	+0 36.7	124	40	19 07	19 39	20 18	14 31	58	2 18	23			
18	93	12.1	-20 56.0	320	57.7	166	+0 49.1	124	45	19 23	19 58	20 44	14 31	62	2 20	19			
19	108	11.9	56.5	335	33.3	166	+1 01.5	125	50	42	20 24	21 21	32	65	22	15			
20	123	11.7	56.9	350	08.9	166	14.0	124	52	19 51	36	21 41	32	67	23	13			
21	138	11.5	57.4	4	44.5	166	26.4	124	54	20 02	20 51	22 07	32	69	23	12			
22	153	11.3	57.9	19	20.1	167	38.8	124	56	13	21 08	22 47	32	72	24	10			
23	168	11.1	58.4	33	55.8	166	+1 51.2	124	58	27	29	** **	32	74	26	7			
24	183	10.9	-20 58.8	48	31.4		+2 03.6		60 S	20 43	21 57	** **	14 32	77	2 27	4			

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 19 ^h 39 ^m 2		Mag: -3.9 PMG: 09 ^h 53 ^m			Mag: -1.3 PMG: 20 ^h 39 ^m			Mag: -2.1 PMG: 15 ^h 29 ^m			Mag: +0.6 PMG: 15 ^h 40 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	'	°	'
0	64	23.7	211	47.7	-11 18.4	49	31.0	+6 00.5	127	22.0	-21 -35.0	124	21.1	-20 56.0	
1	79	26.2	226	47.2	19.5	64	33.2	00.7	142	23.9	-34.9	139	23.4	55.9	
2	94	28.6	241	46.7	20.5	79	35.4	01.0	157	25.9	-34.8	154	25.6	55.9	
3	109	31.1	256	46.2	21.6	94	37.6	01.2	172	27.9	-34.7	169	27.9	55.8	
4	124	33.6	271	45.7	22.7	109	39.8	01.5	187	29.8	-34.6	184	30.1	55.8	
5	139	36.0	286	45.2	-11 23.7	124	41.9	+6 01.7	202	31.8	-21 -34.5	199	32.4	-20 55.8	
6	154	38.5	301	44.7	-11 24.8	139	44.1	+6 01.9	217	33.8	-21 -34.5	214	34.6	-20 55.7	
7	169	41.0	316	44.2	25.8	154	46.3	02.2	232	35.8	-34.4	229	36.8	55.7	
8	184	43.4	331	43.7	26.9	169	48.5	02.4	247	37.7	-34.3	244	39.1	55.6	
9	199	45.9	346	43.2	28.0	184	50.6	02.7	262	39.7	-34.2	259	41.3	55.6	
10	214	48.4	1	42.7	29.0	199	52.8	02.9	277	41.7	-34.1	274	43.6	55.6	
11	229	50.8	16	42.2	-11 30.1	214	55.0	+6 03.2	292	43.6	-21 -34.0	289	45.8	-20 55.5	
12	244	53.3	31	41.7	-11 31.1	229	57.2	+6 03.4	307	45.6	-21 -34.0	304	48.0	-20 55.5	
13	259	55.7	46	41.2	32.2	244	59.3	03.7	322	47.6	-33.9	319	50.3	55.4	
14	274	58.2	61	40.7	33.3	260	01.5	03.9	337	49.5	-33.8	334	52.5	55.4	
15	290	00.7	76	40.1	34.3	275	03.7	04.2	352	51.5	-33.7	349	54.8	55.4	
16	305	03.1	91	39.6	35.4	290	05.9	04.4	7	53.5	-33.6	4	57.0	55.3	
17	320	05.6	106	39.1	-11 36.4	305	08.0	+6 04.7	22	55.4	-21 -33.5	19	59.3	-20 55.3	
18	335	08.1	121	38.6	-11 37.5	320	10.2	+6 04.9	37	57.4	-21 -33.5	35	01.5	-20 55.2	
19	350	10.5	136	38.1	38.5	335	12.4	05.2	52	59.4	-33.4	50	03.7	55.2	
20	5	13.0	151	37.6	39.6	350	14.5	05.4	68	01.3	-33.3	65	06.0	55.2	
21	20	15.5	166	37.1	40.6	5	16.7	05.7	83	03.3	-33.2	80	08.2	55.1	
22	35	17.9	181	36.6	41.7	20	18.8	05.9	98	05.3	-33.1	95	10.5	55.1	
23	50	20.4	196	36.1	42.8	35	21.0	06.2	113	07.2	-33.0	110	12.7	55.0	
24	65	22.8	211	35.6	-11 43.8	50	23.2	+6 06.4	128	09.2	-21 -33.0	125	14.9	-20 55.0	
Dif.	—		-5	-11		+22	+2		+20	+1		+22			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'2				SD: 14'7					PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'0			Edad: 10 ^d 8			Rº: 41 ^m		
	PMG: 11 ^h 47 ^m 4				PMG: 21 ^h 21 ^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	10.9	-20	58.8	48	31.4	166	+2	03.6	124	60 N	6 38	7 32	8 25			14 35 5	3 09 78
1	198	10.7		59.3	63	07.0	166		16.0	123	58	32	23	8 11			38 8	08 74
2	213	10.5	-20	59.8	77	42.6	166		28.3	124	56	27	14	7 59			40 11	06 73
3	228	10.3	-21	00.2	92	18.2	166		40.7	124	54	22	07	48			42 13	05 70
4	243	10.1		00.7	106	53.8	166	+2	53.1	123	52	17	7 00	39			44 15	04 68
5	258	09.9	-21	01.2	121	29.4	165	+3	05.4	123	50	6 13	6 53	7 30			14 46 17	3 03 66
6	273	09.7	-21	01.6	136	04.9	166	+3	17.7	124	45	6 03	6 40	7 12			14 50 21	3 01 62
7	288	09.5		02.1	150	40.5	166		30.1	123	40	5 55	28	6 58			53 24	2 59 58
8	303	09.3		02.6	165	16.1	165		42.4	123	35	47	18	45			56 27	58 55
9	318	09.1		03.0	179	51.6	165	+3	54.7	122	30	39	6 09	34			14 59 29	56 53
10	333	08.9		03.5	194	27.1	166	+4	06.9	123	20	25	5 52	6 16			15 03 34	54 48
11	348	08.7	-21	03.9	209	02.7	165	+4	19.2	122	10 N	5 11	5 37	5 59			15 07 38	2 52 44
12	3	08.5	-21	04.4	223	38.2	165	+4	31.4	123	0	4 56	5 22	5 44			15 11 41	2 50 41
13	18	08.3		04.9	238	13.7	164		43.7	122	10 S	39	5 06	28			15 44	48 37
14	33	08.1		05.3	252	49.1	165	+4	55.9	122	20	4 19	4 47	5 11			19 48	46 33
15	48	07.9		05.8	267	24.6	164	+5	08.1	121	30	3 53	25	4 52			23 53	44 28
16	63	07.7		06.2	282	00.0	165		20.2	122	35	36	4 12	40			26 56	43 26
17	78	07.5	-21	06.7	296	35.5	164	+5	32.4	121	40	3 16	3 56	4 27			15 29 59	2 41 23
18	93	07.3	-21	07.2	311	10.9	164	+5	44.5	121	45	2 50	3 36	4 11			15 33 62	2 39 20
19	108	07.1		07.6	325	46.3	163	+5	56.6	121	50	2 13	3 11	3 52			37 66	37 16
20	123	06.9		08.1	340	21.6	164	+6	08.7	121	52	1 53	2 58	43			39 68	36 14
21	138	06.7		08.5	354	57.0	163		20.8	121	54	1 27	43	32			41 71	35 12
22	153	06.5		09.0	9	32.3	163		32.9	120	56	0 46	26	21			44 72	34 10
23	168	06.3		09.4	24	07.6	162		44.9	120	58	** **	2 05	3 07			15 46 76	2 33 7
24	183	06.1	-21	09.9	38	42.8		+6	56.9		60 S	** **	1 36	2 51			15 49 79	2 31 5
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: -1.3				Mag: -2.0				Mag: +0.6			
	19 ^h 35 ^m 3		PMG: 09 ^h 54 ^m				PMG: 20 ^h 36 ^m				PMG: 15 ^h 25 ^m				PMG: 15 ^h 37 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	65	22.8	211	35.6	-11	43.8	50	23.2	+6	06.4	128	09.2	-21	33.0	125	14.9	-20	55.0
1	80	25.3	226	35.1		44.9	65	25.3		06.7	143	11.2		32.9	140	17.2		55.0
2	95	27.8	241	34.5		45.9	80	27.5		06.9	158	13.1		32.8	155	19.4		54.9
3	110	30.2	256	34.0		47.0	95	29.6		07.2	173	15.1		32.7	170	21.6		54.9
4	125	32.7	271	33.5		48.0	110	31.8		07.5	188	17.1		32.6	185	23.9		54.8
5	140	35.2	286	33.0	-11	49.1	125	33.9	+6	07.7	203	19.0	-21	32.5	200	26.1	-20	54.8
6	155	37.6	301	32.5	-11	50.1	140	36.1	+6	08.0	218	21.0	-21	32.4	215	28.4	-20	54.7
7	170	40.1	316	32.0		51.2	155	38.3		08.2	233	23.0		32.4	230	30.6		54.7
8	185	42.6	331	31.5		52.2	170	40.4		08.5	248	24.9		32.3	245	32.8		54.7
9	200	45.0	346	30.9		53.3	185	42.6		08.7	263	26.9		32.2	260	35.1		54.6
10	215	47.5	1	30.4		54.3	200	44.7		09.0	278	28.9		32.1	275	37.3		54.6
11	230	50.0	16	29.9	-11	55.4	215	46.9	+6	09.2	293	30.8	-21	32.0	290	39.6	-20	54.5
12	245	52.4	31	29.4	-11	56.4	230	49.0	+6	09.5	308	32.8	-21	31.9	305	41.8	-20	54.5
13	260	54.9	46	28.9		57.5	245	51.1		09.8	323	34.7		31.9	320	44.0		54.5
14	275	57.3	61	28.4		58.5	260	53.3		10.0	338	36.7		31.8	335	46.3		54.4
15	290	59.8	76	27.9	-11	59.5	275	55.4		10.3	353	38.7		31.7	350	48.5		54.4
16	306	02.3	91	27.3	-12	00.6	290	57.6		10.5	8	40.6		31.6	5	50.7		54.3
17	321	04.7	106	26.8	-12	01.6	305	59.7	+6	10.8	23	42.6	-21	31.5	20	53.0	-20	54.3
18	336	07.2	121	26.3	-12	02.7	321	01.9	+6	11.1	38	44.6	-21	31.4	35	55.2	-20	54.3
19	351	09.7	136	25.8		03.7	336	04.0		11.3	53	46.5		31.3	50	57.5		54.2
20	6	12.1	151	25.3		04.8	351	06.1		11.6	68	48.5		31.3	65	59.7		54.2
21	21	14.6	166	24.7		05.8	6	08.3		11.8	83	50.4		31.2	81	01.9		54.1
22	36	17.1	181	24.2		06.9	21	10.4		12.1	98	52.4		31.1	96	04.2		54.1
23	51	19.5	196	23.7		07.9	36	12.5		12.4	113	54.4		31.0	111	06.4		54.0
24	66	22.0	211	23.2	-12	08.9	51	14.7	+6	12.6	128	56.3	-21	30.9	126	08.6	-20	54.0
Dif.	—		-5		-10		+21		+3		+20		+1		+22		0	

UT	SOL			☉ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2			SD: 14'7			PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1											
	PMG: 11 ^h 47 ^m 8			Edad: 11 ^d 8														
	PMG: 22 ^h 02 ^m			R ^o : 43 ^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	183	06.1	-21	09.9	38	42.8	163	+6	56.9	120	60 N	15 08	16 01	16 55	14 40	7	4 27	79
1	198	05.9		10.3	53	18.1	162	+7	08.9	119	58	22	11	17 01	46	10	22	76
2	213	05.7		10.8	67	53.3	162		20.8	119	56	34	19	07	51	12	19	73
3	228	05.5		11.2	82	28.5	161		32.7	119	54	45	27	12	55	15	15	71
4	243	05.3		11.7	97	03.6	162		44.6	119	52	15 55	34	16	14 59	17	12	68
5	258	05.1	-21	12.1	111	38.8	161	+7	56.5	119	50	16 03	16 40	17 21	15 03	18	4 09	66
6	273	04.8	-21	12.6	126	13.9	161	+8	08.4	118	45	16 22	16 54	17 31	15 11	22	4 03	62
7	288	04.6		13.0	140	49.0	160		20.2	117	40	36	17 06	40	17	26	3 57	59
8	303	04.4		13.5	155	24.0	160		31.9	118	35	16 49	17	48	23	29	53	56
9	318	04.2		13.9	169	59.0	160		43.7	117	30	17 00	26	17 55	28	31	49	53
10	333	04.0		14.4	184	34.0	159	+8	55.4	117	20	19	43	18 10	37	35	42	49
11	348	03.8	-21	14.8	199	08.9	159	+9	07.1	117	10 N	17 36	17 58	18 24	15 45	39	3 36	45
12	3	03.6	-21	15.3	213	43.8	159	+9	18.8	116	0	17 51	18 14	18 39	15 52	42	3 31	41
13	18	03.4		15.7	228	18.7	158		30.4	116	10 S	18 07	30	18 57	15 59	46	25	38
14	33	03.2		16.1	242	53.5	158		42.0	115	20	24	18 48	19 17	16 07	50	19	34
15	48	03.0		16.6	257	28.3	158	+9	53.5	116	30	44	19 11	19 43	16	54	12	30
16	63	02.8		17.0	272	03.1	157	+10	05.1	114	35	18 56	25	20 00	22	56	09	27
17	78	02.6	-21	17.5	286	37.8	157	+10	16.5	115	40	19 09	19 41	20 21	16 28	59	3 04	25
18	93	02.3	-21	17.9	301	12.5	157	+10	28.0	114	45	19 25	20 01	20 47	16 35	63	2 59	22
19	108	02.1		18.4	315	47.2	156		39.4	114	50	45	27	21 25	43	67	53	18
20	123	01.9		18.8	330	21.8	155	+10	50.8	113	52	19 54	40	21 46	47	69	50	16
21	138	01.7		19.2	344	56.3	156	+11	02.1	113	54	20 05	20 55	22 14	52	71	47	14
22	153	01.5		19.7	359	30.9	154		13.4	113	56	17	21 13	23 00	16 56	74	44	11
23	168	01.3		20.1	14	05.3	155		24.7	112	58	31	21 35	** ** *	17 02	77	40	9
24	183	01.1	-21	20.5	28	39.8		+11	35.9		60 S	20 48	22 05	** ** *	17 08	80	2 36	6

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG		Mag: -3.9			Mag: -1.3			Mag: -2.0			Mag: +0.6						
	19 ^h 31 ^m 3		PMG: 09 ^h 55 ^m			PMG: 20 ^h 32 ^m			PMG: 15 ^h 22 ^m			PMG: 15 ^h 33 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	66	22.0	211	23.2	-12	08.9	51	14.7	+6	12.6	128	56.3	-21	-30.9	126	08.6	-20	54.0
1	81	24.5	226	22.7		10.0	66	16.8		12.9	143	58.3		-30.8	141	10.9		54.0
2	96	26.9	241	22.1		11.0	81	18.9		13.1	159	00.3		-30.7	156	13.1		53.9
3	111	29.4	256	21.6		12.1	96	21.1		13.4	174	02.2		-30.7	171	15.4		53.9
4	126	31.8	271	21.1		13.1	111	23.2		13.7	189	04.2		-30.6	186	17.6		53.8
5	141	34.3	286	20.6	-12	14.1	126	25.3	+6	13.9	204	06.1	-21	-30.5	201	19.8	-20	53.8
6	156	36.8	301	20.0	-12	15.2	141	27.4	+6	14.2	219	08.1	-21	-30.4	216	22.1	-20	53.8
7	171	39.2	316	19.5		16.2	156	29.6		14.5	234	10.1		-30.3	231	24.3		53.7
8	186	41.7	331	19.0		17.3	171	31.7		14.7	249	12.0		-30.2	246	26.5		53.7
9	201	44.2	346	18.5		18.3	186	33.8		15.0	264	14.0		-30.1	261	28.8		53.6
10	216	46.6	1	17.9		19.3	201	35.9		15.2	279	16.0		-30.1	276	31.0		53.6
11	231	49.1	16	17.4	-12	20.4	216	38.1	+6	15.5	294	17.9	-21	-30.0	291	33.2	-20	53.5
12	246	51.6	31	16.9	-12	21.4	231	40.2	+6	15.8	309	19.9	-21	-29.9	306	35.5	-20	53.5
13	261	54.0	46	16.4		22.4	246	42.3		16.0	324	21.8		-29.8	321	37.7		53.5
14	276	56.5	61	15.8		23.5	261	44.4		16.3	339	23.8		-29.7	336	39.9		53.4
15	291	58.9	76	15.3		24.5	276	46.5		16.6	354	25.8		-29.6	351	42.2		53.4
16	307	01.4	91	14.8		25.5	291	48.6		16.8	9	27.7		-29.5	6	44.4		53.3
17	322	03.9	106	14.3	-12	26.6	306	50.7	+6	17.1	24	29.7	-21	-29.5	21	46.7	-20	53.3
18	337	06.3	121	13.7	-12	27.6	321	52.9	+6	17.4	39	31.6	-21	-29.4	36	48.9	-20	53.3
19	352	08.8	136	13.2		28.6	336	55.0		17.6	54	33.6		-29.3	51	51.1		53.2
20	7	11.3	151	12.7		29.7	351	57.1		17.9	69	35.5		-29.2	66	53.4		53.2
21	22	13.7	166	12.1		30.7	6	59.2		18.2	84	37.5		-29.1	81	55.6		53.1
22	37	16.2	181	11.6		31.7	22	01.3		18.5	99	39.5		-29.0	96	57.8		53.1
23	52	18.7	196	11.1		32.8	37	03.4		18.7	114	41.4		-28.9	112	00.1		53.0
24	67	21.1	211	10.5	-12	33.8	52	05.5	+6	19.0	129	43.4	-21	-28.9	127	02.3	-20	53.0
Dif.	—		-5	-10			+21	+3			+20		+1		+22			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2				PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2													
	PMG: 11 ^h 48 ^m 1				Edad: 12 ^d 8													
	PMG: 22 ^h 45 ^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	183	01.1	-21	20.5	28	39.8	154	+11	35.9	111	60 N	6 42	7 36	8 30	14 47	10 5 46 81		
1	198	00.9		21.0	43	14.2	153		47.0	112	58	35	26	15	14 56	12 38 78		
2	213	00.7		21.4	57	48.5	153	+11	58.2	110	56	30	17	8 02	15 03	16 32 74		
3	228	00.4		21.8	72	22.8	153	+12	09.2	111	54	25	10	7 51	10 18	26 71		
4	243	00.2		22.3	86	57.1	152		20.3	110	52	20	7 02	42	16 20	20 70		
5	258	00.0	-21	22.7	101	31.3	151	+12	31.3	109	50	6 15	6 56	7 33	15 21	23 5 15 68		
6	272	59.8	-21	23.1	116	05.4	152	+12	42.2	109	45	6 05	6 42	7 15	15 33	26 5 05 63		
7	287	59.6		23.6	130	39.6	150	+12	53.1	108	40	5 57	30	7 00	43 30	4 56 60		
8	302	59.4		24.0	145	13.6	150	+13	03.9	109	35	48	20	6 47	52 32	49 57		
9	317	59.2		24.4	159	47.6	150		14.8	107	30	41	6 10	36	15 59	34 42 55		
10	332	58.9		24.9	174	21.6	149		25.5	107	20	26	5 53	17	16 12	38 31 51		
11	347	58.7	-21	25.3	188	55.5	149	+13	36.2	107	10 N	5 12	5 38	6 00	16 24	41 4 21 47		
12	2	58.5	-21	25.7	203	29.4	148	+13	46.9	106	0	4 56	5 22	5 44	16 34	45 4 12 44		
13	17	58.3		26.1	218	03.2	147	+13	57.5	105	10 S	39	5 06	29	45 48	4 03 40		
14	32	58.1		26.6	232	36.9	147	+14	08.0	105	20	4 19	4 47	5 11	16 57	51 3 53 37		
15	47	57.9		27.0	247	10.6	147		18.5	104	30	3 52	25	4 51	17 10	56 42 33		
16	62	57.6		27.4	261	44.3	146		28.9	104	35	35	4 11	40	18 58	36 30		
17	77	57.4	-21	27.8	276	17.9	145	+14	39.3	103	40	3 15	3 55	4 26	17 27	61 3 29 27		
18	92	57.2	-21	28.3	290	51.4	145	+14	49.6	103	45	2 48	3 35	4 10	17 38	63 3 21 24		
19	107	57.0		28.7	305	24.9	145	+14	59.9	102	50	2 10	3 09	3 50	50 68	11 20		
20	122	56.8		29.1	319	58.4	143	+15	10.1	102	52	1 49	2 56	41	17 56	70 06 18		
21	137	56.6		29.5	334	31.7	143		20.3	101	54	1 21	41	30	18 03	72 3 01 16		
22	152	56.3		30.0	349	05.0	143		30.4	100	56	0 35	23	18	10 75	2 55 14		
23	167	56.1		30.4	3	38.3	142		40.4	100	58	** **	2 00	3 04	18 19	78 2 49 11		
24	182	55.9	-21	30.8	18	11.5		+15	50.4		60 S	** **	1 30	2 47	18 28	82 2 42 8		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 27 ^m 4		Mag: -3.9 PMG: 09 ^h 56 ^m				Mag: -1.2 PMG: 20 ^h 29 ^m				Mag: -2.0 PMG: 15 ^h 19 ^m				Mag: +0.6 PMG: 15 ^h 30 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	67	21.1	211	10.5	-12	33.8	52	05.5	+6	19.0	129	43.4	-21	28.9	127	02.3	-20	53.0
1	82	23.6	226	10.0		34.8	67	07.6		19.3	144	45.3		28.8	142	04.5		53.0
2	97	26.1	241	09.5		35.9	82	09.7		19.5	159	47.3		28.7	157	06.8		52.9
3	112	28.5	256	08.9		36.9	97	11.8		19.8	174	49.3		28.6	172	09.0		52.9
4	127	31.0	271	08.4		37.9	112	13.9		20.1	189	51.2		28.5	187	11.2		52.8
5	142	33.4	286	07.9	-12	38.9	127	16.0	+6	20.3	204	53.2	-21	28.4	202	13.5	-20	52.8
6	157	35.9	301	07.3	-12	40.0	142	18.1	+6	20.6	219	55.1	-21	28.3	217	15.7	-20	52.8
7	172	38.4	316	06.8		41.0	157	20.2		20.9	234	57.1		28.2	232	17.9		52.7
8	187	40.8	331	06.3		42.0	172	22.3		21.2	249	59.0		28.2	247	20.2		52.7
9	202	43.3	346	05.7		43.1	187	24.4		21.4	265	01.0		28.1	262	22.4		52.6
10	217	45.8	1	05.2		44.1	202	26.5		21.7	280	03.0		28.0	277	24.6		52.6
11	232	48.2	16	04.7	-12	45.1	217	28.6	+6	22.0	295	04.9	-21	27.9	292	26.9	-20	52.5
12	247	50.7	31	04.1	-12	46.1	232	30.7	+6	22.2	310	06.9	-21	27.8	307	29.1	-20	52.5
13	262	53.2	46	03.6		47.2	247	32.8		22.5	325	08.8		27.7	322	31.3		52.5
14	277	55.6	61	03.1		48.2	262	34.9		22.8	340	10.8		27.6	337	33.6		52.4
15	292	58.1	76	02.5		49.2	277	37.0		23.1	355	12.7		27.5	352	35.8		52.4
16	308	00.6	91	02.0		50.2	292	39.1		23.3	10	14.7		27.5	7	38.0		52.3
17	323	03.0	106	01.4	-12	51.2	307	41.1	+6	23.6	25	16.7	-21	27.4	22	40.3	-20	52.3
18	338	05.5	121	00.9	-12	52.3	322	43.2	+6	23.9	40	18.6	-21	27.3	37	42.5	-20	52.2
19	353	07.9	136	00.4		53.3	337	45.3		24.2	55	20.6		27.2	52	44.7		52.2
20	8	10.4	150	59.8		54.3	352	47.4		24.5	70	22.5		27.1	67	47.0		52.2
21	23	12.9	165	59.3		55.3	7	49.5		24.7	85	24.5		27.0	82	49.2		52.1
22	38	15.3	180	58.7		56.3	22	51.6		25.0	100	26.4		26.9	97	51.4		52.1
23	53	17.8	195	58.2		57.4	37	53.7		25.3	115	28.4		26.8	112	53.6		52.0
24	68	20.3	210	57.6	-12	58.4	52	55.7	+6	25.6	130	30.3	-21	26.8	127	55.9	-20	52.0
Dif.	—		-5		-10		+21		+3		+20		+1		+22		0	

UT	SOL				○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 48 ^m 4				SD: 14'8 Edad: 13 ^d 8 PHE { 4^h: 54'3 12^h: 54'3 20^h: 54'4													
	PMG: 23 ^h 30 ^m				R ^o : 49 ^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	182	55.9	-21	30.8	18	11.5	142	+15	50.4	99	60 N	15 05	15 59	16 53	14 57	14	7 07	82
1	197	55.7		31.2	32	44.7	140	+16	00.3	98	58	20	16 09	16 59	15 08	18	6 56	78
2	212	55.5		31.6	47	17.7	141		10.1	98	56	32	18	17 05	19 21		46	75
3	227	55.2		32.1	61	50.8	139		19.9	97	54	43	25	10	28 24		37	72
4	242	55.0		32.5	76	23.7	139		29.6	97	52	15 53	33	15	36 26		30	69
5	257	54.8	-21	32.9	90	56.6	139	+16	39.3	96	50	16 02	16 39	17 20	15 44	27	6 23	68
6	272	54.6	-21	33.3	105	29.5	138	+16	48.9	95	45	16 21	16 54	17 30	15 59	32	6 08	64
7	287	54.4		33.7	120	02.3	137	+16	58.4	95	40	36	17 06	39	16 13	34	5 56	61
8	302	54.1		34.1	134	35.0	136	+17	07.9	93	35	16 49	16	47	24 36		46	58
9	317	53.9		34.5	149	07.6	136		17.2	94	30	17 00	26	17 55	33 39		37	56
10	332	53.7		35.0	163	40.2	136		26.6	92	20	19	43	18 10	16 50	42	22	52
11	347	53.5	-21	35.4	178	12.8	135	+17	35.8	92	10 N	17 36	17 59	18 25	17 05	45	5 08	49
12	2	53.2	-21	35.8	192	45.3	134	+17	45.0	91	0	17 52	18 14	18 40	17 19	48	4 56	46
13	17	53.0		36.2	207	17.7	133	+17	54.1	90	10 S	18 08	31	18 58	33 50		43	43
14	32	52.8		36.6	221	50.0	133	+18	03.1	89	20	26	18 50	19 19	17 48	53	30	40
15	47	52.6		37.0	236	22.3	132		12.0	89	30	46	19 13	19 45	18 06	56	15	36
16	62	52.4		37.4	250	54.5	132		20.9	88	35	18 58	27	20 02	16 58		4 06	34
17	77	52.1	-21	37.8	265	26.7	131	+18	29.7	88	40	19 11	19 43	20 23	18 28	60	3 56	32
18	92	51.9	-21	38.2	279	58.8	130	+18	38.5	86	45	19 28	20 04	20 51	18 41	64	3 45	28
19	107	51.7		38.6	294	30.8	130		47.1	86	50	48	30	21 29	18 58	68	31	24
20	122	51.5		39.0	309	02.8	129	+18	55.7	85	52	19 58	43	21 51	19 06	70	24	23
21	137	51.2		39.4	323	34.7	128	+19	04.2	84	54	20 08	20 59	22 21	15 72		17	20
22	152	51.0		39.8	338	06.5	128		12.6	83	56	21	21 17	23 15	25 74		09	18
23	167	50.8		40.2	352	38.3	127		20.9	82	58	35	21 40	** **	37 77		3 00	15
24	182	50.6	-21	40.6	7	10.0		+19	29.1		60 S	20 52	22 12	** **	19 50	82	2 50	11

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 23 ^m 5		Mag: -3.9 PMG: 09 ^h 57 ^m				Mag: -1.2 PMG: 20 ^h 25 ^m				Mag: -2.0 PMG: 15 ^h 16 ^m				Mag: +0.6 PMG: 15 ^h 26 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	68	20.3	210	57.6	-12	58.4	52	55.7	+6	25.6	130	30.3	-21	-26.8	127	55.9	-20	52.0
1	83	22.7	225	57.1	-12	59.4	67	57.8		25.8	145	32.3		-26.7	142	58.1		51.9
2	98	25.2	240	56.6	-13	00.4	82	59.9		26.1	160	34.2		-26.6	158	00.3		51.9
3	113	27.7	255	56.0		01.4	98	02.0		26.4	175	36.2		-26.5	173	02.6		51.9
4	128	30.1	270	55.5		02.5	113	04.0		26.7	190	38.2		-26.4	188	04.8		51.8
5	143	32.6	285	54.9	-13	03.5	128	06.1	+6	27.0	205	40.1	-21	-26.3	203	07.0	-20	51.8
6	158	35.1	300	54.4	-13	04.5	143	08.2	+6	27.2	220	42.1	-21	-26.2	218	09.3	-20	51.7
7	173	37.5	315	53.8		05.5	158	10.3		27.5	235	44.0		-26.1	233	11.5		51.7
8	188	40.0	330	53.3		06.5	173	12.3		27.8	250	46.0		-26.0	248	13.7		51.6
9	203	42.4	345	52.7		07.5	188	14.4		28.1	265	47.9		-26.0	263	16.0		51.6
10	218	44.9	0	52.2		08.5	203	16.5		28.4	280	49.9		-25.9	278	18.2		51.6
11	233	47.4	15	51.7	-13	09.6	218	18.5	+6	28.6	295	51.8	-21	-25.8	293	20.4	-20	51.5
12	248	49.8	30	51.1	-13	10.6	233	20.6	+6	28.9	310	53.8	-21	-25.7	308	22.6	-20	51.5
13	263	52.3	45	50.6		11.6	248	22.7		29.2	325	55.7		-25.6	323	24.9		51.4
14	278	54.8	60	50.0		12.6	263	24.7		29.5	340	57.7		-25.5	338	27.1		51.4
15	293	57.2	75	49.5		13.6	278	26.8		29.8	355	59.6		-25.4	353	29.3		51.3
16	308	59.7	90	48.9		14.6	293	28.9		30.0	11	01.6		-25.3	8	31.6		51.3
17	324	02.2	105	48.4	-13	15.6	308	30.9	+6	30.3	26	03.5	-21	-25.3	23	33.8	-20	51.3
18	339	04.6	120	47.8	-13	16.6	323	33.0	+6	30.6	41	05.5	-21	-25.2	38	36.0	-20	51.2
19	354	07.1	135	47.3		17.6	338	35.0		30.9	56	07.5		-25.1	53	38.3		51.2
20	9	09.5	150	46.7		18.6	353	37.1		31.2	71	09.4		-25.0	68	40.5		51.1
21	24	12.0	165	46.1		19.6	8	39.2		31.5	86	11.4		-24.9	83	42.7		51.1
22	39	14.5	180	45.6		20.7	23	41.2		31.7	101	13.3		-24.8	98	44.9		51.0
23	54	16.9	195	45.0		21.7	38	43.3		32.0	116	15.3		-24.7	113	47.2		51.0
24	69	19.4	210	44.5	-13	22.7	53	45.3	+6	32.3	131	17.2	-21	-24.6	128	49.4	-20	51.0
Dif.	—		-5		-10		+21		+3		+20		+1		+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 8				SD: 14'8 Edad: 14 ^d 8 PMG: ** ** 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	182	50.6	-21	40.6	7	10.0	126	+19	29.1	82	60 N	6 45	7 40	8 34	15 11	22	8 29	79
1	197	50.3		41.0	21	41.6	126		37.3	81	58	38	29	19	26	27	14	75
2	212	50.1		41.5	36	13.2	125		45.4	80	56	33	20	8 06	40	29	8 01	72
3	227	49.9		41.9	50	44.7	124	+19	53.4	79	54	27	12	7 55	15 52	31	7 49	70
4	242	49.6		42.2	65	16.1	124	+20	01.3	78	52	22	7 05	45	16 02	33	39	68
5	257	49.4	-21	42.6	79	47.5	123	+20	09.1	77	50	6 18	6 58	7 36	16 11	35	7 31	66
6	272	49.2	-21	43.0	94	18.8	123	+20	16.8	77	45	6 07	6 44	7 17	16 31	38	7 12	63
7	287	49.0		43.4	108	50.1	121		24.5	75	40	5 58	32	7 02	16 47	40	6 57	60
8	302	48.7		43.8	123	21.2	122		32.0	75	35	50	21	6 49	17 00	42	44	58
9	317	48.5		44.2	137	52.4	120		39.5	74	30	42	6 12	38	12	44	33	56
10	332	48.3		44.6	152	23.4	120		46.9	73	20	27	5 54	18	32	46	6 14	53
11	347	48.0	-21	45.0	166	54.4	119	+20	54.2	71	10 N	5 13	5 39	6 01	17 50	48	5 57	51
12	2	47.8	-21	45.4	181	25.3	119	+21	01.3	71	0	4 57	5 23	5 45	18 07	50	5 42	49
13	17	47.6		45.8	195	56.2	117		08.4	70	10 S	39	5 06	29	23	52	26	47
14	32	47.4		46.2	210	26.9	118		15.4	69	20	4 19	4 47	5 12	18 41	54	5 10	44
15	47	47.1		46.6	224	57.7	116		22.3	69	30	3 52	24	4 51	19 02	56	4 51	41
16	62	46.9		47.0	239	28.3	116		29.2	67	35	35	4 10	39	14	58	40	39
17	77	46.7	-21	47.4	253	58.9	115	+21	35.9	66	40	3 14	3 54	4 26	19 28	60	4 28	37
18	92	46.4	-21	47.8	268	29.4	115	+21	42.5	65	45	2 46	3 33	4 09	19 45	62	4 13	34
19	107	46.2		48.2	282	59.9	114		49.0	64	50	2 07	3 07	3 49	20 06	64	3 55	31
20	122	46.0		48.5	297	30.3	114	+21	55.4	63	52	1 46	2 54	39	16	65	47	29
21	137	45.7		48.9	312	00.7	112	+22	01.7	62	54	1 16	38	28	27	67	37	27
22	152	45.5		49.3	326	30.9	112		07.9	61	56	0 21	2 20	16	39	70	27	24
23	167	45.3		49.7	341	01.1	112		14.0	61	58	** ** *	1 56	3 02	20 54	73	3 15	21
24	182	45.0	-21	50.1	355	31.3		+22	20.1		60 S	** ** *	1 24	2 44	21 12	76	3 01	17
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 19 ^m 5		Mag: -3.9 PMG: 09 ^h 57 ^m			Mag: -1.2 PMG: 20 ^h 22 ^m			Mag: -2.0 PMG: 15 ^h 13 ^m			Mag: +0.6 PMG: 15 ^h 22 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	69	19.4	210	44.5	-13	22.7	53	45.3	+6	32.3	131	17.2	-21	24.6	128	49.4	-20	51.0
1	84	21.9	225	43.9		23.7	68	47.4		32.6	146	19.2		24.5	143	51.6		50.9
2	99	24.3	240	43.4		24.7	83	49.4		32.9	161	21.1		24.4	158	53.9		50.9
3	114	26.8	255	42.8		25.7	98	51.5		33.2	176	23.1		24.4	173	56.1		50.8
4	129	29.3	270	42.3		26.7	113	53.5		33.5	191	25.0		24.3	188	58.3		50.8
5	144	31.7	285	41.7	-13	27.7	128	55.6	+6	33.7	206	27.0	-21	24.2	204	00.5	-20	50.7
6	159	34.2	300	41.2	-13	28.7	143	57.6	+6	34.0	221	28.9	-21	24.1	219	02.8	-20	50.7
7	174	36.7	315	40.6		29.7	158	59.7		34.3	236	30.9		24.0	234	05.0		50.6
8	189	39.1	330	40.0		30.7	174	01.7		34.6	251	32.8		23.9	249	07.2		50.6
9	204	41.6	345	39.5		31.7	189	03.8		34.9	266	34.8		23.8	264	09.4		50.6
10	219	44.0	0	38.9		32.7	204	05.8		35.2	281	36.7		23.7	279	11.7		50.5
11	234	46.5	15	38.4	-13	33.7	219	07.9	+6	35.5	296	38.7	-21	23.6	294	13.9	-20	50.5
12	249	49.0	30	37.8	-13	34.7	234	09.9	+6	35.8	311	40.6	-21	23.6	309	16.1	-20	50.4
13	264	51.4	45	37.2		35.7	249	11.9		36.1	326	42.6		23.5	324	18.4		50.4
14	279	53.9	60	36.7		36.7	264	14.0		36.3	341	44.5		23.4	339	20.6		50.3
15	294	56.4	75	36.1		37.7	279	16.0		36.6	356	46.5		23.3	354	22.8		50.3
16	309	58.8	90	35.6		38.7	294	18.1		36.9	11	48.4		23.2	9	25.0		50.3
17	325	01.3	105	35.0	-13	39.7	309	20.1	+6	37.2	26	50.4	-21	23.1	24	27.3	-20	50.2
18	340	03.8	120	34.4	-13	40.7	324	22.1	+6	37.5	41	52.3	-21	23.0	39	29.5	-20	50.2
19	355	06.2	135	33.9		41.7	339	24.2		37.8	56	54.3		22.9	54	31.7		50.1
20	10	08.7	150	33.3		42.7	354	26.2		38.1	71	56.2		22.8	69	33.9		50.1
21	25	11.2	165	32.8		43.7	9	28.2		38.4	86	58.1		22.7	84	36.2		50.0
22	40	13.6	180	32.2		44.7	24	30.3		38.7	102	00.1		22.7	99	38.4		50.0
23	55	16.1	195	31.6		45.6	39	32.3		39.0	117	02.0		22.6	114	40.6		49.9
24	70	18.5	210	31.1	-13	46.6	54	34.3	+6	39.3	132	04.0	-21	22.5	129	42.8	-20	49.9
Dif.	—		-6		-10		+20		+3		+19		+1		+22			

