

**ALMANAQUE NÁUTICO
PERSEIS
2022**

ALMANAQUE NÁUTICO PERSEIS 2022

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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 presentan 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.

Esta edición del 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.

En la sección *Fenómenos relevantes* se presenta información sobre fenómenos astronómicos del año que pueden ser de interés. Los datos y figuras relativas a los eclipses se deben a Fred Espenak.

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, 2022

Estaciones			
<i>Hemisferio N</i>	<i>Inicio (hora UT)</i>	<i>Duración (días)</i>	<i>Hemisferio S</i>
Primavera	20 de marzo a las 15 ^h 33 ^m	92.75	Otoño
Verano	21 de junio a las 09 ^h 14 ^m	93.66	Invierno
Otoño	23 de septiembre a las 01 ^h 04 ^m	89.85	Primavera
Invierno	21 de diciembre a las 21 ^h 48 ^m	88.99	Verano

Órbita terrestre		
<i>Ápside</i>	<i>Fecha (hora UT)</i>	<i>Distancia (ua)</i>
Perihelio	4 de enero a las 06 ^h 54 ^m	0.983337
Afelio	4 de julio a las 07 ^h 11 ^m	1.016715

Fases de la Luna (hora UT)			
<i>Luna Nueva</i>	<i>Cuarto Creciente</i>	<i>Luna Llena</i>	<i>Cuarto Menguante</i>
2 ene 18:33	9 ene 18:11	17 ene 23:49	25 ene 13:41
1 feb 05:46	8 feb 13:50	16 feb 16:57	23 feb 22:32
2 mar 17:35	10 mar 10:45	18 mar 07:17	25 mar 05:37
1 abr 06:24	9 abr 06:47	16 abr 18:55	23 abr 11:56
30 abr 20:28	9 may 00:21	16 may 04:14	22 may 18:43
30 may 11:30	7 jun 14:48	14 jun 11:52	21 jun 03:11
29 jun 02:52	7 jul 02:14	13 jul 18:37	20 jul 14:18
28 jul 17:55	5 ago 11:06	12 ago 01:36	19 ago 04:36
27 ago 08:17	3 sep 18:08	10 sep 09:59	17 sep 21:52
25 sep 21:54	3 oct 00:14	9 oct 20:55	17 oct 17:15
25 oct 10:49	1 nov 06:37	8 nov 11:02	16 nov 13:27
23 nov 22:57	30 nov 14:36	8 dic 04:08	16 dic 08:56
23 dic 10:17	30 dic 01:21		

Eclipses

- I Eclipse parcial de Sol, el sábado 30 de abril.
- II Eclipse total de Luna, el lunes 16 de mayo.
- III Eclipse parcial de Sol, el martes 25 de octubre.
- IV Eclipse total de Luna, el martes 8 de noviembre.

FENÓMENOS ASTRONÓMICOS RELEVANTES, 2022

Inicio de las estaciones

El inicio de las estaciones astronómicas se produce cuando el Sol alcanza su altura máxima, solsticio de verano, mínima, solsticio de invierno o cuando la declinación del Sol es cero y la duración del día y la noche son iguales, equinoccios de primavera y de otoño. En la tabla de la página anterior muestra el nombre de las estaciones del hemisferio norte y del hemisferio sur. En el siglo XXI, la fecha más tardía de comienzo de las estaciones se produjo en 2003, la fecha más temprana será en 2096.

Órbita terrestre

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 fue 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 fue el 4 de julio de 2019. Las distancias al Sol se miden en unidades astronómicas (ua). 1 ua = 149 597 870.7 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

En astronomía, el término eclipse puede aplicarse a cualquier oscurecimiento, total o parcial, de la luz de un cuerpo celeste por otro. Pero el término está habitualmente restringido a un eclipse del Sol por la Luna (eclipse solar) o de la Luna por la Tierra (eclipse lunar), mientras que un eclipse del Sol por uno de los planetas interiores se denomina tránsito del planeta y un eclipse de una estrella o un planeta por la Luna, ocultación. En un año pueden suceder hasta siete eclipses.

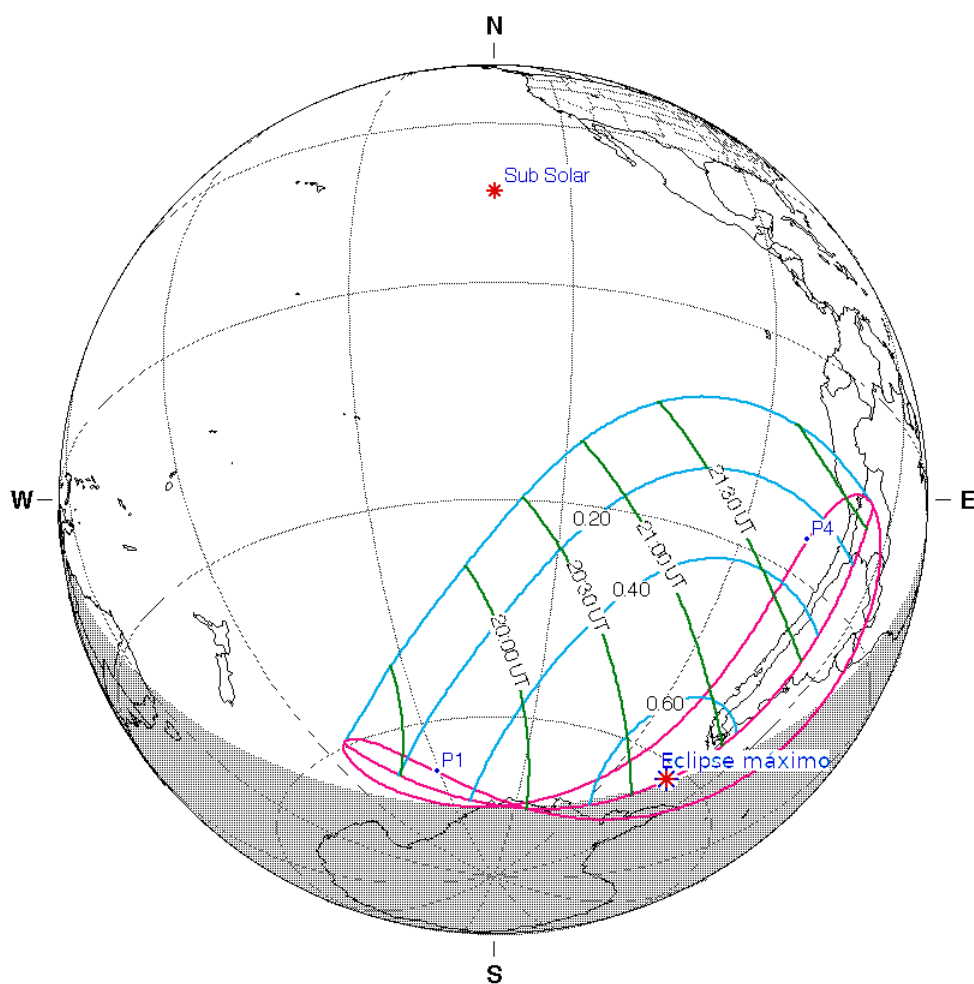
Los eclipses de Sol suceden cuando, en Luna nueva, esta se interpone entre el Sol y la Tierra. Pueden ser de tres tipos principales: eclipse total, cuando la Luna tapa toda la superficie del Sol, para lo que es necesario que el diámetro aparente de la Luna sea igual o mayor que el del Sol y el observador se encuentre en la zona de sombra producida por la Luna; 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 de este; eclipse parcial, cuando la Luna tapa una parte del Sol al estar la sombra de la Luna fuera de la superficie terrestre. Los eclipses totales o anulares solo es posible verlos en una franja de terreno muy estrecha aunque muy larga y durante unos pocos minutos. Hacia el norte y hacia el sur de esa franja, el eclipse se ve como parcial en una gran zona denominada zona de penumbra, fuera de esa zona 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 que produce la Tierra. Se distinguen tres tipos de eclipses de Luna: eclipse total, cuando toda la superficie de la Luna pasa por la *umbra* (sombra) 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 cualquier parte de la Tierra en la que sea visible la Luna. Durante un eclipse total, la Luna adquiere un tono rojo oscuro debido a la luz que le llega difractada por la atmósfera terrestre.

Eclipse parcial de Sol, sábado 30 de abril

Este eclipse será visible en el Cono Sur americano, sudeste del Pacífico y en una pequeña parte de la Antártida.

La fase penumbral comenzará a las 18^h45^m UT (P1) y acabará a las 23^h38^m UT (P4). El eclipse máximo se producirá a las 20^h41^m UT

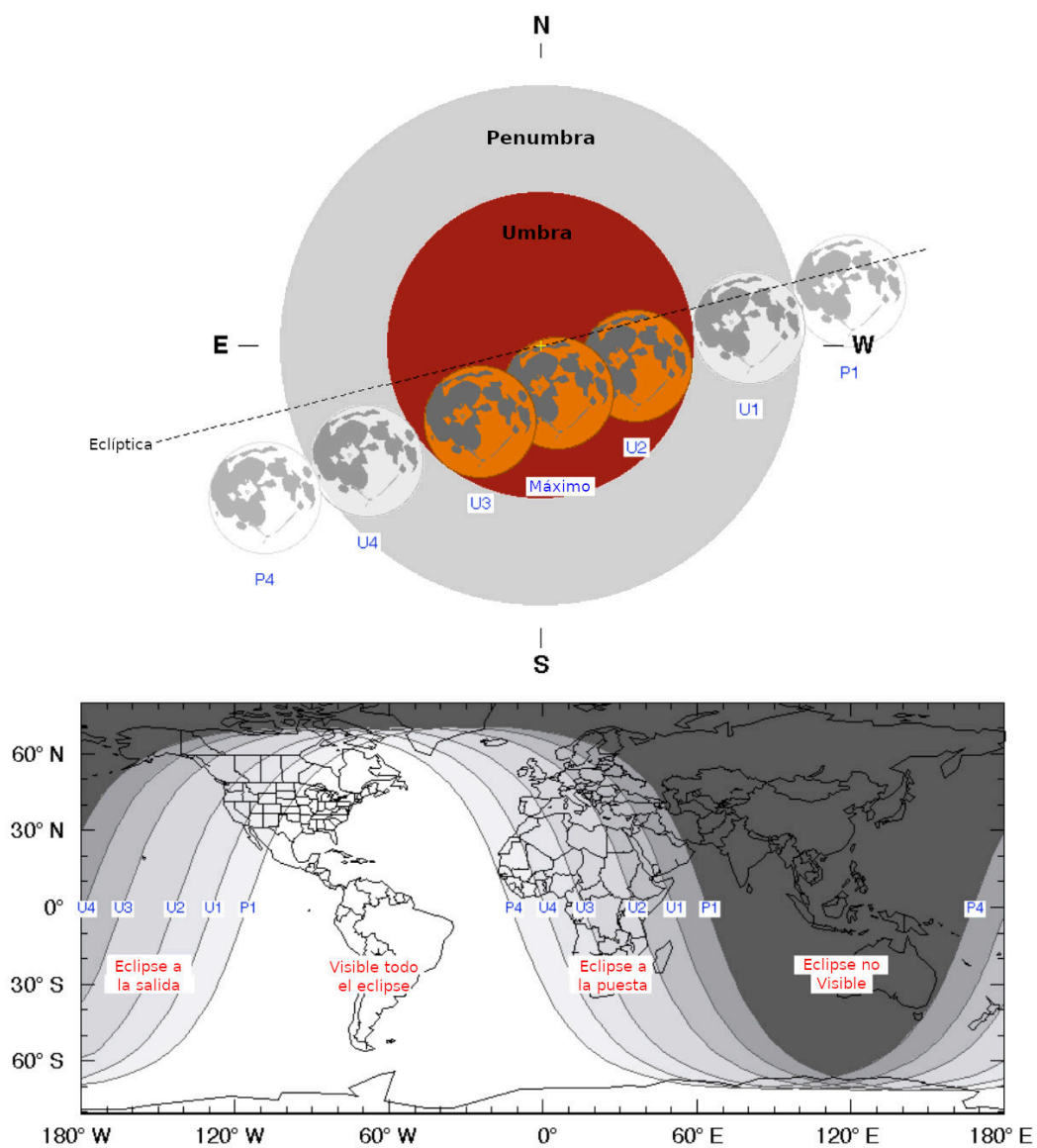


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Eclipse total de Luna, lunes 16 de mayo

Este eclipse será visible en toda América, exceptuando la parte noroccidental de América del Norte donde la Luna ya saldrá eclipsada. En Europa y África será visible a la puesta.

La fase penumbral comenzará a las 01^h32^m UT (P1) y acabará a las 06^h51^m UT (P4). El primer contacto exterior con la umbra será a las 02^h28^m UT (U1) y el último a las 05^h55^m UT.



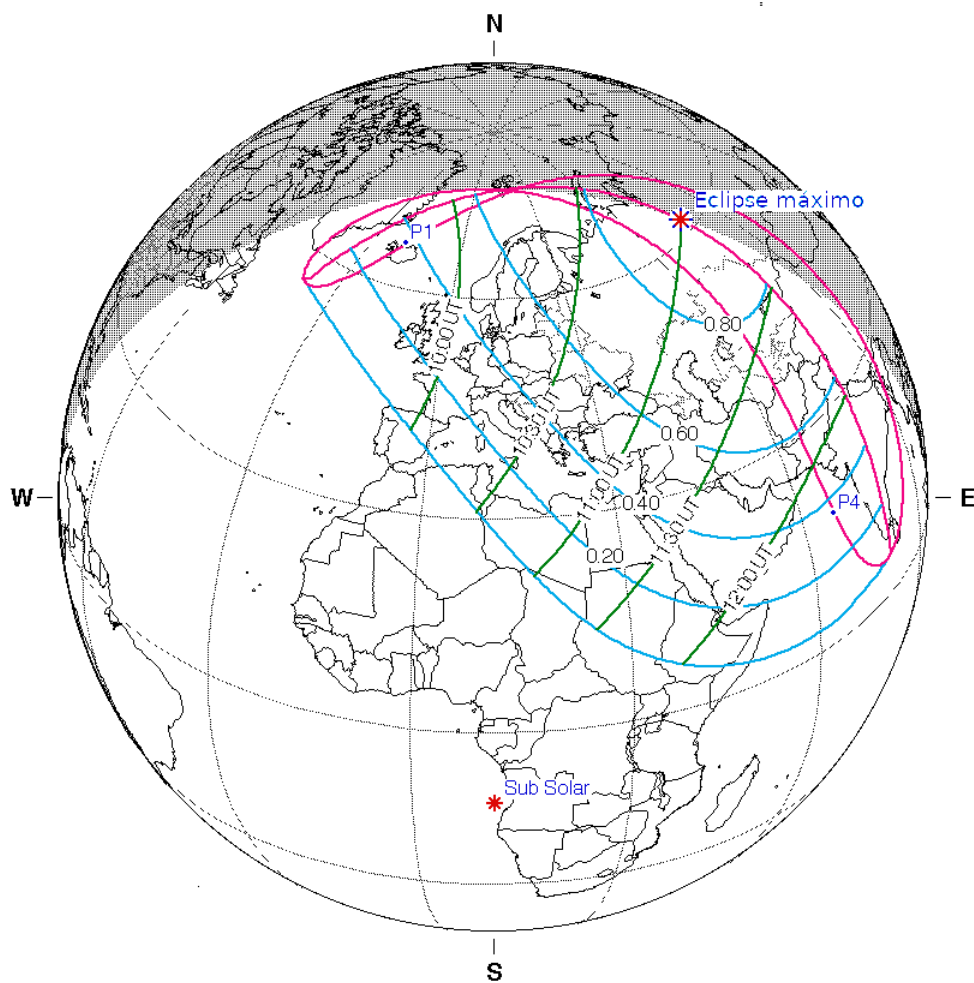
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Eclipse parcial de Sol, martes 25 de octubre

Este eclipse será visible en toda Europa a excepción de la mitad sudoccidental de la península ibérica, la parte sudoccidental de Asia y la nororiental de África.

El primer contacto con la penumbra será a las 08^h58^m UT (P1) y el último a las 13^h02^m UT (P4), siendo su duración de 4^h04^m .

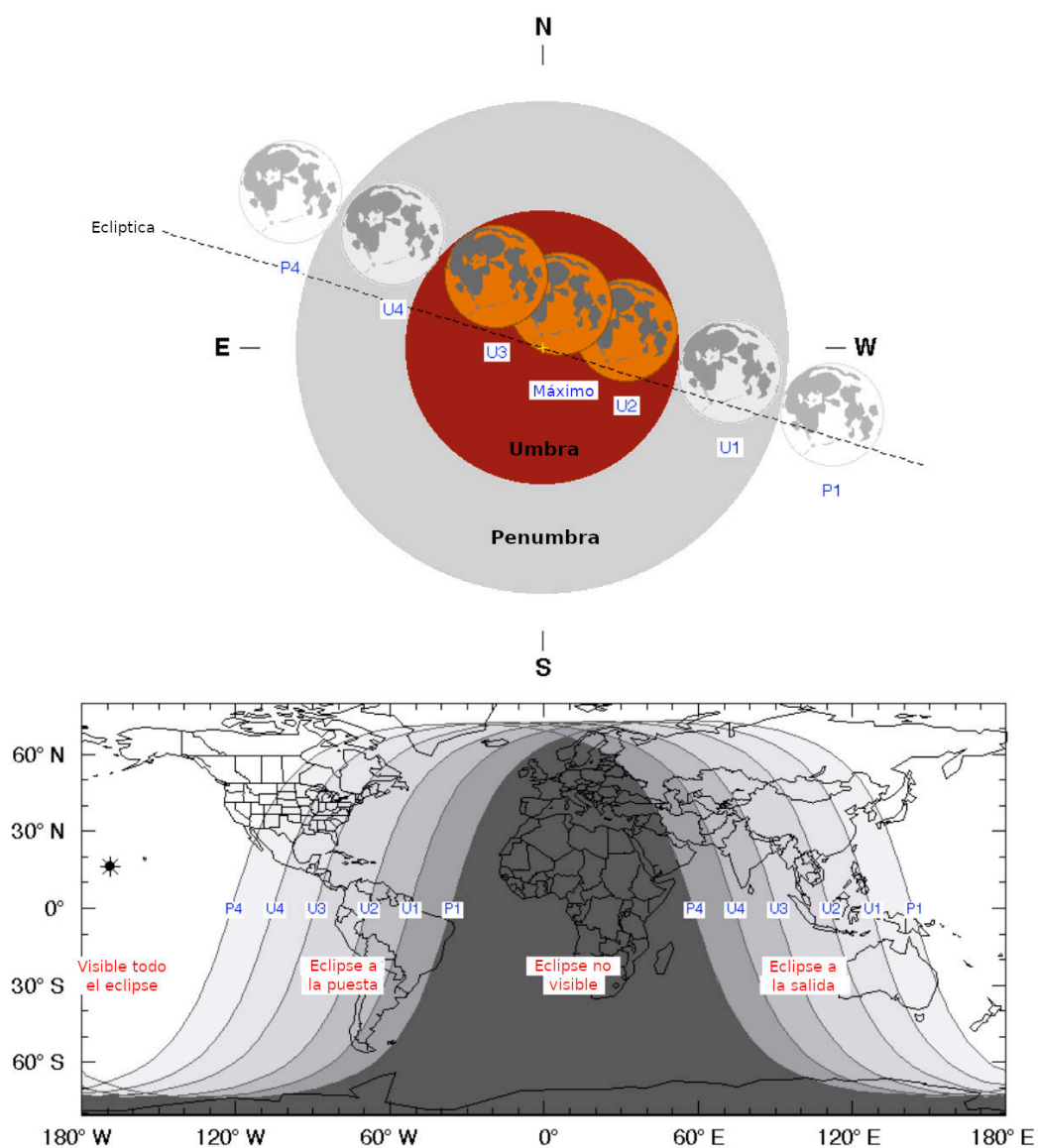


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Eclipse total de Luna, martes 8 de noviembre

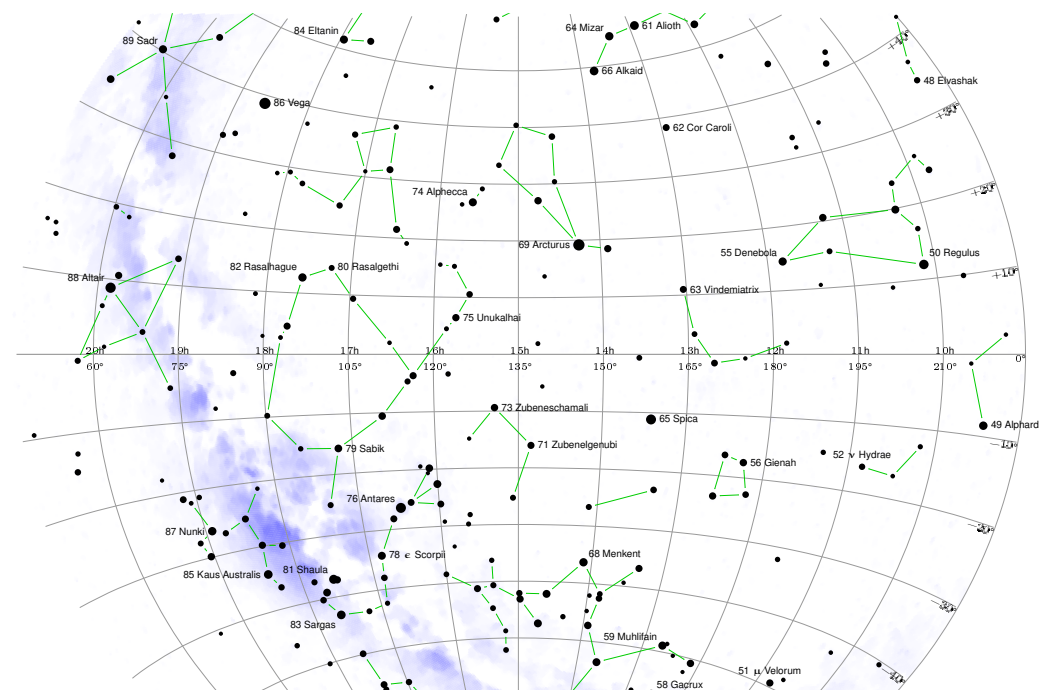
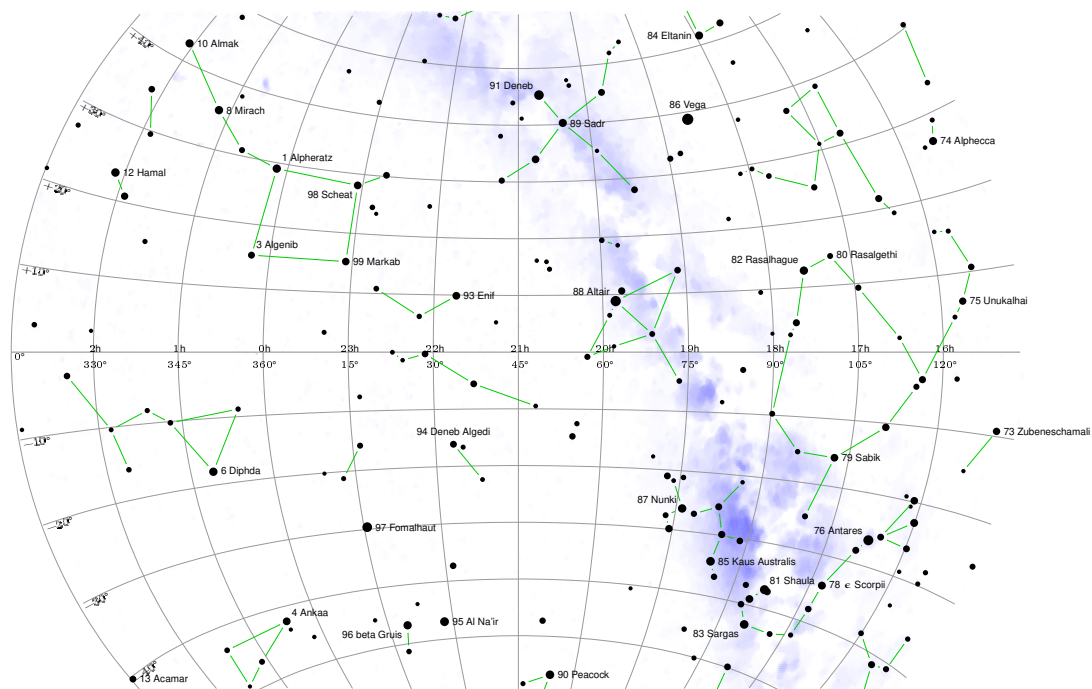
Este eclipse será visible en el Pacífico desde el extremo oriental de Asia hasta la parte noroccidental de América del Norte.

La fase penumbral comenzará a las 08^h02^m UT (P1) y acabará a las 13^h56^m UT (P4). El primer contacto exterior con la umbra será a las 09^h09^m UT (U1) y el último a las 12^h49^m UT (U4).



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Mapas estelares





UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 16'3 PMG: 12 ^h 03 ^m 5				Edad: 27 ^d 7 PHE { SD: 16'6 PMG: 10 ^h 41 ^m R ^c : 67 ^m 4 ^h : 61'1 12 ^h : 61'2 20 ^h : 61'2															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	10.5	-23	01.2	206	32.5	-23	55.2	60 N	7 09	8 06	9 02	8 10	90	13 05	50				
1	194	10.2		01.0	220	54.3	28	-24 02.5	73 58	7 02	7 54	8 45	7 47	85		30	53			
2	209	09.9		00.8	235	16.1	28		09.6	71 56	6 56	44	31	27	83	13	49	56		
3	224	09.6		00.6	249	37.8	27		16.6	70 54	50	35	19	7 11	81	14	06	57		
4	239	09.3		00.4	263	59.4	26		23.4	68 52	44	28	8 08	6 58	78		20	58		
5	254	09.0	-23	00.2	278	20.9	25	-24 30.0	66 50	6 39	7 20	7 58	6 45	78	14	32	60			
6	269	08.7	-23	00.0	292	42.4	25	-24 36.4	64 45	6 28	7 05	7 38	6 21	75	14	58	61			
7	284	08.4	-22	59.8	307	03.7	23		42.6	62 40	17	6 51	22	6 01	73	15	18	63		
8	299	08.1		59.6	321	25.0	23		48.6	60 35	08	40	7 08	5 44	72		35	64		
9	314	07.8		59.4	335	46.1	21	-24 54.5	59 30	6 00	30	6 56	30	71	15	50	64			
10	329	07.5		59.2	350	07.2	21	-25 00.2	57 20	5 44	6 11	35	5 06	69	16	15	65			
11	344	07.2	-22	58.9	4	28.3	21	-25 05.6	54 10 N	5 28	5 54	6 17	4 45	68	16	37	66			
12	359	06.9	-22	58.7	18	49.2	19	-25 10.9	53 0	5 11	5 37	6 00	4 26	66	16	57	66			
13	14	06.6		58.5	33	10.1	19		16.0	51 10 S	4 53	5 20	5 43	4 07	64	17	17	67		
14	29	06.3		58.3	47	30.9	18		20.9	49 20	30	4 59	24	3 46	63	17	39	68		
15	44	06.0		58.1	61	51.7	18		25.6	47 30	4 02	35	5 02	23	60	18	04	68		
16	59	05.7		57.9	76	12.4	17		30.2	46 35	3 44	20	4 50	3 09	59		19	69		
17	74	05.5	-22	57.7	90	33.0	16	-25 34.5	43 40	3 21	4 02	4 35	2 53	57	18	36	69			
18	89	05.2	-22	57.5	104	53.6	16	-25 38.6	41 45	2 51	3 40	4 17	2 35	54	18	57	69			
19	104	04.9		57.2	119	14.1	15		42.5	39 50	2 07	3 11	3 55	11	52	19	23	70		
20	119	04.6		57.0	133	34.6	15		46.2	37 52	1 41	2 56	45	2 00	50		35	71		
21	134	04.3		56.8	147	55.0	14		49.7	35 54	1 01	39	33	1 48	47	19	50	71		
22	149	04.0		56.6	162	15.4	14		53.0	33 56	** ** *	2 18	19	33	45	20	07	71		
23	164	03.7		56.4	176	35.8	14		56.2	32 58	** ** *	1 50	3 03	1 17	41		27	72		
24	179	03.4	-22	56.1	190	56.1	13	-25 59.1	29 60 S	** ** *	1 06	2 43	0 56	36	20	53	72			
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 14 ^m 7				Mag: -4.3 PMG: 12 ^h 53 ^m				Mag: +1.5 PMG: 10 ^h 04 ^m				Mag: -2.2 PMG: 15 ^h 27 ^m				Mag: +0.7 PMG: 14 ^h 14 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	100	37.6	166	00.0	-18	35.0	208	58.0	-22	30.0	127	39.4	-12	12.7	146	01.3	-18	00.6		
1	115	40.0	181	03.9		34.6	223	58.6		30.2	142	41.4		12.5	161	03.5		00.6		
2	130	42.5	196	07.7		34.1	238	59.1		30.5	157	43.4		12.3	176	05.7		00.5		
3	145	45.0	211	11.6		33.7	253	59.7		30.7	172	45.4		12.1	191	07.9		00.4		
4	160	47.4	226	15.4		33.3	269	00.3		31.0	187	47.3		12.0	206	10.1		00.3		
5	175	49.9	241	19.3	-18	32.8	284	00.8	-22	31.2	202	49.3	-12	11.8	221	12.3	-18	00.3		
6	190	52.4	256	23.1	-18	32.4	299	01.4	-22	31.5	217	51.3	-12	11.6	236	14.5	-18	00.2		
7	205	54.8	271	27.0		31.9	314	01.9		31.7	232	53.3		11.4	251	16.6	-18	00.1		
8	220	57.3	286	30.9		31.5	329	02.5		32.0	247	55.3		11.3	266	18.8	-18	00.0		
9	235	59.8	301	34.7		31.1	344	03.1		32.2	262	57.3		11.1	281	21.0	-18	00.0		
10	251	02.2	316	38.6		30.6	359	03.6		32.5	277	59.3		10.9	296	23.2	-17	59.9		
11	266	04.7	331	42.5	-18	30.2	14	04.2	-22	32.7	293	01.3	-12	10.7	311	25.4	-17	59.8		
12	281	07.2	346	46.3	-18	29.8	29	04.7	-22	33.0	308	03.3	-12	10.5	326	27.6	-17	59.7		
13	296	09.6	1	50.2		29.3	44	05.3		33.2	323	05.3		10.4	341	29.8		59.7		
14	311	12.1	16	54.1		28.9	59	05.8		33.5	338	07.3		10.2	356	32.0		59.6		
15	326	14.5	31	58.0		28.5	74	06.4		33.7	353	09.3		10.0	11	34.2		59.5		
16	341	17.0	47	01.9		28.0	89	07.0		33.9	8	11.3		09.8	26	36.4		59.4		
17	356	19.5	62	05.8	-18	27.6	104	07.5	-22	34.2	23	13.3	-12	09.7	41	38.5	-17	59.4		
18	11	21.9	77	09.7	-18	27.2	119	08.1	-22	34.4	38	15.3	-12	09.5	56	40.7	-17	59.3		
19	26	24.4	92	13.5		26.7	134	08.6		34.7	53	17.3		09.3	71	42.9		59.2		
20	41	26.9	107	17.4		26.3	149	09.2		34.9	68	19.3		09.1	86	45.1		59.1		
21	56	29.3	122	21.3		25.9	164	09.7		35.2	83	21.3		09.0	101	47.3		59.1		
22	71	31.8	137	25.3		25.4	179	10.3		35.4	98	23.3		08.8	116	49.5		59.0		
23	86	34.3	152	29.2		25.0	194	10.8		35.6	113	25.3		08.6	131	51.7		58.9		
24	101	36.7	167	33.1	-18	24.6	209	11.4	-22	35.9	128	27.3	-12	08.4	146	53.9	-17	58.8		
Dif	—				+39				+6				+20				+2			
					+4				-2				+2				+1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 28 ^d 7 PHE	SD: 16:7				Civil		Náutico	Hora	Rº	Hora	Rº
	PMG: 12 ^h 04 ^m 0				PMG: 11 ^h 48 ^m				Rº: 66 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	179	03.4	-22 56.1	190	56.1	-25 59.1	27	60 N	15 07	16 03	16 59	9 40	54	13 55	84
1	194	03.1	55.9	205	16.4	-26 01.8	27	58	23	14	17 06	9 12	57	14 23	81
2	209	02.8	55.7	219	36.6	04.3	25	56	37	24	13	8 50	59	14 45	79
3	224	02.5	55.5	233	56.9	06.6	23	54	15 50	33	19	32	60	15 03	77
4	239	02.2	55.3	248	17.1	08.7	21	52	16 00	41	24	16	61	18 76	
5	254	01.9	-22 55.0	262	37.2	-26 10.5	18	50	16 10	16 48	17 29	8 03	62	15 32	75
6	269	01.6	-22 54.8	276	57.4	-26 12.2	17	45	16 30	17 03	17 41	7 36	63	15 59	73
7	284	01.3	54.6	291	17.5	13.7	15	40	16 46	17	17 51	7 14	64	16 21	71
8	299	01.1	54.4	305	37.7	14.9	12	35	17 00	28	18 00	6 56	65	39	70
9	314	00.8	54.1	319	57.8	16.0	11	30	12	38	08	41	65	16 54	70
10	329	00.5	53.9	334	17.9	16.8	8	20	33	17 57	24	6 15	65	17 20	68
11	344	00.2	-22 53.7	348	38.0	-26 17.5	7	10 N	17 51	18 13	18 40	5 53	66	17 43	66
12	358	59.9	-22 53.4	2	58.2	-26 17.9	4	0	18 08	18 30	18 56	5 32	66	18 03	66
13	13	59.6	53.2	17	18.3	18.1	2	10 S	25	18 48	19 15	5 11	67	24	64
14	28	59.3	53.0	31	38.4	18.2	1	20	18 43	19 08	19 37	4 49	67	18 47	62
15	43	59.0	52.8	45	58.6	18.0	2	30	19 05	32	20 05	23	67	19 12	61
16	58	58.7	52.5	60	18.8	17.6	4	35	17	19 47	23	4 08	67	28	59
17	73	58.4	-22 52.3	74	38.9	-26 17.0	6	40	19 32	20 05	20 46	3 50	68	19 45	58
18	88	58.1	-22 52.1	88	59.2	-26 16.2	8	45	19 50	20 27	21 15	3 29	68	20 06	57
19	103	57.8	51.8	103	19.4	15.1	11	50	20 11	20 55	21 58	3 03	68	33	53
20	118	57.6	51.6	117	39.7	13.9	12	52	22	21 10	22 24	2 50	68	20 46	52
21	133	57.3	51.3	132	00.0	12.5	14	54	34	27	23 02	35	68	21 01	50
22	148	57.0	51.1	146	20.3	10.9	16	56	20 47	21 48	** **	2 18	68	18	48
23	163	56.7	50.9	160	40.7	09.0	19	58	21 03	22 15	** **	1 58	67	21 39	44
24	178	56.4	-22 50.6	175	01.1	-26 07.0	20	60 S	21 23	22 56	** **	1 32	67	22 05	39

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 10 ^m 7		Mag: -4.3 PMG: 12 ^h 46 ^m		Mag: +1.5 PMG: 10 ^h 03 ^m		Mag: -2.2 PMG: 15 ^h 24 ^m		Mag: +0.7 PMG: 14 ^h 10 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	101	36.7	167	33.1	209	11.4	128	27.3	146	53.9
1	116	39.2	182	37.0	224	12.0	143	29.3	161	56.1
2	131	41.7	197	40.9	239	12.5	158	31.3	176	58.3
3	146	44.1	212	44.8	254	13.1	173	33.2	192	00.4
4	161	46.6	227	48.7	269	13.6	188	35.2	207	02.6
5	176	49.0	242	52.6	284	14.2	203	37.2	222	04.8
6	191	51.5	257	56.6	299	14.7	218	39.2	237	07.0
7	206	54.0	273	00.5	314	15.3	233	41.2	252	09.2
8	221	56.4	288	04.4	329	15.8	248	43.2	267	11.4
9	236	58.9	303	08.4	344	16.4	263	45.2	282	13.6
10	252	01.4	318	12.3	359	16.9	278	47.2	297	15.8
11	267	03.8	333	16.2	14	17.5	293	49.2	312	18.0
12	282	06.3	348	20.2	29	18.0	308	51.2	327	20.1
13	297	08.8	3	24.1	44	18.6	323	53.2	342	22.3
14	312	11.2	18	28.1	59	19.2	338	55.2	357	24.5
15	327	13.7	33	32.0	74	19.7	353	57.2	12	26.7
16	342	16.2	48	36.0	89	20.3	8	59.2	27	28.9
17	357	18.6	63	39.9	104	20.8	24	01.2	42	31.1
18	12	21.1	78	43.9	119	21.4	39	03.1	57	33.3
19	27	23.5	93	47.8	134	21.9	54	05.1	72	35.5
20	42	26.0	108	51.8	149	22.5	69	07.1	87	37.6
21	57	28.5	123	55.7	164	23.0	84	09.1	102	39.8
22	72	30.9	138	59.7	179	23.6	99	11.1	117	42.0
23	87	33.4	154	03.7	194	24.1	114	13.1	132	44.2
24	102	35.9	169	07.6	209	24.7	129	15.1	147	46.4
Dif	—		+39	+4	+6	-2	+20	+2	+22	+1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 04 ^m 5			Edad: 0 ^d 2 PHE { SD: 16'6 PMG: 12 ^h 54 ^m R°: 62 ^m 4 ^h : 61'0 12 ^h : 60'9 20 ^h : 60'7										
	hG ☉	Dec		hG ☾	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	56.4	-22	50.6	175	01.1	-26 07.0	60 N	7 09	8 05	9 01	10 34 26	15 19 104	
1	193	56.1		50.4	189	21.5	14 04.7	58	7 02	7 54	8 45	10 09 32	15 44 97	
2	208	55.8		50.2	203	42.0	15 -26 02.3	56	6 55	44	31	9 49 37	16 04 93	
3	223	55.5		49.9	218	02.6	16 -25 59.7	54	49	35	18	32 40	20 89	
4	238	55.2		49.7	232	23.2	16 56.8	52	44	27	8 08	17 43	34 87	
5	253	54.9	-22	49.4	246	43.9	17 -25 53.8	50	6 39	7 20	7 58	9 05 45	16 47 84	
6	268	54.7	-22	49.2	261	04.6	17 -25 50.5	45	6 28	7 05	7 38	8 39 49	17 12 80	
7	283	54.4		48.9	275	25.4	18 47.1	40	18	6 52	22	18 52	32 76	
8	298	54.1		48.7	289	46.3	19 43.5	35	09	40	7 08	8 01 54	17 49 74	
9	313	53.8		48.4	304	07.2	19 39.6	30	6 00	30	6 56	7 46 56	18 04 71	
10	328	53.5		48.2	318	28.2	20 35.6	20	5 44	6 12	36	7 20 59	28 68	
11	343	53.2	-22	48.0	332	49.3	21 -25 31.4	10 N	5 29	5 55	6 18	6 59 61	18 49 65	
12	358	52.9	-22	47.7	347	10.5	22 -25 27.0	0	5 12	5 38	6 01	6 38 64	19 09 61	
13	13	52.6		47.5	1	31.7	22 22.4	10 S	4 54	21	5 44	6 18 65	28 59	
14	28	52.4		47.2	15	53.0	23 17.6	20	32	5 01	25	5 56 68	19 49 55	
15	43	52.1		47.0	30	14.5	25 12.7	30	4 03	4 36	5 04	30 71	20 13 52	
16	58	51.8		46.7	44	36.0	25 07.5	35	3 45	22	4 51	5 15 73	27 49	
17	73	51.5	-22	46.4	58	57.5	25 -25 02.2	40	3 23	4 04	4 37	4 58 74	20 43 47	
18	88	51.2	-22	46.2	73	19.2	27 -24 56.7	45	2 53	3 42	4 19	4 37 77	21 03 42	
19	103	50.9		45.9	87	41.0	28 51.0	50	2 10	3 14	3 57	4 11 80	26 39	
20	118	50.6		45.7	102	02.9	29 45.1	52	1 45	2 59	47	3 58 82	38 36	
21	133	50.3		45.4	116	24.8	29 39.0	54	1 06	42	35	43 84	21 51 33	
22	148	50.1		45.2	130	46.9	31 32.8	56	** **	2 21	21	26 87	22 06 29	
23	163	49.8		44.9	145	09.1	32 26.4	58	** **	1 54	3 05	3 05 91	23 25	
24	178	49.5	-22	44.7	159	31.3	32 -24 19.8	60 S	** **	1 12	2 46	2 39 96	22 44 20	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 17 ^h 06 ^m 8		Mag: -4.3 PMG: 12 ^h 40 ^m		Mag: +1.5 PMG: 10 ^h 02 ^m		Mag: -2.2 PMG: 15 ^h 21 ^m		Mag: +0.7 PMG: 14 ^h 07 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	102	35.9	169	07.6	-18 14.4	209 24.7	-22 41.6	129 15.1	-12 04.1	147 46.4	-17 57.0
1	117	38.3	184	11.6	13.9	224 25.2	41.8	144 17.1	04.0	162 48.6	57.0
2	132	40.8	199	15.6	13.5	239 25.8	42.0	159 19.1	03.8	177 50.8	56.9
3	147	43.3	214	19.6	13.1	254 26.3	42.3	174 21.1	03.6	192 53.0	56.8
4	162	45.7	229	23.5	12.7	269 26.9	42.5	189 23.1	03.4	207 55.1	56.7
5	177	48.2	244	27.5	-18 12.3	284 27.4	-22 42.7	204 25.0	-12 03.2	222 57.3	-17 56.7
6	192	50.7	259	31.5	-18 11.8	299 28.0	-22 43.0	219 27.0	-12 03.1	237 59.5	-17 56.6
7	207	53.1	274	35.5	11.4	314 28.5	43.2	234 29.0	02.9	253 01.7	56.5
8	222	55.6	289	39.5	11.0	329 29.1	43.4	249 31.0	02.7	268 03.9	56.4
9	237	58.0	304	43.5	10.6	344 29.6	43.6	264 33.0	02.5	283 06.1	56.4
10	253	00.5	319	47.5	10.2	359 30.2	43.9	279 35.0	02.3	298 08.3	56.3
11	268	03.0	334	51.5	-18 09.8	14 30.7	-22 44.1	294 37.0	-12 02.2	313 10.5	-17 56.2
12	283	05.4	349	55.5	-18 09.4	29 31.3	-22 44.3	309 39.0	-12 02.0	328 12.6	-17 56.1
13	298	07.9	4 59.5	08.9	44 31.8	44.6	324 41.0	01.8	343 14.8	56.1	
14	313	10.4	20 03.5	08.5	59 32.4	44.8	339 43.0	01.6	358 17.0	56.0	
15	328	12.8	35 07.5	08.1	74 32.9	45.0	354 44.9	01.4	13 19.2	55.9	
16	343	15.3	50 11.5	07.7	89 33.5	45.2	9 46.9	01.3	28 21.4	55.8	
17	358	17.8	65 15.5	-18 07.3	104 34.0	-22 45.5	24 48.9	-12 01.1	43 23.6	55.7	
18	13	20.2	80 19.5	-18 06.9	119 34.6	-22 45.7	39 50.9	-12 00.9	58 25.8	55.7	
19	28	22.7	95 23.5	06.5	134 35.1	45.9	54 52.9	00.7	73 27.9	55.6	
20	43	25.2	110 27.5	06.1	149 35.6	46.1	69 54.9	00.5	88 30.1	55.5	
21	58	27.6	125 31.5	05.6	164 36.2	46.4	84 56.9	00.4	103 32.3	55.4	
22	73	30.1	140 35.5	05.2	179 36.7	46.6	99 58.9	-12 00.2	118 34.5	55.4	
23	88	32.5	155 39.5	04.8	194 37.3	46.8	115 00.8	-12 00.0	133 36.7	55.3	
24	103	35.0	170 43.6	-18 04.4	209 37.8	-22 47.0	130 02.8	-11 59.8	148 38.9	55.2	
Dif	—		+40	+4	+5	-2	+20	+2	+22	+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 04 ^m 9			Edad: 1 ^d 2 PHE { 4 ^h : 60'5 SD: 16'5 12 ^h : 60'2 PMG: 13 ^h 56 ^m R°: 57 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	178	49.5	-22 44.7	159	31.3	-24 19.8	67	60 N	15 10	16 06	17 02	11 00 12	17 03 106					
1	193	49.2	44.4	173	53.7	13.1	67	58	26	17 09	10 41 19	21 100						
2	208	48.9	44.1	188	16.2	35	69	56	40	26 15	26 22	37 94						
3	223	48.6	43.9	202	38.8	36	71	54	15 52	35 21	12 27	17 49 91						
4	238	48.3	43.6	217	01.5	37	72	52	16 03	43 26	10 00 30	18 01 87						
5	253	48.1	-22 43.4	231	24.4	39	74	50	16 12	16 50	17 31	9 50 32	18 11 85					
6	268	47.8	-22 43.1	245	47.3	39	76	45	16 32	17 05	17 42	9 28 37	18 32 79					
7	283	47.5	42.8	260	10.4	41	77	40	16 48	18 17 52	9 10 41	18 48 76						
8	298	47.2	42.6	274	33.5	41	79	35	17 02	30 18 01	8 55 44	19 03 71						
9	313	46.9	42.3	288	56.8	43	81	30	13 40	09 42 47	15 69							
10	328	46.6	42.0	303	20.2	44	82	20	34 17 58	25 19 52	36 64							
11	343	46.4	-22 41.8	317	43.8	46	83	10 N	17 52	18 15	18 41	8 00 55	19 54 59					
12	358	46.1	-22 41.5	332	07.4	46	85	0	18 09	18 31	18 57	7 42 58	20 10 56					
13	13	45.8	41.2	346	31.2	48	86	10 S	26 18 49	19 15	23 63	27 52						
14	28	45.5	41.0	0	55.1	49	88	20	18 44	19 08	19 37	7 04 66	20 44 48					
15	43	45.2	40.7	15	19.2	51	89	30	19 05	32 20 05	6 41 70	21 05 43						
16	58	44.9	40.4	29	43.3	51	91	35	18 19 47	23 28 73	16 41							
17	73	44.7	-22 40.2	44	07.6	53	92	40	19 32	20 05	20 46	6 12 76	21 30 37					
18	88	44.4	-22 39.9	58	32.0	54	94	45	19 49	20 26	21 15	5 54 80	21 45 33					
19	103	44.1	39.6	72	56.5	55	94	50	20 11	20 54	21 57	31 85	22 05 27					
20	118	43.8	39.3	87	21.2	57	97	52	21 21 09	22 22	20 87	14 25						
21	133	43.5	39.1	101	46.0	58	97	54	33 25	22 58	5 07 91	24 22						
22	148	43.2	38.8	116	10.9	59	99	56	20 46	21 46	** ** *	4 53 94	35 19					
23	163	43.0	38.5	130	36.0	61	100	58	21 02	22 12	** ** *	36 99	22 48 15					
24	178	42.7	-22 38.2	145	01.1	61	101	60 S	21 21	22 52	** ** *	4 15 105	23 04 9					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 02 ^m 9		Mag: -4.3 PMG: 12 ^h 34 ^m		Mag: +1.5 PMG: 10 ^h 01 ^m		Mag: -2.2 PMG: 15 ^h 18 ^m		Mag: +0.7 PMG: 14 ^h 03 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	103	35.0	170	43.6	-18	04.4	209	37.8	-22	47.0	130	02.8	-11	59.8	148	38.9	-17	55.2
1	118	37.5	185	47.6		04.0	224	38.4		47.3	145	04.8		59.6	163	41.1		55.1
2	133	39.9	200	51.6		03.6	239	38.9		47.5	160	06.8		59.5	178	43.3		55.1
3	148	42.4	215	55.6		03.2	254	39.5		47.7	175	08.8		59.3	193	45.4		55.0
4	163	44.9	230	59.7		02.8	269	40.0		47.9	190	10.8		59.1	208	47.6		54.9
5	178	47.3	246	03.7	-18	02.4	284	40.6	-22	48.2	205	12.8	-11	58.9	223	49.8	-17	54.8
6	193	49.8	261	07.7	-18	02.0	299	41.1	-22	48.4	220	14.8	-11	58.7	238	52.0	-17	54.8
7	208	52.3	276	11.8		01.6	314	41.7		48.6	235	16.7		58.6	253	54.2		54.7
8	223	54.7	291	15.8		01.2	329	42.2		48.8	250	18.7		58.4	268	56.4		54.6
9	238	57.2	306	19.8		00.8	344	42.7		49.0	265	20.7		58.2	283	58.6		54.5
10	253	59.7	321	23.9	-18	00.4	359	43.3		49.3	280	22.7		58.0	299	00.7		54.5
11	269	02.1	336	27.9	-18	00.0	14	43.8	-22	49.5	295	24.7	-11	57.8	314	02.9	-17	54.4
12	284	04.6	351	32.0	-17	59.6	29	44.4	-22	49.7	310	26.7	-11	57.6	329	05.1	-17	54.3
13	299	07.0	6	36.0		59.2	44	44.9		49.9	325	28.7		57.5	344	07.3		54.2
14	314	09.5	21	40.1		58.8	59	45.5		50.1	340	30.7		57.3	359	09.5		54.1
15	329	12.0	36	44.1		58.4	74	46.0		50.4	355	32.6		57.1	14	11.7		54.1
16	344	14.4	51	48.2		58.0	89	46.6		50.6	10	34.6		56.9	29	13.8		54.0
17	359	16.9	66	52.2	-17	57.6	104	47.1	-22	50.8	25	36.6	-11	56.7	44	16.0	-17	53.9
18	14	19.4	81	56.3	-17	57.2	119	47.6	-22	51.0	40	38.6	-11	56.6	59	18.2	-17	53.8
19	29	21.8	97	00.3		56.8	134	48.2		51.2	55	40.6		56.4	74	20.4		53.8
20	44	24.3	112	04.4		56.4	149	48.7		51.4	70	42.6		56.2	89	22.6		53.7
21	59	26.8	127	08.4		56.0	164	49.3		51.7	85	44.5		56.0	104	24.8		53.6
22	74	29.2	142	12.5		55.6	179	49.8		51.9	100	46.5		55.8	119	27.0		53.5
23	89	31.7	157	16.6		55.2	194	50.4		52.1	115	48.5		55.6	134	29.1		53.5
24	104	34.1	172	20.6	-17	54.8	209	50.9	-22	52.3	130	50.5	-11	55.5	149	31.3	-17	53.4
Dif	—			+40	+4		+5	-2		+20	+2		+22	+1				

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 05 ^m 4				Edad: 2 ^d 2 PHE { SD: 16'3 PMG: 14 ^h 53 ^m R°: 52 ^m 4 ^h : 59'7 12 ^h : 59'4 20 ^h : 59'1													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	42.7	-22	38.2	145	01.1	-20	55.4	60 N	7	08	8	04	9	00	11	12	7
1	193	42.4		38.0	159	26.5	64	45.2	58	7	01	7	53	8	43	11	00	11
2	208	42.1		37.7	173	51.9	64	34.8	56	6	55		43	30		10	48	16
3	223	41.8		37.4	188	17.5	66	24.3	54		49		35	18		39	18	
4	238	41.6		37.1	202	43.2	67	13.7	52		44		27	8	07	30	21	
5	253	41.3	-22	36.8	217	09.0	68	-20	50	6	39	7	20	7	58	10	22	24
6	268	41.0	-22	36.6	231	35.0	70	-19	45	6	28	7	05	7	38	10	05	29
7	283	40.7		36.3	246	01.1	71	41.3	40		18	6	52	22		9	51	33
8	298	40.4		36.0	260	27.3	72	30.2	35		09	41	7	08		39	37	
9	313	40.2		35.7	274	53.7	74	19.1	30	6	01	30	6	57		29	39	
10	328	39.9		35.4	289	20.1	74	-19	20	5	45	6	12	36		9	11	44
11	343	39.6	-22	35.1	303	46.8	77	-18	10 N	5	30	5	56	6	18	8	55	49
12	358	39.3	-22	34.9	318	13.5	77	-18	0	5	13	5	39	6	02	8	40	53
13	13	39.0		34.6	332	40.4	79	33.5	10 S	4	55	22	5	45		26	57	
14	28	38.8		34.3	347	07.4	80	21.8	20		33	5	02	26		8	10	61
15	43	38.5		34.0	1	34.5	81	-18	30	4	05	4	38	5	05	7	51	67
16	58	38.2		33.7	16	01.8	83	-17	35	3	47	23	4	53		41	70	
17	73	37.9	-22	33.4	30	29.1	83	-17	40	3	25	4	06	4	38	7	28	74
18	88	37.7	-22	33.1	44	56.7	86	-17	45	2	56	3	44	4	21	7	14	78
19	103	37.4		32.8	59	24.3	86	22.3	50	2	14	16	4	00		6	56	83
20	118	37.1		32.5	73	52.1	88	-17	52	1	49	3	02	3	49	47	86	
21	133	36.8		32.3	88	19.9	88	-16	54	1	13	2	45	38		38	89	
22	148	36.5		32.0	102	47.9	90	45.5	56	** **	2	25	24			27	93	
23	163	36.3		31.7	117	16.1	92	33.1	58	** **	1	58	3	09		15	97	
24	178	36.0	-22	31.4	131	44.3	92	-16	60 S	** **	1	19	2	50		6	00	102

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 58 ^m 9		Mag: -4.3 PMG: 12 ^h 27 ^m		Mag: +1.5 PMG: 10 ^h 00 ^m		Mag: -2.2 PMG: 15 ^h 15 ^m		Mag: +0.7 PMG: 14 ^h 00 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	104	34.1	172	20.6	-17	54.8	209	50.9	-22	52.3
1	119	36.6	187	24.7		54.4	224	51.4		52.5
2	134	39.1	202	28.8		54.0	239	52.0		52.7
3	149	41.5	217	32.8		53.6	254	52.5		52.9
4	164	44.0	232	36.9		53.2	269	53.1		53.2
5	179	46.5	247	41.0	-17	52.8	284	53.6	-22	53.4
6	194	48.9	262	45.0	-17	52.4	299	54.2	-22	53.6
7	209	51.4	277	49.1		52.0	314	54.7		53.8
8	224	53.9	292	53.2		51.7	329	55.2		54.0
9	239	56.3	307	57.3		51.3	344	55.8		54.2
10	254	58.8	323	01.3		50.9	359	56.3		54.4
11	270	01.3	338	05.4	-17	50.5	14	56.9	-22	54.6
12	285	03.7	353	09.5	-17	50.1	29	57.4	-22	54.9
13	300	06.2	8	13.6		49.7	44	57.9		55.1
14	315	08.6	23	17.7		49.3	59	58.5		55.3
15	330	11.1	38	21.7		48.9	74	59.0		55.5
16	345	13.6	53	25.8		48.5	89	59.6		55.7
17	0	16.0	68	29.9	-17	48.2	105	00.1	-22	55.9
18	15	18.5	83	34.0	-17	47.8	120	00.6	-22	56.1
19	30	21.0	98	38.1		47.4	135	01.2		56.3
20	45	23.4	113	42.2		47.0	150	01.7		56.5
21	60	25.9	128	46.3		46.6	165	02.3		56.7
22	75	28.4	143	50.4		46.2	180	02.8		56.9
23	90	30.8	158	54.5		45.9	195	03.3		57.1
24	105	33.3	173	58.6	-17	45.5	210	03.9	-22	57.3
Dif	—		+41		+4		+5		-2	
							+20		+2	
									+22	
									+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 05 ^m 8			Edad: 3 ^d 2 PHE { 4 ^h : 58'8 12 ^h : 58'5 20 ^h : 58'1 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	36.0	-22	31.4	131	44.3	-16 20.6	60 N	15 13	16 09	17 04	11 19 5	20 28 93		
1	193	35.7		31.1	146	12.7 ⁹⁴	-16 08.0 ¹²⁶	58	29	20	11	11 8	35 89		
2	208	35.4		30.8	160	41.2 ⁹⁵	-15 55.4 ¹²⁶	56	43	29	17	11 04 11	42 85		
3	223	35.2		30.5	175	09.8 ⁹⁶	42.7 ¹²⁷	54	15 55	38	23	10 57 14	48 82		
4	238	34.9		30.2	189	38.6 ⁹⁸	29.9 ¹²⁸	52	16 05	45	28	51 16	53 79		
5	253	34.6	-22	29.9	204	07.4 ⁹⁸	-15 17.1 ¹²⁸	50	16 14	16 52	17 33	10 46 18	20 57 77		
6	268	34.3	-22	29.6	218	36.4 ¹⁰⁰	-15 04.2 ¹²⁹	45	16 34	17 07	17 44	10 34 24	21 07 72		
7	283	34.1		29.3	233	05.5 ¹⁰¹	-14 51.2 ¹³⁰	40	16 50	20	17 54	24 28	16 67		
8	298	33.8		29.0	247	34.7 ¹⁰²	38.2 ¹³⁰	35	17 03	31	18 03	16 31	23 64		
9	313	33.5		28.7	262	04.0 ¹⁰³	25.1 ¹³¹	30	15	41	11	10 08 34	29 61		
10	328	33.2		28.4	276	33.4 ¹⁰⁴	-14 12.0 ¹³¹	20	35	17 59	26	9 55 40	39 56		
11	343	33.0	-22	28.1	291	03.0 ¹⁰⁶	-13 58.7 ¹³³	10 N	17 53	18 16	18 42	9 44 44	21 48 51		
12	358	32.7	-22	27.8	305	32.6 ¹⁰⁶	-13 45.5 ¹³²	0	18 10	18 32	18 58	9 33 49	21 57 47		
13	13	32.4		27.5	320	02.4 ¹⁰⁸	32.2 ¹³³	10 S	26	18 49	19 16	23 52	22 05 43		
14	28	32.1		27.2	334	32.3 ¹⁰⁹	18.8 ¹³⁴	20	18 44	19 09	19 38	9 11 58	14 38		
15	43	31.9		26.8	349	02.2 ¹⁰⁹	-13 05.4 ¹³⁴	30	19 05	33	20 05	8 58 63	25 32		
16	58	31.6		26.5	3	32.3 ¹¹¹	-12 51.9 ¹³⁵	35	18	19 47	23	51 65	30 30		
17	73	31.3	-22	26.2	18	02.5 ¹¹²	-12 38.4 ¹³⁵	40	19 32	20 04	20 45	8 42 69	22 37 26		
18	88	31.0	-22	25.9	32	32.8 ¹¹³	-12 24.9 ¹³⁵	45	19 49	20 26	21 14	8 32 73	22 45 22		
19	103	30.8		25.6	47	03.2 ¹¹⁴	-12 11.3 ¹³⁶	50	20 10	20 53	21 55	19 79	54 17		
20	118	30.5		25.3	61	33.7 ¹¹⁵	-11 57.7 ¹³⁶	52	20	21 07	22 19	13 82	22 58 15		
21	133	30.2		25.0	76	04.3 ¹¹⁶	44.0 ¹³⁷	54	32	24	22 53	07 84	23 02 13		
22	148	30.0		24.7	90	35.0 ¹¹⁷	30.3 ¹³⁷	56	20 45	21 44	** **	8 00 87	07 11		
23	163	29.7		24.4	105	05.8 ¹¹⁸	16.5 ¹³⁸	58	21 00	22 09	** **	7 52 91	13 7		
24	178	29.4	-22	24.1	119	36.7 ¹¹⁹	-11 02.7 ¹³⁸	60 S	21 19	22 46	** **	7 42 96	23 19 4		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 55 ^m 0		Mag: -4.4 PMG: 12 ^h 21 ^m			Mag: +1.5 PMG: 9 ^h 59 ^m			Mag: -2.2 PMG: 15 ^h 11 ^m			Mag: +0.7 PMG: 13 ^h 56 ^m			
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	105	33.3	173	58.6	-17	45.5	210	03.9	-22	57.3	131	38.1	-11	51.1	
1	120	35.8	189	02.7		45.1	225	04.4		57.6	146	40.1		50.9	
2	135	38.2	204	06.8		44.7	240	05.0		57.8	161	42.1		50.7	
3	150	40.7	219	10.9		44.3	255	05.5		58.0	176	44.0		50.5	
4	165	43.1	234	15.0		44.0	270	06.0		58.2	191	46.0		50.3	
5	180	45.6	249	19.1	-17	43.6	285	06.6	-22	58.4	206	48.0	-11	50.2	
6	195	48.1	264	23.2	-17	43.2	300	07.1	-22	58.6	221	50.0	-11	50.0	
7	210	50.5	279	27.3		42.8	315	07.6		58.8	236	52.0		49.8	
8	225	53.0	294	31.4		42.4	330	08.2		59.0	251	53.9		49.6	
9	240	55.5	309	35.5		42.1	345	08.7		59.2	266	55.9		49.4	
10	255	57.9	324	39.6		41.7	0	09.3		59.4	281	57.9		49.2	
11	271	00.4	339	43.7	-17	41.3	15	09.8	-22	59.6	296	59.9	-11	49.1	
12	286	02.9	354	47.8	-17	40.9	30	10.3	-22	59.8	312	01.9	-11	48.9	
13	301	05.3	9	51.9		40.6	45	10.9	-23	00.0	327	03.8		48.7	
14	316	07.8	24	56.0		40.2	60	11.4	-23	00.2	342	05.8		48.5	
15	331	10.3	40	00.1		39.8	75	11.9		00.4	357	07.8		48.3	
16	346	12.7	55	04.2		39.5	90	12.5		00.6	12	09.8		48.1	
17	1	15.2	70	08.3	-17	39.1	105	13.0	-23	00.8	27	11.8	-11	47.9	
18	16	17.6	85	12.4	-17	38.7	120	13.5	-23	01.0	42	13.7	-11	47.8	
19	31	20.1	100	16.6		38.3	135	14.1		01.2	57	15.7		47.6	
20	46	22.6	115	20.7		38.0	150	14.6		01.4	72	17.7		47.4	
21	61	25.0	130	24.8		37.6	165	15.1		01.6	87	19.7		47.2	
22	76	27.5	145	28.9		37.2	180	15.7		01.8	102	21.6		47.0	
23	91	30.0	160	33.0		36.9	195	16.2		02.0	117	23.6		46.8	
24	106	32.4	175	37.1	-17	36.5	210	16.8	-23	02.2	132	25.6	-11	46.6	
Dif	—		+41			+4	+5			-2	+20		+2	+22	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 06 ^m 3			Edad: 4 ^d 2 PHE { SD: 15 ^h 8 PMG: 16 ^h 33 ^m										
	hG ☉	Dec		hG ☾	Dif									
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	
0	178	29.4	-22 24.1	119	36.7	-11 02.7	60 N	7 07	8 03	8 58	11 24 2		22 01 87	
1	193	29.1	23.7	134	07.7 ¹²⁰	-10 48.9 ¹³⁸	58	7 00	7 52	42	19 6		04 84	
2	208	28.9	23.4	148	38.8 ¹²¹	35.0 ¹³⁹	56	6 54	42	28	15 9		07 81	
3	223	28.6	23.1	163	10.0 ¹²²	21.2 ¹³⁸	54	49	34	17	11 11		10 78	
4	238	28.3	22.8	177	41.2 ¹²²	-10 07.2 ¹⁴⁰	52	43	26	8 06	07 14		12 76	
5	253	28.1	-22 22.5	192	12.6 ¹²⁴	-9 53.3 ¹³⁹	50	6 38	7 19	7 57	11 04 16		22 14 74	
6	268	27.8	-22 22.2	206	44.1 ¹²⁵	-9 39.3 ¹⁴⁰	45	6 28	7 04	7 38	10 58 20		22 19 69	
7	283	27.5	21.8	221	15.6 ¹²⁵	25.3 ¹⁴⁰	40	18	6 52	22	52 24		23 65	
8	298	27.2	21.5	235	47.2 ¹²⁶	-9 11.3 ¹⁴⁰	35	09	41	7 09	47 28		27 61	
9	313	27.0	21.2	250	18.9 ¹²⁷	-8 57.3 ¹⁴⁰	30	6 01	31	6 57	42 31		30 58	
10	328	26.7	20.9	264	50.7 ¹²⁸	43.2 ¹⁴¹	20	5 46	6 13	37	35 36		35 53	
11	343	26.4	-22 20.6	279	22.6 ¹²⁹	-8 29.1 ¹⁴¹	10 N	5 30	5 56	6 19	10 28 41		22 39 48	
12	358	26.2	-22 20.2	293	54.6 ¹³⁰	-8 15.0 ¹⁴¹	0	5 14	5 40	6 03	10 22 45		22 44 43	
13	13	25.9	19.9	308	26.6 ¹³⁰	-8 00.9 ¹⁴¹	10 S	4 56	23	5 46	15 50		48 39	
14	28	25.6	19.6	322	58.7 ¹³¹	-7 46.7 ¹⁴²	20	35	5 03	28	09 54		52 35	
15	43	25.4	19.3	337	30.9 ¹³²	32.6 ¹⁴¹	30	4 07	4 40	5 07	10 01 59		22 57 30	
16	58	25.1	18.9	352	03.2 ¹³³	18.4 ¹⁴²	35	3 49	25	4 55	9 56 63		23 00 27	
17	73	24.8	-22 18.6	6	35.6 ¹³⁴	-7 04.2 ¹⁴²	40	3 27	4 08	4 40	9 51 66		23 03 24	
18	88	24.6	-22 18.3	21	08.0 ¹³⁴	-6 50.0 ¹⁴²	45	2 59	3 47	4 23	9 45 70		23 07 20	
19	103	24.3	17.9	35	40.5 ¹³⁵	35.8 ¹⁴²	50	2 17	19	4 02	38 75		11 15	
20	118	24.0	17.6	50	13.0 ¹³⁵	21.6 ¹⁴²	52	1 53	3 05	3 52	35 77		13 13	
21	133	23.8	17.3	64	45.7 ¹³⁷	-6 07.4 ¹⁴²	54	1 19	2 49	40	31 80		15 11	
22	148	23.5	17.0	79	18.4 ¹³⁷	-5 53.1 ¹⁴³	56	** ** *	29	27	27 83		18 8	
23	163	23.2	16.6	93	51.2 ¹³⁸	38.9 ¹⁴²	58	** ** *	2 03	3 12	23 85		20 6	
24	178	23.0	-22 16.3	108	24.0 ¹³⁸	-5 24.6 ¹⁴³	60 S	** ** *	1 26	2 54	9 18 89		23 23 3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 51 ^m 1		Mag: -4.4 PMG: 12 ^h 14 ^m		Mag: +1.5 PMG: 9 ^h 59 ^m		Mag: -2.1 PMG: 15 ^h 08 ^m		Mag: +0.7 PMG: 13 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	106	32.4	175	37.1	210	16.8	132	25.6	151	16.1
1	121	34.9	190	41.3	225	17.3	147	27.6	166	18.3
2	136	37.4	205	45.4	240	17.8	162	29.6	181	20.5
3	151	39.8	220	49.5	255	18.4	177	31.5	196	22.7
4	166	42.3	235	53.6	270	18.9	192	33.5	211	24.9
5	181	44.7	250	57.7	285	19.4	207	35.5	226	27.0
6	196	47.2	266	01.8	300	20.0	222	37.5	241	29.2
7	211	49.7	281	06.0	315	20.5	237	39.4	256	31.4
8	226	52.1	296	10.1	330	21.0	252	41.4	271	33.6
9	241	54.6	311	14.2	345	21.6	267	43.4	286	35.8
10	256	57.1	326	18.3	0	22.1	282	45.4	301	37.9
11	271	59.5	341	22.5	15	22.6	297	47.4	316	40.1
12	287	02.0	356	26.6	30	23.2	312	49.3	331	42.3
13	302	04.5	11	30.7	45	23.7	327	51.3	346	44.5
14	317	06.9	26	34.8	60	24.2	342	53.3	1	46.7
15	332	09.4	41	38.9	75	24.8	357	55.3	16	48.8
16	347	11.9	56	43.1	90	25.3	12	57.2	31	51.0
17	2	14.3	71	47.2	105	25.8	27	59.2	46	53.2
18	17	16.8	86	51.3	120	26.3	43	01.2	61	55.4
19	32	19.2	101	55.5	135	26.9	58	03.2	76	57.6
20	47	21.7	116	59.6	150	27.4	73	05.1	91	59.7
21	62	24.2	132	03.7	165	27.9	88	07.1	107	01.9
22	77	26.6	147	07.8	180	28.5	103	09.1	122	04.1
23	92	29.1	162	12.0	195	29.0	118	11.1	137	06.3
24	107	31.6	177	16.1	210	29.5	133	13.0	152	08.5
Dif	—		+41	+4	+5	-2	+20	+2	+22	+1

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 06 ^m 7				Edad: 5 ^d 2 PHE { 4 ^h : 56:9 12 ^h : 56:6 20 ^h : 56:3 R°: 43 ^m														
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m		
0	178	23.0	-22	16.3	108	24.0	-5	24.6	60 N	15 17	16 12	17 07	11 26 3	23 28 84					
1	193	22.7		16.0	122	56.9 ¹³⁹	-5	10.4 ¹⁴²	58	33	22	14	25 5	28 81					
2	208	22.4		15.6	137	29.9 ¹⁴⁰	-4	56.1 ¹⁴³	56	46	32	20	24 8	28 78					
3	223	22.2		15.3	152	02.9 ¹⁴⁰		41.9 ¹⁴²	54	15 58	40	26	22 11	28 75					
4	238	21.9		15.0	166	36.0 ¹⁴¹		27.6 ¹⁴³	52	16 08	48	31	21 13	28 73					
5	253	21.6	-22	14.6	181	09.1 ¹⁴¹	-4	13.4 ¹⁴²	50	16 17	16 54	17 35	11 20 15	23 28 71					
6	268	21.4	-22	14.3	195	42.3 ¹⁴²	-3	59.1 ¹⁴³	45	16 36	17 09	17 46	11 18 19	23 28 66					
7	283	21.1		13.9	210	15.6 ¹⁴³		44.9 ¹⁴²	40	16 52	22	17 56	16 23	28 62					
8	298	20.8		13.6	224	48.9 ¹⁴³		30.6 ¹⁴³	35	17 05	33	18 04	15 26	28 59					
9	313	20.6		13.3	239	22.3 ¹⁴⁴		16.4 ¹⁴²	30	17	17 43	12	13 29	28 56					
10	328	20.3		12.9	253	55.7 ¹⁴⁴	-3	02.1 ¹⁴³	20	37	18 00	28	11 34	28 50					
11	343	20.0	-22	12.6	268	29.2 ¹⁴⁵	-2	47.9 ¹⁴²	10 N	17 54	18 17	18 43	11 09 38	23 27 47					
12	358	19.8	-22	12.3	283	02.7 ¹⁴⁵	-2	33.6 ¹⁴³	0	18 10	18 33	18 59	11 07 43	23 27 43					
13	13	19.5		11.9	297	36.3 ¹⁴⁶		19.4 ¹⁴²	10 S	27	18 50	19 17	05 47	27 38					
14	28	19.3		11.6	312	09.9 ¹⁴⁶	-2	05.2 ¹⁴²	20	18 45	19 09	19 38	03 51	27 34					
15	43	19.0		11.2	326	43.6 ¹⁴⁷	-1	51.0 ¹⁴²	30	19 05	33	20 05	11 00 57	27 29					
16	58	18.7		10.9	341	17.3 ¹⁴⁷		36.8 ¹⁴²	35	18	19 47	23	10 59 59	27 26					
17	73	18.5	-22	10.5	355	51.0 ¹⁴⁷	-1	22.6 ¹⁴²	40	19 32	20 04	20 44	10 57 63	23 27 23					
18	88	18.2	-22	10.2	10	24.8 ¹⁴⁸	-1	08.5 ¹⁴¹	45	19 49	20 25	21 13	10 55 67	23 27 19					
19	103	17.9		09.8	24	58.7 ¹⁴⁹	-0	54.3 ¹⁴²	50	20 09	20 52	21 53	53 72	26 15					
20	118	17.7		09.5	39	32.6 ¹⁴⁹		40.2 ¹⁴¹	52	19	21 06	22 16	52 74	26 13					
21	133	17.4		09.1	54	06.5 ¹⁴⁹		26.0 ¹⁴²	54	31	22	22 48	51 76	26 11					
22	148	17.2		08.8	68	40.4 ¹⁴⁹	-0	11.9 ¹⁴¹	56	44	21 41	** **	50 79	26 8					
23	163	16.9		08.4	83	14.4 ¹⁵⁰	+0	02.2 ¹⁴¹	58	20 59	22 06	** **	48 82	26 6					
24	178	16.6	-22	08.1	97	48.5 ¹⁵¹	+0	16.2 ¹⁴⁰	60 S	21 17	22 41	** **	10 47 85	23 26 3					

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 47 ^m 1		Mag: -4.4 PMG: 12 ^h 08 ^m		Mag: +1.5 PMG: 9 ^h 58 ^m		Mag: -2.1 PMG: 15 ^h 05 ^m		Mag: +0.7 PMG: 13 ^h 49 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	107	31.6	177	16.1	210	29.5	133	13.0	152	08.5
1	122	34.0	192	20.2	225	30.1	148	15.0	167	10.7
2	137	36.5	207	24.3	240	30.6	163	17.0	182	12.8
3	152	39.0	222	28.5	255	31.1	178	19.0	197	15.0
4	167	41.4	237	32.6	270	31.7	193	20.9	212	17.2
5	182	43.9	252	36.7	285	32.2	208	22.9	227	19.4
6	197	46.4	267	40.8	300	32.7	223	24.9	242	21.6
7	212	48.8	282	45.0	315	33.2	238	26.9	257	23.7
8	227	51.3	297	49.1	330	33.8	253	28.8	272	25.9
9	242	53.7	312	53.2	345	34.3	268	30.8	287	28.1
10	257	56.2	327	57.4	0	34.8	283	32.8	302	30.3
11	272	58.7	343	01.5	15	35.4	298	34.8	317	32.5
12	288	01.1	358	05.6	30	35.9	313	36.7	332	34.6
13	303	03.6	13	09.7	45	36.4	328	38.7	347	36.8
14	318	06.1	28	13.9	60	36.9	343	40.7	2	39.0
15	333	08.5	43	18.0	75	37.5	358	42.7	17	41.2
16	348	11.0	58	22.1	90	38.0	13	44.6	32	43.4
17	3	13.5	73	26.3	105	38.5	28	46.6	47	45.5
18	18	15.9	88	30.4	120	39.1	43	48.6	62	47.7
19	33	18.4	103	34.5	135	39.6	58	50.5	77	49.9
20	48	20.8	118	38.6	150	40.1	73	52.5	92	52.1
21	63	23.3	133	42.8	165	40.6	88	54.5	107	54.3
22	78	25.8	148	46.9	180	41.2	103	56.5	122	56.4
23	93	28.2	163	51.0	195	41.7	118	58.4	137	58.6
24	108	30.7	178	55.1	210	42.2	134	00.4	153	00.8
Dif	—		+41		+5		+20		+22	