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 49 ^m 2			SD: 14'9 Edad: 15 ^d 8 PHE { 4 ^h : 54'8 12 ^h : 55'0 20 ^h : 55'1 PMG: 00 ^h 19 ^m Rº: 50 ^m														
	hG ☉	Dec		hG ☾	Dif.	Dec		Dif.				Civil	Náut.	Hora	Rº	Hora	Rº	
	°	'	°	'	°	'	°	'	h			m	h	m	h	m	m	h
h																		
0	182	45.0	-21	50.1	355	31.3	111	+22	20.1	59	60 N	15 02	15 57	16 51	15 33	37	9 48	71
1	197	44.8		50.5	10	01.4	110		26.0	58	58	17	16 07	16 58	15 53	39	29	68
2	212	44.6		50.9	24	31.4	110		31.8	57	56	31	16	17 04	16 09	41	9 13	66
3	227	44.3		51.2	39	01.4	109		37.5	55	54	42	24	09	23	43	8 59	64
4	242	44.1		51.6	53	31.3	108		43.0	55	52	15 52	32	14	35	44	47	63
5	257	43.9	-21	52.0	68	01.1	108	+22	48.5	54	50	16 01	16 38	17 19	16 46	45	8 37	62
6	272	43.6	-21	52.4	82	30.9	107	+22	53.9	53	45	16 20	16 53	17 30	17 09	46	8 15	59
7	287	43.4		52.8	97	00.6	107	+22	59.2	51	40	35	17 05	39	27	48	7 57	58
8	302	43.2		53.1	111	30.3	106	+23	04.3	51	35	16 48	16	47	42	49	42	57
9	317	42.9		53.5	125	59.9	106		09.4	49	30	17 00	26	17 55	17 56	49	29	56
10	332	42.7		53.9	140	29.5	105		14.3	48	20	19	43	18 10	18 18	51	7 07	54
11	347	42.5	-21	54.3	154	59.0	104	+23	19.1	47	10 N	17 37	17 59	18 25	18 38	52	6 48	53
12	2	42.2	-21	54.6	169	28.4	104	+23	23.8	46	0	17 53	18 15	18 41	18 57	52	6 31	51
13	17	42.0		55.0	183	57.8	103		28.4	45	10 S	18 09	32	18 59	19 15	54	6 13	50
14	32	41.8		55.4	198	27.1	103		32.9	44	20	27	18 51	19 20	35	54	5 54	48
15	47	41.5		55.8	212	56.4	102		37.3	42	30	47	19 14	19 47	19 58	56	32	46
16	62	41.3		56.1	227	25.6	102		41.5	41	35	18 59	29	20 04	20 12	56	19	46
17	77	41.0	-21	56.5	241	54.8	101	+23	45.6	41	40	19 13	19 45	20 26	20 28	56	5 05	44
18	92	40.8	-21	56.9	256	23.9	100	+23	49.7	39	45	19 30	20 06	20 54	20 47	57	4 47	42
19	107	40.6		57.3	270	52.9	101		53.6	37	50	19 51	33	21 34	21 10	59	26	39
20	122	40.3		57.6	285	22.0	99	+23	57.3	37	52	20 00	20 47	21 56	21	60	16	38
21	137	40.1		58.0	299	50.9	99	+24	01.0	35	54	12	21 03	22 27	34	60	4 04	37
22	152	39.8		58.4	314	19.8	99		04.5	35	56	24	22	23 40	21 49	61	3 51	35
23	167	39.6		58.7	328	48.7	98		08.0	33	58	39	21 46	** ** *	22 07	62	36	32
24	182	39.4	-21	59.1	343	17.5		+24	11.3		60 S	20 57	22 20	** ** *	22 28	64	3 18	28
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 15 ^m 6		Mag: -3.9 PMG: 09 ^h 58 ^m				Mag: -1.1 PMG: 20 ^h 19 ^m				Mag: -2.0 PMG: 15 ^h 10 ^m				Mag: +0.6 PMG: 15 ^h 19 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	70	18.5	210	31.1	-13	46.6	54	34.3	+6	39.3	132	04.0	-21	-22.5	129	42.8	-20	49.9
1	85	21.0	225	30.5		47.6	69	36.3		39.6	147	05.9		-22.4	144	45.1		49.9
2	100	23.5	240	29.9		48.6	84	38.4		39.8	162	07.9		-22.3	159	47.3		49.8
3	115	25.9	255	29.4		49.6	99	40.4		40.1	177	09.8		-22.2	174	49.5		49.8
4	130	28.4	270	28.8		50.6	114	42.4		40.4	192	11.8		-22.1	189	51.8		49.7
5	145	30.9	285	28.2	-13	51.6	129	44.4	+6	40.7	207	13.7	-21	-22.0	204	54.0	-20	49.7
6	160	33.3	300	27.7	-13	52.6	144	46.5	+6	41.0	222	15.7	-21	-21.9	219	56.2	-20	49.6
7	175	35.8	315	27.1		53.6	159	48.5		41.3	237	17.6		-21.8	234	58.4		49.6
8	190	38.3	330	26.5		54.6	174	50.5		41.6	252	19.6		-21.7	250	00.7		49.6
9	205	40.7	345	26.0		55.5	189	52.5		41.9	267	21.5		-21.7	265	02.9		49.5
10	220	43.2	0	25.4		56.5	204	54.5		42.2	282	23.5		-21.6	280	05.1		49.5
11	235	45.7	15	24.8	-13	57.5	219	56.6	+6	42.5	297	25.4	-21	-21.5	295	07.3	-20	49.4
12	250	48.1	30	24.2	-13	58.5	234	58.6	+6	42.8	312	27.3	-21	-21.4	310	09.6	-20	49.4
13	265	50.6	45	23.7	-13	59.5	250	00.6		43.1	327	29.3		-21.3	325	11.8		49.3
14	280	53.0	60	23.1	-14	00.5	265	02.6		43.4	342	31.2		-21.2	340	14.0		49.3
15	295	55.5	75	22.5		01.5	280	04.6		43.7	357	33.2		-21.1	355	16.2		49.2
16	310	58.0	90	22.0		02.4	295	06.6		44.0	12	35.1		-21.0	10	18.4		49.2
17	326	00.4	105	21.4	-14	03.4	310	08.7	+6	44.3	27	37.1	-21	-20.9	25	20.7	-20	49.2
18	341	02.9	120	20.8	-14	04.4	325	10.7	+6	44.6	42	39.0	-21	-20.8	40	22.9	-20	49.1
19	356	05.4	135	20.2		05.4	340	12.7		44.9	57	41.0		-20.7	55	25.1		49.1
20	11	07.8	150	19.7		06.4	355	14.7		45.2	72	42.9		-20.6	70	27.3		49.0
21	26	10.3	165	19.1		07.4	10	16.7		45.5	87	44.9		-20.6	85	29.6		49.0
22	41	12.8	180	18.5		08.3	25	18.7		45.8	102	46.8		-20.5	100	31.8		48.9
23	56	15.2	195	17.9		09.3	40	20.7		46.1	117	48.7		-20.4	115	34.0		48.9
24	71	17.7	210	17.4	-14	10.3	55	22.7	+6	46.4	132	50.7	-21	-20.3	130	36.2	-20	48.8
Dif.	—		-6		-10		+20		+3		+19		+1		+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 6			SD: 15'0 Edad: 16 ^d 8 PHE { 4 ^h : 55'2 12 ^h : 55'3 20 ^h : 55'5 PMG: 01 ^h 09 ^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
0	182	39.4	-21	59.1	343	17.5	98	+24	11.3	32	60 N	6 48	7 43	8 38	16 10	56	10 59	54
1	197	39.1		59.5	357	46.3	97		14.5	30	58	41	33	22	32	56	37	54
2	212	38.9	-21	59.8	12	15.0	97		17.5	29	56	35	23	8 09	16 50	56	19	54
3	227	38.6	-22	00.2	26	43.7	96		20.4	29	54	30	15	7 58	17 06	55	10 03	55
4	242	38.4		00.6	41	12.3	96		23.3	26	52	25	08	48	19	55	9 50	54
5	257	38.2	-22	00.9	55	40.9	95	+24	25.9	26	50	6 20	7 01	7 38	17 31	55	9 39	54
6	272	37.9	-22	01.3	70	09.4	95	+24	28.5	25	45	6 09	6 46	7 19	17 55	55	9 14	55
7	287	37.7		01.7	84	37.9	95		31.0	23	40	6 00	34	7 04	18 15	54	8 55	54
8	302	37.4		02.0	99	06.4	94		33.3	22	35	5 52	23	6 51	31	54	39	54
9	317	37.2		02.4	113	34.8	94		35.5	20	30	44	6 13	39	18 45	54	25	54
10	332	37.0		02.7	128	03.2	94		37.5	20	20	28	5 56	19	19 09	54	8 01	54
11	347	36.7	-22	03.1	142	31.6	93	+24	39.5	18	10 N	5 13	5 40	6 02	19 30	53	7 41	53
12	2	36.5	-22	03.5	156	59.9	93	+24	41.3	16	0	4 58	5 24	5 46	19 49	53	7 22	53
13	17	36.2		03.8	171	28.2	92		42.9	16	10 S	40	5 07	29	20 09	53	7 03	52
14	32	36.0		04.2	185	56.4	92		44.5	14	20	4 19	4 47	5 12	29	53	6 42	52
15	47	35.7		04.5	200	24.6	92		45.9	13	30	3 51	24	4 51	20 54	52	18	52
16	62	35.5		04.9	214	52.8	92		47.2	12	35	34	4 10	39	21 08	51	6 05	51
17	77	35.3	-22	05.2	229	21.0	91	+24	48.4	10	40	3 13	3 53	4 25	21 24	51	5 49	51
18	92	35.0	-22	05.6	243	49.1	91	+24	49.4	9	45	2 45	3 32	4 08	21 44	51	5 29	51
19	107	34.8		05.9	258	17.2	90		50.3	8	50	2 05	3 05	3 48	22 09	49	5 05	50
20	122	34.5		06.3	272	45.2	91		51.1	6	52	1 42	2 52	38	21	49	4 54	49
21	137	34.3		06.6	287	13.3	90		51.7	5	54	1 11	36	27	34	49	41	49
22	152	34.0		07.0	301	41.3	90		52.2	4	56	0 -06	2 17	3 14	22 50	48	26	48
23	167	33.8		07.3	316	09.3	89		52.6	3	58	** **	1 52	2 59	23 09	47	4 08	47
24	182	33.5	-22	07.7	330	37.2		+24	52.9		60 S	** **	1 19	2 41	23 32	45	3 46	46

UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO						
	PMG: 19 ^h 11 ^m 7		Mag: -3.9 PMG: 09 ^h 59 ^m			Mag: -1.1 PMG: 20 ^h 16 ^m			Mag: -2.0 PMG: 15 ^h 07 ^m				Mag: +0.6 PMG: 15 ^h 15 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	71	17.7	210	17.4	-14	10.3	55	22.7	+6	46.4	132	50.7	-21	20.3	130	36.2	-20	48.8	
1	86	20.1	225	16.8		11.3	70	24.7		46.7	147	52.6		20.2	145	38.5		48.8	
2	101	22.6	240	16.2		12.2	85	26.7		47.0	162	54.6		20.1	160	40.7		48.7	
3	116	25.1	255	15.6		13.2	100	28.7		47.3	177	56.5		20.0	175	42.9		48.7	
4	131	27.5	270	15.0		14.2	115	30.7		47.6	192	58.5		19.9	190	45.1		48.7	
5	146	30.0	285	14.5	-14	15.2	130	32.7	+6	47.9	208	00.4	-21	19.8	205	47.4	-20	48.6	
6	161	32.5	300	13.9	-14	16.2	145	34.7	+6	48.2	223	02.3	-21	19.7	220	49.6	-20	48.6	
7	176	34.9	315	13.3		17.1	160	36.7		48.5	238	04.3		19.6	235	51.8		48.5	
8	191	37.4	330	12.7		18.1	175	38.7		48.8	253	06.2		19.5	250	54.0		48.5	
9	206	39.9	345	12.1		19.1	190	40.7		49.1	268	08.2		19.5	265	56.2		48.4	
10	221	42.3	0	11.6		20.0	205	42.7		49.4	283	10.1		19.4	280	58.5		48.4	
11	236	44.8	15	11.0	-14	21.0	220	44.7	+6	49.7	298	12.1	-21	19.3	296	00.7	-20	48.3	
12	251	47.3	30	10.4	-14	22.0	235	46.7	+6	50.0	313	14.0	-21	19.2	311	02.9	-20	48.3	
13	266	49.7	45	09.8		23.0	250	48.7		50.3	328	15.9		19.1	326	05.1		48.3	
14	281	52.2	60	09.2		23.9	265	50.7		50.6	343	17.9		19.0	341	07.4		48.2	
15	296	54.6	75	08.6		24.9	280	52.6		50.9	358	19.8		18.9	356	09.6		48.2	
16	311	57.1	90	08.1		25.9	295	54.6		51.2	13	21.8		18.8	11	11.8		48.1	
17	326	59.6	105	07.5	-14	26.8	310	56.6	+6	51.5	28	23.7	-21	18.7	26	14.0	-20	48.1	
18	342	02.0	120	06.9	-14	27.8	325	58.6	+6	51.8	43	25.7	-21	18.6	41	16.2	-20	48.0	
19	357	04.5	135	06.3		28.8	341	00.6		52.1	58	27.6		18.5	56	18.5		48.0	
20	12	07.0	150	05.7		29.7	356	02.6		52.4	73	29.5		18.4	71	20.7		47.9	
21	27	09.4	165	05.1		30.7	11	04.6		52.8	88	31.5		18.3	86	22.9		47.9	
22	42	11.9	180	04.5		31.7	26	06.5		53.1	103	33.4		18.2	101	25.1		47.9	
23	57	14.4	195	04.0		32.6	41	08.5		53.4	118	35.4		18.2	116	27.3		47.8	
24	72	16.8	210	03.4	-14	33.6	56	10.5	+6	53.7	133	37.3	-21	18.1	131	29.6	-20	47.8	
Dif.	—		-6	-10			+20	+3			+19	+1			+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 0			SD: 15'1 Edad: 17 ^d 8		PHE { 4 ^h : 55'6 12 ^h : 55'8 20 ^h : 56'0		PMG: 02 ^h 02 ^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	182	33.5	-22	07.7	330	37.2	90	+24	52.9	1	60 N	15 00	15 55	16 50	17 06	74	11 53 37	
1	197	33.3		08.0	345	05.2	89		53.0	0	58	16	16 05	16 57	28 71		31 40	
2	212	33.0		08.4	359	33.1	89		53.0	2	56	29	15	17 03	17 46	69	11 13 42	
3	227	32.8		08.7	14	01.0	89		52.8	3	54	41	23	08	18 01	68	10 58 43	
4	242	32.6		09.1	28	28.9	88		52.5	4	52	15 51	31	14	14	66	44 45	
5	257	32.3	-22	09.4	42	56.7	89	+24	52.1	5	50	16 00	16 37	17 18	18 26	65	10 33 45	
6	272	32.1	-22	09.8	57	24.6	88	+24	51.6	7	45	16 19	16 52	17 29	18 50	63	10 09 47	
7	287	31.8		10.1	71	52.4	88		50.9	8	40	35	17 05	39	19 09	61	9 49 48	
8	302	31.6		10.5	86	20.2	88		50.1	10	35	16 48	16	47	25	60	33 49	
9	317	31.3		10.8	100	48.0	88		49.1	10	30	17 00	26	17 55	19 39	59	9 19 50	
10	332	31.1		11.2	115	15.8	88		48.1	13	20	20	17 43	18 11	20 03	56	8 55 51	
11	347	30.8	-22	11.5	129	43.6	87	+24	46.8	13	10 N	17 37	18 00	18 26	20 23	55	8 34 53	
12	2	30.6	-22	11.8	144	11.3	88	+24	45.5	15	0	17 54	18 16	18 42	20 42	54	8 15 53	
13	17	30.3		12.2	158	39.1	88		44.0	16	10 S	18 10	33	19 00	21 02	51	7 55 55	
14	32	30.1		12.5	173	06.9	87		42.4	18	20	28	18 52	21	22	50	34 56	
15	47	29.8		12.9	187	34.6	87		40.6	19	30	18 49	19 16	19 49	46	48	7 10 57	
16	62	29.6		13.2	202	02.3	88		38.7	20	35	19 01	30	20 06	21 59	47	6 56 57	
17	77	29.3	-22	13.5	216	30.1	87	+24	36.7	21	40	19 15	19 48	20 28	22 15	46	6 40 58	
18	92	29.1	-22	13.9	230	57.8	88	+24	34.6	23	45	19 32	20 09	20 57	22 35	43	6 20 59	
19	107	28.8		14.2	245	25.6	87		32.3	24	50	19 53	36	21 37	22 58	41	5 55 60	
20	122	28.6		14.5	259	53.3	87		29.9	26	52	20 03	20 50	22 01	23 10	39	43 61	
21	137	28.3		14.9	274	21.0	88		27.3	27	54	15	21 06	22 34	23	37	30 61	
22	152	28.1		15.2	288	48.8	87		24.6	28	56	28	26	** **	38	35	5 14 63	
23	167	27.8		15.5	303	16.5	87		21.8	30	58	20 43	21 51	** **	23 56	32	4 55 64	
24	182	27.6	-22	15.9	317	44.2		+24	18.8		60 S	21 01	22 27	** **	** **	**	4 32 66	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 07 ^m 7		Mag: -3.9 PMG: 10 ^h 00 ^m				Mag: -1.1 PMG: 20 ^h 13 ^m				Mag: -2.0 PMG: 15 ^h 04 ^m				Mag: +0.6 PMG: 15 ^h 12 ^m			
	hG ♂		hG ♀	dec.			hG ♂	dec.			hG ♀	dec.			hG ♀	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	72	16.8	210	03.4	-14	33.6	56	10.5	+6	53.7	133	37.3	-21	-18.1	131	29.6	-20	47.8
1	87	19.3	225	02.8		34.6	71	12.5		54.0	148	39.2		-18.0	146	31.8		47.7
2	102	21.8	240	02.2		35.5	86	14.5		54.3	163	41.2		-17.9	161	34.0		47.7
3	117	24.2	255	01.6		36.5	101	16.4		54.6	178	43.1		-17.8	176	36.2		47.6
4	132	26.7	270	01.0		37.5	116	18.4		54.9	193	45.1		-17.7	191	38.4		47.6
5	147	29.1	285	00.4	-14	38.4	131	20.4	+6	55.2	208	47.0	-21	-17.6	206	40.7	-20	47.5
6	162	31.6	299	59.8	-14	39.4	146	22.4	+6	55.5	223	48.9	-21	-17.5	221	42.9	-20	47.5
7	177	34.1	314	59.2		40.3	161	24.3		55.8	238	50.9		-17.4	236	45.1		47.4
8	192	36.5	329	58.6		41.3	176	26.3		56.1	253	52.8		-17.3	251	47.3		47.4
9	207	39.0	344	58.0		42.3	191	28.3		56.5	268	54.8		-17.2	266	49.5		47.4
10	222	41.5	359	57.5		43.2	206	30.3		56.8	283	56.7		-17.1	281	51.8		47.3
11	237	43.9	14	56.9	-14	44.2	221	32.2	+6	57.1	298	58.6	-21	-17.0	296	54.0	-20	47.3
12	252	46.4	29	56.3	-14	45.1	236	34.2	+6	57.4	314	00.6	-21	-16.9	311	56.2	-20	47.2
13	267	48.9	44	55.7		46.1	251	36.2		57.7	329	02.5		-16.8	326	58.4		47.2
14	282	51.3	59	55.1		47.0	266	38.1		58.0	344	04.5		-16.8	342	00.6		47.1
15	297	53.8	74	54.5		48.0	281	40.1		58.3	359	06.4		-16.7	357	02.9		47.1
16	312	56.3	89	53.9		49.0	296	42.1		58.6	14	08.3		-16.6	12	05.1		47.0
17	327	58.7	104	53.3	-14	49.9	311	44.0	+6	58.9	29	10.3	-21	-16.5	27	07.3	-20	47.0
18	343	01.2	119	52.7	-14	50.9	326	46.0	+6	59.3	44	12.2	-21	-16.4	42	09.5	-20	46.9
19	358	03.6	134	52.1		51.8	341	47.9		59.6	59	14.1		-16.3	57	11.7		46.9
20	13	06.1	149	51.5		52.8	356	49.9	+6	59.9	74	16.1		-16.2	72	14.0		46.8
21	28	08.6	164	50.9		53.7	11	51.9	+7	00.2	89	18.0		-16.1	87	16.2		46.8
22	43	11.0	179	50.3		54.7	26	53.8		00.5	104	20.0		-16.0	102	18.4		46.8
23	58	13.5	194	49.7		55.6	41	55.8		00.8	119	21.9		-15.9	117	20.6		46.7
24	73	16.0	209	49.1	-14	56.6	56	57.7	+7	01.1	134	23.8	-21	-15.8	132	22.8	-20	46.7
Dif.	—		-6		-10		+20		+3		+19		+1		+22			

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 50 ^m 4				SD: 15'3 Edad: 18 ^d 8		PHE { 4 ^h : 56'1 12 ^h : 56'3 20 ^h : 56'5		Rº: 54 ^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	182	27.6	-22	15.9	317	44.2	88	+24 18.8	31	60 N	6 51	7 46	8 41	18 20	87		12 30	23	
1	197	27.3		16.2	332	12.0	87	15.7	32	58	44	36	26	39	82		12 11	27	
2	212	27.1		16.5	346	39.7	88	12.5	33	56	38	26	12	18 55	79		11 55	30	
3	227	26.8		16.9	1	07.5	88	09.2	35	54	32	18	8 00	19 09	75		41	32	
4	242	26.5		17.2	15	35.3	87	05.7	37	52	27	10	7 50	20	74		29	34	
5	257	26.3	-22	17.5	30	03.0	88	+24 02.0	37	50	6 22	7 03	7 41	19 31	72		11 18	36	
6	272	26.0	-22	17.8	44	30.8	88	+23 58.3	39	45	6 11	6 48	7 22	19 53	68		10 56	39	
7	287	25.8		18.2	58	58.6	88	54.4	40	40	6 02	36	7 06	20 10	65		37	43	
8	302	25.5		18.5	73	26.4	88	50.4	42	35	5 53	25	6 52	25	63		22	44	
9	317	25.3		18.8	87	54.2	89	46.2	43	30	45	6 15	41	38	61		10 09	46	
10	332	25.0		19.1	102	22.1	88	41.9	44	20	30	5 57	21	20 59	58		9 46	49	
11	347	24.8	-22	19.5	116	49.9	89	+23 37.5	45	10 N	5 14	5 41	6 03	21 18	55		9 27	50	
12	2	24.5	-22	19.8	131	17.8	89	+23 33.0	47	0	4 58	5 24	5 47	21 36	52		9 08	53	
13	17	24.3		20.1	145	45.7	89	28.3	48	10 S	40	5 07	30	21 53	50		8 50	55	
14	32	24.0		20.4	160	13.6	89	23.5	49	20	4 19	4 48	5 12	22 12	47		30	57	
15	47	23.7		20.8	174	41.5	89	18.6	51	30	3 51	24	4 51	34	43		8 07	60	
16	62	23.5		21.1	189	09.4	90	13.5	52	35	34	4 10	39	22 46	42		7 53	62	
17	77	23.2	-22	21.4	203	37.4	89	+23 08.3	53	40	3 12	3 52	4 25	23 01	39		7 38	63	
18	92	23.0	-22	21.7	218	05.3	90	+23 03.0	55	45	2 43	3 31	4 08	23 18	36		7 19	65	
19	107	22.7		22.0	232	33.3	91	+22 57.5	56	50	2 03	3 04	3 47	39	32		6 55	69	
20	122	22.5		22.3	247	01.4	90	51.9	57	52	1 39	2 50	37	23 49	31		44	70	
21	137	22.2		22.7	261	29.4	91	46.2	58	54	1 06	34	25	** ** *	**		31	72	
22	152	21.9		23.0	275	57.5	91	40.4	60	56	** ** *	2 14	3 12	** ** *	**		6 17	74	
23	167	21.7		23.3	290	25.6	91	34.4	61	58	** ** *	1 49	2 57	** ** *	**		5 59	78	
24	182	21.4	-22	23.6	304	53.7		+22 28.3		60 S	** ** *	1 13	2 39	0 17	29		5 38	81	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 19 ^h 03 ^m 8		Mag: -3.9 PMG: 10 ^h 01 ^m				Mag: -1.0 PMG: 20 ^h 10 ^m				Mag: -2.0 PMG: 15 ^h 00 ^m				Mag: +0.6 PMG: 15 ^h 08 ^m				
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	73	16.0	209	49.1	-14	56.6	56	57.7	+7 01.1	134	23.8	-21 15.8	132	22.8	-20 46.7				
1	88	18.4	224	48.5		57.5	71	59.7	01.4	149	25.8	15.7	147	25.0	46.6				
2	103	20.9	239	47.9		58.5	87	01.7	01.8	164	27.7	15.6	162	27.3	46.6				
3	118	23.4	254	47.3	-14	59.4	102	03.6	02.1	179	29.6	15.5	177	29.5	46.5				
4	133	25.8	269	46.7	-15	00.4	117	05.6	02.4	194	31.6	15.4	192	31.7	46.5				
5	148	28.3	284	46.1	-15	01.3	132	07.5	+7 02.7	209	33.5	-21 15.3	207	33.9	-20 46.4				
6	163	30.8	299	45.5	-15	02.3	147	09.5	+7 03.0	224	35.5	-21 15.2	222	36.1	-20 46.4				
7	178	33.2	314	44.9		03.2	162	11.4	03.3	239	37.4	15.1	237	38.4	46.3				
8	193	35.7	329	44.3		04.1	177	13.4	03.7	254	39.3	15.1	252	40.6	46.3				
9	208	38.1	344	43.7		05.1	192	15.3	04.0	269	41.3	15.0	267	42.8	46.3				
10	223	40.6	359	43.1		06.0	207	17.3	04.3	284	43.2	14.9	282	45.0	46.2				
11	238	43.1	14	42.5	-15	07.0	222	19.2	+7 04.6	299	45.1	-21 14.8	297	47.2	-20 46.2				
12	253	45.5	29	41.9	-15	07.9	237	21.1	+7 04.9	314	47.1	-21 14.7	312	49.4	-20 46.1				
13	268	48.0	44	41.2		08.9	252	23.1	05.2	329	49.0	14.6	327	51.7	46.1				
14	283	50.5	59	40.6		09.8	267	25.0	05.6	344	50.9	14.5	342	53.9	46.0				
15	298	52.9	74	40.0		10.7	282	27.0	05.9	359	52.9	14.4	357	56.1	46.0				
16	313	55.4	89	39.4		11.7	297	28.9	06.2	14	54.8	14.3	12	58.3	45.9				
17	328	57.9	104	38.8	-15	12.6	312	30.9	+7 06.5	29	56.7	-21 14.2	28	00.5	-20 45.9				
18	344	00.3	119	38.2	-15	13.6	327	32.8	+7 06.8	44	58.7	-21 14.1	43	02.7	-20 45.8				
19	359	02.8	134	37.6		14.5	342	34.7	07.2	60	00.6	14.0	58	05.0	45.8				
20	14	05.3	149	37.0		15.4	357	36.7	07.5	75	02.5	13.9	73	07.2	45.7				
21	29	07.7	164	36.4		16.4	12	38.6	07.8	90	04.5	13.8	88	09.4	45.7				
22	44	10.2	179	35.8		17.3	27	40.5	08.1	105	06.4	13.7	103	11.6	45.7				
23	59	12.6	194	35.2		18.2	42	42.5	08.4	120	08.4	13.6	118	13.8	45.6				
24	74	15.1	209	34.5	-15	19.2	57	44.4	+7 08.8	135	10.3	-21 13.5	133	16.0	-20 45.6				
Dif.	—		-6		-9		+19		+3	+19		+1	+22						

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2			SD: 15'4 Edad: 19'8														
	PMG: 11 ^h 50 ^m 8			PMG: 03 ^h 49 ^m								PHE { 4 ^h : 56'7 12 ^h : 56'8 20 ^h : 57'0						
	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	21.4	-22	23.6	304	53.7	91	+22	28.3	62	60 N	14 58	15 53	16 49	19 47	91	12 53	14
1	197	21.2		23.9	319	21.8	92		22.1	63	58	15 14	16 04	16 56	20 01	87	38	18
2	212	20.9		24.2	333	50.0	92		15.8	65	56	28	14	17 02	14	83	25	22
3	227	20.7		24.5	348	18.2	92		09.3	66	54	39	22	08	24	81	13	25
4	242	20.4		24.9	2	46.4	92	+22	02.7	67	52	50	30	13	34	78	12 03	27
5	257	20.1	-22	25.2	17	14.6	93	+21	56.0	68	50	15 59	16 37	17 18	20 43	75	11 54	29
6	272	19.9	-22	25.5	31	42.9	93	+21	49.2	70	45	16 19	16 52	17 29	21 01	71	11 35	33
7	287	19.6		25.8	46	11.2	93		42.2	70	40	35	17 05	39	15	68	20	36
8	302	19.4		26.1	60	39.5	94		35.2	72	35	16 48	16	47	28	65	11 06	40
9	317	19.1		26.4	75	07.9	94		28.0	74	30	17 00	26	17 56	39	62	10 55	41
10	332	18.8		26.7	89	36.3	94		20.6	74	20	20	17 44	18 11	21 57	58	35	45
11	347	18.6	-22	27.0	104	04.7	95	+21	13.2	76	10 N	17 38	18 00	18 27	22 13	55	10 17	49
12	2	18.3	-22	27.3	118	33.2	95	+21	05.6	76	0	17 54	18 17	18 43	22 28	51	10 01	52
13	17	18.1		27.6	133	01.7	95	+20	58.0	78	10 S	18 11	34	19 01	43	48	9 45	54
14	32	17.8		27.9	147	30.2	95		50.2	80	20	29	18 54	23	22 59	44	27	58
15	47	17.5		28.2	161	58.7	96		42.2	80	30	18 50	19 18	19 51	23 17	40	9 07	61
16	62	17.3		28.5	176	27.3	97		34.2	81	35	19 03	32	20 08	28	37	8 55	64
17	77	17.0	-22	28.8	190	56.0	96	+20	26.1	83	40	19 17	19 50	20 30	23 40	34	8 41	67
18	92	16.7	-22	29.1	205	24.6	97	+20	17.8	84	45	19 34	20 11	20 59	23 54	31	8 24	70
19	107	16.5		29.4	219	53.3	97		09.4	85	50	19 56	39	21 41	***	***	8 04	74
20	122	16.2		29.7	234	22.0	98	+20	00.9	86	52	20 06	20 53	22 05	***	***	7 54	77
21	137	16.0		30.0	248	50.8	98	+19	52.3	87	54	17	21 10	22 40	0 00	29	43	79
22	152	15.7		30.3	263	19.6	98		43.6	88	56	31	30	***	13	26	31	82
23	167	15.4		30.6	277	48.4	98		34.8	90	58	20 46	21 56	***	28	22	7 17	85
24	182	15.2	-22	30.9	292	17.2		+19	25.8		60 S	21 05	22 34	***	0 46	17	6 59	90
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 59 ^m 9		Mag: -3.9 PMG: 10 ^h 02 ^m			Mag: -1.0 PMG: 20 ^h 06 ^m			Mag: -2.0 PMG: 14 ^h 57 ^m			Mag: +0.6 PMG: 15 ^h 05 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	74	15.1	209	34.5	-15	19.2	57	44.4	+7	08.8	135	10.3	-21	-13.5	133	16.0	-20	45.6
1	89	17.6	224	33.9		20.1	72	46.3		09.1	150	12.2		-13.4	148	18.3		45.5
2	104	20.0	239	33.3		21.0	87	48.3		09.4	165	14.2		-13.3	163	20.5		45.5
3	119	22.5	254	32.7		22.0	102	50.2		09.7	180	16.1		-13.2	178	22.7		45.4
4	134	25.0	269	32.1		22.9	117	52.1		10.0	195	18.0		-13.1	193	24.9		45.4
5	149	27.4	284	31.5	-15	23.8	132	54.1	+7	10.4	210	20.0	-21	-13.1	208	27.1	-20	45.3
6	164	29.9	299	30.9	-15	24.8	147	56.0	+7	10.7	225	21.9	-21	-13.0	223	29.3	-20	45.3
7	179	32.4	314	30.2		25.7	162	57.9		11.0	240	23.8		-12.9	238	31.5		45.2
8	194	34.8	329	29.6		26.6	177	59.8		11.3	255	25.8		-12.8	253	33.8		45.2
9	209	37.3	344	29.0		27.5	193	01.8		11.7	270	27.7		-12.7	268	36.0		45.1
10	224	39.7	359	28.4		28.5	208	03.7		12.0	285	29.6		-12.6	283	38.2		45.1
11	239	42.2	14	27.8	-15	29.4	223	05.6	+7	12.3	300	31.6	-21	-12.5	298	40.4	-20	45.0
12	254	44.7	29	27.2	-15	30.3	238	07.5	+7	12.6	315	33.5	-21	-12.4	313	42.6	-20	45.0
13	269	47.1	44	26.5		31.3	253	09.5		13.0	330	35.4		-12.3	328	44.8		45.0
14	284	49.6	59	25.9		32.2	268	11.4		13.3	345	37.3		-12.2	343	47.0		44.9
15	299	52.1	74	25.3		33.1	283	13.3		13.6	0	39.3		-12.1	358	49.3		44.9
16	314	54.5	89	24.7		34.0	298	15.2		13.9	15	41.2		-12.0	13	51.5		44.8
17	329	57.0	104	24.1	-15	34.9	313	17.1	+7	14.3	30	43.1	-21	-11.9	28	53.7	-20	44.8
18	344	59.5	119	23.4	-15	35.9	328	19.1	+7	14.6	45	45.1	-21	-11.8	43	55.9	-20	44.7
19	0	01.9	134	22.8		36.8	343	21.0		14.9	60	47.0		-11.7	58	58.1		44.7
20	15	04.4	149	22.2		37.7	358	22.9		15.2	75	48.9		-11.6	74	00.3		44.6
21	30	06.9	164	21.6		38.6	13	24.8		15.6	90	50.9		-11.5	89	02.5		44.6
22	45	09.3	179	20.9		39.6	28	26.7		15.9	105	52.8		-11.4	104	04.8		44.5
23	60	11.8	194	20.3		40.5	43	28.6		16.2	120	54.7		-11.3	119	07.0		44.5
24	75	14.2	209	19.7	-15	41.4	58	30.5	+7	16.5	135	56.7	-21	-11.2	134	09.2	-20	44.4
Dif.	—		-6		-9		+19		+3		+19		+1		+22		0	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 51 ^m 2				SD: 15'6 Edad: 20 ^d 8 PMG: 04 ^h 41 ^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	h m m			
0	182	15.2	-22	30.9	292	17.2	99	+19 25.8	90	60 N	6 53	7 49	8 45	21 18	93	13 07	10	
1	197	14.9		31.2	306	46.1	99		16.8	58	47	38	29	28	89	12 56	14	
2	212	14.6		31.5	321	15.0	100	+19	07.6	56	40	29	15	37	86	47	16	
3	227	14.4		31.8	335	44.0	100	+18	58.4	54	35	20	8 03	45	83	38	20	
4	242	14.1		32.1	350	13.0	100		49.0	52	29	12	7 53	52	80	30	22	
5	257	13.8	-22	32.4	4	42.0	101	+18	39.5	50	6 24	7 05	7 43	21 58	78	12 23	25	
6	272	13.6	-22	32.7	19	11.1	101	+18	29.9	45	6 13	6 50	7 24	22 12	73	12 08	29	
7	287	13.3		33.0	33	40.2	101		20.2	40	6 04	37	7 08	23	69	11 56	32	
8	302	13.0		33.3	48	09.3	102		10.4	35	5 55	26	6 54	33	65	46	35	
9	317	12.8		33.5	62	38.5	102	+18	00.5	30	46	6 16	42	41	63	36	38	
10	332	12.5		33.8	77	07.7	102	+17	50.5	20	31	5 58	22	22 55	58	20	43	
11	347	12.2	-22	34.1	91	36.9	103	+17	40.4	10 N	5 15	5 42	6 04	23 08	53	11 06	47	
12	2	12.0	-22	34.4	106	06.2	103	+17	30.2	0	4 59	5 25	5 47	23 19	50	10 53	50	
13	17	11.7		34.7	120	35.5	103		19.9	10 S	41	5 08	31	31	46	39	54	
14	32	11.4		35.0	135	04.8	104	+17	09.5	20	4 19	4 48	5 12	43	42	25	58	
15	47	11.2		35.3	149	34.2	104	+16	58.9	30	3 51	24	4 51	23 57	37	10 08	63	
16	62	10.9		35.5	164	03.6	104		48.3	35	33	4 10	39	** ** *	**	9 59	65	
17	77	10.6	-22	35.8	178	33.0	105	+16	37.6	40	3 11	3 52	4 25	** ** *	**	9 48	68	
18	92	10.4	-22	36.1	193	02.5	105	+16	26.8	45	2 42	3 31	4 07	** ** *	**	9 34	73	
19	107	10.1		36.4	207	32.0	105		15.9	50	2 01	3 03	3 46	0 11	27	18	77	
20	122	09.8		36.7	222	01.5	106	+16	04.9	52	1 36	2 49	36	20	24	11	79	
21	137	09.6		36.9	236	31.1	106	+15	53.8	54	1 01	32	24	29	21	9 02	82	
22	152	09.3		37.2	251	00.7	106		42.7	56	** ** *	2 12	3 11	39	19	8 53	85	
23	167	09.0		37.5	265	30.3	107		31.4	58	** ** *	1 46	2 55	0 50	16	8 42	88	
24	182	08.8	-22	37.8	280	00.0		+15	20.0	60 S	** ** *	1 08	2 37	1 03	12	8 29	93	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 55 ^m 9		Mag: -3.9 PMG: 10 ^h 03 ^m				Mag: -1.0 PMG: 20 ^h 03 ^m				Mag: -2.0 PMG: 14 ^h 54 ^m				Mag: +0.6 PMG: 15 ^h 01 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	75	14.2	209	19.7	-15	41.4	58	30.5	+7 16.5	135	56.7	-21 11.2	134	09.2	-20	44.4		
1	90	16.7	224	19.1		42.3	73	32.4	16.9	150	58.6	11.1	149	11.4		44.4		
2	105	19.2	239	18.4		43.2	88	34.4	17.2	166	00.5	11.0	164	13.6		44.3		
3	120	21.6	254	17.8		44.1	103	36.3	17.5	181	02.5	10.9	179	15.8		44.3		
4	135	24.1	269	17.2		45.1	118	38.2	17.9	196	04.4	10.8	194	18.0		44.2		
5	150	26.6	284	16.6	-15	46.0	133	40.1	+7 18.2	211	06.3	-21 10.7	209	20.3	-20	44.2		
6	165	29.0	299	15.9	-15	46.9	148	42.0	+7 18.5	226	08.2	-21 10.6	224	22.5	-20	44.2		
7	180	31.5	314	15.3		47.8	163	43.9	18.8	241	10.2	10.5	239	24.7		44.1		
8	195	34.0	329	14.7		48.7	178	45.8	19.2	256	12.1	10.4	254	26.9		44.1		
9	210	36.4	344	14.0		49.6	193	47.7	19.5	271	14.0	10.3	269	29.1		44.0		
10	225	38.9	359	13.4		50.5	208	49.6	19.8	286	16.0	10.3	284	31.3		44.0		
11	240	41.4	14	12.8	-15	51.4	223	51.5	+7 20.2	301	17.9	-21 10.2	299	33.5	-20	43.9		
12	255	43.8	29	12.2	-15	52.4	238	53.4	+7 20.5	316	19.8	-21 10.1	314	35.7	-20	43.9		
13	270	46.3	44	11.5		53.3	253	55.3	20.8	331	21.7	10.0	329	38.0		43.8		
14	285	48.7	59	10.9		54.2	268	57.2	21.2	346	23.7	09.9	344	40.2		43.8		
15	300	51.2	74	10.3		55.1	283	59.1	21.5	1	25.6	09.8	359	42.4		43.7		
16	315	53.7	89	09.6		56.0	299	01.0	21.8	16	27.5	09.7	14	44.6		43.7		
17	330	56.1	104	09.0	-15	56.9	314	02.9	+7 22.1	31	29.5	-21 09.6	29	46.8	-20	43.6		
18	345	58.6	119	08.4	-15	57.8	329	04.8	+7 22.5	46	31.4	-21 09.5	44	49.0	-20	43.6		
19	1	01.1	134	07.7		58.7	344	06.7	22.8	61	33.3	09.4	59	51.2		43.5		
20	16	03.5	149	07.1	-15	59.6	359	08.6	23.1	76	35.2	09.3	74	53.4		43.5		
21	31	06.0	164	06.5	-16	00.5	14	10.4	23.5	91	37.2	09.2	89	55.6		43.4		
22	46	08.5	179	05.8		01.4	29	12.3	23.8	106	39.1	09.1	104	57.9		43.4		
23	61	10.9	194	05.2		02.3	44	14.2	24.1	121	41.0	09.0	120	00.1		43.3		
24	76	13.4	209	04.5	-16	03.2	59	16.1	+7 24.5	136	43.0	-21 08.9	135	02.3	-20	43.3		
Dif.	—		-6				+19				+19				+22			

UT	SOL			 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 51 ^m 6			SD: 15'7 Edad: 21 ^d 8 PHE { 4 ^h : 57'9 12 ^h : 58'1 20 ^h : 58'3 PMG: 05 ^h 31 ^m Rº: 50 ^m						Civil		Náut.	Hora	Rº	Hora	Rº
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	08.8	-22	280	00.0	107	+15	20.0	114	60 N	14 56	15 52	16 48	22 51	94	13 17
1	197	08.5		294	29.7	107	+15	08.6	116	58	15 13	16 03	16 55	22 57	90	10 11
2	212	08.2		308	59.4	108	+14	57.0	116	56	27	13	17 02	23 03	87	13 03
3	227	08.0		323	29.2	107		45.4	117	54	39	22	07	08 84		12 58
4	242	07.7		337	58.9	108		33.7	118	52	49	29	13	12 82		52 19
5	257	07.4	-22	352	28.7	109	+14	21.9	119	50	15 58	16 36	17 18	23 16	79	12 48
6	272	07.1	-22	6	58.6	108	+14	10.0	120	45	16 18	16 52	17 29	23 25	74	12 37
7	287	06.9		21	28.4	109	+13	58.0	120	40	35	17 05	39	32 70		28 30
8	302	06.6		35	58.3	109		46.0	122	35	16 48	16	48	38 67		21 33
9	317	06.3		50	28.2	110		33.8	122	30	17 00	26	17 56	44 63		14 36
10	332	06.1		64	58.2	109		21.6	123	20	21	17 44	18 12	23 53	58	12 03
11	347	05.8	-22	79	28.1	110	+13	09.3	124	10 N	17 38	18 01	18 27	** ** *	**	11 53
12	2	05.5	-22	93	58.1	110	+12	56.9	124	0	17 55	18 18	18 44	** ** *	**	11 43
13	17	05.2		108	28.1	111		44.5	126	10 S	18 12	35	19 02	** ** *	**	33 54
14	32	05.0		122	58.2	110		31.9	126	20	31	18 55	24	** ** *	**	23 58
15	47	04.7		137	28.2	111		19.3	127	30	18 52	19 19	19 52	** ** *	**	11 63
16	62	04.4		151	58.3	111	+12	06.6	127	35	19 05	34	20 10	0 05	34	11 04
17	77	04.1	-22	166	28.4	111	+11	53.9	129	40	19 19	19 52	20 33	0 14	31	10 56
18	92	03.9	-22	180	58.5	112	+11	41.0	129	45	19 36	20 13	21 02	0 25	27	10 47
19	107	03.6		195	28.7	111		28.1	129	50	19 58	42	21 45	38 22		35 79
20	122	03.3		209	58.8	112		15.2	131	52	20 08	20 56	22 10	44 20		30 81
21	137	03.1		224	29.0	112	+11	02.1	131	54	20	21 13	22 47	50 18		24 83
22	152	02.8		238	59.2	112	+10	49.0	132	56	34	21 34	** ** *	0 58	15	18 86
23	167	02.5		253	29.4	113		35.8	132	58	20 49	22 00	** ** *	1 06	12	10 90
24	182	02.2	-22	267	59.7		+10	22.6		60 S	21 09	22 41	** ** *	1 15	9	10 02
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO			
	PMG: 18 ^h 52 ^m 0		Mag: -3.9 PMG: 10 ^h 04 ^m			Mag: -0.9 PMG: 20 ^h 00 ^m			Mag: -2.0 PMG: 14 ^h 51 ^m				Mag: +0.6 PMG: 14 ^h 58 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.			
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	'
0	76	13.4	209	04.5	-16	03.2	59	16.1	+7	24.5	136	43.0	-21	-08.9	135	02.3
1	91	15.9	224	03.9		04.1	74	18.0		24.8	151	44.9		-08.8	150	04.5
2	106	18.3	239	03.3		05.0	89	19.9		25.1	166	46.8		-08.7	165	06.7
3	121	20.8	254	02.6		05.9	104	21.8		25.5	181	48.7		-08.6	180	08.9
4	136	23.2	269	02.0		06.8	119	23.7		25.8	196	50.7		-08.5	195	11.1
5	151	25.7	284	01.4	-16	07.7	134	25.5	+7	26.2	211	52.6	-21	-08.4	210	13.3
6	166	28.2	299	00.7	-16	08.6	149	27.4	+7	26.5	226	54.5	-21	-08.3	225	15.5
7	181	30.6	314	00.1		09.5	164	29.3		26.8	241	56.4		-08.2	240	17.8
8	196	33.1	328	59.4		10.4	179	31.2		27.2	256	58.4		-08.1	255	20.0
9	211	35.6	343	58.8		11.3	194	33.1		27.5	272	00.3		-08.0	270	22.2
10	226	38.0	358	58.2		12.2	209	34.9		27.8	287	02.2		-07.9	285	24.4
11	241	40.5	13	57.5	-16	13.1	224	36.8	+7	28.2	302	04.2	-21	-07.8	300	26.6
12	256	43.0	28	56.9	-16	14.0	239	38.7	+7	28.5	317	06.1	-21	-07.7	315	28.8
13	271	45.4	43	56.2		14.9	254	40.6		28.8	332	08.0		-07.6	330	31.0
14	286	47.9	58	55.6		15.8	269	42.5		29.2	347	09.9		-07.5	345	33.2
15	301	50.3	73	54.9		16.7	284	44.3		29.5	2	11.9		-07.4	0	35.4
16	316	52.8	88	54.3		17.6	299	46.2		29.9	17	13.8		-07.3	15	37.6
17	331	55.3	103	53.6	-16	18.4	314	48.1	+7	30.2	32	15.7	-21	-07.2	30	39.8
18	346	57.7	118	53.0	-16	19.3	329	50.0	+7	30.5	47	17.6	-21	-07.1	45	42.1
19	2	00.2	133	52.3		20.2	344	51.8		30.9	62	19.6		-07.0	60	44.3
20	17	02.7	148	51.7		21.1	359	53.7		31.2	77	21.5		-06.9	75	46.5
21	32	05.1	163	51.1		22.0	14	55.6		31.5	92	23.4		-06.8	90	48.7
22	47	07.6	178	50.4		22.9	29	57.4		31.9	107	25.3		-06.7	105	50.9
23	62	10.1	193	49.8		23.8	44	59.3		32.2	122	27.3		-06.6	120	53.1
24	77	12.5	208	49.1	-16	24.7	60	01.2	+7	32.6	137	29.2	-21	-06.5	135	55.3
Dif.	—		-6		-9		+19		+3		+19		+1		+22	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2				SD: 15'9 Edad: 22 ^d 8												PHE { 4 ^h : 58'5 12 ^h : 58'8 20 ^h : 59'0	
	PMG: 11 ^h 52 ^m 1				PMG: 06 ^h 21 ^m												Rº: 49 ^m	
	hG ☉	Dec			hG ☾	Dif.	Dec	Dif.										
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	182	02.2	-22	44.2	267	59.7	112	+10	22.6	134	60 N	6 56	7 52	8 48	** ** *	13 25	6	
1	197	02.0		44.5	282	29.9	113	+10	09.2	134	58	49	41	32	** ** *	21	9	
2	212	01.7		44.7	297	00.2	112	+9	55.8	134	56	43	31	18	** ** *	17	13	
3	227	01.4		45.0	311	30.4	113		42.4	135	54	37	23	8 06	** ** *	14	15	
4	242	01.1		45.2	326	00.7	113		28.9	136	52	31	15	7 55	** ** *	11	18	
5	257	00.9	-22	45.5	340	31.0	113	+9	15.3	136	50	6 26	7 08	7 46	** ** *	13 09	19	
6	272	00.6	-22	45.7	355	01.3	113	+9	01.7	137	45	6 15	6 52	7 26	** ** *	13 03	24	
7	287	00.3		46.0	9	31.6	114	+8	48.0	138	40	6 05	39	7 09	** ** *	12 58	28	
8	302	00.0		46.3	24	02.0	113		34.2	138	35	5 56	28	6 56	** ** *	54	31	
9	316	59.7		46.5	38	32.3	114		20.4	138	30	48	6 18	44	** ** *	50	35	
10	331	59.5		46.8	53	02.7	113	+8	06.6	140	20	32	5 59	23	** ** *	44	40	
11	346	59.2	-22	47.0	67	33.0	114	+7	52.6	139	10 N	5 16	5 43	6 05	0 01	54	12 38	44
12	1	58.9	-22	47.3	82	03.4	113	+7	38.7	141	0	5 00	5 26	5 48	0 09	49	12 32	49
13	16	58.6		47.5	96	33.7	114		24.6	140	10 S	4 41	5 08	31	17	44	27	53
14	31	58.4		47.8	111	04.1	113	+7	10.6	142	20	4 19	4 48	5 13	25	40	21	58
15	46	58.1		48.0	125	34.4	114	+6	56.4	141	30	3 51	24	4 52	34	35	14	64
16	61	57.8		48.2	140	04.8	114		42.3	143	35	33	4 10	39	39	32	10	67
17	76	57.5	-22	48.5	154	35.2	113	+6	28.0	143	40	3 11	3 52	4 24	0 45	29	12 05	71
18	91	57.3	-22	48.7	169	05.5	114	+6	13.7	143	45	2 42	3 30	4 07	0 52	25	12 00	75
19	106	57.0		49.0	183	35.9	114	+5	59.4	143	50	1 59	3 02	3 45	1 00	20	11 54	79
20	121	56.7		49.2	198	06.3	113		45.1	144	52	1 34	2 47	35	04	18	51	82
21	136	56.4		49.5	212	36.6	114		30.7	145	54	0 56	30	23	08	16	47	85
22	151	56.1		49.7	227	07.0	114		16.2	145	56	** ** *	2 10	3 10	13	13	44	87
23	166	55.9		49.9	241	37.4	113	+5	01.7	145	58	** ** *	1 43	2 54	1 18	10	11 40	91
24	181	55.6	-22	50.2	256	07.7		+4	47.2		60 S	** ** *	1 03	2 35	1 24	6	11 35	95

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 18 ^h 48 ^m 1		Mag: -3.9 PMG: 10 ^h 05 ^m			Mag: -0.9 PMG: 19 ^h 57 ^m			Mag: -2.0 PMG: 14 ^h 48 ^m			Mag: +0.6 PMG: 14 ^h 54 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	77	12.5	208	49.1	-16	24.7	60	01.2	+7	32.6	137	29.2	-21	06.5	135	55.3	-20	42.1	
1	92	15.0	223	48.5		25.5	75	03.0		32.9	152	31.1		06.4	150	57.5		42.1	
2	107	17.5	238	47.8		26.4	90	04.9		33.2	167	33.0		06.3	165	59.7		42.0	
3	122	19.9	253	47.2		27.3	105	06.8		33.6	182	35.0		06.2	181	01.9		42.0	
4	137	22.4	268	46.5		28.2	120	08.6		33.9	197	36.9		06.1	196	04.1		42.0	
5	152	24.8	283	45.9	-16	29.1	135	10.5	+7	34.3	212	38.8	-21	06.0	211	06.4	-20	41.9	
6	167	27.3	298	45.2	-16	30.0	150	12.3	+7	34.6	227	40.7	-21	05.9	226	08.6	-20	41.9	
7	182	29.8	313	44.5		30.8	165	14.2		35.0	242	42.7		05.8	241	10.8		41.8	
8	197	32.2	328	43.9		31.7	180	16.1		35.3	257	44.6		05.7	256	13.0		41.8	
9	212	34.7	343	43.2		32.6	195	17.9		35.6	272	46.5		05.6	271	15.2		41.7	
10	227	37.2	358	42.6		33.5	210	19.8		36.0	287	48.4		05.5	286	17.4		41.7	
11	242	39.6	13	41.9	-16	34.3	225	21.6	+7	36.3	302	50.3	-21	05.4	301	19.6	-20	41.6	
12	257	42.1	28	41.3	-16	35.2	240	23.5	+7	36.7	317	52.3	-21	05.3	316	21.8	-20	41.6	
13	272	44.6	43	40.6		36.1	255	25.4		37.0	332	54.2		05.2	331	24.0		41.5	
14	287	47.0	58	40.0		37.0	270	27.2		37.3	347	56.1		05.1	346	26.2		41.5	
15	302	49.5	73	39.3		37.8	285	29.1		37.7	2	58.0		05.0	1	28.4		41.4	
16	317	52.0	88	38.7		38.7	300	30.9		38.0	18	00.0		04.9	16	30.6		41.4	
17	332	54.4	103	38.0	-16	39.6	315	32.8	+7	38.4	33	01.9	-21	04.8	31	32.8	-20	41.3	
18	347	56.9	118	37.3	-16	40.5	330	34.6	+7	38.7	48	03.8	-21	04.7	46	35.0	-20	41.3	
19	2	59.3	133	36.7		41.3	345	36.5		39.1	63	05.7		04.6	61	37.3		41.2	
20	18	01.8	148	36.0		42.2	0	38.3		39.4	78	07.6		04.5	76	39.5		41.2	
21	33	04.3	163	35.4		43.1	15	40.2		39.8	93	09.6		04.4	91	41.7		41.1	
22	48	06.7	178	34.7		43.9	30	42.0		40.1	108	11.5		04.3	106	43.9		41.1	
23	63	09.2	193	34.0		44.8	45	43.9		40.4	123	13.4		04.2	121	46.1		41.0	
24	78	11.7	208	33.4	-16	45.7	60	45.7	+7	40.8	138	15.3	-21	04.1	136	48.3	-20	41.0	
Dif.	—		-7			-9	+18			+3	+19			+1	+22			0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16'2				SD: 16'1												PHE { 4 ^h : 59'2 12 ^h : 59'4 20 ^h : 59'6	
	PMG: 11 ^h 52 ^m 5				Edad: 23 ^d 8													
	PMG: 07 ^h 10 ^m				R ^o : 49 ^m													
	hG ☉	Dec		hG ☾	Dif.	Dec	Dif.			Civil	Náut.	Hora	R ^o	Hora	R ^o			
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	m		
0	181	55.6	-22	50.2	256	07.7	113	+4	47.2	146	60 N	14 55	15 51	16 47	0 25	95		
1	196	55.3		50.4	270	38.0	114		32.6	146	58	15 12	16 03	16 55	27 92	30 10		
2	211	55.0		50.7	285	08.4	113		18.0	146	56	26	12	17 01	30 88	30 12		
3	226	54.7		50.9	299	38.7	113	+4	03.4	147	54	38	21	07	32 85	29 15		
4	241	54.5		51.1	314	09.0	113	+3	48.7	147	52	49	29	12	34 83	29 17		
5	256	54.2	-22	51.4	328	39.3	113	+3	34.0	148	50	15 58	16 36	17 18	0 35	81		
6	271	53.9	-22	51.6	343	09.6	113	+3	19.2	147	45	16 18	16 52	17 29	0 39	76		
7	286	53.6		51.8	357	39.9	112	+3	04.5	149	40	35	17 05	39	42 71	26 29		
8	301	53.3		52.1	12	10.1	113	+2	49.6	148	35	16 48	16	48	45 67	25 33		
9	316	53.1		52.3	26	40.4	112		34.8	148	30	17 00	27	17 56	47 64	25 35		
10	331	52.8		52.5	41	10.6	112		20.0	149	20	21	17 45	18 12	51 59	24 40		
11	346	52.5	-22	52.8	55	40.8	112	+2	05.1	149	10 N	17 39	18 02	18 28	0 55	54		
12	1	52.2	-22	53.0	70	11.0	111	+1	50.2	150	0	17 56	18 19	18 45	0 58	49		
13	16	51.9		53.2	84	41.1	112		35.2	149	10 S	18 13	36	19 03	1 01	45		
14	31	51.6		53.5	99	11.3	111		20.3	150	20	32	18 56	25	05 40	19 60		
15	46	51.4		53.7	113	41.4	111	+1	05.3	150	30	18 53	19 21	19 54	09 35	18 65		
16	61	51.1		53.9	128	11.5	111	+0	50.3	150	35	19 06	36	20 12	11 32	17 68		
17	76	50.8	-22	54.2	142	41.6	110	+0	35.3	150	40	19 21	19 53	20 35	1 14	28		
18	91	50.5	-22	54.4	157	11.6	111	+0	20.3	151	45	19 38	20 15	21 04	1 17	24		
19	106	50.2		54.6	171	41.7	110	+0	05.2	151	50	20 00	44	21 48	20 20	13 82		
20	121	49.9		54.8	186	11.7	109	-0	09.9	150	52	11	20 59	22 14	22 17	13 84		
21	136	49.7		55.1	200	41.6	110		24.9	151	54	23	21 16	22 53	24 15	12 87		
22	151	49.4		55.3	215	11.6	109		40.0	151	56	36	21 37	** **	26 12	11 90		
23	166	49.1		55.5	229	41.5	108	-0	55.1	151	58	20 52	22 05	** **	28 10	11 92		
24	181	48.8	-22	55.7	244	11.3		-1	10.2		60 S	21 12	22 47	** **	1 30 7	13 10 96		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: -0.9				Mag: -2.0				Mag: +0.6			
	18 ^h 44 ^m 1		PMG: 10 ^h 06 ^m				PMG: 19 ^h 55 ^m				PMG: 14 ^h 45 ^m				PMG: 14 ^h 51 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	78	11.7	208	33.4	-16	45.7	60	45.7	+7	40.8	138	15.3	-21	-04.1	136	48.3		
1	93	14.1	223	32.7		46.5	75	47.5		41.1	153	17.3		-04.0	151	50.5		
2	108	16.6	238	32.0		47.4	90	49.4		41.5	168	19.2		-03.9	166	52.7		
3	123	19.1	253	31.4		48.3	105	51.2		41.8	183	21.1		-03.8	181	54.9		
4	138	21.5	268	30.7		49.1	120	53.1		42.2	198	23.0		-03.7	196	57.1		
5	153	24.0	283	30.1	-16	50.0	135	54.9	+7	42.5	213	24.9	-21	-03.6	211	59.3		
6	168	26.4	298	29.4	-16	50.9	150	56.7	+7	42.9	228	26.9	-21	-03.5	227	01.5		
7	183	28.9	313	28.7		51.7	165	58.6		43.2	243	28.8		-03.4	242	03.7		
8	198	31.4	328	28.1		52.6	181	00.4		43.6	258	30.7		-03.3	257	05.9		
9	213	33.8	343	27.4		53.4	196	02.3		43.9	273	32.6		-03.2	272	08.1		
10	228	36.3	358	26.7		54.3	211	04.1		44.3	288	34.5		-03.1	287	10.3		
11	243	38.8	13	26.1	-16	55.2	226	05.9	+7	44.6	303	36.5	-21	-03.0	302	12.6		
12	258	41.2	28	25.4	-16	56.0	241	07.8	+7	45.0	318	38.4	-21	-02.9	317	14.8		
13	273	43.7	43	24.7		56.9	256	09.6		45.3	333	40.3		-02.8	332	17.0		
14	288	46.2	58	24.1		57.7	271	11.4		45.7	348	42.2		-02.7	347	19.2		
15	303	48.6	73	23.4		58.6	286	13.3		46.0	3	44.1		-02.6	2	21.4		
16	318	51.1	88	22.7	-16	59.4	301	15.1		46.4	18	46.1		-02.5	17	23.6		
17	333	53.6	103	22.0	-17	00.3	316	16.9	+7	46.7	33	48.0	-21	-02.4	32	25.8		
18	348	56.0	118	21.4	-17	01.2	331	18.8	+7	47.1	48	49.9	-21	-02.3	47	28.0		
19	3	58.5	133	20.7		02.0	346	20.6		47.4	63	51.8		-02.2	62	30.2		
20	19	00.9	148	20.0		02.9	1	22.4		47.8	78	53.7		-02.1	77	32.4		
21	34	03.4	163	19.4		03.7	16	24.2		48.1	93	55.7		-02.0	92	34.6		
22	49	05.9	178	18.7		04.6	31	26.1		48.5	108	57.6		-01.9	107	36.8		
23	64	08.3	193	18.0		05.4	46	27.9		48.8	123	59.5		-01.8	122	39.0		
24	79	10.8	208	17.3	-17	06.3	61	29.7	+7	49.2	139	01.4	-21	-01.7	137	41.2		
Dif.	—		-7	-9			+18	+3			+19	+1			+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 0				SD: 16'3 Edad: 24 ^d 8 PMG: 07 ^h 59 ^m PHE { 4 ^h : 59'8 12 ^h : 60'0 20 ^h : 60'1 Rº: 52 ^m					Náut.	Civil		Hora	Rº	Hora	Rº														
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.																								
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m															
0	181	48.8	-22	55.7	244	11.3	109	-1	10.2	151	60 N	6 58	7 55	8 51	2 00	98	13 38	7												
1	196	48.5		55.9	258	41.2	108		25.3	151	58	51	43	35	1 59	94	40	11												
2	211	48.2		56.2	273	11.0	108		40.4	151	56	45	33	20	58	91	42	14												
3	226	48.0		56.4	287	40.8	107	-1	55.5	151	54	39	25	8 08	57	88	44	17												
4	241	47.7		56.6	302	10.5	107	-2	10.6	152	52	33	17	7 57	57	85	46	20												
5	256	47.4	-22	56.8	316	40.2	106	-2	25.8	151	50	6 28	7 10	7 48	1 56	83	13 48	22												
6	271	47.1	-22	57.0	331	09.8	107	-2	40.9	151	45	6 17	6 54	7 27	1 55	77	13 52	26												
7	286	46.8		57.2	345	39.5	105	-2	56.0	151	40	6 07	41	7 11	53	74	55	30												
8	301	46.5		57.5	0	09.0	106	-3	11.1	151	35	5 58	29	6 57	52	70	13 58	34												
9	316	46.2		57.7	14	38.6	105		26.2	151	30	49	19	45	51	67	14 00	37												
10	331	46.0		57.9	29	08.1	104		41.3	151	20	33	6 00	24	50	60	04	43												
11	346	45.7	-22	58.1	43	37.5	104	-3	56.4	151	10 N	5 17	5 44	6 06	1 49	55	14 08	47												
12	1	45.4	-22	58.3	58	06.9	104	-4	11.5	150	0	5 01	5 27	5 49	1 47	51	14 11	52												
13	16	45.1		58.5	72	36.3	103		26.5	151	10 S	4 42	5 09	32	46	47	15	56												
14	31	44.8		58.7	87	05.6	102		41.6	150	20	4 20	4 49	5 13	45	42	19	61												
15	46	44.5		58.9	101	34.8	102	-4	56.6	150	30	3 51	25	4 52	44	36	23	67												
16	61	44.2		59.2	116	04.0	102	-5	11.6	150	35	33	4 10	39	43	33	25	71												
17	76	43.9	-22	59.4	130	33.2	101	-5	26.6	150	40	3 11	3 52	4 25	1 42	30	14 28	74												
18	91	43.7	-22	59.6	145	02.3	100	-5	41.6	150	45	2 41	3 30	4 07	1 41	26	14 31	79												
19	106	43.4	-22	59.8	159	31.3	100	-5	56.6	149	50	1 58	3 01	3 45	40	21	35	84												
20	121	43.1	-23	00.0	174	00.3	100	-6	11.5	149	52	1 32	2 47	35	39	19	37	86												
21	136	42.8		00.2	188	29.3	99		26.4	149	54	0 52	29	23	39	16	39	89												
22	151	42.5		00.4	202	58.2	98		41.3	149	56	** **	2 08	3 09	38	13	41	92												
23	166	42.2		00.6	217	27.0	98	-6	56.2	148	58	** **	1 41	2 53	1 38	10	14 43	96												
24	181	41.9	-23	00.8	231	55.8		-7	11.0		60 S	** **	0 58	2 33	1 37	7	14 46	99												
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO															
	PMG: 18 ^h 40 ^m 2		Mag: -3.9 PMG: 10 ^h 07 ^m				Mag: -0.9 PMG: 19 ^h 52 ^m				Mag: -2.0 PMG: 14 ^h 42 ^m				Mag: +0.6 PMG: 14 ^h 47 ^m															
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.														
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'												
0	79	10.8	208	17.3	-17	06.3	61	29.7	+7	49.2	139	01.4	-21	01.7	137	41.2	-20	39.8												
1	94	13.3	223	16.7		07.1	76	31.5		49.5	154	03.3		01.6	152	43.4		39.7												
2	109	15.7	238	16.0		08.0	91	33.4		49.9	169	05.2		01.5	167	45.6		39.7												
3	124	18.2	253	15.3		08.8	106	35.2		50.2	184	07.2		01.4	182	47.8		39.6												
4	139	20.7	268	14.6		09.6	121	37.0		50.6	199	09.1		01.3	197	50.0		39.6												
5	154	23.1	283	14.0	-17	10.5	136	38.8	+7	50.9	214	11.0	-21	01.2	212	52.2	-20	39.5												
6	169	25.6	298	13.3	-17	11.3	151	40.6	+7	51.3	229	12.9	-21	01.1	227	54.4	-20	39.5												
7	184	28.1	313	12.6		12.2	166	42.5		51.6	244	14.8		01.0	242	56.6		39.4												
8	199	30.5	328	11.9		13.0	181	44.3		52.0	259	16.8		00.9	257	58.8		39.4												
9	214	33.0	343	11.2		13.9	196	46.1		52.3	274	18.7		00.8	273	01.0		39.3												
10	229	35.4	358	10.6		14.7	211	47.9		52.7	289	20.6		00.7	288	03.2		39.3												
11	244	37.9	13	09.9	-17	15.5	226	49.7	+7	53.0	304	22.5	-21	00.6	303	05.5	-20	39.2												
12	259	40.4	28	09.2	-17	16.4	241	51.5	+7	53.4	319	24.4	-21	00.5	318	07.7	-20	39.2												
13	274	42.8	43	08.5		17.2	256	53.3		53.8	334	26.3		00.3	333	09.9		39.1												
14	289	45.3	58	07.8		18.1	271	55.2		54.1	349	28.3		00.2	348	12.1		39.1												
15	304	47.8	73	07.2		18.9	286	57.0		54.5	4	30.2		00.1	3	14.3		39.0												
16	319	50.2	88	06.5		19.7	301	58.8		54.8	19	32.1	-21	00.0	18	16.5		39.0												
17	334	52.7	103	05.8	-17	20.6	317	00.6	+7	55.2	34	34.0	-20	59.9	33	18.7	-20	38.9												
18	349	55.2	118	05.1	-17	21.4	332	02.4	+7	55.5	49	35.9	-20	59.8	48	20.9	-20	38.9												
19	4	57.6	133	04.4		22.2	347	04.2		55.9	64	37.8		59.7	63	23.1		38.8												
20	20	00.1	148	03.7		23.1	2	06.0		56.2	79	39.8		59.6	78	25.3		38.8												
21	35	02.5	163	03.1		23.9	17	07.8		56.6	94	41.7		59.5	93	27.5		38.7												
22	50	05.0	178	02.4		24.7	32	09.6		57.0	109	43.6		59.4	108	29.7		38.7												
23	65	07.5	193	01.7		25.6	47	11.4		57.3	124	45.5		59.3	123	31.9		38.6												
24	80	09.9	208	01.0	-17	26.4	62	13.2	+7	57.7	139	47.4	-20	59.2	138	34.1	-20	38.6												
Dif.	—		-7				-8				+18				+4				+19				+1				+22			

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2				SD: 16'4		PHE { 4 ^h : 60'3											
	PMG: 11 ^h 53 ^m 4				Edad: 25 ^d 8		{ 12 ^h : 60'4											
							{ 20 ^h : 60'5											
					PMG:08 ^h 51 ^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	181	41.9	-23	00.8	231	55.8	97	-7	11.0	148	60 N	14 54	15 51	16 47	3 38	102	13 45	10
1	196	41.6		01.0	246	24.5	96		25.8	148	58	15 11	16 02	16 54	33	98	51	14
2	211	41.4		01.2	260	53.1	96		40.6	147	56	25	12	17 01	29	94	13 56	18
3	226	41.1		01.4	275	21.7	96	-7	55.3	147	54	38	21	07	25	91	14 01	26
4	241	40.8		01.6	289	50.3	94	-8	10.0	147	52	48	29	12	22	88	06	22
5	256	40.5	-23	01.8	304	18.7	94	-8	24.7	146	50	15 58	16 36	17 18	3 19	85	14 10	25
6	271	40.2	-23	02.0	318	47.1	94	-8	39.3	146	45	16 18	16 52	17 29	3 12	80	14 18	31
7	286	39.9		02.2	333	15.5	93	-8	53.9	145	40	35	17 05	39	07	75	25	35
8	301	39.6		02.4	347	43.8	92	-9	08.4	145	35	16 49	17	48	3 02	71	32	38
9	316	39.3		02.6	2	12.0	91		22.9	144	30	17 01	27	17 57	2 58	68	37	41
10	331	39.0		02.8	16	40.1	91		37.3	144	20	22	17 46	18 13	50	63	47	46
11	346	38.7	-23	03.0	31	08.2	90	-9	51.7	144	10 N	17 40	18 03	18 29	2 44	58	14 55	51
12	1	38.5	-23	03.2	45	36.2	89	-10	06.1	143	0	17 57	18 20	18 46	2 38	54	15 03	56
13	16	38.2		03.4	60	04.1	89		20.4	142	10 S	18 14	37	19 05	33	49	11	60
14	31	37.9		03.6	74	32.0	88		34.6	142	20	33	18 58	27	27	44	20	64
15	46	37.6		03.7	88	59.8	87	-10	48.8	141	30	18 55	19 22	19 55	20	39	30	69
16	61	37.3		03.9	103	27.5	87	-11	02.9	140	35	19 08	37	20 14	16	36	36	72
17	76	37.0	-23	04.1	117	55.2	86	-11	16.9	140	40	19 22	19 55	20 37	2 12	32	15 42	76
18	91	36.7	-23	04.3	132	22.8	85	-11	30.9	140	45	19 40	20 17	21 07	2 07	28	15 50	80
19	106	36.4		04.5	146	50.3	84		44.9	139	50	20 02	20 46	21 51	2 01	23	15 59	86
20	121	36.1		04.7	161	17.7	83	-11	58.8	138	52	13	21 01	22 17	1 58	21	16 03	89
21	136	35.8		04.9	175	45.0	83	-12	12.6	137	54	25	19	22 58	55	18	08	91
22	151	35.5		05.1	190	12.3	82		26.3	137	56	39	21 40	** **	51	16	13	95
23	166	35.2		05.2	204	39.5	82		40.0	136	58	20 55	22 08	** **	48	12	19	98
24	181	35.0	-23	05.4	219	06.7		-12	53.6		60 S	21 15	22 53	** **	1 44	8	16 25	103

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: -0.8				Mag: -2.0				Mag: +0.6			
	18 ^h 36 ^m 3		PMG: 10 ^h 08 ^m				PMG: 19 ^h 49 ^m				PMG: 14 ^h 39 ^m				PMG: 14 ^h 44 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.		hG ♅	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	80	09.9	208	01.0	-17	26.4	62	13.2	+7	57.7	139	47.4	-20	-59.2	138	34.1	-20	38.6
1	95	12.4	223	00.3		27.2	77	15.0		58.0	154	49.3		-59.1	153	36.3		38.5
2	110	14.9	237	59.6		28.1	92	16.8		58.4	169	51.3		-59.0	168	38.5		38.5
3	125	17.3	252	58.9		28.9	107	18.6		58.7	184	53.2		-58.9	183	40.7		38.4
4	140	19.8	267	58.3		29.7	122	20.4		59.1	199	55.1		-58.8	198	42.9		38.4
5	155	22.3	282	57.6	-17	30.5	137	22.2	+7	59.5	214	57.0	-20	-58.7	213	45.1	-20	38.3
6	170	24.7	297	56.9	-17	31.4	152	24.0	+7	59.8	229	58.9	-20	-58.6	228	47.3	-20	38.3
7	185	27.2	312	56.2		32.2	167	25.8	+8	00.2	245	00.8		-58.5	243	49.5		38.2
8	200	29.7	327	55.5		33.0	182	27.6		00.5	260	02.7		-58.4	258	51.7		38.2
9	215	32.1	342	54.8		33.8	197	29.4		00.9	275	04.7		-58.3	273	53.9		38.1
10	230	34.6	357	54.1		34.7	212	31.2		01.3	290	06.6		-58.2	288	56.1		38.1
11	245	37.0	12	53.4	-17	35.5	227	33.0	+8	01.6	305	08.5	-20	-58.1	303	58.3	-20	38.0
12	260	39.5	27	52.7	-17	36.3	242	34.8	+8	02.0	320	10.4	-20	-58.0	319	00.5	-20	38.0
13	275	42.0	42	52.0		37.1	257	36.6		02.3	335	12.3		-57.9	334	02.7		37.9
14	290	44.4	57	51.3		37.9	272	38.4		02.7	350	14.2		-57.8	349	04.9		37.9
15	305	46.9	72	50.6		38.8	287	40.2		03.1	5	16.1		-57.7	4	07.1		37.8
16	320	49.4	87	49.9		39.6	302	42.0		03.4	20	18.1		-57.6	19	09.3		37.8
17	335	51.8	102	49.3	-17	40.4	317	43.8	+8	03.8	35	20.0	-20	-57.5	34	11.5	-20	37.7
18	350	54.3	117	48.6	-17	41.2	332	45.5	+8	04.1	50	21.9	-20	-57.4	49	13.7	-20	37.7
19	5	56.8	132	47.9		42.0	347	47.3		04.5	65	23.8		-57.2	64	15.9		37.6
20	20	59.2	147	47.2		42.8	2	49.1		04.9	80	25.7		-57.1	79	18.1		37.6
21	36	01.7	162	46.5		43.7	17	50.9		05.2	95	27.6		-57.0	94	20.3		37.5
22	51	04.2	177	45.8		44.5	32	52.7		05.6	110	29.5		-56.9	109	22.5		37.5
23	66	06.6	192	45.1		45.3	47	54.5		06.0	125	31.4		-56.8	124	24.7		37.4
24	81	09.1	207	44.4	-17	46.1	62	56.3	+8	06.3	140	33.4	-20	-56.7	139	26.9	-20	37.4
Dif.	—		-7		-8		+18		+4		+19		+1		+22		+1	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'2 PMG: 11 ^h 53 ^m 9				SD: 16'5 Edad: 26 ^d 8 PHE { 4 ^h : 60'5 12 ^h : 60'6 20 ^h : 60'6														
	PMG: 09 ^h 45 ^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	181	35.0	-23	05.4	219	06.7	80	-12	53.6	135	60 N	7 01	7 57	8 54	5 20	104	13 55	15	
1	196	34.7		05.6	233	33.7	80	-13	07.1	134	58	6 53	46	37	11	99	14 05	19	
2	211	34.4		05.8	248	00.7	79		20.5	134	56	47	36	23	5	03	95	14	23
3	226	34.1		06.0	262	27.6	78		33.9	133	54	41	27	8 10	4	56	92	21	2
4	241	33.8		06.1	276	54.4	78	-13	47.2	132	52	35	19	7 59	50	89	28	30	
5	256	33.5	-23	06.3	291	21.2	76	-14	00.4	131	50	6 30	7 11	7 50	4	44	86	14	35
6	271	33.2	-23	06.5	305	47.8	76	-14	13.5	130	45	6 18	6 56	7 29	4	32	81	14	49
7	286	32.9		06.7	320	14.4	75		26.5	130	40	6 08	42	7 13	22	77	15	00	40
8	301	32.6		06.9	334	40.9	74		39.5	129	35	5 59	31	6 59	13	74	10	43	
9	316	32.3		07.0	349	07.3	74	-14	52.4	127	30	50	20	47	4	06	70	18	47
10	331	32.0		07.2	3	33.7	72	-15	05.1	127	20	34	6 02	26	3	53	66	33	51
11	346	31.7	-23	07.4	17	59.9	72	-15	17.8	126	10 N	5 18	5 45	6 07	3	42	61	15	46
12	1	31.4	-23	07.6	32	26.1	71	-15	30.4	125	0	5 02	5 28	5 50	3	32	57	15	59
13	16	31.1		07.7	46	52.2	70		42.9	124	10 S	4 43	5 10	33	22	53	16	11	62
14	31	30.8		07.9	61	18.2	70	-15	55.3	122	20	4 20	4 50	5 14	3	11	49	24	66
15	46	30.5		08.1	75	44.2	68	-16	07.5	122	30	3 52	25	4 52	2	59	43	39	71
16	61	30.3		08.3	90	10.0	68		19.7	121	35	33	4 10	40	52	41	48	74	
17	76	30.0	-23	08.4	104	35.8	67	-16	31.8	120	40	3 11	3 52	4 25	2	44	37	16	58
18	91	29.7	-23	08.6	119	01.5	66	-16	43.8	119	45	2 41	3 30	4 07	2	35	33	17	10
19	106	29.4		08.8	133	27.1	66	-16	55.7	117	50	1 56	3 01	3 45	24	28	25	85	
20	121	29.1		08.9	147	52.7	64	-17	07.4	117	52	1 30	2 46	34	19	26	32	88	
21	136	28.8		09.1	162	18.1	64		19.1	115	54	0 49	29	22	13	23	39	91	
22	151	28.5		09.3	176	43.5	63		30.6	114	56	** ** *	2 07	3 08	07	20	48	94	
23	166	28.2		09.4	191	08.8	62		42.0	113	58	** ** *	1 39	2 52	2	00	17	17	57
24	181	27.9	-23	09.6	205	34.0		-17	53.3		60 S	** ** *	0 54	2 32	1	52	13	18	08