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 07 ^m 1				Edad: 6 ^d 2 PHE { SD: 15'3 PMG: 18 ^h 00 ^m R°: 42 ^m 4 ^h : 56'0 12 ^h : 55'8 20 ^h : 55'5													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	16.6	-22	08.1	97	48.5	+0	16.2	60 N	7	06	8	01	8	56	11	29	3
1	193	16.4		07.7	112	22.5 ¹⁵⁰		30.3 ¹⁴¹	58	6	59	7	51	40		30	6	
2	208	16.1		07.4	126	56.6 ¹⁵¹		44.3 ¹⁴⁰	56		53	41		27		32	8	
3	223	15.9		07.0	141	30.7 ¹⁵¹	+0	58.4 ¹⁴¹	54		48	33		16		33	11	
4	238	15.6		06.7	156	04.9 ¹⁵²	+1	12.3 ¹³⁹	52		43	26		8	05	34	13	
5	253	15.3	-22	06.3	170	39.1 ¹⁵²	+1	26.3 ¹⁴⁰	50	6	38	7	19	7	56	11	35	15
6	268	15.1	-22	06.0	185	13.3 ¹⁵²	+1	40.3 ¹⁴⁰	45	6	27	7	04	7	37	11	37	20
7	283	14.8		05.6	199	47.5 ¹⁵²	+1	54.2 ¹³⁹	40		18	6	52	22		39	23	
8	298	14.6		05.3	214	21.8 ¹⁵³	+2	08.1 ¹³⁹	35		09	41		7	08	41	26	
9	313	14.3		04.9	228	56.1 ¹⁵³		22.0 ¹³⁹	30	6	01	31		6	57	42	29	
10	328	14.0		04.6	243	30.4 ¹⁵³		35.9 ¹³⁹	20	5	46	6	13	37		45	34	
11	343	13.8	-22	04.2	258	04.7 ¹⁵³	+2	49.7 ¹³⁸	10 N	5	31	5	57	6	20	11	47	38
12	358	13.5	-22	03.8	272	39.1 ¹⁵⁴	+3	03.5 ¹³⁸	0	5	15	5	41	6	03	11	50	42
13	13	13.3		03.5	287	13.4 ¹⁵³		17.3 ¹³⁸	10 S	4	57	24		5	47	52	46	
14	28	13.0		03.1	301	47.8 ¹⁵⁴		31.0 ¹³⁷	20		36	5	05	29		54	51	
15	43	12.8		02.8	316	22.2 ¹⁵⁴		44.8 ¹³⁸	30	4	09	4	41	5	08	57	55	23 56 29
16	58	12.5		02.4	330	56.6 ¹⁵⁴	+3	58.4 ¹³⁶	35	3	51	27		4	56	11	58	59
17	73	12.2	-22	02.0	345	31.1 ¹⁵⁵	+4	12.1 ¹³⁷	40	3	30	4	10	4	42	12	00	62
18	88	12.0	-22	01.7	0	05.5 ¹⁵⁴	+4	25.7 ¹³⁶	45	3	01	3	49	4	25	12	02	66
19	103	11.7		01.3	14	40.0 ¹⁵⁵		39.3 ¹³⁶	50	2	21	22		4	05	05	70	41 16
20	118	11.5		00.9	29	14.5 ¹⁵⁵	+4	52.9 ¹³⁶	52	1	58	3	08	3	55	06	72	39 14
21	133	11.2		00.6	43	48.9 ¹⁵⁴	+5	06.4 ¹³⁵	54	1	26	2	52	43		07	75	37 11
22	148	11.0	-22	00.2	58	23.4 ¹⁵⁵		19.9 ¹³⁵	56	** ** *		33		31		09	77	34 9
23	163	10.7	-21	59.8	72	57.9 ¹⁵⁵		33.4 ¹³⁵	58	** ** *	2	08	3	16		10	81	32 6
24	178	10.5	-21	59.5	87	32.4 ¹⁵⁵	+5	46.8 ¹³⁴	60 S	** ** *	1	33	2	58		12	12	84

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 16 ^h 43 ^m 2		Mag: -4.4 PMG: 12 ^h 01 ^m				Mag: +1.5 PMG: 9 ^h 57 ^m				Mag: -2.1 PMG: 15 ^h 02 ^m				Mag: +0.7 PMG: 13 ^h 46 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	108	30.7	178	55.1	-17	19.6	210	42.2	-23	11.2	134	00.4	-11	37.7	153	00.8	-17	45.9
1	123	33.2	193	59.3		19.3	225	42.8		11.4	149	02.4		37.5	168	03.0		45.9
2	138	35.6	209	03.4		19.0	240	43.3		11.5	164	04.4		37.3	183	05.2		45.8
3	153	38.1	224	07.5		18.6	255	43.8		11.7	179	06.3		37.1	198	07.3		45.7
4	168	40.6	239	11.6		18.3	270	44.3		11.9	194	08.3		36.9	213	09.5		45.6
5	183	43.0	254	15.8	-17	18.0	285	44.9	-23	12.1	209	10.3	-11	36.8	228	11.7	-17	45.5
6	198	45.5	269	19.9	-17	17.6	300	45.4	-23	12.2	224	12.2	-11	36.6	243	13.9	-17	45.5
7	213	48.0	284	24.0		17.3	315	45.9		12.4	239	14.2		36.4	258	16.0		45.4
8	228	50.4	299	28.1		17.0	330	46.4		12.6	254	16.2		36.2	273	18.2		45.3
9	243	52.9	314	32.3		16.7	345	47.0		12.8	269	18.2		36.0	288	20.4		45.2
10	258	55.3	329	36.4		16.3	0	47.5		12.9	284	20.1		35.8	303	22.6		45.1
11	273	57.8	344	40.5	-17	16.0	15	48.0	-23	13.1	299	22.1	-11	35.6	318	24.8	-17	45.1
12	289	00.3	359	44.6	-17	15.7	30	48.5	-23	13.3	314	24.1	-11	35.4	333	26.9	-17	45.0
13	304	02.7	14	48.7		15.3	45	49.1		13.5	329	26.0		35.2	348	29.1		44.9
14	319	05.2	29	52.9		15.0	60	49.6		13.6	344	28.0		35.1	3	31.3		44.8
15	334	07.7	44	57.0		14.7	75	50.1		13.8	359	30.0		34.9	18	33.5		44.8
16	349	10.1	60	01.1		14.4	90	50.6		14.0	14	31.9		34.7	33	35.7		44.7
17	4	12.6	75	05.2	-17	14.0	105	51.2	-23	14.2	29	33.9	-11	34.5	48	37.8	-17	44.6
18	19	15.1	90	09.3	-17	13.7	120	51.7	-23	14.3	44	35.9	-11	34.3	63	40.0	-17	44.5
19	34	17.5	105	13.5		13.4	135	52.2		14.5	59	37.9		34.1	78	42.2		44.4
20	49	20.0	120	17.6		13.1	150	52.7		14.7	74	39.8		33.9	93	44.4		44.4
21	64	22.4	135	21.7		12.8	165	53.3		14.8	89	41.8		33.7	108	46.5		44.3
22	79	24.9	150	25.8		12.4	180	53.8		15.0	104	43.8		33.5	123	48.7		44.2
23	94	27.4	165	29.9		12.1	195	54.3		15.2	119	45.7		33.4	138	50.9		44.1
24	109	29.8	180	34.0	-17	11.8	210	54.8	-23	15.4	134	47.7	-11	33.2	153	53.1	-17	44.0
Dif	—		+41		+3		+5		-2		+20		+2		+22		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 07 ^m 5			Edad: 7 ^d 2 PHE { 4 ^h : 55/3 12 ^h : 55/1 20 ^h : 54/9 PMG: 18 ^h 42 ^m R°: 42 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	10.5	-21 59.5	87	32.4	+5 46.8		60 N	15 21	16 15	17 10	11 32 3	0 52 84		
1	193	10.2		102	06.9 ¹⁵⁵	+6 00.2 ¹³⁴		58	36	26	17	36 7	49 80		
2	208	10.0		116	41.5 ¹⁵⁶	13.6 ¹³⁴		56	15 49	35	23	40 10	46 77		
3	223	09.7		131	16.0 ¹⁵⁵	26.9 ¹³³		54	16 01	43	28	44 12	43 74		
4	238	09.4		145	50.5 ¹⁵⁵	40.2 ¹³³		52	11	50	33	47 14	41 72		
5	253	09.2	-21 57.6	160	25.0 ¹⁵⁵	+6 53.4 ¹³²		50	16 19	16 57	17 38	11 50 16	0 39 69		
6	268	08.9	-21 57.2	174	59.5 ¹⁵⁵	+7 06.6 ¹³²		45	16 38	17 11	17 48	11 57 20	0 34 65		
7	283	08.7		189	34.1 ¹⁵⁶	19.8 ¹³²		40	16 54	24	17 57	12 02 24	30 61		
8	298	08.4		204	08.6 ¹⁵⁵	32.9 ¹³¹		35	17 07	35	18 06	07 27	27 58		
9	313	08.2		218	43.1 ¹⁵⁵	46.0 ¹³¹		30	18	17 44	14	11 30	24 55		
10	328	07.9		233	17.6 ¹⁵⁵	+7 59.0 ¹³⁰		20	38	18 02	29	19 34	18 51		
11	343	07.7	-21 55.4	247	52.1 ¹⁵⁵	+8 12.0 ¹³⁰		10 N	17 55	18 18	18 44	12 25 39	0 14 46		
12	358	07.4	-21 55.0	262	26.6 ¹⁵⁵	+8 25.0 ¹³⁰		0	18 11	18 33	18 59	12 32 42	0 10 42		
13	13	07.2		277	01.1 ¹⁵⁵	37.9 ¹²⁹		10 S	28	18 50	19 17	38 46	05 39		
14	28	06.9		291	35.6 ¹⁵⁵	+8 50.7 ¹²⁸		20	18 45	19 09	19 38	45 50	0 01 34		
15	43	06.7		306	10.1 ¹⁵⁵	+9 03.5 ¹²⁸		30	19 05	32	20 05	52 55	** ** *		
16	58	06.4		320	44.5 ¹⁵⁴	16.3 ¹²⁸		35	18	19 47	22	12 57 57	** ** *		
17	73	06.2	-21 53.1	335	19.0 ¹⁵⁵	+9 29.0 ¹²⁷		40	19 31	20 03	20 44	13 02 61	** ** *		
18	88	05.9	-21 52.7	349	53.4 ¹⁵⁴	+9 41.7 ¹²⁷		45	19 48	20 24	21 11	13 08 65	** ** *		
19	103	05.7		4	27.8 ¹⁵⁴	+9 54.3 ¹²⁶		50	20 08	20 51	21 51	15 69	23 57 17		
20	118	05.4		19	02.2 ¹⁵⁴	+10 06.9 ¹²⁶		52	18	21 04	22 13	18 72	53 15		
21	133	05.2		33	36.6 ¹⁵⁴	19.5 ¹²⁶		54	29	20	22 43	22 74	48 13		
22	148	04.9		51.2	48 11.0 ¹⁵⁴	31.9 ¹²⁴		56	42	21 39	** ** *	26 77	43 11		
23	163	04.7		62	45.4 ¹⁵⁴	44.4 ¹²⁵		58	20 56	22 02	** ** *	31 79	38 7		
24	178	04.4	-21 50.4	77	19.7 ¹⁵³	+10 56.8 ¹²⁴		60 S	21 14	22 35	** ** *	13 36 83	23 31 4		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 39 ^m 3		Mag: -4.4 PMG: 11 ^h 54 ^m			Mag: +1.5 PMG: 9 ^h 56 ^m			Mag: -2.1 PMG: 14 ^h 59 ^m			Mag: +0.7 PMG: 13 ^h 42 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	109	29.8	180	34.0	-17 11.8	210	54.8	-23 15.4	134	47.7	-11 33.2	153	53.1	-17 44.0	
1	124	32.3	195	38.2	11.5	225	55.4	15.5	149	49.7	33.0	168	55.3	44.0	
2	139	34.8	210	42.3	11.2	240	55.9	15.7	164	51.6	32.8	183	57.4	43.9	
3	154	37.2	225	46.4	10.8	255	56.4	15.9	179	53.6	32.6	198	59.6	43.8	
4	169	39.7	240	50.5	10.5	270	56.9	16.0	194	55.6	32.4	214	01.8	43.7	
5	184	42.2	255	54.6	-17 10.2	285	57.4	-23 16.2	209	57.6	-11 32.2	229	04.0	-17 43.6	
6	199	44.6	270	58.7	-17 09.9	300	58.0	-23 16.4	224	59.5	-11 32.0	244	06.2	-17 43.6	
7	214	47.1	286	02.8	09.6	315	58.5	16.5	240	01.5	31.8	259	08.3	43.5	
8	229	49.6	301	06.9	09.3	330	59.0	16.7	255	03.5	31.6	274	10.5	43.4	
9	244	52.0	316	11.0	09.0	345	59.5	16.9	270	05.4	31.5	289	12.7	43.3	
10	259	54.5	331	15.1	08.7	1	00.1	17.0	285	07.4	31.3	304	14.9	43.2	
11	274	56.9	346	19.2	-17 08.3	16	00.6	-23 17.2	300	09.4	-11 31.1	319	17.0	-17 43.2	
12	289	59.4	1	23.3	-17 08.0	31	01.1	-23 17.4	315	11.3	-11 30.9	334	19.2	-17 43.1	
13	305	01.9	16	27.5	07.7	46	01.6	17.5	330	13.3	30.7	349	21.4	43.0	
14	320	04.3	31	31.6	07.4	61	02.1	17.7	345	15.3	30.5	4	23.6	42.9	
15	335	06.8	46	35.7	07.1	76	02.7	17.8	0	17.2	30.3	19	25.7	42.9	
16	350	09.3	61	39.8	06.8	91	03.2	18.0	15	19.2	30.1	34	27.9	42.8	
17	5	11.7	76	43.9	-17 06.5	106	03.7	-23 18.2	30	21.2	-11 29.9	49	30.1	-17 42.7	
18	20	14.2	91	48.0	-17 06.2	121	04.2	-23 18.3	45	23.1	-11 29.7	64	32.3	-17 42.6	
19	35	16.7	106	52.0	05.9	136	04.8	18.5	60	25.1	29.6	79	34.5	42.5	
20	50	19.1	121	56.1	05.6	151	05.3	18.7	75	27.1	29.4	94	36.6	42.5	
21	65	21.6	137	00.2	05.3	166	05.8	18.8	90	29.0	29.2	109	38.8	42.4	
22	80	24.1	152	04.3	05.0	181	06.3	19.0	105	31.0	29.0	124	41.0	42.3	
23	95	26.5	167	08.4	04.7	196	06.8	19.1	120	33.0	28.8	139	43.2	42.2	
24	110	29.0	182	12.5	-17 04.4	211	07.4	-23 19.3	135	34.9	-11 28.6	154	45.3	-17 42.1	
Dif	—		+41 +3			+5 -2			+20 +2			+22 +1			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna												
	SD: 16'3 PMG: 12 ^h 07 ^m 9				Edad: 8 ^d 2 PHE { SD: 14'9 PMG: 19 ^h 24 ^m R°: 44 ^m 4 ^h : 54'8 12 ^h : 54'6 20 ^h : 54'5																							
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico		Civil		Hora		R°		Hora		R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m	h	m	m			
0	178	04.4	-21	50.4	77	19.7	+10	56.8	60 N	7	04	7	59	8	53	11	35	5	2	16	83							
1	193	04.2		50.0	91	54.1 ¹⁵⁴	+11	09.1 ¹²³	58	6	58		49	38		43	8		09	80								
2	208	03.9		49.6	106	28.4 ¹⁵³		21.4 ¹²³	56		52		40	25		50	11		2	03	76							
3	223	03.7		49.2	121	02.7 ¹⁵³		33.6 ¹²²	54		47		32	14		11	56	14		1	57	70						
4	238	03.4		48.9	135	36.9 ¹⁵²		45.7 ¹²¹	52		42		25	8	04	12	01	17		53	71							
5	253	03.2	-21	48.5	150	11.2 ¹⁵³	+11	57.9 ¹²²	50	6	37	7	18	7	55	12	06	19		1	48	70						
6	268	02.9	-21	48.1	164	45.4 ¹⁵²	+12	09.9 ¹²⁰	45	6	27	7	04	7	37	12	17	23		1	39	65						
7	283	02.7		47.7	179	19.6 ¹⁵²		21.9 ¹²⁰	40		18	6	51	21		26	27		31	61								
8	298	02.4		47.3	193	53.8 ¹⁵²		33.9 ¹²⁰	35		09		41	7	08	34	30		25	57								
9	313	02.2		46.9	208	27.9 ¹⁵¹		45.8 ¹¹⁹	30	6	01		31	6	57	41	32		19	55								
10	328	02.0		46.5	223	02.0 ¹⁵¹	+12	57.6 ¹¹⁸	20	5	47	6	14	37		12	53	37		09	50							
11	343	01.7	-21	46.1	237	36.1 ¹⁵¹	+13	09.4 ¹¹⁸	10 N	5	32	5	58	6	20	13	04	40		1	00	47						
12	358	01.5	-21	45.7	252	10.2 ¹⁵¹	+13	21.1 ¹¹⁷	0	5	16	5	42	6	04	13	14	43		0	52	43						
13	13	01.2		45.3	266	44.2 ¹⁵⁰		32.7 ¹¹⁶	10 S	4	58	25	5	48	24	47		44	39									
14	28	01.0		44.9	281	18.2 ¹⁵⁰		44.3 ¹¹⁶	20		37	5	06	30		35	51		35	35								
15	43	00.7		44.5	295	52.2 ¹⁵⁰	+13	55.9 ¹¹⁶	30	4	10	4	43	5	10	47	56		25	31								
16	58	00.5		44.1	310	26.1 ¹⁴⁹	+14	07.3 ¹¹⁴	35	3	53	29	4	58	13	54	58		19	29								
17	73	00.2	-21	43.7	325	00.0 ¹⁴⁹	+14	18.7 ¹¹⁴	40	3	32	4	12	4	44	14	03	61		0	13	25						
18	88	00.0	-21	43.3	339	33.9 ¹⁴⁹	+14	30.1 ¹¹⁴	45	3	04	3	52	4	28	14	13	64		0	06	21						
19	102	59.8		42.9	354	07.7 ¹⁴⁸		41.4 ¹¹³	50	2	25	25	4	07		24	69		**	**	**							
20	117	59.5		42.5	8	41.6 ¹⁴⁹	+14	52.6 ¹¹²	52	2	03	3	12	3	58	30	71		**	**	**							
21	132	59.3		42.1	23	15.3 ¹⁴⁷	+15	03.7 ¹¹¹	54	1	32	2	56	47		36	74		**	**	**							
22	147	59.0		41.7	37	49.1 ¹⁴⁸		14.8 ¹¹¹	56	0	31		37	34		43	76		23	54	13							
23	162	58.8		41.3	52	22.8 ¹⁴⁷		25.8 ¹¹⁰	58	**	**	2	13	19		50	81		45	10								
24	177	58.5	-21	40.9	66	56.4 ¹⁴⁶	+15	36.8 ¹¹⁰	60 S	**	**	1	41	3	02	14	59	84		23	35	7						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO											
	PMG: 16 ^h 35 ^m 3				Mag: -4.3 PMG: 11 ^h 48 ^m				Mag: +1.5 PMG: 9 ^h 55 ^m				Mag: -2.1 PMG: 14 ^h 56 ^m				Mag: +0.7 PMG: 13 ^h 39 ^m											
	hG ☿		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	110	29.0	182	12.5	-17	04.4	211	07.4	-23	19.3	135	34.9	-11	28.6	154	45.3	-17	42.1										
1	125	31.4	197	16.6		04.1	226	07.9		19.5	150	36.9		28.4	169	47.5		42.1										
2	140	33.9	212	20.7		03.8	241	08.4		19.6	165	38.9		28.2	184	49.7		42.0										
3	155	36.4	227	24.8		03.5	256	08.9		19.8	180	40.8		28.0	199	51.9		41.9										
4	170	38.8	242	28.9		03.2	271	09.4		19.9	195	42.8		27.8	214	54.1		41.8										
5	185	41.3	257	33.0	-17	02.9	286	10.0	-23	20.1	210	44.8	-11	27.6	229	56.2	-17	41.7										
6	200	43.8	272	37.0	-17	02.6	301	10.5	-23	20.3	225	46.7	-11	27.5	244	58.4	-17	41.7										
7	215	46.2	287	41.1		02.3	316	11.0		20.4	240	48.7		27.3	260	00.6		41.6										
8	230	48.7	302	45.2		02.0	331	11.5		20.6	255	50.7		27.1	275	02.8		41.5										
9	245	51.2	317	49.3		01.7	346	12.0		20.7	270	52.6		26.9	290	04.9		41.4										
10	260	53.6	332	53.4		01.4	1	12.5		20.9	285	54.6		26.7	305	07.1		41.3										
11	275	56.1	347	57.4	-17	01.1	16	13.1	-23	21.0	300	56.6	-11	26.5	320	09.3	-17	41.3										
12	290	58.5	3	01.5	-17	00.8	31	13.6	-23	21.2	315	58.5	-11	26.3	335	11.5	-17	41.2										
13	306	01.0	18	05.6		00.5	46	14.1		21.3	331	00.5		26.1	350	13.6		41.1										
14	321	03.5	33	09.7	-17	00.2	61	14.6		21.5	346	02.5		25.9	5	15.8		41.0										
15	336	05.9	48	13.7	-17	00.0	76	15.1		21.7	1	04.4		25.7	20	18.0		40.9										
16	351	08.4	63	17.8	-16	59.7	91	15.7		21.8	16	06.4		25.5	35	20.2		40.9										
17	6	10.9	78	21.9	-16	59.4	106	16.2	-23	22.0	31	08.3	-11	25.3	50	22.3	-17	40.8										
18	21	13.3	93	25.9	-16	59.1	121	16.7	-23	22.1	46	10.3	-11	25.2	65	24.5	-17	40.7										
19	36	15.8	108	30.0		58.8	136	17.2		22.3	61	12.3		25.0	80	26.7		40.6										
20	51	18.3	123	34.1		58.5	151	17.7		22.4	76	14.2		24.8	95	28.9		40.5										
21	66	20.7	138	38.1		58.2	166	18.2		22.6	91	16.2		24.6	110	31.1		40.5										
22	81	23.2	153	42.2		58.0	181	18.8		22.7	106	18.2		24.4	125	33.2		40.4										
23	96	25.7	168	46.2		57.7	196	19.3		22.9	121	20.1		24.2	140	35.4		40.3										
24	111	28.1	183	50.3	-16	57.4	211	19.8	-23	23.0	136	22.1	-11	24.0	155	37.6	-17	40.2										
Dif	—				+41				+3				+20				+2				+22				+1			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 08 ^m 3			Edad: 9 ^d 2 PHE { SD: 14/8 PMG: 20 ^h 08 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	177	58.5	-21 40.9	66	56.4	+15 36.8		60 N	15 25	16 19	17 13	11 40 8	3 39 85	
1	192	58.3	40.5	81	30.0 ¹⁴⁶	47.7 ¹⁰⁹		58	40	29	20	11 51 13	29 80	
2	207	58.1	40.1	96	03.6 ¹⁴⁶	+15 58.5 ¹⁰⁸		56	15 53	38	25	12 01 16	19 77	
3	222	57.8	39.7	110	37.2 ¹⁴⁶	+16 09.2 ¹⁰⁷		54	16 04	46	31	10 18	11 74	
4	237	57.6	39.3	125	10.7 ¹⁴⁵	19.9 ¹⁰⁷		52	13	53	36	18 21	3 04 71	
5	252	57.3	-21 38.9	139	44.1 ¹⁴⁴	+16 30.5 ¹⁰⁶		50	16 22	16 59	17 40	12 25 23	2 58 68	
6	267	57.1	-21 38.5	154	17.6 ¹⁴⁵	+16 41.1 ¹⁰⁶		45	16 41	17 14	17 50	12 40 27	2 44 64	
7	282	56.9	38.1	168	50.9 ¹⁴³	+16 51.5 ¹⁰⁴		40	16 56	26	17 59	12 53 30	32 61	
8	297	56.6	37.7	183	24.3 ¹⁴⁴	+17 01.9 ¹⁰⁴		35	17 09	36	18 08	13 04 33	22 58	
9	312	56.4	37.3	197	57.6 ¹⁴³	12.2 ¹⁰³		30	20	17 46	15	13 35	2 14 55	
10	327	56.1	36.8	212	30.8 ¹⁴²	22.5 ¹⁰³		20	39	18 03	30	30 39	1 59 52	
11	342	55.9	-21 36.4	227	04.0 ¹⁴²	+17 32.7 ¹⁰²		10 N	17 56	18 19	18 45	13 44 42	1 47 47	
12	357	55.7	-21 36.0	241	37.2 ¹⁴²	+17 42.8 ¹⁰¹		0	18 12	18 34	19 00	13 57 46	1 35 44	
13	12	55.4	35.6	256	10.3 ¹⁴¹	+17 52.8 ¹⁰⁰		10 S	28	18 51	17	14 11 49	23 41	
14	27	55.2	35.2	270	43.4 ¹⁴¹	+18 02.7 ⁹⁹		20	18 45	19 09	19 38	26 51	1 10 38	
15	42	54.9	34.8	285	16.4 ¹⁴⁰	12.6 ⁹⁹		30	19 05	32	20 05	43 55	0 56 33	
16	57	54.7	34.4	299	49.4 ¹⁴⁰	22.4 ⁹⁸		35	17	19 46	22	14 52 58	48 31	
17	72	54.5	-21 34.0	314	22.3 ¹³⁹	+18 32.1 ⁹⁷		40	19 31	20 03	20 43	15 04 60	0 38 28	
18	87	54.2	-21 33.5	328	55.2 ¹³⁹	+18 41.7 ⁹⁶		45	19 47	20 23	21 10	15 17 64	0 27 25	
19	102	54.0	33.1	343	28.0 ¹³⁸	+18 51.3 ⁹⁶		50	20 07	20 49	21 48	33 69	14 20	
20	117	53.8	32.7	358	00.8 ¹³⁸	+19 00.7 ⁹⁴		52	17	21 02	22 09	41 71	08 18	
21	132	53.5	32.3	12	33.5 ¹³⁷	10.1 ⁹⁴		54	27	17	22 38	50 73	0 01 16	
22	147	53.3	31.9	27	06.2 ¹³⁷	19.4 ⁹³		56	40	36	23 28	15 59 77	** ** *	
23	162	53.0	31.4	41	38.8 ¹³⁶	28.6 ⁹²		58	20 54	21 58	** ** *	16 11 79	23 55 15	
24	177	52.8	-21 31.0	56	11.4 ¹³⁶	+19 37.8 ⁹²		60 S	21 11	22 29	** ** *	16 23 85	23 42 10	
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 16 ^h 31 ^m 4		Mag: -4.3 PMG: 11 ^h 41 ^m		Mag: +1.5 PMG: 9 ^h 54 ^m		Mag: -2.1 PMG: 14 ^h 53 ^m			Mag: +0.7 PMG: 13 ^h 36 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	111	28.1	183 50.3	-16 57.4	211 19.8	-23 23.0	136 22.1	-11 24.0	155 37.6	-17 40.2				
1	126	30.6	198 54.4	57.1	226 20.3	23.2	151 24.1	23.8	170 39.8	40.1				
2	141	33.0	213 58.4	56.8	241 20.8	23.3	166 26.0	23.6	185 41.9	40.1				
3	156	35.5	229 02.5	56.5	256 21.3	23.5	181 28.0	23.4	200 44.1	40.0				
4	171	38.0	244 06.5	56.3	271 21.9	23.6	196 30.0	23.2	215 46.3	39.9				
5	186	40.4	259 10.6	-16 56.0	286 22.4	-23 23.8	211 31.9	-11 23.0	230 48.5	-17 39.8				
6	201	42.9	274 14.6	-16 55.7	301 22.9	-23 23.9	226 33.9	-11 22.8	245 50.6	-17 39.7				
7	216	45.4	289 18.7	55.4	316 23.4	24.1	241 35.8	22.7	260 52.8	39.7				
8	231	47.8	304 22.7	55.2	331 23.9	24.2	256 37.8	22.5	275 55.0	39.6				
9	246	50.3	319 26.7	54.9	346 24.4	24.4	271 39.8	22.3	290 57.2	39.5				
10	261	52.8	334 30.8	54.6	1 24.9	24.5	286 41.7	22.1	305 59.3	39.4				
11	276	55.2	349 34.8	-16 54.3	16 25.5	-23 24.7	301 43.7	-11 21.9	321 01.5	-17 39.3				
12	291	57.7	4 38.9	-16 54.1	31 26.0	-23 24.8	316 45.7	-11 21.7	336 03.7	-17 39.3				
13	307	00.2	19 42.9	53.8	46 26.5	25.0	331 47.6	21.5	351 05.9	39.2				
14	322	02.6	34 46.9	53.5	61 27.0	25.1	346 49.6	21.3	6 08.0	39.1				
15	337	05.1	49 50.9	53.2	76 27.5	25.2	1 51.5	21.1	21 10.2	39.0				
16	352	07.5	64 55.0	53.0	91 28.0	25.4	16 53.5	20.9	36 12.4	38.9				
17	7	10.0	79 59.0	-16 52.7	106 28.6	-23 25.5	31 55.5	-11 20.7	51 14.6	-17 38.9				
18	22	12.5	95 03.0	-16 52.4	121 29.1	-23 25.7	46 57.4	-11 20.5	66 16.7	-17 38.8				
19	37	14.9	110 07.1	52.2	136 29.6	25.8	61 59.4	20.3	81 18.9	38.7				
20	52	17.4	125 11.1	51.9	151 30.1	26.0	77 01.4	20.1	96 21.1	38.6				
21	67	19.9	140 15.1	51.6	166 30.6	26.1	92 03.3	20.0	111 23.3	38.5				
22	82	22.3	155 19.1	51.4	181 31.1	26.2	107 05.3	19.8	126 25.4	38.5				
23	97	24.8	170 23.1	51.1	196 31.6	26.4	122 07.2	19.6	141 27.6	38.4				
24	112	27.3	185 27.1	-16 50.8	211 32.1	-23 26.5	137 09.2	-11 19.4	156 29.8	-17 38.3				
Dif	—		+40 +3		+5 -1		+20 +2		+22 +1					

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 16'3 PMG: 12 ^h 08 ^m 7				Edad: 10 ^d 2 PHE { SD: 14'8 PMG: 20 ^h 54 ^m R°: 48 ^m 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1																
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m		
0	177	52.8	-21	31.0	56	11.4	+19	37.8	60 N	7	03	7	57	8	51	11	48	14	5	04	83
1	192	52.6		30.6	70	44.0 ¹³⁶		46.8	58	6	57	47	36	12	04	18		4	49	78	
2	207	52.3		30.2	85	16.4 ¹³⁴	+19	55.8	56	51	38	23		17	22		36	75			
3	222	52.1		29.8	99	48.9 ¹³⁵	+20	04.7	54	46	31	12		28	25		25	72			
4	237	51.9		29.3	114	21.3 ¹³⁴		13.5	52	41	23	8	03	39	27		15	70			
5	252	51.6	-21	28.9	128	53.6 ¹³³	+20	22.2	50	6	36	7	17	7	54	12	48	29	4	06	68
6	267	51.4	-21	28.5	143	25.9 ¹³³	+20	30.8	45	6	26	7	03	7	36	13	07	33	3	48	63
7	282	51.2		28.1	157	58.1 ¹³²		39.3	40	17	6	51	21	23	36		33	60			
8	297	50.9		27.6	172	30.3 ¹³²		47.8	35	09	40	7	08	37	38		20	58			
9	312	50.7		27.2	187	02.4 ¹³¹	+20	56.1	30	6	01	31	6	57	13	48	40	3	09	56	
10	327	50.5		26.8	201	34.4 ¹³⁰	+21	04.4	20	5	47	6	14	38	14	09	42	2	51	52	
11	342	50.2	-21	26.3	216	06.5 ¹³¹	+21	12.6	10 N	5	32	5	58	6	21	14	26	46	2	34	50
12	357	50.0	-21	25.9	230	38.4 ¹²⁹	+21	20.7	0	5	17	5	43	6	05	14	43	48	2	19	47
13	12	49.8		25.5	245	10.3 ¹²⁹		28.6	10 S	5	00	26	5	49	15	00	50	2	04	44	
14	27	49.5		25.1	259	42.2 ¹²⁹		36.5	20	4	39	5	08	32	17	53		1	48	41	
15	42	49.3		24.6	274	14.0 ¹²⁸		44.3	30	4	12	4	45	12	38	56		29	38		
16	57	49.1		24.2	288	45.7 ¹²⁷		52.0	35	3	55	31	5	00	15	50	58		19	35	
17	72	48.8	-21	23.8	303	17.4 ¹²⁷	+21	59.7	40	3	35	4	15	4	46	16	04	60	1	06	33
18	87	48.6	-21	23.3	317	49.1 ¹²⁷	+22	07.2	45	3	08	3	54	4	30	16	21	62	0	52	30
19	102	48.4		22.9	332	20.7 ¹²⁶		14.6	50	2	29	28	10		42	66		34	26		
20	117	48.2		22.5	346	52.2 ¹²⁵		21.9	52	2	08	15	4	01	16	52	68		26	24	
21	132	47.9		22.0	1	23.7 ¹²⁵		29.1	72	1	39	3	00	3	50	17	03	70		17	21
22	147	47.7		21.6	15	55.1 ¹²⁴		36.2	71	0	50	2	42	38	16	73		0	07	18	
23	162	47.5		21.1	30	26.5 ¹²⁴		43.2	70	** ** *	2	19	23		30	77		** ** *			
24	177	47.2	-21	20.7	44	57.8 ¹²³	+22	50.2	70	** ** *	1	48	3	06	17	48	82		23	52	17

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 27 ^m 5		Mag: -4.3 PMG: 11 ^h 35 ^m		Mag: +1.5 PMG: 9 ^h 54 ^m		Mag: -2.1 PMG: 14 ^h 49 ^m		Mag: +0.7 PMG: 13 ^h 32 ^m	
	hG ♂		hG ♀		hG ♂		hG ♀		hG ♀	
h	°	'	°	'	°	'	°	'	°	'
0	112	27.3	185	27.1	-16	50.8	211	32.1	-23	26.5
1	127	29.7	200	31.1		50.6	226	32.7		26.7
2	142	32.2	215	35.2		50.3	241	33.2		26.8
3	157	34.7	230	39.2		50.1	256	33.7		27.0
4	172	37.1	245	43.2		49.8	271	34.2		27.1
5	187	39.6	260	47.2	-16	49.5	286	34.7	-23	27.2
6	202	42.0	275	51.2	-16	49.3	301	35.2	-23	27.4
7	217	44.5	290	55.2		49.0	316	35.7		27.5
8	232	47.0	305	59.2		48.8	331	36.2		27.6
9	247	49.4	321	03.2		48.5	346	36.8		27.8
10	262	51.9	336	07.2		48.3	1	37.3		27.9
11	277	54.4	351	11.1	-16	48.0	16	37.8	-23	28.1
12	292	56.8	6	15.1	-16	47.8	31	38.3	-23	28.2
13	307	59.3	21	19.1		47.5	46	38.8		28.3
14	323	01.8	36	23.1		47.2	61	39.3		28.5
15	338	04.2	51	27.1		47.0	76	39.8		28.6
16	353	06.7	66	31.1		46.7	91	40.3		28.7
17	8	09.1	81	35.0	-16	46.5	106	40.8	-23	28.9
18	23	11.6	96	39.0	-16	46.2	121	41.4	-23	29.0
19	38	14.1	111	43.0		46.0	136	41.9		29.1
20	53	16.5	126	46.9		45.8	151	42.4		29.3
21	68	19.0	141	50.9		45.5	166	42.9		29.4
22	83	21.5	156	54.9		45.3	181	43.4		29.5
23	98	23.9	171	58.8		45.0	196	43.9		29.7
24	113	26.4	187	02.8	-16	44.8	211	44.4	-23	29.8
Dif	—		+40		+3		+5		-1	
							+20		+2	
									+22	
									+1	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 12 ^h 09 ^m 0			Edad: 11 ^d 2 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 21 ^h 42 ^m R°: 51 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	47.2	-21 20.7	44	57.8	+22 50.2	68	60 N	15 29	16 23	17 17	12 02	24	6 27	78	
1	192	47.0	20.3	59	29.1 ¹²³	+22 57.0	68	58	44	32	23	22 29		6 07	73	
2	207	46.8	19.8	74	00.3 ¹²²	+23 03.7	67	56	15 56	41	28	39 32		5 51	69	
3	222	46.6	19.4	88	31.4 ¹²¹	10.3	66	54	16 07	49	33	12 53 35		37	67	
4	237	46.3	18.9	103	02.6 ¹²²	16.8	65	52	17	16 56	38	13 06 36		25	65	
5	252	46.1	-21 18.5	117	33.6 ¹²⁰	+23 23.2	64	50	16 25	17 02	17 43	13 17 38		5 14	63	
6	267	45.9	-21 18.1	132	04.6 ¹²⁰	+23 29.5	63	45	16 43	17 16	17 52	13 40 40		4 51	61	
7	282	45.6	17.6	146	35.6 ¹²⁰	35.7	62	40	16 58	28	18 01	13 59 42		33	59	
8	297	45.4	17.2	161	06.5 ¹¹⁹	41.8	61	35	17 11	38	09	14 15 43		18	57	
9	312	45.2	16.7	175	37.3 ¹¹⁸	47.8	60	30	22	17 47	17	28 45		4 05	55	
10	327	45.0	16.3	190	08.1 ¹¹⁸	53.7	59	20	40	18 04	31	14 51 47		3 43	53	
11	342	44.7	-21 15.8	204	38.9 ¹¹⁸	+23 59.4	57	10 N	17 57	18 20	18 46	15 12 48		3 24	50	
12	357	44.5	-21 15.4	219	09.6 ¹¹⁷	+24 05.1	57	0	18 13	18 35	19 01	15 31 49		3 06	48	
13	12	44.3	14.9	233	40.2 ¹¹⁶	10.7	56	10 S	28	18 51	18	15 50 51		2 48	47	
14	27	44.1	14.5	248	10.8 ¹¹⁶	16.1	54	20	18 45	19 10	19 38	16 10 53		29	44	
15	42	43.8	14.0	262	41.4 ¹¹⁶	21.4	53	30	19 05	32	20 04	34 54		2 07	42	
16	57	43.6	13.6	277	11.9 ¹¹⁵	26.6	52	35	17	19 46	21	16 48 55		1 54	41	
17	72	43.4	-21 13.1	291	42.3 ¹¹⁴	+24 31.7	51	40	19 30	20 02	20 41	17 04 57		1 39	39	
18	87	43.2	-21 12.7	306	12.7 ¹¹⁴	+24 36.7	50	45	19 46	20 22	21 08	17 23 59		1 22	36	
19	102	42.9	12.2	320	43.1 ¹¹⁴	41.6	49	50	20 06	20 47	21 45	17 48 60		1 00	33	
20	117	42.7	11.8	335	13.4 ¹¹³	46.4	48	52	15	21 00	22 06	18 00 61		0 50	31	
21	132	42.5	11.3	349	43.7 ¹¹³	51.0	46	54	25	15	22 33	13 63		38	29	
22	147	42.3	10.9	4	13.9 ¹¹²	+24 55.6	46	56	37	32	23 16	29 65		25	27	
23	162	42.1	10.4	18	44.1 ¹¹²	+25 00.0	44	58	20 51	21 54	** ** *	18 47 68		0 10	23	
24	177	41.8	-21 10.0	33	14.2 ¹¹¹	+25 04.3	43	60 S	21 08	22 23	** ** *	19 10 72		** ** *	**	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 16 ^h 23 ^m 5		Mag: -4.3 PMG: 11 ^h 29 ^m			Mag: +1.5 PMG: 9 ^h 53 ^m			Mag: -2.1 PMG: 14 ^h 46 ^m			Mag: +0.7 PMG: 13 ^h 29 ^m				
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	113	26.4	187 02.8	-16 44.8	211 44.4	-23 29.8	137 56.2	-11 14.7	157 22.0	-17 36.4						
1	128	28.9	202 06.8	44.5	226 44.9	29.9	152 58.2	14.5	172 24.2	36.3						
2	143	31.3	217 10.7	44.3	241 45.4	30.1	168 00.1	14.3	187 26.3	36.2						
3	158	33.8	232 14.7	44.1	256 46.0	30.2	183 02.1	14.1	202 28.5	36.1						
4	173	36.3	247 18.6	43.8	271 46.5	30.3	198 04.1	13.9	217 30.7	36.0						
5	188	38.7	262 22.6	-16 43.6	286 47.0	-23 30.5	213 06.0	-11 13.7	232 32.8	-17 36.0						
6	203	41.2	277 26.5	-16 43.3	301 47.5	-23 30.6	228 08.0	-11 13.5	247 35.0	-17 35.9						
7	218	43.6	292 30.4	43.1	316 48.0	30.7	243 09.9	13.3	262 37.2	35.8						
8	233	46.1	307 34.4	42.9	331 48.5	30.9	258 11.9	13.1	277 39.4	35.7						
9	248	48.6	322 38.3	42.6	346 49.0	31.0	273 13.9	13.0	292 41.5	35.6						
10	263	51.0	337 42.2	42.4	1 49.5	31.1	288 15.8	12.8	307 43.7	35.5						
11	278	53.5	352 46.2	-16 42.2	16 50.0	-23 31.2	303 17.8	-11 12.6	322 45.9	-17 35.5						
12	293	56.0	7 50.1	-16 41.9	31 50.5	-23 31.4	318 19.7	-11 12.4	337 48.1	-17 35.4						
13	308	58.4	22 54.0	41.7	46 51.0	31.5	333 21.7	12.2	352 50.2	35.3						
14	324	00.9	37 58.0	41.5	61 51.5	31.6	348 23.6	12.0	7 52.4	35.2						
15	339	03.4	53 01.9	41.2	76 52.1	31.7	3 25.6	11.8	22 54.6	35.1						
16	354	05.8	68 05.8	41.0	91 52.6	31.9	18 27.6	11.6	37 56.8	35.1						
17	9	08.3	83 09.7	-16 40.8	106 53.1	-23 32.0	33 29.5	-11 11.4	52 58.9	-17 35.0						
18	24	10.8	98 13.6	-16 40.5	121 53.6	-23 32.1	48 31.5	-11 11.2	68 01.1	-17 34.9						
19	39	13.2	113 17.5	40.3	136 54.1	32.2	63 33.4	11.0	83 03.3	34.8						
20	54	15.7	128 21.4	40.1	151 54.6	32.4	78 35.4	10.8	98 05.4	34.7						
21	69	18.1	143 25.3	39.9	166 55.1	32.5	93 37.3	10.6	113 07.6	34.7						
22	84	20.6	158 29.2	39.6	181 55.6	32.6	108 39.3	10.4	128 09.8	34.6						
23	99	23.1	173 33.1	39.4	196 56.1	32.7	123 41.2	10.2	143 12.0	34.5						
24	114	25.5	188 37.0	-16 39.2	211 56.6	-23 32.9	138 43.2	-11 10.0	158 14.1	-17 34.4						
Dif	—		+39	+2	+5	-1	+20	+2	+22	+1						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16/3 PMG: 12 ^h 09 ^m 4			Edad: 12 ^d 2 PHE { 4 ^h : 54/1 12 ^h : 54/1 20 ^h : 54/2 R°: 51 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	177	41.8	-21	10.0	33	14.2	+25	04.3	60 N	7 01	7 55	8 48	12 26	43	7 45	63	
1	192	41.6		09.5	47	44.3 ¹¹¹		08.5 ⁴²	58	6 55	45	33	12 51	45	20	61	
2	207	41.4		09.1	62	14.3 ¹¹⁰		12.6 ⁴¹	56	49	37	21	13 11	46	7 00	59	
3	222	41.2		08.6	76	44.3 ¹¹⁰		16.5 ³⁹	54	44	29	11		28	46	6 44	58
4	237	41.0		08.1	91	14.3 ¹¹⁰		20.4 ³⁹	52	40	22	8 01	42	47	30	57	
5	252	40.7	-21	07.7	105	44.2 ¹⁰⁹	+25	24.1 ³⁷	50	6 35	7 16	7 53	13 55	47	6 17	57	
6	267	40.5	-21	07.2	120	14.1 ¹⁰⁹	+25	27.7 ³⁶	45	6 26	7 02	7 35	14 20	49	5 52	55	
7	282	40.3		06.8	134	43.9 ¹⁰⁸		31.2 ³⁵	40	17	6 50	20	41	49	32	54	
8	297	40.1		06.3	149	13.7 ¹⁰⁸		34.5 ³³	35	09	40	7 08	14 58	50	15	54	
9	312	39.9		05.8	163	43.5 ¹⁰⁸		37.8 ³³	30	6 01	31	6 57	15 13	50	5 00	53	
10	327	39.6		05.4	178	13.2 ¹⁰⁷		40.9 ³¹	20	5 47	6 14	38	15 38	51	4 36	52	
11	342	39.4	-21	04.9	192	42.9 ¹⁰⁷	+25	43.9 ³⁰	10 N	5 33	5 59	6 21	16 00	51	4 14	52	
12	357	39.2	-21	04.5	207	12.5 ¹⁰⁶	+25	46.8 ²⁹	0	5 18	5 44	6 06	16 20	51	3 54	51	
13	12	39.0		04.0	221	42.2 ¹⁰⁷		49.5 ²⁷	10 S	5 01	27	5 50	16 41	51	35	49	
14	27	38.8		03.5	236	11.8 ¹⁰⁶		52.2 ²⁷	20	4 40	5 09	33	17 03	51	3 13	49	
15	42	38.5		03.1	250	41.3 ¹⁰⁵		54.7 ²⁵	30	4 14	4 47	13	28	52	2 49	47	
16	57	38.3		02.6	265	10.8 ¹⁰⁵		57.1 ²⁴	35	3 58	33	5 02	17 43	52	35	46	
17	72	38.1	-21	02.1	279	40.3 ¹⁰⁵	+25	59.3 ²²	40	3 37	4 17	4 49	18 01	52	2 18	46	
18	87	37.9	-21	01.7	294	09.8 ¹⁰⁵	+26	01.5 ²²	45	3 11	3 57	4 33	18 22	52	1 58	44	
19	102	37.7		01.2	308	39.2 ¹⁰⁴		03.5 ²⁰	50	2 34	32	13	18 48	53	33	43	
20	117	37.5		00.7	323	08.6 ¹⁰⁴		05.4 ¹⁹	52	2 13	19	4 04	19 01	53	21	42	
21	132	37.2	-21	00.3	337	38.0 ¹⁰⁴		07.1 ¹⁷	54	1 46	3 04	3 53	16	53	1 07	41	
22	147	37.0	-20	59.8	352	07.3 ¹⁰³		08.8 ¹⁷	56	1 03	2 46	41	34	52	0 52	38	
23	162	36.8		59.3	6	36.6 ¹⁰³		10.3 ¹⁵	58	** **	2 25	28	19 55	52	33	36	
24	177	36.6	-20	58.8	21	05.9 ¹⁰³	+26	11.6 ¹³	60 S	** **	1 56	3 11	20 22	52	0 09	32	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 19 ^m 6		Mag: -4.2 PMG: 11 ^h 23 ^m		Mag: +1.5 PMG: 9 ^h 52 ^m		Mag: -2.1 PMG: 14 ^h 43 ^m		Mag: +0.7 PMG: 13 ^h 25 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	114	25.5	188	37.0	-16	39.2	211	56.6	-23	32.9	138	43.2	-11	10.0	158	14.1	-17	34.4
1	129	28.0	203	40.9		39.0	226	57.1		33.0	153	45.2		09.8	173	16.3		34.3
2	144	30.5	218	44.8		38.7	241	57.6		33.1	168	47.1		09.6	188	18.5		34.2
3	159	32.9	233	48.7		38.5	256	58.1		33.2	183	49.1		09.4	203	20.7		34.2
4	174	35.4	248	52.6		38.3	271	58.6		33.3	198	51.0		09.2	218	22.8		34.1
5	189	37.9	263	56.5	-16	38.1	286	59.2	-23	33.5	213	53.0	-11	09.0	233	25.0	-17	34.0
6	204	40.3	279	00.3	-16	37.9	301	59.7	-23	33.6	228	54.9	-11	08.8	248	27.2	-17	33.9
7	219	42.8	294	04.2		37.6	317	00.2		33.7	243	56.9		08.6	263	29.3		33.8
8	234	45.3	309	08.1		37.4	332	00.7		33.8	258	58.8		08.4	278	31.5		33.8
9	249	47.7	324	12.0		37.2	347	01.2		33.9	274	00.8		08.2	293	33.7		33.7
10	264	50.2	339	15.8		37.0	2	01.7		34.1	289	02.8		08.1	308	35.9		33.6
11	279	52.6	354	19.7	-16	36.8	17	02.2	-23	34.2	304	04.7	-11	07.9	323	38.0	-17	33.5
12	294	55.1	9	23.6	-16	36.6	32	02.7	-23	34.3	319	06.7	-11	07.7	338	40.2	-17	33.4
13	309	57.6	24	27.4		36.4	47	03.2		34.4	334	08.6		07.5	353	42.4		33.4
14	325	00.0	39	31.3		36.1	62	03.7		34.5	349	10.6		07.3	8	44.6		33.3
15	340	02.5	54	35.1		35.9	77	04.2		34.6	4	12.5		07.1	23	46.7		33.2
16	355	05.0	69	39.0		35.7	92	04.7		34.8	19	14.5		06.9	38	48.9		33.1
17	10	07.4	84	42.8	-16	35.5	107	05.2	-23	34.9	34	16.4	-11	06.7	53	51.1	-17	33.0
18	25	09.9	99	46.7	-16	35.3	122	05.7	-23	35.0	49	18.4	-11	06.5	68	53.2	-17	32.9
19	40	12.4	114	50.5		35.1	137	06.2		35.1	64	20.3		06.3	83	55.4		32.9
20	55	14.8	129	54.3		34.9	152	06.7		35.2	79	22.3		06.1	98	57.6		32.8
21	70	17.3	144	58.2		34.7	167	07.2		35.3	94	24.3		05.9	113	59.8		32.7
22	85	19.8	160	02.0		34.5	182	07.7		35.5	109	26.2		05.7	129	01.9		32.6
23	100	22.2	175	05.8		34.3	197	08.2		35.6	124	28.2		05.5	144	04.1		32.5
24	115	24.7	190	09.7	-16	34.1	212	08.7	-23	35.7	139	30.1	-11	05.3	159	06.3	-17	32.5
Dif	—		+39		+2		+5		-1		+20		+2		+22		+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:3			Edad: 13 ^d 2 PHE { 4 ^h : 54/2 12 ^h : 54/3 20 ^h : 54/4 R°: 51 ^m												
	PMG: 12 ^h 09 ^m 7			SD: 14'8 PMG: 23 ^h 24 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	177	36.6	-20	58.8	21	05.9	+26	11.6	60 N	15 34	16 26	17 20	13 09	65	8 48	41
1	192	36.4		58.4	35	35.2 ¹⁰³		12.9	58	15 48	36	26	36	62	8 21	44
2	207	36.2		57.9	50	04.5 ¹⁰³		14.0	56	16 00	44	31	13 57	61	7 59	46
3	222	36.0		57.4	64	33.7 ¹⁰²		15.0	54	10	52	36	14 14	60	42	46
4	237	35.7		56.9	79	02.9 ¹⁰²		15.9	52	20	16 59	41	29	59	27	47
5	252	35.5	-20	56.5	93	32.1 ¹⁰²	+26	16.7	50	16 28	17 05	17 45	14 42	58	7 14	47
6	267	35.3	-20	56.0	108	01.3 ¹⁰²	+26	17.3	45	16 46	17 18	17 55	15 09	57	6 47	49
7	282	35.1		55.5	122	30.4 ¹⁰¹		17.8	40	17 00	30	18 03	30	56	26	49
8	297	34.9		55.0	136	59.5 ¹⁰¹		18.1	35	12	40	11	15 48	55	6 09	49
9	312	34.7		54.6	151	28.7 ¹⁰²		18.4	30	23	17 49	18	16 03	54	5 53	50
10	327	34.5		54.1	165	57.8 ¹⁰¹		18.5	20	42	18 05	32	29	53	28	50
11	342	34.3	-20	53.6	180	26.9 ¹⁰¹	+26	18.4	10 N	17 58	18 20	18 46	16 51	52	5 06	51
12	357	34.0	-20	53.1	194	56.0 ¹⁰¹	+26	18.3	0	18 13	18 36	19 01	17 11	52	4 45	51
13	12	33.8		52.6	209	25.0 ¹⁰⁰		18.0	10 S	29	18 51	18	32	50	24	52
14	27	33.6		52.2	223	54.1 ¹⁰¹		17.6	20	18 45	19 10	19 38	17 54	49	4 02	52
15	42	33.4		51.7	238	23.2 ¹⁰¹		17.0	30	19 05	31	20 04	18 20	48	3 36	52
16	57	33.2		51.2	252	52.2 ¹⁰⁰		16.4	35	16	19 45	20	35	47	21	52
17	72	33.0	-20	50.7	267	21.3 ¹⁰¹	+26	15.6	40	19 29	20 01	20 40	18 53	46	3 04	52
18	87	32.8	-20	50.2	281	50.3 ¹⁰⁰	+26	14.6	45	19 45	20 20	21 06	19 14	44	2 42	53
19	102	32.6		49.7	296	19.3 ¹⁰⁰		13.6	50	20 04	45	21 42	41	42	16	53
20	117	32.4		49.3	310	48.4 ¹⁰¹		12.4	52	13	20 58	22 02	19 54	41	2 03	53
21	132	32.2		48.8	325	17.4 ¹⁰⁰		11.1	54	23	21 12	22 27	20 09	40	1 48	53
22	147	32.0		48.3	339	46.4 ¹⁰⁰		09.6	56	35	29	23 05	26	38	30	53
23	162	31.7		47.8	354	15.5 ¹⁰¹		08.0	58	20 48	21 50	** **	20 47	36	1 09	53
24	177	31.5	-20	47.3	8	44.5 ¹⁰⁰	+26	06.3	60 S	21 04	22 17	** **	21 14	32	0 41	54

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 15 ^m 7		Mag: -4.3 PMG: 11 ^h 16 ^m		Mag: +1.5 PMG: 9 ^h 51 ^m		Mag: -2.1 PMG: 14 ^h 40 ^m		Mag: +0.7 PMG: 13 ^h 22 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	115	24.7	190	09.7	-16	34.1	212	08.7	-23	35.7
1	130	27.1	205	13.5		33.9	227	09.2		35.8
2	145	29.6	220	17.3		33.7	242	09.8		35.9
3	160	32.1	235	21.1		33.5	257	10.3		36.0
4	175	34.5	250	24.9		33.3	272	10.8		36.1
5	190	37.0	265	28.7	-16	33.1	287	11.3	-23	36.2
6	205	39.5	280	32.5	-16	32.9	302	11.8	-23	36.3
7	220	41.9	295	36.3		32.7	317	12.3		36.5
8	235	44.4	310	40.1		32.5	332	12.8		36.6
9	250	46.9	325	43.9		32.3	347	13.3		36.7
10	265	49.3	340	47.7		32.1	2	13.8		36.8
11	280	51.8	355	51.5	-16	31.9	17	14.3	-23	36.9
12	295	54.2	10	55.3	-16	31.7	32	14.8	-23	37.0
13	310	56.7	25	59.1		31.5	47	15.3		37.1
14	325	59.2	41	02.9		31.3	62	15.8		37.2
15	341	01.6	56	06.6		31.1	77	16.3		37.3
16	356	04.1	71	10.4		31.0	92	16.8		37.4
17	11	06.6	86	14.2	-16	30.8	107	17.3	-23	37.5
18	26	09.0	101	17.9	-16	30.6	122	17.8	-23	37.6
19	41	11.5	116	21.7		30.4	137	18.3		37.8
20	56	14.0	131	25.5		30.2	152	18.8		37.9
21	71	16.4	146	29.2		30.0	167	19.3		38.0
22	86	18.9	161	33.0		29.8	182	19.8		38.1
23	101	21.4	176	36.7		29.7	197	20.3		38.2
24	116	23.8	191	40.5	-16	29.5	212	20.8	-23	38.3
Dif	—		+38		+2		+5		-1	
							+20		+2	
									+22	
									+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 10 ^m 1			Edad: 14 ^d 2 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 PMG: *** **m R°: ***													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	31.5	-20	47.3	8	44.5	+26	06.3	18	60 N	6 59	7 52	8 44	14 14	80	9 29	24
1	192	31.3		46.8	23	13.5 ¹⁰⁰		04.5	20	58	53	43	31	38	76	9 05	28
2	207	31.1		46.3	37	42.6 ¹⁰¹		02.5	21	56	48	35	19	14 58	72	8 45	32
3	222	30.9		45.8	52	11.6 ¹⁰⁰	+26	00.4	21	54	43	27	8 08	15 14	70	28	35
4	237	30.7		45.3	66	40.7 ¹⁰¹	+25	58.2	22	52	38	21	7 59	28	68	14	36
5	252	30.5	-20	44.9	81	09.7 ¹⁰⁰	+25	55.8	24	50	6 34	7 14	7 51	15 40	67	8 01	38
6	267	30.3	-20	44.4	95	38.8 ¹⁰¹	+25	53.3	25	45	6 25	7 01	7 34	16 06	63	7 36	40
7	282	30.1		43.9	110	07.8 ¹⁰⁰		50.7	26	40	16	6 50	19	26	60	7 15	43
8	297	29.9		43.4	124	36.9 ¹⁰¹		48.0	27	35	09	40	7 07	43	58	6 58	44
9	312	29.7		42.9	139	06.0 ¹⁰¹		45.1	29	30	6 01	31	6 56	16 57	57	43	46
10	327	29.5		42.4	153	35.1 ¹⁰¹		42.1	30	20	5 47	6 14	38	17 22	54	6 18	48
11	342	29.3	-20	41.9	168	04.3 ¹⁰²	+25	39.0	31	10 N	5 33	5 59	6 22	17 43	52	5 57	49
12	357	29.1	-20	41.4	182	33.4 ¹⁰¹	+25	35.7	33	0	5 19	5 44	6 06	18 03	50	5 36	51
13	12	28.9		40.9	197	02.6 ¹⁰²		32.3	34	10 S	5 02	28	5 51	22	49	5 16	52
14	27	28.7		40.4	211	31.7 ¹⁰¹		28.8	35	20	4 42	5 10	34	18 43	46	4 54	54
15	42	28.5		39.9	226	00.9 ¹⁰²		25.2	36	30	16	4 49	15	19 08	43	28	56
16	57	28.3		39.4	240	30.1 ¹⁰²		21.4	38	35	4 00	35	5 04	22	42	4 13	57
17	72	28.1	-20	38.9	254	59.3 ¹⁰²	+25	17.5	39	40	3 40	4 19	4 51	19 39	39	3 56	58
18	87	27.9	-20	38.4	269	28.6 ¹⁰³	+25	13.5	40	45	3 14	4 00	4 35	19 58	37	3 35	60
19	102	27.7		37.9	283	57.9 ¹⁰³		09.4	41	50	2 38	3 35	16	20 23	34	3 09	62
20	117	27.4		37.4	298	27.1 ¹⁰²		05.1	43	52	2 19	23	4 07	35	32	2 56	63
21	132	27.2		36.9	312	56.5 ¹⁰⁴	+25	00.7	44	54	1 53	3 08	3 57	20 49	29	41	65
22	147	27.0		36.4	327	25.8 ¹⁰³	+24	56.2	45	56	1 15	2 51	45	21 04	27	23	68
23	162	26.8		35.9	341	55.2 ¹⁰⁴		51.5	47	58	*** **	30	32	23	23	2 02	70
24	177	26.6	-20	35.4	356	24.5 ¹⁰³	+24	46.8	47	60 S	** **	2 03	3 16	21 46	18	1 35	75