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2						PHE { 4 ^h : 60'6 12 ^h : 60'6 20 ^h : 60'5											
	PMG: 11 ^h 54 ^m 4																	
				PMG: 10 ^h 43 ^m		Rº: 61 ^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	181	27.9	-23	09.6	205	34.0	62	-17	53.3	112	60 N	14 53	15 50	16 47	7 04	101	14 10 24	
1	196	27.6		09.8	219	59.2	60	-18	04.5	111	58	15 10	16 02	16 54	6 50	96	24 30	
2	211	27.3		09.9	234	24.2	60		15.6	109	56	25	12	17 01	38	92	37 33	
3	226	27.0		10.1	248	49.2	59		26.5	108	54	37	21	07	28	89	48 36	
4	241	26.7		10.2	263	14.1	59		37.3	107	52	48	29	13	19	86	14 58 39	
5	256	26.4	-23	10.4	277	39.0	57	-18	48.0	106	50	15 58	16 36	17 18	6 10	84	15 06 41	
6	271	26.1	-23	10.6	292	03.7	57	-18	58.6	105	45	16 19	16 52	17 29	5 53	79	15 25 45	
7	286	25.8		10.7	306	28.4	56	-19	09.1	103	40	35	17 06	40	39	76	40 48	
8	301	25.5		10.9	320	53.0	55		19.4	101	35	16 49	17	49	27	73	15 53 51	
9	316	25.2		11.0	335	17.5	55		29.5	101	30	17 01	28	17 58	5 16	71	16 05 52	
10	331	24.9		11.2	349	42.0	54		39.6	99	20	22	17 46	18 14	4 59	66	24 56	
11	346	24.6	-23	11.3	4	06.4	53	-19	49.5	98	10 N	17 41	18 04	18 30	4 43	63	16 41 59	
12	1	24.3	-23	11.5	18	30.7	52	-19	59.3	96	0	17 58	18 21	18 47	4 29	60	16 57 61	
13	16	24.0		11.7	32	54.9	52	-20	08.9	95	10 S	18 16	39	19 06	15	57	17 13 64	
14	31	23.7		11.8	47	19.1	51		18.4	94	20	34	18 59	28	4 00	53	30 67	
15	46	23.4		12.0	61	43.2	50		27.8	92	30	18 56	19 24	19 57	3 42	50	17 50 70	
16	61	23.1		12.1	76	07.2	50		37.0	90	35	19 09	39	20 15	33	47	18 02 71	
17	76	22.8	-23	12.3	90	31.2	49	-20	46.0	90	40	19 24	19 57	20 38	3 21	44	18 15 74	
18	91	22.5	-23	12.4	104	55.1	48	-20	55.0	87	45	19 42	20 19	21 09	3 08	41	18 31 76	
19	106	22.2		12.6	119	18.9	48	-21	03.7	87	50	20 04	20 48	21 53	2 52	36	18 50 81	
20	121	21.9		12.7	133	42.7	47		12.4	84	52	15	21 03	22 20	45	33	19 00 82	
21	136	21.6		12.9	148	06.4	46		20.8	84	54	27	21	23 04	36	32	10 84	
22	151	21.3		13.0	162	30.0	46		29.2	81	56	41	21 43	** ** *	27	28	22 87	
23	166	21.0		13.1	176	53.6	46		37.3	81	58	20 58	22 12	** ** *	17	24	35 91	
24	181	20.7	-23	13.3	191	17.2		-21	45.4		60 S	21 18	22 59	** ** *	2 05	19	19 52 95	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 18 ^h 28 ^m 4		Mag: -3.9 PMG: 10 ^h 11 ^m				Mag: -0.8 PMG: 19 ^h 43 ^m				Mag: -2.0 PMG: 14 ^h 33 ^m				Mag: +0.6 PMG: 14 ^h 37 ^m			
	hG ♂		hG ♀		dec.		hG ♂		dec.		hG ♀		dec.		hG ♀		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	82	08.2	207	27.4	-18	05.3	63	38.8	+8	15.1	141	19.2	-20	-54.2	140	19.7	-20	36.2
1	97	10.7	222	26.7		06.1	78	40.6		15.5	156	21.1		-54.1	155	21.9		36.1
2	112	13.1	237	26.0		06.9	93	42.3		15.8	171	23.1		-54.0	170	24.1		36.1
3	127	15.6	252	25.3		07.7	108	44.1		16.2	186	25.0		-53.9	185	26.3		36.0
4	142	18.1	267	24.6		08.5	123	45.8		16.6	201	26.9		-53.8	200	28.5		36.0
5	157	20.5	282	23.9	-18	09.3	138	47.6	+8	16.9	216	28.8	-20	-53.7	215	30.7	-20	35.9
6	172	23.0	297	23.2	-18	10.0	153	49.4	+8	17.3	231	30.7	-20	-53.6	230	32.9	-20	35.9
7	187	25.5	312	22.4		10.8	168	51.1		17.7	246	32.6		-53.5	245	35.0		35.8
8	202	27.9	327	21.7		11.6	183	52.9		18.0	261	34.5		-53.4	260	37.2		35.8
9	217	30.4	342	21.0		12.4	198	54.6		18.4	276	36.4		-53.2	275	39.4		35.7
10	232	32.9	357	20.3		13.2	213	56.4		18.8	291	38.3		-53.1	290	41.6		35.6
11	247	35.3	12	19.6	-18	14.0	228	58.1	+8	19.1	306	40.2	-20	-53.0	305	43.8	-20	35.6
12	262	37.8	27	18.9	-18	14.7	243	59.9	+8	19.5	321	42.1	-20	-52.9	320	46.0	-20	35.5
13	277	40.3	42	18.1		15.5	259	01.6		19.9	336	44.1		-52.8	335	48.2		35.5
14	292	42.7	57	17.4		16.3	274	03.4		20.3	351	46.0		-52.7	350	50.4		35.4
15	307	45.2	72	16.7		17.1	289	05.1		20.6	6	47.9		-52.6	5	52.6		35.4
16	322	47.6	87	16.0		17.9	304	06.9		21.0	21	49.8		-52.5	20	54.8		35.3
17	337	50.1	102	15.3	-18	18.6	319	08.6	+8	21.4	36	51.7	-20	-52.4	35	57.0	-20	35.3
18	352	52.6	117	14.6	-18	19.4	334	10.4	+8	21.7	51	53.6	-20	-52.3	50	59.2	-20	35.2
19	7	55.0	132	13.8		20.2	349	12.1		22.1	66	55.5		-52.2	66	01.4		35.2
20	22	57.5	147	13.1		21.0	4	13.9		22.5	81	57.4		-52.1	81	03.6		35.1
21	38	00.0	162	12.4		21.7	19	15.6		22.9	96	59.3		-52.0	96	05.8		35.1
22	53	02.4	177	11.7		22.5	34	17.4		23.2	112	01.2		-51.9	111	08.0		35.0
23	68	04.9	192	10.9		23.3	49	19.1		23.6	127	03.1		-51.8	126	10.2		35.0
24	83	07.4	207	10.2	-18	24.0	64	20.9	+8	24.0	142	05.0	-20	-51.6	141	12.4	-20	34.9
Dif.	—		-7		-8		+17		+4		+19		+1		+22		+1	

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 54 ^m 9				SD: 16'5 Edad: 28 ^d 8 PHE { 4 ^h : 60'4 12 ^h : 60'3 20 ^h : 60'1 PMG: 11 ^h 44 ^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 m	h m m	h m m			
0	181	20.7	-23	13.3	191	17.2	44	-21	45.4	78	60 N	7 02	7 59	8 56	8 45	88	14 34	43	
1	196	20.4		13.4	205	40.6	44	-21	53.2	77	58	6 55	48	39	26	83	14 54	46	
2	211	20.1		13.6	220	04.0	44	-22	00.9	76	56	48	37	25	8 10	81	15 10	49	
3	226	19.8		13.7	234	27.4	43		08.5	74	54	42	28	12	7 57	78	24	51	
4	241	19.5		13.9	248	50.7	43		15.9	72	52	37	20	8 01	45	77	37	51	
5	256	19.2	-23	14.0	263	14.0	42	-22	23.1	71	50	6 31	7 13	7 51	7 34	76	15 47	53	
6	271	18.9	-23	14.1	277	37.2	42	-22	30.2	69	45	6 20	6 57	7 31	7 12	73	16 10	55	
7	286	18.6		14.3	292	00.4	41		37.1	67	40	10	44	14	6 55	70	28	57	
8	301	18.3		14.4	306	23.5	41		43.8	66	35	6 00	32	7 00	40	69	44	57	
9	316	18.0		14.6	320	46.6	40		50.4	64	30	5 52	22	6 48	27	68	16 57	59	
10	331	17.7		14.7	335	09.6	40	-22	56.8	63	20	35	6 03	27	6 05	66	17 20	60	
11	346	17.4	-23	14.8	349	32.6	40	-23	03.1	60	10 N	5 19	5 46	6 08	5 46	64	17 40	61	
12	1	17.1	-23	15.0	3	55.6	39	-23	09.1	60	0	5 02	5 29	5 51	5 29	62	17 58	63	
13	16	16.8		15.1	18	18.5	39		15.1	57	10 S	4 44	5 11	34	5 12	60	18 17	63	
14	31	16.5		15.2	32	41.4	39		20.8	56	20	4 21	4 50	5 15	4 53	58	18 37	64	
15	46	16.2		15.4	47	04.3	38		26.4	54	30	3 52	26	4 53	32	56	19 00	65	
16	61	15.9		15.5	61	27.1	38		31.8	52	35	34	4 10	40	20	54	13	66	
17	76	15.6	-23	15.6	75	49.9	38	-23	37.0	51	40	3 11	3 52	4 25	4 05	53	19 29	67	
18	91	15.3	-23	15.8	90	12.7	38	-23	42.1	49	45	2 41	3 30	4 07	3 49	50	19 47	68	
19	106	15.0		15.9	104	35.5	37		47.0	47	50	1 56	3 01	3 45	28	47	20 11	69	
20	121	14.7		16.0	118	58.2	37		51.7	45	52	1 29	2 46	34	18	46	22	70	
21	136	14.4		16.2	133	20.9	37	-23	56.2	44	54	0 45	28	22	3 08	43	34	71	
22	151	14.1		16.3	147	43.6	37	-24	00.6	42	56	** **	2 06	3 08	2 55	41	20 49	72	
23	166	13.8		16.4	162	06.3	37		04.8	40	58	** **	1 37	2 52	2 41	38	21 06	73	
24	181	13.5	-23	16.5	176	29.0		-24	08.8		60 S	** **	0 50	2 31	2 24	34	21 27	75	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 18 ^h 24 ^m 5		Mag: -3.9 PMG: 10 ^h 12 ^m			Mag: -0.7 PMG: 19 ^h 40 ^m			Mag: -2.0 PMG: 14 ^h 30 ^m			Mag: +0.6 PMG: 14 ^h 33 ^m							
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	83	07.4	207	10.2	-18	24.0	64	20.9	+8	24.0	142	05.0	-20	51.6	141	12.4	-20	34.9	
1	98	09.8	222	09.5		24.8	79	22.6		24.4	157	07.0		51.5	156	14.6		34.9	
2	113	12.3	237	08.8		25.6	94	24.3		24.7	172	08.9		51.4	171	16.8		34.8	
3	128	14.8	252	08.0		26.4	109	26.1		25.1	187	10.8		51.3	186	19.0		34.8	
4	143	17.2	267	07.3		27.1	124	27.8		25.5	202	12.7		51.2	201	21.2		34.7	
5	158	19.7	282	06.6	-18	27.9	139	29.6	+8	25.9	217	14.6	-20	51.1	216	23.4	-20	34.7	
6	173	22.1	297	05.9	-18	28.7	154	31.3	+8	26.2	232	16.5	-20	51.0	231	25.6	-20	34.6	
7	188	24.6	312	05.1		29.4	169	33.0		26.6	247	18.4		50.9	246	27.8		34.6	
8	203	27.1	327	04.4		30.2	184	34.8		27.0	262	20.3		50.8	261	29.9		34.5	
9	218	29.5	342	03.7		31.0	199	36.5		27.4	277	22.2		50.7	276	32.1		34.5	
10	233	32.0	357	03.0		31.7	214	38.2		27.7	292	24.1		50.6	291	34.3		34.4	
11	248	34.5	12	02.2	-18	32.5	229	40.0	+8	28.1	307	26.0	-20	50.5	306	36.5	-20	34.4	
12	263	36.9	27	01.5	-18	33.2	244	41.7	+8	28.5	322	27.9	-20	50.4	321	38.7	-20	34.3	
13	278	39.4	42	00.8		34.0	259	43.4		28.9	337	29.8		50.3	336	40.9		34.2	
14	293	41.9	57	00.0		34.8	274	45.2		29.2	352	31.7		50.1	351	43.1		34.2	
15	308	44.3	71	59.3		35.5	289	46.9		29.6	7	33.6		50.0	6	45.3		34.1	
16	323	46.8	86	58.6		36.3	304	48.6		30.0	22	35.6		49.9	21	47.5		34.1	
17	338	49.3	101	57.8	-18	37.0	319	50.4	+8	30.4	37	37.5	-20	49.8	36	49.7	-20	34.0	
18	353	51.7	116	57.1	-18	37.8	334	52.1	+8	30.7	52	39.4	-20	49.7	51	51.9	-20	34.0	
19	8	54.2	131	56.4		38.5	349	53.8		31.1	67	41.3		49.6	66	54.1		33.9	
20	23	56.6	146	55.6		39.3	4	55.6		31.5	82	43.2		49.5	81	56.3		33.9	
21	38	59.1	161	54.9		40.0	19	57.3		31.9	97	45.1		49.4	96	58.5		33.8	
22	54	01.6	176	54.2		40.8	34	59.0		32.2	112	47.0		49.3	112	00.7		33.8	
23	69	04.0	191	53.4		41.5	50	00.7		32.6	127	48.9		49.2	127	02.9		33.7	
24	84	06.5	206	52.7	-18	42.3	65	02.5	+8	33.0	142	50.8	-20	49.1	142	05.1	-20	33.7	
Dif.	—		-7		-8		+17		+4		+19		+1		+22			+1	

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 55 ^m 3			SD: 16'3 Edad: 0 ^d 3 PHE { 4^h: 59'9 12^h: 59'7 20^h: 59'5																
	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	13.5	-23	16.5	176	29.0	36	-24	08.8	39	60 N	14 53	15 50	16 47	10 13	61	15 17	67		
1	196	13.2		16.7	190	51.6	37		12.7	37	58	15 10	16 02	16 55	9 49	62	40	66		
2	211	12.9		16.8	205	14.3	36		16.4	35	56	25	12	17 01	31	62	15 59	66		
3	226	12.6		16.9	219	36.9	37		19.9	33	54	38	21	07	15	62	16 15	65		
4	241	12.3		17.0	233	59.6	36		23.2	31	52	49	29	13	9 02	62	28	65		
5	256	12.0	-23	17.2	248	22.2	37	-24	26.3	30	50	15 58	16 37	17 18	8 50	62	16 40	65		
6	271	11.7	-23	17.3	262	44.9	36	-24	29.3	28	45	16 19	16 53	17 30	8 25	62	17 05	64		
7	286	11.4		17.4	277	07.5	37		32.1	26	40	36	17 06	40	8 05	63	25	63		
8	301	11.1		17.5	291	30.2	37		34.7	24	35	16 50	18	50	7 49	62	41	63		
9	316	10.8		17.6	305	52.9	37		37.1	23	30	17 02	28	17 58	35	62	17 56	62		
10	331	10.5		17.8	320	15.6	37		39.4	21	20	23	17 47	18 15	7 11	62	18 20	62		
11	346	10.2	-23	17.9	334	38.3	37	-24	41.5	19	10 N	17 42	18 05	18 31	6 50	62	18 41	61		
12	1	09.9	-23	18.0	349	01.0	37	-24	43.4	17	0	17 59	18 22	18 48	6 31	62	19 01	60		
13	16	09.6		18.1	3	23.7	37		45.1	16	10 S	18 17	18 40	19 07	6 12	61	20	60		
14	31	09.3		18.2	17	46.4	38		46.7	14	20	35	19 00	29	5 51	61	19 41	60		
15	46	09.0		18.3	32	09.2	38		48.1	12	30	18 57	25	19 58	28	60	20 05	59		
16	61	08.7		18.4	46	32.0	38		49.3	10	35	19 10	40	20 17	5 14	60	19	58		
17	76	08.4	-23	18.6	60	54.8	39	-24	50.3	8	40	19 25	19 58	20 40	4 58	60	20 36	57		
18	91	08.1	-23	18.7	75	17.7	39	-24	51.1	7	45	19 43	20 21	21 10	4 39	59	20 55	57		
19	106	07.8		18.8	89	40.6	39		51.8	5	50	20 06	20 50	21 55	15	59	21 20	55		
20	121	07.4		18.9	104	03.5	39		52.3	4	52	17	21 05	22 23	4 04	58	32	54		
21	136	07.1		19.0	118	26.4	40		52.7	1	54	29	23	23 08	3 51	58	21 45	54		
22	151	06.8		19.1	132	49.4	41		52.8	0	56	20 43	21 45	** ** *	36	57	22 01	52		
23	166	06.5		19.2	147	12.5	41		52.8	2	58	21 00	22 15	** ** *	3 19	56	19	51		
24	181	06.2	-23	19.3	161	35.6		-24	52.6		60 S	21 20	23 03	** ** *	2 58	54	22 42	48		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 20 ^m 6		Mag: -3.9 PMG: 10 ^h 13 ^m				Mag: -0.7 PMG: 19 ^h 38 ^m				Mag: -2.0 PMG: 14 ^h 27 ^m				Mag: +0.6 PMG: 14 ^h 30 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	84	06.5	206	52.7	-18	42.3	65	02.5	+8	33.0	142	50.8	-20	-49.1	142	05.1	-20	33.7
1	99	09.0	221	52.0		43.0	80	04.2		33.4	157	52.7		-49.0	157	07.2		33.6
2	114	11.4	236	51.2		43.8	95	05.9		33.8	172	54.6		-48.8	172	09.4		33.6
3	129	13.9	251	50.5		44.5	110	07.6		34.1	187	56.5		-48.7	187	11.6		33.5
4	144	16.4	266	49.8		45.3	125	09.3		34.5	202	58.4		-48.6	202	13.8		33.5
5	159	18.8	281	49.0	-18	46.0	140	11.1	+8	34.9	218	00.3	-20	-48.5	217	16.0	-20	33.4
6	174	21.3	296	48.3	-18	46.8	155	12.8	+8	35.3	233	02.2	-20	-48.4	232	18.2	-20	33.4
7	189	23.8	311	47.5		47.5	170	14.5		35.7	248	04.1		-48.3	247	20.4		33.3
8	204	26.2	326	46.8		48.3	185	16.2		36.0	263	06.0		-48.2	262	22.6		33.2
9	219	28.7	341	46.1		49.0	200	17.9		36.4	278	07.9		-48.1	277	24.8		33.2
10	234	31.1	356	45.3		49.7	215	19.7		36.8	293	09.8		-48.0	292	27.0		33.1
11	249	33.6	11	44.6	-18	50.5	230	21.4	+8	37.2	308	11.7	-20	-47.9	307	29.2	-20	33.1
12	264	36.1	26	43.8	-18	51.2	245	23.1	+8	37.6	323	13.6	-20	-47.8	322	31.4	-20	33.0
13	279	38.5	41	43.1		52.0	260	24.8		37.9	338	15.5		-47.7	337	33.6		33.0
14	294	41.0	56	42.3		52.7	275	26.5		38.3	353	17.5		-47.5	352	35.8		32.9
15	309	43.5	71	41.6		53.4	290	28.2		38.7	8	19.4		-47.4	7	37.9		32.9
16	324	45.9	86	40.9		54.2	305	29.9		39.1	23	21.3		-47.3	22	40.1		32.8
17	339	48.4	101	40.1	-18	54.9	320	31.6	+8	39.5	38	23.2	-20	-47.2	37	42.3	-20	32.8
18	354	50.9	116	39.4	-18	55.6	335	33.4	+8	39.8	53	25.1	-20	-47.1	52	44.5	-20	32.7
19	9	53.3	131	38.6		56.4	350	35.1		40.2	68	27.0		-47.0	67	46.7		32.7
20	24	55.8	146	37.9		57.1	5	36.8		40.6	83	28.9		-46.9	82	48.9		32.6
21	39	58.3	161	37.1		57.8	20	38.5		41.0	98	30.8		-46.8	97	51.1		32.6
22	55	00.7	176	36.4		58.6	35	40.2		41.4	113	32.7		-46.7	112	53.3		32.5
23	70	03.2	191	35.6	-18	59.3	50	41.9		41.8	128	34.6		-46.6	127	55.5		32.5
24	85	05.6	206	34.9	-19	00.0	65	43.6	+8	42.1	143	36.5	-20	-46.5	142	57.7	-20	32.4
Dif.	—		-7	-7			+17	+4			+19	+1			+22	+1		

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 16'3				SD: 16'2		PHE { 4 ^h : 59'2 12 ^h : 59'0 20 ^h : 58'7					Edad: 1 ^d 3			Rº: 58 ^m								
	PMG: 11 ^h 55 ^m 8				PMG: 13 ^h 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	181	06.2	-23	19.3	161	35.6	41	-24	52.6	3	60 N	7 04	8 01	8 59	11 14	36		16 24	85				
1	196	05.9		19.4	175	58.7	42		52.3	6	58	6 57	7 49	41	10 51	40		16 46	81				
2	211	05.6		19.5	190	21.9	42		51.7	7	56	50	39	26	33	42		17 05	77				
3	226	05.3		19.6	204	45.1	43		51.0	8	54	44	30	14	17	45		20 75					
4	241	05.0		19.7	219	08.4	43		50.2	11	52	38	22	8 03	10 04	46		33 74					
5	256	04.7	-23	19.8	233	31.7	44	-24	49.1	12	50	6 33	7 15	7 53	9 52	47		17 45	72				
6	271	04.4	-23	19.9	247	55.1	44	-24	47.9	14	45	6 21	6 58	7 32	9 27	50		18 09	69				
7	286	04.1		20.0	262	18.5	45		46.5	15	40	11	45	16	9 08	52		28 67					
8	301	03.8		20.1	276	42.0	46		45.0	17	35	6 02	33	7 01	8 51	54		44 66					
9	316	03.5		20.2	291	05.6	46		43.3	19	30	5 53	23	6 49	37	55		18 58	64				
10	331	03.2		20.3	305	29.2	47		41.4	20	20	36	6 04	28	8 13	56		19 22	61				
11	346	02.9	-23	20.4	319	52.9	48	-24	39.4	22	10 N	5 20	5 47	6 09	7 52	58		19 42	60				
12	1	02.6	-23	20.5	334	16.7	49	-24	37.2	24	0	5 03	5 30	5 52	7 33	59		20 01	58				
13	16	02.3		20.6	348	40.6	49		34.8	25	10 S	4 44	5 11	35	7 13	61		20 56					
14	31	02.0		20.7	3	04.5	50		32.3	27	20	4 22	4 51	5 16	6 52	62		20 41	53				
15	46	01.7		20.8	17	28.5	50		29.6	28	30	3 53	26	4 54	28	64		21 04	50				
16	61	01.3		20.9	31	52.5	52		26.8	30	35	34	4 11	41	6 14	65		17 49					
17	76	01.0	-23	21.0	46	16.7	52	-24	23.8	32	40	3 11	3 53	4 26	5 58	65		21 33	47				
18	91	00.7	-23	21.1	60	40.9	53	-24	20.6	33	45	2 41	3 30	4 08	5 38	67		21 52	44				
19	106	00.4		21.2	75	05.2	53		17.3	34	50	1 56	3 01	3 45	14	69		22 15	41				
20	121	00.1		21.3	89	29.5	55		13.9	37	52	1 28	2 46	34	5 02	70		26 40					
21	135	59.8		21.4	103	54.0	56		10.2	37	54	0 43	28	22	4 49	71		39 37					
22	150	59.5		21.5	118	18.6	56		06.5	39	56	** **	2 06	3 08	33	72		22 53	35				
23	165	59.2		21.5	132	43.2	57	-24	02.6	41	58	** **	1 36	2 51	4 15	74		23 10	32				
24	180	58.9	-23	21.6	147	07.9		-23	58.5		60 S	** **	0 47	2 31	3 52	77		23 30	28				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO								
	PMG: 18 ^h 16 ^m 6		Mag: -3.9 PMG: 10 ^h 14 ^m				Mag: -0.7 PMG: 19 ^h 35 ^m				Mag: -2.0 PMG: 14 ^h 24 ^m				Mag: +0.6 PMG: 14 ^h 26 ^m								
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	85	05.6	206	34.9	-19	00.0	65	43.6	+8	42.1	143	36.5	-20	46.5	142	57.7	-20	32.4					
1	100	08.1	221	34.1		00.8	80	45.3		42.5	158	38.4		46.3	157	59.9		32.4					
2	115	10.6	236	33.4		01.5	95	47.0		42.9	173	40.3		46.2	173	02.1		32.3					
3	130	13.0	251	32.6		02.2	110	48.7		43.3	188	42.2		46.1	188	04.2		32.2					
4	145	15.5	266	31.9		02.9	125	50.4		43.7	203	44.1		46.0	203	06.4		32.2					
5	160	18.0	281	31.1	-19	03.7	140	52.1	+8	44.1	218	46.0	-20	45.9	218	08.6	-20	32.1					
6	175	20.4	296	30.4	-19	04.4	155	53.8	+8	44.4	233	47.9	-20	45.8	233	10.8	-20	32.1					
7	190	22.9	311	29.6		05.1	170	55.5		44.8	248	49.8		45.7	248	13.0		32.0					
8	205	25.4	326	28.9		05.8	185	57.2		45.2	263	51.7		45.6	263	15.2		32.0					
9	220	27.8	341	28.1		06.6	200	58.9		45.6	278	53.6		45.5	278	17.4		31.9					
10	235	30.3	356	27.4		07.3	216	00.6		46.0	293	55.5		45.4	293	19.6		31.9					
11	250	32.7	11	26.6	-19	08.0	231	02.3	+8	46.4	308	57.4	-20	45.2	308	21.8	-20	31.8					
12	265	35.2	26	25.9	-19	08.7	246	04.0	+8	46.8	323	59.3	-20	45.1	323	24.0	-20	31.8					
13	280	37.7	41	25.1		09.4	261	05.7		47.1	339	01.2		45.0	338	26.2		31.7					
14	295	40.1	56	24.4		10.1	276	07.4		47.5	354	03.1		44.9	353	28.3		31.7					
15	310	42.6	71	23.6		10.9	291	09.1		47.9	9	05.0		44.8	8	30.5		31.6					
16	325	45.1	86	22.9		11.6	306	10.8		48.3	24	06.9		44.7	23	32.7		31.6					
17	340	47.5	101	22.1	-19	12.3	321	12.5	+8	48.7	39	08.8	-20	44.6	38	34.9	-20	31.5					
18	355	50.0	116	21.4	-19	13.0	336	14.2	+8	49.1	54	10.7	-20	44.5	53	37.1	-20	31.4					
19	10	52.5	131	20.6		13.7	351	15.8		49.5	69	12.6		44.4	68	39.3		31.4					
20	25	54.9	146	19.8		14.4	6	17.5		49.8	84	14.5		44.3	83	41.5		31.3					
21	40	57.4	161	19.1		15.1	21	19.2		50.2	99	16.4		44.1	98	43.7		31.3					
22	55	59.9	176	18.3		15.8	36	20.9		50.6	114	18.3		44.0	113	45.9		31.2					
23	71	02.3	191	17.6		16.6	51	22.6		51.0	129	20.2		43.9	128	48.1		31.2					
24	86	04.8	206	16.8	-19	17.3	66	24.3	+8	51.4	144	22.1	-20	43.8	143	50.2	-20	31.1					
Dif.	—		-8		-7		+17		+4		+19		+1		+22		+1						

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'3			PHE { 4 ^h : 58'4 12 ^h : 58'1 20 ^h : 57'8														
	Edad: 2 ^d 3																	
	PMG: 11 ^h 56 ^m 3			PMG: 14 ^h 45 ^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	180	58.9	-23 21.6	147	07.9	58	-23 58.5	42	60 N	14 53	15 51	16 48	11 50	20	17 49	90		
1	195	58.6	21.7	161	32.7	59	54.3	44	58	15 11	16 02	16 55	31 25		18 07	86		
2	210	58.3	21.8	175	57.6	60	49.9	45	56	25	13	17 02	15 29		22 82			
3	225	58.0	21.9	190	22.6	61	45.4	47	54	38	22	08	11 02	31	35 80			
4	240	57.7	22.0	204	47.7	62	40.7	48	52	49	30	14	10 50	33	47 77			
5	255	57.4	-23 22.1	219	12.9	63	-23 35.9	49	50	15 59	16 37	17 19	10 39	36	18 57	75		
6	270	57.1	-23 22.1	233	38.2	63	-23 31.0	51	45	16 20	16 53	17 31	10 17	40	19 18	71		
7	285	56.7	22.2	248	03.5	65	25.9	52	40	36	17 07	41	10 00	42	35 68			
8	300	56.4	22.3	262	29.0	66	20.7	53	35	16 51	19	50	9 45	44	19 50	65		
9	315	56.1	22.4	276	54.6	66	15.4	55	30	17 03	29	17 59	32 46		20 02	63		
10	330	55.8	22.5	291	20.2	68	09.9	57	20	24	17 48	18 16	9 09	50	23 59			
11	345	55.5	-23 22.5	305	46.0	69	-23 04.2	57	10 N	17 43	18 05	18 32	8 50	52	20 42	55		
12	0	55.2	-23 22.6	320	11.9	70	-22 58.5	59	0	18 00	18 23	18 49	8 32	55	20 59	53		
13	15	54.9	22.7	334	37.9	70	52.6	60	10 S	18	18 41	19 08	8 14	57	21 16	50		
14	30	54.6	22.8	349	03.9	72	46.6	62	20	37	19 01	30	7 54	60	34 46			
15	45	54.3	22.8	3	30.1	73	40.4	63	30	18 59	26	19 59	32 63		21 54	43		
16	60	54.0	22.9	17	56.4	74	34.1	64	35	19 12	19 41	20 18	19 65		22 06	41		
17	75	53.7	-23 23.0	32	22.8	75	-22 27.7	65	40	19 27	20 00	20 41	7 03	68	22 20	38		
18	90	53.4	-23 23.1	46	49.3	76	-22 21.2	66	45	19 45	20 22	21 12	6 45	70	22 36	36		
19	105	53.1	23.1	61	15.9	77	14.6	68	50	20 07	20 52	21 57	23 73		22 56	31		
20	120	52.7	23.2	75	42.6	78	07.8	69	52	18	21 07	22 25	12 75		23 06	29		
21	135	52.4	23.3	90	09.4	79	-22 00.9	70	54	30	25	23 11	6 00	77	16 27			
22	150	52.1	23.3	104	36.3	80	-21 53.9	72	56	20 45	21 47	** ** *	5 45	81	28 24			
23	165	51.8	23.4	119	03.3	81	46.7	72	58	21 01	22 17	** ** *	29 84		42 21			
24	180	51.5	-23 23.5	133	30.4		-21 39.5		60 S	21 22	23 07	** ** *	5 09	88	23 58	17		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 12 ^m 7		Mag: -3.9 PMG: 10 ^h 15 ^m				Mag: -0.6 PMG: 19 ^h 32 ^m				Mag: -2.0 PMG: 14 ^h 21 ^m				Mag: +0.6 PMG: 14 ^h 23 ^m			
	hG ♂		hG ♀	dec.		hG ♂	dec.		hG ♀	dec.		hG ♀	dec.		hG ♀	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	86	04.8	206	16.8	-19	17.3	66	24.3	+8	51.4	144	22.1	-20	-43.8	143	50.2		
1	101	07.2	221	16.0		18.0	81	26.0		51.8	159	24.0		-43.7	158	52.4		
2	116	09.7	236	15.3		18.7	96	27.7		52.2	174	25.9		-43.6	173	54.6		
3	131	12.2	251	14.5		19.4	111	29.3		52.6	189	27.8		-43.5	188	56.8		
4	146	14.6	266	13.8		20.1	126	31.0		52.9	204	29.7		-43.4	203	59.0		
5	161	17.1	281	13.0	-19	20.8	141	32.7	+8	53.3	219	31.6	-20	-43.3	219	01.2		
6	176	19.6	296	12.2	-19	21.5	156	34.4	+8	53.7	234	33.5	-20	-43.1	234	03.4		
7	191	22.0	311	11.5		22.2	171	36.1		54.1	249	35.4		-43.0	249	05.6		
8	206	24.5	326	10.7		22.9	186	37.7		54.5	264	37.3		-42.9	264	07.8		
9	221	27.0	341	09.9		23.6	201	39.4		54.9	279	39.2		-42.8	279	10.0		
10	236	29.4	356	09.2		24.3	216	41.1		55.3	294	41.1		-42.7	294	12.1		
11	251	31.9	11	08.4	-19	25.0	231	42.8	+8	55.7	309	43.0	-20	-42.6	309	14.3		
12	266	34.4	26	07.6	-19	25.7	246	44.5	+8	56.1	324	44.9	-20	-42.5	324	16.5		
13	281	36.8	41	06.9		26.4	261	46.1		56.4	339	46.8		-42.4	339	18.7		
14	296	39.3	56	06.1		27.1	276	47.8		56.8	354	48.7		-42.3	354	20.9		
15	311	41.7	71	05.3		27.8	291	49.5		57.2	9	50.6		-42.1	9	23.1		
16	326	44.2	86	04.6		28.4	306	51.2		57.6	24	52.5		-42.0	24	25.3		
17	341	46.7	101	03.8	-19	29.1	321	52.8	+8	58.0	39	54.4	-20	-41.9	39	27.5		
18	356	49.1	116	03.0	-19	29.8	336	54.5	+8	58.4	54	56.3	-20	-41.8	54	29.7		
19	11	51.6	131	02.3		30.5	351	56.2		58.8	69	58.2		-41.7	69	31.8		
20	26	54.1	146	01.5		31.2	6	57.9		59.2	85	00.1		-41.6	84	34.0		
21	41	56.5	161	00.7		31.9	21	59.5	+8	59.6	100	02.0		-41.5	99	36.2		
22	56	59.0	176	00.0		32.6	37	01.2	+9	00.0	115	03.9		-41.4	114	38.4		
23	72	01.5	190	59.2		33.3	52	02.9		00.4	130	05.8		-41.2	129	40.6		
24	87	03.9	205	58.4	-19	34.0	67	04.5	+9	00.8	145	07.7	-20	-41.1	144	42.8		
Dif.	—		-8		-7		+17		+4		+19		+1		+22			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'3				SD: 15'7												PHE { 4 ^h : 57'5 12 ^h : 57'2 20 ^h : 56'9		
	PMG: 11 ^h 56 ^m 8				Edad: 3 ^d 3														
	hG ☉		Dec		hG ☾		Dif.			Dec			Dif.						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	180	51.5	-23	23.5	133	30.4	83	-21	39.5	74	60 N	7 06	8 03	9 00	12 10	12	19 19	89	
1	195	51.2		23.5	147	57.7	83		32.1	74	58	6 58	7 51	8 43	11 56	16	33 84		
2	210	50.9		23.6	162	25.0	85		24.7	76	56	51	41	28	44 19		44 82		
3	225	50.6		23.7	176	52.5	86		17.1	77	54	45	31	15	33 22		19 55	78	
4	240	50.3		23.7	191	20.1	86		09.4	78	52	40	23	8 04	23 25		20 04	75	
5	255	50.0	-23	23.8	205	47.7	88	-21	01.6	79	50	6 34	7 16	7 54	11 15	27	20 12	73	
6	270	49.7	-23	23.9	220	15.5	89	-20	53.7	80	45	6 22	7 00	7 34	10 57	31	20 29	69	
7	285	49.4		23.9	234	43.4	90		45.7	81	40	12	6 46	17	42 34		43 65		
8	300	49.0		24.0	249	11.4	91		37.6	83	35	6 03	34	7 03	29 38		20 55	62	
9	315	48.7		24.0	263	39.5	92		29.3	83	30	5 54	24	6 50	10 18	40	21 05	60	
10	330	48.4		24.1	278	07.7	94		21.0	84	20	37	6 05	29	9 59	44	22 56		
11	345	48.1	-23	24.2	292	36.1	94	-20	12.6	85	10 N	5 21	5 48	6 10	9 42	48	21 37	52	
12	0	47.8	-23	24.2	307	04.5	95	-20	04.1	86	0	5 04	5 31	5 53	9 27	50	21 52	48	
13	15	47.5		24.3	321	33.0	97	-19	55.5	87	10 S	4 45	5 12	35	9 11	54	22 06	45	
14	30	47.2		24.3	336	01.7	98		46.8	88	20	4 23	4 52	5 17	8 54	58	20 42		
15	45	46.9		24.4	350	30.5	98		38.0	89	30	3 54	27	4 54	35 61		37 38		
16	60	46.6		24.4	4	59.3	100		29.1	90	35	35	4 12	41	24 63		47 35		
17	75	46.3	-23	24.5	19	28.3	101	-19	20.1	91	40	3 12	3 54	4 26	8 11	66	22 58	32	
18	90	46.0	-23	24.5	33	57.4	102	-19	11.0	91	45	2 41	3 31	4 08	7 55	70	23 12	28	
19	105	45.6		24.6	48	26.6	103	-19	01.9	93	50	1 56	3 01	3 46	36 75		27 24		
20	120	45.3		24.7	62	55.9	104	-18	52.6	93	52	1 28	2 46	35	27 77		35 22		
21	135	45.0		24.7	77	25.3	105		43.3	94	54	0 42	28	23	17 79		43 20		
22	150	44.7		24.8	91	54.8	106		33.9	95	56	** **	2 06	3 08	7 06	81	23 52	17	
23	165	44.4		24.8	106	24.4	107		24.4	96	58	** **	1 36	2 52	6 53	85	** **	**	
24	180	44.1	-23	24.8	120	54.1		-18	14.8		60 S	** **	0 46	2 31	6 37	90	** **	**	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 18 ^h 08 ^m 8		Mag: -3.9 PMG: 10 ^h 17 ^m				Mag: -0.6 PMG: 19 ^h 30 ^m				Mag: -2.0 PMG: 14 ^h 18 ^m				Mag: +0.6 PMG: 14 ^h 19 ^m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	87	03.9	205	58.4	-19	34.0	67	04.5	+9	00.8	145	07.7	-20	41.1	144	42.8	-20	29.8
1	102	06.4	220	57.7		34.6	82	06.2		01.1	160	09.6		41.0	159	45.0		29.8
2	117	08.9	235	56.9		35.3	97	07.9		01.5	175	11.5		40.9	174	47.2		29.7
3	132	11.3	250	56.1		36.0	112	09.5		01.9	190	13.4		40.8	189	49.3		29.7
4	147	13.8	265	55.3		36.7	127	11.2		02.3	205	15.3		40.7	204	51.5		29.6
5	162	16.2	280	54.6	-19	37.4	142	12.9	+9	02.7	220	17.2	-20	40.6	219	53.7	-20	29.6
6	177	18.7	295	53.8	-19	38.0	157	14.5	+9	03.1	235	19.1	-20	40.5	234	55.9	-20	29.5
7	192	21.2	310	53.0		38.7	172	16.2		03.5	250	21.0		40.4	249	58.1		29.5
8	207	23.6	325	52.2		39.4	187	17.9		03.9	265	22.9		40.2	265	00.3		29.4
9	222	26.1	340	51.5		40.1	202	19.5		04.3	280	24.8		40.1	280	02.5		29.3
10	237	28.6	355	50.7		40.7	217	21.2		04.7	295	26.6		40.0	295	04.7		29.3
11	252	31.0	10	49.9	-19	41.4	232	22.8	+9	05.1	310	28.5	-20	39.9	310	06.8	-20	29.2
12	267	33.5	25	49.1	-19	42.1	247	24.5	+9	05.5	325	30.4	-20	39.8	325	09.0	-20	29.2
13	282	36.0	40	48.4		42.8	262	26.2		05.9	340	32.3		39.7	340	11.2		29.1
14	297	38.4	55	47.6		43.4	277	27.8		06.3	355	34.2		39.6	355	13.4		29.1
15	312	40.9	70	46.8		44.1	292	29.5		06.7	10	36.1		39.5	10	15.6		29.0
16	327	43.4	85	46.0		44.8	307	31.1		07.1	25	38.0		39.3	25	17.8		29.0
17	342	45.8	100	45.2	-19	45.5	322	32.8	+9	07.4	40	39.9	-20	39.2	40	20.0	-20	28.9
18	357	48.3	115	44.5	-19	46.1	337	34.4	+9	07.8	55	41.8	-20	39.1	55	22.1	-20	28.9
19	12	50.7	130	43.7		46.8	352	36.1		08.2	70	43.7		39.0	70	24.3		28.8
20	27	53.2	145	42.9		47.5	7	37.7		08.6	85	45.6		38.9	85	26.5		28.7
21	42	55.7	160	42.1		48.1	22	39.4		09.0	100	47.5		38.8	100	28.7		28.7
22	57	58.1	175	41.3		48.8	37	41.1		09.4	115	49.4		38.7	115	30.9		28.6
23	73	00.6	190	40.6		49.4	52	42.7		09.8	130	51.3		38.6	130	33.1		28.6
24	88	03.1	205	39.8	-19	50.1	67	44.4	+9	10.2	145	53.2	-20	38.4	145	35.3	-20	28.5
Dif.	—		-8		-7		+17		+4		+19		+1		+22		+1	