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 16 ^h 11 ^m 8		Mag: -4.3 PMG: 11 ^h 11 ^m		Mag: +1.5 PMG: 9 ^h 50 ^m		Mag: -2.1 PMG: 14 ^h 37 ^m		Mag: +0.7 PMG: 13 ^h 18 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	116	23.8	191	40.5	-16	29.5	212	20.8	-23	38.3	140	17.0	-11	00.5	159	58.4	-17	30.5
1	131	26.3	206	44.2		29.3	227	21.3		38.4	155	18.9		00.3	175	00.6		30.4
2	146	28.7	221	47.9		29.1	242	21.8		38.5	170	20.9	-11	00.1	190	02.7		30.3
3	161	31.2	236	51.7		28.9	257	22.3		38.6	185	22.8	-10	59.9	205	04.9		30.2
4	176	33.7	251	55.4		28.8	272	22.8		38.7	200	24.8		59.7	220	07.1		30.2
5	191	36.1	266	59.1	-16	28.6	287	23.3	-23	38.8	215	26.7	-10	59.5	235	09.3	-17	30.1
6	206	38.6	282	02.8	-16	28.4	302	23.8	-23	38.9	230	28.7	-10	59.3	250	11.4	-17	30.0
7	221	41.1	297	06.6		28.2	317	24.3		39.0	245	30.6		59.1	265	13.6		29.9
8	236	43.5	312	10.3		28.1	332	24.8		39.1	260	32.6		58.9	280	15.8		29.8
9	251	46.0	327	14.0		27.9	347	25.3		39.2	275	34.5		58.7	295	17.9		29.7
10	266	48.5	342	17.7		27.7	2	25.8		39.3	290	36.5		58.5	310	20.1		29.7
11	281	50.9	357	21.4	-16	27.5	17	26.3	-23	39.4	305	38.4	-10	58.3	325	22.3	-17	29.6
12	296	53.4	12	25.1	-16	27.4	32	26.8	-23	39.5	320	40.4	-10	58.1	340	24.5	-17	29.5
13	311	55.9	27	28.8		27.2	47	27.3		39.6	335	42.3		57.9	355	26.6		29.4
14	326	58.3	42	32.5		27.0	62	27.8		39.7	350	44.3		57.7	10	28.8		29.3
15	342	00.8	57	36.2		26.9	77	28.3		39.8	5	46.2		57.6	25	31.0		29.3
16	357	03.2	72	39.9		26.7	92	28.8		39.9	20	48.2		57.4	40	33.1		29.2
17	12	05.7	87	43.6	-16	26.5	107	29.3	-23	40.0	35	50.1	-10	57.2	55	35.3	-17	29.1
18	27	08.2	102	47.3	-16	26.4	122	29.8	-23	40.1	50	52.1	-10	57.0	70	37.5	-17	29.0
19	42	10.6	117	50.9		26.2	137	30.3		40.2	65	54.0		56.8	85	39.6		28.9
20	57	13.1	132	54.6		26.0	152	30.8		40.3	80	56.0		56.6	100	41.8		28.8
21	72	15.6	147	58.3		25.9	167	31.3		40.4	95	57.9		56.4	115	44.0		28.8
22	87	18.0	163	01.9		25.7	182	31.8		40.4	110	59.9		56.2	130	46.2		28.7
23	102	20.5	178	05.6		25.5	197	32.3		40.5	126	01.8		56.0	145	48.3		28.6
24	117	23.0	193	09.3	-16	25.4	212	32.8	-23	40.6	141	03.8	-10	55.8	160	50.5	-17	28.5
Dif	—		+37		+2		+5		-1		+19		+2		+22		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3 PMG: 12 ^h 10 ^m 4			Edad: 15 ^d 2 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 55 ^m 0 SD: 14 ^h 9 PMG: 0 ^h 15 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m
0	177	26.6	-20	35.4	356	24.5	+24	46.8	60 N	15 39	16 30	17 24	15 34	89	9 53	14
1	192	26.4		34.9	10	54.0 ¹⁰⁵		41.9 49	58	15 52	40	29	15 54	83	33	19
2	207	26.2		34.4	25	23.4 ¹⁰⁴		36.9 50	56	16 04	48	35	16 10	79	17	22
3	222	26.0		33.9	39	52.9 ¹⁰⁵		31.7 52	54	14	16 55	39	24	76	9 03	25
4	237	25.8		33.4	54	22.4 ¹⁰⁵		26.5 52	52	23	17 02	44	36	73	8 50	28
5	252	25.7	-20	32.8	68	51.9 ¹⁰⁵	+24	21.1 54	50	16 31	17 08	17 48	16 47	71	8 39	30
6	267	25.5	-20	32.3	83	21.5 ¹⁰⁶	+24	15.6 55	45	16 48	17 21	17 57	17 09	66	8 16	34
7	282	25.3		31.8	97	51.1 ¹⁰⁶		09.9 57	40	17 02	32	18 05	26	64	7 58	37
8	297	25.1		31.3	112	20.7 ¹⁰⁶	+24	04.2 57	35	14	42	13	41	61	42	39
9	312	24.9		30.8	126	50.4 ¹⁰⁷	+23	58.3 59	30	25	17 51	20	17 54	59	29	41
10	327	24.7		30.3	141	20.0 ¹⁰⁶		52.3 60	20	43	18 07	34	18 16	55	7 06	44
11	342	24.5	-20	29.8	155	49.8 ¹⁰⁸	+23	46.2 61	10 N	17 59	18 21	18 47	18 35	52	6 46	47
12	357	24.3	-20	29.3	170	19.5 ¹⁰⁷	+23	40.0 62	0	18 14	18 36	19 02	18 53	49	6 27	50
13	12	24.1		28.8	184	49.3 ¹⁰⁸		33.7 63	10 S	29	18 52	18	19 11	45	6 08	52
14	27	23.9		28.2	199	19.2 ¹⁰⁹		27.2 65	20	18 45	19 09	19 38	29	43	5 48	55
15	42	23.7		27.7	213	49.0 ¹⁰⁸		20.6 66	30	19 04	31	20 03	19 51	39	24	58
16	57	23.5		27.2	228	18.9 ¹⁰⁹		13.9 67	35	15	19 44	19	20 04	36	5 10	60
17	72	23.3	-20	26.7	242	48.9 ¹¹⁰	+23	07.1 68	40	19 28	20 00	20 39	20 18	34	4 54	63
18	87	23.1	-20	26.2	257	18.9 ¹¹⁰	+23	00.2 69	45	19 43	20 18	21 04	20 35	31	4 35	65
19	102	22.9		25.7	271	48.9 ¹¹⁰	+22	53.2 70	50	20 02	43	39	20 57	26	4 11	69
20	117	22.7		25.1	286	19.0 ¹¹¹		46.0 72	52	11	20 55	21 58	21 07	24	3 59	71
21	132	22.5		24.6	300	49.1 ¹¹¹		38.7 73	54	21	21 09	22 22	18	22	46	74
22	147	22.3		24.1	315	19.2 ¹¹¹		31.4 73	56	32	25	22 56	31	19	31	76
23	162	22.1		23.6	329	49.4 ¹¹²		23.9 75	58	20 45	21 45	** **	21 46	15	3 12	81
24	177	21.9	-20	23.1	344	19.6 ¹¹²	+22	16.3 76	60 S	21 00	22 11	** **	22 04	10	2 50	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 07 ^m 8		Mag: -4.4 PMG: 11 ^h 05 ^m		Mag: +1.5 PMG: 9 ^h 49 ^m		Mag: -2.1 PMG: 14 ^h 34 ^m		Mag: +0.7 PMG: 13 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	117	23.0	193	09.3	-16	25.4	212	32.8	-23	40.6
1	132	25.4	208	12.9		25.2	227	33.3		40.7
2	147	27.9	223	16.6		25.1	242	33.8		40.8
3	162	30.4	238	20.2		24.9	257	34.3		40.9
4	177	32.8	253	23.9		24.7	272	34.8		41.0
5	192	35.3	268	27.5	-16	24.6	287	35.3	-23	41.1
6	207	37.7	283	31.1	-16	24.4	302	35.8	-23	41.2
7	222	40.2	298	34.8		24.3	317	36.3		41.3
8	237	42.7	313	38.4		24.1	332	36.8		41.4
9	252	45.1	328	42.0		24.0	347	37.2		41.5
10	267	47.6	343	45.6		23.8	2	37.7		41.6
11	282	50.1	358	49.3	-16	23.7	17	38.2	-23	41.6
12	297	52.5	13	52.9	-16	23.5	32	38.7	-23	41.7
13	312	55.0	28	56.5		23.4	47	39.2		41.8
14	327	57.5	44	00.1		23.2	62	39.7		41.9
15	342	59.9	59	03.7		23.1	77	40.2		42.0
16	358	02.4	74	07.3		22.9	92	40.7		42.1
17	13	04.9	89	10.9	-16	22.8	107	41.2	-23	42.2
18	28	07.3	104	14.5	-16	22.6	122	41.7	-23	42.3
19	43	09.8	119	18.1		22.5	137	42.2		42.3
20	58	12.2	134	21.6		22.3	152	42.7		42.4
21	73	14.7	149	25.2		22.2	167	43.2		42.5
22	88	17.2	164	28.8		22.0	182	43.7		42.6
23	103	19.6	179	32.4		21.9	197	44.2		42.7
24	118	22.1	194	35.9	-16	21.8	212	44.7	-23	42.8
Dif	—		+36		+2		+5		-1	
							+19		+2	
									+22	
									+	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 3				Edad: 16 ^d 2 PHE { 4 ^h : 55 ^m 1 12 ^h : 55 ^m 2 20 ^h : 55 ^m 4														
	PMG: 12 ^h 10 ^m 7				SD: 15 ^d 0 PMG: 1 ^h 05 ^m R°: 48 ^m														
	hG ☉		Dec		hG ☾		Dif		Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	m	h m m	m
0	177	21.9	-20	23.1	344	19.6	+22	16.3	77	58	60 N	6 56	7 50	8 41	17 03	89		10 07	8
1	192	21.7		22.5	358	49.9 ¹¹³		08.6	77	58		51	41	28	17 85			9 52	12
2	207	21.6		22.0	13	20.2 ¹¹³	+22	00.8	78	56		46	32	16	29 81			39	16
3	222	21.4		21.5	27	50.6 ¹¹⁴	+21	52.8	80	54		41	25	8 06	40 78			28	19
4	237	21.2		21.0	42	20.9 ¹¹³		44.8	80	52		37	19	7 57	49 76			18	21
5	252	21.0	-20	20.4	56	51.4 ¹¹⁵	+21	36.6	82	50		6 33	7 13	7 49	17 58	73		9 09	24
6	267	20.8	-20	19.9	71	21.9 ¹¹⁵	+21	28.4	82	45		6 24	7 00	7 32	18 15	69		8 50	28
7	282	20.6		19.4	85	52.4 ¹¹⁵		20.0	84	40		16	6 49	18	30 65			35	31
8	297	20.4		18.9	100	23.0 ¹¹⁶		11.6	84	35		08	39	7 06	42 62			21	35
9	312	20.2		18.3	114	53.6 ¹¹⁶	+21	03.0	86	30		6 01	30	6 56	18 53	59		8 10	37
10	327	20.0		17.8	129	24.2 ¹¹⁶	+20	54.3	87	20		5 47	14	38	19 11	54		7 50	41
11	342	19.8	-20	17.3	143	54.9 ¹¹⁷	+20	45.6	87	10 N		5 34	6 00	6 22	19 27	50		7 33	44
12	357	19.6	-20	16.8	158	25.7 ¹¹⁸	+20	36.7	89	0		5 19	5 45	6 07	19 42	47		7 17	47
13	12	19.5		16.2	172	56.5 ¹¹⁸		27.7	90	10 S		5 03	29	5 52	19 56	44		7 00	51
14	27	19.3		15.7	187	27.3 ¹¹⁸		18.6	91	20		4 44	5 12	36	20 12	39		6 43	54
15	42	19.1		15.2	201	58.2 ¹¹⁹		09.4	92	30		18	4 50	17	30 35			22	59
16	57	18.9		14.6	216	29.1 ¹¹⁹	+20	00.2	92	35		4 02	37	5 06	40 33			6 10	62
17	72	18.7	-20	14.1	231	00.0 ¹¹⁹	+19	50.8	94	40		3 43	4 22	4 53	20 52	29		5 57	64
18	87	18.5	-20	13.6	245	31.1 ¹²¹	+19	41.3	95	45		3 18	4 03	4 38	21 06	26		5 40	68
19	102	18.3		13.0	260	02.1 ¹²⁰		31.7	96	50		2 43	3 39	19	23 21			20	72
20	117	18.2		12.5	274	33.2 ¹²¹		22.1	96	52		24	27	11	31 19			10	75
21	132	18.0		12.0	289	04.4 ¹²²		12.3	98	54		2 00	3 13	4 01	40 16			5 00	77
22	147	17.8		11.4	303	35.5 ¹²¹	+19	02.5	98	56		1 25	2 56	3 49	21 50	13		4 47	81
23	162	17.6		10.9	318	06.8 ¹²³	+18	52.5 ¹⁰⁰		58		** **	36	36	22 01	10		33	84
24	177	17.4	-20	10.4	332	38.1 ¹²³	+18	42.5 ¹⁰⁰		60 S		** **	2 11	3 21	22 14	6		4 15	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 16 ^h 03 ^m 9		Mag: -4.4 PMG: 10 ^h 59 ^m		Mag: +1.5 PMG: 9 ^h 49 ^m		Mag: -2.1 PMG: 14 ^h 31 ^m		Mag: +0.7 PMG: 13 ^h 11 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	118	22.1	194	35.9	-16	21.8	212	44.7	-23	42.8
1	133	24.6	209	39.5		21.6	227	45.2		42.8
2	148	27.0	224	43.0		21.5	242	45.7		42.9
3	163	29.5	239	46.6		21.4	257	46.2		43.0
4	178	32.0	254	50.2		21.2	272	46.7		43.1
5	193	34.4	269	53.7	-16	21.1	287	47.2	-23	43.2
6	208	36.9	284	57.2	-16	20.9	302	47.7	-23	43.3
7	223	39.3	300	00.8		20.8	317	48.1		43.3
8	238	41.8	315	04.3		20.7	332	48.6		43.4
9	253	44.3	330	07.8		20.5	347	49.1		43.5
10	268	46.7	345	11.4		20.4	2	49.6		43.6
11	283	49.2	0	14.9	-16	20.3	17	50.1	-23	43.7
12	298	51.7	15	18.4	-16	20.2	32	50.6	-23	43.7
13	313	54.1	30	21.9		20.0	47	51.1		43.8
14	328	56.6	45	25.4		19.9	62	51.6		43.9
15	343	59.1	60	28.9		19.8	77	52.1		44.0
16	359	01.5	75	32.4		19.6	92	52.6		44.1
17	14	04.0	90	35.9	-16	19.5	107	53.1	-23	44.1
18	29	06.5	105	39.4	-16	19.4	122	53.6	-23	44.2
19	44	08.9	120	42.9		19.3	137	54.1		44.3
20	59	11.4	135	46.4		19.1	152	54.6		44.4
21	74	13.8	150	49.9		19.0	167	55.1		44.4
22	89	16.3	165	53.4		18.9	182	55.5		44.5
23	104	18.8	180	56.9		18.8	197	56.0		44.6
24	119	21.2	196	00.3	-16	18.7	212	56.5	-23	44.7
Dif	—		+35		+1		+5		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 11 ^m 0			Edad: 17 ^d 2 PHE { 4 ^h : 55:5 12 ^h : 55:7 20 ^h : 55:8 PMG: 1 ^h 53 ^m R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	177	17.4	-20	10.4	332	38.1	+18	42.5	60 N	15 43	16 35	17 28	18 32 89	10 15 5
1	192	17.2		09.8	347	09.4 ¹²³		32.3 ¹⁰²	58	15 56	43	33	42 85	10 04 9
2	207	17.0		09.3	1	40.7 ¹²³		22.1 ¹⁰²	56	16 08	51	38	50 82	9 55 12
3	222	16.9		08.7	16	12.2 ¹²⁵		11.8 ¹⁰³	54	18	16 58	42	18 58 78	47 14
4	237	16.7		08.2	30	43.6 ¹²⁴	+18	01.4 ¹⁰⁴	52	26	17 05	47	19 05 76	39 17
5	252	16.5	-20	07.7	45	15.1 ¹²⁵	+17	50.9 ¹⁰⁵	50	16 34	17 11	17 50	19 11 73	9 33 19
6	267	16.3	-20	07.1	59	46.6 ¹²⁵	+17	40.3 ¹⁰⁶	45	16 51	17 23	17 59	19 24 69	9 18 24
7	282	16.1		06.6	74	18.2 ¹²⁶		29.6 ¹⁰⁷	40	17 05	34	18 07	35 64	9 06 28
8	297	15.9		06.0	88	49.8 ¹²⁶		18.9 ¹⁰⁷	35	16	44	15	44 61	8 56 31
9	312	15.8		05.5	103	21.5 ¹²⁷	+17	08.0 ¹⁰⁹	30	27	17 52	21	19 52 58	47 33
10	327	15.6		05.0	117	53.2 ¹²⁷	+16	57.1 ¹⁰⁹	20	17 44	18 08	35	20 05 54	31 38
11	342	15.4	-20	04.4	132	25.0 ¹²⁸	+16	46.1 ¹¹⁰	10 N	18 00	18 22	18 48	20 17 50	8 17 43
12	357	15.2	-20	03.9	146	56.8 ¹²⁸	+16	35.0 ¹¹¹	0	18 15	18 37	19 02	20 29 45	8 04 46
13	12	15.0		03.3	161	28.6 ¹²⁸		23.8 ¹¹²	10 S	29	18 52	18	40 41	7 51 50
14	27	14.9		02.8	176	00.5 ¹²⁹		12.6 ¹¹²	20	18 45	19 09	19 37	20 51 38	37 54
15	42	14.7		02.2	190	32.4 ¹²⁹	+16	01.2 ¹¹⁴	30	19 04	30	20 02	21 05 32	21 59
16	57	14.5		01.7	205	04.3 ¹²⁹	+15	49.8 ¹¹⁴	35	15	43	18	13 29	12 61
17	72	14.3	-20	01.1	219	36.3 ¹³⁰	+15	38.3 ¹¹⁵	40	19 27	19 58	20 37	21 21 27	7 01 65
18	87	14.1	-20	00.6	234	08.3 ¹³⁰	+15	26.7 ¹¹⁶	45	19 42	20 17	21 01	21 32 22	6 48 69
19	102	14.0	-20	00.0	248	40.4 ¹³¹		15.1 ¹¹⁶	50	20 00	40	35	44 18	32 74
20	117	13.8	-19	59.5	263	12.5 ¹³¹	+15	03.4 ¹¹⁷	52	09	20 52	21 53	50 16	25 76
21	132	13.6		58.9	277	44.7 ¹³²	+14	51.6 ¹¹⁸	54	18	21 06	22 16	21 56 13	17 78
22	147	13.4		58.4	292	16.8 ¹³¹		39.7 ¹¹⁹	56	29	21	22 48	22 03 11	6 08 81
23	162	13.2		57.8	306	49.1 ¹³³		27.7 ¹²⁰	58	42	21 40	** **	11 7	5 57 85
24	177	13.1	-19	57.3	321	21.3 ¹³²	+14	15.7 ¹²⁰	60 S	20 57	22 05	** **	22 20 4	5 45 89
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 16 ^h 00 ^m 0		Mag: -4.5 PMG: 10 ^h 53 ^m		Mag: +1.5 PMG: 9 ^h 48 ^m		Mag: -2.1 PMG: 14 ^h 28 ^m		Mag: +0.7 PMG: 13 ^h 08 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	119	21.2	196	00.3	-16	18.7	212	56.5	-23	44.7				
1	134	23.7	211	03.8		18.5	227	57.0		44.7				
2	149	26.2	226	07.2		18.4	242	57.5		44.8				
3	164	28.6	241	10.7		18.3	257	58.0		44.9				
4	179	31.1	256	14.2		18.2	272	58.5		45.0				
5	194	33.6	271	17.6	-16	18.1	287	59.0	-23	45.0				
6	209	36.0	286	21.1	-16	18.0	302	59.5	-23	45.1				
7	224	38.5	301	24.5		17.8	318	00.0		45.2				
8	239	41.0	316	27.9		17.7	333	00.5		45.2				
9	254	43.4	331	31.4		17.6	348	01.0		45.3				
10	269	45.9	346	34.8		17.5	3	01.5		45.4				
11	284	48.3	1	38.2	-16	17.4	18	01.9	-23	45.5				
12	299	50.8	16	41.6	-16	17.3	33	02.4	-23	45.5				
13	314	53.3	31	45.0		17.2	48	02.9		45.6				
14	329	55.7	46	48.5		17.1	63	03.4		45.7				
15	344	58.2	61	51.9		17.0	78	03.9		45.7				
16	0	00.7	76	55.3		16.9	93	04.4		45.8				
17	15	03.1	91	58.7	-16	16.8	108	04.9	-23	45.9				
18	30	05.6	107	02.1	-16	16.7	123	05.4	-23	45.9				
19	45	08.1	122	05.4		16.6	138	05.9		46.0				
20	60	10.5	137	08.8		16.4	153	06.4		46.1				
21	75	13.0	152	12.2		16.3	168	06.8		46.1				
22	90	15.5	167	15.6		16.2	183	07.3		46.2				
23	105	17.9	182	19.0		16.1	198	07.8		46.3				
24	120	20.4	197	22.3	-16	16.0	213	08.3	-23	46.3				
Dif	—		+34		+1		+5		-1					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/3 PMG: 12 ^h 11 ^m 3			Edad: 18 ^d 2 PHE { 4 ^h : 56/0 12 ^h : 56/1 20 ^h : 56/3 SD: 15/2 PMG: 2 ^h 39 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	177	13.1	-19	57.3	321	21.3	+14	15.7	60 N	6 54	7 47	8 37	20 01	88	10 20 3
1	192	12.9		56.7	335	53.6 ¹³³	+14	03.6 ¹²¹	58	48	38	25	07 85		13 7
2	207	12.7		56.2	350	25.9 ¹³³	+13	51.5 ¹²¹	56	44	30	13	12 82		07 10
3	222	12.5		55.6	4	58.3 ¹³⁴		39.3 ¹²²	54	39	23	8 04	16 79		10 01 13
4	237	12.4		55.1	19	30.7 ¹³⁴		27.0 ¹²³	52	35	17	7 55	21 76		9 56 15
5	252	12.2	-19	54.5	34	03.1 ¹³⁴	+13	14.6 ¹²⁴	50	6 31	7 11	7 47	20 24	74	9 52 17
6	267	12.0	-19	54.0	48	35.5 ¹³⁴	+13	02.2 ¹²⁴	45	6 22	6 58	7 31	20 33	69	9 42 21
7	282	11.8		53.4	63	08.0 ¹³⁵	+12	49.7 ¹²⁵	40	15	48	17	39 65		34 25
8	297	11.7		52.8	77	40.5 ¹³⁵		37.1 ¹²⁶	35	07	38	7 05	45 62		27 28
9	312	11.5		52.3	92	13.1 ¹³⁶		24.5 ¹²⁶	30	6 01	30	6 55	50 59		20 32
10	327	11.3		51.7	106	45.6 ¹³⁵	+12	11.8 ¹²⁷	20	5 47	14	38	20 59	53	09 37
11	342	11.1	-19	51.2	121	18.2 ¹³⁶	+11	59.0 ¹²⁸	10 N	5 34	6 00	6 22	21 07	48	9 00 40
12	357	11.0	-19	50.6	135	50.9 ¹³⁷	+11	46.2 ¹²⁸	0	5 20	5 46	6 08	21 14	44	8 50 45
13	12	10.8		50.0	150	23.5 ¹³⁶		33.4 ¹²⁸	10 S	5 04	30	5 53	21 40		41 49
14	27	10.6		49.5	164	56.2 ¹³⁷		20.4 ¹³⁰	20	4 45	5 13	37	29 35		31 54
15	42	10.4		48.9	179	28.9 ¹³⁷	+11	07.4 ¹³⁰	30	20	4 52	19	37 31		20 58
16	57	10.3		48.4	194	01.7 ¹³⁸	+10	54.4 ¹³⁰	35	4 05	40	5 08	42 28		13 62
17	72	10.1	-19	47.8	208	34.4 ¹³⁷	+10	41.3 ¹³¹	40	3 46	4 24	4 56	21 48	24	8 06 64
18	87	09.9	-19	47.2	223	07.2 ¹³⁸	+10	28.1 ¹³²	45	3 21	4 06	4 41	21 54	21	7 57 69
19	102	09.8		46.7	237	40.0 ¹³⁸		14.9 ¹³²	50	2 48	3 42	23	22 02	16	46 74
20	117	09.6		46.1	252	12.8 ¹³⁸	+10	01.6 ¹³³	52	29	31	14	06 14		41 76
21	132	09.4		45.5	266	45.7 ¹³⁹	+9	48.3 ¹³³	54	2 07	17	4 04	09 12		35 79
22	147	09.2		45.0	281	18.5 ¹³⁸		34.9 ¹³⁴	56	1 35	3 01	3 54	14 9		29 82
23	162	09.1		44.4	295	51.4 ¹³⁹		21.5 ¹³⁴	58	** **	2 42	41	18 7		22 85
24	177	08.9	-19	43.8	310	24.3 ¹³⁹	+9	08.0 ¹³⁵	60 S	** **	2 18	3 26	22 24	3	7 14 89
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 56 ^m 0			Mag: -4.5 PMG: 10 ^h 48 ^m			Mag: +1.5 PMG: 9 ^h 47 ^m			Mag: -2.1 PMG: 14 ^h 25 ^m			Mag: +0.7 PMG: 13 ^h 04 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	120	20.4		197	22.3	-16	16.0	213	08.3	-23	46.3	143	23.8	-10	41.2
1	135	22.8		212	25.7		15.9	228	08.8		46.4	158	25.8		41.0
2	150	25.3		227	29.1		15.8	243	09.3		46.5	173	27.7		40.8
3	165	27.8		242	32.4		15.8	258	09.8		46.5	188	29.7		40.6
4	180	30.2		257	35.8		15.7	273	10.3		46.6	203	31.6		40.4
5	195	32.7		272	39.1	-16	15.6	288	10.8	-23	46.6	218	33.5	-10	40.2
6	210	35.2		287	42.4	-16	15.5	303	11.3	-23	46.7	233	35.5	-10	40.0
7	225	37.6		302	45.8		15.4	318	11.7		46.8	248	37.4		39.8
8	240	40.1		317	49.1		15.3	333	12.2		46.8	263	39.4		39.6
9	255	42.6		332	52.5		15.2	348	12.7		46.9	278	41.3		39.4
10	270	45.0		347	55.8		15.1	3	13.2		47.0	293	43.2		39.2
11	285	47.5		2	59.1	-16	15.0	18	13.7	-23	47.0	308	45.2	-10	39.0
12	300	49.9		18	02.4	-16	14.9	33	14.2	-23	47.1	323	47.1	-10	38.8
13	315	52.4		33	05.7		14.8	48	14.7		47.1	338	49.1		38.6
14	330	54.9		48	09.0		14.7	63	15.2		47.2	353	51.0		38.4
15	345	57.3		63	12.3		14.7	78	15.7		47.3	8	53.0		38.2
16	0	59.8		78	15.6		14.6	93	16.1		47.3	23	54.9		38.0
17	16	02.3		93	18.9	-16	14.5	108	16.6	-23	47.4	38	56.8	-10	37.8
18	31	04.7		108	22.2	-16	14.4	123	17.1	-23	47.4	53	58.8	-10	37.6
19	46	07.2		123	25.5		14.3	138	17.6		47.5	69	00.7		37.4
20	61	09.7		138	28.8		14.2	153	18.1		47.5	84	02.7		37.1
21	76	12.1		153	32.1		14.2	168	18.6		47.6	99	04.6		36.9
22	91	14.6		168	35.3		14.1	183	19.1		47.6	114	06.5		36.7
23	106	17.1		183	38.6		14.0	198	19.6		47.7	129	08.5		36.5
24	121	19.5		198	41.9	-16	13.9	213	20.0	-23	47.8	144	10.4	-10	36.3
Dif	—			+33		+1		+5		-1		+19		+2	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 11 ^m 5			Edad: 19 ^d 2	PHE { 4 ^h : 56:5 12 ^h : 56:7 20 ^h : 56:8									
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	177	08.9	-19 43.8	310	24.3	+9 08.0	60 N	15 48	16 39	17 31	21 29 90	10 23 3		
1	192	08.7	43.3	324	57.2 ¹³⁹	+8 54.5 ¹³⁵	58	16 01	47	37	32 85	20 6		
2	207	08.6	42.7	339	30.1 ¹³⁹	40.9 ¹³⁶	56	12	16 55	41	34 82	17 8		
3	222	08.4	42.1	354	03.1 ¹⁴⁰	27.3 ¹³⁶	54	21	17 02	45	35 80	14 11		
4	237	08.2	41.6	8	36.1 ¹⁴⁰	+8 13.6 ¹³⁷	52	30	08	49	37 77	11 14		
5	252	08.1	-19 41.0	23	09.0 ¹³⁹	+7 59.9 ¹³⁷	50	16 37	17 13	17 53	21 38 76	10 09 15		
6	267	07.9	-19 40.4	37	42.0 ¹⁴⁰	+7 46.2 ¹³⁷	45	16 54	17 26	18 02	21 42 70	10 03 21		
7	282	07.7	39.8	52	15.0 ¹⁴⁰	32.4 ¹³⁸	40	17 07	36	09	44 66	9 59 24		
8	297	07.6	39.3	66	48.0 ¹⁴⁰	18.5 ¹³⁹	35	18	46	16	47 62	55 27		
9	312	07.4	38.7	81	21.1 ¹⁴¹	+7 04.6 ¹³⁹	30	28	17 54	23	49 59	52 30		
10	327	07.2	38.1	95	54.1 ¹⁴⁰	+6 50.7 ¹³⁹	20	17 46	18 09	36	52 54	46 35		
11	342	07.1	-19 37.5	110	27.1 ¹⁴⁰	+6 36.7 ¹⁴⁰	10 N	18 01	18 23	18 49	21 55 50	9 40 40		
12	357	06.9	-19 37.0	125	00.2 ¹⁴¹	+6 22.7 ¹⁴⁰	0	18 15	18 37	19 03	21 58 45	9 35 45		
13	12	06.7	36.4	139	33.2 ¹⁴⁰	+6 08.7 ¹⁴⁰	10 S	30	18 52	18	22 01 41	30 49		
14	27	06.6	35.8	154	06.3 ¹⁴¹	+5 54.6 ¹⁴¹	20	18 45	19 09	19 37	04 36	25 53		
15	42	06.4	35.2	168	39.3 ¹⁴⁰	40.5 ¹⁴¹	30	19 03	29	20 01	08 31	18 59		
16	57	06.2	34.7	183	12.4 ¹⁴¹	26.3 ¹⁴²	35	14	42	16	10 28	15 62		
17	72	06.1	-19 34.1	197	45.4 ¹⁴⁰	+5 12.1 ¹⁴²	40	19 26	19 57	20 35	22 12 24	9 10 66		
18	87	05.9	-19 33.5	212	18.5 ¹⁴¹	+4 57.9 ¹⁴²	45	19 40	20 15	20 59	22 15 20	9 06 69		
19	102	05.7	32.9	226	51.6 ¹⁴¹	43.6 ¹⁴³	50	19 58	38	21 32	18 16	9 00 74		
20	117	05.6	32.3	241	24.6 ¹⁴⁰	29.4 ¹⁴²	52	20 06	20 49	21 49	20 13	8 57 77		
21	132	05.4	31.8	255	57.7 ¹⁴¹	15.0 ¹⁴⁴	54	16	21 02	22 10	21 11	54 79		
22	147	05.3	31.2	270	30.7 ¹⁴⁰	+4 00.7 ¹⁴³	56	26	17	22 39	23 9	51 82		
23	162	05.1	30.6	285	03.8 ¹⁴¹	+3 46.3 ¹⁴⁴	58	38	35	23 29	25 6	47 85		
24	177	04.9	-19 30.0	299	36.8 ¹⁴⁰	+3 31.9 ¹⁴⁴	60 S	20 52	21 58	** **	22 27 3	8 43 89		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 52 ^m 1		Mag: -4.6 PMG: 10 ^h 43 ^m		Mag: +1.4 PMG: 9 ^h 46 ^m		Mag: -2.1 PMG: 14 ^h 21 ^m		Mag: +0.7 PMG: 13 ^h 01 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	121	19.5	198 41.9	-16 13.9	213 20.0	-23 47.8	144 10.4	-10 36.3	164 18.7	-17 20.5
1	136	22.0	213 45.1	13.8	228 20.5	47.8	159 12.4	36.1	179 20.9	20.4
2	151	24.4	228 48.4	13.8	243 21.0	47.9	174 14.3	35.9	194 23.1	20.4
3	166	26.9	243 51.6	13.7	258 21.5	47.9	189 16.2	35.7	209 25.2	20.3
4	181	29.4	258 54.9	13.6	273 22.0	48.0	204 18.2	35.5	224 27.4	20.2
5	196	31.8	273 58.1	-16 13.5	288 22.5	-23 48.0	219 20.1	-10 35.3	239 29.6	-17 20.1
6	211	34.3	289 01.4	-16 13.5	303 23.0	-23 48.1	234 22.1	-10 35.1	254 31.7	-17 20.0
7	226	36.8	304 04.6	13.4	318 23.5	48.1	249 24.0	34.9	269 33.9	19.9
8	241	39.2	319 07.8	13.3	333 23.9	48.2	264 25.9	34.7	284 36.1	19.9
9	256	41.7	334 11.0	13.2	348 24.4	48.2	279 27.9	34.5	299 38.2	19.8
10	271	44.2	349 14.3	13.2	3 24.9	48.3	294 29.8	34.3	314 40.4	19.7
11	286	46.6	4 17.5	-16 13.1	18 25.4	-23 48.3	309 31.8	-10 34.1	329 42.6	-17 19.6
12	301	49.1	19 20.7	-16 13.0	33 25.9	-23 48.4	324 33.7	-10 33.9	344 44.7	-17 19.5
13	316	51.5	34 23.9	13.0	48 26.4	48.4	339 35.6	33.7	359 46.9	19.4
14	331	54.0	49 27.1	12.9	63 26.9	48.5	354 37.6	33.5	14 49.1	19.4
15	346	56.5	64 30.3	12.8	78 27.3	48.5	9 39.5	33.3	29 51.2	19.3
16	1 58.9	79 33.5	12.7	93 27.8	48.6	24 41.4	33.1	44 53.4	19.2	
17	17 01.4	94 36.7	-16 12.7	108 28.3	-23 48.6	39 43.4	-10 32.8	59 55.6	-17 19.1	
18	32 03.9	109 39.9	-16 12.6	123 28.8	-23 48.7	54 45.3	-10 32.6	74 57.7	-17 19.0	
19	47 06.3	124 43.0	12.6	138 29.3	48.7	69 47.3	32.4	89 59.9	18.9	
20	62 08.8	139 46.2	12.5	153 29.8	48.8	84 49.2	32.2	105 02.1	18.9	
21	77 11.3	154 49.4	12.4	168 30.3	48.8	99 51.1	32.0	120 04.2	18.8	
22	92 13.7	169 52.5	12.4	183 30.7	48.9	114 53.1	31.8	135 06.4	18.7	
23	107 16.2	184 55.7	12.3	198 31.2	48.9	129 55.0	31.6	150 08.6	18.6	
24	122 18.7	199 58.9	-16 12.2	213 31.7	-23 49.0	144 57.0	-10 31.4	165 10.7	-17 18.5	
Dif	—	+32	+1	+5	0	+19	+2	+22	+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3			Edad: 20 ^d 2 PHE { 4 ^h : 57/0 12 ^h : 57/2 20 ^h : 57/4										
	PMG: 12 ^h 11 ^m 8				SD: 15:5			R°: 45 ^m						
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m	m	h m	m
0	177	04.9	-19 30.0	299	36.8	+3 31.9	60 N	6 51	7 43	8 33	22 59 92		10 26 3	
1	192	04.8		314	09.9 ¹⁴¹		58	46	35	21	57 89		26 6	
2	207	04.6		328	42.9 ¹⁴⁰	+3 03.0 ¹⁴⁵	56	41	28	10	56 85		25 9	
3	222	04.4		343	15.9 ¹⁴⁰	+2 48.5 ¹⁴⁵	54	37	21	8 01	55 82		25 1	
4	237	04.3		357	48.9 ¹⁴⁰	34.0 ¹⁴⁵	52	33	15	7 53	54 80		25 13	
5	252	04.1	-19 27.1	12	21.9 ¹⁴⁰	+2 19.5 ¹⁴⁵	50	6 30	7 09	7 45	22 54 77		10 24 16	
6	267	04.0	-19 26.5	26	54.9 ¹⁴⁰	+2 05.0 ¹⁴⁵	45	6 21	6 57	7 29	22 52 72		10 24 20	
7	282	03.8		41	27.9 ¹⁴⁰	+1 50.4 ¹⁴⁶	40	14	47	16	50 68		23 24	
8	297	03.7		56	00.8 ¹³⁹	35.8 ¹⁴⁶	35	07	37	7 05	49 64		22 28	
9	312	03.5		70	33.8 ¹⁴⁰	21.2 ¹⁴⁶	30	6 00	29	6 55	48 61		22 31	
10	327	03.3		85	06.7 ¹³⁹	+1 06.6 ¹⁴⁶	20	5 47	14	37	46 56		21 36	
11	342	03.2	-19 23.6	99	39.6 ¹³⁹	+0 51.9 ¹⁴⁷	10 N	5 35	6 00	6 22	22 45 50		10 20 41	
12	357	03.0	-19 23.0	114	12.5 ¹³⁹	+0 37.3 ¹⁴⁶	0	5 21	5 46	6 08	22 43 46		10 20 45	
13	12	02.9		128	45.3 ¹³⁸	22.6 ¹⁴⁷	10 S	5 05	31	5 54	42 42		19 50	
14	27	02.7		143	18.2 ¹³⁹	+0 07.9 ¹⁴⁷	20	4 47	5 15	38	40 37		18 55	
15	42	02.5		157	51.0 ¹³⁸	-0 06.8 ¹⁴⁷	30	23	4 54	20	39 31		17 60	
16	57	02.4		172	23.8 ¹³⁸	21.5 ¹⁴⁷	35	4 07	42	5 10	38 28		17 63	
17	72	02.2	-19 20.0	186	56.5 ¹³⁷	-0 36.2 ¹⁴⁷	40	3 49	4 27	4 58	22 36 26		10 16 67	
18	87	02.1	-19 19.4	201	29.3 ¹³⁸	-0 51.0 ¹⁴⁸	45	3 25	4 09	4 44	22 35 22		10 15 71	
19	102	01.9		216	02.0 ¹³⁷	-1 05.7 ¹⁴⁷	50	2 52	3 46	26	34 16		14 76	
20	117	01.8		230	34.7 ¹³⁷	20.4 ¹⁴⁷	52	35	35	18	33 14		14 78	
21	132	01.6		245	07.3 ¹³⁶	35.2 ¹⁴⁸	54	2 14	22	4 08	32 12		13 81	
22	147	01.5		259	39.9 ¹³⁶	-1 50.0 ¹⁴⁸	56	1 45	3 07	3 58	32 9		13 83	
23	162	01.3		274	12.5 ¹³⁶	-2 04.7 ¹⁴⁷	58	0 54	2 48	46	31 6		12 87	
24	177	01.2	-19 15.8	288	45.1 ¹³⁶	-2 19.5 ¹⁴⁸	60 S	** **	2 26	3 32	22 30 3		10 12 90	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 15 ^h 48 ^m 2		Mag: -4.6 PMG: 10 ^h 38 ^m		Mag: +1.4 PMG: 9 ^h 46 ^m		Mag: -2.1 PMG: 14 ^h 18 ^m		Mag: +0.7 PMG: 12 ^h 57 ^m					
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec					
h	°	'	°	°	'	°	°	'	°	°	'			
0	122	18.7	199 58.9	-16 12.2	213 31.7	-23 49.0	144 57.0	-10 31.4	165 10.7	-17 18.5				
1	137	21.1	215 02.0	12.2	228 32.2	49.0	159 58.9	31.2	180 12.9	18.4				
2	152	23.6	230 05.2	12.1	243 32.7	49.0	175 00.8	31.0	195 15.1	18.3				
3	167	26.0	245 08.3	12.1	258 33.2	49.1	190 02.8	30.8	210 17.2	18.3				
4	182	28.5	260 11.4	12.0	273 33.6	49.1	205 04.7	30.6	225 19.4	18.2				
5	197	31.0	275 14.6	-16 12.0	288 34.1	-23 49.2	220 06.6	-10 30.4	240 21.6	-17 18.1				
6	212	33.4	290 17.7	-16 11.9	303 34.6	-23 49.2	235 08.6	-10 30.2	255 23.7	-17 18.0				
7	227	35.9	305 20.8	11.8	318 35.1	49.3	250 10.5	30.0	270 25.9	17.9				
8	242	38.4	320 24.0	11.8	333 35.6	49.3	265 12.5	29.8	285 28.1	17.8				
9	257	40.8	335 27.1	11.7	348 36.1	49.3	280 14.4	29.6	300 30.2	17.8				
10	272	43.3	350 30.2	11.7	3 36.6	49.4	295 16.3	29.3	315 32.4	17.7				
11	287	45.8	5 33.3	-16 11.6	18 37.0	-23 49.4	310 18.3	-10 29.1	330 34.6	-17 17.6				
12	302	48.2	20 36.4	-16 11.6	33 37.5	-23 49.5	325 20.2	-10 28.9	345 36.7	-17 17.5				
13	317	50.7	35 39.5	11.5	48 38.0	49.5	340 22.1	28.7	0 38.9	17.4				
14	332	53.2	50 42.6	11.5	63 38.5	49.5	355 24.1	28.5	15 41.1	17.3				
15	347	55.6	65 45.7	11.4	78 39.0	49.6	10 26.0	28.3	30 43.2	17.3				
16	2 58.1	80 48.8	11.4	93 39.5	49.6	25 27.9	25 27.9	28.1	45 45.4	17.2				
17	18 00.5	95 51.8	-16 11.3	108 39.9	-23 49.7	40 29.9	-10 27.9		60 47.6	-17 17.1				
18	33 03.0	110 54.9	-16 11.3	123 40.4	-23 49.7	55 31.8	-10 27.7		75 49.7	-17 17.0				
19	48 05.5	125 58.0	11.2	138 40.9	49.7	70 33.8	27.5		90 51.9	16.9				
20	63 07.9	141 01.1	11.2	153 41.4	49.8	85 35.7	27.3		105 54.1	16.8				
21	78 10.4	156 04.1	11.2	168 41.9	49.8	100 37.6	27.1		120 56.2	16.7				
22	93 12.9	171 07.2	11.1	183 42.4	49.8	115 39.6	26.9		135 58.4	16.7				
23	108 15.3	186 10.2	11.1	198 42.8	49.9	130 41.5	26.7		151 00.6	16.6				
24	123 17.8	201 13.3	-16 11.0	213 43.3	-23 49.9	145 43.4	-10 26.5		166 02.7	-17 16.5				
Dif	—		+31	+1	+5		0	+19		+2	+22		+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 12 ^m 0			Edad: 21 ^d 2 PHE { SD: 15:7 PMG: 4 ^h 54 ^m R°: 47 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	177	01.2	-19	15.8	288	45.1	-2	19.5	60 N	15 53	16 43	17 35	** ** *	**	10 29	3	
1	192	01.0		15.2	303	17.6 ¹³⁵		34.3 ¹⁴⁸	58	16 05	51	40	** ** *	**	32	7	
2	207	00.8		14.6	317	50.1 ¹³⁵	-2	49.0 ¹⁴⁷	56	16	16 59	45	** ** *	**	34	10	
3	222	00.7		14.0	332	22.5 ¹³⁴	-3	03.8 ¹⁴⁸	54	25	17 05	49	** ** *	**	36	13	
4	237	00.5		13.4	346	54.9 ¹³⁴		18.6 ¹⁴⁸	52	33	11	52	** ** *	**	38	15	
5	252	00.4	-19	12.8	1	27.3 ¹³⁴	-3	33.3 ¹⁴⁷	50	16 41	17 16	17 56	** ** *	**	10 40	18	
6	267	00.2	-19	12.2	15	59.6 ¹³³	-3	48.1 ¹⁴⁸	45	16 56	17 28	18 04	** ** *	**	10 44	22	
7	282	00.1		11.6	30	31.9 ¹³³	-4	02.8 ¹⁴⁷	40	17 09	39	11	23 58	71	47	27	
8	296	59.9		11.0	45	04.1 ¹³²		17.6 ¹⁴⁸	35	20	47	18	53	67	50	30	
9	311	59.8		10.4	59	36.3 ¹³²		32.3 ¹⁴⁷	30	30	17 56	25	49	64	53	33	
10	326	59.6		09.8	74	08.5 ¹³²	-4	47.1 ¹⁴⁸	20	17 47	18 10	37	42	58	10 57	39	
11	341	59.5	-19	09.2	88	40.6 ¹³¹	-5	01.8 ¹⁴⁷	10 N	18 02	18 24	18 49	23 35	54	11 01	43	
12	356	59.3	-19	08.6	103	12.6 ¹³⁰	-5	16.5 ¹⁴⁷	0	18 16	18 38	19 03	23 29	49	11 05	47	
13	11	59.2		08.0	117	44.6 ¹³⁰		31.2 ¹⁴⁷	10 S	30	18 52	18	24	44	09	51	
14	26	59.0		07.4	132	16.5 ¹²⁹	-5	45.9 ¹⁴⁷	20	18 45	19 08	19 36	17	40	13	56	
15	41	58.9		06.8	146	48.4 ¹²⁹	-6	00.6 ¹⁴⁷	30	19 02	29	20 00	10	35	17	62	
16	56	58.7		06.2	161	20.3 ¹²⁹		15.2 ¹⁴⁶	35	13	41	15	06	32	20	65	
17	71	58.6	-19	05.6	175	52.0 ¹²⁷	-6	29.9 ¹⁴⁷	40	19 24	19 55	20 33	23 02	28	11 23	69	
18	86	58.4	-19	05.0	190	23.8 ¹²⁸	-6	44.5 ¹⁴⁶	45	19 38	20 13	20 56	22 57	23	11 26	73	
19	101	58.3		04.4	204	55.4 ¹²⁶	-6	59.1 ¹⁴⁶	50	19 55	35	21 28	50	19	30	79	
20	116	58.1		03.7	219	27.0 ¹²⁶	-7	13.7 ¹⁴⁶	52	20 04	46	21 44	47	17	32	81	
21	131	58.0		03.1	233	58.6 ¹²⁶		28.2 ¹⁴⁵	54	13	20 58	22 05	44	14	34	84	
22	146	57.9		02.5	248	30.1 ¹²⁵		42.8 ¹⁴⁶	56	23	21 13	22 31	41	11	36	87	
23	161	57.7		01.9	263	01.5 ¹²⁴	-7	57.3 ¹⁴⁵	58	34	30	23 13	37	8	39	90	
24	176	57.6	-19	01.3	277	32.9 ¹²⁴	-8	11.8 ¹⁴⁵	60 S	20 48	21 52	** ** *	22 33	4	11 42	94	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 44 ^m 2		Mag: -4.6 PMG: 10 ^h 33 ^m			Mag: +1.4 PMG: 9 ^h 45 ^m			Mag: -2.1 PMG: 14 ^h 15 ^m			Mag: +0.7 PMG: 12 ^h 54 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	123	17.8	201	13.3	-16	11.0	213	43.3	-23	49.9	145	43.4	-10	26.5	166	02.7	
1	138	20.3	216	16.3		11.0	228	43.8		49.9	160	45.4		26.2	181	04.9	
2	153	22.7	231	19.4		10.9	243	44.3		50.0	175	47.3		26.0	196	07.1	
3	168	25.2	246	22.4		10.9	258	44.8		50.0	190	49.2		25.8	211	09.2	
4	183	27.6	261	25.4		10.9	273	45.2		50.0	205	51.2		25.6	226	11.4	
5	198	30.1	276	28.4	-16	10.8	288	45.7	-23	50.1	220	53.1	-10	25.4	241	13.6	
6	213	32.6	291	31.5	-16	10.8	303	46.2	-23	50.1	235	55.0	-10	25.2	256	15.7	
7	228	35.0	306	34.5		10.8	318	46.7		50.1	250	57.0		25.0	271	17.9	
8	243	37.5	321	37.5		10.7	333	47.2		50.2	265	58.9		24.8	286	20.1	
9	258	40.0	336	40.5		10.7	348	47.7		50.2	281	00.9		24.6	301	22.2	
10	273	42.4	351	43.5		10.7	3	48.1		50.2	296	02.8		24.4	316	24.4	
11	288	44.9	6	46.5	-16	10.6	18	48.6	-23	50.3	311	04.7	-10	24.2	331	26.6	
12	303	47.4	21	49.5	-16	10.6	33	49.1	-23	50.3	326	06.7	-10	24.0	346	28.7	
13	318	49.8	36	52.5		10.6	48	49.6		50.3	341	08.6		23.8	1	30.9	
14	333	52.3	51	55.5		10.5	63	50.1		50.4	356	10.5		23.6	16	33.1	
15	348	54.8	66	58.4		10.5	78	50.6		50.4	11	12.5		23.3	31	35.2	
16	3	57.2	82	01.4		10.5	93	51.0		50.4	26	14.4		23.1	46	37.4	
17	18	59.7	97	04.4	-16	10.4	108	51.5	-23	50.4	41	16.3	-10	22.9	61	39.6	
18	34	02.1	112	07.4	-16	10.4	123	52.0	-23	50.5	56	18.3	-10	22.7	76	41.7	
19	49	04.6	127	10.3		10.4	138	52.5		50.5	71	20.2		22.5	91	43.9	
20	64	07.1	142	13.3		10.4	153	53.0		50.5	86	22.1		22.3	106	46.1	
21	79	09.5	157	16.2		10.3	168	53.4		50.6	101	24.1		22.1	121	48.2	
22	94	12.0	172	19.2		10.3	183	53.9		50.6	116	26.0		21.9	136	50.4	
23	109	14.5	187	22.1		10.3	198	54.4		50.6	131	27.9		21.7	151	52.6	
24	124	16.9	202	25.1	-16	10.3	213	54.9	-23	50.6	146	29.9	-10	21.5	166	54.7	
Dif	—		+30			0	+5			0	+19		+2	+22			+1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 12 ^m 3			Edad: 22 ^d 2 PHE { 4 ^h : 58'3 12 ^h : 58'5 20 ^h : 58'7 SD: 15'8 PMG: 5 ^h 41 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	57.6	-19	01.3	277	32.9	-8	11.8	60 N	6 48	7 40	8 29	0 31	96	10 32	6
1	191	57.4		00.7	292	04.1 ¹²²		26.3 ¹⁴⁵	58	43	32	18	26	92	39	9
2	206	57.3	-19	00.1	306	35.4 ¹²³		40.7 ¹⁴⁴	56	39	25	8 07	21	89	44	13
3	221	57.1	-18	59.5	321	06.5 ¹²¹	-8	55.1 ¹⁴⁴	54	35	18	7 58	17	86	49	16
4	236	57.0		58.8	335	37.6 ¹²¹	-9	09.5 ¹⁴⁴	52	31	12	50	14	83	53	19
5	251	56.8	-18	58.2	350	08.6 ¹²⁰	-9	23.8 ¹⁴³	50	6 28	7 07	7 43	0 11	80	10 58	20
6	266	56.7	-18	57.6	4	39.6 ¹²⁰	-9	38.1 ¹⁴³	45	6 20	6 55	7 27	0 04	75	11 06	26
7	281	56.6		57.0	19	10.4 ¹¹⁸	-9	52.4 ¹⁴³	40	13	45	14	**	**	14	30
8	296	56.4		56.4	33	41.2 ¹¹⁸	-10	06.6 ¹⁴²	35	6 06	36	7 03	**	**	20	34
9	311	56.3		55.8	48	12.0 ¹¹⁸		20.8 ¹⁴²	30	5 59	28	6 54	**	**	26	36
10	326	56.1		55.1	62	42.6 ¹¹⁶		35.0 ¹⁴²	20	47	14	37	**	**	36	41
11	341	56.0	-18	54.5	77	13.2 ¹¹⁶	-10	49.1 ¹⁴¹	10 N	5 35	6 00	6 23	**	**	11 44	47
12	356	55.8	-18	53.9	91	43.7 ¹¹⁵	-11	03.2 ¹⁴¹	0	5 21	5 47	6 09	**	**	11 52	51
13	11	55.7		53.3	106	14.1 ¹¹⁴		17.2 ¹⁴⁰	10 S	5 06	32	5 55	**	**	12 00	55
14	26	55.6		52.7	120	44.4 ¹¹³		31.2 ¹⁴⁰	20	4 48	5 16	40	23 57	45	09	60
15	41	55.4		52.0	135	14.7 ¹¹³		45.2 ¹⁴⁰	30	25	4 56	22	45	39	19	65
16	56	55.3		51.4	149	44.8 ¹¹¹	-11	59.1 ¹³⁹	35	4 10	44	12	38	36	25	68
17	71	55.1	-18	50.8	164	14.9 ¹¹¹	-12	12.9 ¹³⁸	40	3 52	4 30	5 00	23 30	33	12 32	71
18	86	55.0	-18	50.2	178	44.9 ¹¹⁰	-12	26.7 ¹³⁸	45	3 29	4 12	4 46	23 20	29	12 39	77
19	101	54.9		49.5	193	14.8 ¹⁰⁹		40.5 ¹³⁸	50	2 57	3 50	29	09	24	49	81
20	116	54.7		48.9	207	44.6 ¹⁰⁸	-12	54.2 ¹³⁷	52	41	39	21	23 04	21	53	84
21	131	54.6		48.3	222	14.3 ¹⁰⁷	-13	07.8 ¹³⁶	54	2 20	26	12	22 58	19	12 58	87
22	146	54.4		47.7	236	44.0 ¹⁰⁷		21.4 ¹³⁶	56	1 54	3 12	4 02	52	15	13 03	91
23	161	54.3		47.0	251	13.5 ¹⁰⁵		34.9 ¹³⁵	58	1 12	2 55	3 51	45	12	09	95
24	176	54.2	-18	46.4	265	42.9 ¹⁰⁴	-13	48.4 ¹³⁵	60 S	**	**	2 33	22 37	7	13 16	99

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 15 ^h 40 ^m 3		Mag: -4.7 PMG: 10 ^h 28 ^m		Mag: +1.4 PMG: 9 ^h 44 ^m		Mag: -2.1 PMG: 14 ^h 12 ^m		Mag: +0.7 PMG: 12 ^h 50 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	124	16.9	202	25.1	-16	10.3	213	54.9	-23	50.6
1	139	19.4	217	28.0		10.2	228	55.4		50.7
2	154	21.9	232	30.9		10.2	243	55.8		50.7
3	169	24.3	247	33.8		10.2	258	56.3		50.7
4	184	26.8	262	36.8		10.2	273	56.8		50.7
5	199	29.2	277	39.7	-16	10.1	288	57.3	-23	50.8
6	214	31.7	292	42.6	-16	10.1	303	57.8	-23	50.8
7	229	34.2	307	45.5		10.1	318	58.2		50.8
8	244	36.6	322	48.4		10.1	333	58.7		50.8
9	259	39.1	337	51.3		10.1	348	59.2		50.8
10	274	41.6	352	54.2		10.0	3	59.7		50.9
11	289	44.0	7	57.1	-16	10.0	19	00.2	-23	50.9
12	304	46.5	23	00.0	-16	10.0	34	00.6	-23	50.9
13	319	49.0	38	02.8		10.0	49	01.1		50.9
14	334	51.4	53	05.7		10.0	64	01.6		50.9
15	349	53.9	68	08.6		10.0	79	02.1		51.0
16	4	56.4	83	11.4		10.0	94	02.6		51.0
17	19	58.8	98	14.3	-16	09.9	109	03.0	-23	51.0
18	35	01.3	113	17.2	-16	09.9	124	03.5	-23	51.0
19	50	03.7	128	20.0		09.9	139	04.0		51.0
20	65	06.2	143	22.9		09.9	154	04.5		51.0
21	80	08.7	158	25.7		09.9	169	05.0		51.1
22	95	11.1	173	28.5		09.9	184	05.4		51.1
23	110	13.6	188	31.4		09.9	199	05.9		51.1
24	125	16.1	203	34.2	-16	09.9	214	06.4	-23	51.1
Dif	—		+29		0		+5		0	
							+19		+2	
									+22	
									+1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 12 ^h 12 ^m 5			Edad: 23 ^d 2 SD: 16/0 PMG: 6 ^h 31 ^m					PHE { 4 ^h : 58/9 12 ^h : 59/1 20 ^h : 59/3 R°: 54 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	54.2	-18	46.4	265	42.9	-13	48.4	60 N	15	58	16	48	2	07
1	191	54.0		45.8	280	12.3 ¹⁰⁴	-14	01.8 ¹³⁴	58	16	10	16	55	1	58
2	206	53.9		45.2	294	41.6 ¹⁰³		15.1 ¹³³	56	20		17	02	50	93
3	221	53.8		44.5	309	10.7 ¹⁰¹		28.4 ¹³³	54	29		09	52	43	90
4	236	53.6		43.9	323	39.8 ¹⁰¹		41.6 ¹³²	52	37		14	56	37	86
5	251	53.5	-18	43.3	338	08.8 ¹⁰⁰	-14	54.7 ¹³¹	50	16	44	17	20	1	31
6	266	53.3	-18	42.6	352	37.6 ⁹⁸	-15	07.8 ¹³¹	45	16	59	17	31	1	19
7	281	53.2		42.0	7	06.4 ⁹⁸		20.8 ¹³⁰	40	17	12		41	09	73
8	296	53.1		41.4	21	35.1 ⁹⁷		33.7 ¹²⁹	35	22			49	1	00
9	311	52.9		40.7	36	03.7 ⁹⁶		46.6 ¹²⁹	30	32		17	57	0	53
10	326	52.8		40.1	50	32.1 ⁹⁴	-15	59.3 ¹²⁷	20	17	48	18	11	40	62
11	341	52.7	-18	39.5	65	00.5 ⁹⁴	-16	12.0 ¹²⁷	10 N	18	03	18	25	0	29
12	356	52.5	-18	38.8	79	28.8 ⁹³	-16	24.6 ¹²⁶	0	18	16	18	38	0	18
13	11	52.4		38.2	93	56.9 ⁹¹		37.2 ¹²⁶	10 S		30	18	52	0	08
14	26	52.3		37.6	108	25.0 ⁹¹	-16	49.6 ¹²⁴	20	18	44	19	08	**	**
15	41	52.1		36.9	122	52.9 ⁸⁹	-17	02.0 ¹²⁴	30	19	01	28	19	59	**
16	56	52.0		36.3	137	20.8 ⁸⁹		14.3 ¹²³	35		11	39	20	13	**
17	71	51.9	-18	35.7	151	48.5 ⁸⁷	-17	26.5 ¹²²	40	19	23	19	53	20	31
18	86	51.7	-18	35.0	166	16.1 ⁸⁶	-17	38.6 ¹²¹	45	19	36	20	10	20	53
19	101	51.6		34.4	180	43.6 ⁸⁵	-17	50.6 ¹²⁰	50	19	53		32	21	24
20	116	51.5		33.7	195	11.0 ⁸⁴	-18	02.5 ¹¹⁹	52	20	01		43	40	25
21	131	51.4		33.1	209	38.3 ⁸³		14.3 ¹¹⁸	54		09	20	55	21	59
22	146	51.2		32.5	224	05.5 ⁸²		26.1 ¹¹⁸	56	19		21	09	22	24
23	161	51.1		31.8	238	32.6 ⁸¹		37.7 ¹¹⁶	58	31		25	23	00	22
24	176	51.0	-18	31.2	252	59.6 ⁸⁰	-18	49.2 ¹¹⁵	60 S	20	44	21	46	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -4.7		Mag: +1.4		Mag: -2.1		Mag: +0.7	
	15 ^h 36 ^m 4		PMG: 10 ^h 24 ^m		PMG: 9 ^h 43 ^m		PMG: 14 ^h 09 ^m		PMG: 12 ^h 47 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	125	16.1	203	34.2	214	06.4	147	16.3	167	46.7
1	140	18.5	218	37.0	229	06.9	162	18.2	182	48.9
2	155	21.0	233	39.8	244	07.3	177	20.1	197	51.1
3	170	23.5	248	42.7	259	07.8	192	22.1	212	53.2
4	185	25.9	263	45.5	274	08.3	207	24.0	227	55.4
5	200	28.4	278	48.3	289	08.8	222	25.9	242	57.5
6	215	30.9	293	51.1	304	09.3	237	27.9	257	59.7
7	230	33.3	308	53.9	319	09.7	252	29.8	273	01.9
8	245	35.8	323	56.7	334	10.2	267	31.7	288	04.0
9	260	38.2	338	59.4	349	10.7	282	33.6	303	06.2
10	275	40.7	354	02.2	4	11.2	297	35.6	318	08.4
11	290	43.2	9	05.0	19	11.6	312	37.5	333	10.5
12	305	45.6	24	07.8	34	12.1	327	39.4	348	12.7
13	320	48.1	39	10.5	49	12.6	342	41.4	3	14.9
14	335	50.6	54	13.3	64	13.1	357	43.3	18	17.0
15	350	53.0	69	16.1	79	13.6	12	45.2	33	19.2
16	5	55.5	84	18.8	94	14.0	27	47.2	48	21.4
17	20	58.0	99	21.6	109	14.5	42	49.1	63	23.5
18	36	00.4	114	24.3	124	15.0	57	51.0	78	25.7
19	51	02.9	129	27.1	139	15.5	72	53.0	93	27.9
20	66	05.4	144	29.8	154	15.9	87	54.9	108	30.0
21	81	07.8	159	32.5	169	16.4	102	56.8	123	32.2
22	96	10.3	174	35.3	184	16.9	117	58.7	138	34.4
23	111	12.7	189	38.0	199	17.4	133	00.7	153	36.5
24	126	15.2	204	40.7	214	17.9	148	02.6	168	38.7
Dif	—		+28	0	+5	0	+19	+2	+22	+1

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 12 ^m 7			Edad: 24 ^d 2 SD: 16:2 PMG: 7 ^h 25 ^m	PHE { 4 ^h : 59:5 12 ^h : 59:7 20 ^h : 59:9 R°: 58 ^m	Dec	Dif			Hora	R°		Hora	R°			
	hG ☉	Dec	hG ☾					Dif							Náutico	Civil	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	51.0	-18	31.2	252	59.6	-18	49.2	60 N	6 45	7 36	8 25	3 50	105	10 46	16	
1	191	50.8		30.5	267	26.4	78	-19 00.6	58	40	29	14	36	99	11 01	23	
2	206	50.7		29.9	281	53.2	78	11.9	56	36	22	8 04	23	94	14	27	
3	221	50.6		29.3	296	19.8	76	23.2	54	32	16	7 55	13	90	26	30	
4	236	50.4		28.6	310	46.3	75	34.3	52	29	10	47	3 03	87	36	33	
5	251	50.3	-18	28.0	325	12.7	74	-19 45.3	50	6 26	7 05	7 40	2 55	84	11 45	36	
6	266	50.2	-18	27.3	339	39.0	73	-19 56.1	45	6 18	6 54	7 25	2 37	79	12 04	41	
7	281	50.1		26.7	354	05.2	72	-20 06.9	40	11	44	13	22	76	20	44	
8	296	49.9		26.0	8	31.2	70	17.6	35	6 05	35	7 02	10	72	33	47	
9	311	49.8		25.4	22	57.2	70	28.1	30	5 59	28	6 53	2 00	69	12 44	50	
10	326	49.7		24.7	37	23.0	68	38.5	20	47	14	37	1 42	64	13 04	54	
11	341	49.6	-18	24.1	51	48.8	68	-20 48.8	10 N	5 35	6 00	6 23	1 26	61	13 22	57	
12	356	49.4	-18	23.4	66	14.4	66	-20 59.0	0	5 22	5 47	6 09	1 11	58	13 38	60	
13	11	49.3		22.8	80	39.9	65	-21 09.0	10 S	5 07	33	5 56	0 57	54	13 55	62	
14	26	49.2		22.1	95	05.3	64	19.0	20	4 50	5 17	41	42	50	14 12	66	
15	41	49.1		21.5	109	30.5	62	28.8	30	27	4 58	24	24	46	32	70	
16	56	48.9		20.8	123	55.7	62	38.4	35	4 12	46	14	14	43	44	72	
17	71	48.8	-18	20.2	138	20.7	60	-21 48.0	40	3 55	4 32	5 03	0 02	41	14 58	75	
18	86	48.7	-18	19.5	152	45.7	60	-21 57.4	45	3 32	4 15	4 49	** ** *	**	15 14	79	
19	101	48.6		18.9	167	10.5	58	-22 06.6	50	3 02	3 54	33	** ** *	**	35	82	
20	116	48.4		18.2	181	35.2	57	15.8	52	2 46	43	25	23	54	41	85	
21	131	48.3		17.6	195	59.8	56	24.7	54	27	31	16	42	39	15 55	88	
22	146	48.2		16.9	210	24.3	55	33.6	56	2 02	17	4 07	30	34	16 07	92	
23	161	48.1		16.3	224	48.7	54	42.3	58	1 26	3 01	3 55	23	15	30	22 96	
24	176	48.0	-18	15.6	239	13.0	53	-22 50.9	60 S	** ** *	2 40	3 42	22	57	24	16 39 102	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 32 ^m 4		Mag: -4.7 PMG: 10 ^h 19 ^m		Mag: +1.4 PMG: 9 ^h 43 ^m		Mag: -2.1 PMG: 14 ^h 06 ^m		Mag: +0.7 PMG: 12 ^h 44 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	126	15.2	204	40.7	-16	09.9	214	17.9	-23	51.4	148	02.6	-10	11.4	168	38.7	-17	10.4
1	141	17.7	219	43.4		09.9	229	18.3		51.4	163	04.5		11.2	183	40.9		10.3
2	156	20.1	234	46.1		09.9	244	18.8		51.4	178	06.5		11.0	198	43.0		10.2
3	171	22.6	249	48.8		09.9	259	19.3		51.4	193	08.4		10.8	213	45.2		10.1
4	186	25.1	264	51.5		09.9	274	19.8		51.4	208	10.3		10.6	228	47.4		10.0
5	201	27.5	279	54.2	-16	10.0	289	20.2	-23	51.4	223	12.3	-10	10.4	243	49.5	-17	10.0
6	216	30.0	294	56.9	-16	10.0	304	20.7	-23	51.4	238	14.2	-10	10.2	258	51.7	-17	09.9
7	231	32.5	309	59.6		10.0	319	21.2		51.4	253	16.1		10.0	273	53.8		09.8
8	246	34.9	325	02.3		10.0	334	21.7		51.4	268	18.0		09.8	288	56.0		09.7
9	261	37.4	340	05.0		10.0	349	22.1		51.4	283	20.0		09.5	303	58.2		09.6
10	276	39.8	355	07.6		10.0	4	22.6		51.4	298	21.9		09.3	319	00.3		09.5
11	291	42.3	10	10.3	-16	10.0	19	23.1	-23	51.4	313	23.8	-10	09.1	334	02.5	-17	09.4
12	306	44.8	25	13.0	-16	10.1	34	23.6	-23	51.4	328	25.8	-10	08.9	349	04.7	-17	09.4
13	321	47.2	40	15.6		10.1	49	24.0		51.4	343	27.7		08.7	4	06.8		09.3
14	336	49.7	55	18.3		10.1	64	24.5		51.4	358	29.6		08.5	19	09.0		09.2
15	351	52.2	70	20.9		10.1	79	25.0		51.4	13	31.5		08.3	34	11.2		09.1
16	6	54.6	85	23.6		10.1	94	25.5		51.4	28	33.5		08.1	49	13.3		09.0
17	21	57.1	100	26.2	-16	10.1	109	25.9	-23	51.4	43	35.4	-10	07.9	64	15.5	-17	08.9
18	36	59.6	115	28.9	-16	10.2	124	26.4	-23	51.4	58	37.3	-10	07.6	79	17.7	-17	08.8
19	52	02.0	130	31.5		10.2	139	26.9		51.4	73	39.3		07.4	94	19.8		08.8
20	67	04.5	145	34.1		10.2	154	27.4		51.4	88	41.2		07.2	109	22.0		08.7
21	82	07.0	160	36.7		10.2	169	27.9		51.4	103	43.1		07.0	124	24.2		08.6
22	97	09.4	175	39.4		10.2	184	28.3		51.4	118	45.1		06.8	139	26.3		08.5
23	112	11.9	190	42.0		10.3	199	28.8		51.4	133	47.0		06.6	154	28.5		08.4
24	127	14.3	205	44.6	-16	10.3	214	29.3	-23	51.4	148	48.9	-10	06.4	169	30.7	-17	08.3
Dif	—		+27		0		+5		0		+19		+2		+22		+	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 12 ^m 9			Edad: 25 ^d 2 PHE { 4 ^h : 60'0 12 ^h : 60'2 20 ^h : 60'3 SD: 16:3 PMG: 8 ^h 23 ^m R°: 63 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	176	48.0	-18	15.6	239	13.0	-22	50.9	60 N	16 04	16 52	17 44	5 35	98	11 02 34
1	191	47.8		15.0	253	37.1	-22	59.3	58	15	17 00	48	5 15	91	24 40
2	206	47.7		14.3	268	01.2	-23	07.5	56	24	06	52	4 57	88	41 44
3	221	47.6		13.6	282	25.2		15.6	54	33	12	55	43	84	11 56 44
4	236	47.5		13.0	296	49.0		23.6	52	40	18	57 59	30	82	12 09 49
5	251	47.4	-18	12.3	311	12.8	-23	31.4	50	16 47	17 23	18 02	4 19	80	12 21 50
6	266	47.2	-18	11.7	325	36.4	-23	39.1	45	17 02	17 34	18 09	3 56	76	12 45 53
7	281	47.1		11.0	340	00.0		46.6	40	14	43	16	38	73	13 04 55
8	296	47.0		10.4	354	23.4	-23	53.9	35	25	51	22	22	72	20 57
9	311	46.9		09.7	8	46.8	-24	01.1	30	34	17 59	28	3 09	70	34 58
10	326	46.8		09.0	23	10.0		08.1	20	17 49	18 13	39	2 46	67	13 58 60
11	341	46.6	-18	08.4	37	33.2	-24	15.0	10 N	18 03	18 25	18 51	2 27	64	14 19 62
12	356	46.5	-18	07.7	51	56.2	-24	21.7	0	18 16	18 38	19 03	2 09	62	14 38 64
13	11	46.4		07.0	66	19.2		28.2	10 S	30	18 52	18	1 51	60	14 57 66
14	26	46.3		06.4	80	42.1		34.6	20	18 44	19 07	35	32	57	15 18 67
15	41	46.2		05.7	95	04.8		40.7	30	19 00	26	19 58	1 10	54	42 69
16	56	46.1		05.1	109	27.5		46.8	35	10	38	20 12	0 57	52	15 56 70
17	71	45.9	-18	04.4	123	50.2	-24	52.6	40	19 21	19 51	20 29	0 43	49	16 13 71
18	86	45.8	-18	03.7	138	12.7	-24	58.3	45	19 34	20 08	20 51	0 25	47	16 33 72
19	101	45.7		03.1	152	35.1	-25	03.8	50	50	29	21 20	0 04	43	16 57 75
20	116	45.6		02.4	166	57.5		09.1	52	19 58	39	35	** ** *	**	17 09 76
21	131	45.5		01.7	181	19.8		14.2	54	20 06	20 51	21 53	** ** *	**	23 77
22	146	45.4		01.1	195	42.0		19.2	56	16	21 04	22 16	** ** *	**	39 79
23	161	45.3	-18	00.4	210	04.1		24.0	58	26	20	22 48	23 45	53	17 58 81
24	176	45.1	-17	59.7	224	26.2	-25	28.6	60 S	20 39	21 39	** ** *	23 21	50	18 21 85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 28 ^m 5		Mag: -4.8 PMG: 10 ^h 15 ^m		Mag: +1.4 PMG: 9 ^h 42 ^m		Mag: -2.1 PMG: 14 ^h 03 ^m		Mag: +0.7 PMG: 12 ^h 40 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	127	14.3	205	44.6	-16	10.3	214	29.3	-23	51.4	148	48.9	-10	06.4	169	30.7	-17	08.3
1	142	16.8	220	47.2		10.3	229	29.8		51.4	163	50.8		06.2	184	32.8		08.2
2	157	19.3	235	49.8		10.3	244	30.2		51.3	178	52.8		06.0	199	35.0		08.2
3	172	21.7	250	52.4		10.4	259	30.7		51.3	193	54.7		05.7	214	37.2		08.1
4	187	24.2	265	55.0		10.4	274	31.2		51.3	208	56.6		05.5	229	39.3		08.0
5	202	26.7	280	57.6	-16	10.4	289	31.7	-23	51.3	223	58.5	-10	05.3	244	41.5	-17	07.9
6	217	29.1	296	00.1	-16	10.4	304	32.1	-23	51.3	239	00.5	-10	05.1	259	43.6	-17	07.8
7	232	31.6	311	02.7		10.5	319	32.6		51.3	254	02.4		04.9	274	45.8		07.7
8	247	34.1	326	05.3		10.5	334	33.1		51.3	269	04.3		04.7	289	48.0		07.6
9	262	36.5	341	07.9		10.5	349	33.6		51.3	284	06.3		04.5	304	50.1		07.6
10	277	39.0	356	10.4		10.6	4	34.0		51.3	299	08.2		04.3	319	52.3		07.5
11	292	41.5	11	13.0	-16	10.6	19	34.5	-23	51.3	314	10.1	-10	04.1	334	54.5	-17	07.4
12	307	43.9	26	15.6	-16	10.6	34	35.0	-23	51.3	329	12.0	-10	03.8	349	56.6	-17	07.3
13	322	46.4	41	18.1		10.6	49	35.4		51.3	344	14.0		03.6	4	58.8		07.2
14	337	48.8	56	20.6		10.7	64	35.9		51.3	359	15.9		03.4	20	01.0		07.1
15	352	51.3	71	23.2		10.7	79	36.4		51.2	14	17.8		03.2	35	03.1		07.0
16	7	53.8	86	25.7		10.7	94	36.9		51.2	29	19.8		03.0	50	05.3		07.0
17	22	56.2	101	28.3	-16	10.8	109	37.3	-23	51.2	44	21.7	-10	02.8	65	07.5	-17	06.9
18	37	58.7	116	30.8	-16	10.8	124	37.8	-23	51.2	59	23.6	-10	02.6	80	09.6	-17	06.8
19	53	01.2	131	33.3		10.8	139	38.3		51.2	74	25.5		02.4	95	11.8		06.7
20	68	03.6	146	35.8		10.9	154	38.8		51.2	89	27.5		02.2	110	14.0		06.6
21	83	06.1	161	38.3		10.9	169	39.2		51.2	104	29.4		01.9	125	16.1		06.5
22	98	08.6	176	40.9		10.9	184	39.7		51.2	119	31.3		01.7	140	18.3		06.4
23	113	11.0	191	43.4		11.0	199	40.2		51.1	134	33.2		01.5	155	20.4		06.4
24	128	13.5	206	45.9	-16	11.0	214	40.7	-23	51.1	149	35.2	-10	01.3	170	22.6	-17	06.3
Dif	—		+26		0		+5		0		+19		+2		+22		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 13 ^m 1			Edad: 26 ^d 2 PHE { SD: 16'4 PMG: 9 ^h 26 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	176	45.1	-17	59.7	224	26.2	-25	28.6	60 N	6 41	7 33	8 21	7 13	70	11 36	66
1	191	45.0		59.0	238	48.1	29	33.0	58	37	25	10	6 46	69	12 04	66
2	206	44.9		58.4	253	10.1	30	37.2	56	33	19	8 00	25	69	25	66
3	221	44.8		57.7	267	31.9	28	41.3	54	30	13	7 52	6 07	69	43	66
4	236	44.7		57.0	281	53.7	28	45.1	52	27	07	45	5 52	68	12 58	66
5	251	44.6	-17	56.4	296	15.4	27	-25	50	6 23	7 03	7 38	5 39	68	13 11	66
6	266	44.5	-17	55.7	310	37.1	27	-25	45	6 16	6 52	7 23	5 12	68	13 38	66
7	281	44.4		55.0	324	58.7	26	55.6	40	10	42	11	4 51	68	13 59	67
8	296	44.3		54.3	339	20.3	26	-25	35	6 04	34	7 01	34	67	14 17	66
9	311	44.1		53.7	353	41.8	25	-26	30	5 58	27	6 52	4 19	66	32	66
10	326	44.0		53.0	8	03.2	24	04.3	20	47	13	36	3 53	66	14 58	66
11	341	43.9	-17	52.3	22	24.7	25	-26	10 N	5 35	6 01	6 23	3 31	66	15 21	65
12	356	43.8	-17	51.6	36	46.0	23	-26	0	5 23	5 48	6 10	3 11	65	15 42	65
13	11	43.7		51.0	51	07.4	24	11.4	10 S	5 08	34	5 56	2 51	64	16 03	64
14	26	43.6		50.3	65	28.7	23	13.3	20	4 51	19	42	29	63	25	64
15	41	43.5		49.6	79	49.9	22	15.1	30	29	5 00	26	2 04	63	16 51	63
16	56	43.4		48.9	94	11.1	22	16.6	35	4 15	4 48	16	1 49	62	17 06	63
17	71	43.3	-17	48.3	108	32.3	22	-26	40	3 58	4 35	5 05	1 32	61	17 24	62
18	86	43.2	-17	47.6	122	53.5	22	-26	45	3 36	4 18	4 52	1 12	60	17 45	62
19	101	43.1		46.9	137	14.7	22	20.1	50	3 07	3 58	36	0 47	58	18 12	60
20	116	43.0		46.2	151	35.8	21	20.9	52	2 52	47	29	35	57	25	60
21	131	42.8		45.5	165	56.9	21	21.5	54	33	36	20	21	56	40	59
22	146	42.7		44.9	180	18.0	21	21.8	56	2 10	23	11	0 04	55	18 58	57
23	161	42.6		44.2	194	39.1	21	22.0	58	1 38	3 07	4 00	** ** *	**	19 19	56
24	176	42.5	-17	43.5	209	00.2	21	-26	60 S	** ** *	2 47	3 48	** ** *	**	19 46	53

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 24 ^m 6		Mag: -4.8 PMG: 10 ^h 11 ^m		Mag: +1.4 PMG: 9 ^h 41 ^m		Mag: -2.1 PMG: 14 ^h 00 ^m		Mag: +0.7 PMG: 12 ^h 37 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	128	13.5	206	45.9	-16	11.0	214	40.7	-23	51.1
1	143	16.0	221	48.4		11.1	229	41.1		51.1
2	158	18.4	236	50.9		11.1	244	41.6		51.1
3	173	20.9	251	53.3		11.1	259	42.1		51.1
4	188	23.3	266	55.8		11.2	274	42.6		51.1
5	203	25.8	281	58.3	-16	11.2	289	43.0	-23	51.0
6	218	28.3	297	00.8	-16	11.3	304	43.5	-23	51.0
7	233	30.7	312	03.3		11.3	319	44.0		51.0
8	248	33.2	327	05.7		11.3	334	44.4		51.0
9	263	35.7	342	08.2		11.4	349	44.9		51.0
10	278	38.1	357	10.6		11.4	4	45.4		51.0
11	293	40.6	12	13.1	-16	11.5	19	45.9	-23	50.9
12	308	43.1	27	15.5	-16	11.5	34	46.3	-23	50.9
13	323	45.5	42	18.0		11.5	49	46.8		50.9
14	338	48.0	57	20.4		11.6	64	47.3		50.9
15	353	50.5	72	22.9		11.6	79	47.8		50.9
16	8	52.9	87	25.3		11.7	94	48.2		50.8
17	23	55.4	102	27.7	-16	11.7	109	48.7	-23	50.8
18	38	57.8	117	30.1	-16	11.8	124	49.2	-23	50.8
19	54	00.3	132	32.6		11.8	139	49.6		50.8
20	69	02.8	147	35.0		11.9	154	50.1		50.7
21	84	05.2	162	37.4		11.9	169	50.6		50.7
22	99	07.7	177	39.8		12.0	184	51.1		50.7
23	114	10.2	192	42.2		12.0	199	51.5		50.7
24	129	12.6	207	44.6	-16	12.1	214	52.0	-23	50.6
Dif	—		+24		0		+5		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 13 ^m 2			Edad: 27 ^d 2 PHE { 4 ^h : 60:5 12 ^h : 60:5 20 ^h : 60:5 R°: 64 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	176	42.5	-17 43.5	209	00.2	-26 22.0	2	60 N	16 09	16 57	17 48	8 23 37	12 42 97				
1	191	42.4	42.8	223	21.2	21.8	2	58	19	17 04	52	7 55 43	13 10 90				
2	206	42.3	42.1	237	42.3	21.3	5	56	29	10	55	34 46	31 87				
3	221	42.2	41.4	252	03.4	20.7	6	54	37	16	17 59	16 48	13 49 84				
4	236	42.1	40.8	266	24.4	19.9	8	52	44	21	18 02	7 00 51	14 04 82				
5	251	42.0	-17 40.1	280	45.5	-26 18.9	10	50	16 51	17 26	18 05	6 47 52	14 17 80				
6	266	41.9	-17 39.4	295	06.6	-26 17.7	12	45	17 05	17 36	18 12	6 20 55	14 44 77				
7	281	41.8	38.7	309	27.7	16.2	15	40	17	45	18	5 59 57	15 06 74				
8	296	41.7	38.0	323	48.8	14.6	16	35	27	17 53	24	41 58	23 72				
9	311	41.6	37.3	338	10.0	12.8	18	30	35	18 01	29	5 25 60	15 38 71				
10	326	41.5	36.6	352	31.1	10.8	20	20	17 51	14	40	4 59 62	16 04 68				
11	341	41.4	-17 36.0	6	52.3	-26 08.6	22	10 N	18 04	18 26	18 51	4 37 63	16 26 65				
12	356	41.3	-17 35.3	21	13.5	-26 06.2	24	0	18 17	18 38	19 04	4 16 64	16 47 63				
13	11	41.2	34.6	35	34.7	03.6	26	10 S	30	18 52	18	3 55 66	17 07 61				
14	26	41.1	33.9	49	56.0	-26 00.8	28	20	43	19 07	34	32 68	29 59				
15	41	41.0	33.2	64	17.3	-25 57.8	30	30	18 59	25	19 56	3 07 68	17 54 56				
16	56	40.9	32.5	78	38.7	54.7	31	35	19 09	36	20 10	2 51 70	18 09 54				
17	71	40.8	-17 31.8	93	00.0	-25 51.3	34	40	19 19	19 50	20 26	2 33 71	18 26 52				
18	86	40.7	-17 31.1	107	21.5	-25 47.7	36	45	19 32	20 05	20 48	2 12 72	18 47 48				
19	101	40.6	30.4	121	43.0	44.0	37	50	47	26	21 16	1 45 74	19 12 45				
20	116	40.5	29.7	136	04.5	40.0	40	52	19 55	35	30	32 75	25 43				
21	131	40.4	29.0	150	26.1	35.9	41	54	20 03	47	21 47	1 17 76	39 40				
22	146	40.3	28.3	164	47.7	31.6	43	56	12	20 59	22 09	0 59 78	19 55 38				
23	161	40.2	27.7	179	09.4	27.0	46	58	22	21 15	22 38	38 80	20 15 33				
24	176	40.1	-17 27.0	193	31.1	-25 22.3	47	60 S	20 34	21 33	23 28	0 11 82	20 39 27				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 15 ^h 20 ^m 6			Mag: -4.8 PMG: 10 ^h 07 ^m			Mag: +1.4 PMG: 9 ^h 40 ^m			Mag: -2.1 PMG: 13 ^h 57 ^m			Mag: +0.7 PMG: 12 ^h 33 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	129	12.6	207	44.6	-16 12.1	214	52.0	-23 50.6	150	21.4	-9 56.2	171	14.6	-17 04.2			
1	144	15.1	222	47.0	12.1	229	52.5	50.6	165	23.3	56.0	186	16.7	04.1			
2	159	17.6	237	49.4	12.2	244	53.0	50.6	180	25.2	55.8	201	18.9	04.0			
3	174	20.0	252	51.7	12.2	259	53.4	50.6	195	27.2	55.6	216	21.1	04.0			
4	189	22.5	267	54.1	12.3	274	53.9	50.5	210	29.1	55.3	231	23.2	03.9			
5	204	25.0	282	56.5	-16 12.3	289	54.4	-23 50.5	225	31.0	-9 55.1	246	25.4	-17 03.8			
6	219	27.4	297	58.9	-16 12.4	304	54.8	-23 50.5	240	32.9	-9 54.9	261	27.5	-17 03.7			
7	234	29.9	313	01.2	12.4	319	55.3	50.5	255	34.9	54.7	276	29.7	03.6			
8	249	32.3	328	03.6	12.5	334	55.8	50.4	270	36.8	54.5	291	31.9	03.5			
9	264	34.8	343	06.0	12.5	349	56.3	50.4	285	38.7	54.3	306	34.0	03.4			
10	279	37.3	358	08.3	12.6	4	56.7	50.4	300	40.6	54.1	321	36.2	03.4			
11	294	39.7	13	10.7	-16 12.6	19	57.2	-23 50.4	315	42.6	-9 53.8	336	38.4	-17 03.3			
12	309	42.2	28	13.0	-16 12.7	34	57.7	-23 50.3	330	44.5	-9 53.6	351	40.5	-17 03.2			
13	324	44.7	43	15.3	12.7	49	58.1	50.3	345	46.4	53.4	6	42.7	03.1			
14	339	47.1	58	17.7	12.8	64	58.6	50.3	0	48.3	53.2	21	44.9	03.0			
15	354	49.6	73	20.0	12.9	79	59.1	50.2	15	50.3	53.0	36	47.0	02.9			
16	9	52.1	88	22.3	12.9	94	59.6	50.2	30	52.2	52.8	51	49.2	02.8			
17	24	54.5	103	24.6	-16 13.0	110	00.0	-23 50.2	45	54.1	-9 52.6	66	51.4	-17 02.8			
18	39	57.0	118	27.0	-16 13.0	125	00.5	-23 50.1	60	56.0	-9 52.4	81	53.5	-17 02.7			
19	54	59.5	133	29.3	13.1	140	01.0	50.1	75	57.9	52.1	96	55.7	02.6			
20	70	01.9	148	31.6	13.1	155	01.4	50.1	90	59.9	51.9	111	57.8	02.5			
21	85	04.4	163	33.9	13.2	170	01.9	50.0	106	01.8	51.7	127	00.0	02.4			
22	100	06.8	178	36.2	13.3	185	02.4	50.0	121	03.7	51.5	142	02.2	02.3			
23	115	09.3	193	38.5	13.3	200	02.9	50.0	136	05.6	51.3	157	04.3	02.2			
24	130	11.8	208	40.8	-16 13.4	215	03.3	-23 49.9	151	07.6	-9 51.1	172	06.5	-17 02.2			
Dif	—			+23 -1			+5 0			+19 +2			+22 +1				

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 13 ^m 4				Edad: 28 ^d 2 PHE { SD: 16'5 PMG: 11 ^h 35 ^m 4 ^h : 60'4 12 ^h : 60'3 20 ^h : 60'2 R°: 60 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	176	40.1	-17	27.0	193	31.1	-25	22.3	60 N	6	38	7	29	8	16	9 00 18
1	191	40.0		26.3	207	52.9	28	17.4	58	34	22	8	06	8	38	24 40 101
2	206	39.9		25.6	222	14.8	29	12.4	56	30	15	7	57	20	29	14 58 96
3	221	39.8		24.9	236	36.8	30	07.1	54	27	10	49		8	04	33 15 13 92
4	236	39.7		24.2	250	58.8	30	-25	52	24	05	42		7	51	36 26 88
5	251	39.6	-17	23.5	265	20.9	31	-24	50	6	21	7	00	7	39	38 15 37 86
6	266	39.6	-17	22.8	279	43.0	31	-24	45	6	14	6	50	7	21	7 15 43 16 01 80
7	281	39.5		22.1	294	05.3	33	44.3	40	08	41	10		6	56	46 20 76
8	296	39.4		21.4	308	27.6	33	38.1	35	6	03	33	7	00	39	49 35 74
9	311	39.3		20.7	322	50.0	34	31.8	30	5	57	26	6	51	25	51 16 49 70
10	326	39.2		20.0	337	12.5	35	25.3	20	46	13	36		6	01	55 17 12 66
11	341	39.1	-17	19.3	351	35.0	35	-24	10 N	5	35	6	01	6	22	5 40 58 17 31 63
12	356	39.0	-17	18.6	5	57.7	37	-24	0	5	23	5	48	6	10	5 20 61 17 50 59
13	11	38.9		17.9	20	20.4	37	-24	10 S	5	09	35	5	57	5	01 64 18 08 56
14	26	38.8		17.2	34	43.2	38	-23	20	4	52	20	43	4	40	67 28 51
15	41	38.7		16.5	49	06.2	40	50.2	30	31	5	02	28	15	71	18 50 47
16	56	38.6		15.8	63	29.2	40	42.7	35	17	4	51	18	4	01 73 19 03 45	
17	71	38.5	-17	15.1	77	52.3	41	-23	40	4	01	4	38	5	08	3 44 76 19 18 41
18	86	38.4	-17	14.3	92	15.5	42	-23	45	3	40	4	22	4	55	3 24 79 19 35 38
19	101	38.4		13.6	106	38.8	43	19.2	50	3	12	4	02	4	00	2 59 83 19 57 33
20	116	38.3		12.9	121	02.2	44	11.0	52	2	57	3	52	33	47	86 20 08 30
21	131	38.2		12.2	135	25.7	45	-23	54	40	41	25		33	89	19 27
22	146	38.1		11.5	149	49.3	46	-22	56	2	18	28	16	2	17 92 33 23	
23	161	38.0		10.8	164	13.0	47	45.6	58	1	49	3	13	4	05	1 58 96 20 48 19
24	176	37.9	-17	10.1	178	36.8	48	-22	60 S	0	59	2	55	3	53	1 33 103 21 06 14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 15 ^h 16 ^m 7		Mag: -4.8 PMG: 10 ^h 04 ^m		Mag: +1.4 PMG: 9 ^h 39 ^m		Mag: -2.1 PMG: 13 ^h 54 ^m		Mag: +0.7 PMG: 12 ^h 30 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	130	11.8	208	40.8	-16	13.4	215	03.3	-23	49.9
1	145	14.2	223	43.1		13.4	230	03.8		49.9
2	160	16.7	238	45.4		13.5	245	04.3		49.9
3	175	19.2	253	47.6		13.6	260	04.7		49.8
4	190	21.6	268	49.9		13.6	275	05.2		49.8
5	205	24.1	283	52.2	-16	13.7	290	05.7	-23	49.8
6	220	26.6	298	54.4	-16	13.8	305	06.2	-23	49.7
7	235	29.0	313	56.7		13.8	320	06.6		49.7
8	250	31.5	328	59.0		13.9	335	07.1		49.6
9	265	33.9	344	01.2		14.0	350	07.6		49.6
10	280	36.4	359	03.5		14.0	5	08.0		49.6
11	295	38.9	14	05.7	-16	14.1	20	08.5	-23	49.5
12	310	41.3	29	07.9	-16	14.1	35	09.0	-23	49.5
13	325	43.8	44	10.2		14.2	50	09.4		49.4
14	340	46.3	59	12.4		14.3	65	09.9		49.4
15	355	48.7	74	14.6		14.3	80	10.4		49.4
16	10	51.2	89	16.9		14.4	95	10.9		49.3
17	25	53.7	104	19.1	-16	14.5	110	11.3	-23	49.3
18	40	56.1	119	21.3	-16	14.6	125	11.8	-23	49.2
19	55	58.6	134	23.5		14.6	140	12.3		49.2
20	71	01.1	149	25.7		14.7	155	12.7		49.2
21	86	03.5	164	27.9		14.8	170	13.2		49.1
22	101	06.0	179	30.1		14.8	185	13.7		49.1
23	116	08.4	194	32.3		14.9	200	14.2		49.0
24	131	10.9	209	34.5	-16	15.0	215	14.6	-23	49.0
Dif	—		+22		-1		+5		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 13 ^m 5			Edad: 29 ^d 2 PHE { 4 ^h : 60'1 12 ^h : 59'9 20 ^h : 59'7 R°: 56 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	37.9	-17 10.1	178	36.8	-22 36.8	49	60 N	16 14	17 01	17 52	9 18 9	16 06 105	
1	191	37.8	09.4	193	00.7	27.9	89	58	24	08	56	9 02 14	21 99	
2	206	37.7	08.7	207	24.8	18.8	91	56	33	14	17 59	8 49 18	34 94	
3	221	37.7	08.0	221	48.9	09.6	92	54	41	19	18 02	37 22	45 91	
4	236	37.6	07.3	236	13.2	-22 00.3	93	52	48	24	05	27 25	16 54 88	
5	251	37.5	-17 06.6	250	37.5	-21 50.8	95	50	16 54	17 29	18 08	8 17 28	17 03 85	
6	266	37.4	-17 05.8	265	02.0	-21 41.1	97	45	17 08	17 39	18 14	7 58 33	17 21 80	
7	281	37.3	05.1	279	26.5	31.3	98	40	19	48	20	42 37	36 75	
8	296	37.2	04.4	293	51.2	21.4	99	35	29	17 55	25	28 41	49 71	
9	311	37.1	03.7	308	16.0	11.4	100	30	37	18 02	31	7 16 44	17 59 69	
10	326	37.1	03.0	322	41.0	-21 01.2	102	20	17 52	15	41	6 56 48	18 18 63	
11	341	37.0	-17 02.3	337	06.0	-20 50.9	103	10 N	18 05	18 27	18 52	6 38 53	18 34 58	
12	356	36.9	-17 01.6	351	31.1	-20 40.5	104	0	18 17	18 39	19 04	6 21 57	18 49 54	
13	11	36.8	00.9	5	56.4	29.9	106	10 S	29	18 51	17	6 05 60	19 04 50	
14	26	36.7	-17 00.1	20	21.8	19.2	107	20	43	19 06	34	5 47 64	19 46	
15	41	36.6	-16 59.4	34	47.2	-20 08.4	108	30	18 58	24	19 55	26 70	37 41	
16	56	36.6	58.7	49	12.8	-19 57.5	109	35	19 07	35	20 08	14 72	48 37	
17	71	36.5	-16 58.0	63	38.6	-19 46.4	111	40	19 18	19 47	20 24	5 00 76	19 59 34	
18	86	36.4	-16 57.3	78	04.4	-19 35.3	111	45	19 30	20 03	20 44	4 43 80	20 13 30	
19	101	36.3	56.6	92	30.4	24.0	113	50	45	22	21 11	22 86	30 24	
20	116	36.2	55.8	106	56.4	12.6	114	52	51	32	25	13 88	38 21	
21	131	36.2	55.1	121	22.6	-19 01.1	115	54	19 59	42	21 42	4 02 91	46 19	
22	146	36.1	54.4	135	48.9	-18 49.5	116	56	20 08	20 55	22 02	3 49 95	20 56 16	
23	161	36.0	53.7	150	15.3	37.8	117	58	18	21 09	22 28	34 100	21 07 12	
24	176	35.9	-16 53.0	164	41.9	-18 26.0	118	60 S	20 29	21 26	23 09	3 16 106	21 20 7	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 12 ^m 8		Mag: -4.8 PMG: 10 ^h 00 ^m			Mag: +1.4 PMG: 9 ^h 39 ^m			Mag: -2.1 PMG: 13 ^h 51 ^m			Mag: +0.7 PMG: 12 ^h 26 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	131	10.9	209 34.5	-16 15.0	215 14.6	-23 49.0	151 53.7	-9 45.9	172 58.4	-17 00.1				
1	146	13.4	224 36.7	15.0	230 15.1	48.9	166 55.6	45.7	188 00.6	-17 00.0				
2	161	15.8	239 38.9	15.1	245 15.6	48.9	181 57.5	45.5	203 02.8	-16 59.9				
3	176	18.3	254 41.0	15.2	260 16.0	48.8	196 59.5	45.3	218 04.9	59.8				
4	191	20.8	269 43.2	15.3	275 16.5	48.8	212 01.4	45.1	233 07.1	59.7				
5	206	23.2	284 45.4	-16 15.3	290 17.0	-23 48.7	227 03.3	-9 44.8	248 09.3	-16 59.6				
6	221	25.7	299 47.6	-16 15.4	305 17.4	-23 48.7	242 05.2	-9 44.6	263 11.4	-16 59.6				
7	236	28.2	314 49.7	15.5	320 17.9	48.7	257 07.2	44.4	278 13.6	59.5				
8	251	30.6	329 51.9	15.5	335 18.4	48.6	272 09.1	44.2	293 15.8	59.4				
9	266	33.1	344 54.0	15.6	350 18.9	48.6	287 11.0	44.0	308 17.9	59.3				
10	281	35.6	359 56.2	15.7	5 19.3	48.5	302 12.9	43.8	323 20.1	59.2				
11	296	38.0	14 58.3	-16 15.8	20 19.8	-23 48.5	317 14.8	-9 43.5	338 22.2	-16 59.1				
12	311	40.5	30 00.5	-16 15.8	35 20.3	-23 48.4	332 16.8	-9 43.3	353 24.4	-16 59.0				
13	326	42.9	45 02.6	15.9	50 20.7	48.4	347 18.7	43.1	8 26.6	59.0				
14	341	45.4	60 04.7	16.0	65 21.2	48.3	2 20.6	42.9	23 28.7	58.9				
15	356	47.9	75 06.9	16.1	80 21.7	48.3	17 22.5	42.7	38 30.9	58.8				
16	11	50.3	90 09.0	16.1	95 22.1	48.2	32 24.4	42.5	53 33.1	58.7				
17	26	52.8	105 11.1	-16 16.2	110 22.6	-23 48.2	47 26.4	-9 42.3	68 35.2	-16 58.6				
18	41	55.3	120 13.2	-16 16.3	125 23.1	-23 48.1	62 28.3	-9 42.0	83 37.4	-16 58.5				
19	56	57.7	135 15.3	16.4	140 23.5	48.0	77 30.2	41.8	98 39.6	58.4				
20	72	00.2	150 17.4	16.5	155 24.0	48.0	92 32.1	41.6	113 41.7	58.4				
21	87	02.7	165 19.5	16.5	170 24.5	47.9	107 34.1	41.4	128 43.9	58.3				
22	102	05.1	180 21.6	16.6	185 25.0	47.9	122 36.0	41.2	143 46.1	58.2				
23	117	07.6	195 23.7	16.7	200 25.4	47.8	137 37.9	41.0	158 48.2	58.1				
24	132	10.1	210 25.8	-16 16.8	215 25.9	-23 47.8	152 39.8	-9 40.7	173 50.4	-16 58.0				
Dif	—		+21	-1	+5	0	+19	+2	+22	+1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 12 ^h 13 ^m 7			Edad: 0 ^d 8 PHE { SD: 16:2 PMG: 13 ^h 31 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	176	35.9	-16	53.0	164	41.9	-18	26.0	60 N	6 34	7 25	8 12	9 27	5	17 51	98		
1	191	35.8		52.2	179	08.5	76	14.1	58	30	18	8 02	16	10	18 00	94		
2	206	35.8		51.5	193	35.3	78	-18 02.1	56	27	12	7 53	9 07	13	08	90		
3	221	35.7		50.8	208	02.2	79	-17 50.0	54	24	07	45	8 59	16	16	86		
4	236	35.6		50.1	222	29.2	80	37.8	52	21	7 02	38	52	18	22	84		
5	251	35.5	-16	49.3	236	56.3	81	-17 25.5	50	6 19	6 57	7 32	8 45	21	18 28	81		
6	266	35.4	-16	48.6	251	23.5	82	-17 13.1	45	6 12	6 48	7 19	8 31	26	18 41	76		
7	281	35.4		47.9	265	50.9	84	-17 00.6	40	07	39	7 08	19	30	18 51	72		
8	296	35.3		47.2	280	18.3	84	-16 48.0	35	6 01	32	6 58	09	34	19 00	68		
9	311	35.2		46.4	294	45.9	86	35.4	30	5 56	25	50	8 00	37	08	64		
10	326	35.1		45.7	309	13.6	87	22.6	20	46	12	35	7 44	43	21	59		
11	341	35.1	-16	45.0	323	41.4	88	-16 09.8	10 N	5 35	6 00	6 22	7 31	47	19 32	54		
12	356	35.0	-16	44.3	338	09.3	89	-15 56.9	0	5 23	5 49	6 10	7 18	52	19 43	50		
13	11	34.9		43.5	352	37.3	90	43.9	10 S	5 10	36	5 58	7 05	56	19 54	45		
14	26	34.8		42.8	7	05.5	92	30.9	20	4 54	21	45	6 51	61	20 05	40		
15	41	34.8		42.1	21	33.7	92	17.7	30	33	5 04	29	36	66	18	35		
16	56	34.7		41.4	36	02.1	94	-15 04.5	35	20	4 53	20	26	70	25	32		
17	71	34.6	-16	40.6	50	30.5	94	-14 51.3	40	4 04	4 40	5 10	6 16	73	20 33	29		
18	86	34.5	-16	39.9	64	59.1	96	-14 37.9	45	3 43	4 25	4 58	6 03	78	20 43	24		
19	101	34.5		39.2	79	27.8	97	24.5	50	16	4 05	43	5 48	83	54	19		
20	116	34.4		38.4	93	56.6	98	-14 11.1	52	3 03	3 56	36	41	86	20 59	17		
21	131	34.3		37.7	108	25.5	99	-13 57.5	54	2 46	45	29	33	89	21 05	15		
22	146	34.3		37.0	122	54.5	100	43.9	56	26	33	20	24	92	12	11		
23	161	34.2		36.2	137	23.6	101	30.3	58	2 00	19	4 10	14	96	19	8		
24	176	34.1	-16	35.5	151	52.8	102	-13 16.6	60 S	1 19	3 02	3 59	5 02	101	21 27	5		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 15 ^h 08 ^m 8			Mag: -4.8 PMG: 9 ^h 57 ^m			Mag: +1.4 PMG: 9 ^h 38 ^m			Mag: -2.1 PMG: 13 ^h 48 ^m			Mag: +0.7 PMG: 12 ^h 23 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	132	10.1	210	25.8	-16	16.8	215	25.9	-23	47.8	152	39.8	-9	40.7	173	50.4		
1	147	12.5	225	27.9		16.9	230	26.4		47.7	167	41.7		40.5	188	52.5		
2	162	15.0	240	30.0		16.9	245	26.8		47.7	182	43.7		40.3	203	54.7		
3	177	17.4	255	32.1		17.0	260	27.3		47.6	197	45.6		40.1	218	56.9		
4	192	19.9	270	34.1		17.1	275	27.8		47.6	212	47.5		39.9	233	59.0		
5	207	22.4	285	36.2	-16	17.2	290	28.2	-23	47.5	227	49.4	-9	39.7	249	01.2		
6	222	24.8	300	38.3	-16	17.3	305	28.7	-23	47.4	242	51.3	-9	39.4	264	03.4		
7	237	27.3	315	40.3		17.3	320	29.2		47.4	257	53.3		39.2	279	05.5		
8	252	29.8	330	42.4		17.4	335	29.6		47.3	272	55.2		39.0	294	07.7		
9	267	32.2	345	44.4		17.5	350	30.1		47.3	287	57.1		38.8	309	09.9		
10	282	34.7	0	46.5		17.6	5	30.6		47.2	302	59.0		38.6	324	12.0		
11	297	37.2	15	48.5	-16	17.7	20	31.0	-23	47.1	318	00.9	-9	38.4	339	14.2		
12	312	39.6	30	50.6	-16	17.8	35	31.5	-23	47.1	333	02.9	-9	38.1	354	16.3		
13	327	42.1	45	52.6		17.8	50	32.0		47.0	348	04.8		37.9	9	18.5		
14	342	44.5	60	54.6		17.9	65	32.5		47.0	3	06.7		37.7	24	20.7		
15	357	47.0	75	56.7		18.0	80	32.9		46.9	18	08.6		37.5	39	22.8		
16	12	49.5	90	58.7		18.1	95	33.4		46.8	33	10.5		37.3	54	25.0		
17	27	51.9	106	00.7	-16	18.2	110	33.9	-23	46.8	48	12.4	-9	37.1	69	27.2		
18	42	54.4	121	02.7	-16	18.3	125	34.3	-23	46.7	63	14.4	-9	36.9	84	29.3		
19	57	56.9	136	04.8		18.3	140	34.8		46.7	78	16.3		36.6	99	31.5		
20	72	59.3	151	06.8		18.4	155	35.3		46.6	93	18.2		36.4	114	33.7		
21	88	01.8	166	08.8		18.5	170	35.7		46.5	108	20.1		36.2	129	35.8		
22	103	04.3	181	10.8		18.6	185	36.2		46.5	123	22.0		36.0	144	38.0		
23	118	06.7	196	12.8		18.7	200	36.7		46.4	138	24.0		35.8	159	40.2		
24	133	09.2	211	14.8	-16	18.8	215	37.1	-23	46.3	153	25.9	-9	35.6	174	42.3		
Dif	—		+20		-1		+5		+1		+19		+2		+22		+	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 12 ^h 13 ^m 8				Edad: 1 ^d 8 PHE { 4 ^h : 58:7 12 ^h : 58:5 20 ^h : 58:2 PMG: 14 ^h 21 ^m R°: 47 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	176	34.1	-16	35.5	151	52.8	-13	16.6	60 N	16 19	17 06	17 56	9 32	4	19 29	92		
1	191	34.0		34.8	166	22.1 ¹⁰³	-13	02.8 ¹³⁸	58	29	12	18 00	26	7	34	88		
2	206	34.0		34.0	180	51.5 ¹⁰⁴	-12	49.0 ¹³⁸	56	37	18	03	20	10	38	86		
3	221	33.9		33.3	195	21.0 ¹⁰⁵		35.1 ¹³⁹	54	45	23	06	15	13	42	8		
4	236	33.8		32.6	209	50.6 ¹⁰⁶		21.2 ¹³⁹	52	51	28	08	10	16	46	80		
5	251	33.8	-16	31.8	224	20.3 ¹⁰⁷	-12	07.2 ¹⁴⁰	50	16 58	17 32	18 11	9 06	18	19 49	78		
6	266	33.7	-16	31.1	238	50.1 ¹⁰⁸	-11	53.2 ¹⁴⁰	45	17 11	17 42	18 17	8 57	22	19 57	72		
7	281	33.6		30.4	253	20.0 ¹⁰⁹		39.1 ¹⁴¹	40	21	50	22	49	27	20 03	67		
8	296	33.6		29.6	267	50.0 ¹¹⁰		25.0 ¹⁴¹	35	31	17 57	27	43	30	08	64		
9	311	33.5		28.9	282	20.1 ¹¹¹	-11	10.9 ¹⁴¹	30	39	18 04	32	37	33	12	61		
10	326	33.4		28.2	296	50.3 ¹¹²	-10	56.7 ¹⁴²	20	17 53	16	42	27	38	20	55		
11	341	33.4	-16	27.4	311	20.6 ¹¹³	-10	42.5 ¹⁴²	10 N	18 05	18 27	18 53	8 18	43	20 26	51		
12	356	33.3	-16	26.7	325	50.9 ¹¹³	-10	28.2 ¹⁴³	0	18 17	18 39	19 04	8 10	47	20 33	46		
13	11	33.2		25.9	340	21.4 ¹¹⁵	-10	13.9 ¹⁴³	10 S	29	18 51	17	8 01	52	39	42		
14	26	33.2		25.2	354	51.9 ¹¹⁵	-9	59.6 ¹⁴³	20	42	19 05	33	7 52	57	45	37		
15	41	33.1		24.5	9	22.6 ¹¹⁷		45.2 ¹⁴⁴	30	18 57	22	19 53	42	62	53	31		
16	56	33.0		23.7	23	53.3 ¹¹⁷		30.8 ¹⁴⁴	35	19 06	33	20 06	36	66	20 57	29		
17	71	33.0	-16	23.0	38	24.1 ¹¹⁸	-9	16.4 ¹⁴⁴	40	19 16	19 45	20 22	7 29	69	21 02	25		
18	86	32.9	-16	22.2	52	55.0 ¹¹⁹	-9	01.9 ¹⁴⁵	45	19 27	20 00	20 41	7 21	74	21 07	21		
19	101	32.8		21.5	67	26.0 ¹²⁰	-8	47.4 ¹⁴⁵	50	41	19	21 07	11	79	13	17		
20	116	32.8		20.7	81	57.0 ¹²⁰		32.9 ¹⁴⁵	52	48	28	20	07	81	16	15		
21	131	32.7		20.0	96	28.2 ¹²²		18.4 ¹⁴⁵	54	19 56	38	36	7 02	84	20	12		
22	146	32.6		19.3	110	59.4 ¹²²	-8	03.8 ¹⁴⁶	56	20 04	20 50	21 55	6 56	88	23	10		
23	161	32.6		18.5	125	30.7 ¹²³	-7	49.3 ¹⁴⁵	58	13	21 03	22 19	50	91	27	7		
24	176	32.5	-16	17.8	140	02.1 ¹²⁴	-7	34.7 ¹⁴⁶	60 S	20 24	21 20	22 54	6 43	95	21 32	3		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 15 ^h 04 ^m 9		Mag: -4.8 PMG: 9 ^h 54 ^m				Mag: +1.4 PMG: 9 ^h 37 ^m				Mag: -2.1 PMG: 13 ^h 45 ^m				Mag: +0.7 PMG: 12 ^h 19 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	133	09.2	211	14.8	-16	18.8	215	37.1	-23	46.3	153	25.9	-9	35.6	174	42.3	-16	55.9
1	148	11.7	226	16.7		18.9	230	37.6		46.3	168	27.8		35.3	189	44.5		55.8
2	163	14.1	241	18.7		19.0	245	38.1		46.2	183	29.7		35.1	204	46.6		55.8
3	178	16.6	256	20.7		19.0	260	38.5		46.1	198	31.6		34.9	219	48.8		55.7
4	193	19.0	271	22.7		19.1	275	39.0		46.1	213	33.6		34.7	234	51.0		55.6
5	208	21.5	286	24.7	-16	19.2	290	39.5	-23	46.0	228	35.5	-9	34.5	249	53.1	-16	55.5
6	223	24.0	301	26.6	-16	19.3	305	40.0	-23	45.9	243	37.4	-9	34.2	264	55.3	-16	55.4
7	238	26.4	316	28.6		19.4	320	40.4		45.9	258	39.3		34.0	279	57.5		55.3
8	253	28.9	331	30.6		19.5	335	40.9		45.8	273	41.2		33.8	294	59.6		55.2
9	268	31.4	346	32.5		19.6	350	41.4		45.7	288	43.2		33.6	310	01.8		55.2
10	283	33.8	1	34.5		19.7	5	41.8		45.7	303	45.1		33.4	325	04.0		55.1
11	298	36.3	16	36.4	-16	19.8	20	42.3	-23	45.6	318	47.0	-9	33.2	340	06.1	-16	55.0
12	313	38.8	31	38.4	-16	19.8	35	42.8	-23	45.5	333	48.9	-9	32.9	355	08.3	-16	54.9
13	328	41.2	46	40.3		19.9	50	43.2		45.5	348	50.8		32.7	10	10.4		54.8
14	343	43.7	61	42.2		20.0	65	43.7		45.4	3	52.7		32.5	25	12.6		54.7
15	358	46.2	76	44.2		20.1	80	44.2		45.3	18	54.7		32.3	40	14.8		54.6
16	13	48.6	91	46.1		20.2	95	44.6		45.2	33	56.6		32.1	55	16.9		54.5
17	28	51.1	106	48.0	-16	20.3	110	45.1	-23	45.2	48	58.5	-9	31.9	70	19.1	-16	54.5
18	43	53.5	121	50.0	-16	20.4	125	45.6	-23	45.1	64	00.4	-9	31.6	85	21.3	-16	54.4
19	58	56.0	136	51.9		20.5	140	46.0		45.0	79	02.3		31.4	100	23.4		54.3
20	73	58.5	151	53.8		20.6	155	46.5		45.0	94	04.2		31.2	115	25.6		54.2
21	89	00.9	166	55.7		20.7	170	47.0		44.9	109	06.2		31.0	130	27.8		54.1
22	104	03.4	181	57.6		20.8	185	47.4		44.8	124	08.1		30.8	145	29.9		54.0
23	119	05.9	196	59.5		20.9	200	47.9		44.7	139	10.0		30.6	160	32.1		53.9
24	134	08.3	212	01.4	-16	21.0	215	48.4	-23	44.7	154	11.9	-9	30.3	175	34.2	-16	53.9
Dif	—		+19		-1		+5		+1		+19		+2		+22		+1	

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				Edad: 2 ^d 8 PHE { 4 ^h : 57'9 12 ^h : 57'6 20 ^h : 57'3 SD: 15'8 PMG: 15 ^h 08 ^m R°: 45 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	176	32.5	-16	17.8	140	02.1	-7	34.7	60 N	6 30	7 20	8 07	9 36	2	21 01	88		
1	191	32.5		17.0	154	33.5 ¹²⁴		20.1 ¹⁴⁶	58	27	14	7 57	33	5		02	85	
2	206	32.4		16.3	169	05.1 ¹²⁶	-7	05.5 ¹⁴⁶	56	24	09	49	30	9		04	81	
3	221	32.3		15.5	183	36.7 ¹²⁶	-6	50.8 ¹⁴⁷	54	21	7 03	42	28	11		05	79	
4	236	32.3		14.8	198	08.4 ¹²⁷		36.2 ¹⁴⁶	52	19	6 59	35	26	13		06	76	
5	251	32.2	-16	14.0	212	40.1 ¹²⁷	-6	21.5 ¹⁴⁷	50	6 16	6 55	7 29	9 24	15	21 07	74		
6	266	32.2	-16	13.3	227	11.9 ¹²⁸	-6	06.8 ¹⁴⁷	45	6 10	6 45	7 16	9 19	21	21 09	69		
7	281	32.1		12.5	241	43.8 ¹²⁹	-5	52.1 ¹⁴⁷	40	05	37	7 06	16	24	10	66		
8	296	32.0		11.8	256	15.8 ¹³⁰		37.4 ¹⁴⁷	35	6 00	30	6 57	13	27	12	61		
9	311	32.0		11.0	270	47.8 ¹³⁰		22.7 ¹⁴⁷	30	5 55	24	48	10	31	13	59		
10	326	31.9		10.3	285	19.9 ¹³¹	-5	08.0 ¹⁴⁷	20	45	12	34	05	36	15	53		
11	341	31.9	-16	09.5	299	52.1 ¹³²	-4	53.3 ¹⁴⁷	10 N	5 35	6 00	6 22	9 01	41	21 17	49		
12	356	31.8	-16	08.8	314	24.3 ¹³²	-4	38.6 ¹⁴⁷	0	5 24	5 49	6 10	8 57	45	21 19	44		
13	11	31.7		08.0	328	56.6 ¹³³		23.9 ¹⁴⁷	10 S	5 11	37	5 59	53	50	21	39		
14	26	31.7		07.3	343	28.9 ¹³³	-4	09.2 ¹⁴⁷	20	4 55	23	46	49	54	22	36		
15	41	31.6		06.5	358	01.3 ¹³⁴	-3	54.5 ¹⁴⁷	30	35	5 06	31	44	60	24	30		
16	56	31.6		05.8	12	33.8 ¹³⁵		39.8 ¹⁴⁷	35	22	4 55	22	42	62	26	27		
17	71	31.5	-16	05.0	27	06.3 ¹³⁵	-3	25.1 ¹⁴⁷	40	4 07	4 43	5 13	8 38	67	21 27	24		
18	86	31.5	-16	04.3	41	38.8 ¹³⁵	-3	10.3 ¹⁴⁸	45	3 47	4 28	5 01	8 35	70	21 28	20		
19	101	31.4		03.5	56	11.5 ¹³⁷	-2	55.6 ¹⁴⁷	50	21	09	4 47	30	76	30	15		
20	116	31.4		02.8	70	44.2 ¹³⁷		41.0 ¹⁴⁶	52	3 08	4 00	40	28	78	31	13		
21	131	31.3		02.0	85	16.9 ¹³⁷		26.3 ¹⁴⁷	54	2 52	3 50	33	26	80	32	11		
22	146	31.2		01.3	99	49.7 ¹³⁸	-2	11.6 ¹⁴⁷	56	34	39	25	24	83	33	8		
23	161	31.2	-16	00.5	114	22.5 ¹³⁸	-1	56.9 ¹⁴⁷	58	2 09	25	15	21	86	34	5		
24	176	31.1	-15	59.8	128	55.4 ¹³⁹	-1	42.3 ¹⁴⁶	60 S	1 34	3 09	4 04	8 18	90	21 35	2		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 01 ^m 0		Mag: -4.8 PMG: 9 ^h 51 ^m		Mag: +1.4 PMG: 9 ^h 36 ^m		Mag: -2.1 PMG: 13 ^h 41 ^m		Mag: +0.7 PMG: 12 ^h 16 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	134	08.3	212	01.4	-16	21.0	215	48.4	-23	44.7	154	11.9	-9	30.3	175	34.2	-16	53.9
1	149	10.8	227	03.3		21.0	230	48.8		44.6	169	13.8		30.1	190	36.4		53.8
2	164	13.3	242	05.2		21.1	245	49.3		44.5	184	15.8		29.9	205	38.6		53.7
3	179	15.7	257	07.1		21.2	260	49.8		44.4	199	17.7		29.7	220	40.7		53.6
4	194	18.2	272	09.0		21.3	275	50.2		44.4	214	19.6		29.5	235	42.9		53.5
5	209	20.6	287	10.8	-16	21.4	290	50.7	-23	44.3	229	21.5	-9	29.2	250	45.1	-16	53.4
6	224	23.1	302	12.7	-16	21.5	305	51.2	-23	44.2	244	23.4	-9	29.0	265	47.2	-16	53.3
7	239	25.6	317	14.6		21.6	320	51.6		44.1	259	25.3		28.8	280	49.4		53.2
8	254	28.0	332	16.5		21.7	335	52.1		44.0	274	27.3		28.6	295	51.6		53.2
9	269	30.5	347	18.3		21.8	350	52.6		44.0	289	29.2		28.4	310	53.7		53.1
10	284	33.0	2	20.2		21.9	5	53.1		43.9	304	31.1		28.2	325	55.9		53.0
11	299	35.4	17	22.0	-16	22.0	20	53.5	-23	43.8	319	33.0	-9	27.9	340	58.1	-16	52.9
12	314	37.9	32	23.9	-16	22.1	35	54.0	-23	43.7	334	34.9	-9	27.7	356	00.2	-16	52.8
13	329	40.4	47	25.7		22.2	50	54.5		43.6	349	36.8		27.5	11	02.4		52.7
14	344	42.8	62	27.6		22.3	65	54.9		43.6	4	38.8		27.3	26	04.5		52.6
15	359	45.3	77	29.4		22.4	80	55.4		43.5	19	40.7		27.1	41	06.7		52.6
16	14	47.8	92	31.3		22.5	95	55.9		43.4	34	42.6		26.8	56	08.9		52.5
17	29	50.2	107	33.1	-16	22.6	110	56.3	-23	43.3	49	44.5	-9	26.6	71	11.0	-16	52.4
18	44	52.7	122	34.9	-16	22.7	125	56.8	-23	43.2	64	46.4	-9	26.4	86	13.2	-16	52.3
19	59	55.1	137	36.8		22.8	140	57.3		43.2	79	48.3		26.2	101	15.4		52.2
20	74	57.6	152	38.6		22.9	155	57.7		43.1	94	50.3		26.0	116	17.5		52.1
21	90	00.1	167	40.4		23.0	170	58.2		43.0	109	52.2		25.8	131	19.7		52.0
22	105	02.5	182	42.2		23.1	185	58.7		42.9	124	54.1		25.5	146	21.9		51.9
23	120	05.0	197	44.0		23.2	200	59.1		42.8	139	56.0		25.3	161	24.0		51.9
24	135	07.5	212	45.8	-16	23.3	215	59.6	-23	42.7	154	57.9	-9	25.1	176	26.2	-16	51.8
Dif	—		+19		-1		+5		+1		+19		+2		+22		+1	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 0				Edad: 3 ^d 8 PHE { 4 ^h : 57:0 12 ^h : 56:7 20 ^h : 56:4 R°: 43 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora	R°	Hora
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	176	31.1	-15	59.8	128	55.4	-1	42.3	60 N	16 25	17 11	18 01	9 38 3		22 29 86		
1	191	31.1		59.0	143	28.3 ¹³⁹		27.6 ¹⁴⁷	58	34	17	04	38 6		27 82		
2	206	31.0		58.2	158	01.3 ¹⁴⁰	-1	13.0 ¹⁴⁶	56	42	22	07	39 8		25 80		
3	221	31.0		57.5	172	34.3 ¹⁴⁰	-0	58.4 ¹⁴⁶	54	49	27	09	39 11		24 76		
4	236	30.9		56.7	187	07.4 ¹⁴¹		43.8 ¹⁴⁶	52	16 55	31	12	39 13		22 74		
5	251	30.9	-15	56.0	201	40.5 ¹⁴¹	-0	29.2 ¹⁴⁶	50	17 01	17 35	18 14	9 39 15		22 21 72		
6	266	30.8	-15	55.2	216	13.7 ¹⁴²	-0	14.6 ¹⁴⁶	45	17 13	17 44	18 19	9 40 19		22 18 67		
7	281	30.8		54.4	230	46.9 ¹⁴²	-0	00.1 ¹⁴⁵	40	24	52	24	40 24		16 63		
8	296	30.7		53.7	245	20.1 ¹⁴²	+0	14.5 ¹⁴⁶	35	33	17 59	29	40 27		13 60		
9	311	30.7		52.9	259	53.4 ¹⁴³		29.0 ¹⁴⁵	30	40	18 05	34	41 29		12 57		
10	326	30.6		52.2	274	26.7 ¹⁴³		43.5 ¹⁴⁵	20	17 54	17	43	41 35		08 52		
11	341	30.6	-15	51.4	289	00.0 ¹⁴³	+0	57.9 ¹⁴⁴	10 N	18 06	18 28	18 53	9 42 39		22 06 47		
12	356	30.5	-15	50.6	303	33.4 ¹⁴⁴	+1	12.4 ¹⁴⁵	0	18 17	18 39	19 04	9 42 44		22 03 43		
13	11	30.5		49.9	318	06.8 ¹⁴⁴		26.8 ¹⁴⁴	10 S	29	18 51	16	43 47		22 00 39		
14	26	30.4		49.1	332	40.2 ¹⁴⁴		41.2 ¹⁴⁴	20	41	19 04	32	43 52		21 58 34		
15	41	30.4		48.3	347	13.7 ¹⁴⁵	+1	55.6 ¹⁴⁴	30	18 56	21	19 51	44 57		54 30		
16	56	30.3		47.6	1	47.2 ¹⁴⁵	+2	09.9 ¹⁴³	35	19 04	31	20 04	44 61		53 26		
17	71	30.3	-15	46.8	16	20.7 ¹⁴⁵	+2	24.2 ¹⁴³	40	19 13	19 43	20 19	9 45 64		21 51 23		
18	86	30.2	-15	46.1	30	54.3 ¹⁴⁶	+2	38.5 ¹⁴³	45	19 25	19 57	20 38	9 45 68		21 48 20		
19	101	30.2		45.3	45	27.9 ¹⁴⁶	+2	52.8 ¹⁴³	50	38	20 15	21 03	46 73		45 16		
20	116	30.1		44.5	60	01.5 ¹⁴⁶	+3	07.0 ¹⁴²	52	45	24	15	46 75		44 13		
21	131	30.1		43.8	74	35.1 ¹⁴⁶		21.2 ¹⁴²	54	19 52	34	30	46 78		43 11		
22	146	30.1		43.0	89	08.8 ¹⁴⁷		35.4 ¹⁴²	56	20 00	45	21 48	47 80		41 9		
23	161	30.0		42.2	103	42.4 ¹⁴⁶	+3	49.5 ¹⁴¹	58	09	20 58	22 10	47 83		39 6		
24	176	30.0	-15	41.5	118	16.1 ¹⁴⁷	+4	03.6 ¹⁴¹	60 S	20 19	21 13	22 41	9 48 86		21 37 3		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 57 ^m 0		Mag: -4.9 PMG: 9 ^h 48 ^m		Mag: +1.4 PMG: 9 ^h 36 ^m		Mag: -2.1 PMG: 13 ^h 38 ^m		Mag: +0.7 PMG: 12 ^h 12 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♎	
h	°	'	°	'	°	'	°	'	°	'
0	135	07.5	212	45.8	-16	23.3	215	59.6	-23	42.7
1	150	09.9	227	47.6		23.4	231	00.1		42.6
2	165	12.4	242	49.4		23.5	246	00.5		42.6
3	180	14.9	257	51.2		23.6	261	01.0		42.5
4	195	17.3	272	53.0		23.7	276	01.5		42.4
5	210	19.8	287	54.8	-16	23.8	291	01.9	-23	42.3
6	225	22.2	302	56.6	-16	23.9	306	02.4	-23	42.2
7	240	24.7	317	58.4		24.0	321	02.9		42.1
8	255	27.2	333	00.1		24.1	336	03.3		42.0
9	270	29.6	348	01.9		24.2	351	03.8		42.0
10	285	32.1	3	03.7		24.3	6	04.3		41.9
11	300	34.6	18	05.5	-16	24.4	21	04.7	-23	41.8
12	315	37.0	33	07.2	-16	24.5	36	05.2	-23	41.7
13	330	39.5	48	09.0		24.6	51	05.7		41.6
14	345	42.0	63	10.7		24.7	66	06.1		41.5
15	0	44.4	78	12.5		24.8	81	06.6		41.4
16	15	46.9	93	14.2		24.9	96	07.1		41.3
17	30	49.4	108	16.0	-16	25.0	111	07.5	-23	41.2
18	45	51.8	123	17.7	-16	25.1	126	08.0	-23	41.1
19	60	54.3	138	19.4		25.2	141	08.5		41.0
20	75	56.7	153	21.2		25.3	156	08.9		40.9
21	90	59.2	168	22.9		25.4	171	09.4		40.9
22	106	01.7	183	24.6		25.5	186	09.9		40.8
23	121	04.1	198	26.4		25.6	201	10.3		40.7
24	136	06.6	213	28.1	-16	25.7	216	10.8	-23	40.6
Dif	—		+18		-1		+5		+1	

+19		+2		+22		+	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'2 PMG: 12 ^h 14 ^m 0				Edad: 4 ^d 8 PHE { SD: 15'3 PMG: 16 ^h 36 ^m 4 ^h : 56'2 12 ^h : 55'9 20 ^h : 55'7 R°: 43 ^m																	
	hG ☉	Dec			hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m			
0	176	30.0	-15	41.5	118	16.1	+4	03.6	60 N	6	26	7	16	8	02		9	41	3			
1	191	29.9		40.7	132	49.9 ¹⁴⁸		17.7 ¹⁴¹	58	23	10		7	53		44	6		49	82		
2	206	29.9		39.9	147	23.6 ¹⁴⁷		31.7 ¹⁴⁰	56	20	05		45			47	9		45	78		
3	221	29.8		39.1	161	57.4 ¹⁴⁸		45.7 ¹⁴⁰	54	18	7	00	38			50	11		40	76		
4	236	29.8		38.4	176	31.1 ¹⁴⁷	+4	59.6 ¹³⁹	52	16	6	56	32			52	14		36	73		
5	251	29.7	-15	37.6	191	04.9 ¹⁴⁸	+5	13.6 ¹⁴⁰	50	6	13	6	52	7	26		9	54	16	23	33	71
6	266	29.7	-15	36.8	205	38.7 ¹⁴⁸	+5	27.4 ¹³⁸	45	6	08	6	43	7	14		9	59	21	23	25	66
7	281	29.7		36.1	220	12.5 ¹⁴⁸		41.3 ¹³⁹	40	6	03	35		7	04		10	04	24		19	62
8	296	29.6		35.3	234	46.3 ¹⁴⁸	+5	55.1 ¹³⁸	35	5	58	28		6	55		07	27		13	59	
9	311	29.6		34.5	249	20.2 ¹⁴⁹	+6	08.9 ¹³⁸	30	54	22		47			10	30		09	56		
10	326	29.5		33.8	263	54.0 ¹⁴⁸		22.6 ¹³⁷	20	45	11		34			16	35		23	00	52	
11	341	29.5	-15	33.0	278	27.9 ¹⁴⁹	+6	36.2 ¹³⁶	10 N	5	35	6	00	6	22		10	21	39	22	53	47
12	356	29.4	-15	32.2	293	01.7 ¹⁴⁸	+6	49.9 ¹³⁷	0	5	24	5	49	6	11		10	26	43	22	46	44
13	11	29.4		31.4	307	35.6 ¹⁴⁹	+7	03.5 ¹³⁶	10 S	5	12	37		5	59		30	47		39	40	
14	26	29.4		30.7	322	09.5 ¹⁴⁹		17.0 ¹³⁵	20	4	57	24		47		35	52		32	36		
15	41	29.3		29.9	336	43.3 ¹⁴⁸		30.5 ¹³⁵	30	37	5	07	33			41	57		24	31		
16	56	29.3		29.1	351	17.2 ¹⁴⁹		44.0 ¹³⁵	35	25	4	57	25			45	59		19	28		
17	71	29.2	-15	28.3	5	51.1 ¹⁴⁹	+7	57.4 ¹³⁴	40	4	10	4	46	5	15		10	49	62	22	14	25
18	86	29.2	-15	27.6	20	25.0 ¹⁴⁹	+8	10.7 ¹³³	45	3	51	4	31	5	04		10	53	67	22	08	21
19	101	29.2		26.8	34	58.9 ¹⁴⁹		24.0 ¹³³	50	26	13		4	50		10	59	71	22	01	16	
20	116	29.1		26.0	49	32.7 ¹⁴⁸		37.3 ¹³³	52	3	13	4	05	44		11	01	74	21	57	15	
21	131	29.1		25.2	64	06.6 ¹⁴⁹	+8	50.5 ¹³²	54	2	59	3	55	37		04	76		54	12		
22	146	29.1		24.4	78	40.5 ¹⁴⁹	+9	03.7 ¹³²	56	41	44		29			07	79		50	9		
23	161	29.0		23.7	93	14.4 ¹⁴⁹		16.8 ¹³¹	58	2	18	31		20		10	82		45	7		
24	176	29.0	-15	22.9	107	48.2 ¹⁴⁸	+9	29.8 ¹³⁰	60 S	1	48	3	16	4	10		11	14	86	21	40	4
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO										
	PMG 14 ^h 53 ^m 1		Mag: -4.9 PMG: 9 ^h 45 ^m			Mag: +1.4 PMG: 9 ^h 35 ^m			Mag: -2.1 PMG: 13 ^h 35 ^m			Mag: +0.7 PMG: 12 ^h 09 ^m										
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	136	06.6	213	28.1	-16	25.7	216	10.8	-23	40.6	155	43.9	-9	19.8	177	18.1						
1	151	09.1	228	29.8		25.8	231	11.3		40.5	170	45.8		19.6	192	20.3						
2	166	11.5	243	31.5		25.9	246	11.7		40.4	185	47.7		19.4	207	22.5						
3	181	14.0	258	33.2		26.0	261	12.2		40.3	200	49.6		19.2	222	24.6						
4	196	16.5	273	34.9		26.1	276	12.7		40.2	215	51.6		19.0	237	26.8						
5	211	18.9	288	36.6	-16	26.2	291	13.1	-23	40.1	230	53.5	-9	18.7	252	29.0						
6	226	21.4	303	38.3	-16	26.3	306	13.6	-23	40.0	245	55.4	-9	18.5	267	31.1						
7	241	23.9	318	40.0		26.4	321	14.1		39.9	260	57.3		18.3	282	33.3						
8	256	26.3	333	41.7		26.5	336	14.5		39.8	275	59.2		18.1	297	35.5						
9	271	28.8	348	43.4		26.6	351	15.0		39.7	291	01.1		17.9	312	37.6						
10	286	31.2	3	45.0		26.7	6	15.5		39.6	306	03.1		17.7	327	39.8						
11	301	33.7	18	46.7	-16	26.8	21	15.9	-23	39.5	321	05.0	-9	17.4	342	41.9						
12	316	36.2	33	48.4	-16	26.9	36	16.4	-23	39.4	336	06.9	-9	17.2	357	44.1						
13	331	38.6	48	50.1		27.0	51	16.9		39.3	351	08.8		17.0	12	46.3						
14	346	41.1	63	51.7		27.1	66	17.3		39.2	6	10.7		16.8	27	48.4						
15	1	43.6	78	53.4		27.2	81	17.8		39.1	21	12.6		16.6	42	50.6						
16	16	46.0	93	55.1		27.3	96	18.3		39.0	36	14.5		16.3	57	52.8						
17	31	48.5	108	56.7	-16	27.5	111	18.7	-23	38.9	51	16.5	-9	16.1	72	54.9						
18	46	51.0	123	58.4	-16	27.6	126	19.2	-23	38.8	66	18.4	-9	15.9	87	57.1						
19	61	53.4	139	00.0		27.7	141	19.7		38.7	81	20.3		15.7	102	59.3						
20	76	55.9	154	01.7		27.8	156	20.1		38.6	96	22.2		15.5	118	01.4						
21	91	58.3	169	03.3		27.9	171	20.6		38.5	111	24.1		15.2	133	03.6						
22	107	00.8	184	04.9		28.0	186	21.1		38.4	126	26.0		15.0	148	05.8						
23	122	03.3	199	06.6		28.1	201	21.5		38.3	141	27.9		14.8	163	07.9						
24	137	05.7	214	08.2	-16	28.2	216	22.0	-23	38.2	156	29.9	-9	14.6	178	10.1						
Dif	—		+17			-1	+5		+1		+19		+2		+22		+1					

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2		Edad: 5 ^d 8	PHE { 4 ^h : 55 ^h /5 12 ^h : 55 ^h /3 20 ^h : 55 ^h /1	SD: 15 ^h 1				R°: 44 ^m						
	PMG: 12 ^h 14 ^m 1														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	
0	176	29.0	-15	22.9	107	48.2	+9	29.8	60 N	16 30	17 16	18 05	9 44	4	
1	191	28.9		22.1	122	22.1 ¹⁴⁹		42.9 ¹³¹	58	38	21	08	50	8	
2	206	28.9		21.3	136	56.0 ¹⁴⁹	+9	55.8 ¹²⁹	56	46	26	10	9 56	11	
3	221	28.9		20.6	151	29.8 ¹⁴⁸	+10	08.7 ¹²⁹	54	53	31	13	10 01	14	
4	236	28.8		19.8	166	03.6 ¹⁴⁸		21.6 ¹²⁹	52	16 59	35	15	06 16		
5	251	28.8	-15	19.0	180	37.5 ¹⁴⁹	+10	34.3 ¹²⁷	50	17 04	17 39	18 17	10 10	18	
6	266	28.8	-15	18.2	195	11.3 ¹⁴⁸	+10	47.1 ¹²⁸	45	17 16	17 47	18 22	10 20	22	
7	281	28.7		17.4	209	45.1 ¹⁴⁸	+10	59.8 ¹²⁷	40	26	17 54	27	28 25		
8	296	28.7		16.6	224	18.9 ¹⁴⁸	+11	12.4 ¹²⁶	35	35	18 01	31	34 29		
9	311	28.7		15.9	238	52.7 ¹⁴⁸		24.9 ¹²⁵	30	42	07	35	40 32		
10	326	28.6		15.1	253	26.5 ¹⁴⁸		37.4 ¹²⁵	20	17 55	18	44	10 51	36	
11	341	28.6	-15	14.3	268	00.2 ¹⁴⁷	+11	49.9 ¹²⁵	10 N	18 07	18 28	18 53	11 00	40	
12	356	28.6	-15	13.5	282	34.0 ¹⁴⁸	+12	02.3 ¹²⁴	0	18 18	18 39	19 04	11 09	43	
13	11	28.5		12.7	297	07.7 ¹⁴⁷		14.6 ¹²³	10 S	29	18 50	16	17 48		
14	26	28.5		11.9	311	41.4 ¹⁴⁷		26.9 ¹²³	20	40	19 03	31	27 51		
15	41	28.5		11.2	326	15.1 ¹⁴⁷		39.1 ¹²²	30	18 54	19	50	38 56		
16	56	28.4		10.4	340	48.7 ¹⁴⁶	+12	51.2 ¹²¹	35	19 02	29	20 02	44 59		
17	71	28.4	-15	09.6	355	22.4 ¹⁴⁷	+13	03.3 ¹²¹	40	19 11	19 41	20 16	11 51	62	
18	86	28.4	-15	08.8	9	56.0 ¹⁴⁶	+13	15.3 ¹²⁰	45	19 22	19 54	20 34	12 00	65	
19	101	28.4		08.0	24	29.6 ¹⁴⁶		27.2 ¹¹⁹	50	35	20 12	20 58	10 70		
20	116	28.3		07.2	39	03.2 ¹⁴⁶		39.1 ¹¹⁹	52	41	20	21 10	15 72		
21	131	28.3		06.4	53	36.7 ¹⁴⁵	+13	50.9 ¹¹⁸	54	48	29	24	20 75		
22	146	28.3		05.6	68	10.3 ¹⁴⁶	+14	02.7 ¹¹⁸	56	19 55	40	21 41	26 78		
23	161	28.2		04.9	82	43.8 ¹⁴⁵		14.3 ¹¹⁶	58	20 04	20 52	22 02	32 82		
24	176	28.2	-15	04.1	97	17.3 ¹⁴⁵	+14	26.0 ¹¹⁷	60 S	20 14	21 07	22 29	12 40	85	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 14 ^h 49 ^m 2		Mag: -4.9 PMG: 9 ^h 42 ^m		Mag: +1.4 PMG: 9 ^h 34 ^m		Mag: -2.1 PMG: 13 ^h 32 ^m		Mag: +0.7 PMG: 12 ^h 06 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	137	05.7	214	08.2	-16	28.2	216	22.0	-9	14.6					
1	152	08.2	229	09.8		28.3	231	22.5		14.4					
2	167	10.7	244	11.5		28.4	246	22.9		14.1					
3	182	13.1	259	13.1		28.5	261	23.4		13.9					
4	197	15.6	274	14.7		28.6	276	23.9		13.7					
5	212	18.1	289	16.3	-16	28.7	291	24.3	-23	13.5					
6	227	20.5	304	17.9	-16	28.8	306	24.8	-23	13.3					
7	242	23.0	319	19.5		28.9	321	25.3		13.0					
8	257	25.5	334	21.1		29.0	336	25.7		12.8					
9	272	27.9	349	22.7		29.1	351	26.2		12.6					
10	287	30.4	4	24.3		29.2	6	26.7		12.4					
11	302	32.8	19	25.9	-16	29.4	21	27.1	-23	12.1					
12	317	35.3	34	27.5	-16	29.5	36	27.6	-23	11.9					
13	332	37.8	49	29.1		29.6	51	28.1		11.7					
14	347	40.2	64	30.7		29.7	66	28.5		11.5					
15	2	42.7	79	32.2		29.8	81	29.0		11.3					
16	17	45.2	94	33.8		29.9	96	29.5		11.0					
17	32	47.6	109	35.4	-16	30.0	111	30.0	-23	10.8					
18	47	50.1	124	37.0	-16	30.1	126	30.4	-23	10.6					
19	62	52.6	139	38.5		30.2	141	30.9		10.4					
20	77	55.0	154	40.1		30.3	156	31.4		10.2					
21	92	57.5	169	41.6		30.4	171	31.8		09.9					
22	107	59.9	184	43.2		30.5	186	32.3		09.7					
23	123	02.4	199	44.8		30.6	201	32.8		09.5					
24	138	04.9	214	46.3	-16	30.7	216	33.2	-23	09.3					
Dif	—		+16		-1		+5		+1						
							</								

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 1			Edad: 6 ^d 8 PHE { SD: 15 ^h 0 PMG: 18 ^h 03 ^m										
				R ^o : 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	176	28.2	-15 04.1	97	17.3	+14 26.0	115	6 22	7 11	7 57	9 48	6	1 20	86
1	191	28.2	03.3	111	50.7 ¹⁴⁴	37.5	115	19	06	48	9 58	10	11	81
2	206	28.2	02.5	126	24.1 ¹⁴⁴	+14 49.0	115	17	7 01	41	10 07	14	1 03	78
3	221	28.1	01.7	140	57.5 ¹⁴⁴	+15 00.4	114	15	6 57	34	15 16		0 56	75
4	236	28.1	00.9	155	30.9 ¹⁴⁴	11.7	113	13	53	28	22 19		49	73
5	251	28.1	-15 00.1	170	04.3 ¹⁴⁴	+15 23.0	113	6 11	6 49	7 23	10 28	21	0 44	70
6	266	28.1	-14 59.3	184	37.6 ¹⁴³	+15 34.2	112	6 06	6 40	7 11	10 42	26	0 31	66
7	281	28.0	58.5	199	10.9 ¹⁴³	45.3	111	6 01	33	7 01	10 53	29	21	62
8	296	28.0	57.7	213	44.1 ¹⁴²	+15 56.3	110	5 57	27	6 53	11 03	32	12	59
9	311	28.0	56.9	228	17.3 ¹⁴²	+16 07.3	110	53	21	46	12 34		0 05	56
10	326	28.0	56.2	242	50.5 ¹⁴²	18.2	109	44	10	33	27 38		** ** *	**
11	341	27.9	-14 55.4	257	23.7 ¹⁴²	+16 29.0	108	5 35	6 00	6 21	11 40	42	** ** *	**
12	356	27.9	-14 54.6	271	56.8 ¹⁴¹	+16 39.8	108	5 24	5 49	6 11	11 52	46	** ** *	**
13	11	27.9	53.8	286	29.9 ¹⁴¹	+16 50.5	107	5 12	38	6 00	12 05	48	** ** *	**
14	26	27.9	53.0	301	02.9 ¹⁴⁰	+17 01.1	106	4 58	25	5 48	18 52		23 45	40
15	41	27.8	52.2	315	35.9 ¹⁴⁰	11.6	105	39	09	35	34 56		28	36
16	56	27.8	51.4	330	08.9 ¹⁴⁰	22.0	104	35	27	5 00	43 58		18	33
17	71	27.8	-14 50.6	344	41.8 ¹³⁹	+17 32.4	104	4 13	4 48	5 18	12 53	62	23 06	31
18	86	27.8	-14 49.8	359	14.7 ¹³⁹	+17 42.7	103	3 54	4 35	5 07	13 05	65	22 53	28
19	101	27.7	49.0	13	47.6 ¹³⁹	+17 52.9	102	31	17	4 54	20 70		37	23
20	116	27.7	48.2	28	20.4 ¹³⁸	+18 03.0	101	19	09	48	27 72		29	22
21	131	27.7	47.4	42	53.2 ¹³⁸	13.0	100	54	3 05	4 00	35 74		21	19
22	146	27.7	46.6	57	25.9 ¹³⁷	23.0	100	56	2 48	3 49	44 77		11	17
23	161	27.7	45.8	71	58.6 ¹³⁷	32.9	99	58	27	37	13 54	81	22 01	12
24	176	27.6	-14 45.0	86	31.3 ¹³⁷	+18 42.7	98	60 S	2 00	3 22	14 05	86	21 49	8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 14 ^h 45 ^m 3		Mag: -4.9 PMG: 9 ^h 40 ^m		Mag: +1.4 PMG: 9 ^h 33 ^m		Mag: -2.1 PMG: 13 ^h 29 ^m		Mag: +0.7 PMG: 12 ^h 02 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	138	04.9	214	46.3	-16	30.7	216	33.2	-23	35.5	157	15.8	-9	09.3	179	02.0	-16	45.5
1	153	07.3	229	47.8		30.8	231	33.7		35.4	172	17.7		09.1	194	04.2		45.4
2	168	09.8	244	49.4		31.0	246	34.2		35.3	187	19.6		08.8	209	06.4		45.3
3	183	12.3	259	50.9		31.1	261	34.6		35.2	202	21.5		08.6	224	08.5		45.2
4	198	14.7	274	52.5		31.2	276	35.1		35.0	217	23.4		08.4	239	10.7		45.1
5	213	17.2	289	54.0	-16	31.3	291	35.6	-23	34.9	232	25.3	-9	08.2	254	12.9	-16	45.1
6	228	19.7	304	55.5	-16	31.4	306	36.0	-23	34.8	247	27.3	-9	08.0	269	15.0	-16	45.0
7	243	22.1	319	57.0		31.5	321	36.5		34.7	262	29.2		07.7	284	17.2		44.9
8	258	24.6	334	58.6		31.6	336	37.0		34.6	277	31.1		07.5	299	19.4		44.8
9	273	27.1	350	00.1		31.7	351	37.4		34.5	292	33.0		07.3	314	21.5		44.7
10	288	29.5	5	01.6		31.8	6	37.9		34.3	307	34.9		07.1	329	23.7		44.6
11	303	32.0	20	03.1	-16	31.9	21	38.4	-23	34.2	322	36.8	-9	06.8	344	25.8	-16	44.5
12	318	34.4	35	04.6	-16	32.0	36	38.8	-23	34.1	337	38.7	-9	06.6	359	28.0	-16	44.4
13	333	36.9	50	06.1		32.1	51	39.3		34.0	352	40.6		06.4	14	30.2		44.4
14	348	39.4	65	07.6		32.2	66	39.8		33.9	7	42.6		06.2	29	32.3		44.3
15	3	41.8	80	09.1		32.4	81	40.2		33.7	22	44.5		06.0	44	34.5		44.2
16	18	44.3	95	10.6		32.5	96	40.7		33.6	37	46.4		05.7	59	36.7		44.1
17	33	46.8	110	12.1	-16	32.6	111	41.2	-23	33.5	52	48.3	-9	05.5	74	38.8	-16	44.0
18	48	49.2	125	13.6	-16	32.7	126	41.6	-23	33.4	67	50.2	-9	05.3	89	41.0	-16	43.9
19	63	51.7	140	15.0		32.8	141	42.1		33.2	82	52.1		05.1	104	43.2		43.8
20	78	54.2	155	16.5		32.9	156	42.6		33.1	97	54.0		04.9	119	45.3		43.8
21	93	56.6	170	18.0		33.0	171	43.0		33.0	112	55.9		04.6	134	47.5		43.7
22	108	59.1	185	19.5		33.1	186	43.5		32.9	127	57.8		04.4	149	49.7		43.6
23	124	01.6	200	20.9		33.2	201	44.0		32.8	142	59.8		04.2	164	51.8		43.5
24	139	04.0	215	22.4	-16	33.3	216	44.4	-23	32.6	158	01.7	-9	04.0	179	54.0	-16	43.4
Dif	—	+15		-1		+5		+1		+19		+2		+22		+1		

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 7 ^d 8 PHE { SD: 14:8 PMG: 18 ^h 49 ^m 4 ^h : 54:5 12 ^h : 54:4 20 ^h : 54:3 R°: 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m	h m	h m
0	176	27.6	-14	45.0	86	31.3	+18	42.7	60 N	16 35	17 20	18 10	9 54	11	2 46	85
1	191	27.6		44.2	101	03.9 ¹³⁶	+18	52.4	58	43	26	12	10 08	16	32	81
2	206	27.6		43.4	115	36.5 ¹³⁶	+19	02.0	56	50	30	14	21 19		21	76
3	221	27.6		42.6	130	09.0 ¹³⁵		11.5	54	16 57	34	16	31 23		11	73
4	236	27.6		41.8	144	41.5 ¹³⁵		21.0	52	17 03	38	18	41 24		2 02	71
5	251	27.6	-14	41.0	159	13.9 ¹³⁴	+19	30.4	50	17 08	17 42	18 20	10 49	27	1 54	68
6	266	27.5	-14	40.2	173	46.3 ¹³⁴	+19	39.6	45	17 19	17 50	18 24	11 08	30	1 37	64
7	281	27.5		39.4	188	18.7 ¹³⁴		48.8	40	29	17 57	29	22 34		23	61
8	296	27.5		38.6	202	51.0 ¹³³	+19	57.9	35	37	18 03	33	35 36		11	58
9	311	27.5		37.8	217	23.3 ¹³³	+20	07.0	30	44	09	37	11 46	38	1 01	56
10	326	27.5		37.0	231	55.5 ¹³²		15.9	20	17 56	19	45	12 05	42	0 43	53
11	341	27.5	-14	36.2	246	27.7 ¹³²	+20	24.7	10 N	18 07	18 29	18 54	12 22	44	0 28	49
12	356	27.4	-14	35.4	260	59.8 ¹³¹	+20	33.5	0	18 18	18 39	19 04	12 38	47	0 14	46
13	11	27.4		34.6	275	31.9 ¹³¹		42.1	10 S	28	18 50	15	12 53	50	0 00	43
14	26	27.4		33.7	290	03.9 ¹³⁰		50.7	20	39	19 02	29	13 10	53	** ** *	**
15	41	27.4		32.9	304	35.9 ¹³⁰	+20	59.1	30	18 53	18	48	30 56		** ** *	**
16	56	27.4		32.1	319	07.9 ¹³⁰	+21	07.5	35	19 00	27	19 59	41 58		23 51	39
17	71	27.4	-14	31.3	333	39.8 ¹²⁹	+21	15.8	40	19 09	19 38	20 13	13 55	60	23 37	37
18	86	27.4	-14	30.5	348	11.6 ¹²⁸	+21	24.0	45	19 19	19 51	20 31	14 10	64	23 21	34
19	101	27.3		29.7	2	43.4 ¹²⁸		32.1	50	32	20 08	20 54	30 67		23 00	31
20	116	27.3		28.9	17	15.2 ¹²⁸		40.1	52	37	16	21 05	39 69		22 51	28
21	131	27.3		28.1	31	46.9 ¹²⁷		48.0	54	44	25	19	14 49	72	40	26
22	146	27.3		27.3	46	18.6 ¹²⁷	+21	55.8	56	51	35	34	15 01	75	28	23
23	161	27.3		26.5	60	50.2 ¹²⁶	+22	03.5	58	19 59	20 46	21 54	15 79		22 13	20
24	176	27.3	-14	25.7	75	21.8 ¹²⁶	+22	11.1	60 S	20 08	21 00	22 19	15 31	84	21 57	14

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 41 ^m 3		Mag: -4.9 PMG: 9 ^h 38 ^m		Mag: +1.4 PMG: 9 ^h 33 ^m		Mag: -2.1 PMG: 13 ^h 26 ^m		Mag: +0.7 PMG: 11 ^h 59 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♎	Dec
h	°	'	°	'	°	'	°	'	°	'
0	139	04.0	215	22.4	-16	33.3	216	44.4	-23	32.6
1	154	06.5	230	23.9		33.4	231	44.9		32.5
2	169	08.9	245	25.3		33.5	246	45.4		32.4
3	184	11.4	260	26.8		33.6	261	45.8		32.2
4	199	13.9	275	28.2		33.8	276	46.3		32.1
5	214	16.3	290	29.7	-16	33.9	291	46.8	-23	32.0
6	229	18.8	305	31.1	-16	34.0	306	47.2	-23	31.9
7	244	21.3	320	32.6		34.1	321	47.7		31.7
8	259	23.7	335	34.0		34.2	336	48.2		31.6
9	274	26.2	350	35.5		34.3	351	48.6		31.5
10	289	28.7	5	36.9		34.4	6	49.1		31.4
11	304	31.1	20	38.3	-16	34.5	21	49.6	-23	31.2
12	319	33.6	35	39.7	-16	34.6	36	50.0	-23	31.1
13	334	36.1	50	41.2		34.7	51	50.5		31.0
14	349	38.5	65	42.6		34.8	66	51.0		30.8
15	4	41.0	80	44.0		34.9	81	51.4		30.7
16	19	43.4	95	45.4		35.0	96	51.9		30.6
17	34	45.9	110	46.8	-16	35.1	111	52.4	-23	30.4
18	49	48.4	125	48.2	-16	35.3	126	52.8	-23	30.3
19	64	50.8	140	49.6		35.4	141	53.3		30.2
20	79	53.3	155	51.0		35.5	156	53.8		30.0
21	94	55.8	170	52.4		35.6	171	54.2		29.9
22	109	58.2	185	53.8		35.7	186	54.7		29.8
23	125	00.7	200	55.2		35.8	201	55.2		29.6
24	140	03.2	215	56.6	-16	35.9	216	55.6	-23	29.5
Dif	—		+14		-1		+5		+1	
							+19		+2	
									+22	
									+	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 14 ^m 2			Edad: 8 ^d 8 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2 Rº: 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	27.3	-14	25.7	75	21.8	+22	11.1	75	60 N	6 17	7 07	7 52	10 05	20	4 11	81
1	191	27.3		24.9	89	53.3 ¹²⁵		18.6	75	58	15	7 02	44	24	25	3 53	75
2	206	27.3		24.0	104	24.7 ¹²⁴		26.0	74	56	13	6 57	37	40	28	37	72
3	221	27.2		23.2	118	56.2 ¹²⁵		33.3	73	54	11	53	30	10 54	30	24	69
4	236	27.2		22.4	133	27.5 ¹²³		40.5	72	52	09	49	25	11 05	33	13	67
5	251	27.2	-14	21.6	147	58.9 ¹²⁴	+22	47.6	71	50	6 08	6 46	7 19	11 16	34	3 02	66
6	266	27.2	-14	20.8	162	30.1 ¹²²	+22	54.6	70	45	6 03	6 38	7 08	11 38	38	2 41	62
7	281	27.2		20.0	177	01.4 ¹²³	+23	01.5	69	40	5 59	31	6 59	11 56	40	24	59
8	296	27.2		19.2	191	32.5 ¹²¹		08.3	68	35	55	25	51	12 11	42	2 09	58
9	311	27.2		18.4	206	03.7 ¹²²		15.0	67	30	51	19	44	24	43	1 57	56
10	326	27.2		17.5	220	34.8 ¹²¹		21.6	66	20	43	6 09	32	12 47	45	36	52
11	341	27.2	-14	16.7	235	05.8 ¹²⁰	+23	28.1	65	10 N	5 34	5 59	6 21	13 06	48	1 17	51
12	356	27.2	-14	15.9	249	36.8 ¹²⁰	+23	34.4	63	0	5 25	5 49	6 11	13 25	49	1 00	48
13	11	27.2		15.1	264	07.7 ¹¹⁹		40.7	63	10 S	5 13	39	6 00	13 43	51	0 43	46
14	26	27.2		14.3	278	38.6 ¹¹⁹		46.9	62	20	4 59	26	5 49	14 03	53	25	43
15	41	27.1		13.5	293	09.5 ¹¹⁹		52.9	60	30	41	11	36	26	55	0 04	40
16	56	27.1		12.7	307	40.3 ¹¹⁸	+23	58.9	60	35	29	5 02	29	39	57	***	***
17	71	27.1	-14	11.8	322	11.0 ¹¹⁷	+24	04.7	58	40	4 15	4 51	5 20	14 55	58	***	***
18	86	27.1	-14	11.0	336	41.7 ¹¹⁷	+24	10.4	57	45	3 58	4 38	5 10	15 14	60	23 55	41
19	101	27.1		10.2	351	12.4 ¹¹⁷		16.0	56	50	35	21	4 57	37	63	31	38
20	116	27.1		09.4	5	43.0 ¹¹⁶		21.5	55	52	24	13	52	15 48	65	19	37
21	131	27.1		08.6	20	13.5 ¹¹⁵		26.9	54	54	3 11	4 04	45	16 01	66	23 06	36
22	146	27.1		07.7	34	44.1 ¹¹⁶		32.2	53	56	2 55	3 54	38	16	69	22 51	33
23	161	27.1		06.9	49	14.5 ¹¹⁴		37.4	52	58	36	43	30	34	71	33	30
24	176	27.1	-14	06.1	63	45.0 ¹¹⁵	+24	42.4	50	60 S	2 10	3 29	4 21	16 55	77	22 11	26

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 37 ^m 4		Mag: -4.9 PMG: 9 ^h 35 ^m			Mag: +1.4 PMG: 9 ^h 32 ^m			Mag: -2.1 PMG: 13 ^h 23 ^m			Mag: +0.7 PMG: 11 ^h 55 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	140	03.2	215	56.6	-16	35.9	216	55.6	-23	29.5	158	47.5	-8	58.6	180	46.0	-16	41.3
1	155	05.6	230	58.0		36.0	231	56.1		29.4	173	49.5		58.4	195	48.1		41.2
2	170	08.1	245	59.4		36.1	246	56.6		29.2	188	51.4		58.2	210	50.3		41.1
3	185	10.5	261	00.8		36.2	261	57.0		29.1	203	53.3		58.0	225	52.4		41.0
4	200	13.0	276	02.1		36.3	276	57.5		29.0	218	55.2		57.7	240	54.6		41.0
5	215	15.5	291	03.5	-16	36.4	291	58.0	-23	28.8	233	57.1	-8	57.5	255	56.8	-16	40.9
6	230	17.9	306	04.9	-16	36.5	306	58.4	-23	28.7	248	59.0	-8	57.3	270	58.9	-16	40.8
7	245	20.4	321	06.2		36.6	321	58.9		28.5	264	00.9		57.1	286	01.1		40.7
8	260	22.9	336	07.6		36.8	336	59.4		28.4	279	02.8		56.9	301	03.3		40.6
9	275	25.3	351	09.0		36.9	351	59.8		28.3	294	04.7		56.6	316	05.4		40.5
10	290	27.8	6	10.3		37.0	7	00.3		28.1	309	06.7		56.4	331	07.6		40.4
11	305	30.3	21	11.7	-16	37.1	22	00.8	-23	28.0	324	08.6	-8	56.2	346	09.8	-16	40.3
12	320	32.7	36	13.0	-16	37.2	37	01.2	-23	27.8	339	10.5	-8	56.0	1	11.9	-16	40.3
13	335	35.2	51	14.4		37.3	52	01.7		27.7	354	12.4		55.7	16	14.1		40.2
14	350	37.7	66	15.7		37.4	67	02.2		27.6	9	14.3		55.5	31	16.3		40.1
15	5	40.1	81	17.0		37.5	82	02.6		27.4	24	16.2		55.3	46	18.4		40.0
16	20	42.6	96	18.4		37.6	97	03.1		27.3	39	18.1		55.1	61	20.6		39.9
17	35	45.0	111	19.7	-16	37.7	112	03.6	-23	27.1	54	20.0	-8	54.9	76	22.8	-16	39.8
18	50	47.5	126	21.0	-16	37.8	127	04.0	-23	27.0	69	21.9	-8	54.6	91	24.9	-16	39.7
19	65	50.0	141	22.4		37.9	142	04.5		26.8	84	23.8		54.4	106	27.1		39.6
20	80	52.4	156	23.7		38.0	157	05.0		26.7	99	25.8		54.2	121	29.3		39.6
21	95	54.9	171	25.0		38.1	172	05.4		26.6	114	27.7		54.0	136	31.4		39.5
22	110	57.4	186	26.3		38.2	187	05.9		26.4	129	29.6		53.7	151	33.6		39.4
23	125	59.8	201	27.7		38.3	202	06.4		26.3	144	31.5		53.5	166	35.8		39.3
24	141	02.3	216	29.0	-16	38.4	217	06.8	-23	26.1	159	33.4	-8	53.3	181	37.9	-16	39.2
Dif	—		+13			-1	+5			+1	+19			+2	+22			+1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 14 ^m 2			Edad: 9 ^d 8 PHE { SD: 14:7 PMG: 20 ^h 26 ^m 4 ^h : 54:2 12 ^h : 54:2 20 ^h : 54:2 R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	27.1	-14 06.1	63	45.0	+24 42.4	50	60 N	16 40	17 25	18 14	10 25 35	5 32 69	
1	191	27.1	05.3	78	15.4 ¹¹⁴	47.4	50	58	48	30	16	10 49 38	5 08 66	
2	206	27.1	04.5	92	45.7 ¹¹³	52.2	48	56	16 55	34	18	11 08 41	4 49 64	
3	221	27.1	03.6	107	16.0 ¹¹³	+24 56.9	47	54	17 01	38	20	24 42	33 62	
4	236	27.1	02.8	121	46.3 ¹¹³	+25 01.5	46	52	06	42	22	38 43	20 60	
5	251	27.1	-14 02.0	136	16.5 ¹¹²	+25 06.0	45	50	17 11	17 45	18 23	11 50 44	4 08 59	
6	266	27.1	-14 01.2	150	46.6 ¹¹¹	+25 10.4	44	45	17 22	17 53	18 27	12 16 45	3 43 57	
7	281	27.1	-14 00.4	165	16.8 ¹¹²	14.6	42	40	31	17 59	31	36 46	23 56	
8	296	27.1	-13 59.5	179	46.9 ¹¹¹	18.8	42	35	39	18 05	35	12 53 47	3 07 55	
9	311	27.1	58.7	194	16.9 ¹¹⁰	22.8	40	30	45	10	38	13 07 48	2 53 54	
10	326	27.1	57.9	208	46.9 ¹¹⁰	26.7	39	20	17 57	20	46	32 49	28 53	
11	341	27.1	-13 57.1	223	16.9 ¹¹⁰	+25 30.5	38	10 N	18 08	18 29	18 54	13 54 50	2 08 51	
12	356	27.1	-13 56.2	237	46.8 ¹⁰⁹	+25 34.1	36	0	18 18	18 39	19 04	14 14 50	1 48 50	
13	11	27.1	55.4	252	16.7 ¹⁰⁹	37.7	36	10 S	28	18 49	15	34 51	29 48	
14	26	27.1	54.6	266	46.5 ¹⁰⁸	41.1	34	20	38	19 01	28	14 56 52	1 08 47	
15	41	27.1	53.8	281	16.4 ¹⁰⁹	44.4	33	30	51	16	46	15 21 53	0 44 46	
16	56	27.1	52.9	295	46.1 ¹⁰⁷	47.6	32	35	18 58	25	19 57	36 53	30 45	
17	71	27.1	-13 52.1	310	15.9 ¹⁰⁸	+25 50.6	30	40	19 06	19 35	20 10	15 53 54	0 14 43	
18	86	27.1	-13 51.3	324	45.6 ¹⁰⁷	+25 53.6	30	45	19 16	19 48	20 27	16 14 54	*** ** *	
19	101	27.1	50.5	339	15.2 ¹⁰⁶	56.4	28	50	28	20 04	20 49	40 55	*** ** *	
20	116	27.1	49.6	353	44.9 ¹⁰⁷	+25 59.1	27	52	34	11	21 00	16 53 56	23 56 49	
21	131	27.1	48.8	8	14.5 ¹⁰⁶	+26 01.6	25	54	40	20	13	17 07 57	42 48	
22	146	27.1	48.0	22	44.1 ¹⁰⁶	04.1	25	56	46	30	28	25 57	24 48	
23	161	27.1	47.1	37	13.6 ¹⁰⁵	06.4	23	58	19 54	41	21 46	17 45 59	23 03 47	
24	176	27.1	-13 46.3	51	43.1 ¹⁰⁵	+26 08.6	22	60 S	20 03	20 54	22 09	18 12 60	22 37 45	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 33 ^m 5		Mag: -4.9 PMG: 9 ^h 33 ^m		Mag: +1.4 PMG: 9 ^h 31 ^m		Mag: -2.0 PMG: 13 ^h 20 ^m		Mag: +0.7 PMG: 11 ^h 52 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	°	'	°	°	°	'								
0	141	02.3	216	29.0	-16	38.4	217	06.8	-23	26.1	159	33.4	-8	53.3	181	37.9	-16	39.2
1	156	04.8	231	30.3		38.5	232	07.3		26.0	174	35.3		53.1	196	40.1		39.1
2	171	07.2	246	31.6		38.7	247	07.8		25.8	189	37.2		52.8	211	42.3		39.0
3	186	09.7	261	32.9		38.8	262	08.2		25.7	204	39.1		52.6	226	44.4		38.9
4	201	12.2	276	34.2		38.9	277	08.7		25.5	219	41.0		52.4	241	46.6		38.9
5	216	14.6	291	35.5	-16	39.0	292	09.2	-23	25.4	234	42.9	-8	52.2	256	48.8	-16	38.8
6	231	17.1	306	36.8	-16	39.1	307	09.6	-23	25.2	249	44.9	-8	52.0	271	50.9	-16	38.7
7	246	19.5	321	38.1		39.2	322	10.1		25.1	264	46.8		51.7	286	53.1		38.6
8	261	22.0	336	39.3		39.3	337	10.6		25.0	279	48.7		51.5	301	55.3		38.5
9	276	24.5	351	40.6		39.4	352	11.0		24.8	294	50.6		51.3	316	57.4		38.4
10	291	26.9	6	41.9		39.5	7	11.5		24.7	309	52.5		51.1	331	59.6		38.3
11	306	29.4	21	43.2	-16	39.6	22	12.0	-23	24.5	324	54.4	-8	50.8	347	01.7	-16	38.2
12	321	31.9	36	44.5	-16	39.7	37	12.4	-23	24.4	339	56.3	-8	50.6	2	03.9	-16	38.2
13	336	34.3	51	45.7		39.8	52	12.9		24.2	354	58.2		50.4	17	06.1		38.1
14	351	36.8	66	47.0		39.9	67	13.4		24.1	10	00.1		50.2	32	08.2		38.0
15	6	39.3	81	48.3		40.0	82	13.8		23.9	25	02.0		49.9	47	10.4		37.9
16	21	41.7	96	49.5		40.1	97	14.3		23.7	40	03.9		49.7	62	12.6		37.8
17	36	44.2	111	50.8	-16	40.2	112	14.8	-23	23.6	55	05.9	-8	49.5	77	14.7	-16	37.7
18	51	46.7	126	52.0	-16	40.3	127	15.2	-23	23.4	70	07.8	-8	49.3	92	16.9	-16	37.6
19	66	49.1	141	53.3		40.4	142	15.7		23.3	85	09.7		49.1	107	19.1		37.5
20	81	51.6	156	54.6		40.5	157	16.2		23.1	100	11.6		48.8	122	21.2		37.5
21	96	54.0	171	55.8		40.6	172	16.6		23.0	115	13.5		48.6	137	23.4		37.4
22	111	56.5	186	57.0		40.7	187	17.1		22.8	130	15.4		48.4	152	25.6		37.3
23	126	59.0	201	58.3		40.8	202	17.6		22.7	145	17.3		48.2	167	27.7		37.2
24	142	01.4	216	59.5	-16	40.9	217	18.0	-23	22.5	160	19.2	-8	47.9	182	29.9	-16	37.1
Dif	—		+13		-1		+5		+2		+19		+2		+22		+	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2			Edad: 10 ^d 8	PHE	4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4												
	PMG: 12 ^h 14 ^m 2					SD: 14'8												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	176	27.1	−13	46.3	51	43.1	+26	08.6	60 N	6	13	7	02	7	46	11	00	
1	191	27.1		45.5	66	12.6 ¹⁰⁵		10.7	19	58	11	6	57	39	27	57	6	14
2	206	27.1		44.6	80	42.1 ¹⁰⁵		12.6	21	56	09	53	32	11	49	55	5	53
3	221	27.2		43.8	95	11.5 ¹⁰⁴		14.4	18	54	08	49	26	12	06	56	35	55
4	236	27.2		43.0	109	40.9 ¹⁰⁴		16.1	17	52	06	46	21	21	55	20	51	
5	251	27.2	−13	42.2	124	10.2 ¹⁰³	+26	17.7	16	50	6	04	6	42	7	16	12	34
6	266	27.2	−13	41.3	138	39.6 ¹⁰⁴	+26	19.1	14	45	6	01	6	35	7	06	13	01
7	281	27.2		40.5	153	08.9 ¹⁰³		20.4	13	40	5	57	29	6	57	22	54	
8	296	27.2		39.7	167	38.2 ¹⁰³		21.6	12	35	53	23	49	40	53	4	02	
9	311	27.2		38.8	182	07.5 ¹⁰³		22.7	11	30	50	18	43	13	55	53	3	47
10	326	27.2		38.0	196	36.7 ¹⁰²		23.6	9	20	42	6	08	31	14	21	53	
11	341	27.2	−13	37.2	211	06.0 ¹⁰³	+26	24.4	8	10 N	5	34	5	59	6	21	14	44
12	356	27.2	−13	36.3	225	35.2 ¹⁰²	+26	25.1	7	0	5	25	5	49	6	11	15	04
13	11	27.2		35.5	240	04.4 ¹⁰²		25.7	6	10 S	14		39	6	01	25	51	
14	26	27.2		34.7	254	33.5 ¹⁰¹		26.1	4	20	5	00	27	5	50	15	48	
15	41	27.2		33.8	269	02.7 ¹⁰²		26.4	3	30	4	43	13	38	16	14		
16	56	27.3		33.0	283	31.8 ¹⁰¹		26.5	1	35	32	5	04	31	29	49		
17	71	27.3	−13	32.2	298	01.0 ¹⁰²	+26	26.6	1	40	4	18	4	53	5	22		
18	86	27.3	−13	31.3	312	30.1 ¹⁰¹	+26	26.5	1	45	4	02	4	41	5	13		
19	101	27.3		30.5	326	59.2 ¹⁰¹		26.2	3	50	3	40	25	5	01	17		
20	116	27.3		29.6	341	28.3 ¹⁰¹		25.9	3	52	29	18	4	56	17	49		
21	131	27.3		28.8	355	57.3 ¹⁰⁰		25.4	5	54	16	09	50	18	04			
22	146	27.3		28.0	10	26.4 ¹⁰¹		24.8	6	56	3	02	4	00	22	43		
23	161	27.3		27.1	24	55.4 ¹⁰⁰		24.0	8	58	2	44	3	49	18	44		
24	176	27.4	−13	26.3	39	24.5 ¹⁰¹	+26	23.2	8	60 S	2	21	3	36	19	12		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 29 ^m 5		Mag: −4.9 PMG: 9 ^h 31 ^m		Mag: +1.3 PMG: 9 ^h 31 ^m		Mag: −2.0 PMG: 13 ^h 17 ^m		Mag: +0.7 PMG: 11 ^h 48 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	142	01.4	216	59.5	−16	40.9	217	18.0	−23	22.5
1	157	03.9	232	00.8		41.0	232	18.5		22.4
2	172	06.4	247	02.0		41.1	247	19.0		22.2
3	187	08.8	262	03.2		41.2	262	19.4		22.1
4	202	11.3	277	04.4		41.3	277	19.9		21.9
5	217	13.8	292	05.7	−16	41.4	292	20.4	−23	21.7
6	232	16.2	307	06.9	−16	41.5	307	20.9	−23	21.6
7	247	18.7	322	08.1		41.6	322	21.3		21.4
8	262	21.1	337	09.3		41.7	337	21.8		21.3
9	277	23.6	352	10.5		41.8	352	22.3		21.1
10	292	26.1	7	11.7		41.9	7	22.7		20.9
11	307	28.5	22	13.0	−16	42.1	22	23.2	−23	20.8
12	322	31.0	37	14.2	−16	42.2	37	23.7	−23	20.6
13	337	33.5	52	15.4		42.3	52	24.1		20.5
14	352	35.9	67	16.6		42.4	67	24.6		20.3
15	7	38.4	82	17.7		42.5	82	25.1		20.1
16	22	40.9	97	18.9		42.6	97	25.5		20.0
17	37	43.3	112	20.1	−16	42.7	112	26.0	−23	19.8
18	52	45.8	127	21.3	−16	42.8	127	26.5	−23	19.7
19	67	48.3	142	22.5		42.8	142	26.9		19.5
20	82	50.7	157	23.7		42.9	157	27.4		19.3
21	97	53.2	172	24.8		43.0	172	27.9		19.2
22	112	55.6	187	26.0		43.1	187	28.3		19.0
23	127	58.1	202	27.2		43.2	202	28.8		18.8
24	143	00.6	217	28.4	−16	43.3	217	29.3	−23	18.7
Dif	—		+12		−1		+5		+2	
									+19	+2
										+22
										+1