UT	SOL				 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16'3				SD: 15'5		PHE { 4 ^h : 56'6 12 ^h : 56'4 20 ^h : 56'1						Edad: 4 ^d 3			Rº: 45 ^m					
	PMG: 11 ^h 57 ^m 3				PMG: 16 ^h 29 ^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	180	44.1	-23	24.8	120	54.1	108	-18	14.8	97	60 N	14 54	15 51	16 48		12 22	9	20 48	85		
1	195	43.8		24.9	135	23.9	109	-18	05.1	97	58	15 11	16 03	16 56		12 12		20 57	82		
2	210	43.5		24.9	149	53.8	111	-17	55.4	98	56	26	13	17 03		12 03	15	21 06	78		
3	225	43.2		25.0	164	23.9	111		45.6	99	54	39	22	09		11 55	17	13	75		
4	240	42.9		25.0	178	54.0	112		35.7	100	52	15 50	31	14		48	20	19	73		
5	255	42.5	-23	25.1	193	24.2	114	-17	25.7	100	50	16 00	16 38	17 20		11 42	21	21 25	71		
6	270	42.2	-23	25.1	207	54.6	114	-17	15.7	101	45	16 20	16 54	17 31		11 28	25	21 38	66		
7	285	41.9		25.2	222	25.0	115	-17	05.6	102	40	37	17 08	42		16	29	48	63		
8	300	41.6		25.2	236	55.5	117	-16	55.4	103	35	16 51	20	17 51		11 07	32	21 57	59		
9	315	41.3		25.2	251	26.2	117		45.1	103	30	17 04	30	18 00		10 58	34	22 05	56		
10	330	41.0		25.3	265	56.9	118		34.8	104	20	25	17 49	17		43	39	18	52		
11	345	40.7	-23	25.3	280	27.7	119	-16	24.4	104	10 N	17 44	18 06	18 33		10 30	42	22 29	49		
12	0	40.4	-23	25.4	294	58.6	121	-16	14.0	105	0	18 01	18 24	18 50		10 17	47	22 40	45		
13	15	40.1		25.4	309	29.7	121	-16	03.5	106	10 S	19	18 42	19 09		10 05	50	22 51	41		
14	30	39.8		25.4	324	00.8	122	-15	52.9	107	20	18 38	19 02	19 31		9 52	53	23 02	37		
15	45	39.4		25.5	338	32.0	123		42.2	107	30	19 00	27	20 01		36	58	15	32		
16	60	39.1		25.5	353	03.3	124		31.5	107	35	13	19 42	19		27	61	22	30		
17	75	38.8	-23	25.5	7	34.7	125	-15	20.8	108	40	19 28	20 01	20 42		9 17	64	23 30	27		
18	90	38.5	-23	25.6	22	06.2	125	-15	10.0	109	45	19 46	20 23	21 13		9 05	68	23 40	24		
19	105	38.2		25.6	36	37.7	127	-14	59.1	109	50	20 08	20 53	21 59		8 51	72	51	20		
20	120	37.9		25.6	51	09.4	128		48.2	110	52	19	21 08	22 27		44	74	23 57	17		
21	135	37.6		25.7	65	41.2	128		37.2	111	54	32	26	23 14		36	77	***	***		
22	150	37.3		25.7	80	13.0	129		26.1	110	56	20 46	21 49	***	***		27	80	***	***	
23	165	37.0		25.7	94	44.9	131		15.1	112	58	21 03	22 19	***	***		18	82	0 03	14	
24	180	36.7	-23	25.8	109	17.0		-14	03.9		60 S	21 23	23 10	***	***		8 07	86	0 15	10	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 18 ^h 04 ^m 8		Mag: -3.9 PMG: 10 ^h 18 ^m				Mag: -0.6 PMG: 19 ^h 27 ^m				Mag: -2.0 PMG: 14 ^h 15 ^m				Mag: +0.6 PMG: 14 ^h 16 ^m						
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	88	03.1	205	39.8	-19	50.1	67	44.4	+9	10.2	145	53.2	-20	-38.4	145	35.3	-20	28.5			
1	103	05.5	220	39.0		50.8	82	46.0		10.6	160	55.1		-38.3	160	37.5		28.5			
2	118	08.0	235	38.2		51.4	97	47.7		11.0	175	57.0		-38.2	175	39.6		28.4			
3	133	10.5	250	37.4		52.1	112	49.3		11.4	190	58.9		-38.1	190	41.8		28.4			
4	148	12.9	265	36.6		52.7	127	51.0		11.8	206	00.8		-38.0	205	44.0		28.3			
5	163	15.4	280	35.9	-19	53.4	142	52.6	+9	12.2	221	02.7	-20	-37.9	220	46.2	-20	28.3			
6	178	17.8	295	35.1	-19	54.1	157	54.2	+9	12.6	236	04.6	-20	-37.8	235	48.4	-20	28.2			
7	193	20.3	310	34.3		54.7	172	55.9		13.0	251	06.5		-37.6	250	50.6		28.1			
8	208	22.8	325	33.5		55.4	187	57.5		13.4	266	08.4		-37.5	265	52.8		28.1			
9	223	25.2	340	32.7		56.0	202	59.2		13.8	281	10.2		-37.4	280	54.9		28.0			
10	238	27.7	355	31.9		56.7	218	00.8		14.2	296	12.1		-37.3	295	57.1		28.0			
11	253	30.2	10	31.1	-19	57.3	233	02.5	+9	14.6	311	14.0	-20	-37.2	310	59.3	-20	27.9			
12	268	32.6	25	30.3	-19	58.0	248	04.1	+9	15.0	326	15.9	-20	-37.1	326	01.5	-20	27.9			
13	283	35.1	40	29.6		58.6	263	05.8		15.4	341	17.8		-37.0	341	03.7		27.8			
14	298	37.6	55	28.8		59.3	278	07.4		15.8	356	19.7		-36.8	356	05.9		27.8			
15	313	40.0	70	28.0	-19	59.9	293	09.0		16.2	11	21.6		-36.7	11	08.1		27.7			
16	328	42.5	85	27.2	-20	00.6	308	10.7		16.6	26	23.5		-36.6	26	10.2		27.7			
17	343	45.0	100	26.4	-20	01.2	323	12.3	+9	17.0	41	25.4	-20	-36.5	41	12.4	-20	27.6			
18	358	47.4	115	25.6	-20	01.9	338	13.9	+9	17.4	56	27.3	-20	-36.4	56	14.6	-20	27.5			
19	13	49.9	130	24.8		02.5	353	15.6		17.8	71	29.2		-36.3	71	16.8		27.5			
20	28	52.3	145	24.0		03.1	8	17.2		18.2	86	31.1		-36.2	86	19.0		27.4			
21	43	54.8	160	23.2		03.8	23	18.9		18.6	101	33.0		-36.1	101	21.2		27.4			
22	58	57.3	175	22.4		04.4	38	20.5		19.0	116	34.9		-35.9	116	23.3		27.3			
23	73	59.7	190	21.6		05.1	53	22.1		19.4	131	36.8		-35.8	131	25.5		27.3			
24	89	02.2	205	20.8	-20	05.7	68	23.8	+9	19.8	146	38.7	-20	-35.7	146	27.7	-20	27.2			
Dif.	—		-8		-6		+16		+4		+19		+1		+22		+		+1		

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3				SD: 15'3 Edad: 5 ^d 3					PHE { 4 ^h : 55'8 12 ^h : 55'6 20 ^h : 55'4								
	PMG: 11 ^h 57 ^m 8				PMG: 17 ^h 14 ^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		h m m			
0	180	36.7	-23	25.8	109	17.0	131	-14	03.9	112	60 N	7 07	8 04	9 02	12 31	5		
1	195	36.3		25.8	123	49.1	132	-13	52.7	112	58	6 59	7 52	8 44	24	9		
2	210	36.0		25.8	138	21.3	132		41.5	113	56	53	42	29	18	11		
3	225	35.7		25.8	152	53.5	134		30.2	113	54	46	33	17	12	14		
4	240	35.4		25.9	167	25.9	134		18.9	114	52	41	24	8 05	08	16		
5	255	35.1	-23	25.9	181	58.3	136	-13	07.5	115	50	6 35	7 17	7 56	12 03	18		
6	270	34.8	-23	25.9	196	30.9	136	-12	56.0	114	45	6 24	7 01	7 35	11 53	23		
7	285	34.5		25.9	211	03.5	136		44.6	115	40	13	6 47	18	45	26		
8	300	34.2		25.9	225	36.1	138		33.1	116	35	6 04	36	7 04	39	28		
9	315	33.9		26.0	240	08.9	138		21.5	116	30	5 55	25	6 51	32	31		
10	330	33.6		26.0	254	41.7	139	-12	09.9	116	20	39	6 06	30	22	35		
11	345	33.2	-23	26.0	269	14.6	140	-11	58.3	117	10 N	5 22	5 49	6 12	11 12	40		
12	0	32.9	-23	26.0	283	47.6	141	-11	46.6	117	0	5 05	5 31	5 54	11 04	43		
13	15	32.6		26.0	298	20.7	141		34.9	117	10 S	4 46	5 13	36	10 55	47		
14	30	32.3		26.1	312	53.8	142		23.2	118	20	4 24	4 53	5 17	45	51		
15	45	32.0		26.1	327	27.0	143	-11	11.4	118	30	3 54	28	4 55	34	56		
16	60	31.7		26.1	342	00.3	143	-10	59.6	119	35	36	4 13	42	28	58		
17	75	31.4	-23	26.1	356	33.6	144	-10	47.7	119	40	3 13	3 54	4 27	10 21	61		
18	90	31.1	-23	26.1	11	07.0	145	-10	35.8	119	45	2 42	3 32	4 09	10 13	64		
19	105	30.8		26.1	25	40.5	145		23.9	119	50	1 56	3 02	3 47	10 03	69		
20	120	30.4		26.1	40	14.0	147		12.0	120	52	1 28	2 47	36	9 58	71		
21	135	30.1		26.2	54	47.7	146	-10	00.0	120	54	0 41	29	23	53	73		
22	150	29.8		26.2	69	21.3	148	-9	48.0	121	56	** ** *	2 06	3 09	47	76		
23	165	29.5		26.2	83	55.1	148		35.9	120	58	** ** *	1 36	2 52	9 40	79		
24	180	29.2	-23	26.2	98	28.9		-9	23.9		60 S	** ** *	0 45	2 32	9 33	82		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 00 ^m 9		Mag: -3.9 PMG: 10 ^h 19 ^m				Mag: -0.6 PMG: 19 ^h 24 ^m				Mag: -2.0 PMG: 14 ^h 12 ^m				Mag: +0.6 PMG: 14 ^h 12 ^m			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	89	02.2	205	20.8	-20	05.7	68	23.8	+9	19.8	146	38.7	-20	35.7	146	27.7		
1	104	04.7	220	20.0		06.3	83	25.4		20.2	161	40.5		35.6	161	29.9		
2	119	07.1	235	19.3		07.0	98	27.0		20.6	176	42.4		35.5	176	32.1		
3	134	09.6	250	18.5		07.6	113	28.7		21.0	191	44.3		35.4	191	34.3		
4	149	12.1	265	17.7		08.2	128	30.3		21.4	206	46.2		35.3	206	36.5		
5	164	14.5	280	16.9	-20	08.9	143	31.9	+9	21.8	221	48.1	-20	35.1	221	38.6		
6	179	17.0	295	16.1	-20	09.5	158	33.5	+9	22.2	236	50.0	-20	35.0	236	40.8		
7	194	19.5	310	15.3		10.1	173	35.2		22.6	251	51.9		34.9	251	43.0		
8	209	21.9	325	14.5		10.8	188	36.8		23.0	266	53.8		34.8	266	45.2		
9	224	24.4	340	13.7		11.4	203	38.4		23.4	281	55.7		34.7	281	47.4		
10	239	26.8	355	12.9		12.0	218	40.1		23.8	296	57.6		34.6	296	49.6		
11	254	29.3	10	12.1	-20	12.7	233	41.7	+9	24.2	311	59.5	-20	34.4	311	51.7		
12	269	31.8	25	11.3	-20	13.3	248	43.3	+9	24.6	327	01.4	-20	34.3	326	53.9		
13	284	34.2	40	10.5		13.9	263	44.9		25.0	342	03.3		34.2	341	56.1		
14	299	36.7	55	09.7		14.5	278	46.6		25.4	357	05.2		34.1	356	58.3		
15	314	39.2	70	08.9		15.2	293	48.2		25.8	12	07.0		34.0	12	00.5		
16	329	41.6	85	08.1		15.8	308	49.8		26.2	27	08.9		33.9	27	02.7		
17	344	44.1	100	07.3	-20	16.4	323	51.4	+9	26.6	42	10.8	-20	33.8	42	04.8		
18	359	46.6	115	06.5	-20	17.0	338	53.0	+9	27.0	57	12.7	-20	33.6	57	07.0		
19	14	49.0	130	05.7		17.7	353	54.7		27.4	72	14.6		33.5	72	09.2		
20	29	51.5	145	04.9		18.3	8	56.3		27.8	87	16.5		33.4	87	11.4		
21	44	54.0	160	04.1		18.9	23	57.9		28.2	102	18.4		33.3	102	13.6		
22	59	56.4	175	03.3		19.5	38	59.5		28.6	117	20.3		33.2	117	15.8		
23	74	58.9	190	02.5		20.1	54	01.1		29.0	132	22.2		33.1	132	17.9		
24	90	01.3	205	01.6	-20	20.7	69	02.8	+9	29.4	147	24.1	-20	33.0	147	20.1		
Dif.	—		-8		-6		+16		+4		+19		+1		+22			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna		Puesta de Luna										
	SD: 16'3 PMG: 11 ^h 58 ^m 3				SD: 15'1 Edad: 6 ^d 3 PHE { 4 ^h : 55'2 12 ^h : 55'0 20 ^h : 54'8 PMG: 17 ^h 57 ^m Rº: 41 ^m						Civil			Náut.		Hora Rº		Hora Rº								
	hG ☉	Dec	hG ☾	Dif.	Dec	Dif.	h m	h m			h m	h m m	Rº	h m m	Rº											
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m									
0	180	29.2	-23	26.2	98	28.9	148	-9	23.9	121	60 N	14 54	15 52	16 49	12 36	5	23 34	78								
1	195	28.9		26.2	113	02.7	149	-9	11.8	121	58	15 12	16 04	16 57	33	7	36	76								
2	210	28.6		26.2	127	36.6	150	-8	59.7	122	56	27	14	17 03	29	10	39	73								
3	225	28.3		26.2	142	10.6	151		47.5	121	54	39	23	10	26	13	41	70								
4	240	28.0		26.2	156	44.7	150		35.4	122	52	15 51	32	15	24	14	43	68								
5	255	27.6	-23	26.2	171	18.7	152	-8	23.2	123	50	16 01	16 39	17 21	12 21	16	23 44	67								
6	270	27.3	-23	26.2	185	52.9	152	-8	10.9	122	45	16 21	16 55	17 32	12 16	20	23 48	62								
7	285	27.0		26.2	200	27.1	153	-7	58.7	122	40	38	17 09	43	11	23	51	59								
8	300	26.7		26.2	215	01.4	153		46.5	123	35	16 52	21	17 52	07	26	54	55								
9	315	26.4		26.2	229	35.7	153		34.2	123	30	17 05	31	18 01	12 03	29	23 56	53								
10	330	26.1		26.2	244	10.0	154		21.9	123	20	26	17 50	18	11 57	34	***	***								
11	345	25.8	-23	26.2	258	44.4	155	-7	09.6	124	10 N	17 45	18 07	18 34	11 52	37	***	***								
12	0	25.5	-23	26.2	273	18.9	155	-6	57.2	123	0	18 02	18 25	18 51	11 47	41	***	***								
13	15	25.2		26.2	287	53.4	155		44.9	124	10 S	20	18 43	19 10	42	45	***	***								
14	30	24.8		26.2	302	27.9	156		32.5	123	20	18 39	19 03	19 32	36	49	***	***								
15	45	24.5		26.2	317	02.5	157		20.2	124	30	19 01	28	20 02	30	54	***	***								
16	60	24.2		26.2	331	37.2	157	-6	07.8	124	35	14	19 44	20	26	57	***	***								
17	75	23.9	-23	26.2	346	11.9	157	-5	55.4	125	40	19 29	20 02	20 44	11 22	60	***	***								
18	90	23.6	-23	26.2	0	46.6	158	-5	42.9	124	45	19 47	20 24	21 14	11 17	63	0 04	21								
19	105	23.3		26.2	15	21.4	158		30.5	125	50	20 10	20 54	22 00	12	67	11	17								
20	120	23.0		26.2	29	56.2	158		18.0	124	52	20	21 09	22 28	09	69	14	16								
21	135	22.7		26.2	44	31.0	159	-5	05.6	125	54	33	27	23 15	06	71	18	13								
22	150	22.4		26.2	59	05.9	159	-4	53.1	125	56	20 47	21 50	***	11 03	74	22	11								
23	165	22.0		26.2	73	40.8	160		40.6	124	58	21 04	22 20	***	10 59	77	27	8								
24	180	21.7	-23	26.1	88	15.8		-4	28.2		60 S	21 24	23 11	***	10 55	80	0 32	5								
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO											
	PMG 17 ^h 57 ^m 0		Mag: -3.9 PMG: 10 ^h 20 ^m				Mag: -0.5 PMG: 19 ^h 22 ^m				Mag: -2.0 PMG: 14 ^h 09 ^m				Mag: +0.6 PMG: 14 ^h 09 ^m											
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	90	01.3	205	01.6	-20	20.7	69	02.8	+9	29.4	147	24.1	-20	-33.0	147	20.1	-20	25.9								
1	105	03.8	220	00.8		21.4	84	04.4		29.8	162	26.0		-32.8	162	22.3		25.8								
2	120	06.3	235	00.0		22.0	99	06.0		30.2	177	27.8		-32.7	177	24.5		25.8								
3	135	08.7	249	59.2		22.6	114	07.6		30.7	192	29.7		-32.6	192	26.7		25.7								
4	150	11.2	264	58.4		23.2	129	09.2		31.1	207	31.6		-32.5	207	28.8		25.7								
5	165	13.7	279	57.6	-20	23.8	144	10.8	+9	31.5	222	33.5	-20	-32.4	222	31.0	-20	25.6								
6	180	16.1	294	56.8	-20	24.4	159	12.4	+9	31.9	237	35.4	-20	-32.3	237	33.2	-20	25.5								
7	195	18.6	309	56.0		25.0	174	14.1		32.3	252	37.3		-32.1	252	35.4		25.5								
8	210	21.1	324	55.2		25.6	189	15.7		32.7	267	39.2		-32.0	267	37.6		25.4								
9	225	23.5	339	54.4		26.2	204	17.3		33.1	282	41.1		-31.9	282	39.8		25.4								
10	240	26.0	354	53.6		26.8	219	18.9		33.5	297	43.0		-31.8	297	41.9		25.3								
11	255	28.4	9	52.8	-20	27.4	234	20.5	+9	33.9	312	44.9	-20	-31.7	312	44.1	-20	25.3								
12	270	30.9	24	51.9	-20	28.0	249	22.1	+9	34.3	327	46.8	-20	-31.6	327	46.3	-20	25.2								
13	285	33.4	39	51.1		28.6	264	23.7		34.7	342	48.6		-31.4	342	48.5		25.2								
14	300	35.8	54	50.3		29.2	279	25.3		35.1	357	50.5		-31.3	357	50.7		25.1								
15	315	38.3	69	49.5		29.8	294	26.9		35.5	12	52.4		-31.2	12	52.9		25.0								
16	330	40.8	84	48.7		30.4	309	28.5		35.9	27	54.3		-31.1	27	55.0		25.0								
17	345	43.2	99	47.9	-20	31.0	324	30.1	+9	36.3	42	56.2	-20	-31.0	42	57.2	-20	24.9								
18	0	45.7	114	47.1	-20	31.6	339	31.7	+9	36.7	57	58.1	-20	-30.9	57	59.4	-20	24.9								
19	15	48.2	129	46.3		32.2	354	33.3		37.2	73	00.0		-30.7	73	01.6		24.8								
20	30	50.6	144	45.4		32.8	9	34.9		37.6	88	01.9		-30.6	88	03.8		24.8								
21	45	53.1	159	44.6		33.4	24	36.6		38.0	103	03.8		-30.5	103	05.9		24.7								
22	60	55.6	174	43.8		34.0	39	38.2		38.4	118	05.7		-30.4	118	08.1		24.7								
23	75	58.0	189	43.0		34.6	54	39.8		38.8	133	07.5		-30.3	133	10.3		24.6								
24	91	00.5	204	42.2	-20	35.2	69	41.4	+9	39.2	148	09.4	-20	-30.2	148	12.5	-20	24.5								
Dif.	—		-8				-6				+16				+4				+19				+1			

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna																			
	SD: 16'3 PMG: 11 ^h 58 ^m 8				SD: 14'9 Edad: 7 ^d 3 PMG: 18 ^h 38 ^m Rº: 40 ^m																													
	hG ☉	Dec			hG ☾	Dif.				Dec	Dif.	Náut.	Civil	Hora	Rº	Hora	Rº																	
h	°	'	°	'	°	'		°	'		h	m	h	m	h	m	m																	
0	180	21.7	-23	26.1	88	15.8	160	-4	28.2	125	60 N	7 08	8 05	9 03	12 41	5	*** **																	
1	195	21.4		26.1	102	50.8	160		15.7	125	58	7 00	7 53	8 45	40	8	*** **																	
2	210	21.1		26.1	117	25.8	161	-4	03.2	126	56	6 54	43	30	39	10	*** **																	
3	225	20.8		26.1	132	00.9	161	-3	50.6	125	54	47	34	18	39	11	*** **																	
4	240	20.5		26.1	146	36.0	161		38.1	125	52	42	25	8 06	38	14	*** **																	
5	255	20.2	-23	26.1	161	11.1	161	-3	25.6	125	50	6 36	7 18	7 57	12 37	16	*** **																	
6	270	19.9	-23	26.1	175	46.2	162	-3	13.1	126	45	6 25	7 02	7 36	12 36	19	*** **																	
7	285	19.6		26.0	190	21.4	162	-3	00.5	125	40	14	6 48	19	34	23	*** **																	
8	300	19.2		26.0	204	56.6	162	-2	48.0	125	35	6 05	37	7 05	33	26	*** **																	
9	315	18.9		26.0	219	31.8	163		35.5	126	30	5 56	26	6 52	32	29	*** **																	
10	330	18.6		26.0	234	07.1	163		22.9	125	20	40	6 07	31	31	32	0 00 48																	
11	345	18.3	-23	26.0	248	42.4	163	-2	10.4	126	10 N	5 23	5 50	6 13	12 29	37	0 03 45																	
12	0	18.0	-23	26.0	263	17.7	163	-1	57.8	125	0	5 06	5 32	5 55	12 28	40	0 07 40																	
13	15	17.7		25.9	277	53.0	163		45.3	126	10 S	4 47	5 14	37	27	44	10 37																	
14	30	17.4		25.9	292	28.3	164		32.7	125	20	4 25	4 54	5 18	25	48	13 33																	
15	45	17.1		25.9	307	03.7	164		20.2	125	30	3 55	29	4 56	24	52	17 29																	
16	60	16.8		25.9	321	39.1	164	-1	07.7	126	35	37	4 14	43	23	55	19 26																	
17	75	16.4	-23	25.8	336	14.5	164	-0	55.1	125	40	3 14	3 55	4 28	12 22	58	0 22 23																	
18	90	16.1	-23	25.8	350	49.9	164	-0	42.6	126	45	2 43	3 33	4 10	12 20	62	0 25 19																	
19	105	15.8		25.8	5	25.3	165		30.0	125	50	1 57	3 03	3 48	19	66	28 16																	
20	120	15.5		25.8	20	00.8	164		17.5	125	52	1 29	2 48	37	18	68	30 14																	
21	135	15.2		25.7	34	36.2	165	-0	05.0	125	54	0 42	30	24	17	70	31 12																	
22	150	14.9		25.7	49	11.7	165	+0	07.5	126	56	** **	2 07	3 10	17	72	33 10																	
23	165	14.6		25.7	63	47.2	165		20.1	125	58	** **	1 37	2 53	12 16	75	0 35 8																	
24	180	14.3	-23	25.6	78	22.7		+0	32.6		60 S	** **	0 46	2 33	12 15	78	0 37 5																	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO																			
	PMG 17 ^h 53 ^m 0		Mag: -3.9 PMG: 10 ^h 22 ^m				Mag: -0.5 PMG: 19 ^h 19 ^m				Mag: -2.0 PMG: 14 ^h 06 ^m				Mag: +0.6 PMG: 14 ^h 05 ^m																			
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.																		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'																
0	91	00.5	204	42.2	-20	35.2	69	41.4	+9	39.2	148	09.4	-20	30.2	148	12.5	-20	24.5																
1	106	02.9	219	41.4		35.8	84	43.0		39.6	163	11.3		30.0	163	14.7		24.5																
2	121	05.4	234	40.6		36.4	99	44.6		40.0	178	13.2		29.9	178	16.8		24.4																
3	136	07.9	249	39.7		37.0	114	46.2		40.4	193	15.1		29.8	193	19.0		24.4																
4	151	10.3	264	38.9		37.5	129	47.7		40.8	208	17.0		29.7	208	21.2		24.3																
5	166	12.8	279	38.1	-20	38.1	144	49.3	+9	41.2	223	18.9	-20	29.6	223	23.4	-20	24.3																
6	181	15.3	294	37.3	-20	38.7	159	50.9	+9	41.6	238	20.8	-20	29.5	238	25.6	-20	24.2																
7	196	17.7	309	36.5		39.3	174	52.5		42.0	253	22.7		29.3	253	27.8		24.1																
8	211	20.2	324	35.6		39.9	189	54.1		42.5	268	24.5		29.2	268	29.9		24.1																
9	226	22.7	339	34.8		40.5	204	55.7		42.9	283	26.4		29.1	283	32.1		24.0																
10	241	25.1	354	34.0		41.0	219	57.3		43.3	298	28.3		29.0	298	34.3		24.0																
11	256	27.6	9	33.2	-20	41.6	234	58.9	+9	43.7	313	30.2	-20	28.9	313	36.5	-20	23.9																
12	271	30.0	24	32.4	-20	42.2	250	00.5	+9	44.1	328	32.1	-20	28.8	328	38.7	-20	23.9																
13	286	32.5	39	31.5		42.8	265	02.1		44.5	343	34.0		28.6	343	40.8		23.8																
14	301	35.0	54	30.7		43.4	280	03.7		44.9	358	35.9		28.5	358	43.0		23.8																
15	316	37.4	69	29.9		43.9	295	05.3		45.3	13	37.8		28.4	13	45.2		23.7																
16	331	39.9	84	29.1		44.5	310	06.9		45.7	28	39.6		28.3	28	47.4		23.6																
17	346	42.4	99	28.2	-20	45.1	325	08.5	+9	46.1	43	41.5	-20	28.2	43	49.6	-20	23.6																
18	1	44.8	114	27.4	-20	45.7	340	10.0	+9	46.6	58	43.4	-20	28.1	58	51.7	-20	23.5																
19	16	47.3	129	26.6		46.2	355	11.6		47.0	73	45.3		27.9	73	53.9		23.5																
20	31	49.8	144	25.8		46.8	10	13.2		47.4	88	47.2		27.8	88	56.1		23.4																
21	46	52.2	159	25.0		47.4	25	14.8		47.8	103	49.1		27.7	103	58.3		23.4																
22	61	54.7	174	24.1		47.9	40	16.4		48.2	118	51.0		27.6	119	00.5		23.3																
23	76	57.2	189	23.3		48.5	55	18.0		48.6	133	52.9		27.5	134	02.6		23.2																
24	91	59.6	204	22.5	-20	49.1	70	19.6	+9	49.0	148	54.7	-20	27.3	149	04.8	-20	23.2																
Dif.	—		-8				-6				+16				+4				+19				+1				+22				+			

UT	SOL				 LUNA				Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG: 11 ^h 59 ^m 3				SD: 14'8 Edad: 8 ^d 3 PMG: 19 ^h 18 ^m PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2 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	180	14.3	-23	25.6	78	22.7	165	+0	32.6	125	60 N	14 56	15 53	16 50	12 46	5	0 52	78	
1	195	14.0		25.6	92	58.2	165		45.1	125	58	15 13	16 05	16 58	48	7	52	75	
2	210	13.7		25.6	107	33.7	165	+0	57.6	124	56	28	15	17 05	49	10	52	72	
3	225	13.3		25.5	122	09.2	165	+1	10.0	125	54	41	24	11	50	13	51	70	
4	240	13.0		25.5	136	44.7	165		22.5	125	52	15 52	33	16	52	14	51	68	
5	255	12.7	-23	25.5	151	20.2	166	+1	35.0	125	50	16 02	16 40	17 22	12 53	16	0 51	66	
6	270	12.4	-23	25.4	165	55.8	165	+1	47.5	124	45	16 22	16 56	17 34	12 55	20	0 50	62	
7	285	12.1		25.4	180	31.3	165	+1	59.9	124	40	39	17 10	44	57	24	50	58	
8	300	11.8		25.4	195	06.8	166	+2	12.3	125	35	16 53	22	17 53	12 59	26	49	56	
9	315	11.5		25.3	209	42.4	165		24.8	124	30	17 06	32	18 02	13 01	28	49	53	
10	330	11.2		25.3	224	17.9	165		37.2	124	20	27	17 51	19	03	33	48	48	
11	345	10.9	-23	25.2	238	53.4	166	+2	49.6	124	10 N	17 46	18 08	18 35	13 06	37	0 48	44	
12	0	10.5	-23	25.2	253	29.0	165	+3	02.0	123	0	18 03	18 26	18 52	13 08	41	0 47	41	
13	15	10.2		25.2	268	04.5	165		14.3	124	10 S	21	18 44	19 11	11	44	47	37	
14	30	09.9		25.1	282	40.0	165		26.7	123	20	18 40	19 04	19 33	13	48	46	33	
15	45	09.6		25.1	297	15.5	165		39.0	124	30	19 02	29	20 03	16	53	46	28	
16	60	09.3		25.0	311	51.0	165	+3	51.4	123	35	15	19 44	21	18	55	45	26	
17	75	09.0	-23	25.0	326	26.5	165	+4	03.7	123	40	19 30	20 03	20 44	13 20	58	0 45	23	
18	90	08.7	-23	24.9	341	02.0	165	+4	16.0	122	45	19 48	20 25	21 15	13 22	62	0 44	20	
19	105	08.4		24.9	355	37.5	165		28.2	123	50	20 10	20 55	22 01	25	66	44	15	
20	120	08.1		24.9	10	13.0	164		40.5	122	52	21	21 10	22 28	26	68	44	13	
21	135	07.7		24.8	24	48.4	165	+4	52.7	122	54	34	28	23 15	27	70	43	12	
22	150	07.4		24.8	39	23.9	164	+5	04.9	122	56	20 48	21 50	** **	29	72	43	10	
23	165	07.1		24.7	53	59.3	164		17.1	122	58	21 05	22 20	** **	31	75	43	7	
24	180	06.8	-23	24.7	68	34.7		+5	29.3		60 S	21 25	23 11	** **	13 33	78	0 42	5	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO				
	PMG: 17 ^h 49 ^m 1		Mag: -3.9 PMG: 10 ^h 23 ^m				Mag: -0.5 PMG: 19 ^h 17 ^m				Mag: -2.0 PMG: 14 ^h 03 ^m				Mag: +0.6 PMG: 14 ^h 02 ^m				
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	91	59.6	204	22.5	-20	49.1	70	19.6	+9	49.0	148	54.7	-20	-27.3	149	04.8	-20	23.2	
1	107	52.1	219	21.6		49.6	85	21.1		49.4	163	56.6		-27.2	164	07.0		23.1	
2	122	04.5	234	20.8		50.2	100	22.7		49.8	178	58.5		-27.1	179	09.2		23.1	
3	137	07.0	249	20.0		50.8	115	24.3		50.3	194	00.4		-27.0	194	11.4		23.0	
4	152	09.5	264	19.2		51.3	130	25.9		50.7	209	02.3		-26.9	209	13.5		23.0	
5	167	11.9	279	18.3	-20	51.9	145	27.5	+9	51.1	224	04.2	-20	-26.8	224	15.7	-20	22.9	
6	182	14.4	294	17.5	-20	52.4	160	29.1	+9	51.5	239	06.1	-20	-26.6	239	17.9	-20	22.8	
7	197	16.9	309	16.7		53.0	175	30.6		51.9	254	08.0		-26.5	254	20.1		22.8	
8	212	19.3	324	15.8		53.6	190	32.2		52.3	269	09.8		-26.4	269	22.2		22.7	
9	227	21.8	339	15.0		54.1	205	33.8		52.7	284	11.7		-26.3	284	24.4		22.7	
10	242	24.3	354	14.2		54.7	220	35.4		53.1	299	13.6		-26.2	299	26.6		22.6	
11	257	26.7	9	13.4	-20	55.2	235	36.9	+9	53.6	314	15.5	-20	-26.0	314	28.8	-20	22.6	
12	272	29.2	24	12.5	-20	55.8	250	38.5	+9	54.0	329	17.4	-20	-25.9	329	31.0	-20	22.5	
13	287	31.7	39	11.7		56.3	265	40.1		54.4	344	19.3		-25.8	344	33.1		22.4	
14	302	34.1	54	10.9		56.9	280	41.7		54.8	359	21.2		-25.7	359	35.3		22.4	
15	317	36.6	69	10.0		57.4	295	43.2		55.2	14	23.0		-25.6	14	37.5		22.3	
16	332	39.0	84	09.2		58.0	310	44.8		55.6	29	24.9		-25.5	29	39.7		22.3	
17	347	41.5	99	08.4	-20	58.5	325	46.4	+9	56.0	44	26.8	-20	-25.3	44	41.9	-20	22.2	
18	2	44.0	114	07.5	-20	59.1	340	48.0	+9	56.5	59	28.7	-20	-25.2	59	44.0	-20	22.2	
19	17	46.4	129	06.7	-20	59.6	355	49.5		56.9	74	30.6		-25.1	74	46.2		22.1	
20	32	48.9	144	05.9	-21	00.2	10	51.1		57.3	89	32.5		-25.0	89	48.4		22.0	
21	47	51.4	159	05.0		00.7	25	52.7		57.7	104	34.4		-24.9	104	50.6		22.0	
22	62	53.8	174	04.2		01.3	40	54.3		58.1	119	36.2		-24.7	119	52.8		21.9	
23	77	56.3	189	03.3		01.8	55	55.8		58.5	134	38.1		-24.6	134	54.9		21.9	
24	92	58.8	204	02.5	-21	02.3	70	57.4	+9	58.9	149	40.0	-20	-24.5	149	57.1	-20	21.8	
Dif.	—		-8 -6				+16 +4				+19 +1				+22 +1				

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 59 ^m 8				SD: 14'8 Edad: 9 ^d 3 PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1 PMG: 19 ^h 59 ^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					
0	180	06.8	-23	24.7	68	34.7	164	+5	29.3	122	60 N	7 09	8 06	9 03	12 51	6	2 10	78
1	195	06.5		24.6	83	10.1	164		41.5	121	58	7 01	7 54	8 46		55	9	07 75
2	210	06.2		24.6	97	45.5	164	+5	53.6	121	56	6 54	44	31	12 59	12		04 72
3	225	05.9		24.5	112	20.9	163	+6	05.7	121	54	48	34	18	13 03	13	2 01	70
4	240	05.6		24.4	126	56.2	164		17.8	120	52	43	26	8 07	06	16	1 59	68
5	255	05.3	-23	24.4	141	31.6	163	+6	29.8	121	50	6 37	7 19	7 57	13 09	17	1 57	66
6	270	05.0	-23	24.3	156	06.9	163	+6	41.9	120	45	6 25	7 03	7 37	13 15	22	1 52	62
7	285	04.6		24.3	170	42.2	162	+6	53.9	120	40	15	6 49	20	21	24	48	58
8	300	04.3		24.2	185	17.4	163	+7	05.9	119	35	6 06	37	7 06	25	28	45	55
9	315	04.0		24.2	199	52.7	162		17.8	119	30	5 57	27	6 53	29	30	42	52
10	330	03.7		24.1	214	27.9	162		29.7	120	20	40	6 08	32	36	35	36	49
11	345	03.4	-23	24.0	229	03.1	161	+7	41.7	118	10 N	5 24	5 51	6 13	13 43	38	1 32	45
12	0	03.1	-23	24.0	243	38.2	162	+7	53.5	119	0	5 07	5 33	5 56	13 49	42	1 28	41
13	15	02.8		23.9	258	13.4	161	+8	05.4	118	10 S	4 48	5 15	38	13 55	45	24	37
14	30	02.5		23.9	272	48.5	161		17.2	118	20	4 26	4 55	5 19	14 01	49	19	34
15	45	02.2		23.8	287	23.6	160		29.0	117	30	3 57	30	4 57	09	53	14	29
16	60	01.9		23.7	301	58.6	161		40.7	117	35	38	4 15	44	13	56	11	27
17	75	01.5	-23	23.7	316	33.7	160	+8	52.4	117	40	3 15	3 56	4 29	14 18	59	1 08	24
18	90	01.2	-23	23.6	331	08.7	159	+9	04.1	117	45	2 44	3 34	4 11	14 24	62	1 04	21
19	105	00.9		23.5	345	43.6	159		15.8	116	50	1 58	3 04	3 49	31	66	0 59	17
20	120	00.6		23.5	0	18.5	159		27.4	116	52	1 31	2 49	38	34	68	57	15
21	135	00.3		23.4	14	53.4	159		39.0	115	54	0 44	31	26	37	71	55	13
22	150	00.0		23.3	29	28.3	158	+9	50.5	116	56	** **	2 09	3 11	41	74	53	10
23	164	59.7		23.3	44	03.1	158	+10	02.1	114	58	** **	1 39	2 54	14 46	76	0 50	8
24	179	59.4	-23	23.2	58	37.9		+10	13.5		60 S	** **	0 48	2 34	14 51	79	0 47	5
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 45 ^m 2		Mag: -3.9 PMG: 10 ^h 24 ^m				Mag: -0.4 PMG: 19 ^h 14 ^m				Mag: -2.0 PMG: 14 ^h 00 ^m				Mag: +0.6 PMG: 13 ^h 58 ^m			
	hG ♈		hG ♀ dec.				hG ♂ dec.				hG ♃ dec.				hG ♄ dec.			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	92	58.8	204	02.5	-21	02.3	70	57.4	+9	58.9	149	40.0	-20	24.5	149	57.1	-20	21.8
1	108	01.2	219	01.7		02.9	85	59.0		59.4	164	41.9		24.4	164	59.3		21.8
2	123	03.7	234	00.8		03.4	101	00.5	+9	59.8	179	43.8		24.3	180	01.5		21.7
3	138	06.1	249	00.0		04.0	116	02.1	+10	00.2	194	45.7		24.1	195	03.6		21.6
4	153	08.6	263	59.2		04.5	131	03.7		00.6	209	47.6		24.0	210	05.8		21.6
5	168	11.1	278	58.3	-21	05.0	146	05.2	+10	01.0	224	49.4	-20	23.9	225	08.0	-20	21.5
6	183	13.5	293	57.5	-21	05.6	161	06.8	+10	01.4	239	51.3	-20	23.8	240	10.2	-20	21.5
7	198	16.0	308	56.6		06.1	176	08.4		01.8	254	53.2		23.7	255	12.4		21.4
8	213	18.5	323	55.8		06.6	191	09.9		02.3	269	55.1		23.5	270	14.5		21.4
9	228	20.9	338	55.0		07.2	206	11.5		02.7	284	57.0		23.4	285	16.7		21.3
10	243	23.4	353	54.1		07.7	221	13.0		03.1	299	58.9		23.3	300	18.9		21.2
11	258	25.9	8	53.3	-21	08.2	236	14.6	+10	03.5	315	00.8	-20	23.2	315	21.1	-20	21.2
12	273	28.3	23	52.4	-21	08.8	251	16.2	+10	03.9	330	02.6	-20	23.1	330	23.2	-20	21.1
13	288	30.8	38	51.6		09.3	266	17.7		04.3	345	04.5		22.9	345	25.4		21.1
14	303	33.3	53	50.7		09.8	281	19.3		04.8	0	06.4		22.8	0	27.6		21.0
15	318	35.7	68	49.9		10.3	296	20.8		05.2	15	08.3		22.7	15	29.8		21.0
16	333	38.2	83	49.1		10.9	311	22.4		05.6	30	10.2		22.6	30	31.9		20.9
17	348	40.6	98	48.2	-21	11.4	326	24.0	+10	06.0	45	12.1	-20	22.5	45	34.1	-20	20.8
18	3	43.1	113	47.4	-21	11.9	341	25.5	+10	06.4	60	13.9	-20	22.3	60	36.3	-20	20.8
19	18	45.6	128	46.5		12.4	356	27.1		06.8	75	15.8		22.2	75	38.5		20.7
20	33	48.0	143	45.7		12.9	11	28.6		07.3	90	17.7		22.1	90	40.7		20.7
21	48	50.5	158	44.8		13.5	26	30.2		07.7	105	19.6		22.0	105	42.8		20.6
22	63	53.0	173	44.0		14.0	41	31.7		08.1	120	21.5		21.9	120	45.0		20.6
23	78	55.4	188	43.1		14.5	56	33.3		08.5	135	23.4		21.7	135	47.2		20.5
24	93	57.9	203	42.3	-21	15.0	71	34.8	+10	08.9	150	25.2	-20	21.6	150	49.4	-20	20.4
Dif.	—		-8				+16				+19				+1			

UT	SOL			 LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'3			PHE { 4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'2														
	PMG: 12 ^h 00 ^m 3			Edad: 10 ^d 3								PMG: 20 ^h 41 ^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	179	59.4	-23 23.2	58	37.9	157	+10 13.5	115	115	60 N	14 57	15 55	16 52	12 57 8		3 28 81		
1	194	59.1	23.1	73	12.6	158	25.0	114	114	58	15 15	16 07	16 59	13 04 12		22 77		
2	209	58.8	23.1	87	47.4	156	36.4	114	114	56	29	17	17 06	11 14		16 74		
3	224	58.5	23.0	102	22.0	156	47.8	113	113	54	42	26	12	16 17		11 72		
4	239	58.1	22.9	116	56.6	156	+10 59.1	113	113	52	15 53	34	18	22 18		07 69		
5	254	57.8	-23 22.8	131	31.2	156	+11 10.4	112	112	50	16 03	16 41	17 23	13 26 21		3 03 67		
6	269	57.5	-23 22.8	146	05.8	155	+11 21.6	112	112	45	16 24	16 57	17 35	13 37 24		2 54 63		
7	284	57.2	22.7	160	40.3	154	32.8	112	112	40	40	17 11	45	45 28		46 60		
8	299	56.9	22.6	175	14.7	155	44.0	111	111	35	16 55	23	17 54	53 30		40 57		
9	314	56.6	22.5	189	49.2	153	+11 55.1	111	111	30	17 07	33	18 03	13 59 33		34 54		
10	329	56.3	22.5	204	23.5	153	+12 06.2	110	110	20	28	17 52	20	14 11 37		25 50		
11	344	56.0	-23 22.4	218	57.8	153	+12 17.2	110	110	10 N	17 47	18 09	18 36	14 21 41		2 17 46		
12	359	55.7	-23 22.3	233	32.1	153	+12 28.2	109	109	0	18 04	18 27	18 53	14 31 43		2 09 42		
13	14	55.4	22.2	248	06.4	151	39.1	109	109	10 S	22	18 45	19 12	40 47		2 01 39		
14	29	55.1	22.1	262	40.5	152	+12 50.0	109	109	20	18 41	19 05	19 34	14 50 51		1 53 35		
15	44	54.7	22.1	277	14.7	150	+13 00.9	108	108	30	19 03	30	20 03	15 02 55		43 32		
16	59	54.4	22.0	291	48.7	151	11.7	107	107	35	16	19 45	22	09 57		38 29		
17	74	54.1	-23 21.9	306	22.8	150	+13 22.4	107	107	40	19 31	20 03	20 45	15 17 60		1 32 26		
18	89	53.8	-23 21.8	320	56.8	149	+13 33.1	107	107	45	19 49	20 26	21 16	15 26 63		1 25 23		
19	104	53.5	21.7	335	30.7	149	43.8	106	106	50	20 11	20 56	22 01	37 68		16 19		
20	119	53.2	21.6	350	04.6	148	+13 54.4	105	105	52	22	21 11	22 29	42 70		12 17		
21	134	52.9	21.5	4	38.4	147	+14 04.9	105	105	54	34	29	23 14	48 72		08 15		
22	149	52.6	21.5	19	12.1	148	15.4	105	105	56	20 48	21 51	** **	15 55 74		1 03 13		
23	164	52.3	21.4	33	45.9	146	25.9	103	103	58	21 05	22 20	** **	16 02 77		0 58 10		
24	179	52.0	-23 21.3	48	19.5		+14 36.2			60 S	21 25	23 10	** **	16 10 81		0 52 7		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 17 ^h 41 ^m 2		Mag: -3.9 PMG: 10 ^h 26 ^m			Mag: -0.4 PMG: 19 ^h 12 ^m			Mag: -2.0 PMG: 13 ^h 57 ^m			Mag: +0.6 PMG: 13 ^h 55 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	93	57.9	203 42.3	-21 15.0	71 34.8	+10 08.9	150 25.2	-20 -21.6	150 25.2	-20 -21.6	150 49.4	-20 20.4	150 49.4	-20 20.4				
1	109	00.4	218 41.4	15.5	86 36.4	09.4	165 27.1	-21.5	165 27.1	-21.5	165 51.5	20.4	165 51.5	20.4				
2	124	02.8	233 40.6	16.0	101 38.0	09.8	180 29.0	-21.4	180 29.0	-21.4	180 53.7	20.3	180 53.7	20.3				
3	139	05.3	248 39.8	16.6	116 39.5	10.2	195 30.9	-21.3	195 30.9	-21.3	195 55.9	20.3	195 55.9	20.3				
4	154	07.8	263 38.9	17.1	131 41.1	10.6	210 32.8	-21.1	210 32.8	-21.1	210 58.1	20.2	210 58.1	20.2				
5	169	10.2	278 38.1	-21 17.6	146 42.6	+10 11.0	225 34.7	-20 -21.0	225 34.7	-20 -21.0	226 00.2	-20 20.2	226 00.2	-20 20.2				
6	184	12.7	293 37.2	-21 18.1	161 44.2	+10 11.4	240 36.5	-20 -20.9	240 36.5	-20 -20.9	241 02.4	-20 20.1	241 02.4	-20 20.1				
7	199	15.1	308 36.4	18.6	176 45.7	11.9	255 38.4	-20.8	255 38.4	-20.8	256 04.6	20.0	256 04.6	20.0				
8	214	17.6	323 35.5	19.1	191 47.3	12.3	270 40.3	-20.7	270 40.3	-20.7	271 06.8	20.0	271 06.8	20.0				
9	229	20.1	338 34.7	19.6	206 48.8	12.7	285 42.2	-20.5	285 42.2	-20.5	286 09.0	19.9	286 09.0	19.9				
10	244	22.5	353 33.8	20.1	221 50.3	13.1	300 44.1	-20.4	300 44.1	-20.4	301 11.1	19.9	301 11.1	19.9				
11	259	25.0	8 33.0	-21 20.6	236 51.9	+10 13.5	315 46.0	-20 -20.3	315 46.0	-20 -20.3	316 13.3	-20 19.8	316 13.3	-20 19.8				
12	274	27.5	23 32.1	-21 21.1	251 53.4	+10 14.0	330 47.8	-20 -20.2	330 47.8	-20 -20.2	331 15.5	-20 19.7	331 15.5	-20 19.7				
13	289	29.9	38 31.3	21.6	266 55.0	14.4	345 49.7	-20.1	345 49.7	-20.1	346 17.7	19.7	346 17.7	19.7				
14	304	32.4	53 30.4	22.1	281 56.5	14.8	0 51.6	-19.9	0 51.6	-19.9	1 19.8	19.6	1 19.8	19.6				
15	319	34.9	68 29.5	22.6	296 58.1	15.2	15 53.5	-19.8	15 53.5	-19.8	16 22.0	19.6	16 22.0	19.6				
16	334	37.3	83 28.7	23.1	311 59.6	15.6	30 55.4	-19.7	30 55.4	-19.7	31 24.2	19.5	31 24.2	19.5				
17	349	39.8	98 27.8	-21 23.6	327 01.2	+10 16.1	45 57.3	-20 -19.6	45 57.3	-20 -19.6	46 26.4	-20 19.5	46 26.4	-20 19.5				
18	4	42.2	113 27.0	-21 24.1	342 02.7	+10 16.5	60 59.1	-20 -19.5	60 59.1	-20 -19.5	61 28.5	-20 19.4	61 28.5	-20 19.4				
19	19	44.7	128 26.1	24.6	357 04.2	16.9	76 01.0	-19.3	76 01.0	-19.3	76 30.7	19.3	76 30.7	19.3				
20	34	47.2	143 25.3	25.1	12 05.8	17.3	91 02.9	-19.2	91 02.9	-19.2	91 32.9	19.3	91 32.9	19.3				
21	49	49.6	158 24.4	25.6	27 07.3	17.7	106 04.8	-19.1	106 04.8	-19.1	106 35.1	19.2	106 35.1	19.2				
22	64	52.1	173 23.6	26.1	42 08.9	18.2	121 06.7	-19.0	121 06.7	-19.0	121 37.2	19.2	121 37.2	19.2				
23	79	54.6	188 22.7	26.6	57 10.4	18.6	136 08.5	-18.8	136 08.5	-18.8	136 39.4	19.1	136 39.4	19.1				
24	94	57.0	203 21.9	-21 27.1	72 11.9	+10 19.0	151 10.4	-20 -18.7	151 10.4	-20 -18.7	151 41.6	-20 19.1	151 41.6	-20 19.1				
Dif.	—		-9	-5	+15	+4	+19	+1	+19	+1	+22	+1	+22	+1				

UT	SOL				 LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3				SD: 14'8		PHE {		Edad: 11'3			Rº: 48m							
	PMG: 12h 00m8				PMG: 21h 25m														
	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	52.0	-23	21.3	48	19.5	146	+14	36.2	104	60 N	7 09	8 06	9 04	13 05	12	4 49	81	
1	194	51.7		21.2	62	53.1	145		46.6	102	58	7 02	7 54	8 46	16 15		39	78	
2	209	51.4		21.1	77	26.6	145	+14	56.8	103	56	6 55	44	31	25 19		30	75	
3	224	51.0		21.0	92	00.1	145	+15	07.1	101	54	49	35	19	33 21		23	72	
4	239	50.7		20.9	106	33.6	143		17.2	101	52	43	27	8 08	40 24		16	70	
5	254	50.4	-23	20.8	121	06.9	143	+15	27.3	101	50	6 38	7 20	7 58	13 47	25	4 10	67	
6	269	50.1	-23	20.7	135	40.2	143	+15	37.4	99	45	6 26	7 03	7 37	14 01	30	3 57	63	
7	284	49.8		20.6	150	13.5	142		47.3	100	40	16	6 50	21	13 33		46	60	
8	299	49.5		20.5	164	46.7	141	+15	57.3	98	35	6 07	38	7 06	23 35		37	57	
9	314	49.2		20.4	179	19.8	141	+16	07.1	98	30	5 58	28	6 54	32 37		28	56	
10	329	48.9		20.3	193	52.9	140		16.9	98	20	41	6 09	33	14 48	40	15 51		
11	344	48.6	-23	20.2	208	25.9	139	+16	26.7	96	10 N	5 25	5 52	6 14	15 02	43	3 03	48	
12	359	48.3	-23	20.1	222	58.8	139	+16	36.3	96	0	5 08	5 34	5 57	15 14	47	2 51	45	
13	14	48.0		20.0	237	31.7	138		45.9	96	10 S	4 49	5 16	39	27 50		40	42	
14	29	47.7		19.9	252	04.5	137	+16	55.5	94	20	4 27	4 56	5 21	41 53		28	39	
15	44	47.4		19.8	266	37.2	137	+17	04.9	94	30	3 58	31	4 59	15 57	56	15 34		
16	59	47.0		19.7	281	09.9	136		14.3	94	35	39	4 16	46	16 06	59	2 07	32	
17	74	46.7	-23	19.6	295	42.5	136	+17	23.7	92	40	3 16	3 58	4 31	16 17	61	1 58	30	
18	89	46.4	-23	19.5	310	15.1	135	+17	32.9	92	45	2 46	3 35	4 13	16 29	64	1 48	26	
19	104	46.1		19.4	324	47.6	134		42.1	92	50	2 00	3 06	3 50	45 68		35	23	
20	119	45.8		19.3	339	20.0	133	+17	51.3	90	52	1 33	2 51	39	16 52	70	29 21		
21	134	45.5		19.2	353	52.3	133	+18	00.3	90	54	0 47	33	27	17 00	72	23 18		
22	149	45.2		19.1	8	24.6	132		09.3	89	56	** ** *	2 10	3 13	09 75		16 16		
23	164	44.9		19.0	22	56.8	132		18.2	88	58	** ** *	1 41	2 56	17 19	79	1 08 13		
24	179	44.6	-23	18.9	37	29.0		+18	27.0		60 S	** ** *	0 51	2 36	17 31	83	0 59 9		

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG		Mag: -3.9				Mag: -0.4				Mag: -2.0				Mag: +0.6			
	17h 37m3		PMG: 10h 27m				PMG: 19h 09m				PMG: 13h 54m				PMG: 13h 51m			
	hG ♈		hG ♀		dec.		hG ♂		dec.		hG ♃		dec.		hG ♄		dec.	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	94	57.0	203	21.9	-21	27.1	72	11.9	+10	19.0	151	10.4	-20	18.7	151	41.6	-20	19.1
1	109	59.5	218	21.0		27.6	87	13.5		19.4	166	12.3		18.6	166	43.8		19.0
2	125	02.0	233	20.1		28.1	102	15.0		19.8	181	14.2		18.5	181	45.9		18.9
3	140	04.4	248	19.3		28.5	117	16.6		20.3	196	16.1		18.4	196	48.1		18.9
4	155	06.9	263	18.4		29.0	132	18.1		20.7	211	18.0		18.2	211	50.3		18.8
5	170	09.4	278	17.6	-21	29.5	147	19.6	+10	21.1	226	19.8	-20	18.1	226	52.5	-20	18.8
6	185	11.8	293	16.7	-21	30.0	162	21.2	+10	21.5	241	21.7	-20	18.0	241	54.6	-20	18.7
7	200	14.3	308	15.8		30.5	177	22.7		22.0	256	23.6		17.9	256	56.8		18.6
8	215	16.7	323	15.0		31.0	192	24.2		22.4	271	25.5		17.8	271	59.0		18.6
9	230	19.2	338	14.1		31.4	207	25.8		22.8	286	27.4		17.6	287	01.2		18.5
10	245	21.7	353	13.3		31.9	222	27.3		23.2	301	29.2		17.5	302	03.3		18.5
11	260	24.1	8	12.4	-21	32.4	237	28.8	+10	23.6	316	31.1	-20	17.4	317	05.5	-20	18.4
12	275	26.6	23	11.5	-21	32.9	252	30.4	+10	24.1	331	33.0	-20	17.3	332	07.7	-20	18.4
13	290	29.1	38	10.7		33.3	267	31.9		24.5	346	34.9		17.1	347	09.9		18.3
14	305	31.5	53	09.8		33.8	282	33.4		24.9	1	36.8		17.0	2	12.0		18.2
15	320	34.0	68	09.0		34.3	297	34.9		25.3	16	38.6		16.9	17	14.2		18.2
16	335	36.5	83	08.1		34.8	312	36.5		25.8	31	40.5		16.8	32	16.4		18.1
17	350	38.9	98	07.2	-21	35.2	327	38.0	+10	26.2	46	42.4	-20	16.7	47	18.6	-20	18.1
18	5	41.4	113	06.4	-21	35.7	342	39.5	+10	26.6	61	44.3	-20	16.5	62	20.7	-20	18.0
19	20	43.9	128	05.5		36.2	357	41.1		27.0	76	46.2		16.4	77	22.9		17.9
20	35	46.3	143	04.6		36.6	12	42.6		27.4	91	48.0		16.3	92	25.1		17.9
21	50	48.8	158	03.8		37.1	27	44.1		27.9	106	49.9		16.2	107	27.3		17.8
22	65	51.2	173	02.9		37.6	42	45.6		28.3	121	51.8		16.0	122	29.4		17.8
23	80	53.7	188	02.0		38.0	57	47.2		28.7	136	53.7		15.9	137	31.6		17.7
24	95	56.2	203	01.2	-21	38.5	72	48.7	+10	29.1	151	55.6	-20	15.8	152	33.8	-20	17.7
Dif.	—		-9		-5		+15		+4		+19		+1		+22		+1	

UT	SOL				LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3				SD: 14'9		PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'8											
	PMG: 12 ^h 01 ^m 3				Edad: 12 ^d 3													
	PMG: 22 ^h 13 ^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	179	44.6	-23	18.9	37	29.0	131	+18	27.0	88	60 N	14 59	15 57	16 53	13 17	19	6 10	82
1	194	44.3		18.8	52	01.1	130		35.8	87	58	15 16	16 08	17 01	31	23	5 57	77
2	209	44.0		18.7	66	33.1	129		44.5	86	56	31	18	07	44	26	45	74
3	224	43.7		18.6	81	05.0	129	+18	53.1	85	54	44	27	14	13 54	29	35	71
4	239	43.4		18.4	95	36.9	128	+19	01.6	84	52	15 55	35	19	14 04	30	26	69
5	254	43.1	-23	18.3	110	08.7	127	+19	10.0	84	50	16 04	16 43	17 24	14 12	33	5 17	68
6	269	42.8	-23	18.2	124	40.4	127	+19	18.4	83	45	16 25	16 59	17 36	14 31	35	5 00	64
7	284	42.5		18.1	139	12.1	126		26.7	82	40	42	17 12	46	46	38	4 46	61
8	299	42.1		18.0	153	43.7	125		34.9	81	35	16 56	24	17 56	14 58	40	34	59
9	314	41.8		17.9	168	15.2	124		43.0	80	30	17 08	34	18 04	15 09	42	24	56
10	329	41.5		17.8	182	46.6	124		51.0	80	20	29	17 53	21	28	45	4 06	53
11	344	41.2	-23	17.6	197	18.0	123	+19	59.0	78	10 N	17 48	18 10	18 37	15 45	47	3 51	50
12	359	40.9	-23	17.5	211	49.3	123	+20	06.8	78	0	18 05	18 28	18 54	16 01	49	3 36	48
13	14	40.6		17.4	226	20.6	121		14.6	77	10 S	22	18 46	19 13	17	51	22	45
14	29	40.3		17.3	240	51.7	121		22.3	76	20	18 41	19 06	19 35	34	54	3 07	42
15	44	40.0		17.2	255	22.8	120		29.9	75	30	19 03	31	20 04	16 53	57	2 49	40
16	59	39.7		17.0	269	53.8	120		37.4	74	35	16	19 46	23	17 05	58	39	37
17	74	39.4	-23	16.9	284	24.8	119	+20	44.8	73	40	19 31	20 04	20 46	17 18	60	2 28	35
18	89	39.1	-23	16.8	298	55.7	118	+20	52.1	73	45	19 49	20 26	21 16	17 33	64	2 14	32
19	104	38.8		16.7	313	26.5	117	+20	59.4	71	50	20 11	20 56	22 01	17 53	66	1 58	28
20	119	38.5		16.5	327	57.2	117	+21	06.5	71	52	22	21 11	22 28	18 02	68	50	26
21	134	38.2		16.4	342	27.9	116		13.6	69	54	34	29	23 12	12	70	41	25
22	149	37.9		16.3	356	58.5	115		20.5	69	56	20 48	21 50	***	24	73	32	22
23	164	37.6		16.2	11	29.0	115		27.4	67	58	21 05	22 20	***	38	75	21	19
24	179	37.3	-23	16.0	25	59.5		+21	34.1		60 S	21 25	23 08	***	18 54	79	1 08	15
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 33 ^m 4		Mag: -3.9 PMG: 10 ^h 29 ^m				Mag: -0.4 PMG: 19 ^h 07 ^m				Mag: -2.0 PMG: 13 ^h 51 ^m				Mag: +0.6 PMG: 13 ^h 48 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	95	56.2	203	01.2	-21	38.5	72	48.7	+10	29.1	151	55.6	-20	-15.8	152	33.8	-20	17.7
1	110	58.6	218	00.3		39.0	87	50.2		29.6	166	57.4		-15.7	167	36.0		17.6
2	126	01.1	232	59.5		39.4	102	51.7		30.0	181	59.3		-15.6	182	38.1		17.5
3	141	03.6	247	58.6		39.9	117	53.2		30.4	197	01.2		-15.4	197	40.3		17.5
4	156	06.0	262	57.7		40.4	132	54.8		30.8	212	03.1		-15.3	212	42.5		17.4
5	171	08.5	277	56.8	-21	40.8	147	56.3	+10	31.3	227	05.0	-20	-15.2	227	44.6	-20	17.4
6	186	11.0	292	56.0	-21	41.3	162	57.8	+10	31.7	242	06.8	-20	-15.1	242	46.8	-20	17.3
7	201	13.4	307	55.1		41.7	177	59.3		32.1	257	08.7		-14.9	257	49.0		17.2
8	216	15.9	322	54.2		42.2	193	00.8		32.5	272	10.6		-14.8	272	51.2		17.2
9	231	18.4	337	53.4		42.6	208	02.4		33.0	287	12.5		-14.7	287	53.3		17.1
10	246	20.8	352	52.5		43.1	223	03.9		33.4	302	14.4		-14.6	302	55.5		17.1
11	261	23.3	7	51.6	-21	43.5	238	05.4	+10	33.8	317	16.2	-20	-14.4	317	57.7	-20	17.0
12	276	25.7	22	50.8	-21	44.0	253	06.9	+10	34.2	332	18.1	-20	-14.3	332	59.9	-20	16.9
13	291	28.2	37	49.9		44.4	268	08.4		34.7	347	20.0		-14.2	348	02.0		16.9
14	306	30.7	52	49.0		44.9	283	10.0		35.1	2	21.9		-14.1	3	04.2		16.8
15	321	33.1	67	48.2		45.3	298	11.5		35.5	17	23.8		-14.0	18	06.4		16.8
16	336	35.6	82	47.3		45.8	313	13.0		35.9	32	25.6		-13.8	33	08.6		16.7
17	351	38.1	97	46.4	-21	46.2	328	14.5	+10	36.4	47	27.5	-20	-13.7	48	10.7	-20	16.7
18	6	40.5	112	45.5	-21	46.7	343	16.0	+10	36.8	62	29.4	-20	-13.6	63	12.9	-20	16.6
19	21	43.0	127	44.7		47.1	358	17.5		37.2	77	31.3		-13.5	78	15.1		16.5
20	36	45.5	142	43.8		47.6	13	19.0		37.6	92	33.2		-13.3	93	17.2		16.5
21	51	47.9	157	42.9		48.0	28	20.5		38.1	107	35.0		-13.2	108	19.4		16.4
22	66	50.4	172	42.0		48.4	43	22.1		38.5	122	36.9		-13.1	123	21.6		16.4
23	81	52.9	187	41.2		48.9	58	23.6		38.9	137	38.8		-13.0	138	23.8		16.3
24	96	55.3	202	40.3	-21	49.3	73	25.1	+10	39.3	152	40.7	-20	-12.8	153	25.9	-20	16.2
Dif.	—		-9		-5		+15		+4		+19		+1		+22		+1	

UT	SOL				○ LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 01 ^m 8				SD: 14'9 Edad: 13 ^d 3 PMG: 23 ^h 03 ^m PHE { 4^h: 54'9 12^h: 55'1 20^h: 55'2 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	179	37.3	-23	16.0	25	59.5	113	+21	34.1	67	60 N	7 09	8 06	9 03	13 36	31	7 32	75
1	194	37.0		15.9	40	29.8	113		40.8	66	58	7 02	7 55	8 46	13 54	35	7 14	72
2	209	36.6		15.8	55	00.1	113		47.4	64	56	6 55	44	32	14 10	37	6 59	69
3	224	36.3		15.6	69	30.4	112	+21	53.8	64	54	49	35	19	23	39	46	67
4	239	36.0		15.5	84	00.6	111	+22	00.2	63	52	44	27	8 08	34	41	35	65
5	254	35.7	-23	15.4	98	30.7	110	+22	06.5	61	50	6 38	7 20	7 58	14 45	41	6 25	64
6	269	35.4	-23	15.2	113	00.7	110	+22	12.6	61	45	6 27	7 04	7 38	15 06	44	6 04	62
7	284	35.1		15.1	127	30.7	108		18.7	59	40	17	6 51	21	24	45	5 47	60
8	299	34.8		15.0	142	00.5	109		24.6	59	35	6 07	39	7 07	38	47	33	58
9	314	34.5		14.8	156	30.4	107		30.5	57	30	5 59	28	6 55	15 51	48	5 20	57
10	329	34.2		14.7	171	00.1	107		36.2	56	20	42	6 10	34	16 13	50	4 59	55
11	344	33.9	-23	14.6	185	29.8	106	+22	41.8	56	10 N	5 26	5 53	6 15	16 32	51	4 41	53
12	359	33.6	-23	14.4	199	59.4	106	+22	47.4	54	0	5 09	5 35	5 58	16 50	53	4 24	51
13	14	33.3		14.3	214	29.0	105		52.8	53	10 S	4 50	5 18	41	17 08	54	4 07	49
14	29	33.0		14.1	228	58.5	104	+22	58.1	52	20	4 28	4 57	22	28	54	3 49	47
15	44	32.7		14.0	243	27.9	104	+23	03.3	51	30	3 59	32	5 00	17 50	56	29	44
16	59	32.4		13.9	257	57.3	103		08.4	49	35	41	4 17	4 47	18 03	58	16	44
17	74	32.1	-23	13.7	272	26.6	102	+23	13.3	49	40	3 18	3 59	4 32	18 18	59	3 03	41
18	89	31.8	-23	13.6	286	55.8	101	+23	18.2	48	45	2 47	3 37	4 14	18 37	59	2 46	40
19	104	31.5		13.4	301	24.9	101		23.0	46	50	2 02	3 07	3 52	18 59	62	26	36
20	119	31.2		13.3	315	54.0	101		27.6	45	52	1 35	2 52	41	19 10	63	16	35
21	134	30.9		13.1	330	23.1	100		32.1	44	54	0 51	35	29	22	64	2 06	33
22	149	30.6		13.0	344	52.1	99		36.5	43	56	** **	2 13	3 15	37	65	1 54	30
23	164	30.3		12.9	359	21.0	98		40.8	42	58	** **	1 44	2 58	19 53	67	1 40	27
24	179	30.0	-23	12.7	13	49.8		+23	45.0		60 S	** **	0 56	2 38	20 13	70	1 23	24

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 17 ^h 29 ^m 4		Mag: -3.9 PMG: 10 ^h 30 ^m				Mag: -0.3 PMG: 19 ^h 04 ^m				Mag: -2.0 PMG: 13 ^h 48 ^m				Mag: +0.6 PMG: 13 ^h 44 ^m							
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	96	55.3	202	40.3	-21	49.3	73	25.1	+10	39.3	152	40.7	-20	12.8	153	25.9	-20	16.2				
1	111	57.8	217	39.4		49.7	88	26.6		39.8	167	42.5		12.7	168	28.1		16.2				
2	127	00.2	232	38.5		50.2	103	28.1		40.2	182	44.4		12.6	183	30.3		16.1				
3	142	02.7	247	37.7		50.6	118	29.6		40.6	197	46.3		12.5	198	32.5		16.1				
4	157	05.2	262	36.8		51.0	133	31.1		41.0	212	48.2		12.3	213	34.6		16.0				
5	172	07.6	277	35.9	-21	51.5	148	32.6	+10	41.5	227	50.1	-20	12.2	228	36.8	-20	15.9				
6	187	10.1	292	35.0	-21	51.9	163	34.1	+10	41.9	242	51.9	-20	12.1	243	39.0	-20	15.9				
7	202	12.6	307	34.2		52.3	178	35.6		42.3	257	53.8		12.0	258	41.1		15.8				
8	217	15.0	322	33.3		52.8	193	37.1		42.7	272	55.7		11.8	273	43.3		15.8				
9	232	17.5	337	32.4		53.2	208	38.6		43.2	287	57.6		11.7	288	45.5		15.7				
10	247	20.0	352	31.5		53.6	223	40.1		43.6	302	59.5		11.6	303	47.7		15.6				
11	262	22.4	7	30.7	-21	54.0	238	41.6	+10	44.0	318	01.3	-20	11.5	318	49.8	-20	15.6				
12	277	24.9	22	29.8	-21	54.5	253	43.1	+10	44.5	333	03.2	-20	11.4	333	52.0	-20	15.5				
13	292	27.3	37	28.9		54.9	268	44.6		44.9	348	05.1		11.2	348	54.2		15.5				
14	307	29.8	52	28.0		55.3	283	46.1		45.3	3	07.0		11.1	3	56.3		15.4				
15	322	32.3	67	27.1		55.7	298	47.6		45.7	18	08.8		11.0	18	58.5		15.3				
16	337	34.7	82	26.3		56.2	313	49.1		46.2	33	10.7		10.9	34	00.7		15.3				
17	352	37.2	97	25.4	-21	56.6	328	50.6	+10	46.6	48	12.6	-20	10.7	49	02.9	-20	15.2				
18	7	39.7	112	24.5	-21	57.0	343	52.1	+10	47.0	63	14.5	-20	10.6	64	05.0	-20	15.2				
19	22	42.1	127	23.6		57.4	358	53.6		47.5	78	16.4		10.5	79	07.2		15.1				
20	37	44.6	142	22.7		57.8	13	55.1		47.9	93	18.2		10.4	94	09.4		15.1				
21	52	47.1	157	21.8		58.2	28	56.6		48.3	108	20.1		10.2	109	11.5		15.0				
22	67	49.5	172	21.0		58.6	43	58.1		48.7	123	22.0		10.1	124	13.7		14.9				
23	82	52.0	187	20.1		59.1	58	59.6		49.2	138	23.9		10.0	139	15.9		14.9				
24	97	54.5	202	19.2	-21	59.5	74	01.1	+10	49.6	153	25.7	-20	09.9	154	18.1	-20	14.8				
Dif.	—		-9				+15				+4				+19				+1			

UT	SOL				○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 02 ^m 2				SD: 15'1 Edad: 14 ^d 3		PHE { 4 ^h : 55'4 12 ^h : 55'5 20 ^h : 55'7		PMG: 23 ^h 55 ^m				Rº: 55 ^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	179	30.0	-23	12.7	13	49.8	98	+23	45.0	40	60 N	15 01	15 59	16 55	14 07	50		8 47	62		
1	194	29.7		12.6	28	18.6	98		49.0	39	58	19	16 10	17 03		29 50		26	60		
2	209	29.4		12.4	42	47.4	96		52.9	39	56	33	20	09	14 47	51		8 08	60		
3	224	29.1		12.3	57	16.0	97	+23	56.8	36	54	45	29	15	15 02	51		7 53	59		
4	239	28.8		12.1	71	44.7	95	+24	00.4	36	52	15 56	37	21		15 52		40	59		
5	254	28.5	-23	12.0	86	13.2	95	+24	04.0	35	50	16 06	16 44	17 26	15 26	52		7 29	58		
6	269	28.2	-23	11.8	100	41.7	95	+24	07.5	33	45	16 27	17 00	17 38	15 50	53		7 06	57		
7	284	27.9		11.6	115	10.2	94		10.8	32	40	43	14	48	16 09	53		6 47	56		
8	299	27.6		11.5	129	38.6	93		14.0	30	35	16 57	25	17 57		25 53		31	56		
9	314	27.3		11.3	144	06.9	93		17.0	30	30	17 09	36	18 06	16 39	53		6 17	56		
10	329	27.0		11.2	158	35.2	93		20.0	28	20	30	17 54	22	17 03	53		5 54	55		
11	344	26.7	-23	11.0	173	03.5	92	+24	22.8	27	10 N	17 49	18 12	18 38	17 23	54		5 34	54		
12	359	26.3	-23	10.9	187	31.7	91	+24	25.5	26	0	18 06	18 28	18 55	17 43	53		5 15	53		
13	14	26.0		10.7	201	59.8	91		28.1	24	10 S	23	18 46	19 13	18 02	54		4 56	53		
14	29	25.7		10.6	216	27.9	91		30.5	23	20	18 42	19 07	19 36		22 55		36	52		
15	44	25.4		10.4	230	56.0	90		32.8	22	30	19 04	31	20 05	18 46	55		13	51		
16	59	25.1		10.2	245	24.0	90		35.0	21	35	17	19 46	23	19 01	54		4 00	50		
17	74	24.8	-23	10.1	259	52.0	89	+24	37.1	19	40	19 32	20 04	20 46	19 17	54		3 44	49		
18	89	24.5	-23	09.9	274	19.9	89	+24	39.0	18	45	19 49	20 27	21 16	19 36	54		3 26	48		
19	104	24.2		09.7	288	47.8	88		40.8	17	50	20 12	20 56	22 00	20 01	54		3 02	47		
20	119	23.9		09.6	303	15.6	88		42.5	15	52	22	21 11	22 27		13 53		2 51	46		
21	134	23.6		09.4	317	43.4	87		44.0	14	54	34	28	23 09		26 54		39	44		
22	149	23.3		09.3	332	11.1	88		45.4	13	56	20 48	21 50	** **	20 42	53		24	44		
23	164	23.0		09.1	346	38.9	86		46.7	11	58	21 05	22 19	** **	21 00	54		2 07	42		
24	179	22.7	-23	08.9	1	06.5		+24	47.8		60 S	21 25	23 04	** **	21 23	53		1 47	39		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG: 17 ^h 25 ^m 5		Mag: -3.9 PMG: 10 ^h 31 ^m				Mag: -0.3 PMG: 19 ^h 02 ^m				Mag: -2.0 PMG: 13 ^h 45 ^m				Mag: +0.6 PMG: 13 ^h 41 ^m						
	hG ♈		hG ♀	dec.			hG ♂	dec.			hG ♃	dec.			hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	97	54.5	202	19.2	-21	59.5	74	01.1	+10	49.6	153	25.7	-20	-09.9	154	18.1	-20	14.8			
1	112	56.9	217	18.3	-21	59.9	89	02.6		50.0	168	27.6		-09.7	169	20.2		14.8			
2	127	59.4	232	17.4	-22	00.3	104	04.1		50.5	183	29.5		-09.6	184	22.4		14.7			
3	143	01.8	247	16.5		00.7	119	05.6		50.9	198	31.4		-09.5	199	24.6		14.6			
4	158	04.3	262	15.7		01.1	134	07.1		51.3	213	33.2		-09.4	214	26.7		14.6			
5	173	06.8	277	14.8	-22	01.5	149	08.6	+10	51.7	228	35.1	-20	-09.2	229	28.9	-20	14.5			
6	188	09.2	292	13.9	-22	01.9	164	10.1	+10	52.2	243	37.0	-20	-09.1	244	31.1	-20	14.5			
7	203	11.7	307	13.0		02.3	179	11.6		52.6	258	38.9		-09.0	259	33.3		14.4			
8	218	14.2	322	12.1		02.7	194	13.1		53.0	273	40.8		-08.9	274	35.4		14.3			
9	233	16.6	337	11.2		03.1	209	14.6		53.5	288	42.6		-08.7	289	37.6		14.3			
10	248	19.1	352	10.4		03.5	224	16.1		53.9	303	44.5		-08.6	304	39.8		14.2			
11	263	21.6	7	09.5	-22	03.9	239	17.5	+10	54.3	318	46.4	-20	-08.5	319	41.9	-20	14.2			
12	278	24.0	22	08.6	-22	04.3	254	19.0	+10	54.7	333	48.3	-20	-08.4	334	44.1	-20	14.1			
13	293	26.5	37	07.7		04.7	269	20.5		55.2	348	50.1		-08.2	349	46.3		14.0			
14	308	29.0	52	06.8		05.1	284	22.0		55.6	3	52.0		-08.1	4	48.5		14.0			
15	323	31.4	67	05.9		05.5	299	23.5		56.0	18	53.9		-08.0	19	50.6		13.9			
16	338	33.9	82	05.0		05.9	314	25.0		56.5	33	55.8		-07.8	34	52.8		13.9			
17	353	36.3	97	04.1	-22	06.3	329	26.5	+10	56.9	48	57.6	-20	-07.7	49	55.0	-20	13.8			
18	8	38.8	112	03.2	-22	06.7	344	28.0	+10	57.3	63	59.5	-20	-07.6	64	57.1	-20	13.7			
19	23	41.3	127	02.4		07.1	359	29.4		57.8	79	01.4		-07.5	79	59.3		13.7			
20	38	43.7	142	01.5		07.4	14	30.9		58.2	94	03.3		-07.3	95	01.5		13.6			
21	53	46.2	157	00.6		07.8	29	32.4		58.6	109	05.1		-07.2	110	03.7		13.6			
22	68	48.7	171	59.7		08.2	44	33.9		59.0	124	07.0		-07.1	125	05.8		13.5			
23	83	51.1	186	58.8		08.6	59	35.4		59.5	139	08.9		-07.0	140	08.0		13.4			
24	98	53.6	201	57.9	-22	09.0	74	36.9	+10	59.9	154	10.8	-20	-06.8	155	10.2	-20	13.4			
Dif.	—		-9		-4		+15		+4		+19		+1		+22		+1				

UT	SOL				○ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:3 PMG: 12 ^h 02 ^m 7				SD: 15:2 Edad: 15 ^d 3 PMG: ** ** PHE { 4 ^h : 55:8 12 ^h : 56:0 20 ^h : 56:2 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	179	22.7	-23	08.9	1	06.5	87	+24	47.8	10	60 N	7 09	8 06	9 03	14 57	70	9 49	43
1	194	22.4		08.7	15	34.2	86		48.8	9	58	7 02	7 55	8 46	15 19	68	26	45
2	209	22.1		08.6	30	01.8	86		49.7	7	56	6 56	44	32	38	66	9 08	46
3	224	21.8		08.4	44	29.4	85		50.4	6	54	50	36	19	15 53	65	8 52	48
4	239	21.5		08.2	58	56.9	86		51.0	5	52	44	28	8 08	16 07	63	39	48
5	254	21.2	-23	08.1	73	24.5	84	+24	51.5	3	50	6 39	7 20	7 59	16 18	63	8 27	49
6	269	20.9	-23	07.9	87	51.9	85	+24	51.8	2	45	6 27	7 04	7 38	16 43	61	8 03	50
7	284	20.6		07.7	102	19.4	84		52.0	0	40	17	6 51	22	17 02	60	7 43	51
8	299	20.3		07.6	116	46.8	85		52.0	1	35	6 08	40	7 08	18	59	27	52
9	314	20.0		07.4	131	14.3	83		51.9	2	30	5 59	29	6 55	32	59	7 13	52
10	329	19.7		07.2	145	41.6	84		51.7	3	20	43	6 11	34	17 56	57	6 49	53
11	344	19.4	-23	07.0	160	09.0	84	+24	51.4	5	10 N	5 27	5 53	6 16	18 17	56	6 28	54
12	359	19.1	-23	06.8	174	36.4	83	+24	50.9	7	0	5 10	5 36	5 59	18 36	55	6 08	55
13	14	18.9		06.7	189	03.7	83		50.2	7	10 S	4 52	5 19	42	18 56	53	5 49	55
14	29	18.6		06.5	203	31.0	83		49.5	9	20	29	4 58	23	19 17	52	28	55
15	44	18.3		06.3	217	58.3	82		48.6	11	30	4 00	34	5 01	41	50	5 04	56
16	59	18.0		06.1	232	25.5	83		47.5	12	35	3 42	19	4 48	19 55	49	4 50	56
17	74	17.7	-23	06.0	246	52.8	82	+24	46.3	13	40	3 19	4 01	4 33	20 11	48	4 33	57
18	89	17.4	-23	05.8	261	20.0	83	+24	45.0	14	45	2 49	3 38	4 16	20 30	47	4 14	57
19	104	17.1		05.6	275	47.3	82		43.6	16	50	2 05	3 09	3 53	20 55	44	3 49	58
20	119	16.8		05.4	290	14.5	82		42.0	18	52	1 38	2 54	43	21 06	44	37	58
21	134	16.5		05.2	304	41.7	82		40.2	18	54	0 56	37	31	20	42	23	59
22	149	16.2		05.0	319	08.9	82		38.4	20	56	** **	2 15	17	35	40	3 08	58
23	164	15.9		04.9	333	36.1	82		36.4	22	58	** **	1 47	3 00	21 54	37	2 49	59
24	179	15.6	-23	04.7	348	03.3		+24	34.2		60 S	** **	1 01	2 40	22 16	34	2 26	60