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2		Edad: 11 ^d 8 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 R°: 51 ^m												
	PMG: 12 ^h 14 ^m 2			SD: 14'8		PMG: 22 ^h 08 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	176	27.4	-13	26.3	39	24.5	+26	23.2	60 N	16 46	17 30	18 19	11 57 78	7 30 29	
1	191	27.4		25.4	53	53.5 ¹⁰⁰		22.2	58	53	34	21	12 24 72	7 04 33	
2	206	27.4		24.6	68	22.6 ¹⁰¹		21.0	56	16 59	38	22	12 44 70	6 43 36	
3	221	27.4		23.8	82	51.6 ¹⁰⁰		19.8	54	17 05	42	24	13 02 67	26 38	
4	236	27.4		22.9	97	20.6 ¹⁰⁰		18.4	52	10	45	25	16 66	6 11 40	
5	251	27.4	-13	22.1	111	49.6 ¹⁰⁰	+26	16.8	50	17 15	17 48	18 26	13 29 64	5 58 41	
6	266	27.4	-13	21.2	126	18.6 ¹⁰⁰	+26	15.2	45	17 25	17 55	18 30	13 55 62	5 31 44	
7	281	27.5		20.4	140	47.6 ¹⁰⁰		13.4	40	33	18 01	33	14 16 60	5 10 45	
8	296	27.5		19.6	155	16.7 ¹⁰¹		11.5	35	41	07	36	33 58	4 53 46	
9	311	27.5		18.7	169	45.7 ¹⁰⁰		09.4	30	47	12	40	14 48 57	38 47	
10	326	27.5		17.9	184	14.7 ¹⁰⁰		07.3	20	17 58	21	47	15 14 54	4 12 49	
11	341	27.5	-13	17.0	198	43.7 ¹⁰⁰	+26	05.0	10 N	18 08	18 30	18 55	15 35 53	3 50 50	
12	356	27.5	-13	16.2	213	12.7 ¹⁰⁰	+26	02.5	0	18 18	18 39	19 03	15 56 51	3 29 51	
13	11	27.6		15.4	227	41.7 ¹⁰⁰	+25	59.9	10 S	27	18 49	14	16 16 49	3 08 53	
14	26	27.6		14.5	242	10.8 ¹⁰¹		57.2	20	37	19 00	27	16 38 47	2 46 54	
15	41	27.6		13.7	256	39.8 ¹⁰⁰		54.4	30	49	14	44	17 03 45	20 55	
16	56	27.6		12.8	271	08.9 ¹⁰¹		51.5	35	18 56	23	19 55	18 43	2 05 56	
17	71	27.6	-13	12.0	285	37.9 ¹⁰⁰	+25	48.4	40	19 04	19 33	20 08	17 35 42	1 47 57	
18	86	27.6	-13	11.1	300	07.0 ¹⁰¹	+25	45.2	45	19 13	19 45	20 24	17 55 40	1 26 58	
19	101	27.7		10.3	314	36.1 ¹⁰¹		41.8	50	24	20 00	45	18 21 37	0 59 59	
20	116	27.7		09.4	329	05.1 ¹⁰⁰		38.3	52	30	07	20 55	34 35	45 61	
21	131	27.7		08.6	343	34.2 ¹⁰¹		34.7	54	35	15	21 07	18 48 33	30 62	
22	146	27.7		07.7	358	03.4 ¹⁰²		31.0	56	42	24	21	19 05 30	0 12 63	
23	161	27.7		06.9	12	32.5 ¹⁰¹		27.1	58	49	35	38	25 26	** ** *	
24	176	27.8	-13	06.0	27	01.6 ¹⁰¹	+25	23.1	60 S	19 57	20 47	21 59	19 50 21	** ** *	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 25 ^m 6		Mag: -4.9 PMG: 9 ^h 29 ^m		Mag: +1.3 PMG: 9 ^h 30 ^m		Mag: -2.0 PMG: 13 ^h 14 ^m		Mag: +0.7 PMG: 11 ^h 45 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	143	00.6	217	28.4	-16	43.3	217	29.3	-23	18.7
1	158	03.0	232	29.5		43.4	232	29.7		18.5
2	173	05.5	247	30.7		43.5	247	30.2		18.3
3	188	08.0	262	31.8		43.6	262	30.7		18.2
4	203	10.4	277	33.0		43.7	277	31.1		18.0
5	218	12.9	292	34.2	-16	43.8	292	31.6	-23	17.8
6	233	15.4	307	35.3	-16	43.9	307	32.1	-23	17.7
7	248	17.8	322	36.5		44.0	322	32.5		17.5
8	263	20.3	337	37.6		44.1	337	33.0		17.3
9	278	22.8	352	38.7		44.2	352	33.5		17.2
10	293	25.2	7	39.9		44.3	7	34.0		17.0
11	308	27.7	22	41.0	-16	44.4	22	34.4	-23	16.8
12	323	30.1	37	42.2	-16	44.5	37	34.9	-23	16.7
13	338	32.6	52	43.3		44.6	52	35.4		16.5
14	353	35.1	67	44.4		44.7	67	35.8		16.3
15	8	37.5	82	45.5		44.8	82	36.3		16.1
16	23	40.0	97	46.7		44.9	97	36.8		16.0
17	38	42.5	112	47.8	-16	45.0	112	37.2	-23	15.8
18	53	44.9	127	48.9	-16	45.1	127	37.7	-23	15.6
19	68	47.4	142	50.0		45.2	142	38.2		15.5
20	83	49.9	157	51.1		45.3	157	38.6		15.3
21	98	52.3	172	52.2		45.4	172	39.1		15.1
22	113	54.8	187	53.3		45.5	187	39.6		14.9
23	128	57.3	202	54.4		45.6	202	40.0		14.8
24	143	59.7	217	55.5	-16	45.6	217	40.5	-23	14.6
Dif	—		+11		-1		+5		+2	

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			Edad: 12 ^d 8 PHE { SD: 14'9 PMG: 22 ^h 59 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	27.8	-13	06.0	27	01.6	+25 23.1	60 N	6 08	6 57	7 41	13 15	87	7 59	16
1	191	27.8		05.2	41	30.8 ¹⁰²	19.0 ⁴¹	58	07	53	34	36	82	37	21
2	206	27.8		04.4	56	00.0 ¹⁰²	14.8 ⁴²	56	05	49	28	13 54	78	19	25
3	221	27.8		03.5	70	29.2 ¹⁰²	10.4 ⁴⁴	54	04	45	22	14 09	75	7 04	28
4	236	27.8		02.7	84	58.4 ¹⁰²	05.9 ⁴⁵	52	03	42	17	22	72	6 51	30
5	251	27.9	-13	01.8	99	27.6 ¹⁰²	+25 01.3 ⁴⁶	50	6 01	6 39	7 12	14 33	71	6 39	32
6	266	27.9	-13	01.0	113	56.9 ¹⁰³	+24 56.5 ⁴⁸	45	5 58	6 32	7 03	14 57	66	6 15	36
7	281	27.9	-13	00.1	128	26.1 ¹⁰²	51.6 ⁴⁹	40	55	26	6 54	15 16	63	5 55	39
8	296	27.9	-12	59.3	142	55.4 ¹⁰³	46.6 ⁵⁰	35	52	21	47	31	61	39	41
9	311	28.0		58.4	157	24.7 ¹⁰³	41.5 ⁵¹	30	48	16	41	15 45	59	25	43
10	326	28.0		57.6	171	54.1 ¹⁰⁴	36.2 ⁵³	20	41	6 07	30	16 08	55	5 01	46
11	341	28.0	-12	56.7	186	23.4 ¹⁰³	+24 30.9 ⁵³	10 N	5 34	5 59	6 20	16 28	52	4 40	48
12	356	28.0	-12	55.9	200	52.8 ¹⁰⁴	+24 25.4 ⁵⁵	0	5 25	5 50	6 11	16 47	49	4 20	51
13	11	28.1		55.0	215	22.3 ¹⁰⁵	19.7 ⁵⁷	10 S	14	40	6 01	17 05	47	4 01	52
14	26	28.1		54.1	229	51.7 ¹⁰⁴	14.0 ⁵⁷	20	5 02	28	5 51	25	44	3 40	55
15	41	28.1		53.3	244	21.2 ¹⁰⁵	08.1 ⁵⁹	30	4 45	14	39	17 48	41	15	58
16	56	28.1		52.4	258	50.7 ¹⁰⁵	+24 02.1 ⁶⁰	35	34	5 06	33	18 01	39	3 01	59
17	71	28.2	-12	51.6	273	20.2 ¹⁰⁵	+23 56.0 ⁶¹	40	4 21	4 56	5 25	18 17	36	2 44	62
18	86	28.2	-12	50.7	287	49.8 ¹⁰⁶	+23 49.7 ⁶³	45	4 05	4 44	5 16	18 35	33	2 24	64
19	101	28.2		49.9	302	19.4 ¹⁰⁶	43.4 ⁶³	50	3 44	29	5 05	18 58	28	1 58	68
20	116	28.2		49.0	316	49.0 ¹⁰⁶	36.9 ⁶⁵	52	34	22	4 59	19 09	26	46	70
21	131	28.3		48.2	331	18.6 ¹⁰⁶	30.3 ⁶⁶	54	22	14	54	21	24	32	72
22	146	28.3		47.3	345	48.3 ¹⁰⁷	23.6 ⁶⁷	56	3 08	4 05	47	35	21	1 15	75
23	161	28.3		46.5	0	18.0 ¹⁰⁷	16.7 ⁶⁹	58	2 51	3 54	40	19 51	17	0 56	78
24	176	28.4	-12	45.6	14	47.8 ¹⁰⁸	+23 09.7 ⁷⁰	60 S	2 30	3 42	4 32	20 11	12	0 31	84

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 14 ^h 21 ^m 7		Mag: -4.9 PMG: 9 ^h 28 ^m			Mag: +1.3 PMG: 9 ^h 29 ^m			Mag: -2.0 PMG: 13 ^h 11 ^m			Mag: +0.7 PMG: 11 ^h 41 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	'	'				
0	143	59.7	217	55.5	-16	45.6	217	40.5	-23	14.6	161	50.8	-8	37.2	184	13.9	-16	32.9
1	159	02.2	232	56.6		45.7	232	41.0		14.4	176	52.7		36.9	199	16.1		32.8
2	174	04.6	247	57.7		45.8	247	41.4		14.2	191	54.6		36.7	214	18.2		32.7
3	189	07.1	262	58.8		45.9	262	41.9		14.1	206	56.5		36.5	229	20.4		32.7
4	204	09.6	277	59.9		46.0	277	42.4		13.9	221	58.4		36.3	244	22.6		32.6
5	219	12.0	293	01.0	-16	46.1	292	42.9	-23	13.7	237	00.4	-8	36.0	259	24.7	-16	32.5
6	234	14.5	308	02.1	-16	46.2	307	43.3	-23	13.5	252	02.3	-8	35.8	274	26.9	-16	32.4
7	249	17.0	323	03.2		46.3	322	43.8		13.3	267	04.2		35.6	289	29.1		32.3
8	264	19.4	338	04.2		46.4	337	44.3		13.2	282	06.1		35.4	304	31.2		32.2
9	279	21.9	353	05.3		46.5	352	44.7		13.0	297	08.0		35.1	319	33.4		32.1
10	294	24.4	8	06.4		46.6	7	45.2		12.8	312	09.9		34.9	334	35.6		32.0
11	309	26.8	23	07.4	-16	46.7	22	45.7	-23	12.6	327	11.8	-8	34.7	349	37.7	-16	32.0
12	324	29.3	38	08.5	-16	46.7	37	46.1	-23	12.5	342	13.7	-8	34.5	4	39.9	-16	31.9
13	339	31.7	53	09.6		46.8	52	46.6		12.3	357	15.6		34.2	19	42.1		31.8
14	354	34.2	68	10.6		46.9	67	47.1		12.1	12	17.5		34.0	34	44.2		31.7
15	9	36.7	83	11.7		47.0	82	47.5		11.9	27	19.4		33.8	49	46.4		31.6
16	24	39.1	98	12.8		47.1	97	48.0		11.7	42	21.3		33.6	64	48.6		31.5
17	39	41.6	113	13.8	-16	47.2	112	48.5	-23	11.5	57	23.2	-8	33.3	79	50.7	-16	31.4
18	54	44.1	128	14.9	-16	47.3	127	48.9	-23	11.4	72	25.1	-8	33.1	94	52.9	-16	31.3
19	69	46.5	143	15.9		47.4	142	49.4		11.2	87	27.1		32.9	109	55.1		31.3
20	84	49.0	158	17.0		47.5	157	49.9		11.0	102	29.0		32.7	124	57.2		31.2
21	99	51.5	173	18.0		47.6	172	50.4		10.8	117	30.9		32.4	139	59.4		31.1
22	114	53.9	188	19.0		47.6	187	50.8		10.6	132	32.8		32.2	155	01.6		31.0
23	129	56.4	203	20.1		47.7	202	51.3		10.4	147	34.7		32.0	170	03.7		30.9
24	144	58.9	218	21.1	-16	47.8	217	51.8	-23	10.3	162	36.6	-8	31.8	185	05.9	-16	30.8
Dif	—		+11		-1		+5		+2		+19		+2		+22		+1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 1			Edad: 13 ^d 8 PHE { 4 ^h : 55 ^h /2 12 ^h : 55 ^h /4 20 ^h : 55 ^h /5 PMG: 23 ^h 48 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	28.4	-12	45.6	14	47.8	+23	09.7	60 N	16 51	17 35	18 24	14 42 91	8 15 9	
1	191	28.4		44.7	29	17.6 ¹⁰⁸	+23	02.7	58	16 58	39	25	14 58 86	7 58 14	
2	206	28.4		43.9	43	47.4 ¹⁰⁸	+22	55.5	56	17 04	42	26	15 12 82	44 18	
3	221	28.4		43.0	58	17.2 ¹⁰⁸		48.2	54	09	46	27	24 79	32 21	
4	236	28.5		42.2	72	47.1 ¹⁰⁹		40.7	52	14	49	28	34 76	21 23	
5	251	28.5	-12	41.3	87	17.0 ¹⁰⁹	+22	33.2	50	17 18	17 52	18 29	15 44 73	7 11 26	
6	266	28.5	-12	40.5	101	47.0 ¹¹⁰	+22	25.5	45	17 28	17 58	18 32	16 03 69	6 51 30	
7	281	28.6		39.6	116	17.0 ¹¹⁰		17.7	40	36	18 03	35	19 65	34 33	
8	296	28.6		38.7	130	47.0 ¹¹⁰		09.9	35	43	08	38	32 62	20 36	
9	311	28.6		37.9	145	17.1 ¹¹¹	+22	01.8	30	49	13	41	16 44 59	6 08 38	
10	326	28.7		37.0	159	47.2 ¹¹¹	+21	53.7	20	17 59	22	48	17 03 56	5 47 42	
11	341	28.7	-12	36.2	174	17.3 ¹¹¹	+21	45.5	10 N	18 09	18 30	18 55	17 20 52	5 28 46	
12	356	28.7	-12	35.3	188	47.5 ¹¹²	+21	37.2	0	18 17	18 39	19 03	17 36 48	5 11 49	
13	11	28.8		34.4	203	17.7 ¹¹²		28.7	10 S	26	48	13	17 52 45	4 53 52	
14	26	28.8		33.6	217	48.0 ¹¹³		20.2	20	36	18 59	26	18 09 41	35 55	
15	41	28.8		32.7	232	18.3 ¹¹³		11.5	30	47	19 12	42	29 36	13 59	
16	56	28.9		31.9	246	48.6 ¹¹³	+21	02.7	35	18 54	20	19 52	40 34	4 00 62	
17	71	28.9	-12	31.0	261	19.0 ¹¹⁴	+20	53.8	40	19 01	19 30	20 05	18 53 31	3 46 64	
18	86	28.9	-12	30.1	275	49.4 ¹¹⁴	+20	44.9	45	19 10	19 42	20 20	19 08 27	3 28 68	
19	101	29.0		29.3	290	19.9 ¹¹⁵		35.8	50	21	19 56	40	26 23	3 06 73	
20	116	29.0		28.4	304	50.4 ¹¹⁵		26.6	52	26	20 03	20 50	35 21	2 56 74	
21	131	29.0		27.5	319	20.9 ¹¹⁵		17.2	54	31	11	21 01	45 18	44 77	
22	146	29.1		26.7	333	51.5 ¹¹⁶	+20	07.8	56	37	19	14	19 56 15	30 81	
23	161	29.1		25.8	348	22.1 ¹¹⁶	+19	58.3	58	44	29	30	20 08 12	2 14 85	
24	176	29.1	-12	24.9	2	52.8 ¹¹⁷	+19	48.7	60 S	19 52	20 41	21 50	20 23 7	1 55 90	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 14 ^h 17 ^m 7		Mag: -4.8 PMG: 9 ^h 26 ^m		Mag: +1.3 PMG: 9 ^h 28 ^m		Mag: -2.0 PMG: 13 ^h 08 ^m		Mag: +0.7 PMG: 11 ^h 38 ^m						
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄						
h	°	'	°	'	°	'	°	'	°	'					
0	144	58.9	218	21.1	217	51.8	-23	10.3	162	36.6					
1	160	01.3	233	22.1	232	52.2		10.1	177	38.5					
2	175	03.8	248	23.2	247	52.7		09.9	192	40.4					
3	190	06.2	263	24.2	262	53.2		09.7	207	42.3					
4	205	08.7	278	25.2	277	53.6		09.5	222	44.2					
5	220	11.2	293	26.2	292	54.1	-23	09.3	237	46.1					
6	235	13.6	308	27.3	307	54.6	-23	09.1	252	48.0					
7	250	16.1	323	28.3	322	55.0		09.0	267	49.9					
8	265	18.6	338	29.3	337	55.5		08.8	282	51.8					
9	280	21.0	353	30.3	352	56.0		08.6	297	53.7					
10	295	23.5	8	31.3	7	56.5		08.4	312	55.7					
11	310	26.0	23	32.3	22	56.9	-23	08.2	327	57.6					
12	325	28.4	38	33.3	37	57.4	-23	08.0	342	59.5					
13	340	30.9	53	34.3	52	57.9		07.8	358	01.4					
14	355	33.4	68	35.3	67	58.3		07.6	13	03.3					
15	10	35.8	83	36.3	82	58.8		07.4	28	05.2					
16	25	38.3	98	37.3	97	59.3		07.2	43	07.1					
17	40	40.7	113	38.3	112	59.7	-23	07.1	58	09.0					
18	55	43.2	128	39.3	128	00.2	-23	06.9	73	10.9					
19	70	45.7	143	40.2	143	00.7		06.7	88	12.8					
20	85	48.1	158	41.2	158	01.2		06.5	103	14.7					
21	100	50.6	173	42.2	173	01.6		06.3	118	16.6					
22	115	53.1	188	43.2	188	02.1		06.1	133	18.5					
23	130	55.5	203	44.2	203	02.6		05.9	148	20.4					
24	145	58.0	218	45.1	218	03.0	-23	05.7	163	22.3					
Dif	—		+10		-1		+5		+19						
							+2		+2						
									+22						
									+1						

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 0			Edad: 14 ^d 8 PHE { 4 ^h : 55:7 12 ^h : 55:9 20 ^h : 56:0 PMG: *** **m R°: ***											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	176	29.1	-12	2	52.8	+19	48.7	60 N	6 03	6 52	7 36	16	13	91	8 24
1	191	29.2		17	23.5 ¹¹⁷		39.0 ⁹⁷	58	02	48	29	24	87		12 10
2	206	29.2		31	54.2 ¹¹⁷		29.2 ⁹⁸	56	01	44	23	34	83	8 02	13
3	221	29.2		46	25.0 ¹¹⁸		19.3 ⁹⁹	54	6 00	41	18	43	80	7 53	15
4	236	29.3		60	55.9 ¹¹⁹	+19	09.3 ¹⁰⁰	52	5 59	38	13	50	78	44	19
5	251	29.3	-12	75	26.7 ¹¹⁸	+18	59.1 ¹⁰²	50	5 58	6 36	7 09	16	57	75	7 37
6	266	29.4	-12	89	57.6 ¹¹⁹	+18	48.9 ¹⁰²	45	5 55	6 29	7 00	17	12	70	7 21
7	281	29.4		104	28.6 ¹²⁰		38.6 ¹⁰³	40	52	24	6 52	24	66	7 07	29
8	296	29.4		118	59.6 ¹²⁰		28.2 ¹⁰⁴	35	50	19	45	34	63	6 56	32
9	311	29.5		133	30.6 ¹²⁰		17.7 ¹⁰⁵	30	47	15	39	43	60	46	35
10	326	29.5		148	01.6 ¹²⁰	+18	07.1 ¹⁰⁶	20	40	6 06	29	17	59	54	29
11	341	29.6	-12	162	32.8 ¹²²	+17	56.4 ¹⁰⁷	10 N	5 33	5 58	6 19	18	12	50	6 14
12	356	29.6	-12	177	03.9 ¹²¹	+17	45.7 ¹⁰⁷	0	5 25	5 49	6 11	18	24	47	6 00
13	11	29.6		191	35.1 ¹²²		34.8 ¹⁰⁹	10 S	15	40	6 02	37	42	5 45	51
14	26	29.7		206	06.3 ¹²²		23.8 ¹¹⁰	20	5 03	29	5 52	18	50	38	30
15	41	29.7		220	37.6 ¹²³		12.8 ¹¹⁰	30	4 47	16	41	19	05	34	12
16	56	29.8		235	08.9 ¹²³	+17	01.7 ¹¹¹	35	36	5 08	35	14	30	5 02	62
17	71	29.8	-12	249	40.2 ¹²³	+16	50.4 ¹¹³	40	4 24	4 59	5 27	19	24	27	4 50
18	86	29.8	-12	264	11.6 ¹²⁴	+16	39.1 ¹¹³	45	4 09	4 47	5 19	19	35	24	4 36
19	101	29.9		278	43.0 ¹²⁴		27.7 ¹¹⁴	50	3 49	33	08	49	19	19	70
20	116	29.9		293	14.5 ¹²⁵		16.2 ¹¹⁵	52	39	26	5 03	19	56	16	10
21	131	30.0		307	46.0 ¹²⁵	+16	04.7 ¹¹⁵	54	28	18	4 58	20	03	14	4 01
22	146	30.0		322	17.5 ¹²⁵	+15	53.0 ¹¹⁷	56	3 14	10	52	11	11	3	51
23	161	30.0		336	49.1 ¹²⁶		41.3 ¹¹⁷	58	2 59	4 00	45	20	8	39	87
24	176	30.1	-12	351	20.7 ¹²⁶	+15	29.5 ¹¹⁸	60 S	2 39	3 48	4 37	20	30	4	3 25

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 14 ^h 13 ^m 8		Mag: -4.8 PMG: 9 ^h 24 ^m			Mag: +1.3 PMG: 9 ^h 28 ^m			Mag: -2.0 PMG: 13 ^h 05 ^m			Mag: +0.7 PMG: 11 ^h 34 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	145	58.0	218	45.1	-16	49.8	218	03.0	-23	05.7	163	22.3	-8	26.3	
1	161	00.5	233	46.1		49.9	233	03.5		05.5	178	24.2		26.1	
2	176	02.9	248	47.1		50.0	248	04.0		05.3	193	26.1		25.9	
3	191	05.4	263	48.0		50.1	263	04.4		05.1	208	28.1		25.7	
4	206	07.9	278	49.0		50.2	278	04.9		04.9	223	30.0		25.4	
5	221	10.3	293	49.9	-16	50.2	293	05.4	-23	04.7	238	31.9	-8	25.2	
6	236	12.8	308	50.9	-16	50.3	308	05.9	-23	04.5	253	33.8	-8	25.0	
7	251	15.2	323	51.9		50.4	323	06.3		04.3	268	35.7		24.8	
8	266	17.7	338	52.8		50.5	338	06.8		04.1	283	37.6		24.5	
9	281	20.2	353	53.8		50.5	353	07.3		03.9	298	39.5		24.3	
10	296	22.6	8	54.7		50.6	8	07.7		03.7	313	41.4		24.1	
11	311	25.1	23	55.6	-16	50.7	23	08.2	-23	03.5	328	43.3	-8	23.9	
12	326	27.6	38	56.6	-16	50.8	38	08.7	-23	03.3	343	45.2	-8	23.6	
13	341	30.0	53	57.5		50.9	53	09.1		03.1	358	47.1		23.4	
14	356	32.5	68	58.5		50.9	68	09.6		02.9	13	49.0		23.2	
15	11	35.0	83	59.4		51.0	83	10.1		02.7	28	50.9		22.9	
16	26	37.4	99	00.3		51.1	98	10.6		02.5	43	52.8		22.7	
17	41	39.9	114	01.2	-16	51.2	113	11.0	-23	02.3	58	54.7	-8	22.5	
18	56	42.3	129	02.2	-16	51.2	128	11.5	-23	02.1	73	56.6	-8	22.3	
19	71	44.8	144	03.1		51.3	143	12.0		01.9	88	58.5		22.0	
20	86	47.3	159	04.0		51.4	158	12.4		01.7	104	00.5		21.8	
21	101	49.7	174	04.9		51.5	173	12.9		01.5	119	02.4		21.6	
22	116	52.2	189	05.8		51.5	188	13.4		01.3	134	04.3		21.4	
23	131	54.7	204	06.8		51.6	203	13.9		01.1	149	06.2		21.1	
24	146	57.1	219	07.7	-16	51.7	218	14.3	-23	00.9	164	08.1	-8	20.9	
Dif	—		+9	-1			+5	+2			+19	+2		+22	+

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°2 PMG: 12 ^h 14 ^m 0			Edad: 15 ^d 8 PHE { SD: 15°3 PMG: 0 ^h 36 ^m { 4 ^h : 56°2 12 ^h : 56°4 20 ^h : 56°5 R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	m
0	176	30.1	-12 04.1	351	20.7	+15 29.5		60 N	16 56	17 40	18 28	17 44	90	8 30 4
1	191	30.1	03.2	5	52.3 ¹²⁶	17.6 ¹¹⁹		58	17 02	43	29	51 87		22 7
2	206	30.2	02.3	20	24.0 ¹²⁷	+15 05.6 ¹²⁰		56	08	47	30	17 57	84	15 10
3	221	30.2	01.5	34	55.7 ¹²⁷	+14 53.6 ¹²⁰		54	13	50	31	18 03	80	08 13
4	236	30.3	-12 00.6	49	27.5 ¹²⁸	41.4 ¹²²		52	18	52	32	08 78		8 03 15
5	251	30.3	-11 59.7	63	59.3 ¹²⁸	+14 29.2 ¹²²		50	17 22	17 55	18 33	18 12	76	7 57 18
6	266	30.4	-11 58.8	78	31.1 ¹²⁸	+14 17.0 ¹²²		45	17 31	18 01	18 35	18 22	70	7 46 22
7	281	30.4	58.0	93	03.0 ¹²⁹	+14 04.6 ¹²⁴		40	38	06	37	30 66		36 27
8	296	30.4	57.1	107	34.8 ¹²⁸	+13 52.2 ¹²⁴		35	44	10	40	37 63		28 30
9	311	30.5	56.2	122	06.8 ¹³⁰	39.7 ¹²⁵		30	17 50	15	43	43 60		21 32
10	326	30.5	55.3	136	38.7 ¹²⁹	27.1 ¹²⁶		20	18 00	23	48	18 53	55	7 08 38
11	341	30.6	-11 54.5	151	10.7 ¹³⁰	+13 14.4 ¹²⁷		10 N	18 09	18 30	18 55	19 02	50	6 57 42
12	356	30.6	-11 53.6	165	42.7 ¹³⁰	+13 01.7 ¹²⁷		0	18 17	18 38	19 03	19 11	45	6 47 46
13	11	30.7	52.7	180	14.8 ¹³¹	+12 49.0 ¹²⁷		10 S	26	47	12	19 42		36 50
14	26	30.7	51.8	194	46.8 ¹³⁰	36.1 ¹²⁹		20	35	18 58	24	28 37		25 55
15	41	30.8	51.0	209	18.9 ¹³¹	23.2 ¹²⁹		30	46	19 10	40	39 31		12 60
16	56	30.8	50.1	223	51.1 ¹³²	+12 10.2 ¹³⁰		35	52	18	19 50	44 29		6 04 63
17	71	30.9	-11 49.2	238	23.2 ¹³¹	+11 57.2 ¹³⁰		40	18 59	19 27	20 01	19 51	25	5 56 66
18	86	30.9	-11 48.3	252	55.4 ¹³²	+11 44.0 ¹³²		45	19 07	19 38	20 16	19 59	21	5 46 70
19	101	31.0	47.4	267	27.6 ¹³²	30.9 ¹³¹		50	17	52	35	20 08	17	33 75
20	116	31.0	46.6	281	59.9 ¹³³	17.6 ¹³³		52	22	19 58	45	12 15		27 78
21	131	31.1	45.7	296	32.2 ¹³³	+11 04.3 ¹³³		54	27	20 06	20 55	17 12		21 80
22	146	31.1	44.8	311	04.4 ¹³²	+10 51.0 ¹³³		56	32	14	21 08	22 9		14 83
23	161	31.2	43.9	325	36.8 ¹³⁴	37.6 ¹³⁴		58	39	23	23	28 6		5 06 86
24	176	31.2	-11 43.0	340	09.1 ¹³³	+10 24.1 ¹³⁵		60 S	19 46	20 34	21 41	20 34	3	4 56 91

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 14 ^h 09 ^m 9		Mag: -4.8 PMG: 9 ^h 23 ^m		Mag: +1.3 PMG: 9 ^h 27 ^m		Mag: -2.0 PMG: 13 ^h 02 ^m		Mag: +0.7 PMG: 11 ^h 31 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	146	57.1	219 07.7	-16 51.7	218 14.3	-23 00.9	164 08.1	-8 20.9	186 50.0	-16 26.6
1	161	59.6	234 08.6	51.7	233 14.8	00.7	179 10.0	20.7	201 52.2	26.6
2	177	02.1	249 09.5	51.8	248 15.3	00.5	194 11.9	20.5	216 54.3	26.5
3	192	04.5	264 10.4	51.9	263 15.7	00.3	209 13.8	20.2	231 56.5	26.4
4	207	07.0	279 11.3	52.0	278 16.2	-23 00.1	224 15.7	20.0	246 58.7	26.3
5	222	09.5	294 12.2	-16 52.0	293 16.7	-22 59.9	239 17.6	-8 19.8	262 00.8	-16 26.2
6	237	11.9	309 13.1	-16 52.1	308 17.2	-22 59.7	254 19.5	-8 19.5	277 03.0	-16 26.1
7	252	14.4	324 14.0	52.2	323 17.6	59.5	269 21.4	19.3	292 05.2	26.0
8	267	16.8	339 14.9	52.2	338 18.1	59.3	284 23.3	19.1	307 07.3	25.9
9	282	19.3	354 15.8	52.3	353 18.6	59.0	299 25.2	18.9	322 09.5	25.9
10	297	21.8	9 16.6	52.4	8 19.0	58.8	314 27.1	18.6	337 11.7	25.8
11	312	24.2	24 17.5	-16 52.4	23 19.5	-22 58.6	329 29.0	-8 18.4	352 13.8	-16 25.7
12	327	26.7	39 18.4	-16 52.5	38 20.0	-22 58.4	344 30.9	-8 18.2	7 16.0	-16 25.6
13	342	29.2	54 19.3	52.6	53 20.5	58.2	359 32.8	18.0	22 18.2	25.5
14	357	31.6	69 20.2	52.7	68 20.9	58.0	14 34.7	17.7	37 20.4	25.4
15	12	34.1	84 21.0	52.7	83 21.4	57.8	29 36.7	17.5	52 22.5	25.3
16	27	36.6	99 21.9	52.8	98 21.9	57.6	44 38.6	17.3	67 24.7	25.2
17	42	39.0	114 22.8	-16 52.9	113 22.3	-22 57.4	59 40.5	-8 17.1	82 26.9	-16 25.2
18	57	41.5	129 23.6	-16 52.9	128 22.8	-22 57.1	74 42.4	-8 16.8	97 29.0	-16 25.1
19	72	43.9	144 24.5	53.0	143 23.3	56.9	89 44.3	16.6	112 31.2	25.0
20	87	46.4	159 25.4	53.1	158 23.8	56.7	104 46.2	16.4	127 33.4	24.9
21	102	48.9	174 26.2	53.1	173 24.2	56.5	119 48.1	16.1	142 35.5	24.8
22	117	51.3	189 27.1	53.2	188 24.7	56.3	134 50.0	15.9	157 37.7	24.7
23	132	53.8	204 27.9	53.2	203 25.2	56.1	149 51.9	15.7	172 39.9	24.6
24	147	56.3	219 28.8	-16 53.3	218 25.6	-22 55.9	164 53.8	-8 15.5	187 42.1	-16 24.5
Dif	—		+9	-1	+5	+2	+19	+2	+22	+1

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				Edad: 16 ^d 8 PHE { 4 ^h : 56'7 12 ^h : 56'9 20 ^h : 57'0 SD: 15'4 PMG: 1 ^h 22 ^m R°: 45 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	176	31.2	-11	43.0	340	09.1	+10	24.1	60 N	5 58	6 47	7 30	19 14	91		8 34	2	
1	191	31.3		42.2	354	41.5 ¹³⁴	+10	10.6 ¹³⁵	58	58	43	24	18	86		29	6	
2	206	31.3		41.3	9	13.9 ¹³⁴	+9	57.0 ¹³⁶	56	57	40	18	21	83		25	9	
3	221	31.4		40.4	23	46.3 ¹³⁴		43.3 ¹³⁷	54	56	37	14	23	81		21	1	
4	236	31.4		39.5	38	18.7 ¹³⁴		29.6 ¹³⁷	52	55	35	09	26	78		18	14	
5	251	31.5	-11	38.6	52	51.1 ¹³⁴	+9	15.9 ¹³⁷	50	5 54	6 32	7 05	19 28	76		8 15	16	
6	266	31.5	-11	37.8	67	23.6 ¹³⁵	+9	02.1 ¹³⁸	45	5 52	6 26	6 56	19 32	71		8 08	21	
7	281	31.6		36.9	81	56.1 ¹³⁵	+8	48.3 ¹³⁸	40	50	22	49	36	67		8 03	24	
8	296	31.6		36.0	96	28.6 ¹³⁵		34.4 ¹³⁹	35	47	17	43	40	63		7 58	28	
9	311	31.7		35.1	111	01.1 ¹³⁵		20.4 ¹⁴⁰	30	45	13	37	43	60		53	31	
10	326	31.7		34.2	125	33.6 ¹³⁵	+8	06.4 ¹⁴⁰	20	39	6 05	27	48	54		46	36	
11	341	31.8	-11	33.3	140	06.2 ¹³⁶	+7	52.4 ¹⁴⁰	10 N	5 33	5 57	6 19	19 52	50		7 39	41	
12	356	31.9	-11	32.5	154	38.7 ¹³⁵	+7	38.3 ¹⁴¹	0	5 25	5 49	6 10	19 56	46		7 33	45	
13	11	31.9		31.6	169	11.3 ¹³⁶		24.2 ¹⁴¹	10 S	16	41	6 02	20 01	40		26	50	
14	26	32.0		30.7	183	43.9 ¹³⁶	+7	10.0 ¹⁴²	20	5 04	30	5 53	05	36		20	54	
15	41	32.0		29.8	198	16.5 ¹³⁶	+6	55.8 ¹⁴²	30	4 48	18	43	10	31		12	59	
16	56	32.1		28.9	212	49.1 ¹³⁶		41.5 ¹⁴³	35	39	10	37	13	28		07	63	
17	71	32.1	-11	28.0	227	21.7 ¹³⁶	+6	27.2 ¹⁴³	40	4 27	5 01	5 30	20 16	25		7 02	66	
18	86	32.2	-11	27.1	241	54.4 ¹³⁷	+6	12.9 ¹⁴³	45	4 12	4 50	5 21	20 20	20		6 56	70	
19	101	32.2		26.3	256	27.0 ¹³⁶	+5	58.5 ¹⁴⁴	50	3 53	37	12	25	15		48	76	
20	116	32.3		25.4	270	59.7 ¹³⁷		44.1 ¹⁴⁴	52	44	30	07	27	13		45	78	
21	131	32.4		24.5	285	32.3 ¹³⁶		29.7 ¹⁴⁴	54	33	23	5 02	29	11		41	81	
22	146	32.4		23.6	300	05.0 ¹³⁷		15.2 ¹⁴⁵	56	21	15	4 56	31	9		37	83	
23	161	32.5		22.7	314	37.6 ¹³⁶	+5	00.7 ¹⁴⁵	58	3 06	4 05	50	34	6		32	87	
24	176	32.5	-11	21.8	329	10.3 ¹³⁷	+4	46.2 ¹⁴⁵	60 S	2 48	3 55	4 43	20 37	3		6 27	90	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 14 ^h 05 ^m 9		Mag: -4.8 PMG: 9 ^h 22 ^m				Mag: +1.3 PMG: 9 ^h 26 ^m				Mag: -2.0 PMG: 12 ^h 59 ^m				Mag: +0.7 PMG: 11 ^h 28 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	147	56.3	219	28.8	-16	53.3	218	25.6	-22	55.9	164	53.8	-8	15.5	187	42.1	-16	24.5
1	162	58.7	234	29.6		53.4	233	26.1		55.7	179	55.7		15.2	202	44.2		24.5
2	178	01.2	249	30.5		53.4	248	26.6		55.4	194	57.6		15.0	217	46.4		24.4
3	193	03.7	264	31.3		53.5	263	27.1		55.2	209	59.5		14.8	232	48.6		24.3
4	208	06.1	279	32.2		53.6	278	27.5		55.0	225	01.4		14.6	247	50.7		24.2
5	223	08.6	294	33.0	-16	53.6	293	28.0	-22	54.8	240	03.3	-8	14.3	262	52.9	-16	24.1
6	238	11.1	309	33.8	-16	53.7	308	28.5	-22	54.6	255	05.2	-8	14.1	277	55.1	-16	24.0
7	253	13.5	324	34.7		53.7	323	28.9		54.4	270	07.1		13.9	292	57.2		23.9
8	268	16.0	339	35.5		53.8	338	29.4		54.1	285	09.0		13.6	307	59.4		23.9
9	283	18.4	354	36.3		53.9	353	29.9		53.9	300	10.9		13.4	323	01.6		23.8
10	298	20.9	9	37.2		53.9	8	30.4		53.7	315	12.8		13.2	338	03.7		23.7
11	313	23.4	24	38.0	-16	54.0	23	30.8	-22	53.5	330	14.7	-8	13.0	353	05.9	-16	23.6
12	328	25.8	39	38.8	-16	54.0	38	31.3	-22	53.3	345	16.7	-8	12.7	8	08.1	-16	23.5
13	343	28.3	54	39.6		54.1	53	31.8		53.0	0	18.6		12.5	23	10.3		23.4
14	358	30.8	69	40.5		54.2	68	32.3		52.8	15	20.5		12.3	38	12.4		23.3
15	13	33.2	84	41.3		54.2	83	32.7		52.6	30	22.4		12.1	53	14.6		23.2
16	28	35.7	99	42.1		54.3	98	33.2		52.4	45	24.3		11.8	68	16.8		23.2
17	43	38.2	114	42.9	-16	54.3	113	33.7	-22	52.2	60	26.2	-8	11.6	83	18.9	-16	23.1
18	58	40.6	129	43.7	-16	54.4	128	34.1	-22	51.9	75	28.1	-8	11.4	98	21.1	-16	23.0
19	73	43.1	144	44.5		54.5	143	34.6		51.7	90	30.0		11.1	113	23.3		22.9
20	88	45.6	159	45.3		54.5	158	35.1		51.5	105	31.9		10.9	128	25.4		22.8
21	103	48.0	174	46.1		54.6	173	35.6		51.3	120	33.8		10.7	143	27.6		22.7
22	118	50.5	189	46.9		54.6	188	36.0		51.0	135	35.7		10.5	158	29.8		22.6
23	133	52.9	204	47.7		54.7	203	36.5		50.8	150	37.6		10.2	173	32.0		22.5
24	148	55.4	219	48.5	-16	54.7	218	37.0	-22	50.6	165	39.5	-8	10.0	188	34.1	-16	22.5
Dif	—		+8		-1		+5		+2		+19		+2		+22		+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 17 ^d 8 PHE { 4 ^h : 57:2 12 ^h : 57:3 20 ^h : 57:5										
	PMG: 12 ^h 13 ^m 8			SD: 15:5 PMG: 2 ^h 07 ^m R ^o : 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	176	32.5	-11 21.8	329	10.3	+4 46.2	60 N	17 01	17 45	18 33	20 45 92	8 36 3		
1	191	32.6	20.9	343	42.9 ¹³⁶	31.6 ¹⁴⁶	58	07	48	34	44 89	35 6		
2	206	32.6	20.0	358	15.6 ¹³⁷	17.0 ¹⁴⁶	56	12	51	34	44 85	34 8		
3	221	32.7	19.1	12	48.3 ¹³⁷	+4 02.4 ¹⁴⁶	54	17	53	35	44 82	33 11		
4	236	32.8	18.3	27	20.9 ¹³⁶	+3 47.7 ¹⁴⁷	52	21	56	35	44 79	32 13		
5	251	32.8	-11 17.4	41	53.6 ¹³⁷	+3 33.0 ¹⁴⁷	50	17 25	17 58	18 36	20 44 77	8 31 16		
6	266	32.9	-11 16.5	56	26.3 ¹³⁷	+3 18.3 ¹⁴⁷	45	17 33	18 03	18 38	20 43 72	8 29 20		
7	281	32.9	15.6	70	58.9 ¹³⁶	+3 03.6 ¹⁴⁷	40	40	08	40	43 68	27 24		
8	296	33.0	14.7	85	31.6 ¹³⁷	+2 48.8 ¹⁴⁸	35	46	12	42	43 64	26 27		
9	311	33.1	13.8	100	04.2 ¹³⁶	34.0 ¹⁴⁸	30	17 52	16	44	43 60	24 31		
10	326	33.1	12.9	114	36.9 ¹³⁷	19.2 ¹⁴⁸	20	18 01	23	49	42 56	22 36		
11	341	33.2	-11 12.0	129	09.5 ¹³⁶	+2 04.4 ¹⁴⁸	10 N	18 09	18 31	18 55	20 42 50	8 20 41		
12	356	33.2	-11 11.1	143	42.1 ¹³⁶	+1 49.6 ¹⁴⁸	0	18 17	18 38	19 03	20 42 46	8 18 45		
13	11	33.3	10.2	158	14.7 ¹³⁶	34.7 ¹⁴⁹	10 S	25	47	12	41 42	16 50		
14	26	33.4	09.3	172	47.3 ¹³⁶	19.8 ¹⁴⁹	20	34	18 56	23	41 37	14 54		
15	41	33.4	08.5	187	19.9 ¹³⁶	+1 04.9 ¹⁴⁹	30	44	19 08	38	41 31	11 61		
16	56	33.5	07.6	201	52.5 ¹³⁶	+0 50.0 ¹⁴⁹	35	49	16	47	41 28	10 63		
17	71	33.5	-11 06.7	216	25.1 ¹³⁶	+0 35.1 ¹⁴⁹	40	18 56	19 24	19 58	20 41 24	8 08 67		
18	86	33.6	-11 05.8	230	57.6 ¹³⁵	+0 20.2 ¹⁴⁹	45	19 04	19 35	20 12	20 40 21	8 06 72		
19	101	33.7	04.9	245	30.2 ¹³⁶	+0 05.3 ¹⁴⁹	50	13	48	31	40 16	04 76		
20	116	33.7	04.0	260	02.7 ¹³⁵	-0 09.7 ¹⁵⁰	52	18	19 54	40	40 14	03 79		
21	131	33.8	03.1	274	35.2 ¹³⁵	24.7 ¹⁵⁰	54	22	20 01	20 50	40 12	02 81		
22	146	33.9	02.2	289	07.6 ¹³⁴	39.6 ¹⁴⁹	56	28	09	21 02	40 9	8 00 84		
23	161	33.9	01.3	303	40.1 ¹³⁵	-0 54.6 ¹⁵⁰	58	34	17	15	40 6	7 59 87		
24	176	34.0	-11 00.4	318	12.5 ¹³⁴	-1 09.6 ¹⁵⁰	60 S	19 40	20 28	21 32	20 40 3	7 57 91		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 14 ^h 02 ^m 0		Mag: -4.8 PMG: 9 ^h 20 ^m			Mag: +1.3 PMG: 9 ^h 25 ^m			Mag: -2.0 PMG: 12 ^h 56 ^m			Mag: +0.7 PMG: 11 ^h 24 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	148	55.4	219 48.5	-16 54.7	218 37.0	-22 50.6	165 39.5	-8 10.0	188 34.1	-16 22.5				
1	163	57.9	234 49.3	54.8	233 37.5	50.4	180 41.4	09.8	203 36.3	22.4				
2	179	00.3	249 50.1	54.8	248 37.9	50.2	195 43.3	09.5	218 38.5	22.3				
3	194	02.8	264 50.9	54.9	263 38.4	49.9	210 45.2	09.3	233 40.6	22.2				
4	209	05.3	279 51.7	54.9	278 38.9	49.7	225 47.1	09.1	248 42.8	22.1				
5	224	07.7	294 52.5	-16 55.0	293 39.3	-22 49.5	240 49.0	-8 08.9	263 45.0	-16 22.0				
6	239	10.2	309 53.2	-16 55.0	308 39.8	-22 49.2	255 50.9	-8 08.6	278 47.1	-16 21.9				
7	254	12.7	324 54.0	55.1	323 40.3	49.0	270 52.8	08.4	293 49.3	21.9				
8	269	15.1	339 54.8	55.2	338 40.8	48.8	285 54.7	08.2	308 51.5	21.8				
9	284	17.6	354 55.6	55.2	353 41.2	48.6	300 56.6	08.0	323 53.7	21.7				
10	299	20.0	9 56.3	55.3	8 41.7	48.3	315 58.5	07.7	338 55.8	21.6				
11	314	22.5	24 57.1	-16 55.3	23 42.2	-22 48.1	331 00.5	-8 07.5	353 58.0	-16 21.5				
12	329	25.0	39 57.9	-16 55.4	38 42.7	-22 47.9	346 02.4	-8 07.3	9 00.2	-16 21.4				
13	344	27.4	54 58.7	55.4	53 43.1	47.6	1 04.3	07.0	24 02.3	21.3				
14	359	29.9	69 59.4	55.4	68 43.6	47.4	16 06.2	06.8	39 04.5	21.2				
15	14	32.4	85 00.2	55.5	83 44.1	47.2	31 08.1	06.6	54 06.7	21.2				
16	29	34.8	100 00.9	55.5	98 44.6	47.0	46 10.0	06.4	69 08.9	21.1				
17	44	37.3	115 01.7	-16 55.6	113 45.0	-22 46.7	61 11.9	-8 06.1	84 11.0	-16 21.0				
18	59	39.8	130 02.4	-16 55.6	128 45.5	-22 46.5	76 13.8	-8 05.9	99 13.2	-16 20.9				
19	74	42.2	145 03.2	55.7	143 46.0	46.3	91 15.7	05.7	114 15.4	20.8				
20	89	44.7	160 04.0	55.7	158 46.5	46.0	106 17.6	05.4	129 17.5	20.7				
21	104	47.2	175 04.7	55.8	173 46.9	45.8	121 19.5	05.2	144 19.7	20.6				
22	119	49.6	190 05.4	55.8	188 47.4	45.6	136 21.4	05.0	159 21.9	20.5				
23	134	52.1	205 06.2	55.9	203 47.9	45.3	151 23.3	04.8	174 24.1	20.5				
24	149	54.5	220 06.9	-16 55.9	218 48.3	-22 45.1	166 25.2	-8 04.5	189 26.2	-16 20.4				
Dif	—		+8		0	+5	+2	+19	+2	+22	+1			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16/2 PMG: 12 ^h 13 ^m 7			Edad: 18 ^d 8 PHE { 4 ^h : 57/6 12 ^h : 57/8 20 ^h : 57/9 R°: 47 ^m											
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	34.0	-11	00.4	318	12.5	-1 09.6	60 N	5 53	6 41	7 24	22 17	95	8 39	3
1	191	34.1	-10	59.5	332	45.0 ¹³⁵	24.5 ¹⁴⁹	58	53	38	19	13	91	41	6
2	206	34.1		58.6	347	17.3 ¹³³	39.5 ¹⁵⁰	56	52	36	14	09	88	42	10
3	221	34.2		57.7	1	49.7 ¹³⁴	-1 54.5 ¹⁵⁰	54	52	33	09	06	85	44	12
4	236	34.3		56.8	16	22.1 ¹³⁴	-2 09.5 ¹⁵⁰	52	51	31	05	03	82	45	15
5	251	34.3	-10	55.9	30	54.4 ¹³³	-2 24.5 ¹⁵⁰	50	5 51	6 28	7 01	22 01	79	8 47	16
6	266	34.4	-10	55.0	45	26.7 ¹³³	-2 39.5 ¹⁵⁰	45	5 49	6 23	6 53	21 55	75	8 49	22
7	281	34.4		54.1	59	58.9 ¹³²	-2 54.4 ¹⁴⁹	40	47	19	46	51	70	51	26
8	296	34.5		53.2	74	31.1 ¹³²	-3 09.4 ¹⁵⁰	35	45	15	41	47	66	53	29
9	311	34.6		52.3	89	03.3 ¹³²	24.4 ¹⁵⁰	30	43	11	35	43	63	55	32
10	326	34.7		51.4	103	35.5 ¹³²	39.3 ¹⁴⁹	20	38	6 04	26	38	57	8 58	38
11	341	34.7	-10	50.5	118	07.6 ¹³¹	-3 54.3 ¹⁵⁰	10 N	5 32	5 57	6 18	21 32	53	9 01	42
12	356	34.8	-10	49.6	132	39.7 ¹³¹	-4 09.2 ¹⁴⁹	0	5 25	5 49	6 10	21 28	48	9 03	47
13	11	34.9		48.7	147	11.8 ¹³¹	24.2 ¹⁵⁰	10 S	16	41	6 02	23	43	06	51
14	26	34.9		47.8	161	43.8 ¹³⁰	39.1 ¹⁴⁹	20	5 05	31	5 54	18	39	08	57
15	41	35.0		46.9	176	15.8 ¹³⁰	-4 54.0 ¹⁴⁹	30	4 50	19	44	12	34	12	61
16	56	35.1		46.0	190	47.7 ¹²⁹	-5 08.9 ¹⁴⁹	35	41	12	38	09	30	13	65
17	71	35.1	-10	45.1	205	19.6 ¹²⁹	-5 23.7 ¹⁴⁸	40	4 30	5 04	5 32	21 05	27	9 15	69
18	86	35.2	-10	44.2	219	51.5 ¹²⁹	-5 38.6 ¹⁴⁹	45	4 16	4 53	5 24	21 01	23	9 18	72
19	101	35.3		43.3	234	23.3 ¹²⁸	-5 53.4 ¹⁴⁸	50	3 58	40	15	20 56	18	20	78
20	116	35.3		42.4	248	55.1 ¹²⁸	-6 08.3 ¹⁴⁹	52	49	34	11	54	16	22	80
21	131	35.4		41.5	263	26.8 ¹²⁷	23.1 ¹⁴⁸	54	39	27	06	52	13	23	83
22	146	35.5		40.6	277	58.5 ¹²⁷	37.8 ¹⁴⁷	56	27	20	5 01	49	10	24	87
23	161	35.5		39.7	292	30.1 ¹²⁶	-6 52.6 ¹⁴⁸	58	3 13	11	4 55	46	7	26	90
24	176	35.6	-10	38.8	307	01.7 ¹²⁶	-7 07.3 ¹⁴⁷	60 S	2 56	4 01	4 48	20 43	3	9 28	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 58 ^m 1		Mag: -4.8 PMG: 9 ^h 19 ^m		Mag: +1.3 PMG: 9 ^h 24 ^m		Mag: -2.0 PMG: 12 ^h 53 ^m		Mag: +0.7 PMG: 11 ^h 21 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	149	54.5	220	06.9	-16	55.9	218	48.3	-22	45.1
1	164	57.0	235	07.7		56.0	233	48.8		44.9
2	179	59.5	250	08.4		56.0	248	49.3		44.6
3	195	01.9	265	09.1		56.0	263	49.8		44.4
4	210	04.4	280	09.9		56.1	278	50.2		44.2
5	225	06.9	295	10.6	-16	56.1	293	50.7	-22	43.9
6	240	09.3	310	11.3	-16	56.2	308	51.2	-22	43.7
7	255	11.8	325	12.1		56.2	323	51.7		43.4
8	270	14.3	340	12.8		56.2	338	52.1		43.2
9	285	16.7	355	13.5		56.3	353	52.6		43.0
10	300	19.2	10	14.2		56.3	8	53.1		42.7
11	315	21.6	25	14.9	-16	56.4	23	53.6	-22	42.5
12	330	24.1	40	15.7	-16	56.4	38	54.0	-22	42.3
13	345	26.6	55	16.4		56.4	53	54.5		42.0
14	0	29.0	70	17.1		56.5	68	55.0		41.8
15	15	31.5	85	17.8		56.5	83	55.5		41.5
16	30	34.0	100	18.5		56.6	98	55.9		41.3
17	45	36.4	115	19.2	-16	56.6	113	56.4	-22	41.1
18	60	38.9	130	19.9	-16	56.6	128	56.9	-22	40.8
19	75	41.4	145	20.6		56.7	143	57.4		40.6
20	90	43.8	160	21.3		56.7	158	57.8		40.3
21	105	46.3	175	22.0		56.7	173	58.3		40.1
22	120	48.8	190	22.7		56.8	188	58.8		39.8
23	135	51.2	205	23.4		56.8	203	59.3		39.6
24	150	53.7	220	24.1	-16	56.8	218	59.7	-22	39.4
Dif	—		+7		0		+5		+2	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 6			Edad: 19 ^d 8 PHE { SD: 15:8 PMG: 3 ^h 39 ^m 4 ^h : 58:1 12 ^h : 58:2 20 ^h : 58:4 R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	176	35.6	-10	38.8	307	01.7	-7	07.3	60 N	17 07	17 50	18 38	23 52 100	8 42 4
1	191	35.7		37.9	321	33.2 ¹²⁵		22.0 ¹⁴⁷	58	12	52	38	44 95	47 8
2	206	35.8		37.0	336	04.7 ¹²⁵		36.7 ¹⁴⁷	56	17	55	38	37 91	52 11
3	221	35.8		36.1	350	36.2 ¹²⁵	-7	51.3 ¹⁴⁶	54	21	57	38	31 88	8 56 11
4	236	35.9		35.2	5	07.5 ¹²³	-8	06.0 ¹⁴⁷	52	25	17 59	39	25 85	9 00 17
5	251	36.0	-10	34.3	19	38.9 ¹²⁴	-8	20.5 ¹⁴⁵	50	17 28	18 01	18 39	23 20 82	9 03 19
6	266	36.1	-10	33.4	34	10.2 ¹²³	-8	35.1 ¹⁴⁶	45	17 36	18 06	18 40	23 10 76	9 11 24
7	281	36.1		32.5	48	41.4 ¹²²	-8	49.6 ¹⁴⁵	40	43	10	42	23 01 72	17 28
8	296	36.2		31.6	63	12.5 ¹²¹	-9	04.1 ¹⁴⁵	35	48	14	43	22 53 68	22 32
9	311	36.3		30.7	77	43.6 ¹²¹		18.5 ¹⁴⁴	30	17 53	17	45	46 65	27 35
10	326	36.3		29.8	92	14.7 ¹²¹		32.9 ¹⁴⁴	20	18 02	24	50	35 60	36 40
11	341	36.4	-10	28.9	106	45.7 ¹²⁰	-9	47.3 ¹⁴⁴	10 N	18 10	18 31	18 56	22 25 55	9 43 45
12	356	36.5	-10	28.0	121	16.6 ¹¹⁹	-10	01.6 ¹⁴³	0	18 17	18 38	19 02	22 16 51	9 50 49
13	11	36.6		27.1	135	47.4 ¹¹⁸		15.9 ¹⁴³	10 S	24	46	11	22 06 47	9 57 54
14	26	36.6		26.2	150	18.2 ¹¹⁸		30.2 ¹⁴³	20	32	18 55	21	21 57 42	10 05 58
15	41	36.7		25.2	164	49.0 ¹¹⁸		44.4 ¹⁴²	30	42	19 06	35	46 37	13 64
16	56	36.8		24.3	179	19.6 ¹¹⁶	-10	58.5 ¹⁴¹	35	47	13	44	39 35	18 67
17	71	36.9	-10	23.4	193	50.2 ¹¹⁶	-11	12.6 ¹⁴¹	40	18 53	19 21	19 55	21 32 31	10 24 71
18	86	36.9	-10	22.5	208	20.8 ¹¹⁶	-11	26.7 ¹⁴¹	45	19 01	19 31	20 09	21 24 27	10 30 76
19	101	37.0		21.6	222	51.2 ¹¹⁴		40.7 ¹⁴⁰	50	09	44	26	14 22	38 81
20	116	37.1		20.7	237	21.6 ¹¹⁴	-11	54.6 ¹³⁹	52	13	49	34	10 19	42 83
21	131	37.2		19.8	251	51.9 ¹¹³	-12	08.5 ¹³⁹	54	18	19 56	44	21 05 16	46 86
22	146	37.3		18.9	266	22.2 ¹¹³		22.4 ¹³⁹	56	23	20 03	20 55	20 59 13	51 89
23	161	37.3		18.0	280	52.3 ¹¹¹		36.2 ¹³⁸	58	28	12	21 08	53 10	10 56 93
24	176	37.4	-10	17.1	295	22.5 ¹¹²	-12	49.9 ¹³⁷	60 S	19 34	20 21	21 24	20 46 6	11 01 98

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 54 ^m 1		Mag: -4.8 PMG: 9 ^h 18 ^m		Mag: +1.3 PMG: 9 ^h 24 ^m		Mag: -2.0 PMG: 12 ^h 50 ^m		Mag: +0.7 PMG: 11 ^h 17 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	150	53.7	220	24.1	-16	56.8	218	59.7	-22	39.4
1	165	56.1	235	24.8		56.9	234	00.2		39.1
2	180	58.6	250	25.5		56.9	249	00.7		38.9
3	196	01.1	265	26.1		56.9	264	01.2		38.6
4	211	03.5	280	26.8		57.0	279	01.6		38.4
5	226	06.0	295	27.5	-16	57.0	294	02.1	-22	38.1
6	241	08.5	310	28.2	-16	57.0	309	02.6	-22	37.9
7	256	10.9	325	28.9		57.0	324	03.1		37.6
8	271	13.4	340	29.5		57.1	339	03.5		37.4
9	286	15.9	355	30.2		57.1	354	04.0		37.1
10	301	18.3	10	30.9		57.1	9	04.5		36.9
11	316	20.8	25	31.5	-16	57.2	24	05.0	-22	36.7
12	331	23.2	40	32.2	-16	57.2	39	05.5	-22	36.4
13	346	25.7	55	32.9		57.2	54	05.9		36.2
14	1	28.2	70	33.5		57.2	69	06.4		35.9
15	16	30.6	85	34.2		57.3	84	06.9		35.7
16	31	33.1	100	34.8		57.3	99	07.4		35.4
17	46	35.6	115	35.5	-16	57.3	114	07.8	-22	35.2
18	61	38.0	130	36.1	-16	57.3	129	08.3	-22	34.9
19	76	40.5	145	36.8		57.4	144	08.8		34.7
20	91	43.0	160	37.4		57.4	159	09.3		34.4
21	106	45.4	175	38.1		57.4	174	09.7		34.1
22	121	47.9	190	38.7		57.4	189	10.2		33.9
23	136	50.4	205	39.4		57.4	204	10.7		33.6
24	151	52.8	220	40.0	-16	57.5	219	11.2	-22	33.4
Dif	—		+7		0		+5		+2	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'2 PMG: 12 ^h 13 ^m 4				Edad: 20 ^d 8 PHE { 4 ^h : 58'5 12 ^h : 58'6 20 ^h : 58'7 PMG: 4 ^h 27 ^m R°: 52 ^m																
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m		
0	176	37.4	-10	17.1	295	22.5	-12	49.9	60 N	5	48	6	36	7	19	** ** *	8	46	7		
1	191	37.5		16.2	309	52.5 ¹¹⁰	-13	03.6 ¹³⁷	58	48	33	14	** ** *	8	55	11					
2	206	37.6		15.3	324	22.4 ¹⁰⁹		17.2 ¹³⁶	56	48	31	09	** ** *	9	03	15					
3	221	37.6		14.3	338	52.3 ¹⁰⁹		30.7 ¹³⁵	54	48	29	05	** ** *	10	19						
4	236	37.7		13.4	353	22.1 ¹⁰⁸		44.2 ¹³⁵	52	48	27	01	** ** *	17	21						
5	251	37.8	-10	12.5	7	51.8 ¹⁰⁷	-13	57.6 ¹³⁴	50	5	47	6	25	6	58	** ** *	9	22	24		
6	266	37.9	-10	11.6	22	21.4 ¹⁰⁶	-14	11.0 ¹³⁴	45	5	46	6	20	6	50	** ** *	9	35	29		
7	281	38.0		10.7	36	51.0 ¹⁰⁶		24.3 ¹³³	40	45	16	44	** ** *	45	34						
8	296	38.0		09.8	51	20.5 ¹⁰⁵		37.5 ¹³²	35	43	13	38	** ** *	9	54	37					
9	311	38.1		08.9	65	49.9 ¹⁰⁴	-14	50.6 ¹³¹	30	41	09	33	23	51	68	10	02	40			
10	326	38.2		08.0	80	19.2 ¹⁰³	-15	03.7 ¹³¹	20	37	6	03	25	35	62	16	45				
11	341	38.3	-10	07.1	94	48.4 ¹⁰²	-15	16.7 ¹³⁰	10 N	5	31	5	56	6	17	23	20	59	10	28	49
12	356	38.4	-10	06.1	109	17.6 ¹⁰²	-15	29.6 ¹²⁹	0	5	25	5	49	6	10	23	07	55	10	39	53
13	11	38.4		05.2	123	46.6 ¹⁰⁰		42.5 ¹²⁹	10 S	16	41	6	03	22	53	52	10	51	57		
14	26	38.5		04.3	138	15.6 ¹⁰⁰	-15	55.3 ¹²⁸	20	5	06	32	5	55	39	47	11	03	61		
15	41	38.6		03.4	152	44.5 ⁹⁹	-16	07.9 ¹²⁶	30	4	52	21	46	23	43	17	66				
16	56	38.7		02.5	167	13.3 ⁹⁸		20.5 ¹²⁶	35	43	14	40	14	39	25	70					
17	71	38.8	-10	01.6	181	42.0 ⁹⁷	-16	33.1 ¹²⁶	40	4	32	5	06	5	34	22	03	37	11	35	72
18	86	38.8	-10	00.7	196	10.6 ⁹⁶	-16	45.5 ¹²⁴	45	4	19	4	56	5	27	21	51	32	11	46	77
19	101	38.9	-9	59.7	210	39.1 ⁹⁵	-16	57.9 ¹²⁴	50	4	02	44	19	36	27	11	59	82			
20	116	39.0		58.8	225	07.5 ⁹⁴	-17	10.1 ¹²²	52	3	53	38	15	29	25	12	05	85			
21	131	39.1		57.9	239	35.9 ⁹⁴		22.3 ¹²²	54	44	32	10	21	22	12	88					
22	146	39.2		57.0	254	04.1 ⁹²		34.4 ¹²¹	56	33	25	05	12	19	20	92					
23	161	39.3		56.1	268	32.3 ⁹²		46.4 ¹²⁰	58	20	16	5	00	21	03	14	29	96			
24	176	39.3	-9	55.2	283	00.4 ⁹¹	-17	58.3 ¹¹⁹	60 S	3	04	4	07	4	54	20	52	9	12	39	101