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 21 ^m 6		Mag: -3.9 PMG: 10 ^h 33 ^m				Mag: -0.3 PMG: 19 ^h 00 ^m				Mag: -2.0 PMG: 13 ^h 42 ^m				Mag: +0.6 PMG: 13 ^h 37 ^m			
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	98	53.6	201	57.9	-22	09.0	74	36.9	+10	59.9	154	10.8	-20	06.8	155	10.2	-20	13.4
1	113	56.1	216	57.0		09.4	89	38.3	+11	00.3	169	12.6		06.7	170	12.3		13.3
2	128	58.5	231	56.1		09.7	104	39.8		00.8	184	14.5		06.6	185	14.5		13.3
3	144	01.0	246	55.2		10.1	119	41.3		01.2	199	16.4		06.5	200	16.7		13.2
4	159	03.5	261	54.3		10.5	134	42.8		01.6	214	18.3		06.3	215	18.8		13.1
5	174	05.9	276	53.4	-22	10.9	149	44.3	+11	02.1	229	20.1	-20	06.2	230	21.0	-20	13.1
6	189	08.4	291	52.6	-22	11.3	164	45.7	+11	02.5	244	22.0	-20	06.1	245	23.2	-20	13.0
7	204	10.8	306	51.7		11.6	179	47.2		02.9	259	23.9		06.0	260	25.4		13.0
8	219	13.3	321	50.8		12.0	194	48.7		03.4	274	25.8		05.8	275	27.5		12.9
9	234	15.8	336	49.9		12.4	209	50.2		03.8	289	27.6		05.7	290	29.7		12.8
10	249	18.2	351	49.0		12.7	224	51.6		04.2	304	29.5		05.6	305	31.9		12.8
11	264	20.7	6	48.1	-22	13.1	239	53.1	+11	04.7	319	31.4	-20	05.5	320	34.0	-20	12.7
12	279	23.2	21	47.2	-22	13.5	254	54.6	+11	05.1	334	33.3	-20	05.3	335	36.2	-20	12.7
13	294	25.6	36	46.3		13.9	269	56.1		05.5	349	35.1		05.2	350	38.4		12.6
14	309	28.1	51	45.4		14.2	284	57.5		05.9	4	37.0		05.1	5	40.5		12.5
15	324	30.6	66	44.5		14.6	299	59.0		06.4	19	38.9		04.9	20	42.7		12.5
16	339	33.0	81	43.6		15.0	315	00.5		06.8	34	40.8		04.8	35	44.9		12.4
17	354	35.5	96	42.7	-22	15.3	330	02.0	+11	07.2	49	42.6	-20	04.7	50	47.0	-20	12.4
18	9	38.0	111	41.8	-22	15.7	345	03.4	+11	07.7	64	44.5	-20	04.6	65	49.2	-20	12.3
19	24	40.4	126	40.9		16.0	0	04.9		08.1	79	46.4		04.4	80	51.4		12.2
20	39	42.9	141	40.0		16.4	15	06.4		08.5	94	48.3		04.3	95	53.6		12.2
21	54	45.3	156	39.1		16.8	30	07.8		09.0	109	50.1		04.2	110	55.7		12.1
22	69	47.8	171	38.2		17.1	45	09.3		09.4	124	52.0		04.1	125	57.9		12.1
23	84	50.3	186	37.3		17.5	60	10.8		09.8	139	53.9		03.9	141	00.1		12.0
24	99	52.7	201	36.4	-22	17.8	75	12.3	+11	10.3	154	55.8	-20	03.8	156	02.2	-20	11.9
Dif.	—		-9	-4			+15	+4			+19	+1			+22			+1

UT	SOL			○ LUNA						Latitud	Puesta de Sol	Fin del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'3			SD: 15'3 Edad: 16 ^d 3														
	PMG: 12 ^h 03 ^m 2			PMG: 00 ^h 50 ^m R ^o : 54 ^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	15.6	-23	04.7	348	03.3	82	+24	34.2	23	60 N	15 04	16 01	16 57	16 07	85	10 32	27
1	194	15.3		04.5	2	30.5	82		31.9	24	58	21	12	17 05	27	81	10 11	31
2	209	15.0		04.3	16	57.7	82		29.5	26	56	35	22	11	44	77	9 54	34
3	224	14.7		04.1	31	24.9	81		26.9	27	54	48	31	17	16 58	75	40	36
4	239	14.4		03.9	45	52.0	82		24.2	28	52	15 58	39	23	17 10	73	27	38
5	254	14.1	-23	03.7	60	19.2	82	+24	21.4	30	50	16 08	16 46	17 28	17 21	71	9 16	40
6	269	13.8	-23	03.5	74	46.4	82	+24	18.4	31	45	16 28	17 02	17 39	17 44	68	8 53	43
7	284	13.5		03.3	89	13.6	82		15.3	33	40	45	15	49	18 02	65	34	45
8	299	13.2		03.1	103	40.8	82		12.0	34	35	16 59	27	17 58	17	64	19	46
9	314	12.9		03.0	118	08.0	82		08.6	35	30	17 11	37	18 07	31	61	8 05	48
10	329	12.6		02.8	132	35.2	83		05.1	37	20	32	17 56	23	18 53	59	7 42	50
11	344	12.3	-23	02.6	147	02.5	82	+24	01.4	38	10 N	17 50	18 13	18 39	19 13	56	7 22	52
12	359	12.0	-23	02.4	161	29.7	82	+23	57.6	39	0	18 07	18 29	18 56	19 31	54	7 03	54
13	14	11.7		02.2	175	56.9	83		53.7	41	10 S	24	18 47	19 14	19 49	51	6 44	56
14	29	11.4		02.0	190	24.2	83		49.6	42	20	18 43	19 07	19 36	20 09	48	23	58
15	44	11.1		01.8	204	51.5	82		45.4	44	30	19 04	32	20 05	31	46	6 00	60
16	59	10.8		01.6	219	18.7	83		41.0	45	35	17	19 47	23	44	44	5 46	61
17	74	10.5	-23	01.4	233	46.0	84	+23	36.5	46	40	19 32	20 05	20 46	20 59	42	5 30	63
18	89	10.2	-23	01.2	248	13.4	83	+23	31.9	48	45	19 50	20 27	21 16	21 17	39	5 11	64
19	104	09.9		01.0	262	40.7	84		27.1	48	50	20 12	20 56	22 00	39	35	4 47	67
20	119	09.7		00.8	277	08.1	83		22.3	51	52	22	21 10	22 26	21 50	33	35	69
21	134	09.4		00.6	291	35.4	84		17.2	51	54	34	28	23 06	22 02	31	22	70
22	149	09.1		00.4	306	02.8	85		12.1	53	56	20 48	21 49	** **	15	29	4 06	73
23	164	08.8		00.2	320	30.3	84		06.8	54	58	21 04	22 17	** **	31	25	3 48	75
24	179	08.5	-23	00.0	334	57.7		+23	01.4		60 S	21 24	23 00	** **	22 50	21	3 26	79

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 17 ^m 6		Mag: -3.9 PMG: 10 ^h 34 ^m			Mag: -0.3 PMG: 18 ^h 57 ^m			Mag: -2.0 PMG: 13 ^h 39 ^m			Mag: +0.6 PMG: 13 ^h 34 ^m						
	hG ♈		hG ♀	dec.		hG ♂	dec.		hG ♃	dec.		hG ♄	dec.					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	99	52.7	201	36.4	-22	17.8	75	12.3	+11	10.3	154	55.8	-20	-03.8	156	02.2	-20	11.9
1	114	55.2	216	35.5		18.2	90	13.7		10.7	169	57.6		-03.7	171	04.4		11.9
2	129	57.7	231	34.6		18.5	105	15.2		11.1	184	59.5		-03.5	186	06.6		11.8
3	145	00.1	246	33.7		18.9	120	16.7		11.6	200	01.4		-03.4	201	08.7		11.8
4	160	02.6	261	32.8		19.2	135	18.1		12.0	215	03.3		-03.3	216	10.9		11.7
5	175	05.1	276	31.9	-22	19.6	150	19.6	+11	12.4	230	05.1	-20	-03.2	231	13.1	-20	11.6
6	190	07.5	291	31.0	-22	19.9	165	21.1	+11	12.9	245	07.0	-20	-03.0	246	15.2	-20	11.6
7	205	10.0	306	30.1		20.3	180	22.5		13.3	260	08.9		-02.9	261	17.4		11.5
8	220	12.5	321	29.2		20.6	195	24.0		13.7	275	10.8		-02.8	276	19.6		11.4
9	235	14.9	336	28.3		21.0	210	25.4		14.2	290	12.6		-02.7	291	21.8		11.4
10	250	17.4	351	27.4		21.3	225	26.9		14.6	305	14.5		-02.5	306	23.9		11.3
11	265	19.8	6	26.5	-22	21.7	240	28.4	+11	15.0	320	16.4	-20	-02.4	321	26.1	-20	11.3
12	280	22.3	21	25.6	-22	22.0	255	29.8	+11	15.5	335	18.2	-20	-02.3	336	28.3	-20	11.2
13	295	24.8	36	24.7		22.4	270	31.3		15.9	350	20.1		-02.1	351	30.4		11.1
14	310	27.2	51	23.8		22.7	285	32.8		16.3	5	22.0		-02.0	6	32.6		11.1
15	325	29.7	66	22.9		23.0	300	34.2		16.8	20	23.9		-01.9	21	34.8		11.0
16	340	32.2	81	22.0		23.4	315	35.7		17.2	35	25.7		-01.8	36	36.9		11.0
17	355	34.6	96	21.1	-22	23.7	330	37.1	+11	17.6	50	27.6	-20	-01.6	51	39.1	-20	10.9
18	10	37.1	111	20.2	-22	24.0	345	38.6	+11	18.1	65	29.5	-20	-01.5	66	41.3	-20	10.8
19	25	39.6	126	19.3		24.4	0	40.1		18.5	80	31.4		-01.4	81	43.4		10.8
20	40	42.0	141	18.4		24.7	15	41.5		18.9	95	33.2		-01.3	96	45.6		10.7
21	55	44.5	156	17.5		25.0	30	43.0		19.4	110	35.1		-01.1	111	47.8		10.7
22	70	46.9	171	16.6		25.4	45	44.4		19.8	125	37.0		-01.0	126	49.9		10.6
23	85	49.4	186	15.7		25.7	60	45.9		20.3	140	38.8		-00.9	141	52.1		10.5
24	100	51.9	201	14.8	-22	26.0	75	47.3	+11	20.7	155	40.7	-20	-00.7	156	54.3	-20	10.5
Dif.	—		-9		-3		+15		+4		+19		+1		+22		+	

ESTRELLAS, 2020
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	39.0	39.0	39.1	39.0	38.8	38.6	38.3	38.1	38.0	38.0	38.0	38.1
2 - β Cas	<i>Caph</i>	2.3	357	26.5	26.8	26.8	26.7	26.5	26.1	25.8	25.4	25.3	25.3	25.4	25.6
3 - γ Peg	<i>Algenib</i>	2.8	356	26.3	26.4	26.4	26.3	26.2	25.9	25.7	25.5	25.4	25.3	25.4	25.4
4 - α Phe	<i>Ankaa</i>	2.4	353	11.3	11.5	11.5	11.4	11.3	11.0	10.7	10.4	10.3	10.2	10.3	10.4
5 - α Cas	<i>Schedar</i>	2.2	349	35.5	35.7	35.8	35.8	35.6	35.2	34.9	34.6	34.3	34.3	34.3	34.5
6 - β Cet	<i>Diphda</i>	2.0	348	51.4	51.5	51.5	51.5	51.3	51.1	50.9	50.7	50.5	50.5	50.5	50.5
7 - γ Cas	<i>Navi</i>	1.6	345	31.3	31.6	31.7	31.7	31.5	31.1	30.7	30.4	30.1	30.0	30.1	30.2
8 - β And	<i>Mirach</i>	2.1	342	17.4	17.5	17.6	17.6	17.4	17.2	16.9	16.7	16.5	16.4	16.4	16.4
9 - α Eri	<i>Achernar</i>	0.5	335	23.3	23.6	23.7	23.8	23.7	23.4	23.1	22.7	22.4	22.3	22.3	22.5
10 - γ^1 And	<i>Almak</i>	2.3	328	43.1	43.3	43.4	43.5	43.4	43.1	42.8	42.5	42.3	42.2	42.1	42.1
12 - α Ari	<i>Hamal</i>	2.0	327	55.6	55.7	55.8	55.8	55.7	55.5	55.3	55.1	54.8	54.7	54.7	54.7
11 - α UMi	<i>Polaris</i>	2.0	315	36.7	51.4	64.0	71.6	71.3	63.4	50.5	34.8	20.2	9.8	5.1	7.9
13 - θ^1 Eri	<i>Acamar</i>	3.3	315	14.7	14.9	15.0	15.1	15.1	15.0	14.8	14.5	14.2	14.0	14.0	14.0
14 - α Cet	<i>Menkar</i>	2.5	314	10.2	10.3	10.4	10.4	10.4	10.3	10.1	9.8	9.6	9.5	9.4	9.3
15 - β Per	<i>Algol</i>	2.1	312	37.9	38.1	38.2	38.3	38.2	38.1	37.8	37.5	37.2	37.0	36.9	36.9
16 - α Per	<i>Mirfak</i>	1.8	308	33.6	33.8	34.0	34.1	34.1	33.9	33.6	33.3	32.9	32.7	32.5	32.5
17 - η Tau	<i>Alcyone</i>	2.9	302	49.9	50.0	50.1	50.2	50.2	50.1	49.9	49.6	49.4	49.2	49.0	49.0
18 - γ Eri	<i>Zaurak</i>	3.0	300	15.5	15.6	15.8	15.9	15.9	15.8	15.6	15.4	15.2	15.0	14.8	14.8
19 - α Tau	<i>Aldebaran</i>	0.9	290	43.9	44.0	44.1	44.2	44.3	44.2	44.0	43.8	43.5	43.3	43.2	43.1
20 - β Ori	<i>Rigel</i>	0.1	281	7.4	7.5	7.6	7.7	7.8	7.8	7.6	7.4	7.2	7.0	6.8	6.7
21 - α Aur	<i>Capella</i>	0.1	280	27.3	27.5	27.6	27.8	27.9	27.8	27.6	27.3	27.0	26.7	26.5	26.3
22 - γ Ori	<i>Bellatrix</i>	1.6	278	26.9	26.9	27.0	27.2	27.2	27.2	27.1	26.8	26.6	26.4	26.2	26.1
23 - β Tau	<i>Elnath</i>	1.7	278	6.6	6.6	6.8	6.9	7.0	6.9	6.8	6.5	6.3	6.0	5.8	5.7
24 - δ Ori	<i>Mintaka</i>	2.2	276	44.5	44.5	44.7	44.8	44.8	44.8	44.7	44.5	44.3	44.1	43.9	43.7
25 - ϵ Ori	<i>Alnilam</i>	1.7	275	41.5	41.5	41.7	41.8	41.8	41.8	41.7	41.5	41.3	41.1	40.9	40.7
26 - ζ Ori	<i>Alnitak</i>	1.9	274	33.4	33.4	33.6	33.7	33.7	33.7	33.6	33.4	33.2	33.0	32.8	32.7
27 - κ Ori	<i>Saiph</i>	2.1	272	49.3	49.4	49.5	49.6	49.7	49.7	49.6	49.4	49.2	49.0	48.8	48.6
28 - α Ori	<i>Betelgeuse</i>	0.4	270	56.1	56.1	56.2	56.4	56.4	56.4	56.3	56.1	55.9	55.7	55.5	55.3
29 - β Aur	<i>Menkalinan</i>	1.9	269	44.9	45.0	45.2	45.3	45.4	45.4	45.3	45.0	44.7	44.4	44.1	43.9
30 - β CMa	<i>Mirzam</i>	2.0	264	6.1	6.2	6.3	6.5	6.5	6.6	6.5	6.3	6.1	5.9	5.7	5.5
31 - α Car	<i>Canopus</i>	-0.7	263	53.6	53.7	54.0	54.3	54.5	54.6	54.5	54.3	54.0	53.7	53.5	53.3
32 - γ Gem	<i>Alhena</i>	1.9	260	16.9	16.9	17.0	17.1	17.2	17.2	17.2	17.0	16.8	16.5	16.3	16.1
33 - α CMa	<i>Sirius</i>	-1.5	258	29.4	29.4	29.6	29.7	29.8	29.8	29.8	29.6	29.4	29.2	29.0	28.8
34 - ϵ CMa	<i>Adhara</i>	1.5	255	8.6	8.6	8.8	8.9	9.1	9.1	9.1	8.9	8.7	8.5	8.3	8.1
35 - δ CMa	<i>Wezen</i>	1.9	252	41.7	41.7	41.9	42.0	42.1	42.2	42.2	42.0	41.8	41.6	41.4	41.2
36 - η CMa	<i>Aludra</i>	2.5	248	46.5	46.5	46.6	46.8	46.9	47.0	47.0	46.8	46.7	46.4	46.2	46.0
37 - α^1 Gem	<i>Castor</i>	2.0	246	1.8	1.7	1.8	2.0	2.1	2.1	2.1	1.9	1.7	1.5	1.2	1.0
38 - α CMi	<i>Procyon</i>	0.4	244	54.7	54.7	54.7	54.9	55.0	55.0	55.0	54.8	54.7	54.4	54.2	54.0
39 - β Gem	<i>Pollux</i>	1.1	243	21.8	21.8	21.9	22.0	22.1	22.2	22.1	22.0	21.8	21.6	21.3	21.1
40 - ζ Pup	<i>Naos</i>	2.3	238	55.4	55.4	55.5	55.7	55.9	56.0	56.0	55.9	55.8	55.5	55.2	55.0
41 - γ^2 Vel	<i>Regor</i>	1.8	237	27.4	27.4	27.5	27.7	27.9	28.1	28.1	28.1	27.9	27.6	27.3	27.1
42 - ϵ Car	<i>Avior</i>	1.9	234	15.6	15.6	15.8	16.1	16.4	16.6	16.7	16.7	16.5	16.2	15.8	15.5
43 - δ Velorum		2.0	228	40.7	40.7	40.8	41.0	41.3	41.5	41.6	41.6	41.4	41.2	40.8	40.5
44 - ζ Hya	<i>Hydrobius</i>	3.1	225	53.2	53.1	53.1	53.2	53.3	53.4	53.4	53.3	53.2	53.0	52.8	52.5
45 - λ Vel	<i>Suhail</i>	2.2	222	48.7	48.7	48.7	48.9	49.1	49.2	49.3	49.3	49.2	49.0	48.7	48.4
46 - β Car	<i>Miaplacidus</i>	1.7	221	37.9	37.9	38.1	38.5	39.0	39.4	39.7	39.7	39.6	39.2	38.7	38.2
47 - ι Car	<i>Aspidiske</i>	2.3	220	35.1	35.0	35.2	35.4	35.7	36.0	36.1	36.1	36.0	35.7	35.4	35.0
48 - α Lyn	<i>Elvashak</i>	3.1	219	25.9	25.8	25.8	25.9	26.0	26.1	26.1	26.1	25.9	25.7	25.5	25.2
49 - α Hya	<i>Alphard</i>	2.0	217	51.4	51.3	51.3	51.4	51.5	51.6	51.6	51.6	51.4	51.3	51.1	50.8
50 - α Leo	<i>Regulus</i>	1.4	207	38.4	38.3	38.3	38.3	38.4	38.5	38.6	38.6	38.5	38.3	38.1	37.9

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	'	'	'	'	'	'	'	'	'	'	'	'
1 - α And	<i>Alpheratz</i>	2.1	+29	12.1	12.0	11.9	11.9	11.9	11.9	12.0	12.1	12.3	12.4	12.4	12.4
2 - β Cas	<i>Caph</i>	2.3	+59	15.8	15.7	15.5	15.4	15.3	15.3	15.4	15.6	15.7	15.9	16.0	16.1
3 - γ Peg	<i>Algenib</i>	2.8	+15	17.6	17.6	17.5	17.5	17.5	17.6	17.7	17.8	17.9	18.0	18.0	18.0
4 - α Phe	<i>Ankaa</i>	2.4	-42	12.2	12.2	12.1	11.9	11.8	11.6	11.5	11.5	11.6	11.7	11.8	11.9
5 - α Cas	<i>Schedar</i>	2.2	+56	39.0	38.9	38.8	38.6	38.6	38.6	38.6	38.8	38.9	39.1	39.2	39.3
6 - β Cet	<i>Diphda</i>	2.0	-17	52.9	52.9	52.8	52.7	52.6	52.5	52.4	52.4	52.3	52.4	52.5	52.5
7 - γ Cas	<i>Navi</i>	1.6	+60	49.6	49.6	49.5	49.3	49.2	49.2	49.3	49.4	49.6	49.7	49.9	50.0
8 - β And	<i>Mirach</i>	2.1	+35	43.6	43.6	43.5	43.4	43.4	43.4	43.5	43.6	43.7	43.8	43.9	44.0
9 - α Eri	<i>Achernar</i>	0.5	-57	8.5	8.5	8.4	8.2	8.0	7.9	7.8	7.7	7.8	7.9	8.1	8.2
10 - γ^1 And	<i>Almak</i>	2.3	+42	25.6	25.5	25.5	25.4	25.3	25.3	25.4	25.5	25.6	25.7	25.8	25.9
12 - α Ari	<i>Hamal</i>	2.0	+23	33.4	33.3	33.3	33.2	33.2	33.3	33.3	33.4	33.5	33.6	33.6	33.7
11 - α UMi	<i>Polaris</i>	2.0	+89	21.1	21.1	21.1	21.0	20.8	20.7	20.6	20.6	20.7	20.9	21.1	21.3
13 - θ^1 Eri	<i>Acamar</i>	3.3	-40	13.9	13.9	13.8	13.7	13.5	13.4	13.2	13.2	13.2	13.2	13.4	13.5
14 - α Cet	<i>Menkar</i>	2.5	+4	9.9	9.9	9.9	9.9	9.9	10.0	10.1	10.2	10.2	10.3	10.2	10.2
15 - β Per	<i>Algol</i>	2.1	+41	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2.0	2.1	2.2
16 - α Per	<i>Mirfak</i>	1.8	+49	56.0	56.0	55.9	55.9	55.8	55.7	55.7	55.7	55.8	55.9	56.0	56.1
17 - η Tau	<i>Alcyone</i>	2.9	+24	9.9	9.9	9.9	9.9	9.9	9.9	9.9	10.0	10.0	10.1	10.1	10.1
18 - γ Eri	<i>Zaurak</i>	3.0	-13	27.4	27.4	27.4	27.3	27.3	27.1	27.0	26.9	26.9	26.9	27.0	27.1
19 - α Tau	<i>Aldebaran</i>	0.9	+16	32.8	32.8	32.8	32.8	32.8	32.8	32.9	32.9	33.0	33.0	33.0	33.0
20 - β Ori	<i>Rigel</i>	0.1	-8	10.9	11.0	11.0	11.0	10.9	10.8	10.7	10.6	10.6	10.6	10.6	10.7
21 - α Aur	<i>Capella</i>	0.1	+46	1.0	1.1	1.1	1.1	1.0	0.9	0.9	0.9	0.9	0.9	1.0	1.1
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	21.9	21.9	21.9	21.9	21.9	22.0	22.0	22.1	22.1	22.1	22.1	22.0
23 - β Tau	<i>Elnath</i>	1.7	+28	37.3	37.4	37.4	37.4	37.3	37.3	37.3	37.3	37.4	37.4	37.4	37.4
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.2	17.3	17.3	17.3	17.2	17.2	17.1	17.0	17.0	17.0	17.0	17.1
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.5	11.6	11.6	11.6	11.5	11.5	11.4	11.3	11.3	11.3	11.3	11.4
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.1	56.1	56.2	56.1	56.1	56.0	55.9	55.9	55.8	55.8	55.9	56.0
27 - κ Ori	<i>Saiph</i>	2.1	-9	39.9	40.0	40.0	40.0	39.9	39.9	39.8	39.7	39.6	39.6	39.7	39.8
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.5	24.5	24.5	24.5	24.5	24.5	24.6	24.6	24.7	24.7	24.6	24.6
29 - β Aur	<i>Menkalinan</i>	1.9	+44	56.9	56.9	57.0	57.0	56.9	56.8	56.8	56.8	56.7	56.8	56.8	56.8
30 - β CMa	<i>Mirzam</i>	2.0	-17	58.1	58.2	58.3	58.2	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	42.7	42.7	42.5	42.3	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	44.8	44.9	44.9	44.9	44.8	44.7	44.6	44.5	44.5	44.5	44.6	44.7
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	60.1	60.2	60.3	60.3	60.2	60.1	60.0	59.9	59.8	59.8	59.9	60.0
35 - δ CMa	<i>Wezen</i>	1.9	-26	25.6	25.7	25.8	25.8	25.8	25.7	25.5	25.4	25.3	25.3	25.4	25.5
36 - η CMa	<i>Aludra</i>	2.5	-29	20.6	20.8	20.8	20.8	20.8	20.7	20.6	20.4	20.4	20.4	20.4	20.6
37 - α^1 Gem	<i>Castor</i>	2.0	+31	50.5	50.6	50.6	50.6	50.7	50.6	50.6	50.6	50.5	50.5	50.4	50.4
38 - α CMi	<i>Procyon</i>	0.4	+5	10.3	10.3	10.2	10.3	10.3	10.3	10.4	10.4	10.4	10.4	10.3	10.3
39 - β Gem	<i>Pollux</i>	1.1	+27	58.5	58.6	58.6	58.6	58.6	58.6	58.6	58.6	58.5	58.5	58.5	58.4
40 - ζ Pup	<i>Naos</i>	2.3	-40	3.6	3.8	3.9	3.9	3.9	3.8	3.7	3.5	3.4	3.4	3.4	3.6
41 - γ^2 Vel	<i>Regor</i>	1.8	-47	23.7	23.9	24.0	24.1	24.1	24.0	23.8	23.7	23.6	23.5	23.6	23.7
42 - ϵ Car	<i>Avior</i>	1.9	-59	34.4	34.6	34.7	34.8	34.8	34.7	34.6	34.4	34.3	34.2	34.2	34.4
43 - δ Velorum		2.0	-54	46.9	47.1	47.2	47.3	47.3	47.2	47.1	46.9	46.8	46.7	46.8	46.9
44 - ζ Hya	<i>Hydrobius</i>	3.1	+5	52.1	52.0	52.0	52.0	52.0	52.1	52.1	52.1	52.1	52.1	52.0	52.0
45 - λ Vel	<i>Suhail</i>	2.2	-43	30.7	30.9	31.0	31.1	31.1	31.1	31.0	30.8	30.7	30.6	30.7	30.8
46 - β Car	<i>Miaplacidus</i>	1.7	-69	47.8	48.0	48.2	48.3	48.3	48.3	48.2	48.0	47.8	47.8	47.8	47.9
47 - ι Car	<i>Aspidiske</i>	2.3	-59	21.4	21.6	21.8	21.9	21.9	21.9	21.7	21.6	21.4	21.4	21.4	21.5
48 - α Lyn	<i>Elvashak</i>	3.1	+34	18.3	18.4	18.4	18.5	18.5	18.5	18.5	18.4	18.3	18.3	18.2	18.1
49 - α Hya	<i>Alphard</i>	2.0	-8	44.7	44.8	44.9	44.9	44.9	44.9	44.8	44.7	44.7	44.7	44.8	44.9
50 - α Leo	<i>Regulus</i>	1.4	+11	52.1	52.1	52.1	52.1	52.1	52.1	52.2	52.2	52.1	52.1	52.0	51.9

ESTRELLAS, 2020
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	5.3	5.1	5.1	5.2	5.3	5.5	5.7	5.8	5.7	5.6	5.3	5.0
52 - ν Hydrae		3.1	197	20.8	20.6	20.6	20.6	20.7	20.8	20.9	20.9	20.9	20.7	20.5	20.3
53 - β UMa	<i>Merak</i>	2.4	194	14.4	14.1	14.0	14.1	14.3	14.5	14.6	14.7	14.7	14.5	14.2	13.8
54 - α UMa	<i>Dubhe</i>	1.8	193	45.7	45.4	45.3	45.4	45.6	45.8	46.0	46.1	46.1	45.9	45.6	45.1
55 - β Leo	<i>Denebola</i>	2.1	182	28.9	28.7	28.6	28.6	28.6	28.7	28.8	28.9	28.9	28.8	28.6	28.4
56 - γ Crv	<i>Gienah</i>	2.6	175	47.5	47.3	47.2	47.2	47.2	47.3	47.4	47.5	47.5	47.4	47.3	47.0
57 - α ¹ Cru	<i>Acrux</i>	1.4	173	4.1	3.7	3.6	3.5	3.6	3.9	4.1	4.4	4.5	4.5	4.2	3.8
58 - γ Cru	<i>Gacrux</i>	1.6	171	55.7	55.4	55.2	55.2	55.3	55.5	55.7	55.9	56.0	55.9	55.7	55.4
59 - γ Cen	<i>Muhlifain</i>	2.2	169	20.7	20.4	20.2	20.1	20.2	20.3	20.5	20.6	20.7	20.7	20.5	20.2
60 - β Cru	<i>Mimosa</i>	1.3	167	46.5	46.2	46.0	45.9	46.0	46.1	46.4	46.6	46.7	46.7	46.5	46.1
61 - ε UMa	<i>Alioth</i>	1.8	166	16.6	16.2	16.0	15.9	16.0	16.2	16.4	16.6	16.7	16.7	16.5	16.2
62 - α ² CVn	<i>Cor Caroli</i>	2.9	165	45.7	45.5	45.3	45.3	45.3	45.4	45.5	45.6	45.7	45.7	45.5	45.3
63 - ε Vir	<i>Vindemiatrix</i>	2.8	164	12.6	12.4	12.2	12.2	12.2	12.2	12.3	12.4	12.4	12.4	12.3	12.1
64 - ζ UMa	<i>Mizar</i>	2.3	158	49.3	48.9	48.7	48.6	48.6	48.8	49.0	49.2	49.3	49.3	49.2	49.0
65 - α Vir	<i>Spica</i>	1.0	158	26.5	26.2	26.1	26.0	26.0	26.0	26.1	26.2	26.2	26.2	26.1	25.9
66 - η UMa	<i>Alkaid</i>	1.9	152	55.3	55.0	54.8	54.7	54.7	54.8	54.9	55.1	55.2	55.3	55.2	55.0
67 - β Cen	<i>Hadar</i>	0.6	148	41.6	41.2	40.8	40.6	40.6	40.7	40.9	41.1	41.3	41.4	41.3	41.0
68 - θ Cen	<i>Menkent</i>	2.1	148	2.3	2.0	1.8	1.7	1.6	1.7	1.7	1.9	2.0	2.0	2.0	1.7
69 - α Boo	<i>Arcturus</i>	-0.0	145	51.7	51.4	51.2	51.1	51.1	51.1	51.2	51.3	51.4	51.4	51.4	51.2
70 - α ¹ Cen	<i>Rigil Kent</i>	0.0	139	45.9	45.5	45.1	44.9	44.8	44.9	45.1	45.3	45.6	45.7	45.6	45.4
71 - α ² Lib	<i>Zubenelgenubi</i>	2.8	136	60.5	60.3	60.1	59.9	59.8	59.8	59.9	60.0	60.1	60.1	60.1	59.9
72 - β UMi	<i>Kochab</i>	2.1	137	20.5	19.8	19.2	18.9	18.8	19.1	19.6	20.1	20.7	21.0	21.1	20.9
73 - β Lib	<i>Zubeneschamali</i>	2.6	130	29.1	28.9	28.6	28.5	28.4	28.3	28.4	28.5	28.6	28.7	28.6	28.5
74 - α CrB	<i>Alphecca</i>	2.2	126	7.4	7.1	6.9	6.7	6.6	6.6	6.6	6.8	6.9	7.0	7.0	6.9
75 - α Ser	<i>Unukalhai</i>	2.7	123	41.6	41.3	41.1	41.0	40.8	40.8	40.8	40.9	41.0	41.1	41.1	41.0
76 - α Sco	<i>Antares</i>	0.9	112	21.0	20.7	20.5	20.2	20.1	20.0	20.0	20.1	20.2	20.3	20.4	20.3
77 - α TrA	<i>Atria</i>	1.9	107	19.2	18.6	18.1	17.5	17.1	16.9	17.0	17.2	17.6	18.0	18.1	18.0
78 - ε Scorpii		2.3	107	8.7	8.4	8.1	7.9	7.7	7.6	7.6	7.6	7.8	7.9	8.0	7.9
79 - η Oph	<i>Sabik</i>	2.4	102	7.6	7.4	7.2	7.0	6.8	6.7	6.6	6.7	6.8	6.9	7.0	6.9
80 - α ¹ Her	<i>Rasalgethi</i>	3.1	101	7.1	6.9	6.7	6.4	6.3	6.2	6.2	6.2	6.4	6.5	6.6	6.5
81 - λ Sco	<i>Shaula</i>	1.6	96	16.1	15.9	15.6	15.3	15.1	14.9	14.9	14.9	15.1	15.2	15.3	15.3
82 - α Oph	<i>Rasalhague</i>	2.1	96	2.5	2.4	2.1	1.9	1.7	1.6	1.6	1.7	1.8	1.9	2.0	2.0
83 - θ Sco	<i>Sargas</i>	1.9	95	19.3	19.1	18.8	18.5	18.2	18.1	18.0	18.1	18.2	18.4	18.5	18.4
84 - γ Dra	<i>Eltanin</i>	2.2	90	44.5	44.3	44.0	43.7	43.5	43.4	43.4	43.5	43.7	44.0	44.2	44.3
85 - ε Sgr	<i>Kaus Australis</i>	1.9	83	38.2	38.0	37.7	37.5	37.2	37.0	36.9	36.9	37.1	37.2	37.3	37.3
86 - α Lyr	<i>Vega</i>	0.0	80	36.3	36.2	35.9	35.7	35.4	35.3	35.2	35.3	35.5	35.7	35.8	35.9
87 - σ Sgr	<i>Nunki</i>	2.0	75	53.1	52.9	52.7	52.4	52.2	52.0	51.9	51.9	52.0	52.1	52.2	52.2
88 - α Aql	<i>Altair</i>	0.8	62	4.2	4.1	3.9	3.7	3.4	3.3	3.1	3.1	3.2	3.3	3.4	3.5
89 - γ Cyg	<i>Sadr</i>	2.2	54	16.4	16.3	16.2	15.9	15.6	15.4	15.3	15.2	15.3	15.5	15.7	15.8
90 - α Pav	<i>Peacock</i>	1.9	53	12.7	12.6	12.3	11.9	11.5	11.2	10.9	10.8	10.9	11.1	11.3	11.5
91 - α Cyg	<i>Deneb</i>	1.3	49	28.9	28.8	28.7	28.4	28.2	27.9	27.7	27.7	27.8	28.0	28.2	28.3
92 - α Cep	<i>Alderamin</i>	2.4	40	14.9	14.9	14.8	14.5	14.1	13.7	13.5	13.4	13.5	13.8	14.1	14.4
93 - ε Peg	<i>Enif</i>	0.7	33	43.0	42.9	42.9	42.7	42.5	42.2	42.0	41.9	41.9	42.0	42.1	42.2
94 - δ Cap	<i>Deneb Algedi</i>	2.9	32	58.4	58.4	58.3	58.1	57.9	57.6	57.4	57.3	57.3	57.3	57.4	57.5
95 - α Gru	<i>Al Na'ir</i>	1.7	27	38.4	38.4	38.3	38.1	37.8	37.5	37.2	37.0	36.9	37.0	37.2	37.3
96 - β Gruis		2.1	19	2.8	2.8	2.8	2.6	2.3	2.0	1.7	1.5	1.4	1.5	1.6	1.8
97 - α PsA	<i>Fomalhaut</i>	1.2	15	19.2	19.2	19.2	19.0	18.8	18.6	18.3	18.1	18.0	18.1	18.2	18.3
98 - β Peg	<i>Scheat</i>	2.4	13	49.2	49.3	49.2	49.1	48.9	48.7	48.4	48.3	48.2	48.2	48.3	48.4
99 - α Peg	<i>Markab</i>	2.5	13	34.0	34.1	34.0	33.9	33.7	33.5	33.3	33.1	33.0	33.0	33.1	33.2

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	'	'	'	'	'	'	'	'	'	'	'	'
51	- μ Velorum	2.7	-49	31.3	31.5	31.7	31.8	31.9	31.9	31.8	31.7	31.6	31.5	31.4	31.5
52	- ν Hydrae	3.1	-16	17.8	17.9	18.0	18.1	18.1	18.1	18.0	17.9	17.9	17.9	17.9	18.0
53	- β UMa <i>Merak</i>	2.4	+56	16.3	16.4	16.5	16.6	16.7	16.7	16.7	16.6	16.4	16.3	16.1	16.0
54	- α UMa <i>Dubhe</i>	1.8	+61	38.4	38.4	38.6	38.7	38.8	38.8	38.7	38.6	38.5	38.3	38.1	38.1
55	- β Leo <i>Denebola</i>	2.1	+14	27.6	27.5	27.5	27.6	27.6	27.6	27.7	27.7	27.6	27.6	27.4	27.3
56	- γ Crv <i>Gienah</i>	2.6	-17	39.0	39.1	39.2	39.3	39.3	39.3	39.3	39.2	39.2	39.2	39.2	39.3
57	- α^1 Cru <i>Acrux</i>	1.4	-63	12.2	12.4	12.5	12.7	12.8	12.9	12.9	12.8	12.7	12.6	12.5	12.5
58	- γ Cru <i>Gacrux</i>	1.6	-57	13.2	13.3	13.5	13.6	13.7	13.8	13.8	13.7	13.6	13.5	13.4	13.4
59	- γ Cen <i>Muhlifain</i>	2.2	-49	3.8	4.0	4.1	4.3	4.4	4.4	4.4	4.4	4.3	4.2	4.1	4.1
60	- β Cru <i>Mimosa</i>	1.3	-59	47.5	47.6	47.8	48.0	48.1	48.2	48.2	48.1	48.0	47.9	47.8	47.8
61	- ϵ UMa <i>Alioth</i>	1.8	+55	50.9	50.9	51.0	51.1	51.2	51.3	51.3	51.3	51.1	51.0	50.8	50.6
62	- α^2 CVn <i>Cor Caroli</i>	2.9	+38	12.5	12.5	12.5	12.6	12.7	12.8	12.8	12.8	12.7	12.6	12.4	12.3
63	- ϵ Vir <i>Vindemiatrix</i>	2.8	+10	51.1	51.0	51.0	51.0	51.1	51.1	51.2	51.2	51.2	51.1	51.0	50.9
64	- ζ UMa <i>Mizar</i>	2.3	+54	49.1	49.1	49.1	49.3	49.4	49.5	49.5	49.5	49.4	49.2	49.0	48.8
65	- α Vir <i>Spica</i>	1.0	-11	15.8	15.9	16.0	16.0	16.0	16.0	16.0	16.0	15.9	15.9	16.0	16.0
66	- η UMa <i>Alkaid</i>	1.9	+49	12.6	12.6	12.7	12.8	12.9	13.0	13.1	13.0	12.9	12.8	12.6	12.4
67	- β Cen <i>Hadar</i>	0.6	-60	27.7	27.8	28.0	28.1	28.3	28.4	28.4	28.4	28.3	28.2	28.1	28.0
68	- θ Cen <i>Menkent</i>	2.1	-36	27.8	27.9	28.0	28.1	28.2	28.3	28.3	28.2	28.2	28.1	28.1	28.1
69	- α Boo <i>Arcturus</i>	-0.0	+19	4.7	4.6	4.6	4.6	4.7	4.8	4.8	4.8	4.8	4.7	4.6	4.5
70	- α^1 Cen <i>Rigil Kent</i>	0.0	-60	54.7	54.7	54.8	55.0	55.1	55.2	55.3	55.3	55.2	55.1	55.0	54.9
71	- α^2 Lib <i>Zubenelgenubi</i>	2.8	-16	7.3	7.4	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
72	- β UMi <i>Kochab</i>	2.1	+74	4.2	4.1	4.2	4.3	4.5	4.6	4.7	4.7	4.6	4.4	4.2	4.0
73	- β Lib <i>Zubeneschamali</i>	2.6	-9	27.3	27.3	27.4	27.4	27.4	27.4	27.4	27.4	27.3	27.3	27.4	27.4
74	- α CrB <i>Alphecca</i>	2.2	+26	38.8	38.7	38.7	38.7	38.8	39.0	39.0	39.1	39.1	39.0	38.9	38.7
75	- α Ser <i>Unukalhai</i>	2.7	+6	21.8	21.7	21.7	21.7	21.8	21.8	21.9	21.9	21.9	21.9	21.8	21.7
76	- α Sco <i>Antares</i>	0.9	-26	28.4	28.4	28.4	28.5	28.5	28.5	28.6	28.6	28.6	28.5	28.5	28.5
77	- α TrA <i>Atria</i>	1.9	-69	3.5	3.4	3.4	3.5	3.6	3.8	3.9	4.0	4.0	3.9	3.8	3.7
78	- ϵ Scorpii	2.3	-34	19.5	19.6	19.6	19.6	19.7	19.7	19.8	19.8	19.8	19.8	19.7	19.7
79	- η Oph <i>Sabik</i>	2.4	-15	44.8	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9	44.9
80	- α^1 Her <i>Rasalgethi</i>	3.1	+14	22.1	22.0	21.9	22.0	22.0	22.1	22.2	22.3	22.3	22.3	22.2	22.1
81	- λ Sco <i>Shaula</i>	1.6	-37	6.9	6.9	6.9	6.9	7.0	7.0	7.0	7.1	7.1	7.1	7.1	7.0
82	- α Oph <i>Rasalhague</i>	2.1	+12	32.8	32.7	32.6	32.6	32.7	32.8	32.9	32.9	33.0	32.9	32.9	32.8
83	- θ Sco <i>Sargas</i>	1.9	-43	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.6	0.6	0.5
84	- γ Dra <i>Eltanin</i>	2.2	+51	29.1	29.0	28.9	28.9	29.1	29.2	29.4	29.5	29.5	29.5	29.4	29.3
85	- ϵ Sgr <i>Kaus Australis</i>	1.9	-34	22.4	22.4	22.3	22.3	22.3	22.4	22.4	22.4	22.5	22.5	22.5	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	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
88	- α Aql <i>Altair</i>	0.8	+8	55.3	55.2	55.2	55.2	55.2	55.3	55.4	55.5	55.6	55.6	55.5	55.5
89	- γ Cyg <i>Sadr</i>	2.2	+40	19.3	19.1	19.0	19.0	19.0	19.2	19.3	19.5	19.6	19.7	19.6	19.6
90	- α Pav <i>Peacock</i>	1.9	-56	40.3	40.2	40.1	40.0	39.9	39.9	40.0	40.1	40.2	40.3	40.3	40.2
91	- α Cyg <i>Deneb</i>	1.3	+45	21.2	21.0	20.9	20.8	20.9	21.0	21.2	21.3	21.5	21.5	21.5	21.5
92	- α Cep <i>Alderamin</i>	2.4	+62	40.3	40.1	40.0	39.9	39.9	40.0	40.2	40.4	40.5	40.7	40.7	40.7
93	- ϵ Peg <i>Enif</i>	0.7	+9	58.0	57.9	57.9	57.9	57.9	58.0	58.1	58.2	58.3	58.3	58.3	58.3
94	- δ Cap <i>Deneb Algedi</i>	2.9	-16	2.3	2.3	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1
95	- α Gru <i>Al Na'ir</i>	1.7	-46	52.1	52.0	51.8	51.7	51.6	51.5	51.5	51.6	51.7	51.8	51.9	51.9
96	- β Gruis	2.1	-46	47.1	47.0	46.9	46.7	46.6	46.5	46.5	46.5	46.6	46.7	46.8	46.8
97	- α PsA <i>Fomalhaut</i>	1.2	-29	31.2	31.2	31.1	31.0	30.9	30.8	30.7	30.7	30.7	30.8	30.9	30.9
98	- β Peg <i>Scheat</i>	2.4	+28	11.5	11.4	11.3	11.3	11.3	11.4	11.5	11.6	11.7	11.8	11.9	11.9
99	- α Peg <i>Markab</i>	2.5	+15	18.7	18.7	18.6	18.6	18.6	18.7	18.8	19.0	19.0	19.1	19.1	19.1