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 50 ^m 2		Mag: -4.8 PMG: 9 ^h 17 ^m		Mag: +1.3 PMG: 9 ^h 23 ^m		Mag: -2.0 PMG: 12 ^h 47 ^m		Mag: +0.8 PMG: 11 ^h 14 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	151	52.8	220	40.0	-16	57.5	219	11.2	-22	33.4	167	56.6	-7	53.6	191	10.5	-16	16.2
1	166	55.3	235	40.7		57.5	234	11.6		33.1	182	58.5		53.3	206	12.6		16.1
2	181	57.7	250	41.3		57.5	249	12.1		32.9	198	00.4		53.1	221	14.8		16.0
3	197	00.2	265	41.9		57.5	264	12.6		32.6	213	02.3		52.9	236	17.0		15.9
4	212	02.7	280	42.6		57.5	279	13.1		32.4	228	04.2		52.6	251	19.2		15.9
5	227	05.1	295	43.2	-16	57.6	294	13.6	-22	32.1	243	06.1	-7	52.4	266	21.3	-16	15.8
6	242	07.6	310	43.8	-16	57.6	309	14.0	-22	31.9	258	08.0	-7	52.2	281	23.5	-16	15.7
7	257	10.1	325	44.4		57.6	324	14.5		31.6	273	09.9		52.0	296	25.7		15.6
8	272	12.5	340	45.1		57.6	339	15.0		31.3	288	11.8		51.7	311	27.9		15.5
9	287	15.0	355	45.7		57.6	354	15.5		31.1	303	13.7		51.5	326	30.0		15.4
10	302	17.5	10	46.3		57.6	9	15.9		30.8	318	15.6		51.3	341	32.2		15.3
11	317	19.9	25	46.9	-16	57.7	24	16.4	-22	30.6	333	17.5	-7	51.0	356	34.4	-16	15.3
12	332	22.4	40	47.5	-16	57.7	39	16.9	-22	30.3	348	19.4	-7	50.8	11	36.5	-16	15.2
13	347	24.9	55	48.2		57.7	54	17.4		30.1	3	21.3		50.6	26	38.7		15.1
14	2	27.3	70	48.8		57.7	69	17.9		29.8	18	23.2		50.4	41	40.9		15.0
15	17	29.8	85	49.4		57.7	84	18.3		29.5	33	25.1		50.1	56	43.1		14.9
16	32	32.2	100	50.0		57.7	99	18.8		29.3	48	27.0		49.9	71	45.2		14.8
17	47	34.7	115	50.6	-16	57.7	114	19.3	-22	29.0	63	28.9	-7	49.7	86	47.4	-16	14.7
18	62	37.2	130	51.2	-16	57.8	129	19.8	-22	28.8	78	30.8	-7	49.4	101	49.6	-16	14.6
19	77	39.6	145	51.8		57.8	144	20.2		28.5	93	32.7		49.2	116	51.8		14.6
20	92	42.1	160	52.4		57.8	159	20.7		28.2	108	34.6		49.0	131	53.9		14.5
21	107	44.6	175	53.0		57.8	174	21.2		28.0	123	36.5		48.7	146	56.1		14.4
22	122	47.0	190	53.6		57.8	189	21.7		27.7	138	38.4		48.5	161	58.3		14.3
23	137	49.5	205	54.2		57.8	204	22.2		27.5	153	40.3		48.3	177	00.4		14.2
24	152	52.0	220	54.8	-16	57.8	219	22.6	-22	27.2	168	42.2	-7	48.1	192	02.6	-16	14.1
Dif	—		+6		0		+5		+3		+19		+2		+22		+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 13 ^m 3			Edad: 21 ^d 8 PHE { 4 ^h : 58 ^m 8 12 ^h : 59 ^m 0 20 ^h : 59 ^m 1 PMG: 5 ^h 19 ^m R°: 56 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	176	39.3	-9 55.2	283	00.4	-17 58.3	118	60 N	17 12	17 54	18 43	1 32 104	8 53 12		
1	191	39.4	54.3	297	28.4	-18 10.1	90	58	17	57	42	19 98	9 06 18		
2	206	39.5	53.3	311	56.2	21.8	88	56	21	17 59	42	1 08 93	18 23		
3	221	39.6	52.4	326	24.0	33.4	88	54	25	18 01	42	0 59 88	29 26		
4	236	39.7	51.5	340	51.7	44.9	87	52	29	03	42	50 86	38 29		
5	251	39.8	-9 50.6	355	19.3	-18 56.3	86	50	17 32	18 05	18 42	0 42 83	9 46 32		
6	266	39.9	-9 49.7	9	46.8	-19 07.6	85	45	17 39	18 09	18 43	0 26 78	10 04 37		
7	281	39.9	48.7	24	14.2	18.8	84	40	45	12	44	13 73	19 40		
8	296	40.0	47.8	38	41.6	29.9	84	35	50	16	45	0 01 71	31 43		
9	311	40.1	46.9	53	08.8	40.9	82	30	17 55	19	47	** ** *	10 42 46		
10	326	40.2	46.0	67	35.9	-19 51.7	81	20	18 03	25	51	** ** *	11 01 50		
11	341	40.3	-9 45.1	82	02.9	-20 02.5	80	10 N	18 10	18 31	18 56	** ** *	11 17 54		
12	356	40.4	-9 44.2	96	29.9	-20 13.1	80	0	18 17	18 38	19 02	** ** *	11 32 57		
13	11	40.5	43.2	110	56.7	23.7	78	10 S	24	45	10	23 45 56	11 48 60		
14	26	40.5	42.3	125	23.4	34.1	77	20	31	18 53	20	26 54	12 04 64		
15	41	40.6	41.4	139	50.1	44.4	77	30	40	19 04	33	23 06 49	23 68		
16	56	40.7	40.5	154	16.6	-20 54.6	75	35	45	11	42	22 53 48	35 70		
17	71	40.8	-9 39.6	168	43.1	-21 04.6	75	40	18 50	19 18	19 52	22 40 45	12 47 74		
18	86	40.9	-9 38.6	183	09.4	-21 14.6	73	45	18 57	19 28	20 05	22 23 42	13 03 77		
19	101	41.0	37.7	197	35.7	24.4	98	50	19 05	39	21	22 03 37	21 82		
20	116	41.1	36.8	212	01.8	34.0	96	52	09	45	29	21 54 35	30 85		
21	131	41.2	35.9	226	27.9	43.6	96	54	13	51	38	43 32	40 88		
22	146	41.3	34.9	240	53.8	-21 53.0	94	56	18	19 58	20 49	31 29	13 52 91		
23	161	41.3	34.0	255	19.7	-22 02.3	93	58	23	20 06	21 01	17 25	14 05 96		
24	176	41.4	-9 33.1	269	45.5	-22 11.5	92	60 S	19 29	20 15	21 16	21 01 19	14 20 102		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 13 ^h 46 ^m 3		Mag: -4.8 PMG: 9 ^h 16 ^m			Mag: +1.3 PMG: 9 ^h 22 ^m			Mag: -2.0 PMG: 12 ^h 44 ^m			Mag: +0.8 PMG: 11 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	152	52.0	220 54.8	-16 57.8	219 22.6	-22 27.2	168 42.2	-7 48.1	192 02.6	-16 14.1					
1	167	54.4	235 55.4	57.8	234 23.1	26.9	183 44.1	47.8	207 04.8	14.0					
2	182	56.9	250 56.0	57.8	249 23.6	26.7	198 46.0	47.6	222 07.0	14.0					
3	197	59.3	265 56.6	57.8	264 24.1	26.4	213 47.9	47.4	237 09.1	13.9					
4	213	01.8	280 57.1	57.8	279 24.5	26.1	228 49.8	47.1	252 11.3	13.8					
5	228	04.3	295 57.7	-16 57.8	294 25.0	-22 25.9	243 51.7	-7 46.9	267 13.5	-16 13.7					
6	243	06.7	310 58.3	-16 57.8	309 25.5	-22 25.6	258 53.6	-7 46.7	282 15.7	-16 13.6					
7	258	09.2	325 58.9	57.8	324 26.0	25.3	273 55.5	46.5	297 17.8	13.5					
8	273	11.7	340 59.5	57.9	339 26.5	25.1	288 57.4	46.2	312 20.0	13.4					
9	288	14.1	356 00.0	57.9	354 26.9	24.8	303 59.3	46.0	327 22.2	13.3					
10	303	16.6	11 00.6	57.9	9 27.4	24.5	319 01.2	45.8	342 24.4	13.3					
11	318	19.1	26 01.2	-16 57.9	24 27.9	-22 24.3	334 03.1	-7 45.5	357 26.5	-16 13.2					
12	333	21.5	41 01.8	-16 57.9	39 28.4	-22 24.0	349 05.1	-7 45.3	12 28.7	-16 13.1					
13	348	24.0	56 02.3	57.9	54 28.9	23.7	4 07.0	45.1	27 30.9	13.0					
14	3	26.5	71 02.9	57.9	69 29.3	23.5	19 08.9	44.8	42 33.1	12.9					
15	18	28.9	86 03.5	57.9	84 29.8	23.2	34 10.8	44.6	57 35.2	12.8					
16	33	31.4	101 04.0	57.9	99 30.3	22.9	49 12.7	44.4	72 37.4	12.7					
17	48	33.8	116 04.6	-16 57.9	114 30.8	-22 22.7	64 14.6	-7 44.2	87 39.6	-16 12.7					
18	63	36.3	131 05.1	-16 57.9	129 31.3	-22 22.4	79 16.5	-7 43.9	102 41.8	-16 12.6					
19	78	38.8	146 05.7	57.9	144 31.7	22.1	94 18.4	43.7	117 43.9	12.5					
20	93	41.2	161 06.3	57.9	159 32.2	21.8	109 20.3	43.5	132 46.1	12.4					
21	108	43.7	176 06.8	57.9	174 32.7	21.6	124 22.2	43.2	147 48.3	12.3					
22	123	46.2	191 07.4	57.8	189 33.2	21.3	139 24.1	43.0	162 50.4	12.2					
23	138	48.6	206 07.9	57.8	204 33.7	21.0	154 26.0	42.8	177 52.6	12.1					
24	153	51.1	221 08.5	-16 57.8	219 34.1	-22 20.8	169 27.9	-7 42.5	192 54.8	-16 12.1					
Dif	—		+6		0		+5		+3		+19		+2		
											+22		+1		

UT	SOL			☾ LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 13 ^m 2			Edad: 22 ^d 8 PHE { SD: 16'1 PMG: 6 ^h 15 ^m R°: 60 ^m 4 ^h : 59'2 12 ^h : 59'3 20 ^h : 59'3														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	176	41.4	-9	33.1	269	45.5	-22	11.5	60 N	5	43	6	31	7	13	3	16	100
1	191	41.5		32.2	284	11.2	67	20.5	58	43	28	08		2	57	93	24	32
2	206	41.6		31.3	298	36.7	65	29.4	56	43	26	04		41	88	41	35	
3	221	41.7		30.3	313	02.2	65	38.2	54	44	24	7	00	27	85	9	55	
4	236	41.8		29.4	327	27.6	64	46.8	52	44	23	6	57	16	82	10	07	
5	251	41.9	-9	28.5	341	52.9	63	-22	50	5	43	6	21	6	54	2	05	80
6	266	42.0	-9	27.6	356	18.1	62	-23	45	5	43	6	17	6	47	1	44	75
7	281	42.1		26.6	10	43.2	61	11.8	40	42	14	41		26	73	10	59	50
8	296	42.2		25.7	25	08.3	61	19.9	35	41	10	36		1	12	70	11	14
9	311	42.3		24.8	39	33.2	59	27.8	30	39	07	31		0	59	68	28	53
10	326	42.3		23.9	53	58.1	59	35.6	20	36	6	01	23	37	65	11	51	56
11	341	42.4	-9	22.9	68	22.8	57	-23	10 N	5	31	5	55	6	16	0	19	62
12	356	42.5	-9	22.0	82	47.5	57	-23	0	5	25	5	49	6	10	0	02	59
13	11	42.6		21.1	97	12.1	56	-23	10 S	17	42	6	03	**	**	**	12	48
14	26	42.7		20.2	111	36.6	55	-24	20	5	07	33	5	56	**	**	**	13
15	41	42.8		19.2	126	01.0	54	12.1	30	4	54	23	47	23	55	58	31	68
16	56	42.9		18.3	140	25.3	53	19.0	35	45	16	42		41	56	13	45	69
17	71	43.0	-9	17.4	154	49.6	53	-24	40	4	35	5	09	5	37	23	25	55
18	86	43.1	-9	16.5	169	13.7	51	-24	45	4	22	4	59	5	30	23	05	53
19	101	43.2		15.5	183	37.8	51	38.6	50	4	06	48	22	22	40	51	43	76
20	116	43.3		14.6	198	01.8	50	44.8	52	3	58	42	18	29	49	14	55	77
21	131	43.4		13.7	212	25.8	50	50.9	54	49	36	14		15	48	15	08	79
22	146	43.5		12.8	226	49.6	48	-24	56	39	30	10		22	00	45	23	82
23	161	43.6		11.8	241	13.4	48	-25	58	26	22	5	05	21	42	42	15	41
24	176	43.7	-9	10.9	255	37.1	47	-25	60 S	3	12	4	13	21	20	36	16	02

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 42 ^m 3		Mag: -4.8 PMG: 9 ^h 15 ^m			Mag: +1.3 PMG: 9 ^h 21 ^m			Mag: -2.0 PMG: 12 ^h 41 ^m			Mag: +0.8 PMG: 11 ^h 07 ^m		
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	153	51.1	221	08.5	-16	57.8	219	34.1	-22	20.8	169	27.9	-7	42.5
1	168	53.6	236	09.0		57.8	234	34.6		20.5	184	29.8		42.3
2	183	56.0	251	09.5		57.8	249	35.1		20.2	199	31.7		42.1
3	198	58.5	266	10.1		57.8	264	35.6		19.9	214	33.6		41.9
4	214	01.0	281	10.6		57.8	279	36.1		19.7	229	35.5		41.6
5	229	03.4	296	11.2	-16	57.8	294	36.5	-22	19.4	244	37.4	-7	41.4
6	244	05.9	311	11.7	-16	57.8	309	37.0	-22	19.1	259	39.3	-7	41.2
7	259	08.3	326	12.2		57.8	324	37.5		18.8	274	41.2		40.9
8	274	10.8	341	12.8		57.8	339	38.0		18.6	289	43.1		40.7
9	289	13.3	356	13.3		57.8	354	38.5		18.3	304	45.0		40.5
10	304	15.7	11	13.8		57.8	9	38.9		18.0	319	46.9		40.2
11	319	18.2	26	14.4	-16	57.7	24	39.4	-22	17.7	334	48.8	-7	40.0
12	334	20.7	41	14.9	-16	57.7	39	39.9	-22	17.5	349	50.7	-7	39.8
13	349	23.1	56	15.4		57.7	54	40.4		17.2	4	52.6		39.6
14	4	25.6	71	15.9		57.7	69	40.9		16.9	19	54.5		39.3
15	19	28.1	86	16.5		57.7	84	41.3		16.6	34	56.4		39.1
16	34	30.5	101	17.0		57.7	99	41.8		16.3	49	58.3		38.9
17	49	33.0	116	17.5	-16	57.7	114	42.3	-22	16.1	65	00.2	-7	38.6
18	64	35.5	131	18.0	-16	57.6	129	42.8	-22	15.8	80	02.1	-7	38.4
19	79	37.9	146	18.5		57.6	144	43.3		15.5	95	04.0		38.2
20	94	40.4	161	19.0		57.6	159	43.8		15.2	110	05.9		37.9
21	109	42.8	176	19.5		57.6	174	44.2		14.9	125	07.8		37.7
22	124	45.3	191	20.0		57.6	189	44.7		14.7	140	09.7		37.5
23	139	47.8	206	20.6		57.6	204	45.2		14.4	155	11.6		37.3
24	154	50.2	221	21.1	-16	57.5	219	45.7	-22	14.1	170	13.5	-7	37.0
Dif	—		+5	0			+5	+3			+19	+2		

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2		Edad: 23 ^d 8 PHE { 4 ^h : 59'4 12 ^h : 59'5 20 ^h : 59'5						Civil		Náutico		Hora R°	
	PMG: 12 ^h 13 ^m 0		PMG: 7 ^h 15 ^m	R°: 63 ^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	43.7	-9 10.9	255	37.1	-25 08.1	54	60 N	17 17	17 59	18 47	4 56 79	9 30 50	
1	191	43.8	10.0	270	00.7	13.5	54	58	21	18 01	47	30 76	9 56 54	
2	206	43.9	09.0	284	24.3	18.7	52	56	25	03	46	4 09 74	10 16 56	
3	221	44.0	08.1	298	47.8	23.8	51	54	29	05	46	3 52 73	34 56	
4	236	44.1	07.2	313	11.2	28.7	49	52	32	06	46	38 71	10 48 58	
5	251	44.2	-9 06.3	327	34.6	-25 33.4	47	50	17 35	18 08	18 45	3 25 71	11 01 59	
6	266	44.2	-9 05.3	341	57.9	-25 37.9	45	45	17 42	18 11	18 45	2 59 69	11 28 59	
7	281	44.3	04.4	356	21.1	42.3	44	40	47	15	46	39 67	11 49 60	
8	296	44.4	03.5	10	44.3	46.5	42	35	52	17	47	22 66	12 06 61	
9	311	44.5	02.5	25	07.4	50.5	40	30	17 56	20	48	2 07 66	21 62	
10	326	44.6	01.6	39	30.5	54.4	39	20	18 03	26	51	1 42 64	12 47 62	
11	341	44.7	-9 00.7	53	53.5	-25 58.1	37	10 N	18 10	18 31	18 56	1 21 63	13 09 62	
12	356	44.8	-8 59.7	68	16.4	-26 01.6	35	0	18 16	18 37	19 02	1 01 62	13 30 63	
13	11	44.9	58.8	82	39.3	04.9	33	10 S	23	44	09	0 41 61	13 51 63	
14	26	45.0	57.9	97	02.2	08.0	31	20	30	18 52	18	0 20 59	14 13 63	
15	41	45.1	56.9	111	25.0	11.0	30	30	38	19 02	31	** ** *	39 63	
16	56	45.2	56.0	125	47.8	13.8	28	35	42	08	39	** ** *	14 54 63	
17	71	45.3	-8 55.1	140	10.5	-26 16.4	26	40	18 48	19 15	19 49	** ** *	15 11 64	
18	86	45.4	-8 54.1	154	33.2	-26 18.8	24	45	18 54	19 24	20 01	23 58 66	15 33 63	
19	101	45.5	53.2	168	55.9	21.0	22	50	19 01	35	16	31 66	15 59 64	
20	116	45.6	52.3	183	18.5	23.1	21	52	05	40	24	18 66	16 12 64	
21	131	45.7	51.3	197	41.1	24.9	18	54	09	46	33	23 03 66	27 64	
22	146	45.8	50.4	212	03.6	26.6	17	56	13	19 52	43	22 45 67	16 45 64	
23	161	45.9	49.5	226	26.1	28.1	15	58	17	20 00	20 54	22 24 67	17 06 64	
24	176	46.0	-8 48.5	240	48.6	-26 29.4	13	60 S	19 23	20 08	21 08	21 56 68	17 33 64	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 38 ^m 4		Mag: -4.8 PMG: 9 ^h 14 ^m		Mag: +1.3 PMG: 9 ^h 21 ^m		Mag: -2.0 PMG: 12 ^h 37 ^m		Mag: +0.8 PMG: 11 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	154	50.2	221 21.1	-16 57.5	219 45.7	-22 14.1	170 13.5	-7 37.0	193 47.0	-16 10.0
1	169	52.7	236 21.6	57.5	234 46.2	13.8	185 15.4	36.8	208 49.2	09.9
2	184	55.2	251 22.1	57.5	249 46.6	13.5	200 17.3	36.6	223 51.3	09.8
3	199	57.6	266 22.6	57.5	264 47.1	13.2	215 19.2	36.3	238 53.5	09.7
4	215	00.1	281 23.1	57.5	279 47.6	13.0	230 21.1	36.1	253 55.7	09.6
5	230	02.6	296 23.6	-16 57.4	294 48.1	-22 12.7	245 23.0	-7 35.9	268 57.9	-16 09.6
6	245	05.0	311 24.1	-16 57.4	309 48.6	-22 12.4	260 24.9	-7 35.6	284 00.0	-16 09.5
7	260	07.5	326 24.5	57.4	324 49.1	12.1	275 26.8	35.4	299 02.2	09.4
8	275	09.9	341 25.0	57.4	339 49.5	11.8	290 28.7	35.2	314 04.4	09.3
9	290	12.4	356 25.5	57.3	354 50.0	11.5	305 30.6	34.9	329 06.6	09.2
10	305	14.9	11 26.0	57.3	9 50.5	11.3	320 32.5	34.7	344 08.8	09.1
11	320	17.3	26 26.5	-16 57.3	24 51.0	-22 11.0	335 34.4	-7 34.5	359 10.9	-16 09.0
12	335	19.8	41 27.0	-16 57.3	39 51.5	-22 10.7	350 36.3	-7 34.3	14 13.1	-16 08.9
13	350	22.3	56 27.5	57.2	54 51.9	10.4	5 38.2	34.0	29 15.3	08.9
14	5	24.7	71 27.9	57.2	69 52.4	10.1	20 40.1	33.8	44 17.5	08.8
15	20	27.2	86 28.4	57.2	84 52.9	09.8	35 42.1	33.6	59 19.6	08.7
16	35	29.7	101 28.9	57.2	99 53.4	09.5	50 44.0	33.3	74 21.8	08.6
17	50	32.1	116 29.4	-16 57.1	114 53.9	-22 09.2	65 45.9	-7 33.1	89 24.0	-16 08.5
18	65	34.6	131 29.8	-16 57.1	129 54.4	-22 09.0	80 47.8	-7 32.9	104 26.2	-16 08.4
19	80	37.1	146 30.3	57.1	144 54.8	08.7	95 49.7	32.6	119 28.3	08.3
20	95	39.5	161 30.8	57.0	159 55.3	08.4	110 51.6	32.4	134 30.5	08.3
21	110	42.0	176 31.3	57.0	174 55.8	08.1	125 53.5	32.2	149 32.7	08.2
22	125	44.4	191 31.7	57.0	189 56.3	07.8	140 55.4	32.0	164 34.9	08.1
23	140	46.9	206 32.2	56.9	204 56.8	07.5	155 57.3	31.7	179 37.0	08.0
24	155	49.4	221 32.6	-16 56.9	219 57.3	-22 07.2	170 59.2	-7 31.5	194 39.2	-16 07.9
Dif	—	+5	0	+5	+3	+19	+2	+22	+1	+1

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 12 ^h 12 ^m 8			Edad: 24 ^d 8 PHE { 4 ^h : 59/6 12 ^h : 59/6 20 ^h : 59/6 SD: 16:2 PMG: 8 ^h 18 ^m R°: 62 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	176	46.0	-8	48.5	240	48.6	-26	29.4	11	60 N	5 37	6 25	7 07	6 15	47	10 20	85	
1	191	46.1		47.6	255	11.1	35	30.5	10	58	38	23	7 03	5 46	50	10 50	80	
2	206	46.2		46.7	269	33.6	35	31.5	7	56	39	22	6 59	23	53	11 12	77	
3	221	46.3		45.7	283	56.0	34	32.2	6	54	39	20	56	5 05	54	30	76	
4	236	46.5		44.8	298	18.4	34	32.8	4	52	39	18	53	4 49	56	11 46	74	
5	251	46.6	-8	43.9	312	40.8	34	-26	33.2	5	50	40	6 17	6 50	4 36	56	12 00	72
6	266	46.7	-8	42.9	327	03.2	34	-26	33.4	2	45	40	6 14	6 43	4 08	58	12 27	71
7	281	46.8		42.0	341	25.6	34	33.4	0	40	39	11	38	3 46	59	12 49	69	
8	296	46.9		41.1	355	48.0	34	33.2	2	35	39	08	33	28	60	13 07	68	
9	311	47.0		40.1	10	10.3	33	32.8	4	30	37	05	29	3 13	60	23	66	
10	326	47.1		39.2	24	32.7	34	32.3	5	20	34	6 00	22	2 46	62	13 49	65	
11	341	47.2	-8	38.3	38	55.1	34	-26	31.5	8	10 N	5 30	5 54	6 16	2 24	62	14 11	64
12	356	47.3	-8	37.3	53	17.5	34	-26	30.6	9	0	5 24	5 49	6 10	2 03	62	14 33	62
13	11	47.4		36.4	67	39.8	33	29.5	11	10 S	17	42	6 03	1 42	63	14 54	60	
14	26	47.5		35.5	82	02.2	34	28.2	13	20	5 08	34	5 56	1 19	64	15 16	59	
15	41	47.6		34.5	96	24.6	34	26.7	15	30	4 55	24	49	0 53	64	42	57	
16	56	47.7		33.6	110	47.0	34	25.0	17	35	47	18	44	37	65	15 57	56	
17	71	47.8	-8	32.6	125	09.5	35	-26	23.2	18	40	4 38	5 11	5 39	0 20	65	16 15	54
18	86	47.9	-8	31.7	139	31.9	34	-26	21.1	21	45	4 26	5 02	5 33	*** ** *	16	36	52
19	101	48.0		30.8	153	54.4	35	18.9	22	50	10	4 52	25	25	*** ** *	17	03	49
20	116	48.1		29.8	168	16.9	35	16.5	24	52	4 03	46	22	22	*** ** *	16	48	
21	131	48.2		28.9	182	39.4	35	13.9	26	54	3 54	41	18	18	*** ** *	31	46	
22	146	48.3		27.9	197	01.9	35	11.1	28	56	44	34	14	23	52	85	17 49	43
23	161	48.4		27.0	211	24.5	36	08.1	30	58	33	27	09	31	89	18 10	39	
24	176	48.6	-8	26.1	225	47.1	36	-26	04.9	32	60 S	3 19	4 19	5 04	23 04	95	18 37	33

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 13 ^h 34 ^m 5		Mag: -4.8 PMG: 9 ^h 14 ^m		Mag: +1.3 PMG: 9 ^h 20 ^m		Mag: -2.0 PMG: 12 ^h 34 ^m		Mag: +0.8 PMG: 11 ^h 00 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	155	49.4	221	32.6	-16	56.9	219	57.3	-22	07.2	170	59.2	-7	31.5	194	39.2	-16	07.9
1	170	51.8	236	33.1		56.9	234	57.7		06.9	186	01.1		31.3	209	41.4		07.8
2	185	54.3	251	33.6		56.8	249	58.2		06.6	201	03.0		31.0	224	43.6		07.7
3	200	56.8	266	34.0		56.8	264	58.7		06.3	216	04.9		30.8	239	45.7		07.7
4	215	59.2	281	34.5		56.8	279	59.2		06.0	231	06.8		30.6	254	47.9		07.6
5	231	01.7	296	34.9	-16	56.7	294	59.7	-22	05.7	246	08.7	-7	30.3	269	50.1	-16	07.5
6	246	04.2	311	35.4	-16	56.7	310	00.2	-22	05.5	261	10.6	-7	30.1	284	52.3	-16	07.4
7	261	06.6	326	35.8		56.7	325	00.6		05.2	276	12.5		29.9	299	54.5		07.3
8	276	09.1	341	36.3		56.6	340	01.1		04.9	291	14.4		29.6	314	56.6		07.2
9	291	11.6	356	36.7		56.6	355	01.6		04.6	306	16.3		29.4	329	58.8		07.1
10	306	14.0	11	37.2		56.5	10	02.1		04.3	321	18.2		29.2	345	01.0		07.1
11	321	16.5	26	37.6	-16	56.5	25	02.6	-22	04.0	336	20.1	-7	29.0	0	03.2	-16	07.0
12	336	18.9	41	38.1	-16	56.5	40	03.1	-22	03.7	351	22.0	-7	28.7	15	05.3	-16	06.9
13	351	21.4	56	38.5		56.4	55	03.6		03.4	6	23.9		28.5	30	07.5		06.8
14	6	23.9	71	39.0		56.4	70	04.0		03.1	21	25.8		28.3	45	09.7		06.7
15	21	26.3	86	39.4		56.3	85	04.5		02.8	36	27.7		28.0	60	11.9		06.6
16	36	28.8	101	39.8		56.3	100	05.0		02.5	51	29.6		27.8	75	14.0		06.5
17	51	31.3	116	40.3	-16	56.2	115	05.5	-22	02.2	66	31.5	-7	27.6	90	16.2	-16	06.5
18	66	33.7	131	40.7	-16	56.2	130	06.0	-22	01.9	81	33.4	-7	27.3	105	18.4	-16	06.4
19	81	36.2	146	41.1		56.1	145	06.5		01.6	96	35.3		27.1	120	20.6		06.3
20	96	38.7	161	41.6		56.1	160	07.0		01.3	111	37.2		26.9	135	22.8		06.2
21	111	41.1	176	42.0		56.1	175	07.4		01.0	126	39.1		26.6	150	24.9		06.1
22	126	43.6	191	42.4		56.0	190	07.9		00.7	141	41.0		26.4	165	27.1		06.0
23	141	46.1	206	42.8		56.0	205	08.4		00.4	156	42.9		26.2	180	29.3		05.9
24	156	48.5	221	43.3	-16	55.9	220	08.9	-22	00.1	171	44.8	-7	26.0	195	31.5	-16	05.9
Dif	—		+4		0		+5		+3		+19		+2		+22		+	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 12 ^h 12 ^m 7			Edad: 25 ^d 8 PHE { 4 ^h : 59'6 12 ^h : 59'6 20 ^h : 59'6 PMG: 9 ^h 20 ^m R°: 60 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	176	48.6	-8 26.1	225	47.1	-26 04.9	60 N	17 22	18 04	18 52	7 02 22	11 45 102		
1	191	48.7	25.1	240	09.8	-26 01.6	58	26	06	51	6 36 29	12 10 95		
2	206	48.8	24.2	254	32.4	-25 58.1	56	30	07	50	6 16 34	29 91		
3	221	48.9	23.2	268	55.1	54.4	54	33	09	50	5 59 37	12 46 87		
4	236	49.0	22.3	283	17.9	50.5	52	36	10	49	45 40	13 00 85		
5	251	49.1	-8 21.4	297	40.7	-25 46.4	50	17 39	18 11	18 49	5 32 42	13 12 83		
6	266	49.2	-8 20.4	312	03.5	-25 42.2	45	17 44	18 14	18 48	5 06 46	13 38 77		
7	281	49.3	19.5	326	26.4	37.8	40	49	17	48	4 45 49	13 58 74		
8	296	49.4	18.5	340	49.4	33.2	35	54	19	49	28 51	14 15 71		
9	311	49.5	17.6	355	12.4	28.4	30	17 58	22	49	4 13 53	29 70		
10	326	49.6	16.7	9	35.4	23.4	20	18 04	26	52	3 48 56	14 54 65		
11	341	49.7	-8 15.7	23	58.5	-25 18.3	10 N	18 10	18 31	18 56	3 26 58	15 15 62		
12	356	49.9	-8 14.8	38	21.7	-25 13.0	0	18 16	18 37	19 01	3 05 61	15 35 59		
13	11	50.0	13.8	52	44.9	07.5	10 S	22	43	08	2 45 63	15 54 57		
14	26	50.1	12.9	67	08.2	-25 01.9	20	28	18 50	17	2 23 65	16 15 53		
15	41	50.2	12.0	81	31.5	-24 56.1	30	35	19 00	28	1 57 69	39 49		
16	56	50.3	11.0	95	54.9	50.1	35	40	06	36	42 70	16 53 47		
17	71	50.4	-8 10.1	110	18.4	-24 43.9	40	18 45	19 12	19 45	1 25 72	17 09 44		
18	86	50.5	-8 09.1	124	42.0	-24 37.6	45	18 50	19 21	19 57	1 04 74	17 28 41		
19	101	50.6	08.2	139	05.6	31.1	50	18 57	31	20 12	0 37 78	17 52 36		
20	116	50.7	07.2	153	29.3	24.5	52	19 00	36	19	24 80	18 04 33		
21	131	50.9	06.3	167	53.0	17.6	54	04	41	27	0 10 82	17 30		
22	146	51.0	05.3	182	16.9	10.7	56	08	47	36	*** ** *	32 27		
23	161	51.1	04.4	196	40.8	-24 03.5	58	12	19 54	20 47	*** ** *	18 49 23		
24	176	51.2	-8 03.5	211	04.8	-23 56.2	60 S	19 17	20 02	21 00	*** ** *	19 10 17		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 30 ^m 5		Mag: -4.8 PMG: 9 ^h 13 ^m			Mag: +1.3 PMG: 9 ^h 19 ^m			Mag: -2.0 PMG: 12 ^h 31 ^m			Mag: +0.8 PMG: 10 ^h 56 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	156	48.5	221	43.3	-16 55.9	220	08.9	-22 00.1	171	44.8	-7 26.0	195	31.5	-16 05.9
1	171	51.0	236	43.7	55.9	235	09.4	-21 59.8	186	46.7	25.7	210	33.6	05.8
2	186	53.4	251	44.1	55.8	250	09.9	59.5	201	48.6	25.5	225	35.8	05.7
3	201	55.9	266	44.5	55.8	265	10.4	59.2	216	50.5	25.3	240	38.0	05.6
4	216	58.4	281	45.0	55.7	280	10.8	58.9	231	52.4	25.0	255	40.2	05.5
5	232	00.8	296	45.4	-16 55.7	295	11.3	-21 58.6	246	54.3	-7 24.8	270	42.4	-16 05.4
6	247	03.3	311	45.8	-16 55.6	310	11.8	-21 58.3	261	56.2	-7 24.6	285	44.5	-16 05.3
7	262	05.8	326	46.2	55.6	325	12.3	58.0	276	58.1	24.3	300	46.7	05.3
8	277	08.2	341	46.6	55.5	340	12.8	57.7	292	00.0	24.1	315	48.9	05.2
9	292	10.7	356	47.0	55.4	355	13.3	57.4	307	01.9	23.9	330	51.1	05.1
10	307	13.2	11	47.4	55.4	10	13.8	57.1	322	03.8	23.6	345	53.2	05.0
11	322	15.6	26	47.8	-16 55.3	25	14.2	-21 56.8	337	05.7	-7 23.4	0	55.4	-16 04.9
12	337	18.1	41	48.2	-16 55.3	40	14.7	-21 56.5	352	07.6	-7 23.2	15	57.6	-16 04.8
13	352	20.6	56	48.6	55.2	55	15.2	56.1	7	09.5	22.9	30	59.8	04.7
14	7	23.0	71	49.0	55.2	70	15.7	55.8	22	11.4	22.7	46	02.0	04.7
15	22	25.5	86	49.4	55.1	85	16.2	55.5	37	13.3	22.5	61	04.1	04.6
16	37	27.9	101	49.8	55.0	100	16.7	55.2	52	15.2	22.3	76	06.3	04.5
17	52	30.4	116	50.2	-16 55.0	115	17.2	-21 54.9	67	17.1	-7 22.0	91	08.5	-16 04.4
18	67	32.9	131	50.6	-16 54.9	130	17.7	-21 54.6	82	19.0	-7 21.8	106	10.7	-16 04.3
19	82	35.3	146	51.0	54.9	145	18.1	54.3	97	20.9	21.6	121	12.8	04.2
20	97	37.8	161	51.4	54.8	160	18.6	54.0	112	22.8	21.3	136	15.0	04.1
21	112	40.3	176	51.8	54.7	175	19.1	53.7	127	24.7	21.1	151	17.2	04.1
22	127	42.7	191	52.2	54.7	190	19.6	53.4	142	26.6	20.9	166	19.4	04.0
23	142	45.2	206	52.6	54.6	205	20.1	53.1	157	28.5	20.6	181	21.6	03.9
24	157	47.7	221	53.0	-16 54.6	220	20.6	-21 52.8	172	30.4	-7 20.4	196	23.7	-16 03.8
Dif	—		+4	+1		+5	+3		+19	+2		+22	+1	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1			Edad: 26 ^d 8	PHE {	4 ^h : 59'5 12 ^h : 59'4 20 ^h : 59'3	R°: 56 ^m										
	PMG: 12 ^h 12 ^m 5							SD: 16'2		PMG: 10 ^h 20 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	176	51.2	-8	03.5	211	04.8	-23	56.2	60 N	5 32	6 20	7 02	7 24	11	13 27	106	
1	191	51.3		02.5	225	28.9	51	48.8	58	33	18	6 58	7 05	17	13 45	99	
2	206	51.4		01.6	239	53.0	51	41.1	56	34	17	54	6 50	21	14 00	95	
3	221	51.5	-8	00.6	254	17.3	53	33.4	54	35	15	51	36	25	13	91	
4	236	51.6	-7	59.7	268	41.6	53	25.4	52	35	14	48	25	28	25	87	
5	251	51.8	-7	58.7	283	06.0	54	-23	50	5 36	6 13	6 46	6 14	31	14 35	84	
6	266	51.9	-7	57.8	297	30.5	55	-23	45	5 36	6 10	6 40	5 52	36	14 55	79	
7	281	52.0		56.8	311	55.1	56	-23	40	37	08	35	34	40	15	12	75
8	296	52.1		55.9	326	19.7	56	-22	35	36	05	31	19	43	26	72	
9	311	52.2		55.0	340	44.5	58	43.5	30	35	6 03	27	5 06	46	39	68	
10	326	52.3		54.0	355	09.3	58	34.7	20	33	5 58	21	4 44	50	15 59	64	
11	341	52.4	-7	53.1	9	34.3	60	-22	10 N	5 29	5 54	6 15	4 24	54	16 17	60	
12	356	52.6	-7	52.1	23	59.3	60	-22	0	5 24	5 48	6 09	4 06	57	16 34	55	
13	11	52.7		51.2	38	24.4	61	-22	10 S	18	42	6 03	3 48	61	16 51	51	
14	26	52.8		50.2	52	49.6	62	-21	20	5 09	35	5 57	28	65	17 08	47	
15	41	52.9		49.3	67	14.9	63	48.5	30	4 57	26	50	3 06	69	28	43	
16	56	53.0		48.3	81	40.3	64	38.8	35	50	20	46	2 52	72	40	39	
17	71	53.1	-7	47.4	96	05.8	65	-21	40	4 40	5 13	5 41	2 37	75	17 53	36	
18	86	53.3	-7	46.4	110	31.4	66	-21	45	4 29	5 05	5 36	2 18	79	18 09	32	
19	101	53.4		45.5	124	57.1	67	-21	50	14	4 55	29	1 55	84	28	27	
20	116	53.5		44.5	139	22.9	68	-20	52	4 07	50	26	44	87	37	24	
21	131	53.6		43.6	153	48.8	69	48.6	54	3 59	45	22	32	89	47	22	
22	146	53.7		42.6	168	14.8	70	38.1	56	50	39	18	17	94	18 59	18	
23	161	53.8		41.7	182	40.8	70	27.6	58	39	32	14	1 00	98	19 12	14	
24	176	54.0	-7	40.7	197	07.0	72	-20	60 S	3 26	4 25	5 09	0 39	105	19 27	9	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 13 ^h 26 ^m 6		Mag: -4.7 PMG: 9 ^h 12 ^m		Mag: +1.3 PMG: 9 ^h 18 ^m		Mag: -2.0 PMG: 12 ^h 28 ^m		Mag: +0.8 PMG: 10 ^h 53 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	157	47.7	221	53.0	-16	54.6	220	20.6	-21	52.8
1	172	50.1	236	53.4		54.5	235	21.1		52.4
2	187	52.6	251	53.7		54.4	250	21.6		52.1
3	202	55.1	266	54.1		54.4	265	22.0		51.8
4	217	57.5	281	54.5		54.3	280	22.5		51.5
5	233	00.0	296	54.9	-16	54.2	295	23.0	-21	51.2
6	248	02.4	311	55.3	-16	54.2	310	23.5	-21	50.9
7	263	04.9	326	55.6		54.1	325	24.0		50.6
8	278	07.4	341	56.0		54.0	340	24.5		50.3
9	293	09.8	356	56.4		53.9	355	25.0		49.9
10	308	12.3	11	56.8		53.9	10	25.5		49.6
11	323	14.8	26	57.1	-16	53.8	25	25.9	-21	49.3
12	338	17.2	41	57.5	-16	53.7	40	26.4	-21	49.0
13	353	19.7	56	57.9		53.7	55	26.9		48.7
14	8	22.2	71	58.2		53.6	70	27.4		48.4
15	23	24.6	86	58.6		53.5	85	27.9		48.1
16	38	27.1	101	59.0		53.4	100	28.4		47.7
17	53	29.5	116	59.3	-16	53.4	115	28.9	-21	47.4
18	68	32.0	131	59.7	-16	53.3	130	29.4	-21	47.1
19	83	34.5	147	00.0		53.2	145	29.9		46.8
20	98	36.9	162	00.4		53.1	160	30.3		46.5
21	113	39.4	177	00.7		53.1	175	30.8		46.2
22	128	41.9	192	01.1		53.0	190	31.3		45.8
23	143	44.3	207	01.5		52.9	205	31.8		45.5
24	158	46.8	222	01.8	-16	52.8	220	32.3	-21	45.2
Dif	—		+4		+1		+5		+3	

UT	SOL			● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 27 ^d 8 PHE { 4 ^h : 59 ^m /2 12 ^h : 59 ^m /1 20 ^h : 58 ^m /9 R°: 53 ^m											
	PMG: 12 ^h 12 ^m 3			SD: 16 ^h 1 PMG: 11 ^h 16 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	176	54.0	-7 40.7	197	07.0	-20 16.9	73	60 N	17 27	18 09	18 57	7 35	6	15 13	100
1	191	54.1	39.8	211	33.3	-20 06.1	108	58	31	10	56	22	11	24	97
2	206	54.2	38.8	225	59.7	-19 55.2	109	56	34	11	54	11	15	35	92
3	221	54.3	37.9	240	26.2	44.1	111	54	37	12	53	7 01	18	44	88
4	236	54.4	36.9	254	52.7	33.0	111	52	40	13	53	6 53	20	52	85
5	251	54.6	-7 36.0	269	19.4	-19 21.7	113	50	17 42	18 14	18 52	6 45	23	15 59	83
6	266	54.7	-7 35.0	283	46.2	-19 10.3	114	45	17 47	18 17	18 51	6 28	28	16 14	78
7	281	54.8	34.1	298	13.1	-18 58.8	115	40	52	19	50	14	33	27	73
8	296	54.9	33.1	312	40.0	47.2	116	35	56	21	50	6 02	36	38	69
9	311	55.0	32.2	327	07.1	35.5	117	30	17 59	23	51	5 52	39	16 47	66
10	326	55.2	31.2	341	34.3	23.7	118	20	18 05	27	53	34	44	17 03	60
11	341	55.3	-7 30.3	356	01.6	-18 11.8	119	10 N	18 10	18 32	18 56	5 18	49	17 17	55
12	356	55.4	-7 29.3	10	28.9	-17 59.8	120	0	18 16	18 36	19 01	5 03	54	17 29	51
13	11	55.5	28.4	24	56.4	47.7	121	10 S	21	42	07	4 49	57	42	47
14	26	55.6	27.4	39	24.0	35.5	122	20	27	49	15	33	62	17 55	43
15	41	55.8	26.5	53	51.6	23.2	123	30	33	18 58	26	15	67	18 11	36
16	56	55.9	25.5	68	19.4	-17 10.8	124	35	37	19 03	33	4 04	70	19	34
17	71	56.0	-7 24.6	82	47.3	-16 58.3	125	40	18 42	19 09	19 42	3 52	73	18 29	31
18	86	56.1	-7 23.6	97	15.2	-16 45.8	125	45	18 47	19 17	19 53	3 37	78	18 41	26
19	101	56.3	22.7	111	43.3	33.1	127	50	53	26	20 07	19	84	18 55	21
20	116	56.4	21.7	126	11.5	20.4	127	52	56	31	14	11	86	19 01	19
21	131	56.5	20.8	140	39.7	-16 07.5	129	54	18 59	36	21	3 01	90	09	15
22	146	56.6	19.8	155	08.1	-15 54.6	129	56	19 03	42	30	2 51	93	17	12
23	161	56.7	18.9	169	36.5	41.6	130	58	07	48	40	38	98	26	9
24	176	56.9	-7 17.9	184	05.1	-15 28.6	130	60 S	19 11	19 55	20 52	2 24	103	19 36	5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 13 ^h 22 ^m 7		Mag: -4.7 PMG: 9 ^h 12 ^m		Mag: +1.3 PMG: 9 ^h 18 ^m		Mag: -2.0 PMG: 12 ^h 25 ^m		Mag: +0.8 PMG: 10 ^h 49 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	158	46.8	222	01.8	-16	52.8	220	32.3	-21	45.2	173	16.1	-7	14.8	197	16.0	-16	01.8
1	173	49.3	237	02.2		52.7	235	32.8		44.9	188	18.0		14.6	212	18.2		01.7
2	188	51.7	252	02.5		52.7	250	33.3		44.6	203	19.9		14.4	227	20.4		01.6
3	203	54.2	267	02.8		52.6	265	33.8		44.2	218	21.8		14.2	242	22.6		01.5
4	218	56.7	282	03.2		52.5	280	34.3		43.9	233	23.7		13.9	257	24.8		01.4
5	233	59.1	297	03.5	-16	52.4	295	34.8	-21	43.6	248	25.6	-7	13.7	272	26.9	-16	01.3
6	249	01.6	312	03.9	-16	52.3	310	35.3	-21	43.3	263	27.5	-7	13.5	287	29.1	-16	01.2
7	264	04.0	327	04.2		52.2	325	35.7		42.9	278	29.4		13.2	302	31.3		01.2
8	279	06.5	342	04.6		52.1	340	36.2		42.6	293	31.3		13.0	317	33.5		01.1
9	294	09.0	357	04.9		52.1	355	36.7		42.3	308	33.2		12.8	332	35.7		01.0
10	309	11.4	12	05.2		52.0	10	37.2		42.0	323	35.1		12.5	347	37.8		00.9
11	324	13.9	27	05.6	-16	51.9	25	37.7	-21	41.7	338	37.0	-7	12.3	2	40.0	-16	00.8
12	339	16.4	42	05.9	-16	51.8	40	38.2	-21	41.3	353	38.9	-7	12.1	17	42.2	-16	00.7
13	354	18.8	57	06.2		51.7	55	38.7		41.0	8	40.8		11.8	32	44.4		00.6
14	9	21.3	72	06.6		51.6	70	39.2		40.7	23	42.7		11.6	47	46.6		00.6
15	24	23.8	87	06.9		51.5	85	39.7		40.4	38	44.6		11.4	62	48.7		00.5
16	39	26.2	102	07.2		51.4	100	40.2		40.0	53	46.5		11.1	77	50.9		00.4
17	54	28.7	117	07.6	-16	51.3	115	40.7	-21	39.7	68	48.4	-7	10.9	92	53.1	-16	00.3
18	69	31.2	132	07.9	-16	51.3	130	41.1	-21	39.4	83	50.3	-7	10.7	107	55.3	-16	00.2
19	84	33.6	147	08.2		51.2	145	41.6		39.1	98	52.2		10.4	122	57.5	-16	00.1
20	99	36.1	162	08.5		51.1	160	42.1		38.7	113	54.1		10.2	137	59.6	-16	00.0
21	114	38.5	177	08.8		51.0	175	42.6		38.4	128	56.0		10.0	153	01.8	-16	00.0
22	129	41.0	192	09.2		50.9	190	43.1		38.1	143	57.9		09.8	168	04.0	-15	59.9
23	144	43.5	207	09.5		50.8	205	43.6		37.7	158	59.8		09.5	183	06.2		59.8
24	159	45.9	222	09.8	-16	50.7	220	44.1	-21	37.4	174	01.7	-7	09.3	198	08.4	-15	59.7
Dif	—		+3		+1		+5		+3		+19		+2		+22		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 12 ^m 1			Edad: 28 ^d 8 PHE { SD: 16'0 PMG: 12 ^h 09 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	176	56.9	-7	17.9	184	05.1	-15 28.6	60 N	5 26	6 14	6 56	7 41 4	16 53 96			
1	191	57.0		16.9	198	33.7	15.4 ¹³²	58	28	13	52	33 8	17 01 91			
2	206	57.1		16.0	213	02.4	97 -15 02.2 ¹³²	56	29	12	49	26 11	07 88			
3	221	57.2		15.0	227	31.2	98 -14 48.9 ¹³³	54	30	11	46	19 14	12 85			
4	236	57.4		14.1	242	00.2 ¹⁰⁰	100 35.5 ¹³⁴	52	31	10	44	13 17	17 83			
5	251	57.5	-7	13.1	256	29.2 ¹⁰⁰	-14 22.1 ¹³⁴	50	5 32	6 09	6 41	7 08 19	17 22 80			
6	266	57.6	-7	12.2	270	58.3 ¹⁰¹	-14 08.5 ¹³⁶	45	5 33	6 07	6 36	6 56 24	17 32 74			
7	281	57.7		11.2	285	27.5 ¹⁰²	-13 55.0 ¹³⁵	40	34	05	32	47 28	40 70			
8	296	57.9		10.3	299	56.7 ¹⁰²	41.3 ¹³⁷	35	34	03	28	38 32	47 66			
9	311	58.0		09.3	314	26.1 ¹⁰⁴	27.6 ¹³⁷	30	33	6 01	25	31 35	17 53 63			
10	326	58.1		08.3	328	55.6 ¹⁰⁵	-13 13.8 ¹³⁸	20	31	5 57	19	18 40	18 03 57			
11	341	58.2	-7	07.4	343	25.1 ¹⁰⁵	-13 00.0 ¹³⁸	10 N	5 28	5 53	6 14	6 07 45	18 12 52			
12	356	58.4	-7	06.4	357	54.8 ¹⁰⁷	-12 46.1 ¹³⁹	0	5 24	5 48	6 09	5 57 49	18 20 48			
13	11	58.5		05.5	12	24.5 ¹⁰⁷	32.2 ¹³⁹	10 S	18	42	6 04	46 54	29 43			
14	26	58.6		04.5	26	54.3 ¹⁰⁸	18.2 ¹⁴⁰	20	5 10	36	5 58	35 58	38 38			
15	41	58.7		03.6	41	24.2 ¹⁰⁹	-12 04.1 ¹⁴¹	30	4 59	27	52	22 64	47 34			
16	56	58.9		02.6	55	54.1 ¹⁰⁹	-11 50.0 ¹⁴¹	35	52	22	48	14 68	18 53 30			
17	71	59.0	-7	01.7	70	24.2 ¹¹¹	-11 35.8 ¹⁴²	40	4 43	5 16	5 43	5 05 72	19 00 26			
18	86	59.1	-7	00.7	84	54.3 ¹¹¹	-11 21.6 ¹⁴²	45	4 32	5 08	5 38	4 55 76	19 07 22			
19	101	59.2	-6	59.7	99	24.6 ¹¹³	-11 07.4 ¹⁴²	50	18	4 59	32	43 81	16 17			
20	116	59.4		58.8	113	54.9 ¹¹³	-10 53.1 ¹⁴³	52	11	54	29	37 84	20 15			
21	131	59.5		57.8	128	25.2 ¹¹³	38.8 ¹⁴³	54	4 04	49	26	31 86	24 13			
22	146	59.6		56.9	142	55.7 ¹¹⁵	24.4 ¹⁴⁴	56	3 55	44	23	24 90	29 10			
23	161	59.8		55.9	157	26.2 ¹¹⁵	-10 09.9 ¹⁴⁵	58	45	37	19	16 93	35 7			
24	176	59.9	-6	55.0	171	56.8 ¹¹⁶	-9 55.5 ¹⁴⁴	60 S	3 33	4 30	5 15	4 07 97	19 41 3			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 13 ^h 18 ^m 8		Mag: -4.7 PMG: 9 ^h 11 ^m			Mag: +1.2 PMG: 9 ^h 17 ^m			Mag: -2.0 PMG: 12 ^h 22 ^m			Mag: +0.8 PMG: 10 ^h 46 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	159	45.9	222	09.8	-16	50.7	220	44.1	-21	37.4	174	01.7	-7 09.3	198 08.4	-15 59.7	
1	174	48.4	237	10.1		50.6	235	44.6		37.1	189	03.6	09.1	213 10.6	59.6	
2	189	50.9	252	10.4		50.5	250	45.1		36.8	204	05.5	08.8	228 12.7	59.5	
3	204	53.3	267	10.7		50.4	265	45.6		36.4	219	07.4	08.6	243 14.9	59.5	
4	219	55.8	282	11.1		50.3	280	46.1		36.1	234	09.3	08.4	258 17.1	59.4	
5	234	58.3	297	11.4	-16	50.2	295	46.6	-21	35.8	249	11.2	-7 08.1	273 19.3	-15 59.3	
6	250	00.7	312	11.7	-16	50.1	310	47.1	-21	35.4	264	13.1	-7 07.9	288 21.5	-15 59.2	
7	265	03.2	327	12.0		50.0	325	47.5		35.1	279	15.0	07.7	303 23.6	59.1	
8	280	05.6	342	12.3		49.9	340	48.0		34.8	294	16.9	07.4	318 25.8	59.0	
9	295	08.1	357	12.6		49.8	355	48.5		34.4	309	18.8	07.2	333 28.0	58.9	
10	310	10.6	12	12.9		49.7	10	49.0		34.1	324	20.7	07.0	348 30.2	58.9	
11	325	13.0	27	13.2	-16	49.6	25	49.5	-21	33.8	339	22.6	-7 06.7	3 32.4	-15 58.8	
12	340	15.5	42	13.5	-16	49.5	40	50.0	-21	33.4	354	24.5	-7 06.5	18 34.5	-15 58.7	
13	355	18.0	57	13.8		49.4	55	50.5		33.1	9	26.4	06.3	33 36.7	58.6	
14	10	20.4	72	14.1		49.3	70	51.0		32.8	24	28.3	06.0	48 38.9	58.5	
15	25	22.9	87	14.4		49.2	85	51.5		32.4	39	30.2	05.8	63 41.1	58.4	
16	40	25.4	102	14.7		49.0	100	52.0		32.1	54	32.1	05.6	78 43.3	58.4	
17	55	27.8	117	15.0	-16	48.9	115	52.5	-21	31.8	69	34.0	-7 05.3	93 45.5	-15 58.3	
18	70	30.3	132	15.3	-16	48.8	130	53.0	-21	31.4	84	35.9	-7 05.1	108 47.6	-15 58.2	
19	85	32.8	147	15.6		48.7	145	53.5		31.1	99	37.8	04.9	123 49.8	58.1	
20	100	35.2	162	15.9		48.6	160	54.0		30.8	114	39.7	04.7	138 52.0	58.0	
21	115	37.7	177	16.1		48.5	175	54.5		30.4	129	41.6	04.4	153 54.2	57.9	
22	130	40.1	192	16.4		48.4	190	55.0		30.1	144	43.5	04.2	168 56.4	57.8	
23	145	42.6	207	16.7		48.3	205	55.5		29.7	159	45.4	04.0	183 58.6	57.8	
24	160	45.1	222	17.0	-16	48.2	220	55.9	-21	29.4	174	47.3	-7 03.7	199 00.7	-15 57.7	
Dif	—		+3		+1		+5		+3		+19		+2		+22	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1		Edad: 29 ^d 8 PHE { 4 ^h : 58/2 12 ^h : 58/0 20 ^h : 57/8											
	PMG: 12 ^h 11 ^m 9		SD: 15/9 PMG: 12 ^h 57 ^m R°: 46 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	176	59.9	-6 55.0	171	56.8	-9 55.5	60 N	17 32	18 14	19 02	7 45 3	18 29 91		
1	192	00.0		186	27.5 ¹¹⁷	41.0 ¹⁴⁵	58	35	15	19 00	41 5	32 88		
2	207	00.1	53.0	200	58.3 ¹¹⁸	26.4 ¹⁴⁶	56	38	16	18 59	37 8	35 84		
3	222	00.3	52.1	215	29.1 ¹¹⁸	-9 11.9 ¹⁴⁵	54	41	16	57	33 11	37 82		
4	237	00.4	51.1	230	00.0 ¹¹⁹	-8 57.3 ¹⁴⁶	52	43	17	56	30 14	40 78		
5	252	00.5	-6 50.2	244	31.0 ¹²⁰	-8 42.6 ¹⁴⁷	50	17 45	18 18	18 55	7 27 16	18 42 76		
6	267	00.7	-6 49.2	259	02.1 ¹²¹	-8 28.0 ¹⁴⁶	45	17 50	18 19	18 53	7 20 21	18 46 71		
7	282	00.8	48.2	273	33.2 ¹²¹	-8 13.3 ¹⁴⁷	40	54	21	52	15 25	50 67		
8	297	00.9	47.3	288	04.4 ¹²²	-7 58.6 ¹⁴⁷	35	17 57	23	52	10 28	53 63		
9	312	01.1	46.3	302	35.6 ¹²²	43.8 ¹⁴⁸	30	18 00	24	52	7 06 31	18 56 60		
10	327	01.2	45.4	317	07.0 ¹²⁴	29.0 ¹⁴⁸	20	06	28	53	6 58 38	19 00 55		
11	342	01.3	-6 44.4	331	38.3 ¹²³	-7 14.3 ¹⁴⁷	10 N	18 11	18 32	18 56	6 52 42	19 04 50		
12	357	01.4	-6 43.4	346	09.8 ¹²⁵	-6 59.4 ¹⁴⁹	0	18 15	18 36	19 00	6 46 46	19 08 46		
13	12	01.6	42.5	0	41.3 ¹²⁵	44.6 ¹⁴⁸	10 S	20	41	06	40 51	12 41		
14	27	01.7	41.5	15	12.9 ¹²⁶	29.8 ¹⁴⁸	20	25	47	13	33 56	16 36		
15	42	01.8	40.6	29	44.5 ¹²⁶	-6 14.9 ¹⁴⁹	30	31	18 55	24	26 61	21 30		
16	57	02.0	39.6	44	16.2 ¹²⁷	-6 00.0 ¹⁴⁹	35	35	19 00	31	22 64	23 28		
17	72	02.1	-6 38.6	58	48.0 ¹²⁸	-5 45.1 ¹⁴⁹	40	18 39	19 06	19 39	6 17 68	19 26 24		
18	87	02.2	-6 37.7	73	19.8 ¹²⁸	-5 30.2 ¹⁴⁹	45	18 43	19 13	19 49	6 11 73	19 29 21		
19	102	02.4	36.7	87	51.7 ¹²⁹	15.3 ¹⁴⁹	50	49	22	20 02	04 78	33 16		
20	117	02.5	35.8	102	23.6 ¹²⁹	-5 00.4 ¹⁴⁹	52	52	26	09	6 01 80	35 14		
21	132	02.6	34.8	116	55.6 ¹³⁰	-4 45.4 ¹⁵⁰	54	54	31	16	5 57 83	37 11		
22	147	02.8	33.8	131	27.7 ¹³¹	30.5 ¹⁴⁹	56	18 58	36	24	54 85	39 9		
23	162	02.9	32.9	145	59.8 ¹³¹	15.5 ¹⁵⁰	58	19 01	42	34	49 89	42 5		
24	177	03.0	-6 31.9	160	31.9 ¹³¹	-4 00.6 ¹⁴⁹	60 S	19 05	19 49	20 45	5 44 93	19 44 3		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 14 ^m 8		Mag: -4.7 PMG: 9 ^h 11 ^m		Mag: +1.2 PMG: 9 ^h 16 ^m		Mag: -2.0 PMG: 12 ^h 19 ^m		Mag: +0.8 PMG: 10 ^h 42 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	160	45.1	222	17.0	220	55.9	174	47.3	199	00.7				
1	175	47.5	237	17.3	235	56.4	189	49.2	214	02.9				
2	190	50.0	252	17.6	250	56.9	204	51.1	229	05.1				
3	205	52.5	267	17.9	265	57.4	219	53.0	244	07.3				
4	220	54.9	282	18.1	280	57.9	234	54.9	259	09.5				
5	235	57.4	297	18.4	295	58.4	249	56.8	274	11.6				
6	250	59.9	312	18.7	310	58.9	264	58.7	289	13.8				
7	266	02.3	327	19.0	325	59.4	280	00.6	304	16.0				
8	281	04.8	342	19.2	340	59.9	295	02.5	319	18.2				
9	296	07.2	357	19.5	356	00.4	310	04.4	334	20.4				
10	311	09.7	12	19.8	11	00.9	325	06.3	349	22.6				
11	326	12.2	27	20.1	26	01.4	340	08.2	4	24.7				
12	341	14.6	42	20.3	41	01.9	355	10.1	19	26.9				
13	356	17.1	57	20.6	56	02.4	10	12.0	34	29.1				
14	11	19.6	72	20.9	71	02.9	25	13.9	49	31.3				
15	26	22.0	87	21.1	86	03.4	40	15.8	64	33.5				
16	41	24.5	102	21.4	101	03.9	55	17.7	79	35.7				
17	56	27.0	117	21.7	116	04.4	70	19.6	94	37.8				
18	71	29.4	132	21.9	131	04.9	85	21.5	109	40.0				
19	86	31.9	147	22.2	146	05.4	100	23.4	124	42.2				
20	101	34.4	162	22.4	161	05.9	115	25.3	139	44.4				
21	116	36.8	177	22.7	176	06.4	130	27.2	154	46.6				
22	131	39.3	192	23.0	191	06.9	145	29.1	169	48.8				
23	146	41.7	207	23.2	206	07.4	160	31.0	184	50.9				
24	161	44.2	222	23.5	221	07.9	175	32.9	199	53.1				
Dif	—	+3	+1		+5	+3	+19	+2	+22	+1				

UT	SOL		● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 11 ^m 7		Edad: 1 ^d 3 PHE { 4 ^h : 57/5 12 ^h : 57/3 20 ^h : 57/0 PMG: 13 ^h 43 ^m R°: 44 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	177	03.0	-6	31.9	160	31.9	-4 00.6	60 N	5 20	6 08	6 50	7 48	2	20 00 89
1	192	03.2		31.0	175	04.1 ¹³²	-3 45.6 ¹⁵⁰	58	22	08	47	46	6	20 00 85
2	207	03.3		30.0	189	36.3 ¹³²	30.7 ¹⁴⁹	56	24	07	44	45	9	19 59 82
3	222	03.4		29.0	204	08.6 ¹³³	15.7 ¹⁵⁰	54	25	06	42	44	11	59 79
4	237	03.6		28.1	218	41.0 ¹³⁴	-3 00.7 ¹⁵⁰	52	27	06	39	44	13	58 77
5	252	03.7	-6	27.1	233	13.4 ¹³⁴	-2 45.8 ¹⁴⁹	50	5 28	6 05	6 37	7 43	15	19 58 74
6	267	03.8	-6	26.1	247	45.8 ¹³⁴	-2 30.8 ¹⁵⁰	45	5 30	6 03	6 33	7 41	20	19 57 70
7	282	04.0		25.2	262	18.3 ¹³⁵	15.9 ¹⁴⁹	40	31	02	29	40	24	57 65
8	297	04.1		24.2	276	50.8 ¹³⁵	-2 00.9 ¹⁵⁰	35	31	6 00	26	38	28	56 62
9	312	04.2		23.2	291	23.4 ¹³⁶	-1 46.0 ¹⁴⁹	30	31	5 59	23	37	31	56 58
10	327	04.4		22.3	305	56.0 ¹³⁶	31.1 ¹⁴⁹	20	30	55	18	36	35	55 53
11	342	04.5	-6	21.3	320	28.6 ¹³⁶	-1 16.1 ¹⁵⁰	10 N	5 27	5 52	6 13	7 34	40	19 54 49
12	357	04.6	-6	20.4	335	01.3 ¹³⁷	-1 01.2 ¹⁴⁹	0	5 23	5 48	6 08	7 32	45	19 54 44
13	12	04.8		19.4	349	34.0 ¹³⁷	-0 46.3 ¹⁴⁹	10 S	18	43	6 04	31	49	53 40
14	27	04.9		18.4	4	06.8 ¹³⁸	31.4 ¹⁴⁹	20	11	37	5 59	29	54	52 36
15	42	05.1		17.5	18	39.6 ¹³⁸	16.6 ¹⁴⁸	30	5 00	29	53	27	59	51 31
16	57	05.2		16.5	33	12.4 ¹³⁸	-0 01.7 ¹⁴⁹	35	4 54	24	50	26	63	51 27
17	72	05.3	-6	15.5	47	45.2 ¹³⁸	+0 13.1 ¹⁴⁸	40	4 45	5 18	5 46	7 25	66	19 50 24
18	87	05.5	-6	14.6	62	18.1 ¹³⁹	+0 28.0 ¹⁴⁹	45	4 35	5 11	5 41	7 24	70	19 50 20
19	102	05.6		13.6	76	51.1 ¹⁴⁰	42.8 ¹⁴⁸	50	22	5 02	36	22	75	49 15
20	117	05.7		12.6	91	24.0 ¹³⁹	+0 57.5 ¹⁴⁷	52	16	4 58	33	21	78	49 13
21	132	05.9		11.7	105	57.0 ¹⁴⁰	+1 12.3 ¹⁴⁸	54	09	54	30	20	80	48 11
22	147	06.0		10.7	120	30.0 ¹⁴⁰	27.1 ¹⁴⁸	56	4 00	48	27	19	83	48 8
23	162	06.1		09.7	135	03.1 ¹⁴¹	41.8 ¹⁴⁷	58	3 51	43	24	18	86	47 6
24	177	06.3	-6	08.8	149	36.1 ¹⁴⁰	+1 56.5 ¹⁴⁷	60 S	3 40	4 36	5 20	7 17	90	19 47 2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 13 ^h 10 ^m 9		Mag: -4.7 PMG: 9 ^h 10 ^m		Mag: +1.2 PMG: 9 ^h 15 ^m		Mag: -2.0 PMG: 12 ^h 16 ^m		Mag: +0.8 PMG: 10 ^h 39 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	161	44.2	222	23.5	-16	45.2	221	07.9	-21	21.2						
1	176	46.7	237	23.7		45.1	236	08.4		20.8						
2	191	49.1	252	24.0		45.0	251	08.9		20.5						
3	206	51.6	267	24.2		44.8	266	09.3		20.1						
4	221	54.1	282	24.5		44.7	281	09.8		19.8						
5	236	56.5	297	24.7	-16	44.6	296	10.3	-21	19.5						
6	251	59.0	312	25.0	-16	44.4	311	10.8	-21	19.1						
7	267	01.5	327	25.2		44.3	326	11.3		18.8						
8	282	03.9	342	25.5		44.2	341	11.8		18.4						
9	297	06.4	357	25.7		44.0	356	12.3		18.1						
10	312	08.8	12	25.9		43.9	11	12.8		17.7						
11	327	11.3	27	26.2	-16	43.7	26	13.3	-21	17.3						
12	342	13.8	42	26.4	-16	43.6	41	13.8	-21	17.0						
13	357	16.2	57	26.7		43.5	56	14.3		16.6						
14	12	18.7	72	26.9		43.3	71	14.8		16.3						
15	27	21.2	87	27.1		43.2	86	15.3		15.9						
16	42	23.6	102	27.4		43.0	101	15.8		15.6						
17	57	26.1	117	27.6	-16	42.9	116	16.3	-21	15.2						
18	72	28.6	132	27.8	-16	42.8	131	16.8	-21	14.9						
19	87	31.0	147	28.1		42.6	146	17.3		14.5						
20	102	33.5	162	28.3		42.5	161	17.8		14.2						
21	117	36.0	177	28.5		42.3	176	18.3		13.8						
22	132	38.4	192	28.7		42.2	191	18.8		13.5						
23	147	40.9	207	29.0		42.0	206	19.3		13.1						
24	162	43.3	222	29.2	-16	41.9	221	19.8	-21	12.8						
Dif	—		+2		+1		+5		+4		+19	+2			+22	+1

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1		Edad: 2 ^d 3 PHE { 4 ^h : 56 ^m 8 12 ^h : 56 ^m 6 20 ^h : 56 ^m 3 R°: 44 ^m															
	PMG: 12 ^h 11 ^m 5	PMG: 14 ^h 27 ^m	hG ☉	Dec	hG ☾	Dif			Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	177	06.3	-6	08.8	149	36.1	+1	56.5	60 N	17 37	18 19	19 07	7 50	2	21 29	87		
1	192	06.4		07.8	164	09.2 ¹⁴¹	+2	11.2 ¹⁴⁷	58	40	19	05	52	5	25	83		
2	207	06.6		06.8	178	42.3 ¹⁴¹		25.8 ¹⁴⁶	56	42	20	03	54	8	21	81		
3	222	06.7		05.9	193	15.5 ¹⁴²		40.4 ¹⁴⁶	54	45	20	01	55	11	18	78		
4	237	06.8		04.9	207	48.6 ¹⁴¹	+2	55.0 ¹⁴⁶	52	47	20	19 00	57	13	15	75		
5	252	07.0	-6	04.0	222	21.8 ¹⁴²	+3	09.6 ¹⁴⁶	50	17 49	18 21	18 58	7 58	16	21 12	73		
6	267	07.1	-6	03.0	236	55.0 ¹⁴²	+3	24.1 ¹⁴⁵	45	17 53	18 22	18 56	8 01	20	21 07	68		
7	282	07.3		02.0	251	28.2 ¹⁴²		38.6 ¹⁴⁵	40	56	23	55	04	23	21 02	64		
8	297	07.4		01.1	266	01.5 ¹⁴³	+3	53.1 ¹⁴⁵	35	17 59	24	54	06	27	20 58	61		
9	312	07.5	-6	00.1	280	34.7 ¹⁴²	+4	07.5 ¹⁴⁴	30	18 02	26	53	08	30	54	58		
10	327	07.7	-5	59.1	295	08.0 ¹⁴³		21.9 ¹⁴⁴	20	06	29	54	11	35	48	53		
11	342	07.8	-5	58.2	309	41.3 ¹⁴³	+4	36.3 ¹⁴⁴	10 N	18 11	18 32	18 56	8 14	40	20 43	48		
12	357	08.0	-5	57.2	324	14.6 ¹⁴³	+4	50.6 ¹⁴³	0	18 15	18 36	19 00	8 17	44	20 38	44		
13	12	08.1		56.2	338	47.9 ¹⁴³	+5	04.9 ¹⁴³	10 S	19	40	05	20	48	33	40		
14	27	08.2		55.2	353	21.2 ¹⁴³		19.2 ¹⁴³	20	24	46	12	23	53	28	35		
15	42	08.4		54.3	7	54.5 ¹⁴³		33.4 ¹⁴²	30	29	53	21	26	58	22	30		
16	57	08.5		53.3	22	27.9 ¹⁴⁴	+5	47.6 ¹⁴²	35	32	18 58	28	29	61	18	28		
17	72	08.7	-5	52.3	37	01.2 ¹⁴³	+6	01.7 ¹⁴¹	40	18 36	19 03	19 35	8 31	64	20 14	25		
18	87	08.8	-5	51.4	51	34.6 ¹⁴⁴	+6	15.8 ¹⁴¹	45	18 40	19 10	19 45	8 34	68	20 10	20		
19	102	08.9		50.4	66	07.9 ¹⁴³		29.9 ¹⁴¹	50	45	18	19 58	37	73	04	16		
20	117	09.1		49.4	80	41.3 ¹⁴⁴		43.9 ¹⁴⁰	52	47	22	20 04	39	75	20 02	14		
21	132	09.2		48.5	95	14.7 ¹⁴⁴	+6	57.9 ¹⁴⁰	54	50	26	10	40	79	19 59	12		
22	147	09.4		47.5	109	48.1 ¹⁴⁴	+7	11.8 ¹³⁹	56	52	31	18	42	81	56	9		
23	162	09.5		46.5	124	21.4 ¹⁴³		25.7 ¹³⁹	58	56	36	27	44	84	53	6		
24	177	09.7	-5	45.6	138	54.8 ¹⁴⁴	+7	39.5 ¹³⁸	60 S	18 59	19 42	20 37	8 47	87	19 49	3		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 07 ^m 0		Mag: -4.7 PMG: 9 ^h 10 ^m			Mag: +1.2 PMG: 9 ^h 14 ^m			Mag: -2.0 PMG: 12 ^h 13 ^m			Mag: +0.8 PMG: 10 ^h 35 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	162	43.3	222	29.2	-16	41.9	221	19.8	-21	12.8	176	18.6	-6	52.6	200	45.5	-15	53.6
1	177	45.8	237	29.4		41.7	236	20.3		12.4	191	20.5		52.4	215	47.7		53.5
2	192	48.3	252	29.6		41.6	251	20.8		12.0	206	22.4		52.1	230	49.9		53.5
3	207	50.7	267	29.9		41.4	266	21.3		11.7	221	24.3		51.9	245	52.1		53.4
4	222	53.2	282	30.1		41.3	281	21.8		11.3	236	26.2		51.7	260	54.3		53.3
5	237	55.7	297	30.3	-16	41.1	296	22.3	-21	11.0	251	28.1	-6	51.4	275	56.5	-15	53.2
6	252	58.1	312	30.5	-16	41.0	311	22.8	-21	10.6	266	30.0	-6	51.2	290	58.7	-15	53.1
7	268	00.6	327	30.7		40.8	326	23.3		10.3	281	31.9		51.0	306	00.8		53.0
8	283	03.1	342	31.0		40.7	341	23.8		09.9	296	33.8		50.7	321	03.0		53.0
9	298	05.5	357	31.2		40.5	356	24.3		09.5	311	35.7		50.5	336	05.2		52.9
10	313	08.0	12	31.4		40.4	11	24.8		09.2	326	37.6		50.3	351	07.4		52.8
11	328	10.5	27	31.6	-16	40.2	26	25.3	-21	08.8	341	39.5	-6	50.0	6	09.6	-15	52.7
12	343	12.9	42	31.8	-16	40.0	41	25.8	-21	08.5	356	41.4	-6	49.8	21	11.8	-15	52.6
13	358	15.4	57	32.0		39.9	56	26.3		08.1	11	43.3		49.6	36	14.0		52.5
14	13	17.8	72	32.2		39.7	71	26.8		07.7	26	45.2		49.3	51	16.1		52.4
15	28	20.3	87	32.4		39.6	86	27.3		07.4	41	47.1		49.1	66	18.3		52.4
16	43	22.8	102	32.6		39.4	101	27.8		07.0	56	49.0		48.9	81	20.5		52.3
17	58	25.2	117	32.9	-16	39.2	116	28.3	-21	06.6	71	50.9	-6	48.6	96	22.7	-15	52.2
18	73	27.7	132	33.1	-16	39.1	131	28.9	-21	06.3	86	52.8	-6	48.4	111	24.9	-15	52.1
19	88	30.2	147	33.3		38.9	146	29.4		05.9	101	54.7		48.2	126	27.1		52.0
20	103	32.6	162	33.5		38.8	161	29.9		05.6	116	56.6		47.9	141	29.3		51.9
21	118	35.1	177	33.7		38.6	176	30.4		05.2	131	58.5		47.7	156	31.4		51.9
22	133	37.6	192	33.9		38.4	191	30.9		04.8	147	00.4		47.5	171	33.6		51.8
23	148	40.0	207	34.1		38.3	206	31.4		04.5	162	02.3		47.2	186	35.8		51.7
24	163	42.5	222	34.3	-16	38.1	221	31.9	-21	04.1	177	04.2	-6	47.0	201	38.0	-15	51.6
Dif	—		+2		+2		+5		+4		+19		+2		+22		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 3 ^d 3	PHE { 4 ^h : 56 ^h 1 12 ^h : 55 ^h 9 20 ^h : 55 ^h 7 R°: 45 ^m									
	PMG: 12 ^h 11 ^m 2					PMG: 15 ^h 11 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	177	09.7	-5 45.6	138	54.8	+7 39.5	60 N	5 14	6 03	6 44	7 52	4	22 56	88
1	192	09.8		153	28.2 ¹⁴⁴	+7 53.3 ¹³⁸	58	17	02	41	7 57	7	48	84
2	207	09.9		168	01.6 ¹⁴⁴	+8 07.0 ¹³⁷	56	19	02	39	8 02	10	42	80
3	222	10.1		182	35.0 ¹⁴⁴	20.7 ¹³⁷	54	21	02	37	06	13	36	76
4	237	10.2		197	08.4 ¹⁴⁴	34.3 ¹³⁶	52	22	01	35	10	15	30	74
5	252	10.4	-5 40.7	211	41.7 ¹⁴³	+8 47.9 ¹³⁶	50	5 24	6 01	6 33	8 14	16	22 25	72
6	267	10.5	-5 39.7	226	15.1 ¹⁴⁴	+9 01.5 ¹³⁶	45	5 26	6 00	6 29	8 21	22	22 15	67
7	282	10.7		240	48.5 ¹⁴⁴	14.9 ¹³⁴	40	28	5 59	26	27	26	22 06	63
8	297	10.8		255	21.9 ¹⁴⁴	28.4 ¹³⁵	35	29	58	23	33	28	21 59	60
9	312	10.9		269	55.2 ¹⁴³	41.7 ¹³³	30	29	57	21	38	31	52	57
10	327	11.1		284	28.6 ¹⁴⁴	+9 55.1 ¹³⁴	20	28	54	16	46	36	41	52
11	342	11.2	-5 34.9	299	01.9 ¹⁴³	+10 08.3 ¹³²	10 N	5 26	5 51	6 12	8 54	40	21 31	49
12	357	11.4	-5 33.9	313	35.3 ¹⁴⁴	+10 21.5 ¹³²	0	5 23	5 47	6 08	9 01	44	21 22	45
13	12	11.5		328	08.6 ¹⁴³	34.7 ¹³²	10 S	18	43	6 04	08	48	13	41
14	27	11.7		342	41.9 ¹⁴³	+10 47.8 ¹³¹	20	11	37	5 59	16	52	21 03	37
15	42	11.8		357	15.2 ¹⁴³	+11 00.8 ¹³⁰	30	5 02	30	54	24	58	20 52	32
16	57	12.0		11	48.5 ¹⁴³	13.8 ¹³⁰	35	4 56	26	51	30	60	46	29
17	72	12.1	-5 29.1	26	21.8 ¹⁴³	+11 26.7 ¹²⁹	40	4 48	5 20	5 48	9 35	64	20 39	26
18	87	12.3	-5 28.1	40	55.1 ¹⁴³	+11 39.5 ¹²⁸	45	4 38	5 14	5 44	9 42	68	20 30	23
19	102	12.4		55	28.3 ¹⁴²	+11 52.3 ¹²⁸	50	26	06	39	50	73	20	18
20	117	12.5		70	01.6 ¹⁴³	+12 05.0 ¹²⁷	52	20	5 02	37	54	75	16	16
21	132	12.7		84	34.8 ¹⁴²	17.7 ¹²⁷	54	13	4 58	34	9 59	77	11	13
22	147	12.8		99	08.0 ¹⁴²	30.3 ¹²⁶	56	4 06	53	31	10 03	80	20 05	11
23	162	13.0		113	41.2 ¹⁴²	42.8 ¹²⁵	58	3 57	48	28	08	84	19 59	7
24	177	13.1	-5 22.3	128	14.4 ¹⁴²	+12 55.3 ¹²⁵	60 S	3 46	4 41	5 25	10 14	88	19 52	4
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 13 ^h 03 ^m 0		Mag: -4.7 PMG: 9 ^h 10 ^m			Mag: +1.2 PMG: 9 ^h 14 ^m			Mag: -2.0 PMG: 12 ^h 10 ^m			Mag: +0.8 PMG: 10 ^h 32 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°
0	163	42.5	222 34.3	-16 38.1	221 31.9	-21 04.1	177 04.2	-6 47.0	201 38.0	-15 51.6				
1	178	44.9	237 34.5	37.9	236 32.4	03.7	192 06.1	46.8	216 40.2	51.5				
2	193	47.4	252 34.7	37.8	251 32.9	03.4	207 08.0	46.5	231 42.4	51.4				
3	208	49.9	267 34.9	37.6	266 33.4	03.0	222 09.9	46.3	246 44.6	51.4				
4	223	52.3	282 35.0	37.4	281 33.9	02.6	237 11.8	46.1	261 46.8	51.3				
5	238	54.8	297 35.2	-16 37.3	296 34.4	-21 02.3	252 13.7	-6 45.8	276 48.9	-15 51.2				
6	253	57.3	312 35.4	-16 37.1	311 34.9	-21 01.9	267 15.6	-6 45.6	291 51.1	-15 51.1				
7	268	59.7	327 35.6	36.9	326 35.4	01.5	282 17.5	45.4	306 53.3	51.0				
8	284	02.2	342 35.8	36.7	341 35.9	01.2	297 19.4	45.1	321 55.5	50.9				
9	299	04.7	357 36.0	36.6	356 36.4	00.8	312 21.3	44.9	336 57.7	50.9				
10	314	07.1	12 36.2	36.4	11 36.9	00.4	327 23.2	44.7	351 59.9	50.8				
11	329	09.6	27 36.4	-16 36.2	26 37.4	-21 00.1	342 25.1	-6 44.5	7 02.1	-15 50.7				
12	344	12.1	42 36.6	-16 36.1	41 37.9	-20 59.7	357 27.0	-6 44.2	22 04.2	-15 50.6				
13	359	14.5	57 36.7	35.9	56 38.4	59.3	12 28.9	44.0	37 06.4	50.5				
14	14	17.0	72 36.9	35.7	71 38.9	59.0	27 30.9	43.8	52 08.6	50.4				
15	29	19.4	87 37.1	35.5	86 39.4	58.6	42 32.8	43.5	67 10.8	50.4				
16	44	21.9	102 37.3	35.3	101 39.9	58.2	57 34.7	43.3	82 13.0	50.3				
17	59	24.4	117 37.5	-16 35.2	116 40.4	-20 57.8	72 36.6	-6 43.1	97 15.2	-15 50.2				
18	74	26.8	132 37.6	-16 35.0	131 40.9	-20 57.5	87 38.5	-6 42.8	112 17.4	-15 50.1				
19	89	29.3	147 37.8	34.8	146 41.4	57.1	102 40.4	42.6	127 19.6	50.0				
20	104	31.8	162 38.0	34.6	161 41.9	56.7	117 42.3	42.4	142 21.7	49.9				
21	119	34.2	177 38.2	34.4	176 42.5	56.4	132 44.2	42.1	157 23.9	49.9				
22	134	36.7	192 38.3	34.3	191 43.0	56.0	147 46.1	41.9	172 26.1	49.8				
23	149	39.2	207 38.5	34.1	206 43.5	55.6	162 48.0	41.7	187 28.3	49.7				
24	164	41.6	222 38.7	-16 33.9	221 44.0	-20 55.2	177 49.9	-6 41.4	202 30.5	-15 49.6				
Dif	—		+2	+2	+5	+4	+19	+2	+22	+1				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 4 ^d 3 PHE	SD: 15 ^h 1	PMG: 15 ^h 56 ^m			R°: 45 ^m						
	hG ☉	Dec								hG ☾	Dif	Dec	Dif	Civil	Náutico
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	177	13.1	-5	22.3	128	14.4	+12 55.3	60 N	17 42	18 24	19 12	7 56 5	*** ** *	*** ** *	
1	192	13.3		21.3	142	47.5 ¹⁴¹	+13 07.7 ¹²⁴	58	45	24	09	8 04 9	*** ** *	*** ** *	
2	207	13.4		20.3	157	20.6 ¹⁴¹	20.0 ¹²³	56	47	24	07	12 12	*** ** *	*** ** *	
3	222	13.6		19.4	171	53.8 ¹⁴²	32.3 ¹²³	54	49	24	05	19 15	23 52 76	23 52 76	
4	237	13.7		18.4	186	26.8 ¹⁴⁰	44.5 ¹²²	52	50	24	03	25 17	44 73	44 73	
5	252	13.9	-5	17.4	200	59.9 ¹⁴¹	+13 56.6 ¹²¹	50	17 52	18 24	19 02	8 30 20	23 37 71	23 37 71	
6	267	14.0	-5	16.4	215	33.0 ¹⁴¹	+14 08.7 ¹²¹	45	17 55	18 25	18 59	8 43 24	23 22 66	23 22 66	
7	282	14.2		15.5	230	06.0 ¹⁴⁰	20.6 ¹¹⁹	40	17 58	25	57	8 53 28	23 09 63	23 09 63	
8	297	14.3		14.5	244	39.0 ¹⁴⁰	32.6 ¹²⁰	35	18 01	26	55	9 01 31	22 59 59	22 59 59	
9	312	14.5		13.5	259	11.9 ¹³⁹	44.4 ¹¹⁸	30	03	27	55	09 33	49 57	49 57	
10	327	14.6		12.5	273	44.9 ¹⁴⁰	+14 56.2 ¹¹⁸	20	07	29	55	22 38	33 53	33 53	
11	342	14.8	-5	11.6	288	17.8 ¹³⁹	+15 07.9 ¹¹⁷	10 N	18 11	18 32	18 56	9 34 42	22 20 49	22 20 49	
12	357	14.9	-5	10.6	302	50.7 ¹³⁹	+15 19.5 ¹¹⁶	0	18 14	18 35	18 59	9 45 45	22 07 46	22 07 46	
13	12	15.1		09.6	317	23.6 ¹³⁹	31.0 ¹¹⁵	10 S	18	39	19 04	9 56 49	21 54 42	21 54 42	
14	27	15.2		08.6	331	56.4 ¹³⁸	42.5 ¹¹⁵	20	22	44	10	10 08 53	40 39	40 39	
15	42	15.4		07.7	346	29.2 ¹³⁸	+15 53.9 ¹¹⁴	30	27	51	19	22 57	24 35	24 35	
16	57	15.5		06.7	1	02.0 ¹³⁸	+16 05.2 ¹¹³	35	29	18 55	25	30 60	15 33	15 33	
17	72	15.7	-5	05.7	15	34.8 ¹³⁸	+16 16.4 ¹¹²	40	18 32	19 00	19 32	10 39 63	21 05 30	21 05 30	
18	87	15.8	-5	04.8	30	07.5 ¹³⁷	+16 27.6 ¹¹²	45	18 36	19 06	19 41	10 50 66	20 53 26	20 53 26	
19	102	16.0		03.8	44	40.2 ¹³⁷	38.6 ¹¹⁰	50	40	13	53	11 03 71	38 22	38 22	
20	117	16.1		02.8	59	12.8 ¹³⁶	+16 49.6 ¹¹⁰	52	42	17	58	09 74	32 19	32 19	
21	132	16.3		01.8	73	45.5 ¹³⁷	+17 00.6 ¹¹⁰	54	45	21	20 05	16 76	24 17	24 17	
22	147	16.4	-5	00.9	88	18.1 ¹³⁶	11.4 ¹⁰⁸	56	47	25	12	23 80	16 14	16 14	
23	162	16.6	-4	59.9	102	50.6 ¹³⁵	22.1 ¹⁰⁷	58	50	30	20	32 83	20 06 11	20 06 11	
24	177	16.7	-4	58.9	117	23.1 ¹³⁵	+17 32.8 ¹⁰⁷	60 S	18 53	19 36	20 30	11 42 88	19 56 6	19 56 6	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 59 ^m 1		Mag: -4.7 PMG: 9 ^h 09 ^m		Mag: +1.2 PMG: 9 ^h 13 ^m		Mag: -2.0 PMG: 12 ^h 07 ^m		Mag: +0.8 PMG: 10 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	164	41.6	222	38.7	-16	33.9	221	44.0	-20	55.2
1	179	44.1	237	38.9		33.7	236	44.5		54.9
2	194	46.5	252	39.0		33.5	251	45.0		54.5
3	209	49.0	267	39.2		33.3	266	45.5		54.1
4	224	51.5	282	39.4		33.2	281	46.0		53.7
5	239	53.9	297	39.5	-16	33.0	296	46.5	-20	53.4
6	254	56.4	312	39.7	-16	32.8	311	47.0	-20	53.0
7	269	58.9	327	39.9		32.6	326	47.5		52.6
8	285	01.3	342	40.0		32.4	341	48.0		52.2
9	300	03.8	357	40.2		32.2	356	48.5		51.9
10	315	06.3	12	40.3		32.0	11	49.0		51.5
11	330	08.7	27	40.5	-16	31.8	26	49.5	-20	51.1
12	345	11.2	42	40.7	-16	31.6	41	50.0	-20	50.7
13	0	13.7	57	40.8		31.4	56	50.6		50.3
14	15	16.1	72	41.0		31.2	71	51.1		50.0
15	30	18.6	87	41.1		31.0	86	51.6		49.6
16	45	21.0	102	41.3		30.9	101	52.1		49.2
17	60	23.5	117	41.4	-16	30.7	116	52.6	-20	48.8
18	75	26.0	132	41.6	-16	30.5	131	53.1	-20	48.4
19	90	28.4	147	41.7		30.3	146	53.6		48.1
20	105	30.9	162	41.9		30.1	161	54.1		47.7
21	120	33.4	177	42.0		29.9	176	54.6		47.3
22	135	35.8	192	42.2		29.7	191	55.1		46.9
23	150	38.3	207	42.3		29.5	206	55.6		46.5
24	165	40.8	222	42.5	-16	29.3	221	56.1	-20	46.2
Dif	—		+2		+2		+5		+4	
									+19	
									+2	
									+22	
									+1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 1			Edad: 5 ^d 3 PHE { 4 ^h : 54 ^m 9 12 ^h : 54 ^m 8 20 ^h : 54 ^m 6 R°: 48 ^m														
	PMG: 12 ^h 10 ^m 8			SD: 15 ^h 0				Náutico			Civil		Hora		R°			
h	G ☉	Dec	G ☾	Dif	Dec	Dif	h	m	h	m	h	m	h	m				
0	177	16.7	-4	58.9	117	23.1	+17	32.8	60 N	5	08	5	57	6	38			
1	192	16.9		57.9	131	55.6 ¹³⁵		43.4 ¹⁰⁶	58	11	57		36	13	13			
2	207	17.0		57.0	146	28.1 ¹³⁵	+17	53.9 ¹⁰⁵	56	14	57		34	24	17			
3	222	17.2		56.0	161	00.5 ¹³⁴	+18	04.3 ¹⁰⁴	54	16	57		32	34	19			
4	237	17.3		55.0	175	32.9 ¹³⁴		14.6 ¹⁰³	52	18	57		30	42	23			
5	252	17.5	-4	54.0	190	05.3 ¹³⁴	+18	24.9 ¹⁰³	50	5	57	6	29	8	50			
6	267	17.6	-4	53.1	204	37.6 ¹³³	+18	35.0 ¹⁰¹	45	5	56	6	26	9	07			
7	282	17.8		52.1	219	09.9 ¹³³		45.1 ¹⁰¹	40	25	56		23	21	31			
8	297	17.9		51.1	233	42.1 ¹³²	+18	55.1 ¹⁰⁰	35	26	55		20	32	35			
9	312	18.1		50.1	248	14.3 ¹³²	+19	05.0 ⁹⁹	30	27	54		18	9	42			
10	327	18.2		49.2	262	46.5 ¹³²		14.8 ⁹⁸	20	27	52		14	10	00			
11	342	18.4	-4	48.2	277	18.6 ¹³¹	+19	24.5 ⁹⁷	10 N	5	50	6	11	10	16			
12	357	18.5	-4	47.2	291	50.7 ¹³¹	+19	34.1 ⁹⁶	0	5	47	6	07	10	30			
13	12	18.7		46.2	306	22.8 ¹³¹		43.7 ⁹⁶	10 S	18	43		04	10	45			
14	27	18.8		45.2	320	54.8 ¹³⁰	+19	53.1 ⁹⁴	20	12	38	6	00	11	01			
15	42	19.0		44.3	335	26.7 ¹²⁹	+20	02.4 ⁹³	30	5	03	32	5	56	19			
16	57	19.2		43.3	349	58.7 ¹³⁰		11.7 ⁹³	35	4	57	27	53	30	59			
17	72	19.3	-4	42.3	4	30.6 ¹²⁹	+20	20.9 ⁹²	40	4	50	5	50	11	42			
18	87	19.5	-4	41.3	19	02.4 ¹²⁸	+20	29.9 ⁹⁰	45	4	41	5	46	11	56			
19	102	19.6		40.4	33	34.2 ¹²⁸		38.9 ⁹⁰	50	30	09		42	12	14			
20	117	19.8		39.4	48	06.0 ¹²⁸		47.8 ⁸⁹	52	24	06		40	23	71			
21	132	19.9		38.4	62	37.7 ¹²⁷	+20	56.5 ⁸⁷	54	18	5	02	38	32	75			
22	147	20.1		37.4	77	09.4 ¹²⁷	+21	05.2 ⁸⁷	56	11	4	57	36	43	77			
23	162	20.2		36.5	91	41.1 ¹²⁷		13.8 ⁸⁶	58	4	02	52	33	12	55			
24	177	20.4	-4	35.5	106	12.7 ¹²⁶	+21	22.3 ⁸⁵	60 S	3	53	4	47	13	10			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 12 ^h 55 ^m 2		Mag: -4.7 PMG: 9 ^h 09 ^m				Mag: +1.2 PMG: 9 ^h 12 ^m				Mag: -2.0 PMG: 12 ^h 04 ^m				Mag: +0.8 PMG: 10 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	165	40.8	222	42.5	-16	29.3	221	56.1	-20	46.2	178	35.5	-6	35.8	203	23.0	-15	47.6
1	180	43.2	237	42.6		29.1	236	56.7		45.8	193	37.4		35.6	218	25.2		47.5
2	195	45.7	252	42.8		28.8	251	57.2		45.4	208	39.3		35.4	233	27.4		47.4
3	210	48.2	267	42.9		28.6	266	57.7		45.0	223	41.2		35.1	248	29.6		47.4
4	225	50.6	282	43.1		28.4	281	58.2		44.6	238	43.1		34.9	263	31.8		47.3
5	240	53.1	297	43.2	-16	28.2	296	58.7	-20	44.2	253	45.0	-6	34.7	278	34.0	-15	47.2
6	255	55.5	312	43.3	-16	28.0	311	59.2	-20	43.9	268	46.9	-6	34.4	293	36.2	-15	47.1
7	270	58.0	327	43.5		27.8	326	59.7		43.5	283	48.8		34.2	308	38.4		47.0
8	286	00.5	342	43.6		27.6	342	00.2		43.1	298	50.7		34.0	323	40.5		46.9
9	301	02.9	357	43.8		27.4	357	00.7		42.7	313	52.6		33.7	338	42.7		46.9
10	316	05.4	12	43.9		27.2	12	01.2		42.3	328	54.5		33.5	353	44.9		46.8
11	331	07.9	27	44.0	-16	27.0	27	01.7	-20	41.9	343	56.4	-6	33.3	8	47.1	-15	46.7
12	346	10.3	42	44.2	-16	26.8	42	02.3	-20	41.5	358	58.3	-6	33.0	23	49.3	-15	46.6
13	1	12.8	57	44.3		26.6	57	02.8		41.2	14	00.2		32.8	38	51.5		46.5
14	16	15.3	72	44.4		26.3	72	03.3		40.8	29	02.2		32.6	53	53.7		46.4
15	31	17.7	87	44.6		26.1	87	03.8		40.4	44	04.1		32.3	68	55.9		46.4
16	46	20.2	102	44.7		25.9	102	04.3		40.0	59	06.0		32.1	83	58.1		46.3
17	61	22.6	117	44.8	-16	25.7	117	04.8	-20	39.6	74	07.9	-6	31.9	99	00.3	-15	46.2
18	76	25.1	132	45.0	-16	25.5	132	05.3	-20	39.2	89	09.8	-6	31.6	114	02.4	-15	46.1
19	91	27.6	147	45.1		25.3	147	05.8		38.8	104	11.7		31.4	129	04.6		46.0
20	106	30.0	162	45.2		25.1	162	06.3		38.4	119	13.6		31.2	144	06.8		46.0
21	121	32.5	177	45.3		24.8	177	06.9		38.0	134	15.5		31.0	159	09.0		45.9
22	136	35.0	192	45.5		24.6	192	07.4		37.7	149	17.4		30.7	174	11.2		45.8
23	151	37.4	207	45.6		24.4	207	07.9		37.3	164	19.3		30.5	189	13.4		45.7
24	166	39.9	222	45.7	-16	24.2	222	08.4	-20	36.9	179	21.2	-6	30.3	204	15.6	-15	45.6
Dif	—		+1		+2		+5		+4		+19		+2		+22		+	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 10 ^m 5			Edad: 6 ^d 3 SD: 14:9 PMG: 17 ^h 29 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	177	20.4	-4 35.5	106	12.7	+21 22.3	84	60 N	17 47	18 29	19 17	8 09 15	1 51 85		
1	192	20.5		120	44.2 ¹²⁵		30.7	58	49	28	14	26 20	34 80		
2	207	20.7		135	15.7 ¹²⁵		39.0	56	51	28	11	41 24	20 76		
3	222	20.9		149	47.2 ¹²⁵		47.2	54	52	28	09	8 53 27	1 08 72		
4	237	21.0		164	18.7 ¹²⁵	+21 55.2	80	52	54	27	07	9 05 29	0 57 70		
5	252	21.2	-4 30.6	178	50.0 ¹²³	+22 03.2	80	50	17 55	18 27	19 05	9 15 31	0 48 68		
6	267	21.3	-4 29.6	193	21.4 ¹²⁴	+22 11.1	79	45	17 58	18 27	19 01	9 35 35	0 28 64		
7	282	21.5		207	52.7 ¹²³		18.9	40	18 00	27	18 59	9 52 38	0 12 61		
8	297	21.6		222	24.0 ¹²³		26.6	35	02	28	57	10 07 39	** ** *	**	
9	312	21.8		236	55.2 ¹²²		34.1	30	04	28	56	19 42	** ** *	**	
10	327	21.9		251	26.4 ¹²²		41.6	20	08	30	55	10 41 44	** ** *	**	
11	342	22.1	-4 24.7	265	57.5 ¹²¹	+22 49.0	74	10 N	18 11	18 32	18 56	11 00 46	23 59 51		
12	357	22.3	-4 23.7	280	28.6 ¹²¹	+22 56.2	72	0	18 14	18 35	18 59	11 17 49	23 40 50		
13	12	22.4		294	59.7 ¹²¹	+23 03.4	72	10 S	17	38	19 02	35 51	22 47		
14	27	22.6		309	30.7 ¹²⁰		10.4	20	20	42	08	11 54 53	23 02 45		
15	42	22.7		324	01.6 ¹¹⁹		17.4	30	24	48	16	12 16 56	22 38 44		
16	57	22.9		338	32.6 ¹²⁰		24.2	35	27	52	22	29 57	25 42		
17	72	23.0	-4 18.8	353	03.5 ¹¹⁹	+23 31.0	68	40	18 29	18 57	19 29	12 44 59	22 09 41		
18	87	23.2	-4 17.9	7	34.3 ¹¹⁸	+23 37.6	66	45	18 32	19 02	19 37	13 01 63	21 51 38		
19	102	23.4		22	05.1 ¹¹⁸		44.1	50	36	09	48	24 65	28 35		
20	117	23.5		36	35.9 ¹¹⁸		50.5	52	38	12	53	34 68	17 33		
21	132	23.7		51	06.6 ¹¹⁷	+23 56.8	63	54	40	16	19 59	13 47 69	21 04 31		
22	147	23.8		65	37.3 ¹¹⁷	+24 02.9	61	56	42	20	20 06	14 00 73	20 50 29		
23	162	24.0		80	07.9 ¹¹⁶		09.0	58	44	24	14	17 76	33 25		
24	177	24.2	-4 12.0	94	38.5 ¹¹⁶	+24 15.0	60	60 S	18 47	19 30	20 23	14 37 82	20 13 19		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 51 ^m 2		Mag: -4.6 PMG: 9 ^h 09 ^m		Mag: +1.2 PMG: 9 ^h 11 ^m		Mag: -2.0 PMG: 12 ^h 01 ^m		Mag: +0.8 PMG: 10 ^h 21 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	166	39.9	222 45.7	-16 24.2	222 08.4	-20 36.9	179 21.2	-6 30.3	204 15.6	-15 45.6
1	181	42.4	237 45.8	24.0	237 08.9	36.5	194 23.1	30.0	219 17.8	45.5
2	196	44.8	252 46.0	23.7	252 09.4	36.1	209 25.0	29.8	234 20.0	45.5
3	211	47.3	267 46.1	23.5	267 09.9	35.7	224 26.9	29.6	249 22.2	45.4
4	226	49.8	282 46.2	23.3	282 10.4	35.3	239 28.8	29.3	264 24.4	45.3
5	241	52.2	297 46.3	-16 23.1	297 10.9	-20 34.9	254 30.7	-6 29.1	279 26.5	-15 45.2
6	256	54.7	312 46.4	-16 22.8	312 11.5	-20 34.5	269 32.6	-6 28.9	294 28.7	-15 45.1
7	271	57.1	327 46.5	22.6	327 12.0	34.1	284 34.5	28.6	309 30.9	45.0
8	286	59.6	342 46.7	22.4	342 12.5	33.7	299 36.4	28.4	324 33.1	45.0
9	302	02.1	357 46.8	22.2	357 13.0	33.3	314 38.3	28.2	339 35.3	44.9
10	317	04.5	12 46.9	21.9	12 13.5	32.9	329 40.2	27.9	354 37.5	44.8
11	332	07.0	27 47.0	-16 21.7	27 14.0	-20 32.6	344 42.1	-6 27.7	9 39.7	-15 44.7
12	347	09.5	42 47.1	-16 21.5	42 14.5	-20 32.2	359 44.0	-6 27.5	24 41.9	-15 44.6
13	2	11.9	57 47.2	21.2	57 15.1	31.8	14 45.9	27.2	39 44.1	44.5
14	17	14.4	72 47.3	21.0	72 15.6	31.4	29 47.8	27.0	54 46.3	44.5
15	32	16.9	87 47.4	20.8	87 16.1	31.0	44 49.7	26.8	69 48.5	44.4
16	47	19.3	102 47.6	20.5	102 16.6	30.6	59 51.6	26.5	84 50.7	44.3
17	62	21.8	117 47.7	-16 20.3	117 17.1	-20 30.2	74 53.5	-6 26.3	99 52.8	-15 44.2
18	77	24.3	132 47.8	-16 20.1	132 17.6	-20 29.8	89 55.4	-6 26.1	114 55.0	-15 44.1
19	92	26.7	147 47.9	19.8	147 18.1	29.4	104 57.3	25.8	129 57.2	44.1
20	107	29.2	162 48.0	19.6	162 18.6	29.0	119 59.2	25.6	144 59.4	44.0
21	122	31.6	177 48.1	19.4	177 19.2	28.6	135 01.1	25.4	160 01.6	43.9
22	137	34.1	192 48.2	19.1	192 19.7	28.2	150 03.0	25.1	175 03.8	43.8
23	152	36.6	207 48.3	18.9	207 20.2	27.8	165 04.9	24.9	190 06.0	43.7
24	167	39.0	222 48.4	-16 18.6	222 20.7	-20 27.4	180 06.8	-6 24.7	205 08.2	-15 43.6
Dif	—		+1	+2	+5	+4	+19	+2	+22	+1

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1			Edad: 7 ^d 3	PHE { 4 ^h : 54'3 12 ^h : 54'3 20 ^h : 54'2	Rº: 50 ^m		Náutico	Civil		Hora	Rº	Hora	Rº		
	PMG: 12 ^h 10 ^m 3															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	24.2	-4	12.0	94	38.5	+24	15.0	58	02	5	51	6	32	8	24
1	192	24.3		11.0	109	09.0 ¹¹⁵		20.8	58	06		51		30	8	46
2	207	24.5		10.0	123	39.6 ¹¹⁶		26.5	57	09		52		29	9	05
3	222	24.6		09.1	138	10.0 ¹¹⁴		32.1	56	11		52		27	20	37
4	237	24.8		08.1	152	40.5 ¹¹⁵		37.7	56	13		52		26	34	38
5	252	25.0	-4	07.1	167	10.9 ¹¹⁴	+24	43.0	53	15	5	53	6	25	9	46
6	267	25.1	-4	06.1	181	41.2 ¹¹³	+24	48.3	53	19	5	53	6	22	10	10
7	282	25.3		05.1	196	11.5 ¹¹³		53.5	52	21		53		20	30	44
8	297	25.4		04.2	210	41.8 ¹¹³	+24	58.5	50	23		53		18	10	46
9	312	25.6		03.2	225	12.1 ¹¹³	+25	03.4	49	30		24		52	11	01
10	327	25.8		02.2	239	42.3 ¹¹²		08.2	48	25		51		13	25	48
11	342	25.9	-4	01.2	254	12.4 ¹¹¹	+25	12.9	47	24	5	49	6	10	11	46
12	357	26.1	-4	00.2	268	42.6 ¹¹²	+25	17.5	46	22	5	46	6	07	12	06
13	12	26.2	-3	59.2	283	12.6 ¹¹⁰		22.0	45	18		43		04	26	51
14	27	26.4		58.3	297	42.7 ¹¹¹		26.3	43	13		39	6	01	12	47
15	42	26.6		57.3	312	12.7 ¹¹⁰		30.5	42	05	5	33	5	57	13	12
16	57	26.7		56.3	326	42.7 ¹¹⁰		34.6	41	59	4	29		55	26	55
17	72	26.9	-3	55.3	341	12.7 ¹¹⁰	+25	38.6	40	53	4	25	5	52	13	43
18	87	27.0	-3	54.3	355	42.6 ¹⁰⁹	+25	42.5	39	44	4	19	5	49	14	04
19	102	27.2		53.4	10	12.5 ¹⁰⁹		46.2	37	33		13		45	29	59
20	117	27.4		52.4	24	42.3 ¹⁰⁸		49.8	36	28		10		44	42	59
21	132	27.5		51.4	39	12.2 ¹⁰⁹		53.3	35	22		06		42	14	56
22	147	27.7		50.4	53	41.9 ¹⁰⁷		56.7	34	16		5		40	15	13
23	162	27.9		49.4	68	11.7 ¹⁰⁸	+25	59.9	32	08	4	57		38	33	65
24	177	28.0	-3	48.5	82	41.4 ¹⁰⁷	+26	03.1	32	59	3	52	5	35	15	59

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 47 ^m 3		Mag: -4.6 PMG: 9 ^h 09 ^m		Mag: +1.2 PMG: 9 ^h 10 ^m		Mag: -2.0 PMG: 11 ^h 58 ^m		Mag: +0.8 PMG: 10 ^h 18 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	167	39.0	222	48.4	-16	18.6	222	20.7	-20	27.4
1	182	41.5	237	48.5		18.4	237	21.2		27.0
2	197	44.0	252	48.6		18.2	252	21.7		26.6
3	212	46.4	267	48.7		17.9	267	22.3		26.2
4	227	48.9	282	48.8		17.7	282	22.8		25.8
5	242	51.4	297	48.9	-16	17.4	297	23.3	-20	25.4
6	257	53.8	312	49.0	-16	17.2	312	23.8	-20	25.0
7	272	56.3	327	49.1		16.9	327	24.3		24.6
8	287	58.7	342	49.2		16.7	342	24.8		24.2
9	303	01.2	357	49.3		16.5	357	25.3		23.8
10	318	03.7	12	49.3		16.2	12	25.9		23.4
11	333	06.1	27	49.4	-16	16.0	27	26.4	-20	23.0
12	348	08.6	42	49.5	-16	15.7	42	26.9	-20	22.6
13	3	11.1	57	49.6		15.5	57	27.4		22.2
14	18	13.5	72	49.7		15.2	72	27.9		21.8
15	33	16.0	87	49.8		15.0	87	28.4		21.3
16	48	18.5	102	49.9		14.7	102	29.0		20.9
17	63	20.9	117	50.0	-16	14.5	117	29.5	-20	20.5
18	78	23.4	132	50.1	-16	14.2	132	30.0	-20	20.1
19	93	25.9	147	50.1		13.9	147	30.5		19.7
20	108	28.3	162	50.2		13.7	162	31.0		19.3
21	123	30.8	177	50.3		13.4	177	31.5		18.9
22	138	33.2	192	50.4		13.2	192	32.1		18.5
23	153	35.7	207	50.5		12.9	207	32.6		18.1
24	168	38.2	222	50.5	-16	12.7	222	33.1	-20	17.7
Dif	—		+1	+2			+5	+4		
									+19	+2
										+22
										+1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1			Edad: 8 ^d 3	PHE { 4 ^h : 54/2 12 ^h : 54/3 20 ^h : 54/3	PMG: 12 ^h 10 ^m 0			R°: 51 ^m									
	hG ☉	Dec				hG ☾				Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	177	28.0	-3	48.5	82	41.4	+26	03.1	60 N	17 52	18 34	19 22	8 51	48	4 32	57		
1	192	28.2		47.5	97	11.1 ¹⁰⁷		06.1 ³⁰	58	54	33	19	9 18	50	4 05	56		
2	207	28.3		46.5	111	40.8 ¹⁰⁷		08.9 ²⁸	56	55	32	15	40	49	3 43	56		
3	222	28.5		45.5	126	10.5 ¹⁰⁷		11.7 ²⁸	54	56	31	13	9 57	50	26	55		
4	237	28.7		44.5	140	40.1 ¹⁰⁶		14.3 ²⁶	52	57	31	10	10 12	51	3 11	55		
5	252	28.8	-3	43.5	155	09.7 ¹⁰⁶	+26	16.8 ²⁵	50	17 58	18 31	19 08	10 26	50	2 58	54		
6	267	29.0	-3	42.6	169	39.2 ¹⁰⁵	+26	19.2 ²⁴	45	18 01	18 30	19 04	10 52	51	2 31	54		
7	282	29.2		41.6	184	08.8 ¹⁰⁶		21.5 ²³	40	02	30	19 01	11 14	51	2 10	54		
8	297	29.3		40.6	198	38.3 ¹⁰⁵		23.6 ²¹	35	04	29	18 59	31	51	1 53	53		
9	312	29.5		39.6	213	07.8 ¹⁰⁵		25.6 ²⁰	30	06	30	57	11 47	51	38	52		
10	327	29.7		38.6	227	37.2 ¹⁰⁴		27.5 ¹⁹	20	08	30	56	12 13	51	1 12	52		
11	342	29.8	-3	37.7	242	06.7 ¹⁰⁵	+26	29.3 ¹⁸	10 N	18 11	18 32	18 56	12 35	51	0 50	52		
12	357	30.0	-3	36.7	256	36.1 ¹⁰⁴	+26	30.9 ¹⁶	0	18 13	18 34	18 58	12 56	51	0 30	50		
13	12	30.1		35.7	271	05.5 ¹⁰⁴		32.4 ¹⁵	10 S	16	37	19 01	13 17	51	0 09	50		
14	27	30.3		34.7	285	34.9 ¹⁰⁴		33.8 ¹⁴	20	19	41	06	13 39	51	** ** *	**		
15	42	30.5		33.7	300	04.2 ¹⁰³		35.0 ¹²	30	22	46	14	14 05	51	** ** *	**		
16	57	30.6		32.7	314	33.6 ¹⁰⁴		36.1 ¹¹	35	24	49	19	21	50	23 55	54		
17	72	30.8	-3	31.8	329	02.9 ¹⁰³	+26	37.1 ¹⁰	40	18 26	18 53	19 25	14 39	50	23 37	54		
18	87	31.0	-3	30.8	343	32.2 ¹⁰³	+26	38.0 ⁹	45	18 29	18 58	19 33	15 01	50	23 15	55		
19	102	31.1		29.8	358	01.5 ¹⁰³		38.7 ⁷	50	32	19 04	43	28	50	22 48	55		
20	117	31.3		28.8	12	30.8 ¹⁰³		39.3 ⁶	52	33	07	48	41	50	34	56		
21	132	31.5		27.8	27	00.0 ¹⁰²		39.8 ⁵	54	35	11	19 54	15 57	49	19	56		
22	147	31.6		26.8	41	29.3 ¹⁰³		40.2 ⁴	56	37	14	20 00	16 15	49	22 00	58		
23	162	31.8		25.9	55	58.5 ¹⁰²		40.4 ²	58	39	19	07	16 38	47	21 38	58		
24	177	32.0	-3	24.9	70	27.7 ¹⁰²	+26	40.5 ¹	60 S	18 41	19 23	20 16	17 07	46	21 09	60		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 12 ^h 43 ^m 4		Mag: -4.6 PMG: 9 ^h 09 ^m			Mag: +1.2 PMG: 9 ^h 09 ^m			Mag: -2.0 PMG: 11 ^h 55 ^m			Mag: +0.8 PMG: 10 ^h 14 ^m						
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	168	38.2	222	50.5	-16	12.7	222	33.1	-20	17.7	180	52.5	-6	19.1	206	00.8	-15	41.7
1	183	40.6	237	50.6		12.4	237	33.6		17.3	195	54.4		18.8	221	03.0		41.6
2	198	43.1	252	50.7		12.1	252	34.1		16.9	210	56.3		18.6	236	05.2		41.5
3	213	45.6	267	50.8		11.9	267	34.6		16.5	225	58.2		18.4	251	07.4		41.4
4	228	48.0	282	50.9		11.6	282	35.2		16.1	241	00.1		18.1	266	09.6		41.3
5	243	50.5	297	50.9	-16	11.4	297	35.7	-20	15.6	256	02.0	-6	17.9	281	11.8	-15	41.3
6	258	53.0	312	51.0	-16	11.1	312	36.2	-20	15.2	271	03.9	-6	17.7	296	14.0	-15	41.2
7	273	55.4	327	51.1		10.8	327	36.7		14.8	286	05.8		17.4	311	16.2		41.1
8	288	57.9	342	51.1		10.6	342	37.2		14.4	301	07.7		17.2	326	18.4		41.0
9	304	00.4	357	51.2		10.3	357	37.8		14.0	316	09.6		17.0	341	20.6		40.9
10	319	02.8	12	51.3		10.0	12	38.3		13.6	331	11.6		16.7	356	22.8		40.9
11	334	05.3	27	51.4	-16	09.8	27	38.8	-20	13.2	346	13.5	-6	16.5	11	25.0	-15	40.8
12	349	07.7	42	51.4	-16	09.5	42	39.3	-20	12.8	1	15.4	-6	16.3	26	27.2	-15	40.7
13	4	10.2	57	51.5		09.2	57	39.8		12.4	16	17.3		16.0	41	29.4		40.6
14	19	12.7	72	51.6		09.0	72	40.4		11.9	31	19.2		15.8	56	31.6		40.5
15	34	15.1	87	51.6		08.7	87	40.9		11.5	46	21.1		15.6	71	33.8		40.5
16	49	17.6	102	51.7		08.4	102	41.4		11.1	61	23.0		15.3	86	35.9		40.4
17	64	20.1	117	51.8	-16	08.2	117	41.9	-20	10.7	76	24.9	-6	15.1	101	38.1	-15	40.3
18	79	22.5	132	51.8	-16	07.9	132	42.4	-20	10.3	91	26.8	-6	14.9	116	40.3	-15	40.2
19	94	25.0	147	51.9		07.6	147	43.0		09.9	106	28.7		14.7	131	42.5		40.1
20	109	27.5	162	52.0		07.3	162	43.5		09.5	121	30.6		14.4	146	44.7		40.0
21	124	29.9	177	52.0		07.1	177	44.0		09.0	136	32.5		14.2	161	46.9		40.0
22	139	32.4	192	52.1		06.8	192	44.5		08.6	151	34.4		14.0	176	49.1		39.9
23	154	34.9	207	52.1		06.5	207	45.0		08.2	166	36.3		13.7	191	51.3		39.8
24	169	37.3	222	52.2	-16	06.2	222	45.6	-20	07.8	181	38.2	-6	13.5	206	53.5	-15	39.7
Dif	—		+1			+3	+5			+4	+19		+2	+22			+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 09 ^m 7			Edad: 9 ^d 3 PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'5 R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	177	32.0	-3	24.9	70	27.7	+26 40.5	60 N	4 56	5 45	6 26	9 39	71	5 29	35
1	192	32.1		23.9	84	57.0 ¹⁰³	40.5	0	58	5 00	46	25	10 08	67	5 01
2	207	32.3		22.9	99	26.2 ¹⁰²	40.3	2	56	03	47	23	29	65	4 39
3	222	32.5		21.9	113	55.4 ¹⁰²	40.0	3	54	06	47	22	10 47	63	21
4	237	32.6		20.9	128	24.5 ¹⁰¹	39.6	4	52	09	48	21	11 03	61	4 06
5	252	32.8	-3	20.0	142	53.7 ¹⁰²	+26 39.0	6	50	5 11	5 48	6 20	11 16	60	3 52
6	267	33.0	-3	19.0	157	22.9 ¹⁰²	+26 38.3	7	45	5 15	5 49	6 18	11 43	59	3 25
7	282	33.1		18.0	171	52.0 ¹⁰¹	37.5	8	40	18	50	17	12 05	57	3 04
8	297	33.3		17.0	186	21.2 ¹⁰²	36.6	9	35	20	50	15	22	56	2 46
9	312	33.5		16.0	200	50.4 ¹⁰²	35.5	11	30	22	50	14	12 38	55	30
10	327	33.6		15.0	215	19.5 ¹⁰¹	34.3	12	20	24	49	11	13 04	53	2 04
11	342	33.8	-3	14.1	229	48.7 ¹⁰²	+26 33.0	13	10 N	5 23	5 48	6 09	13 26	52	1 42
12	357	34.0	-3	13.1	244	17.8 ¹⁰¹	+26 31.5	15	0	5 22	5 46	6 06	13 47	51	1 20
13	12	34.1		12.1	258	47.0 ¹⁰²	29.9	16	10 S	19	43	04	14 08	49	0 59
14	27	34.3		11.1	273	16.1 ¹⁰¹	28.2	17	20	14	39	6 01	30	48	37
15	42	34.5		10.1	287	45.3 ¹⁰²	26.4	18	30	06	34	5 58	14 56	47	0 11
16	57	34.6		09.1	302	14.4 ¹⁰¹	24.4	20	35	5 01	31	56	15 11	46	*** ** *
17	72	34.8	-3	08.1	316	43.6 ¹⁰²	+26 22.3	21	40	4 55	5 27	5 54	15 29	44	*** ** *
18	87	35.0	-3	07.2	331	12.7 ¹⁰¹	+26 20.0	23	45	4 47	5 22	5 52	15 51	42	*** ** *
19	102	35.1		06.2	345	41.9 ¹⁰²	17.7	23	50	37	16	49	16 18	39	23 43
20	117	35.3		05.2	0	11.1 ¹⁰²	15.2	25	52	32	13	47	31	38	30
21	132	35.5		04.2	14	40.2 ¹⁰¹	12.5	27	54	27	10	46	16 46	36	23 15
22	147	35.6		03.2	29	09.4 ¹⁰²	09.8	27	56	21	06	44	17 04	34	22 58
23	162	35.8		02.2	43	38.6 ¹⁰²	06.9	29	58	13	5 02	42	25	31	36
24	177	36.0	-3	01.3	58	07.8 ¹⁰²	+26 03.9	30	60 S	4 05	4 58	5 40	17 53	26	22 09

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 39 ^m 4		Mag: -4.6 PMG: 9 ^h 08 ^m		Mag: +1.2 PMG: 9 ^h 09 ^m		Mag: -2.0 PMG: 11 ^h 52 ^m		Mag: +0.8 PMG: 10 ^h 11 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	169	37.3	222	52.2	-16	06.2	222	45.6	-20	07.8
1	184	39.8	237	52.3		05.9	237	46.1		07.4
2	199	42.2	252	52.3		05.7	252	46.6		07.0
3	214	44.7	267	52.4		05.4	267	47.1		06.5
4	229	47.2	282	52.4		05.1	282	47.6		06.1
5	244	49.6	297	52.5	-16	04.8	297	48.2	-20	05.7
6	259	52.1	312	52.5	-16	04.5	312	48.7	-20	05.3
7	274	54.6	327	52.6		04.3	327	49.2		04.9
8	289	57.0	342	52.7		04.0	342	49.7		04.4
9	304	59.5	357	52.7		03.7	357	50.3		04.0
10	320	02.0	12	52.8		03.4	12	50.8		03.6
11	335	04.4	27	52.8	-16	03.1	27	51.3	-20	03.2
12	350	06.9	42	52.9	-16	02.8	42	51.8	-20	02.8
13	5	09.3	57	52.9		02.5	57	52.3		02.3
14	20	11.8	72	53.0		02.3	72	52.9		01.9
15	35	14.3	87	53.0		02.0	87	53.4		01.5
16	50	16.7	102	53.0		01.7	102	53.9		01.1
17	65	19.2	117	53.1	-16	01.4	117	54.4	-20	00.7
18	80	21.7	132	53.1	-16	01.1	132	55.0	-20	00.2
19	95	24.1	147	53.2		00.8	147	55.5	-19	59.8
20	110	26.6	162	53.2		00.5	162	56.0		59.4
21	125	29.1	177	53.3	-16	00.2	177	56.5		59.0
22	140	31.5	192	53.3	-15	59.9	192	57.0		58.5
23	155	34.0	207	53.4		59.6	207	57.6		58.1
24	170	36.5	222	53.4	-15	59.3	222	58.1	-19	57.7
Dif	—		0	+3			+5	+4		
									+19	+2
										+22
										+1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 10 ^d 3 PHE { 4 ^h : 54 ^m /7 12 ^h : 54 ^m /8 20 ^h : 54 ^m /9											
	PMG: 12 ^h 09 ^m 5			SD: 14 ^h 9 PMG: 20 ^h 50 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	177	36.0	-3 01.3	58	07.8	+26 03.9	32	60 N	17 57	18 39	19 28	10 50 85	6 04 20		
1	192	36.2	-3 00.3	72	37.0 ¹⁰²	+26 00.7	32	58	58	37	23	11 15 79	5 40 25		
2	207	36.3	-2 59.3	87	06.2 ¹⁰²	+25 57.5	34	56	17 59	36	20	34 76	20 29		
3	222	36.5	58.3	101	35.5 ¹⁰³	54.1	32	54	18 00	35	17	11 50 73	5 04 31		
4	237	36.7	57.3	116	04.7 ¹⁰²	50.5	36	52	01	34	14	12 04 70	4 49 34		
5	252	36.8	-2 56.3	130	33.9 ¹⁰²	+25 46.9	36	50	18 02	18 34	19 11	12 16 69	4 37 35		
6	267	37.0	-2 55.3	145	03.2 ¹⁰³	+25 43.1	38	45	18 03	18 32	19 07	12 42 64	4 11 39		
7	282	37.2	54.4	159	32.5 ¹⁰³	39.2	39	40	05	32	03	13 02 62	3 51 41		
8	297	37.3	53.4	174	01.8 ¹⁰³	35.1	41	35	06	31	19 00	18 60	34 42		
9	312	37.5	52.4	188	31.1 ¹⁰³	30.9	42	30	07	31	18 59	33 58	3 19 44		
10	327	37.7	51.4	203	00.4 ¹⁰³	26.6	43	20	09	31	57	13 57 55	2 54 46		
11	342	37.9	-2 50.4	217	29.8 ¹⁰⁴	+25 22.2	44	10 N	18 11	18 32	18 56	14 18 53	2 32 49		
12	357	38.0	-2 49.4	231	59.2 ¹⁰⁴	+25 17.7	45	0	18 13	18 33	18 57	14 38 50	2 12 50		
13	12	38.2	48.4	246	28.5 ¹⁰³	13.0	47	10 S	15	36	19 00	14 57 48	1 51 53		
14	27	38.4	47.5	260	57.9 ¹⁰⁴	08.2	48	20	17	39	05	15 18 46	29 55		
15	42	38.5	46.5	275	27.4 ¹⁰⁵	+25 03.2	50	30	20	43	11	43 42	1 04 56		
16	57	38.7	45.5	289	56.8 ¹⁰⁴	+24 58.2	50	35	21	46	16	15 57 40	0 49 58		
17	72	38.9	-2 44.5	304	26.3 ¹⁰⁵	+24 53.0	52	40	18 23	18 50	19 22	16 13 38	0 31 60		
18	87	39.0	-2 43.5	318	55.8 ¹⁰⁵	+24 47.7	53	45	18 25	18 54	19 29	16 33 35	0 10 62		
19	102	39.2	42.5	333	25.3 ¹⁰⁵	42.3	54	50	28	19 00	39	16 57 31	** ** *		
20	117	39.4	41.5	347	54.8 ¹⁰⁵	36.7	56	52	29	03	43	17 09 29	** ** *		
21	132	39.6	40.6	2	24.4 ¹⁰⁶	31.0	57	54	30	06	48	22 27	** ** *		
22	147	39.7	39.6	16	54.0 ¹⁰⁶	25.2	58	56	32	09	19 54	38 23	** ** *		
23	162	39.9	38.6	31	23.6 ¹⁰⁶	19.3	59	58	33	13	20 01	17 56 20	23 51 83		
24	177	40.1	-2 37.6	45	53.2 ¹⁰⁶	+24 13.3	60	60 S	18 35	19 17	20 09	18 19 13	23 29 89		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 12 ^h 35 ^m 5		Mag: -4.6 PMG: 9 ^h 08 ^m			Mag: +1.2 PMG: 9 ^h 08 ^m			Mag: -2.0 PMG: 11 ^h 49 ^m			Mag: +0.8 PMG: 10 ^h 07 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	170	36.5	222 53.4	-15 59.3	222 58.1	-19 57.7	182 23.9	-6 07.9	207 46.2	-15 37.8					
1	185	38.9	237 53.4	59.0	237 58.6	57.3	197 25.8	07.7	222 48.4	37.7					
2	200	41.4	252 53.5	58.7	252 59.1	56.8	212 27.7	07.4	237 50.6	37.6					
3	215	43.8	267 53.5	58.4	267 59.7	56.4	227 29.6	07.2	252 52.8	37.5					
4	230	46.3	282 53.6	58.1	283 00.2	56.0	242 31.5	07.0	267 55.0	37.4					
5	245	48.8	297 53.6	-15 57.8	298 00.7	-19 55.6	257 33.4	-6 06.7	282 57.2	-15 37.4					
6	260	51.2	312 53.6	-15 57.5	313 01.2	-19 55.1	272 35.3	-6 06.5	297 59.4	-15 37.3					
7	275	53.7	327 53.7	57.2	328 01.8	54.7	287 37.2	06.3	313 01.6	37.2					
8	290	56.2	342 53.7	56.9	343 02.3	54.3	302 39.1	06.0	328 03.8	37.1					
9	305	58.6	357 53.7	56.6	358 02.8	53.9	317 41.0	05.8	343 06.0	37.0					
10	321	01.1	12 53.8	56.3	13 03.3	53.4	332 42.9	05.6	358 08.2	37.0					
11	336	03.6	27 53.8	-15 56.0	28 03.9	-19 53.0	347 44.9	-6 05.3	13 10.4	-15 36.9					
12	351	06.0	42 53.8	-15 55.7	43 04.4	-19 52.6	2 46.8	-6 05.1	28 12.6	-15 36.8					
13	6	08.5	57 53.9	55.4	58 04.9	52.1	17 48.7	04.9	43 14.8	36.7					
14	21	11.0	72 53.9	55.1	73 05.4	51.7	32 50.6	04.6	58 17.0	36.6					
15	36	13.4	87 53.9	54.8	88 06.0	51.3	47 52.5	04.4	73 19.2	36.6					
16	51	15.9	102 53.9	54.5	103 06.5	50.8	62 54.4	04.2	88 21.4	36.5					
17	66	18.3	117 54.0	-15 54.2	118 07.0	-19 50.4	77 56.3	-6 03.9	103 23.6	-15 36.4					
18	81	20.8	132 54.0	-15 53.9	133 07.6	-19 50.0	92 58.2	-6 03.7	118 25.8	-15 36.3					
19	96	23.3	147 54.0	53.5	148 08.1	49.6	108 00.1	03.5	133 28.0	36.2					
20	111	25.7	162 54.1	53.2	163 08.6	49.1	123 02.0	03.2	148 30.2	36.2					
21	126	28.2	177 54.1	52.9	178 09.1	48.7	138 03.9	03.0	163 32.4	36.1					
22	141	30.7	192 54.1	52.6	193 09.7	48.3	153 05.8	02.8	178 34.6	36.0					
23	156	33.1	207 54.1	52.3	208 10.2	47.8	168 07.7	02.5	193 36.8	35.9					
24	171	35.6	222 54.1	-15 52.0	223 10.7	-19 47.4	183 09.6	-6 02.3	208 39.0	-15 35.8					
Dif	—		0	+3	+5	+4	+19	+2	+22		+				

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:1			Edad: 11 ^d 3 PHE { 4 ^h : 55:1 12 ^h : 55:2 20 ^h : 55:4											
	PMG: 12 ^h 09 ^m 2			SD: 15:0 PMG: 21 ^h 40 ^m R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	177	40.1	-2	37.6	45	53.2	+24	13.3	60 N	4 50	5 39	6 20	12 15	91	6 24 10
1	192	40.3		36.6	60	22.9 ¹⁰⁷		07.1	58	54	40	19	34	85	6 05 15
2	207	40.4		35.6	74	52.6 ¹⁰⁷	+24	00.8	56	4 58	41	18	12 50	81	5 49 19
3	222	40.6		34.6	89	22.3 ¹⁰⁷	+23	54.4	54	5 01	42	17	13 03	78	35 23
4	237	40.8		33.7	103	52.0 ¹⁰⁷		47.8	52	04	43	17	14	76	23 25
5	252	40.9	-2	32.7	118	21.8 ¹⁰⁸	+23	41.2	50	5 06	5 44	6 16	13 25	73	5 12 28
6	267	41.1	-2	31.7	132	51.6 ¹⁰⁸	+23	34.4	45	5 11	5 45	6 15	13 46	69	4 50 32
7	282	41.3		30.7	147	21.4 ¹⁰⁸		27.5	40	15	46	13	14 04	64	32 35
8	297	41.5		29.7	161	51.3 ¹⁰⁹		20.5	35	18	47	12	18	62	16 38
9	312	41.6		28.7	176	21.2 ¹⁰⁹		13.4	30	20	47	11	31	59	4 03 40
10	327	41.8		27.7	190	51.1 ¹⁰⁹	+23	06.1	20	22	47	09	14 52	56	3 40 44
11	342	42.0	-2	26.8	205	21.1 ¹¹⁰	+22	58.7	10 N	5 22	5 47	6 08	15 11	52	3 21 46
12	357	42.2	-2	25.8	219	51.1 ¹¹⁰	+22	51.3	0	5 21	5 45	6 06	15 28	49	3 02 50
13	12	42.3		24.8	234	21.1 ¹¹⁰		43.7	10 S	19	43	04	15 45	46	2 44 52
14	27	42.5		23.8	248	51.1 ¹¹⁰		35.9	20	14	40	02	16 04	42	24 55
15	42	42.7		22.8	263	21.2 ¹¹¹		28.1	30	08	36	6 00	25	38	2 00 59
16	57	42.8		21.8	277	51.3 ¹¹¹		20.2	35	5 03	33	5 58	37	36	1 47 61
17	72	43.0	-2	20.8	292	21.5 ¹¹²	+22	12.1	40	4 57	5 29	5 56	16 51	33	1 31 63
18	87	43.2	-2	19.8	306	51.6 ¹¹¹	+22	03.9	45	4 50	5 25	5 54	17 08	29	1 12 67
19	102	43.4		18.9	321	21.9 ¹¹³	+21	55.6	50	41	19	52	28	25	0 48 71
20	117	43.5		17.9	335	52.1 ¹¹²		47.2	52	36	17	51	38	22	37 73
21	132	43.7		16.9	350	22.4 ¹¹³		38.7	54	31	14	50	17 49	20	24 76
22	147	43.9		15.9	4	52.7 ¹¹³		30.1	56	25	11	48	18 01	17	0 09 79
23	162	44.1		14.9	19	23.0 ¹¹³		21.3	58	19	07	47	16	12	** ** *
24	177	44.2	-2	13.9	33	53.4 ¹¹⁴	+21	12.5	60 S	4 11	5 03	5 45	18 32	8	** ** *

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 12 ^h 31 ^m 6		Mag: -4.6 PMG: 9 ^h 08 ^m		Mag: +1.2 PMG: 9 ^h 07 ^m		Mag: -2.0 PMG: 11 ^h 46 ^m		Mag: +0.8 PMG: 10 ^h 04 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	171	35.6	222	54.1	-15	52.0	223	10.7	-19	47.4	183	09.6	-6	02.3	208	39.0	-15	35.8
1	186	38.1	237	54.2		51.7	238	11.2		47.0	198	11.5		02.1	223	41.2		35.8
2	201	40.5	252	54.2		51.3	253	11.8		46.5	213	13.4		01.8	238	43.4		35.7
3	216	43.0	267	54.2		51.0	268	12.3		46.1	228	15.3		01.6	253	45.6		35.6
4	231	45.5	282	54.2		50.7	283	12.8		45.7	243	17.2		01.4	268	47.8		35.5
5	246	47.9	297	54.3	-15	50.4	298	13.4	-19	45.2	258	19.1	-6	01.2	283	50.0	-15	35.4
6	261	50.4	312	54.3	-15	50.1	313	13.9	-19	44.8	273	21.0	-6	00.9	298	52.2	-15	35.4
7	276	52.8	327	54.3		49.7	328	14.4		44.4	288	23.0		00.7	313	54.4		35.3
8	291	55.3	342	54.3		49.4	343	14.9		43.9	303	24.9		00.5	328	56.6		35.2
9	306	57.8	357	54.3		49.1	358	15.5		43.5	318	26.8	-6	00.2	343	58.8		35.1
10	322	00.2	12	54.3		48.8	13	16.0		43.0	333	28.7	-6	00.0	359	01.0		35.0
11	337	02.7	27	54.4	-15	48.5	28	16.5	-19	42.6	348	30.6	-5	59.8	14	03.2	-15	35.0
12	352	05.2	42	54.4	-15	48.1	43	17.0	-19	42.2	3	32.5	-5	59.5	29	05.4	-15	34.9
13	7	07.6	57	54.4		47.8	58	17.6		41.7	18	34.4		59.3	44	07.6		34.8
14	22	10.1	72	54.4		47.5	73	18.1		41.3	33	36.3		59.1	59	09.8		34.7
15	37	12.6	87	54.4		47.1	88	18.6		40.9	48	38.2		58.8	74	12.0		34.6
16	52	15.0	102	54.4		46.8	103	19.2		40.4	63	40.1		58.6	89	14.2		34.6
17	67	17.5	117	54.4	-15	46.5	118	19.7	-19	40.0	78	42.0	-5	58.4	104	16.4	-15	34.5
18	82	19.9	132	54.4	-15	46.2	133	20.2	-19	39.5	93	43.9	-5	58.1	119	18.6	-15	34.4
19	97	22.4	147	54.4		45.8	148	20.8		39.1	108	45.8		57.9	134	20.8		34.3
20	112	24.9	162	54.5		45.5	163	21.3		38.7	123	47.7		57.7	149	23.0		34.2
21	127	27.3	177	54.5		45.2	178	21.8		38.2	138	49.6		57.4	164	25.2		34.2
22	142	29.8	192	54.5		44.8	193	22.3		37.8	153	51.5		57.2	179	27.4		34.1
23	157	32.3	207	54.5		44.5	208	22.9		37.3	168	53.4		57.0	194	29.6		34.0
24	172	34.7	222	54.5	-15	44.2	223	23.4	-19	36.9	183	55.3	-5	56.7	209	31.8	-15	33.9
Dif	—		0 +3		+5 +4		+19 +2		+22 +1									

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 12 ^d 3 PHE { 4 ^h : 55 ^m 6 12 ^h : 55 ^m 8 20 ^h : 56 ^m 0											
	PMG: 12 ^h 08 ^m 9			SD: 15 ^h 1											
	PMG: 22 ^h 28 ^m			R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	177	44.2	-2 13.9	33	53.4	+21 12.5	90	60 N	18 02	18 44	19 33	13 46 92	6 34 7		
1	192	44.4	12.9	48	23.8 ¹¹⁴	+21 03.5	90	58	03	42	28	13 59 88	20 11		
2	207	44.6	12.0	62	54.3 ¹¹⁵	+20 54.5	90	56	03	40	24	14 11 84	6 08 14		
3	222	44.8	11.0	77	24.8 ¹¹⁵	45.3	92	54	04	39	21	21 81	5 58 17		
4	237	44.9	10.0	91	55.3 ¹¹⁵	36.0	93	52	04	38	17	30 78	48 20		
5	252	45.1	-2 09.0	106	25.9 ¹¹⁶	+20 26.6	94	50	18 05	18 37	19 15	14 38 75	5 40 22		
6	267	45.3	-2 08.0	120	56.4 ¹¹⁵	+20 17.1	95	45	18 06	18 35	19 09	14 55 70	5 22 26		
7	282	45.5	07.0	135	27.1 ¹¹⁷	+20 07.5	96	40	07	34	05	15 08 67	5 07 30		
8	297	45.6	06.0	149	57.7 ¹¹⁶	+19 57.8	97	35	07	33	02	20 63	4 54 34		
9	312	45.8	05.0	164	28.4 ¹¹⁷	48.0	98	30	08	32	19 00	30 60	43 36		
10	327	46.0	04.1	178	59.1 ¹¹⁷	38.1	99	20	10	32	18 57	15 48 55	24 41		
11	342	46.2	-2 03.1	193	29.9 ¹¹⁸	+19 28.1	100	10 N	18 11	18 32	18 56	16 03 51	4 07 45		
12	357	46.3	-2 02.1	208	00.7 ¹¹⁸	+19 18.0	101	0	18 12	18 33	18 57	16 17 47	3 52 48		
13	12	46.5	01.1	222	31.5 ¹¹⁸	+19 07.7	103	10 S	14	35	18 59	31 43	36 51		
14	27	46.7	-2 00.1	237	02.4 ¹¹⁹	+18 57.4	103	20	15	37	19 03	16 46 39	3 19 55		
15	42	46.9	-1 59.1	251	33.3 ¹¹⁹	47.0	104	30	17	41	09	17 03 34	2 59 60		
16	57	47.1	58.1	266	04.3 ¹²⁰	36.5	105	35	18	44	13	13 31	48 62		
17	72	47.2	-1 57.1	280	35.2 ¹¹⁹	+18 25.9	106	40	18 20	18 47	19 19	17 24 28	2 34 66		
18	87	47.4	-1 56.2	295	06.2 ¹²⁰	+18 15.1	108	45	18 21	18 51	19 25	17 37 25	2 19 69		
19	102	47.6	55.2	309	37.3 ¹²¹	+18 04.3	108	50	23	56	34	17 53 20	1 59 75		
20	117	47.8	54.2	324	08.3 ¹²⁰	+17 53.4	109	52	24	18 58	38	18 00 18	50 77		
21	132	47.9	53.2	338	39.4 ¹²¹	42.4	110	54	25	19 01	43	09 15	40 79		
22	147	48.1	52.2	353	10.6 ¹²²	31.3	111	56	26	04	48	18 12	28 83		
23	162	48.3	51.2	7	41.8 ¹²²	20.1	112	58	27	07	19 55	28 9	1 14 87		
24	177	48.5	-1 50.2	22	13.0 ¹²²	+17 08.9	112	60 S	18 29	19 11	20 02	18 40 5	0 58 92		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 27 ^m 6		Mag: -4.6 PMG: 9 ^h 08 ^m			Mag: +1.2 PMG: 9 ^h 06 ^m			Mag: -2.0 PMG: 11 ^h 43 ^m			Mag: +0.8 PMG: 10 ^h 00 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	172	34.7	222 54.5	-15 44.2	223 23.4	-19 36.9	183 55.3	-5 56.7	209 31.8	-15 56.7	224 34.0	33.8			
1	187	37.2	237 54.5	43.8	238 23.9	36.5	198 57.2	56.5	224 34.0	33.8	239 36.2	33.8			
2	202	39.7	252 54.5	43.5	253 24.5	36.0	213 59.2	56.3	239 36.2	33.8	254 38.4	33.7			
3	217	42.1	267 54.5	43.1	268 25.0	35.6	229 01.1	56.0	254 38.4	33.7	269 40.6	33.6			
4	232	44.6	282 54.5	42.8	283 25.5	35.1	244 03.0	55.8	269 40.6	33.6	284 42.8	-15 33.5			
5	247	47.1	297 54.5	-15 42.5	298 26.1	-19 34.7	259 04.9	-5 55.6	284 42.8	-15 33.5	299 45.0	-15 33.4			
6	262	49.5	312 54.5	-15 42.1	313 26.6	-19 34.2	274 06.8	-5 55.3	299 45.0	-15 33.4	314 47.2	33.4			
7	277	52.0	327 54.5	41.8	328 27.1	33.8	289 08.7	55.1	314 47.2	33.4	329 49.4	33.3			
8	292	54.4	342 54.5	41.4	343 27.7	33.4	304 10.6	54.9	329 49.4	33.3	344 51.6	33.2			
9	307	56.9	357 54.5	41.1	358 28.2	32.9	319 12.5	54.6	344 51.6	33.2	359 53.8	33.1			
10	322	59.4	12 54.5	40.8	13 28.7	32.5	334 14.4	54.4	359 53.8	33.1	14 56.0	-15 33.0			
11	338	01.8	27 54.5	-15 40.4	28 29.2	-19 32.0	349 16.3	-5 54.2	14 56.0	-15 33.0	29 58.2	-15 33.0			
12	353	04.3	42 54.5	-15 40.1	43 29.8	-19 31.6	4 18.2	-5 53.9	29 58.2	-15 33.0	45 00.4	32.9			
13	8	06.8	57 54.5	39.7	58 30.3	31.1	19 20.1	53.7	45 00.4	32.9	60 02.6	32.8			
14	23	09.2	72 54.5	39.4	73 30.8	30.7	34 22.0	53.5	60 02.6	32.8	75 04.8	32.7			
15	38	11.7	87 54.5	39.0	88 31.4	30.2	49 23.9	53.2	75 04.8	32.7	90 07.0	32.6			
16	53	14.2	102 54.5	38.7	103 31.9	29.8	64 25.8	53.0	90 07.0	32.6	105 09.2	-15 32.6			
17	68	16.6	117 54.5	-15 38.3	118 32.4	-19 29.3	79 27.7	-5 52.8	105 09.2	-15 32.6	120 11.4	-15 32.5			
18	83	19.1	132 54.5	-15 38.0	133 33.0	-19 28.9	94 29.6	-5 52.5	120 11.4	-15 32.5	135 13.6	32.4			
19	98	21.6	147 54.5	37.6	148 33.5	28.5	109 31.6	52.3	135 13.6	32.4	150 15.8	32.3			
20	113	24.0	162 54.5	37.3	163 34.0	28.0	124 33.5	52.1	150 15.8	32.3	165 18.0	32.2			
21	128	26.5	177 54.5	36.9	178 34.6	27.6	139 35.4	51.8	165 18.0	32.2	180 20.2	32.2			
22	143	28.9	192 54.4	36.6	193 35.1	27.1	154 37.3	51.6	180 20.2	32.2	195 22.4	32.1			
23	158	31.4	207 54.4	36.2	208 35.6	26.7	169 39.2	51.4	195 22.4	32.1	210 24.6	-15 32.0			
24	173	33.9	222 54.4	-15 35.9	223 36.2	-19 26.2	184 41.1	-5 51.1	210 24.6	-15 32.0					
Dif	—		0	+3	+5	+4	+19	+2	+22	+1					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 13 ^d 3 PHE { 4 ^h : 56 ^m /2 12 ^h : 56 ^m /4 20 ^h : 56 ^m /7 Rº: 46 ^m											
	PMG: 12 ^h 08 ^m 6			SD: 15 ^h 3 PMG: 23 ^h 15 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m	
0	177	48.5	-1	50.2	22	13.0	+17	08.9	58	4	44	5	33	6	14
1	192	48.6		49.2	36	44.2	+16	57.5	58	48	35	14	27	88	31
2	207	48.8		48.3	51	15.5		46.0	56	52	36	13	35	84	22
3	222	49.0		47.3	65	46.8		34.5	54	56	37	13	42	81	15
4	237	49.2		46.3	80	18.1		22.8	52	4	59	39	12	48	78
5	252	49.4	-1	45.3	94	49.5	+16	11.1	50	5	02	5	40	6	12
6	267	49.5	-1	44.3	109	20.8	+15	59.3	45	5	08	5	42	6	11
7	282	49.7		43.3	123	52.3		47.4	40	12	43	10	15	67	37
8	297	49.9		42.3	138	23.7		35.4	35	15	44	09	23	64	28
9	312	50.1		41.3	152	55.2		23.3	30	17	45	09	30	61	19
10	327	50.2		40.4	167	26.7	+15	11.1	20	20	46	08	43	55	5
11	342	50.4	-1	39.4	181	58.3	+14	58.9	10 N	5	21	5	46	6	07
12	357	50.6	-1	38.4	196	29.8	+14	46.6	0	5	21	5	45	6	05
13	12	50.8		37.4	211	01.4		34.2	10 S	19	43	04	14	42	27
14	27	51.0		36.4	225	33.0		21.7	20	15	41	03	25	38	4
15	42	51.1		35.4	240	04.7	+14	09.1	30	09	37	01	37	33	3
16	57	51.3		34.4	254	36.4	+13	56.5	35	05	34	6	44	30	50
17	72	51.5	-1	33.4	269	08.1	+13	43.8	40	5	00	5	59	17	52
18	87	51.7	-1	32.4	283	39.8	+13	31.0	45	4	53	5	57	18	02
19	102	51.9		31.5	298	11.6		18.1	50	44	23	55	13	17	14
20	117	52.0		30.5	312	43.3	+13	05.1	52	40	20	54	18	15	3
21	132	52.2		29.5	327	15.1	+12	52.1	54	35	18	53	24	12	2
22	147	52.4		28.5	341	46.9		39.0	56	30	15	52	30	10	51
23	162	52.6		27.5	356	18.8		25.9	58	24	12	51	37	7	41
24	177	52.7	-1	26.5	10	50.7	+12	12.6	60 S	4	17	5	50	18	45

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 23 ^m 7		Mag: -4.6 PMG: 9 ^h 08 ^m		Mag: +1.2 PMG: 9 ^h 05 ^m		Mag: -2.0 PMG: 11 ^h 40 ^m		Mag: +0.8 PMG: 9 ^h 57 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	173	33.9	222	54.4	-15	35.9	223	36.2	-19	26.2
1	188	36.3	237	54.4		35.5	238	36.7		25.8
2	203	38.8	252	54.4		35.2	253	37.2		25.3
3	218	41.3	267	54.4		34.8	268	37.8		24.9
4	233	43.7	282	54.4		34.4	283	38.3		24.4
5	248	46.2	297	54.4	-15	34.1	298	38.8	-19	24.0
6	263	48.7	312	54.4	-15	33.7	313	39.4	-19	23.5
7	278	51.1	327	54.3		33.4	328	39.9		23.1
8	293	53.6	342	54.3		33.0	343	40.4		22.6
9	308	56.0	357	54.3		32.6	358	41.0		22.2
10	323	58.5	12	54.3		32.3	13	41.5		21.7
11	339	01.0	27	54.3	-15	31.9	28	42.1	-19	21.2
12	354	03.4	42	54.3	-15	31.6	43	42.6	-19	20.8
13	9	05.9	57	54.2		31.2	58	43.1		20.3
14	24	08.4	72	54.2		30.8	73	43.7		19.9
15	39	10.8	87	54.2		30.5	88	44.2		19.4
16	54	13.3	102	54.2		30.1	103	44.7		19.0
17	69	15.8	117	54.2	-15	29.7	118	45.3	-19	18.5
18	84	18.2	132	54.1	-15	29.4	133	45.8	-19	18.1
19	99	20.7	147	54.1		29.0	148	46.3		17.6
20	114	23.2	162	54.1		28.6	163	46.9		17.2
21	129	25.6	177	54.1		28.2	178	47.4		16.7
22	144	28.1	192	54.1		27.9	193	48.0		16.2
23	159	30.5	207	54.0		27.5	208	48.5		15.8
24	174	33.0	222	54.0	-15	27.1	223	49.0	-19	15.3
Dif	—		0	+4		+5	+5	+19		+2