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 26	15 24	13 30	11 28	9 30	7 28	5 31
2 - β Cassiopeae	Caph	2.3	17 27	15 25	13 31	11 29	9 31	7 29	5 31
6 - β Ceti	Diphda	2.0	18 01	15 59	14 05	12 03	10 05	8 04	6 06
9 - α Eridani	Achernar	0.5	18 55	16 53	14 59	12 57	10 59	8 57	6 59
11 - α Arietis	Hamal	2.0	19 25	17 23	15 29	13 27	11 29	9 27	7 29
13 - θ^1 Eridani	Acamar	3.3	20 15	18 13	16 19	14 17	12 19	10 18	8 20
16 - α Persei	Mirfak	1.8	20 42	18 40	16 46	14 44	12 46	10 44	8 46
19 - α Tauri	Aldebaran	0.9	21 53	19 51	17 57	15 55	13 57	11 55	9 57
20 - β Orionis	Rigel	0.1	22 31	20 29	18 35	16 34	14 36	12 34	10 36
21 - α Aurigae	Capella	0.1	22 34	20 32	18 38	16 36	14 38	12 36	10 38
22 - γ Orionis	Bellatrix	1.6	22 42	20 40	18 46	16 44	14 46	12 44	10 46
28 - α Orionis	Betelgeuse	0.4	23 12	21 10	19 16	17 14	15 16	13 14	11 16
31 - α Carinae	Canopus	-0.7	23 40	21 38	19 44	17 42	15 44	13 42	11 44
33 - α Canis Majoris	Sirius	-1.5	0 06	22 00	20 06	18 04	16 06	14 04	12 06
34 - ϵ Canis Majoris	Adhara	1.5	0 19	22 13	20 19	18 17	16 19	14 17	12 19
38 - α Canis Minoris	Procyon	0.4	1 00	22 54	21 00	18 58	17 00	14 58	13 00
39 - β Geminorum	Pollux	1.1	1 06	23 00	21 06	19 04	17 06	15 04	13 06
42 - ϵ Carinae	Avior	1.9	1 42	23 36	21 42	19 40	17 42	15 41	13 43
45 - λ Velorum	Suhail	2.2	2 28	0 26	22 28	20 26	18 28	16 26	14 28
46 - β Carinae	Miaplacidus	1.7	2 33	0 31	22 33	20 31	18 33	16 31	14 33
49 - α Hydrae	Alphard	2.0	2 48	0 46	22 48	20 46	18 48	16 46	14 48
50 - α Leonis	Regulus	1.4	3 28	1 27	23 29	21 27	19 29	17 27	15 29
54 - α Ursae Majoris	Dubhe	1.8	4 24	2 22	0 28	22 22	20 24	18 22	16 24
55 - β Leonis	Denebola	2.1	5 09	3 07	1 13	23 07	21 09	19 07	17 09
57 - α^1 Crucis	Acrux	1.4	5 46	3 44	1 50	23 45	21 47	19 45	17 47
58 - γ Crucis	Gacrux	1.6	5 51	3 49	1 55	23 49	21 51	19 49	17 51
60 - β Crucis	Mimosa	1.3	6 07	4 06	2 12	0 10	22 08	20 06	18 08
61 - ϵ Ursae Majoris	Alioth	1.8	6 13	4 12	2 18	0 16	22 14	20 12	18 14
64 - ζ Ursae Majoris	Mizar	2.3	6 43	4 41	2 47	0 45	22 44	20 42	18 44
65 - α Virginis	Spica	1.0	6 45	4 43	2 49	0 47	22 45	20 43	18 45
68 - θ Centauri	Menkent	2.1	7 26	5 24	3 30	1 28	23 27	21 25	19 27
69 - α Bootis	Arcturus	-0.0	7 35	5 33	3 39	1 37	23 35	21 33	19 35
70 - α^1 Centauri	Rigil Kent	0.0	7 59	5 57	4 03	2 01	0 03	21 58	20 00
72 - β Ursae Minoris	Kochab	2.1	8 09	6 07	4 13	2 11	0 13	22 07	20 09
74 - α Coronae Borealis	Alphecca	2.2	8 54	6 52	4 58	2 56	0 58	22 52	20 54
76 - α Scorpii	Antares	0.9	9 49	7 47	5 53	3 51	1 53	23 47	21 49
77 - α Triangulis Australis	Atria	1.9	10 09	8 07	6 13	4 11	2 13	0 11	22 09
81 - λ Scorpii	Shaula	1.6	10 53	8 51	6 57	4 55	2 57	0 55	22 53
82 - α Ophiuci	Rasalhague	2.1	10 54	8 52	6 58	4 56	2 58	0 56	22 54
84 - γ Draconis	Eltanin	2.2	11 15	9 13	7 19	5 17	3 19	1 17	23 15
85 - ϵ Sagittarii	Kaus Australis	1.9	11 43	9 41	7 47	5 45	3 47	1 46	23 44
86 - α Lyrae	Vega	0.0	11 55	9 53	7 59	5 57	3 59	1 58	23 56
87 - σ Sagittarii	Nunki	2.0	12 14	10 12	8 18	6 16	4 18	2 16	0 18
88 - α Aquilae	Altair	0.8	13 09	11 07	9 13	7 11	5 13	3 12	1 14
90 - α Pavonis	Peacock	1.9	13 44	11 43	9 49	7 47	5 49	3 47	1 49
91 - α Cigni	Deneb	1.3	13 59	11 57	10 03	8 02	6 04	4 02	2 04
93 - ϵ Pegasi	Enif	0.7	15 02	13 00	11 06	9 04	7 06	5 05	3 07
95 - α Gruis	Al Na'ir	1.7	15 26	13 25	11 31	9 29	7 31	5 29	3 31
97 - α Piscis Austrini	Fomalhaut	1.2	16 16	14 14	12 20	10 18	8 20	6 18	4 20
99 - α Pegasi	Markab	2.5	16 23	14 21	12 27	10 25	8 27	6 25	4 27

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

Nº	NOMBRE	Mag	Ago	Sep	Oct	Nov	Dic	1º CORRECCIÓN																																																																		
1 - α Andromedae	Alpheratz	2.1	h m 3 29	h m 1 27	h m 23 25	h m 21 23	h m 19 25	Restar para obtener la hora de paso en otro día del mismo mes.																																																																		
2 - β Cassiopeae	Caph	2.3	3 29	1 28	23 26	21 24	19 26																																																																			
6 - β Ceti	Diphda	2.0	4 04	2 02	0 04	21 58	20 00																																																																			
9 - α Eridani	Achernar	0.5	4 57	2 56	0 58	22 52	20 54																																																																			
11 - α Arietis	Hamal	2.0	5 27	3 25	1 27	23 22	21 24	<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
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13 - θ¹ Eridani	Acamar	3.3	6 18	4 16	2 18	0 16	22 14	Si el resultado es negativo sumar 23 ^h 56 ^m																																																																		
16 - α Persei	Mirfak	1.8	6 44	4 43	2 45	0 43	22 41																																																																			
19 - α Tauri	Aldebaran	0.9	7 56	5 54	3 56	1 54	23 52																																																																			
20 - β Orionis	Rigel	0.1	8 34	6 32	4 34	2 32	0 34																																																																			
21 - α Aurigae	Capella	0.1	8 37	6 35	4 37	2 35	0 37																																																																			
22 - γ Orionis	Bellatrix	1.6	8 45	6 43	4 45	2 43	0 45																																																																			
28 - α Orionis	Betelgeuse	0.4	9 14	7 13	5 15	3 13	1 15																																																																			
31 - α Carinae	Canopus	-0.7	9 43	7 41	5 43	3 41	1 43																																																																			
33 - α Canis Majoris	Sirius	-1.5	10 04	8 02	6 04	4 02	2 05																																																																			
34 - ε Canis Majoris	Adhara	1.5	10 17	8 16	6 18	4 16	2 18																																																																			
38 - α Canis Minoris	Procyon	0.4	10 58	8 56	6 58	4 57	2 59																																																																			
39 - β Geminorum	Pollux	1.1	11 04	9 03	7 05	5 03	3 05																																																																			
42 - ε Carinae	Avior	1.9	11 41	9 39	7 41	5 39	3 41																																																																			
45 - λ Velorum	Suhail	2.2	12 26	10 25	8 27	6 25	4 27																																																																			
46 - β Carinae	Miaplacidus	1.7	12 31	10 29	8 31	6 29	4 31																																																																			
49 - α Hydrae	Alphard	2.0	12 46	10 44	8 46	6 45	4 47																																																																			
50 - α Leonis	Regulus	1.4	13 27	11 25	9 27	7 25	5 27																																																																			
54 - α Ursae Majoris	Dubhe	1.8	14 22	12 20	10 22	8 21	6 23																																																																			
55 - β Leonis	Denebola	2.1	15 07	13 05	11 08	9 06	7 08																																																																			
57 - α¹ Crucis	Acrux	1.4	15 45	13 43	11 45	9 43	7 45																																																																			
58 - γ Crucis	Gacrux	1.6	15 49	13 48	11 50	9 48	7 50																																																																			
60 - β Crucis	Mimosa	1.3	16 06	14 04	12 06	10 04	8 06																																																																			
61 - ε Ursae Majoris	Alioth	1.8	16 12	14 10	12 12	10 10	8 12																																																																			
64 - ζ Ursae Majoris	Mizar	2.3	16 42	14 40	12 42	10 40	8 42																																																																			
65 - α Virginis	Spica	1.0	16 43	14 41	12 43	10 42	8 44																																																																			
68 - θ Centauri	Menkent	2.1	17 25	15 23	13 25	11 23	9 25	2º CORRECCIÓN																																																																		
69 - α Bootis	Arcturus	-0.0	17 33	15 32	13 34	11 32	9 34																																																																			
70 - α¹ Centauri	Rigil Kent	0.0	17 58	15 56	13 58	11 56	9 58																																																																			
72 - β Ursae Minoris	Kochab	2.1	18 07	16 06	14 08	12 06	10 08																																																																			
74 - α Coronae Borealis	Alphecca	2.2	18 52	16 50	14 52	12 50	10 53	Se aplicará para tener la hora civil del paso por otro meridiano.																																																																		
76 - α Scorpii	Antares	0.9	19 47	17 45	15 47	13 45	11 47																																																																			
77 - α Triangulis Australis	Atria	1.9	20 07	18 05	16 07	14 06	12 08																																																																			
81 - λ Scorpii	Shaula	1.6	20 51	18 49	16 51	14 50	12 52																																																																			
82 - α Ophiuci	Rasalhague	2.1	20 52	18 50	16 52	14 50	12 53	<table><tr><th>Long</th><th>Corr.</th></tr><tr><td>°</td><td>m</td></tr><tr><td>180 W</td><td>-2</td></tr><tr><td>136 W</td><td>-1</td></tr><tr><td>46 W</td><td>0</td></tr><tr><td>46 E</td><td>+1</td></tr><tr><td>136 E</td><td>+2</td></tr><tr><td>180 E</td><td></td></tr></table>	Long	Corr.	°	m	180 W	-2	136 W	-1	46 W	0	46 E	+1	136 E	+2	180 E																																																			
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84 - γ Draconis	Eltanin	2.2	21 13	19 11	17 13	15 12	13 14																																																																			
85 - ε Sagitarii	Kaus Australis	1.9	21 42	19 40	17 42	15 40	13 42																																																																			
86 - α Lyrae	Vega	0.0	21 54	19 52	17 54	15 52	13 54																																																																			
87 - σ Sagitarii	Nunki	2.0	22 13	20 11	18 13	16 11	14 13																																																																			
88 - α Aquilae	Altair	0.8	23 08	21 06	19 08	17 06	15 08																																																																			
90 - α Pavonis	Peacock	1.9	23 43	21 41	19 43	17 41	15 43																																																																			
91 - α Cigni	Deneb	1.3	0 02	21 56	19 58	17 56	15 58																																																																			
93 - ε Pegasi	Enif	0.7	1 05	22 59	21 01	18 59	17 01																																																																			
95 - α Gruis	Al Na'ir	1.7	1 29	23 23	21 25	19 23	17 25																																																																			
97 - α Piscis Austrini	Fomalhaut	1.2	2 18	0 16	22 14	20 13	18 15																																																																			
99 - α Pegasi	Markab	2.5	2 25	0 23	22 21	20 19	18 22																																																																			

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2020

TABLA I

hL [°] ° ,	Corr. ,	hL [°] ° ,	Corr. ,	hL [°] ° ,	Corr. ,	hL [°] ° ,	Corr. ,	hL [°] ° ,	Corr. ,	hL [°] ° ,	Corr. ,	hL [°] ° ,	Corr. ,
0 00	-27.9	26 00	-37.1	52 00	-38.7	78 00	-32.5	104 00	-19.7	130 00	-3.0	156 00	+14.4
0 30	-28.2	26 30	-37.2	52 30	-38.7	78 30	-32.3	104 30	-19.4	130 30	-2.6	156 30	+14.7
1 00	-28.4	27 00	-37.3	53 00	-38.6	79 00	-32.1	105 00	-19.1	131 00	-2.3	157 00	+15.0
1 30	-28.6	27 30	-37.4	53 30	-38.6	79 30	-31.9	105 30	-18.8	131 30	-1.9	157 30	+15.4
2 00	-28.9	28 00	-37.5	54 00	-38.5	80 00	-31.7	106 00	-18.5	132 00	-1.6	158 00	+15.7
2 30	-29.1	28 30	-37.6	54 30	-38.4	80 30	-31.5	106 30	-18.2	132 30	-1.3	158 30	+16.0
3 00	-29.3	29 00	-37.7	55 00	-38.4	81 00	-31.3	107 00	-17.9	133 00	-0.9	159 00	+16.3
3 30	-29.5	29 30	-37.8	55 30	-38.3	81 30	-31.1	107 30	-17.6	133 30	-0.6	159 30	+16.6
4 00	-29.8	30 00	-37.8	56 00	-38.3	82 00	-30.9	108 00	-17.3	134 00	-0.2	160 00	+16.9
4 30	-30.0	30 30	-37.9	56 30	-38.2	82 30	-30.7	108 30	-17.0	134 30	+0.1	160 30	+17.2
5 00	-30.2	31 00	-38.0	57 00	-38.1	83 00	-30.5	109 00	-16.7	135 00	+0.4	161 00	+17.5
5 30	-30.4	31 30	-38.1	57 30	-38.0	83 30	-30.3	109 30	-16.4	135 30	+0.8	161 30	+17.8
6 00	-30.6	32 00	-38.2	58 00	-38.0	84 00	-30.1	110 00	-16.1	136 00	+1.1	162 00	+18.1
6 30	-30.8	32 30	-38.2	58 30	-37.9	84 30	-29.9	110 30	-15.8	136 30	+1.5	162 30	+18.4
7 00	-31.0	33 00	-38.3	59 00	-37.8	85 00	-29.6	111 00	-15.5	137 00	+1.8	163 00	+18.7
7 30	-31.3	33 30	-38.4	59 30	-37.7	85 30	-29.4	111 30	-15.2	137 30	+2.1	163 30	+19.0
8 00	-31.5	34 00	-38.4	60 00	-37.6	86 00	-29.2	112 00	-14.9	138 00	+2.5	164 00	+19.3
8 30	-31.7	34 30	-38.5	60 30	-37.5	86 30	-29.0	112 30	-14.5	138 30	+2.8	164 30	+19.6
9 00	-31.9	35 00	-38.5	61 00	-37.4	87 00	-28.7	113 00	-14.2	139 00	+3.2	165 00	+19.9
9 30	-32.1	35 30	-38.6	61 30	-37.3	87 30	-28.5	113 30	-13.9	139 30	+3.5	165 30	+20.2
10 00	-32.2	36 00	-38.6	62 00	-37.2	88 00	-28.3	114 00	-13.6	140 00	+3.8	166 00	+20.5
10 30	-32.4	36 30	-38.7	62 30	-37.1	88 30	-28.0	114 30	-13.3	140 30	+4.2	166 30	+20.8
11 00	-32.6	37 00	-38.7	63 00	-37.0	89 00	-27.8	115 00	-12.9	141 00	+4.5	167 00	+21.1
11 30	-32.8	37 30	-38.8	63 30	-36.9	89 30	-27.5	115 30	-12.6	141 30	+4.9	167 30	+21.4
12 00	-33.0	38 00	-38.8	64 00	-36.8	90 00	-27.3	116 00	-12.3	142 00	+5.2	168 00	+21.6
12 30	-33.2	38 30	-38.9	64 30	-36.7	90 30	-27.1	116 30	-12.0	142 30	+5.5	168 30	+21.9
13 00	-33.4	39 00	-38.9	65 00	-36.5	91 00	-26.8	117 00	-11.6	143 00	+5.9	169 00	+22.2
13 30	-33.5	39 30	-38.9	65 30	-36.4	91 30	-26.6	117 30	-11.3	143 30	+6.2	169 30	+22.5
14 00	-33.7	40 00	-38.9	66 00	-36.3	92 00	-26.3	118 00	-11.0	144 00	+6.5	170 00	+22.8
14 30	-33.9	40 30	-39.0	66 30	-36.2	92 30	-26.1	118 30	-10.7	144 30	+6.9	170 30	+23.0
15 00	-34.0	41 00	-39.0	67 00	-36.0	93 00	-25.8	119 00	-10.3	145 00	+7.2	171 00	+23.3
15 30	-34.2	41 30	-39.0	67 30	-35.9	93 30	-25.5	119 30	-10.0	145 30	+7.6	171 30	+23.6
16 00	-34.4	42 00	-39.0	68 00	-35.8	94 00	-25.3	120 00	-9.7	146 00	+7.9	172 00	+23.9
16 30	-34.5	42 30	-39.0	68 30	-35.6	94 30	-25.0	120 30	-9.3	146 30	+8.2	172 30	+24.1
17 00	-34.7	43 00	-39.0	69 00	-35.5	95 00	-24.8	121 00	-9.0	147 00	+8.6	173 00	+24.4
17 30	-34.8	43 30	-39.1	69 30	-35.4	95 30	-24.5	121 30	-8.7	147 30	+8.9	173 30	+24.7
18 00	-35.0	44 00	-39.1	70 00	-35.2	96 00	-24.2	122 00	-8.4	148 00	+9.2	174 00	+24.9
18 30	-35.1	44 30	-39.1	70 30	-35.1	96 30	-24.0	122 30	-8.0	148 30	+9.5	174 30	+25.2
19 00	-35.3	45 00	-39.1	71 00	-34.9	97 00	-23.7	123 00	-7.7	149 00	+9.9	175 00	+25.4
19 30	-35.4	45 30	-39.0	71 30	-34.8	97 30	-23.4	123 30	-7.4	149 30	+10.2	175 30	+25.7
20 00	-35.6	46 00	-39.0	72 00	-34.6	98 00	-23.1	124 00	-7.0	150 00	+10.5	176 00	+26.0
20 30	-35.7	46 30	-39.0	72 30	-34.4	98 30	-22.9	124 30	-6.7	150 30	+10.9	176 30	+26.2
21 00	-35.9	47 00	-39.0	73 00	-34.3	99 00	-22.6	125 00	-6.3	151 00	+11.2	177 00	+26.5
21 30	-36.0	47 30	-39.0	73 30	-34.1	99 30	-22.3	125 30	-6.0	151 30	+11.5	177 30	+26.7
22 00	-36.1	48 00	-39.0	74 00	-33.9	100 00	-22.0	126 00	-5.7	152 00	+11.8	178 00	+27.0
22 30	-36.3	48 30	-39.0	74 30	-33.8	100 30	-21.8	126 30	-5.3	152 30	+12.2	178 30	+27.2
23 00	-36.4	49 00	-38.9	75 00	-33.6	101 00	-21.5	127 00	-5.0	153 00	+12.5	179 00	+27.4
23 30	-36.5	49 30	-38.9	75 30	-33.4	101 30	-21.2	127 30	-4.7	153 30	+12.8	179 30	+27.7
24 00	-36.6	50 00	-38.9	76 00	-33.2	102 00	-20.9	128 00	-4.3	154 00	+13.1	180 00	+27.9
24 30	-36.7	50 30	-38.8	76 30	-33.1	102 30	-20.6	128 30	-4.0	154 30	+13.5	180 30	+28.2
25 00	-36.9	51 00	-38.8	77 00	-32.9	103 00	-20.3	129 00	-3.6	155 00	+13.8	181 00	+28.4
25 30	-37.0	51 30	-38.8	77 30	-32.7	103 30	-20.0	129 30	-3.3	155 30	+14.1	181 30	+28.6
26 00	-37.1	52 00	-38.7	78 00	-32.5	104 00	-19.7	130 00	-3.0	156 00	+14.4	182 00	+28.9

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2020

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TABLA I

hL [°] ° ,	Corr. ,	hL [°] ° ,	Corr. ,	hL [°] ° ,	Corr. ,	hL [°] ° ,	Corr. ,	hL [°] ° ,	Corr. ,	hL [°] ° ,	Corr. ,	hL [°] ° ,	Corr. ,
182 00	+28.9	208 00	+37.5	234 00	+38.5	260 00	+31.7	286 00	+18.5	312 00	+1.6	338 00	-15.7
182 30	+29.1	208 30	+37.6	234 30	+38.4	260 30	+31.5	286 30	+18.2	312 30	+1.3	338 30	-16.0
183 00	+29.3	209 00	+37.7	235 00	+38.4	261 00	+31.3	287 00	+17.9	313 00	+0.9	339 00	-16.3
183 30	+29.5	209 30	+37.8	235 30	+38.3	261 30	+31.1	287 30	+17.6	313 30	+0.6	339 30	-16.6
184 00	+29.8	210 00	+37.8	236 00	+38.3	262 00	+30.9	288 00	+17.3	314 00	+0.2	340 00	-16.9
184 30	+30.0	210 30	+37.9	236 30	+38.2	262 30	+30.7	288 30	+17.0	314 30	-0.1	340 30	-17.2
185 00	+30.2	211 00	+38.0	237 00	+38.1	263 00	+30.5	289 00	+16.7	315 00	-0.4	341 00	-17.5
185 30	+30.4	211 30	+38.1	237 30	+38.0	263 30	+30.3	289 30	+16.4	315 30	-0.8	341 30	-17.8
186 00	+30.6	212 00	+38.2	238 00	+38.0	264 00	+30.1	290 00	+16.1	316 00	-1.1	342 00	-18.1
186 30	+30.8	212 30	+38.2	238 30	+37.9	264 30	+29.9	290 30	+15.8	316 30	-1.5	342 30	-18.4
187 00	+31.0	213 00	+38.3	239 00	+37.8	265 00	+29.6	291 00	+15.5	317 00	-1.8	343 00	-18.7
187 30	+31.3	213 30	+38.4	239 30	+37.7	265 30	+29.4	291 30	+15.2	317 30	-2.1	343 30	-19.0
188 00	+31.5	214 00	+38.4	240 00	+37.6	266 00	+29.2	292 00	+14.9	318 00	-2.5	344 00	-19.3
188 30	+31.7	214 30	+38.5	240 30	+37.5	266 30	+29.0	292 30	+14.5	318 30	-2.8	344 30	-19.6
189 00	+31.9	215 00	+38.5	241 00	+37.4	267 00	+28.7	293 00	+14.2	319 00	-3.2	345 00	-19.9
189 30	+32.1	215 30	+38.6	241 30	+37.3	267 30	+28.5	293 30	+13.9	319 30	-3.5	345 30	-20.2
190 00	+32.2	216 00	+38.6	242 00	+37.2	268 00	+28.3	294 00	+13.6	320 00	-3.8	346 00	-20.5
190 30	+32.4	216 30	+38.7	242 30	+37.1	268 30	+28.0	294 30	+13.3	320 30	-4.2	346 30	-20.8
191 00	+32.6	217 00	+38.7	243 00	+37.0	269 00	+27.8	295 00	+12.9	321 00	-4.5	347 00	-21.1
191 30	+32.8	217 30	+38.8	243 30	+36.9	269 30	+27.5	295 30	+12.6	321 30	-4.9	347 30	-21.4
192 00	+33.0	218 00	+38.8	244 00	+36.8	270 00	+27.3	296 00	+12.3	322 00	-5.2	348 00	-21.6
192 30	+33.2	218 30	+38.9	244 30	+36.7	270 30	+27.1	296 30	+12.0	322 30	-5.5	348 30	-21.9
193 00	+33.4	219 00	+38.9	245 00	+36.5	271 00	+26.8	297 00	+11.6	323 00	-5.9	349 00	-22.2
193 30	+33.5	219 30	+38.9	245 30	+36.4	271 30	+26.6	297 30	+11.3	323 30	-6.2	349 30	-22.5
194 00	+33.7	220 00	+38.9	246 00	+36.3	272 00	+26.3	298 00	+11.0	324 00	-6.5	350 00	-22.8
194 30	+33.9	220 30	+39.0	246 30	+36.2	272 30	+26.1	298 30	+10.7	324 30	-6.9	350 30	-23.0
195 00	+34.0	221 00	+39.0	247 00	+36.0	273 00	+25.8	299 00	+10.3	325 00	-7.2	351 00	-23.3
195 30	+34.2	221 30	+39.0	247 30	+35.9	273 30	+25.5	299 30	+10.0	325 30	-7.6	351 30	-23.6
196 00	+34.4	222 00	+39.0	248 00	+35.8	274 00	+25.3	300 00	+9.7	326 00	-7.9	352 00	-23.9
196 30	+34.5	222 30	+39.0	248 30	+35.6	274 30	+25.0	300 30	+9.3	326 30	-8.2	352 30	-24.1
197 00	+34.7	223 00	+39.0	249 00	+35.5	275 00	+24.8	301 00	+9.0	327 00	-8.6	353 00	-24.4
197 30	+34.8	223 30	+39.1	249 30	+35.4	275 30	+24.5	301 30	+8.7	327 30	-8.9	353 30	-24.7
198 00	+35.0	224 00	+39.1	250 00	+35.2	276 00	+24.2	302 00	+8.4	328 00	-9.2	354 00	-24.9
198 30	+35.1	224 30	+39.1	250 30	+35.1	276 30	+24.0	302 30	+8.0	328 30	-9.5	354 30	-25.2
199 00	+35.3	225 00	+39.1	251 00	+34.9	277 00	+23.7	303 00	+7.7	329 00	-9.9	355 00	-25.4
199 30	+35.4	225 30	+39.0	251 30	+34.8	277 30	+23.4	303 30	+7.4	329 30	-10.2	355 30	-25.7
200 00	+35.6	226 00	+39.0	252 00	+34.6	278 00	+23.1	304 00	+7.0	330 00	-10.5	356 00	-26.0
200 30	+35.7	226 30	+39.0	252 30	+34.4	278 30	+22.9	304 30	+6.7	330 30	-10.9	356 30	-26.2
201 00	+35.9	227 00	+39.0	253 00	+34.3	279 00	+22.6	305 00	+6.3	331 00	-11.2	357 00	-26.5
201 30	+36.0	227 30	+39.0	253 30	+34.1	279 30	+22.3	305 30	+6.0	331 30	-11.5	357 30	-26.7
202 00	+36.1	228 00	+39.0	254 00	+33.9	280 00	+22.0	306 00	+5.7	332 00	-11.8	358 00	-27.0
202 30	+36.3	228 30	+39.0	254 30	+33.8	280 30	+21.8	306 30	+5.3	332 30	-12.2	358 30	-27.2
203 00	+36.4	229 00	+38.9	255 00	+33.6	281 00	+21.5	307 00	+5.0	333 00	-12.5	359 00	-27.4
203 30	+36.5	229 30	+38.9	255 30	+33.4	281 30	+21.2	307 30	+4.7	333 30	-12.8	359 30	-27.7
204 00	+36.6	230 00	+38.9	256 00	+33.2	282 00	+20.9	308 00	+4.3	334 00	-13.1	360 00	-27.9
204 30	+36.7	230 30	+38.8	256 30	+33.1	282 30	+20.6	308 30	+4.0	334 30	-13.5		
205 00	+36.9	231 00	+38.8	257 00	+32.9	283 00	+20.3	309 00	+3.6	335 00	-13.8		
205 30	+37.0	231 30	+38.8	257 30	+32.7	283 30	+20.0	309 30	+3.3	335 30	-14.1		
206 00	+37.1	232 00	+38.7	258 00	+32.5	284 00	+19.7	310 00	+3.0	336 00	-14.4		
206 30	+37.2	232 30	+38.7	258 30	+32.3	284 30	+19.4	310 30	+2.6	336 30	-14.7		
207 00	+37.3	233 00	+38.6	259 00	+32.1	285 00	+19.1	311 00	+2.3	337 00	-15.0		
207 30	+37.4	233 30	+38.6	259 30	+31.9	285 30	+18.8	311 30	+1.9	337 30	-15.4		
208 00	+37.5	234 00	+38.5	260 00	+31.7	286 00	+18.5	312 00	+1.6	338 00	-15.7		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2020

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	0.2	0.3	0.4	0.4	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	0.2	0.3	0.4	0.4	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	+0.1	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.2	-0.1	+0.1	+0.3	+0.4	+0.5
20	+0.1	+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	0.0	+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	+0.2
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	+0.3	+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	-0.1	-0.1	0.0	+0.2	+0.3	+0.4	+0.4	+0.2	+0.1	-0.1	-0.3	-0.4	-0.5
200	-0.1	-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	0.0	-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	-0.2
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	-0.3	-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	+0.1	+0.1	0.0	-0.2	-0.3	-0.4	-0.4	-0.2	-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	+0.1	+0.1	+0.1	+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	-0.3	-0.4	-0.4	-0.4	-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	-0.9	-1.1	90
100	-0.5	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.1	-1.3	100
110	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-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	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	130
140	-0.7	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	140
150	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-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	-0.1	-0.1	-0.1	-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	+0.1	230
240	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+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	+0.7	+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	+0.5	+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	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	310
320	+0.7	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	320
330	+0.6	+0.6	+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	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.2	+1.4	340
350	+0.5	+0.5	+0.6	+0.6	+0.6	+0.6	+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

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, 2020**

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TABLA A				TABLA B: SOL (LIMBO INFERIOR)									
DEPRESIÓN DE HORIZONTE				SEMIDIÁMETRO, REFRACCIÓN Y PARALAJE								Corrección adicional (2020)	
Elevación del observador en metros	Corrección	Elevación del observador en metros	Corrección	Altura aparente	Correc	Altura aparente	Correc	Altura aparente	Correc	Altura aparente	Correc		
				° ' "		° ' "		° ' "		° ' "			
m 1.9 2.0 2.2 2.3 2.5 2.7 2.9 3.1 3.3 3.5 3.7 3.9 4.2 4.4 4.7 4.9 5.2 5.4 5.7 6.0 6.2 6.5 6.8 7.1 7.4 7.7 8.0 8.4 8.7 9.0 9.4 9.7 10.1 10.4 10.8 11.2 11.6 11.9 12.3 12.7 13.1 13.6	-2.5 -2.6 -2.7 -2.8 -2.9 -3.0 -3.1 -3.2 -3.3 -3.4 -3.5 -3.6 -3.7 -3.8 -3.9 -4.0 -4.1 -4.2 -4.3 -4.4 -4.5 -4.6 -4.7 -4.8 -4.9 -5.0 -5.1 -5.2 -5.3 -5.4 -5.5 -5.6 -5.7 -5.8 -5.9 -6.0 -6.1 -6.2 -6.3 -6.4 -6.5	13.6 14.0 14.4 14.8 15.3 15.7 16.2 16.6 17.1 17.6 18.0 18.5 19.0 19.5 20.0 20.5 21.0 21.5 22.1 22.6 23.1 23.7 24.2 24.8 25.4 25.9 26.5 27.1 27.7 28.3 28.9 29.5 30.1 30.7 31.3 32.0 32.6 33.3 33.9 34.6 35.2 35.9	-6.6 -6.7 -6.8 -6.9 -7.0 -7.1 -7.2 -7.3 -7.4 -7.5 -7.6 -7.7 -7.8 -7.9 -8.0 -8.1 -8.2 -8.3 -8.4 -8.5 -8.6 -8.7 -8.8 -8.9 -9.0 -9.1 -9.2 -9.3 -9.4 -9.5 -9.6 -9.7 -9.8 -9.9 -10.0 -10.1 -10.2 -10.3 -10.4 -10.5 -10.6	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 23	+0.2
				6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4	feb 27	+0.1
				6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5	mar 22	0.0
				6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6	abr 13	-0.1
				6 46	+8.7	9 37	+10.7	15 18	+12.7	33 19	+14.7	may 7	-0.2
				6 53	+8.8	9 47	+10.8	15 45	+12.8	35 16	+14.8	jun 12	-0.3
				7 00	+8.9	10 00	+10.9	16 13	+12.9	37 25	+14.9	jul 27	-0.2
				7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0	sep 1	-0.1
				7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1	sep 25	0.0
				7 21	+9.2	10 38	+11.2	17 47	+13.2	45 30	+15.2	oct 17	+0.1
				7 28	+9.3	10 52	+11.3	18 23	+13.3	48 53	+15.3	nov 9	+0.2
				7 36	+9.4	11 06	+11.4	19 01	+13.4	52 43	+15.4	dic 15	+0.3
				7 44	+9.5	11 21	+11.5	19 41	+13.5	57 01	+15.5	dic 31	
				7 52	+9.6	11 36	+11.6	20 24	+13.6	61 51	+15.6		
				8 00	+9.7	11 52	+11.7	21 10	+13.7	67 16	+15.7		
				8 08	+9.8	12 09	+11.8	21 59	+13.8	73 14	+15.8		
				8 17	+9.9	12 26	+11.9	22 53	+13.9	79 42	+15.9		
				8 26	+10.0	12 44	+12.0	23 50	+14.0	86 30	+16.0		
				8 35	+10.1	13 03	+12.1	24 52	+14.1	90 00			
8 45		13 23		25 59									
TABLA C: PLANETAS Y ESTRELLAS													
				REFRACCIÓN				PARALAJE (2020)					
				Altura aparente	Correc	Altura aparente	Correc	Fechas	Venus para cualquier altura	Marte			
				° ' "	° ' "	° ' "	° ' "			Altura aparente			
				° ' "	° ' "	° ' "	° ' "			a < 30°	30° < a < 60°	a > 60°	
6.5	-4.6	23.7	-8.6	6 30	-7.8	14 00	-3.8	ene 1	+0.1	+0.1	0.0	0.0	
6.8	-4.7	24.2	-8.7	6 40	-7.6	15 00	-3.6	ene 16	+0.1	+0.1	+0.1	0.0	
7.1	-4.8	24.8	-8.8	6 50	-7.5	16 00	-3.3	mar 1	+0.2	+0.1	+0.1	0.0	
7.4	-4.9	25.4	-9.0	7 00	-7.3	17 00	-3.1	abr 16	+0.3	+0.1	+0.1	0.0	
7.7	-5.0	25.9	-9.1	7 15	-7.1	18 00	-3.0	may 8	+0.4	+0.1	+0.1	0.0	
8.0	-5.1	26.5	-9.2	7 30	-6.9	19 00	-2.8	may 28	+0.5	+0.1	+0.1	0.0	
8.4	-5.2	27.1	-9.3	7 45	-6.7	20 00	-2.6	jun 2	+0.5	+0.1	+0.1	0.0	
8.7	-5.3	27.7	-9.4	8 00	-6.5	21 00	-2.5	jun 10	+0.4	+0.1	+0.1	+0.1	
9.0	-5.4	28.3	-9.5	8 15	-6.3	22 00	-2.4	jun 14	+0.4	+0.1	+0.1	+0.1	
9.4	-5.5	28.9	-9.6	8 30	-6.2	24 00	-2.2	jun 29	+0.3	+0.2	+0.1	+0.1	
9.7	-5.6	29.5	-9.7	8 45	-6.0	26 00	-2.0	jul 21	+0.2	+0.2	+0.1	+0.1	
10.1	-5.7	30.1	-9.8	9 00	-5.9	28 00	-1.8	jul 22	+0.2	+0.2	+0.2	+0.1	
10.4	-5.8	30.7	-9.9	9 20	-5.7	32 00	-1.6	ago 19	+0.2	+0.3	+0.2	+0.1	
10.8	-5.9	31.3	-10.0	9 40	-5.5	36 00	-1.3	sep 5	+0.1	+0.3	+0.2	+0.1	
11.2	-6.0	32.0	-10.1	10 00	-5.3	40 00	-1.2	nov 17	+0.1	+0.2	+0.2	+0.1	
11.6	-6.1	32.6	-10.2	10 30	-5.1	45 00	-1.0	dic 7	+0.1	+0.2	+0.2	+0.1	
11.9	-6.2	33.3	-10.3	11 00	-4.8	50 00	-0.8	dic 31	+0.1	+0.2	+0.1	+0.1	
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