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 08 ^m 3			Edad: 14 ^d 3 PHE { SD: 15:5 PMG: **h **m 4 ^h : 56/9 12 ^h : 57/1 20 ^h : 57/3 R°: **m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	177	52.7	-1 26.5	10	50.7	+12 12.6		60 N	18 07	18 49	19 38	16 50 93	6 45 2	
1	192	52.9		25	22.5 ¹²⁸	+11 59.3 ¹³³		58	07		46 33	55 89	39 6	
2	207	53.1		39	54.5 ¹³⁰		45.9 ¹³⁴	56	07	45	28	16 59 86	33 9	
3	222	53.3		54	26.4 ¹²⁹		32.5 ¹³⁴	54	08	43	25	17 03 82	28 12	
4	237	53.5		68	58.3 ¹²⁹		19.0 ¹³⁵	52	08	41	21	06 80	24 14	
5	252	53.6	-1 21.6	83	30.3 ¹³⁰	+11 05.4 ¹³⁶		50	18 08	18 40	19 18	17 10 77	6 20 17	
6	267	53.8	-1 20.6	98	02.3 ¹³⁰	+10 51.8 ¹³⁶		45	18 08	18 38	19 12	17 16 72	6 12 21	
7	282	54.0		112	34.3 ¹³⁰		38.1 ¹³⁷	40	09	36	07	22 68	6 04 26	
8	297	54.2		127	06.3 ¹³⁰		24.3 ¹³⁸	35	09	34	04	27 64	5 58 29	
9	312	54.4		141	38.3 ¹³⁰	+10 10.5 ¹³⁸		30	09	33	19 01	31 61	53 31	
10	327	54.5		156	10.4 ¹³¹	+9 56.6 ¹³⁹		20	10	32	18 58	38 55	43 37	
11	342	54.7	-1 15.7	170	42.4 ¹³⁰	+9 42.6 ¹⁴⁰		10 N	18 11	18 32	18 56	17 44 51	5 34 42	
12	357	54.9	-1 14.7	185	14.5 ¹³¹	+9 28.6 ¹⁴⁰		0	18 12	18 32	18 56	17 50 46	5 26 46	
13	12	55.1		199	46.6 ¹³¹		14.6 ¹⁴⁰	10 S	12	33	18 58	17 56 42	18 51	
14	27	55.3		214	18.7 ¹³¹	+9 00.4 ¹⁴²		20	13	35	19 01	18 03 36	5 09 56	
15	42	55.5		228	50.8 ¹³¹	+8 46.3 ¹⁴¹		30	15	39	07	10 31	4 59 61	
16	57	55.6		243	22.9 ¹³¹		32.0 ¹⁴³	35	16	41	10	14 28	54 63	
17	72	55.8	-1 09.7	257	55.0 ¹³¹	+8 17.8 ¹⁴²		40	18 16	18 43	19 15	18 18 25	4 47 67	
18	87	56.0	-1 08.7	272	27.2 ¹³²	+8 03.4 ¹⁴⁴		45	18 18	18 47	19 21	18 24 21	4 39 72	
19	102	56.2		286	59.3 ¹³¹	+7 49.0 ¹⁴⁴		50	19	51	29	30 16	30 76	
20	117	56.4		301	31.5 ¹³²		34.6 ¹⁴⁴	52	20	53	33	33 14	25 79	
21	132	56.5		316	03.6 ¹³¹		20.1 ¹⁴⁵	54	20	56	38	36 12	20 82	
22	147	56.7		330	35.8 ¹³²	+7 05.6 ¹⁴⁵		56	21	18 58	43	40 9	15 85	
23	162	56.9		345	08.0 ¹³²	+6 51.0 ¹⁴⁶		58	22	19 01	48	44 5	09 88	
24	177	57.1	-1 02.8	359	40.1 ¹³¹	+6 36.4 ¹⁴⁶		60 S	18 23	19 05	19 55	18 48 3	4 02 92	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO	
	PMG: 12 ^h 19 ^m 8			Mag: -4.6 PMG: 9 ^h 08 ^m			Mag: +1.2 PMG: 9 ^h 04 ^m			Mag: -2.0 PMG: 11 ^h 37 ^m			Mag: +0.8 PMG: 9 ^h 53 ^m	
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	174	33.0	222 54.0	-15 27.1		223 49.0	-19 15.3		185 26.8	-5 45.6		211 17.5	-15 30.1	
1	189	35.5	237 54.0	26.7		238 49.6	14.9		200 28.7	45.3		226 19.7	30.0	
2	204	37.9	252 54.0	26.4		253 50.1	14.4		215 30.7	45.1		241 21.9	29.9	
3	219	40.4	267 53.9	26.0		268 50.6	14.0		230 32.6	44.9		256 24.2	29.9	
4	234	42.9	282 53.9	25.6		283 51.2	13.5		245 34.5	44.6		271 26.4	29.8	
5	249	45.3	297 53.9	-15 25.2		298 51.7	-19 13.0		260 36.4	-5 44.4		286 28.6	-15 29.7	
6	264	47.8	312 53.8	-15 24.9		313 52.2	-19 12.6		275 38.3	-5 44.2		301 30.8	-15 29.6	
7	279	50.3	327 53.8	24.5		328 52.8	12.1		290 40.2	43.9		316 33.0	29.6	
8	294	52.7	342 53.8	24.1		343 53.3	11.7		305 42.1	43.7		331 35.2	29.5	
9	309	55.2	357 53.8	23.7		358 53.9	11.2		320 44.0	43.5		346 37.4	29.4	
10	324	57.6	12 53.7	23.3		13 54.4	10.7		335 45.9	43.2		1 39.6	29.3	
11	340	00.1	27 53.7	-15 23.0		28 54.9	-19 10.3		350 47.8	-5 43.0		16 41.8	-15 29.2	
12	355	02.6	42 53.7	-15 22.6		43 55.5	-19 09.8		5 49.7	-5 42.8		31 44.0	-15 29.2	
13	10	05.0	57 53.6	22.2		58 56.0	09.4		20 51.6	42.6		46 46.2	29.1	
14	25	07.5	72 53.6	21.8		73 56.6	08.9		35 53.5	42.3		61 48.4	29.0	
15	40	10.0	87 53.6	21.4		88 57.1	08.4		50 55.4	42.1		76 50.6	28.9	
16	55	12.4	102 53.5	21.0		103 57.6	08.0		65 57.4	41.9		91 52.8	28.8	
17	70	14.9	117 53.5	-15 20.6		118 58.2	-19 07.5		80 59.3	-5 41.6		106 55.0	-15 28.8	
18	85	17.4	132 53.5	-15 20.3		133 58.7	-19 07.0		96 01.2	-5 41.4		121 57.2	-15 28.7	
19	100	19.8	147 53.4	19.9		148 59.3	06.6		111 03.1	41.2		136 59.4	28.6	
20	115	22.3	162 53.4	19.5		163 59.8	06.1		126 05.0	40.9		152 01.7	28.5	
21	130	24.8	177 53.3	19.1		179 00.3	05.7		141 06.9	40.7		167 03.9	28.5	
22	145	27.2	192 53.3	18.7		194 00.9	05.2		156 08.8	40.5		182 06.1	28.4	
23	160	29.7	207 53.3	18.3		209 01.4	04.7		171 10.7	40.2		197 08.3	28.3	
24	175	32.1	222 53.2	-15 17.9		224 02.0	-19 04.3		186 12.6	-5 40.0		212 10.5	-15 28.2	
Dif	—		0	+4		+5	+5		+19	+2		+22	+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16'1			Edad: 15 ^d 3 PHE { 4 ^h : 57'5 12 ^h : 57'7 20 ^h : 57'9														
	PMG: 12 ^h 08 ^m 0			SD: 15'6 PMG: 0 ^h 01 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif		Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m		
0	177	57.1	-1	02.8	359	40.1	+6	36.4	60 N	4	37	5	27	6	08	18 23 93	6 47 3	
1	192	57.3		01.8	14	12.3 ¹³²		21.7 ¹⁴⁷	58	42	29	08		24	90	45 5		
2	207	57.4	-1	00.8	28	44.5 ¹³²	+6	07.0 ¹⁴⁷	56	47	31	08		25	86	42 0		
3	222	57.6	-0	59.8	43	16.7 ¹³²	+5	52.3 ¹⁴⁷	54	51	32	08		25	84	40 1		
4	237	57.8		58.8	57	48.8 ¹³¹		37.5 ¹⁴⁸	52	54	34	08		26	81	38 14		
5	252	58.0	-0	57.9	72	21.0 ¹³²	+5	22.6 ¹⁴⁹	50	4	57	5	35	6	07	18 27 79	6 37 15	
6	267	58.2	-0	56.9	86	53.2 ¹³²	+5	07.8 ¹⁴⁸	45	5	04	5	38	6	07	18 28 74	6 33 20	
7	282	58.4		55.9	101	25.4 ¹³²	+4	52.9 ¹⁴⁹	40	08	40	07		30	69	30 24		
8	297	58.5		54.9	115	57.5 ¹³¹		37.9 ¹⁵⁰	35	12	41	07		31	65	27 28		
9	312	58.7		53.9	130	29.7 ¹³²		22.9 ¹⁵⁰	30	15	43	06		32	62	24 32		
10	327	58.9		52.9	145	01.9 ¹³²	+4	07.9 ¹⁵⁰	20	18	44	06		33	57	20 37		
11	342	59.1	-0	51.9	159	34.0 ¹³¹	+3	52.9 ¹⁵⁰	10 N	5	20	5	44	6	05	18 35 51	6 16 42	
12	357	59.3	-0	50.9	174	06.2 ¹³²	+3	37.8 ¹⁵¹	0	5	20	5	44	6	05	18 36 47	6 12 46	
13	12	59.4		50.0	188	38.3 ¹³¹		22.7 ¹⁵¹	10 S	19	43	04		38	42	09 50		
14	27	59.6		49.0	203	10.4 ¹³¹	+3	07.6 ¹⁵¹	20	16	41	03		39	38	05 55		
15	42	59.8		48.0	217	42.6 ¹³²	+2	52.4 ¹⁵²	30	10	38	02		41	32	6 00 61		
16	58	00.0		47.0	232	14.7 ¹³¹		37.2 ¹⁵²	35	07	36	01		42	29	5 57 65		
17	73	00.2	-0	46.0	246	46.8 ¹³¹	+2	22.0 ¹⁵²	40	5	02	5	34	6	01	18 43 25	5 54 69	
18	88	00.4	-0	45.0	261	18.9 ¹³¹	+2	06.8 ¹⁵²	45	4	56	5	30	6	00	18 45 20	5 51 72	
19	103	00.5		44.0	275	50.9 ¹³⁰	+1	51.5 ¹⁵³	50	48	26	5	58	46	16	46 78		
20	118	00.7		43.0	290	23.0 ¹³¹		36.3 ¹⁵²	52	44	24	58		47	14	44 81		
21	133	00.9		42.0	304	55.0 ¹³⁰		21.0 ¹⁵³	54	40	22	57		48	11	42 83		
22	148	01.1		41.1	319	27.0 ¹³⁰	+1	05.6 ¹⁵⁴	56	35	19	57		49	8	40 86		
23	163	01.3		40.1	333	59.0 ¹³⁰	+0	50.3 ¹⁵³	58	29	16	56		49	6	37 89		
24	178	01.5	-0	39.1	348	31.0 ¹³⁰	+0	35.0 ¹⁵³	60 S	4	22	5	13	5	55	18 51 2	5 34 93	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 15 ^m 8		Mag: -4.5 PMG: 9 ^h 08 ^m		Mag: +1.2 PMG: 9 ^h 04 ^m		Mag: -2.0 PMG: 11 ^h 34 ^m		Mag: +0.8 PMG: 9 ^h 50 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	175	32.1	222	53.2	-15	17.9	186	12.6	-5	40.0
1	190	34.6	237	53.2		17.5	201	14.5		39.8
2	205	37.1	252	53.1		17.1	216	16.4		39.5
3	220	39.5	267	53.1		16.7	231	18.3		39.3
4	235	42.0	282	53.1		16.3	246	20.2		39.1
5	250	44.5	297	53.0	-15	15.9	261	22.2	-5	38.8
6	265	46.9	312	53.0	-15	15.5	276	24.1	-5	38.6
7	280	49.4	327	52.9		15.1	291	26.0		38.4
8	295	51.9	342	52.9		14.7	306	27.9		38.1
9	310	54.3	357	52.9		14.3	321	29.8		37.9
10	325	56.8	12	52.8		13.9	336	31.7		37.7
11	340	59.2	27	52.8	-15	13.5	351	33.6	-5	37.4
12	355	01.7	42	52.7	-15	13.1	6	35.5	-5	37.2
13	11	04.2	57	52.7		12.7	21	37.4		37.0
14	26	06.6	72	52.6		12.3	36	39.3		36.7
15	41	09.1	87	52.6		11.9	51	41.2		36.5
16	56	11.6	102	52.5		11.5	66	43.1		36.3
17	71	14.0	117	52.5	-15	11.1	81	45.0	-5	36.0
18	86	16.5	132	52.4	-15	10.7	96	47.0	-5	35.8
19	101	19.0	147	52.4		10.3	111	48.9		35.6
20	116	21.4	162	52.3		09.9	126	50.8		35.4
21	131	23.9	177	52.3		09.5	141	52.7		35.1
22	146	26.4	192	52.2		09.0	156	54.6		34.9
23	161	28.8	207	52.2		08.6	171	56.5		34.7
24	176	31.3	222	52.1	-15	08.2	186	58.4	-5	34.4
Dif	—		0		+4		+19		+2	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			Edad: 16 ^d 3 PHE { 4 ^h : 58 ^m 1 12 ^h : 58 ^m 2 20 ^h : 58 ^m 4											
	PMG: 12 ^h 07 ^m 8			SD: 15 ^h 8 PMG: 0 ^h 47 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	178	01.5	-0 39.1	348	31.0	+0 35.0		60 N	18 12	18 54	19 43	19 56 97	6 50 2		
1	193	01.6	38.1	3	03.0 ¹³⁰	19.6 ¹⁵⁴		58	12	51	38	54 93	50 6		
2	208	01.8	37.1	17	34.9 ¹²⁹	+0 04.2 ¹⁵⁴		56	12	49	33	51 90	51 9		
3	223	02.0	36.1	32	06.9 ¹³⁰	-0 11.2 ¹⁵⁴		54	11	47	29	49 86	51 12		
4	238	02.2	35.1	46	38.7 ¹²⁸	26.6 ¹⁵⁴		52	11	45	25	47 84	52 14		
5	253	02.4	-0 34.1	61	10.6 ¹²⁹	-0 42.0 ¹⁵⁴		50	18 11	18 43	19 21	19 46 80	6 52 17		
6	268	02.6	-0 33.2	75	42.5 ¹²⁹	-0 57.4 ¹⁵⁴		45	18 11	18 40	19 15	19 42 75	6 53 22		
7	283	02.7	32.2	90	14.3 ¹²⁸	-1 12.8 ¹⁵⁴		40	11	38	09	39 71	54 26		
8	298	02.9	31.2	104	46.1 ¹²⁸	28.2 ¹⁵⁴		35	11	36	06	36 67	55 29		
9	313	03.1	30.2	119	17.9 ¹²⁸	43.7 ¹⁵⁵		30	11	35	19 02	34 64	56 32		
10	328	03.3	29.2	133	49.6 ¹²⁷	-1 59.1 ¹⁵⁴		20	11	33	18 58	30 58	57 37		
11	343	03.5	-0 28.2	148	21.3 ¹²⁷	-2 14.5 ¹⁵⁴		10 N	18 11	18 32	18 56	19 26 53	6 58 42		
12	358	03.7	-0 27.2	162	53.0 ¹²⁷	-2 30.0 ¹⁵⁵		0	18 11	18 32	18 56	19 23 48	6 58 48		
13	13	03.8	26.2	177	24.6 ¹²⁶	-2 45.4 ¹⁵⁴		10 S	11	32	57	20 44	6 59 52		
14	28	04.0	25.2	191	56.2 ¹²⁶	-3 00.8 ¹⁵⁴		20	12	34	18 59	17 38	7 00 57		
15	43	04.2	24.3	206	27.8 ¹²⁶	16.3 ¹⁵⁵		30	12	36	19 04	13 33	01 63		
16	58	04.4	23.3	220	59.3 ¹²⁵	31.7 ¹⁵⁴		35	13	38	07	11 30	02 66		
17	73	04.6	-0 22.3	235	30.8 ¹²⁵	-3 47.1 ¹⁵⁴		40	18 13	18 40	19 12	19 08 27	7 03 69		
18	88	04.8	-0 21.3	250	02.3 ¹²⁵	-4 02.5 ¹⁵⁴		45	18 14	18 43	19 17	19 05 23	7 03 75		
19	103	04.9	20.3	264	33.7 ¹²⁴	17.9 ¹⁵⁴		50	15	47	25	02 17	04 80		
20	118	05.1	19.3	279	05.1 ¹²⁴	33.3 ¹⁵⁴		52	15	49	28	19 01 15	05 82		
21	133	05.3	18.3	293	36.5 ¹²⁴	-4 48.7 ¹⁵⁴		54	15	51	32	18 59 12	05 85		
22	148	05.5	17.3	308	07.8 ¹²³	-5 04.0 ¹⁵³		56	16	53	37	57 10	06 87		
23	163	05.7	16.4	322	39.0 ¹²²	19.4 ¹⁵⁴		58	16	55	42	55 7	06 91		
24	178	05.9	-0 15.4	337	10.3 ¹²³	-5 34.7 ¹⁵³		60 S	18 17	18 58	19 48	18 53 3	7 07 95		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 12 ^h 11 ^m 9	Mag: -4.5 PMG: 9 ^h 09 ^m		Mag: +1.1 PMG: 9 ^h 03 ^m		Mag: -2.0 PMG: 11 ^h 31 ^m		Mag: +0.8 PMG: 9 ^h 46 ^m							
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	°	°	°	°	°	°	°	°						
0	176	31.3	222 52.1	-15 08.2	224 15.0	-18 53.0	186 58.4	-5 34.4	213 03.5						
1	191	33.7	237 52.1	07.8	239 15.5	52.5	202 00.3	34.2	228 05.7						
2	206	36.2	252 52.0	07.4	254 16.0	52.1	217 02.2	34.0	243 07.9						
3	221	38.7	267 52.0	07.0	269 16.6	51.6	232 04.1	33.7	258 10.1						
4	236	41.1	282 51.9	06.6	284 17.1	51.1	247 06.0	33.5	273 12.3						
5	251	43.6	297 51.9	-15 06.1	299 17.7	-18 50.6	262 08.0	-5 33.3	288 14.5						
6	266	46.1	312 51.8	-15 05.7	314 18.2	-18 50.2	277 09.9	-5 33.0	303 16.7						
7	281	48.5	327 51.7	05.3	329 18.8	49.7	292 11.8	32.8	318 18.9						
8	296	51.0	342 51.7	04.9	344 19.3	49.2	307 13.7	32.6	333 21.1						
9	311	53.5	357 51.6	04.5	359 19.9	48.7	322 15.6	32.3	348 23.3						
10	326	55.9	12 51.6	04.0	14 20.4	48.3	337 17.5	32.1	3 25.6						
11	341	58.4	27 51.5	-15 03.6	29 21.0	-18 47.8	352 19.4	-5 31.9	18 27.8						
12	357	00.8	42 51.5	-15 03.2	44 21.5	-18 47.3	7 21.3	-5 31.6	33 30.0						
13	12	03.3	57 51.4	02.8	59 22.0	46.8	22 23.2	31.4	48 32.2						
14	27	05.8	72 51.3	02.4	74 22.6	46.3	37 25.1	31.2	63 34.4						
15	42	08.2	87 51.3	01.9	89 23.1	45.9	52 27.0	30.9	78 36.6						
16	57	10.7	102 51.2	01.5	104 23.7	45.4	67 28.9	30.7	93 38.8						
17	72	13.2	117 51.2	-15 01.1	119 24.2	-18 44.9	82 30.9	-5 30.5	108 41.0						
18	87	15.6	132 51.1	-15 00.6	134 24.8	-18 44.4	97 32.8	-5 30.3	123 43.2						
19	102	18.1	147 51.0	-15 00.2	149 25.3	44.0	112 34.7	30.0	138 45.4						
20	117	20.6	162 51.0	-14 59.8	164 25.9	43.5	127 36.6	29.8	153 47.6						
21	132	23.0	177 50.9	59.4	179 26.4	43.0	142 38.5	29.6	168 49.9						
22	147	25.5	192 50.8	58.9	194 27.0	42.5	157 40.4	29.3	183 52.1						
23	162	28.0	207 50.8	58.5	209 27.5	42.0	172 42.3	29.1	198 54.3						
24	177	30.4	222 50.7	-14 58.1	224 28.0	-18 41.6	187 44.2	-5 28.9	213 56.5						
Dif	—	-1	+4	+5	+5	+19	+2	+22	+1						

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1			Edad: 17 ^d 3 PHE { 4 ^h : 58'5 12 ^h : 58'7 20 ^h : 58'8												
	PMG: 12 ^h 07 ^m 5			SD: 15'9 PMG: 1 ^h 34 ^m R°: 49 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'		°	'	°	h	m	h	m	h	m	m
0	178	05.9	-0 15.4	337	10.3	-5 34.7	60 N	4 31	5 20	6 02	21 33	102	6 52	3		
1	193	06.1	14.4	351	41.4 ¹²¹	-5 50.0 ¹⁵³	58	36	23	02	27 96		6 56	7		
2	208	06.2	13.4	6	12.6 ¹²²	-6 05.3 ¹⁵³	56	41	25	03	21 92		7 00	10		
3	223	06.4	12.4	20	43.6 ¹²⁰	20.6 ¹⁵³	54	46	27	03	15 89		03	13		
4	238	06.6	11.4	35	14.7 ¹²¹	35.8 ¹⁵²	52	50	29	03	11 86		06	16		
5	253	06.8	-0 10.4	49	45.7 ¹²⁰	-6 51.1 ¹⁵³	50	4 53	5 31	6 03	21 06	84	7 09	18		
6	268	07.0	-0 09.4	64	16.6 ¹¹⁹	-7 06.2 ¹⁵¹	45	5 00	5 34	6 03	20 57	78	7 15	23		
7	283	07.2	08.5	78	47.5 ¹¹⁹	21.4 ¹⁵²	40	05	37	04	50 73		20	27		
8	298	07.4	07.5	93	18.3 ¹¹⁸	36.6 ¹⁵²	35	09	39	04	43 69		24	31		
9	313	07.5	06.5	107	49.1 ¹¹⁸	-7 51.7 ¹⁵¹	30	12	40	04	38 65		28	34		
10	328	07.7	05.5	122	19.8 ¹¹⁷	-8 06.7 ¹⁵⁰	20	17	42	04	28 60		34	40		
11	343	07.9	-0 04.5	136	50.5 ¹¹⁷	-8 21.8 ¹⁵¹	10 N	5 19	5 43	6 04	20 19	56	7 40	45		
12	358	08.1	-0 03.5	151	21.1 ¹¹⁶	-8 36.8 ¹⁵⁰	0	5 20	5 44	6 04	20 11	51	7 46	49		
13	13	08.3	02.5	165	51.6 ¹¹⁵	-8 51.8 ¹⁵⁰	10 S	19	43	04	20 04	46	51	54		
14	28	08.5	01.5	180	22.1 ¹¹⁵	-9 06.7 ¹⁴⁹	20	16	42	04	19 55	42	7 57	59		
15	43	08.6	-0 00.5	194	52.5 ¹¹⁴	21.6 ¹⁴⁹	30	12	39	03	46 36		8 04	65		
16	58	08.8	+0 00.4	209	22.9 ¹¹⁴	36.5 ¹⁴⁹	35	08	38	03	41 33		08	68		
17	73	09.0	+0 01.4	223	53.2 ¹¹³	-9 51.3 ¹⁴⁸	40	5 04	5 36	6 03	19 35	29	8 12	72		
18	88	09.2	+0 02.4	238	23.5 ¹¹³	-10 06.0 ¹⁴⁷	45	4 58	5 33	6 02	19 28	25	8 18	76		
19	103	09.4	03.4	252	53.7 ¹¹²	20.8 ¹⁴⁸	50	51	29	02	19 21		24	82		
20	118	09.6	04.4	267	23.8 ¹¹¹	35.4 ¹⁴⁶	52	48	28	01	16 17		27	84		
21	133	09.8	05.4	281	53.9 ¹¹¹	-10 50.1 ¹⁴⁷	54	44	26	01	11 15		30	87		
22	148	09.9	06.4	296	23.9 ¹¹⁰	-11 04.6 ¹⁴⁵	56	39	23	01	07 12		33	91		
23	163	10.1	07.4	310	53.8 ¹⁰⁹	19.2 ¹⁴⁶	58	34	21	00	19 02	8	37	95		
24	178	10.3	+0 08.3	325	23.6 ¹⁰⁸	-11 33.6 ¹⁴⁴	60 S	4 28	5 18	6 00	18 56	4	8 42	98		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 12 ^h 08 ^m 0		Mag: -4.5 PMG: 9 ^h 09 ^m			Mag: +1.1 PMG: 9 ^h 02 ^m			Mag: -2.0 PMG: 11 ^h 28 ^m			Mag: +0.8 PMG: 9 ^h 43 ^m		
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	177	30.4	222 50.7	-14 58.1		224 28.0	-18 41.6		187 44.2	-5 28.9		213 56.5	-15 24.5	
1	192	32.9	237 50.7	57.6		239 28.6	41.1		202 46.1	28.6		228 58.7	24.4	
2	207	35.3	252 50.6	57.2		254 29.1	40.6		217 48.0	28.4		244 00.9	24.3	
3	222	37.8	267 50.5	56.8		269 29.7	40.1		232 49.9	28.2		259 03.1	24.3	
4	237	40.3	282 50.5	56.3		284 30.2	39.6		247 51.9	27.9		274 05.3	24.2	
5	252	42.7	297 50.4	-14 55.9		299 30.8	-18 39.1		262 53.8	-5 27.7		289 07.5	-15 24.1	
6	267	45.2	312 50.3	-14 55.5		314 31.3	-18 38.7		277 55.7	-5 27.5		304 09.8	-15 24.0	
7	282	47.7	327 50.3	55.0		329 31.9	38.2		292 57.6	27.2		319 12.0	23.9	
8	297	50.1	342 50.2	54.6		344 32.4	37.7		307 59.5	27.0		334 14.2	23.9	
9	312	52.6	357 50.1	54.1		359 33.0	37.2		323 01.4	26.8		349 16.4	23.8	
10	327	55.1	12 50.0	53.7		14 33.5	36.7		338 03.3	26.5		4 18.6	23.7	
11	342	57.5	27 50.0	-14 53.3		29 34.1	-18 36.2		353 05.2	-5 26.3		19 20.8	-15 23.6	
12	358	00.0	42 49.9	-14 52.8		44 34.6	-18 35.8		8 07.1	-5 26.1		34 23.0	-15 23.6	
13	13	02.5	57 49.8	52.4		59 35.2	35.3		23 09.0	25.8		49 25.2	23.5	
14	28	04.9	72 49.8	51.9		74 35.7	34.8		38 11.0	25.6		64 27.4	23.4	
15	43	07.4	87 49.7	51.5		89 36.3	34.3		53 12.9	25.4		79 29.7	23.3	
16	58	09.8	102 49.6	51.0		104 36.8	33.8		68 14.8	25.2		94 31.9	23.3	
17	73	12.3	117 49.5	-14 50.6		119 37.4	-18 33.3		83 16.7	-5 24.9		109 34.1	-15 23.2	
18	88	14.8	132 49.5	-14 50.1		134 37.9	-18 32.9		98 18.6	-5 24.7		124 36.3	-15 23.1	
19	103	17.2	147 49.4	49.7		149 38.5	32.4		113 20.5	24.5		139 38.5	23.0	
20	118	19.7	162 49.3	49.2		164 39.0	31.9		128 22.4	24.2		154 40.7	22.9	
21	133	22.2	177 49.2	48.8		179 39.6	31.4		143 24.3	24.0		169 42.9	22.9	
22	148	24.6	192 49.2	48.3		194 40.1	30.9		158 26.2	23.8		184 45.1	22.8	
23	163	27.1	207 49.1	47.9		209 40.7	30.4		173 28.1	23.5		199 47.4	22.7	
24	178	29.6	222 49.0	-14 47.4		224 41.2	-18 29.9		188 30.0	-5 23.3		214 49.6	-15 22.6	
Dif	—		-1	+4		+5	+5		+19	+2		+22	+	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 07 ^m 2			Edad: 18 ^d 3 PHE { 4 ^h : 58 ^m 9 12 ^h : 59 ^m 0 20 ^h : 59 ^m 1 R°: 52 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	
0	178	10.3	+0 08.3	325	23.6	-11 33.6	60 N	18 17	18 59	19 49	23 15 105	6 55	5	
1	193	10.5	09.3	339	53.4 ¹⁰⁸	-11 48.0 ¹⁴⁴	58	16	56	43	23 03 99	7 03	10	
2	208	10.7	10.3	354	23.2 ¹⁰⁸	-12 02.4 ¹⁴⁴	56	16	53	37	22 53 95	10	14	
3	223	10.9	11.3	8	52.8 ¹⁰⁶	16.7 ¹⁴³	54	15	51	33	44 91	16	17	
4	238	11.1	12.3	23	22.4 ¹⁰⁶	31.0 ¹⁴³	52	15	49	29	37 87	22	20	
5	253	11.2	+0 13.3	37	51.9 ¹⁰⁵	-12 45.1 ¹⁴¹	50	18 14	18 47	19 25	22 30 84	7 27	22	
6	268	11.4	+0 14.3	52	21.3 ¹⁰⁴	-12 59.3 ¹⁴²	45	18 14	18 43	19 17	22 15 79	7 38	28	
7	283	11.6	15.3	66	50.7 ¹⁰⁴	-13 13.3 ¹⁴⁰	40	13	40	12	22 03 74	47	32	
8	298	11.8	16.2	81	20.0 ¹⁰³	27.3 ¹⁴⁰	35	12	38	07	21 52 71	7 55	36	
9	313	12.0	17.2	95	49.2 ¹⁰²	41.2 ¹³⁹	30	12	36	19 04	43 68	8 02	39	
10	328	12.2	18.2	110	18.3 ¹⁰¹	-13 55.1 ¹³⁹	20	11	33	18 59	28 63	14	44	
11	343	12.4	+0 19.2	124	47.4 ¹⁰¹	-14 08.8 ¹³⁷	10 N	18 11	18 32	18 56	21 15 58	8 25	49	
12	358	12.6	+0 20.2	139	16.4 ¹⁰⁰	-14 22.5 ¹³⁷	0	18 10	18 31	18 55	21 02 55	8 35	53	
13	13	12.7	21.2	153	45.3 ⁹⁹	36.2 ¹³⁷	10 S	10	31	56	20 50 51	45	57	
14	28	12.9	22.2	168	14.1 ⁹⁸	-14 49.7 ¹³⁵	20	10	32	18 58	37 47	8 56	62	
15	43	13.1	23.1	182	42.8 ⁹⁷	-15 03.2 ¹³⁵	30	10	34	19 02	22 42	9 09	67	
16	58	13.3	24.1	197	11.5 ⁹⁷	16.6 ¹³⁴	35	10	35	05	14 38	16	70	
17	73	13.5	+0 25.1	211	40.1 ⁹⁶	-15 29.9 ¹³³	40	18 10	18 37	19 08	20 04 35	9 24	74	
18	88	13.7	+0 26.1	226	08.6 ⁹⁵	-15 43.2 ¹³³	45	18 10	18 39	19 14	19 53 31	9 34	78	
19	103	13.9	27.1	240	37.0 ⁹⁴	-15 56.3 ¹³¹	50	10	42	20	40 25	46	84	
20	118	14.0	28.1	255	05.3 ⁹³	-16 09.4 ¹³¹	52	10	44	24	33 23	51	87	
21	133	14.2	29.1	269	33.6 ⁹³	22.4 ¹³⁰	54	10	46	27	26 20	9 57	90	
22	148	14.4	30.1	284	01.8 ⁹²	35.2 ¹²⁸	56	10	47	31	19 16	10 04	94	
23	163	14.6	31.0	298	29.9 ⁹¹	-16 48.0 ¹²⁸	58	11	50	36	10 13	12	97	
24	178	14.8	+0 32.0	312	57.9 ⁹⁰	-17 00.8 ¹²⁸	60 S	18 11	18 52	19 42	19 00 8	10 20	103	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 12 ^h 04 ^m 0		Mag: -4.5 PMG: 9 ^h 09 ^m		Mag: +1.1 PMG: 9 ^h 01 ^m		Mag: -2.0 PMG: 11 ^h 25 ^m		Mag: +0.8 PMG: 9 ^h 39 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	178	29.6	222	49.0	-14	47.4	224	41.2	-18	29.9
1	193	32.0	237	48.9		47.0	239	41.8		29.4
2	208	34.5	252	48.9		46.5	254	42.3		29.0
3	223	36.9	267	48.8		46.1	269	42.9		28.5
4	238	39.4	282	48.7		45.6	284	43.4		28.0
5	253	41.9	297	48.6	-14	45.2	299	44.0	-18	27.5
6	268	44.3	312	48.6	-14	44.7	314	44.5	-18	27.0
7	283	46.8	327	48.5		44.3	329	45.1		26.5
8	298	49.3	342	48.4		43.8	344	45.6		26.0
9	313	51.7	357	48.3		43.3	359	46.2		25.5
10	328	54.2	12	48.2		42.9	14	46.7		25.0
11	343	56.7	27	48.2	-14	42.4	29	47.3	-18	24.5
12	358	59.1	42	48.1	-14	42.0	44	47.8	-18	24.0
13	14	01.6	57	48.0		41.5	59	48.4		23.6
14	29	04.1	72	47.9		41.0	74	48.9		23.1
15	44	06.5	87	47.8		40.6	89	49.5		22.6
16	59	09.0	102	47.7		40.1	104	50.0		22.1
17	74	11.4	117	47.7	-14	39.6	119	50.6	-18	21.6
18	89	13.9	132	47.6	-14	39.2	134	51.1	-18	21.1
19	104	16.4	147	47.5		38.7	149	51.7		20.6
20	119	18.8	162	47.4		38.2	164	52.3		20.1
21	134	21.3	177	47.3		37.8	179	52.8		19.6
22	149	23.8	192	47.2		37.3	194	53.4		19.1
23	164	26.2	207	47.1		36.8	209	53.9		18.6
24	179	28.7	222	47.1	-14	36.4	224	54.5	-18	18.1
Dif	—		-1	+5	+6	+5	+19	+2	+22	+1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 06 ^m 9			Edad: 19 ^d 3 PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 2 20 ^h : 59 ^m 2 SD: 16 ^h 1 PMG: 3 ^h 15 ^m R°: 56 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	
0	178	14.8	+0	32.0	312	57.9	89	-17 00.8	60 N	4 24	5 14	5 56	** ** *	**	7 00	10
1	193	15.0		33.0	327	25.8	89	13.4 ¹²⁶	58	30	17	57	** ** *	**	13	15
2	208	15.2		34.0	341	53.6	88	25.9 ¹²⁵	56	36	20	57	** ** *	**	24	19
3	223	15.4		35.0	356	21.4	88	38.3 ¹²⁴	54	40	22	58	** ** *	**	33	25
4	238	15.5		36.0	10	49.0	86	-17 50.6 ¹²³	52	45	25	58	** ** *	**	42	26
5	253	15.7	+0	37.0	25	16.6	86	-18 02.8 ¹²²	50	4 48	5 26	5 59	23 54	82	7 49	29
6	268	15.9	+0	38.0	39	44.1	85	-18 15.0 ¹²²	45	4 56	5 30	6 00	23 34	77	8 06	34
7	283	16.1		38.9	54	11.5	84	27.0 ¹²⁰	40	5 02	33	00	17 74		19	38
8	298	16.3		39.9	68	38.8	83	38.9 ¹¹⁹	35	06	36	01	23 03	71	31	41
9	313	16.5		40.9	83	06.0	82	-18 50.7 ¹¹⁸	30	10	38	02	22 51	69	41	44
10	328	16.7		41.9	97	33.2	82	-19 02.4 ¹¹⁷	20	15	40	02	31 65		8 58	49
11	343	16.8	+0	42.9	112	00.2	80	-19 14.0 ¹¹⁶	10 N	5 18	5 42	6 03	22 13	62	9 14	52
12	358	17.0	+0	43.9	126	27.2	80	-19 25.4 ¹¹⁴	0	5 19	5 43	6 04	21 57	58	9 28	56
13	13	17.2		44.9	140	54.1	79	36.8 ¹¹⁴	10 S	19	43	04	41 55		42	60
14	28	17.4		45.8	155	20.8	77	48.0 ¹¹²	20	17	42	04	24 51		9 58	64
15	43	17.6		46.8	169	47.5	77	-19 59.2 ¹¹²	30	13	41	05	21 04	48	10 16	68
16	58	17.8		47.8	184	14.1	76	-20 10.2 ¹¹⁰	35	10	39	05	20 52	46	26	71
17	73	18.0	+0	48.8	198	40.7	76	-20 21.1 ¹⁰⁹	40	5 06	5 38	6 05	20 39	43	10 38	75
18	88	18.2	+0	49.8	213	07.1	74	-20 31.8 ¹⁰⁷	45	5 01	5 35	6 05	20 24	39	10 52	79
19	103	18.3		50.8	227	33.5	74	42.5 ¹⁰⁷	50	4 55	33	05	20 05	34	11 10	83
20	118	18.5		51.8	241	59.7	72	-20 53.0 ¹⁰⁵	52	51	31	05	19 56	32	18	86
21	133	18.7		52.7	256	25.9	72	-21 03.4 ¹⁰⁴	54	48	29	05	46 29		27	90
22	148	18.9		53.7	270	52.0	71	13.6 ¹⁰²	56	44	28	05	35 25		38	93
23	163	19.1		54.7	285	18.0	70	23.8 ¹⁰²	58	39	25	05	23 20		11 49	99
24	178	19.3	+0	55.7	299	43.9	69	-21 33.8 ¹⁰⁰	60 S	4 33	5 23	6 05	19 08	14	12 03	105

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 12 ^h 00 ^m 1		Mag: -4.5 PMG: 9 ^h 09 ^m		Mag: +1.1 PMG: 9 ^h 00 ^m		Mag: -2.0 PMG: 11 ^h 21 ^m		Mag: +0.8 PMG: 9 ^h 36 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	179	28.7	222	47.1	-14	36.4	224	54.5	-18	189	15.9	-5	215	42.7	-15	20.8
1	194	31.2	237	47.0		35.9	239	55.0		204	17.8		230	44.9		20.7
2	209	33.6	252	46.9		35.4	254	55.6		219	19.7		245	47.1		20.7
3	224	36.1	267	46.8		34.9	269	56.1		234	21.6		260	49.3		20.6
4	239	38.5	282	46.7		34.5	284	56.7		249	23.5		275	51.6		20.5
5	254	41.0	297	46.6	-14	34.0	299	57.2	-18	264	25.5	-5	290	53.8	-15	20.4
6	269	43.5	312	46.5	-14	33.5	314	57.8	-18	279	27.4	-5	305	56.0	-15	20.4
7	284	45.9	327	46.4		33.0	329	58.3		294	29.3		320	58.2		20.3
8	299	48.4	342	46.3		32.6	344	58.9		309	31.2		336	00.4		20.2
9	314	50.9	357	46.3		32.1	359	59.5		324	33.1		351	02.6		20.1
10	329	53.3	12	46.2		31.6	15	00.0		339	35.0		6	04.8		20.0
11	344	55.8	27	46.1	-14	31.1	30	00.6	-18	354	36.9	-5	21	07.1	-15	20.0
12	359	58.3	42	46.0	-14	30.6	45	01.1	-18	9	38.8	-5	36	09.3	-15	19.9
13	15	00.7	57	45.9		30.2	60	01.7		24	40.7		51	11.5		19.8
14	30	03.2	72	45.8		29.7	75	02.2		39	42.7		66	13.7		19.7
15	45	05.7	87	45.7		29.2	90	02.8		54	44.6		81	15.9		19.7
16	60	08.1	102	45.6		28.7	105	03.3		69	46.5		96	18.1		19.6
17	75	10.6	117	45.5	-14	28.2	120	03.9	-18	84	48.4	-5	111	20.4	-15	19.5
18	90	13.0	132	45.4	-14	27.7	135	04.5	-18	99	50.3	-5	126	22.6	-15	19.4
19	105	15.5	147	45.3		27.3	150	05.0		114	52.2		141	24.8		19.4
20	120	18.0	162	45.2		26.8	165	05.6		129	54.1		156	27.0		19.3
21	135	20.4	177	45.1		26.3	180	06.1		144	56.0		171	29.2		19.2
22	150	22.9	192	45.0		25.8	195	06.7		159	57.9		186	31.4		19.1
23	165	25.4	207	44.9		25.3	210	07.2		174	59.9		201	33.7		19.1
24	180	27.8	222	44.8	-14	24.8	225	07.8	-18	190	01.8	-5	216	35.9	-15	19.0
Dif	—		-1	+5			+6	+5		+19	+2		+22	+1		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 12 ^h 06 ^m 6			Edad: 20 ^d 3 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 PMG: 4 ^h 11 ^m R°: 59 ^m					Civil		Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec			Dif						
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	19.3	+0 55.7	299	43.9	-21 33.8	68	60 N	18 22	19 04	19 54	1 00 103	7 10 19		
1	193	19.5		56.7	314	09.7	68	58	21	19 00	48	0 42 97	28 26		
2	208	19.7		57.7	328	35.4	67	56	20	18 57	42	28 91	43 31		
3	223	19.8		58.7	343	01.1	67	54	19	54	37	15 88	7 56 35		
4	238	20.0	+0 59.6	357	26.7	66	95	52	18	52	32	0 04 85	8 08 37		
5	253	20.2	+1 00.6	11	52.2	65	93	50	18 18	18 50	19 28	** ** *	8 18 40		
6	268	20.4	+1 01.6	26	17.6	64	92	45	18 16	18 46	19 20	** ** *	8 40 44		
7	283	20.6		02.6	40	42.9	63	40	15	42	14	** ** *	8 57 47		
8	298	20.8		03.6	55	08.1	62	35	14	39	09	** ** *	9 12 50		
9	313	21.0		04.6	69	33.3	62	30	13	37	19 05	** ** *	25 51		
10	328	21.2		05.6	83	58.4	61	20	12	34	18 59	23 36 64	9 47 55		
11	343	21.3	+1 06.5	98	23.3	59	85	10 N	18 11	18 32	18 56	23 15 62	10 06 58		
12	358	21.5	+1 07.5	112	48.3	60	83	0	18 10	18 30	18 54	22 55 61	10 24 60		
13	13	21.7		08.5	127	13.1	82	10 S	09	30	54	36 59	10 42 63		
14	28	21.9		09.5	141	37.9	80	20	08	30	56	22 15 58	11 02 65		
15	43	22.1		10.5	156	02.5	78	30	08	31	18 59	21 52 55	24 68		
16	58	22.3		11.5	170	27.2	57	35	07	32	19 02	38 53	37 70		
17	73	22.5	+1 12.5	184	51.7	55	75	40	18 07	18 34	19 05	21 22 51	11 53 72		
18	88	22.7	+1 13.4	199	16.2	55	74	45	18 06	18 36	19 10	21 03 49	12 11 75		
19	103	22.9		14.4	213	40.5	53	50	06	38	16	20 39 46	33 79		
20	118	23.0		15.4	228	04.9	54	52	06	39	19	28 44	44 81		
21	133	23.2		16.4	242	29.1	52	54	05	41	22	15 42	12 57 83		
22	148	23.4		17.4	256	53.3	52	56	05	42	26	20 00 39	13 11 86		
23	163	23.6		18.4	271	17.4	51	58	05	44	30	19 43 35	28 90		
24	178	23.8	+1 19.4	285	41.5	51	64	60 S	18 05	18 46	19 35	19 22 29	13 48 97		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 56 ^m 2		Mag: -4.5 PMG: 9 ^h 09 ^m			Mag: +1.1 PMG: 8 ^h 59 ^m			Mag: -2.0 PMG: 11 ^h 18 ^m			Mag: +0.8 PMG: 9 ^h 32 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	180	27.8	222	44.8	-14 24.8	225	07.8	-18 06.1	190	01.8	-5 12.2	216	35.9	-15 19.0	
1	195	30.3	237	44.8	24.3	240	08.4	05.6	205	03.7	12.0	231	38.1	18.9	
2	210	32.8	252	44.7	23.8	255	08.9	05.1	220	05.6	11.7	246	40.3	18.8	
3	225	35.2	267	44.6	23.3	270	09.5	04.6	235	07.5	11.5	261	42.5	18.8	
4	240	37.7	282	44.5	22.8	285	10.0	04.1	250	09.4	11.3	276	44.7	18.7	
5	255	40.2	297	44.4	-14 22.3	300	10.6	-18 03.6	265	11.3	-5 11.0	291	47.0	-15 18.6	
6	270	42.6	312	44.3	-14 21.9	315	11.1	-18 03.1	280	13.2	-5 10.8	306	49.2	-15 18.5	
7	285	45.1	327	44.2	21.4	330	11.7	02.6	295	15.2	10.6	321	51.4	18.5	
8	300	47.5	342	44.1	20.9	345	12.3	02.1	310	17.1	10.3	336	53.6	18.4	
9	315	50.0	357	44.0	20.4	0 12.8	01.6	01.6	325	19.0	10.1	351	55.8	18.3	
10	330	52.5	12	43.9	19.9	15	13.4	01.1	340	20.9	09.9	6	58.0	18.2	
11	345	54.9	27	43.8	-14 19.4	30	13.9	-18 00.6	355	22.8	-5 09.6	22	00.3	-15 18.2	
12	0	57.4	42	43.7	-14 18.9	45	14.5	-18 00.1	10	24.7	-5 09.4	37	02.5	-15 18.1	
13	15	59.9	57	43.6	18.4	60	15.1	-17 59.6	25	26.6	09.2	52	04.7	18.0	
14	31	02.3	72	43.5	17.9	75	15.6	59.1	40	28.5	09.0	67	06.9	17.9	
15	46	04.8	87	43.3	17.4	90	16.2	58.5	55	30.5	08.7	82	09.1	17.9	
16	61	07.3	102	43.2	16.9	105	16.7	58.0	70	32.4	08.5	97	11.4	17.8	
17	76	09.7	117	43.1	-14 16.4	120	17.3	-17 57.5	85	34.3	-5 08.3	112	13.6	-15 17.7	
18	91	12.2	132	43.0	-14 15.8	135	17.9	-17 57.0	100	36.2	-5 08.0	127	15.8	-15 17.6	
19	106	14.7	147	42.9	15.3	150	18.4	56.5	115	38.1	07.8	142	18.0	17.6	
20	121	17.1	162	42.8	14.8	165	19.0	56.0	130	40.0	07.6	157	20.2	17.5	
21	136	19.6	177	42.7	14.3	180	19.5	55.5	145	41.9	07.3	172	22.4	17.4	
22	151	22.0	192	42.6	13.8	195	20.1	55.0	160	43.8	07.1	187	24.7	17.3	
23	166	24.5	207	42.5	13.3	210	20.7	54.5	175	45.8	06.9	202	26.9	17.3	
24	181	27.0	222	42.4	-14 12.8	225	21.2	-17 54.0	190	47.7	-5 06.6	217	29.1	-15 17.2	
Dif	—		-1		+5	+6		+5	+19		+2	+22		+1	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16/0 PMG: 12 ^h 06 ^m 3			Edad: 21 ^d 3 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 PMG: 5 ^h 10 ^m R°: 61 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	23.8	+1	19.4	285	41.5	-24	50.9	60 N	4 17	5 08	5 50	2 43	88	7 29	41
1	193	24.0		20.3	300	05.4	49	-24 57.2	63 58	24	12	51	2 19	82	7 54	46
2	208	24.2		21.3	314	29.4	50	-25 03.3	61 56	30	15	52	1 59	79	8 14	49
3	223	24.4		22.3	328	53.2	48	09.2	59 54	35	17	53	43	77	31	50
4	238	24.5		23.3	343	17.0	48	15.0	58 52	40	20	54	29	75	45	52
5	253	24.7	+1	24.3	357	40.8	48	-25 20.6	56 50	4 44	5 22	5 54	1 16	74	8 58	53
6	268	24.9	+1	25.3	12	04.4	46	-25 26.1	55 45	4 52	5 27	5 56	0 51	71	9 24	55
7	283	25.1		26.2	26	28.1	47	31.3	52 40	4 58	30	57	31	69	9 44	57
8	298	25.3		27.2	40	51.6	45	36.4	51 35	5 03	33	58	14	68	10 02	57
9	313	25.5		28.2	55	15.2	46	41.4	50 30	07	35	5 59	0 00	67	16	59
10	328	25.7		29.2	69	38.6	44	46.1	47 20	13	39	6 01	** ** *	**	10 42	60
11	343	25.9	+1	30.2	84	02.1	45	-25 50.7	46 10 N	5 17	5 41	6 02	** ** *	**	11 04	61
12	358	26.0	+1	31.2	98	25.5	44	-25 55.1	44 0	5 18	5 42	6 03	23 56	62	11 24	62
13	13	26.2		32.2	112	48.8	43	-25 59.4	43 10 S	19	43	04	35	62	11 45	62
14	28	26.4		33.1	127	12.1	43	-26 03.4	40 20	17	43	05	23 13	61	12 07	63
15	43	26.6		34.1	141	35.3	42	07.3	39 30	14	42	06	22 47	61	32	64
16	58	26.8		35.1	155	58.6	43	11.0	37 35	12	41	06	31	62	12 47	65
17	73	27.0	+1	36.1	170	21.7	41	-26 14.5	35 40	5 08	5 40	6 07	22 13	62	13 05	65
18	88	27.2	+1	37.1	184	44.9	42	-26 17.9	34 45	5 04	5 38	6 07	21 52	61	13 26	66
19	103	27.4		38.1	199	08.0	41	21.0	31 50	4 58	36	08	25	61	13 52	67
20	118	27.6		39.0	213	31.1	41	24.0	30 52	55	35	08	21 12	60	14 05	68
21	133	27.7		40.0	227	54.1	40	26.8	28 54	52	33	09	20 57	60	20	68
22	148	27.9		41.0	242	17.2	41	29.5	27 56	48	32	09	39	60	37	70
23	163	28.1		42.0	256	40.2	40	31.9	24 58	44	30	09	20 18	59	14 58	71
24	178	28.3	+1	43.0	271	03.1	39	-26 34.2	23 60 S	4 39	5 28	6 10	19 51	57	15 25	72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 52 ^m 3		Mag: -4.5 PMG: 9 ^h 09 ^m		Mag: +1.1 PMG: 8 ^h 58 ^m		Mag: -2.0 PMG: 11 ^h 15 ^m		Mag: +0.9 PMG: 9 ^h 29 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	181	27.0	222	42.4	-14	12.8	225	21.2	-17	54.0
1	196	29.4	237	42.3		12.3	240	21.8		53.5
2	211	31.9	252	42.2		11.8	255	22.3		52.9
3	226	34.4	267	42.1		11.3	270	22.9		52.4
4	241	36.8	282	42.0		10.8	285	23.5		51.9
5	256	39.3	297	41.9	-14	10.2	300	24.0	-17	51.4
6	271	41.8	312	41.8	-14	09.7	315	24.6	-17	50.9
7	286	44.2	327	41.7		09.2	330	25.1		50.4
8	301	46.7	342	41.5		08.7	345	25.7		49.9
9	316	49.1	357	41.4		08.2	0	26.3		49.4
10	331	51.6	12	41.3		07.7	15	26.8		48.8
11	346	54.1	27	41.2	-14	07.1	30	27.4	-17	48.3
12	1	56.5	42	41.1	-14	06.6	45	28.0	-17	47.8
13	16	59.0	57	41.0		06.1	60	28.5		47.3
14	32	01.5	72	40.9		05.6	75	29.1		46.8
15	47	03.9	87	40.8		05.1	90	29.6		46.3
16	62	06.4	102	40.7		04.5	105	30.2		45.8
17	77	08.9	117	40.5	-14	04.0	120	30.8	-17	45.2
18	92	11.3	132	40.4	-14	03.5	135	31.3	-17	44.7
19	107	13.8	147	40.3		03.0	150	31.9		44.2
20	122	16.3	162	40.2		02.4	165	32.5		43.7
21	137	18.7	177	40.1		01.9	180	33.0		43.2
22	152	21.2	192	40.0		01.4	195	33.6		42.7
23	167	23.6	207	39.9		00.9	210	34.2		42.1
24	182	26.1	222	39.8	-14	00.3	225	34.7	-17	41.6
Dif	—		-1	+5		+6	+5	+19		+2

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 06 ^m 0			Edad: 22 ^d 3 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/2 PMG: 6 ^h 11 ^m R°: 62 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	28.3	+1 43.0	271	03.1	-26 34.2	60 N	18 27	19 09	20 00	4 11 55	8 10 74		
1	193	28.5		285	26.1 40	36.3	58	25	05	19 53	3 41 57	8 40 71		
2	208	28.7		299	49.0 39	38.2	56	24	19 01	46	18 59	9 03 70		
3	223	28.9		314	12.0 40	39.9	54	23	18 58	41	3 00 59	21 69		
4	238	29.1		328	34.9 39	41.4	52	22	56	36	2 44 59	37 69		
5	253	29.2	+1 47.9	342	57.8 39	-26 42.8	50	18 21	18 53	19 32	2 30 60	9 51 68		
6	268	29.4	+1 48.9	357	20.7 39	-26 43.9	45	18 19	18 48	19 23	2 02 61	10 19 66		
7	283	29.6		11	43.5 38	44.9	40	17	44	16	1 40 61	41 66		
8	298	29.8		50.8	26 06.4 39	45.7	35	16	41	11	22 61	10 59 65		
9	313	30.0		51.8	40 29.3 39	46.3	30	14	38	06	1 07 61	11 15 64		
10	328	30.2		52.8	54 52.2 39	46.8	20	12	34	19 00	0 40 62	11 42 63		
11	343	30.4	+1 53.8	69	15.1 39	-26 47.0	10 N	18 11	18 32	18 56	0 17 62	12 05 62		
12	358	30.6	+1 54.8	83	37.9 38	-26 47.1	0	18 09	18 30	18 54	** ** *	12 26 61		
13	13	30.8		55.7	98 00.8 39	47.0	10 S	08	29	53	** ** *	12 47 61		
14	28	30.9		56.7	112 23.7 39	46.7	20	07	28	54	** ** *	13 10 59		
15	43	31.1		57.7	126 46.7 40	46.2	30	05	29	57	23 48 66	36 58		
16	58	31.3		58.7	141 09.6 39	45.6	35	04	30	18 59	33 67	13 52 57		
17	73	31.5	+1 59.7	155	32.5 39	-26 44.7	40	18 03	18 30	19 02	23 15 69	14 10 56		
18	88	31.7	+2 00.7	169	55.5 40	-26 43.7	45	18 03	18 32	19 06	22 53 71	14 32 54		
19	103	31.9		01.6	184 18.5 40	42.5	50	01	34	11	26 73	14 59 53		
20	118	32.1		02.6	198 41.5 40	41.1	52	01	35	14	22 12 75	15 13 51		
21	133	32.3		03.6	213 04.5 40	39.5	54	00	36	17	21 57 77	28 50		
22	148	32.5		04.6	227 27.5 40	37.8	56	18 00	37	20	39 79	15 47 47		
23	163	32.6		05.6	241 50.6 41	35.8	58	17 59	38	24	21 17 82	16 09 45		
24	178	32.8	+2 06.6	256	13.7 41	-26 33.7	60 S	17 59	18 40	19 29	20 48 87	16 37 40		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 48 ^m 3		Mag: -4.5 PMG: 9 ^h 09 ^m		Mag: +1.1 PMG: 8 ^h 57 ^m		Mag: -2.0 PMG: 11 ^h 12 ^m		Mag: +0.9 PMG: 9 ^h 25 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	182	26.1	222	39.8	-14 00.3	225	34.7	-17 41.6	191	33.6	-5 01.1	218	22.4	-15 15.4
1	197	28.6	237	39.6	-13 59.8	240	35.3	41.1	206	35.5	00.9	233	24.6	15.3
2	212	31.0	252	39.5	59.3	255	35.8	40.6	221	37.4	00.6	248	26.8	15.3
3	227	33.5	267	39.4	58.7	270	36.4	40.1	236	39.3	00.4	263	29.0	15.2
4	242	36.0	282	39.3	58.2	285	37.0	39.5	251	41.2	-5 00.2	278	31.3	15.1
5	257	38.4	297	39.2	-13 57.7	300	37.5	-17 39.0	266	43.2	-5 00.0	293	33.5	-15 15.0
6	272	40.9	312	39.1	-13 57.1	315	38.1	-17 38.5	281	45.1	-4 59.7	308	35.7	-15 15.0
7	287	43.4	327	38.9	56.6	330	38.7	38.0	296	47.0	59.5	323	37.9	14.9
8	302	45.8	342	38.8	56.1	345	39.2	37.5	311	48.9	59.3	338	40.1	14.8
9	317	48.3	357	38.7	55.5	0	39.8	37.0	326	50.8	59.0	353	42.4	14.7
10	332	50.8	12	38.6	55.0	15	40.4	36.4	341	52.7	58.8	8	44.6	14.7
11	347	53.2	27	38.5	-13 54.5	30	40.9	-17 35.9	356	54.6	-4 58.6	23	46.8	-15 14.6
12	2	55.7	42	38.4	-13 53.9	45	41.5	-17 35.4	11	56.6	-4 58.3	38	49.0	-15 14.5
13	17	58.1	57	38.2	53.4	60	42.1	34.9	26	58.5	58.1	53	51.3	14.4
14	33	00.6	72	38.1	52.9	75	42.6	34.3	42	00.4	57.9	68	53.5	14.4
15	48	03.1	87	38.0	52.3	90	43.2	33.8	57	02.3	57.6	83	55.7	14.3
16	63	05.5	102	37.9	51.8	105	43.8	33.3	72	04.2	57.4	98	57.9	14.2
17	78	08.0	117	37.8	-13 51.2	120	44.3	-17 32.8	87	06.1	-4 57.2	114	00.1	-15 14.1
18	93	10.5	132	37.6	-13 50.7	135	44.9	-17 32.3	102	08.0	-4 57.0	129	02.4	-15 14.1
19	108	12.9	147	37.5	50.1	150	45.5	31.7	117	10.0	56.7	144	04.6	14.0
20	123	15.4	162	37.4	49.6	165	46.0	31.2	132	11.9	56.5	159	06.8	13.9
21	138	17.9	177	37.3	49.1	180	46.6	30.7	147	13.8	56.3	174	09.0	13.8
22	153	20.3	192	37.2	48.5	195	47.2	30.2	162	15.7	56.0	189	11.3	13.8
23	168	22.8	207	37.0	48.0	210	47.7	29.6	177	17.6	55.8	204	13.5	13.7
24	183	25.3	222	36.9	-13 47.4	225	48.3	-17 29.1	192	19.5	-4 55.6	219	15.7	-15 13.6
Dif	—		-1 +5		+6 +5		+19 +2		+22 +1					

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 05 ^m 7			Edad: 23 ^d 3 SD: 16 ^h 1 PMG: 7 ^h 13 ^m	PHE { 4 ^h : 59 ^m 1 12 ^h : 59 ^m 1 20 ^h : 59 ^m 0 R°: 59 ^m									
	hG ☉	Dec	Dif			Náutico		Civil	Hora		R°	Hora	R°	
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	
0	178	32.8	+2 06.6	256	13.7	-26 33.7	60 N	4 10	5 02	5 44	5 06 27	9 24 97		
1	193	33.0		270	36.9	31.4	58	18	06	45	4 38 34	9 51 91		
2	208	33.2		285	00.0	28.9	56	24	09	47	4 17 37	10 13 86		
3	223	33.4		299	23.3	26.3	54	30	12	48	3 59 40	30 83		
4	238	33.6		313	46.5	23.5	52	35	15	49	43 44	46 80		
5	253	33.8	+2 11.5	328	09.8	-26 20.4	50	4 39	5 18	5 50	3 30 45	10 59 78		
6	268	34.0	+2 12.4	342	33.1	-26 17.3	45	4 48	5 23	5 52	3 03 48	11 25 75		
7	283	34.1		356	56.5	13.9	40	4 55	27	54	2 41 51	11 47 71		
8	298	34.3		11	20.0	10.4	35	5 01	30	55	23 53	12 04 69		
9	313	34.5		25	43.4	06.7	30	05	33	57	2 08 54	19 67		
10	328	34.7		40	07.0	-26 02.8	20	11	37	5 59	1 42 56	12 45 64		
11	343	34.9	+2 17.3	54	30.6	-25 58.7	10 N	5 15	5 40	6 01	1 19 59	13 07 61		
12	358	35.1	+2 18.3	68	54.2	-25 54.5	0	5 18	5 42	6 02	0 58 60	13 27 59		
13	13	35.3		83	17.9	50.1	10 S	19	43	04	37 62	13 48 56		
14	28	35.5		97	41.6	45.5	20	18	43	05	0 14 64	14 09 54		
15	43	35.7		112	05.4	40.8	30	15	43	07	** ** *	34 51		
16	58	35.8		126	29.3	35.9	35	13	43	08	** ** *	14 49 49		
17	73	36.0	+2 23.2	140	53.3	-25 30.8	40	5 10	5 42	6 09	** ** *	15 06 46		
18	88	36.2	+2 24.2	155	17.3	-25 25.6	45	5 06	5 41	6 10	** ** *	15 26 43		
19	103	36.4		169	41.3	20.1	50	5 01	39	11	23 39 81	15 52 38		
20	118	36.6		184	05.5	14.6	52	4 59	38	12	27 84	16 04 37		
21	133	36.8		198	29.7	08.8	54	56	37	12	23 14 86	18 34		
22	148	37.0		212	53.9	-25 02.9	56	52	36	13	22 58 90	34 31		
23	163	37.2		227	18.3	-24 56.9	58	48	34	14	39 94	16 54 25		
24	178	37.3	+2 30.1	241	42.7	-24 50.7	60 S	4 44	5 33	6 14	22 15 102	17 17 20		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 11 ^h 44 ^m 4		Mag: -4.5 PMG: 9 ^h 10 ^m		Mag: +1.1 PMG: 8 ^h 56 ^m		Mag: -2.0 PMG: 11 ^h 09 ^m		Mag: +0.9 PMG: 9 ^h 22 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	183	25.3	222	36.9	-13 47.4	225	48.3	-17 29.1	192	19.5	-4 55.6	219	15.7	-15 13.6
1	198	27.7	237	36.8	46.9	240	48.9	28.6	207	21.4	55.3	234	17.9	13.6
2	213	30.2	252	36.7	46.3	255	49.4	28.1	222	23.4	55.1	249	20.2	13.5
3	228	32.6	267	36.5	45.8	270	50.0	27.5	237	25.3	54.9	264	22.4	13.4
4	243	35.1	282	36.4	45.2	285	50.6	27.0	252	27.2	54.7	279	24.6	13.3
5	258	37.6	297	36.3	-13 44.7	300	51.1	-17 26.5	267	29.1	-4 54.4	294	26.8	-15 13.3
6	273	40.0	312	36.2	-13 44.1	315	51.7	-17 26.0	282	31.0	-4 54.2	309	29.1	-15 13.2
7	288	42.5	327	36.0	43.6	330	52.3	25.4	297	32.9	54.0	324	31.3	13.1
8	303	45.0	342	35.9	43.0	345	52.8	24.9	312	34.8	53.7	339	33.5	13.0
9	318	47.4	357	35.8	42.5	0	53.4	24.4	327	36.8	53.5	354	35.7	13.0
10	333	49.9	12	35.7	41.9	15	54.0	23.8	342	38.7	53.3	9	37.9	12.9
11	348	52.4	27	35.5	-13 41.3	30	54.6	-17 23.3	357	40.6	-4 53.0	24	40.2	-15 12.8
12	3	54.8	42	35.4	-13 40.8	45	55.1	-17 22.8	12	42.5	-4 52.8	39	42.4	-15 12.7
13	18	57.3	57	35.3	40.2	60	55.7	22.3	27	44.4	52.6	54	44.6	12.7
14	33	59.8	72	35.2	39.7	75	56.3	21.7	42	46.3	52.4	69	46.8	12.6
15	49	02.2	87	35.0	39.1	90	56.8	21.2	57	48.3	52.1	84	49.1	12.5
16	64	04.7	102	34.9	38.5	105	57.4	20.7	72	50.2	51.9	99	51.3	12.5
17	79	07.1	117	34.8	-13 38.0	120	58.0	-17 20.1	87	52.1	-4 51.7	114	53.5	-15 12.4
18	94	09.6	132	34.7	-13 37.4	135	58.5	-17 19.6	102	54.0	-4 51.4	129	55.7	-15 12.3
19	109	12.1	147	34.5	36.9	150	59.1	19.1	117	55.9	51.2	144	58.0	12.2
20	124	14.5	162	34.4	36.3	165	59.7	18.6	132	57.8	51.0	160	00.2	12.2
21	139	17.0	177	34.3	35.7	181	00.3	18.0	147	59.7	50.7	175	02.4	12.1
22	154	19.5	192	34.1	35.2	196	00.8	17.5	163	01.7	50.5	190	04.6	12.0
23	169	21.9	207	34.0	34.6	211	01.4	17.0	178	03.6	50.3	205	06.9	11.9
24	184	24.4	222	33.9	-13 34.0	226	02.0	-17 16.4	193	05.5	-4 50.1	220	09.1	-15 11.9
Dif	—		-1 +6		+6 +5		+19 +2		+22 +1					

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 05 ^m 4			Edad: 24 ^d 3 PHE { 4 ^h : 58'9 12 ^h : 58'8 20 ^h : 58'7 R°: 57 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	37.3	+2 30.1	241	42.7	-24 50.7	55	60 N	18 31	19 14	20 06	5 33 13	11 01 104	
1	193	37.5		256	07.2		64	58	30	09	19 58	5 12 19	22 97	
2	208	37.7	32.0	270	31.8	37.8	65	56	28	06	51	4 54 24	39 92	
3	223	37.9	33.0	284	56.4	31.1	67	54	26	19 02	45	39 28	11 53 88	
4	238	38.1	34.0	299	21.1	24.2	69	52	25	18 59	40	27 30	12 06 85	
5	253	38.3	+2 35.0	313	45.9	-24 17.2	70	50	18 24	18 56	19 35	4 15 33	12 17 82	
6	268	38.5	+2 36.0	328	10.8	-24 10.1	71	45	18 21	18 51	19 26	3 51 38	12 40 77	
7	283	38.7	36.9	342	35.8	-24 02.8	73	40	19	46	18	32 41	12 58 73	
8	298	38.9	37.9	357	00.8	-23 55.3	75	35	17	43	12	16 44	13 13 70	
9	313	39.0	38.9	11	26.0	47.7	76	30	16	40	08	3 02 47	26 68	
10	328	39.2	39.9	25	51.2	40.0	77	20	13	35	19 01	2 38 51	13 49 62	
11	343	39.4	+2 40.9	40	16.5	-23 32.1	79	10 N	18 11	18 32	18 56	2 18 54	14 08 59	
12	358	39.6	+2 41.8	54	41.9	-23 24.0	81	0	18 09	18 29	18 53	1 58 58	14 26 55	
13	13	39.8	42.8	69	07.4	15.9	81	10 S	07	28	52	39 60	14 44 52	
14	28	40.0	43.8	83	32.9	-23 07.5	84	20	05	27	52	1 18 64	15 03 48	
15	43	40.2	44.8	97	58.6	-22 59.1	84	30	03	27	54	0 54 68	25 43	
16	58	40.4	45.8	112	24.3	50.5	86	35	02	27	56	40 70	38 40	
17	73	40.5	+2 46.7	126	50.2	-22 41.7	88	40	18 00	18 27	18 59	0 24 72	15 52 37	
18	88	40.7	+2 47.7	141	16.1	-22 32.8	89	45	17 59	18 28	19 02	0 04 76	16 09 34	
19	103	40.9	48.7	155	42.1	23.8	90	50	57	29	07	** ** *	30 29	
20	118	41.1	49.7	170	08.2	14.7	91	52	56	30	09	** ** *	41 25	
21	133	41.3	50.6	184	34.4	-22 05.4	93	54	56	31	12	** ** *	16 52 23	
22	148	41.5	51.6	199	00.7	-21 56.0	94	56	55	32	15	** ** *	17 05 19	
23	163	41.7	52.6	213	27.1	46.5	95	58	54	33	18	** ** *	19 16	
24	178	41.9	+2 53.6	227	53.5	-21 36.8	97	60 S	17 53	18 34	19 23	23 57 101	17 37 10	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 11 ^h 40 ^m 5	Mag: -4.4 PMG: 9 ^h 10 ^m	Mag: +1.1 PMG: 8 ^h 56 ^m	Mag: -2.1 PMG: 11 ^h 06 ^m	Mag: +0.9 PMG: 9 ^h 18 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	°	'	°	'	°	'					
0	184	24.4	222 33.9	-13 34.0	226 02.0	-17 16.4	193 05.5	-4 50.1	220 09.1	-15 11.9				
1	199	26.9	237 33.8	33.5	241 02.5	15.9	208 07.4	49.8	235 11.3	11.8				
2	214	29.3	252 33.6	32.9	256 03.1	15.4	223 09.3	49.6	250 13.5	11.7				
3	229	31.8	267 33.5	32.3	271 03.7	14.8	238 11.2	49.4	265 15.8	11.7				
4	244	34.2	282 33.4	31.8	286 04.3	14.3	253 13.2	49.1	280 18.0	11.6				
5	259	36.7	297 33.2	-13 31.2	301 04.8	-17 13.8	268 15.1	-4 48.9	295 20.2	-15 11.5				
6	274	39.2	312 33.1	-13 30.6	316 05.4	-17 13.2	283 17.0	-4 48.7	310 22.4	-15 11.4				
7	289	41.6	327 33.0	30.1	331 06.0	12.7	298 18.9	48.4	325 24.7	11.4				
8	304	44.1	342 32.8	29.5	346 06.5	12.2	313 20.8	48.2	340 26.9	11.3				
9	319	46.6	357 32.7	28.9	1 07.1	11.6	328 22.7	48.0	355 29.1	11.2				
10	334	49.0	12 32.6	28.3	16 07.7	11.1	343 24.7	47.8	10 31.4	11.1				
11	349	51.5	27 32.4	-13 27.8	31 08.3	-17 10.6	358 26.6	-4 47.5	25 33.6	-15 11.1				
12	4	54.0	42 32.3	-13 27.2	46 08.8	-17 10.0	13 28.5	-4 47.3	40 35.8	-15 11.0				
13	19	56.4	57 32.2	26.6	61 09.4	09.5	28 30.4	47.1	55 38.0	10.9				
14	34	58.9	72 32.0	26.0	76 10.0	09.0	43 32.3	46.8	70 40.3	10.9				
15	50	01.4	87 31.9	25.5	91 10.6	08.4	58 34.2	46.6	85 42.5	10.8				
16	65	03.8	102 31.8	24.9	106 11.1	07.9	73 36.2	46.4	100 44.7	10.7				
17	80	06.3	117 31.6	-13 24.3	121 11.7	-17 07.3	88 38.1	-4 46.1	115 46.9	-15 10.6				
18	95	08.7	132 31.5	-13 23.7	136 12.3	-17 06.8	103 40.0	-4 45.9	130 49.2	-15 10.6				
19	110	11.2	147 31.4	23.1	151 12.8	06.3	118 41.9	45.7	145 51.4	10.5				
20	125	13.7	162 31.2	22.6	166 13.4	05.7	133 43.8	45.5	160 53.6	10.4				
21	140	16.1	177 31.1	22.0	181 14.0	05.2	148 45.7	45.2	175 55.9	10.3				
22	155	18.6	192 31.0	21.4	196 14.6	04.7	163 47.7	45.0	190 58.1	10.3				
23	170	21.1	207 30.8	20.8	211 15.1	04.1	178 49.6	44.8	206 00.3	10.2				
24	185	23.5	222 30.7	-13 20.2	226 15.7	-17 03.6	193 51.5	-4 44.5	221 02.5	-15 10.1				
Dif	—		-1	+6	+6	+5	+19	+2	+22	+1				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 05 ^m 1			Edad: 25 ^d 3 PHE { SD: 16'0 PMG: 9 ^h 09 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	178	41.9	+2 53.6	227	53.5	-21 36.8	98	60 N	4 04	4 55	5 38	5 46	6	12 45	100
1	193	42.0		242	20.1	76	27.0	58	12	5 00	40	31	11	12 59	95
2	208	42.2		256	46.8	77	17.1	56	18	04	41	18	16	13 11	91
3	223	42.4		271	13.5	77	-21 07.1	54	24	07	43	5 07	19	21	88
4	238	42.6		285	40.4	79	-20 56.9	52	30	10	44	4 57	22	31	84
5	253	42.8	+2 58.5	300	07.3	79	-20 46.7	50	4 34	5 13	5 46	4 48	24	13 39	82
6	268	43.0	+2 59.4	314	34.4	81	-20 36.3	45	4 44	5 19	5 48	4 29	30	13 57	76
7	283	43.2	+3 00.4	329	01.5	81	25.8	40	52	24	51	13	34	14 11	72
8	298	43.4		343	28.7	82	15.2	35	4 58	27	53	4 00	38	23	68
9	313	43.6		357	56.0	83	-20 04.4	30	5 02	30	54	3 49	40	34	65
10	328	43.7		12	23.4	84	-19 53.6	20	09	35	5 57	29	45	14 51	60
11	343	43.9	+3 04.3	26	51.0	86	-19 42.6	10 N	5 14	5 39	6 00	3 12	49	15 07	55
12	358	44.1	+3 05.3	41	18.6	86	-19 31.6	0	5 17	5 41	6 02	2 56	53	15 21	52
13	13	44.3		55	46.3	87	20.4	10 S	18	43	04	39	57	36	47
14	28	44.5		70	14.0	87	-19 09.1	20	18	44	06	22	61	15 51	43
15	43	44.7		84	41.9	89	-18 57.7	30	17	44	08	2 02	66	16 08	38
16	58	44.9		99	09.9	90	46.3	35	15	44	09	1 50	69	18	35
17	73	45.1	+3 10.2	113	38.0	91	-18 34.7	40	5 12	5 44	6 11	1 36	73	16 29	32
18	88	45.2	+3 11.2	128	06.1	91	-18 23.0	45	5 09	5 43	6 12	1 20	77	16 43	27
19	103	45.4		142	34.4	93	-18 11.2	50	04	42	14	1 00	82	16 59	22
20	118	45.6		157	02.7	93	-17 59.3	52	5 02	41	15	0 51	85	17 06	20
21	133	45.8		171	31.2	95	47.4	54	4 59	41	16	40	88	15	16
22	148	46.0		185	59.7	95	35.3	56	56	40	17	28	91	24	13
23	163	46.2		200	28.3	96	23.2	58	53	39	18	0 13	97	35	9
24	178	46.4	+3 17.0	214	57.0	97	-17 10.9	60 S	4 49	5 38	6 19	** ** *	**	17 47	5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 11 ^h 36 ^m 5		Mag: -4.4 PMG: 9 ^h 10 ^m		Mag: +1.1 PMG: 8 ^h 55 ^m		Mag: -2.1 PMG: 11 ^h 03 ^m		Mag: +0.9 PMG: 9 ^h 14 ^m					
	hG ♀	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	185	23.5	222	30.7	-13 20.2	226	15.7	-17 03.6	193	51.5	-4 44.5	221	02.5	-15 10.1
1	200	26.0	237	30.6	19.6	241	16.3	03.0	208	53.4	44.3	236	04.8	10.1
2	215	28.5	252	30.4	19.1	256	16.9	02.5	223	55.3	44.1	251	07.0	10.0
3	230	30.9	267	30.3	18.5	271	17.4	02.0	238	57.2	43.9	266	09.2	09.9
4	245	33.4	282	30.2	17.9	286	18.0	01.4	253	59.2	43.6	281	11.4	09.8
5	260	35.9	297	30.0	-13 17.3	301	18.6	-17 00.9	269	01.1	-4 43.4	296	13.7	-15 09.8
6	275	38.3	312	29.9	-13 16.7	316	19.2	-17 00.3	284	03.0	-4 43.2	311	15.9	-15 09.7
7	290	40.8	327	29.7	16.1	331	19.8	-16 59.8	299	04.9	42.9	326	18.1	09.6
8	305	43.2	342	29.6	15.5	346	20.3	59.3	314	06.8	42.7	341	20.4	09.6
9	320	45.7	357	29.5	14.9	1	20.9	58.7	329	08.7	42.5	356	22.6	09.5
10	335	48.2	12	29.3	14.3	16	21.5	58.2	344	10.7	42.2	11	24.8	09.4
11	350	50.6	27	29.2	-13 13.7	31	22.1	-16 57.6	359	12.6	-4 42.0	26	27.0	-15 09.3
12	5	53.1	42	29.1	-13 13.2	46	22.6	-16 57.1	14	14.5	-4 41.8	41	29.3	-15 09.3
13	20	55.6	57	28.9	12.6	61	23.2	56.6	29	16.4	41.6	56	31.5	09.2
14	35	58.0	72	28.8	12.0	76	23.8	56.0	44	18.3	41.3	71	33.7	09.1
15	51	00.5	87	28.6	11.4	91	24.4	55.5	59	20.3	41.1	86	36.0	09.1
16	66	03.0	102	28.5	10.8	106	24.9	54.9	74	22.2	40.9	101	38.2	09.0
17	81	05.4	117	28.4	-13 10.2	121	25.5	-16 54.4	89	24.1	-4 40.6	116	40.4	-15 08.9
18	96	07.9	132	28.2	-13 09.6	136	26.1	-16 53.8	104	26.0	-4 40.4	131	42.6	-15 08.8
19	111	10.3	147	28.1	09.0	151	26.7	53.3	119	27.9	40.2	146	44.9	08.8
20	126	12.8	162	27.9	08.4	166	27.3	52.8	134	29.8	40.0	161	47.1	08.7
21	141	15.3	177	27.8	07.8	181	27.8	52.2	149	31.8	39.7	176	49.3	08.6
22	156	17.7	192	27.7	07.2	196	28.4	51.7	164	33.7	39.5	191	51.6	08.6
23	171	20.2	207	27.5	06.6	211	29.0	51.1	179	35.6	39.3	206	53.8	08.5
24	186	22.7	222	27.4	-13 06.0	226	29.6	-16 50.6	194	37.5	-4 39.0	221	56.0	-15 08.4
Dif	—		-1 +6		+6 +5		+19 +2		+22 +1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0			Edad: 26 ^d 3	PHE { 4 ^h : 58 ^m 3 12 ^h : 58 ^m 1 20 ^h : 58 ^m 0									
	PMG: 12 ^h 04 ^m 8					SD: 15 ^h 9			PMG: 10 ^h 01 ^m		R°: 48 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	46.4	+3 17.0	214	57.0	-17 10.9		60 N	18 36	19 19	20 12	5 52 4	14 25 96	
1	193	46.6		229	25.9	-16 58.6	123	58	34	14	20 03	42 8	34 92	
2	208	46.7		243	54.7	46.2	124	56	32	10	19 56	34 11	42 88	
3	223	46.9		258	23.7	33.7	125	54	30	06	49	26 14	49 85	
4	238	47.1		272	52.8	21.1	126	52	29	03	44	19 17	14 55 82	
5	253	47.3	+3 21.9	287	22.0	-16 08.4	127	50	18 27	19 00	19 39	5 12 20	15 01 79	
6	268	47.5	+3 22.9	301	51.2	-15 55.7	127	45	18 24	18 53	19 28	4 59 24	15 13 74	
7	283	47.7		316	20.5	42.9	128	40	21	48	20	47 29	23 70	
8	298	47.9		330	49.9	30.0	129	35	19	44	14	38 32	31 66	
9	313	48.1		345	19.4	17.0	130	30	17	41	09	29 35	39 62	
10	328	48.2		359	49.0	-15 03.9	131	20	13	36	19 01	14 41	15 51 58	
11	343	48.4	+3 27.7	14	18.7	-14 50.8	131	10 N	18 11	18 32	18 56	4 01 45	16 02 53	
12	358	48.6	+3 28.7	28	48.5	-14 37.6	132	0	18 08	18 29	18 53	3 49 49	16 13 48	
13	13	48.8		43	18.3	24.4	132	10 S	06	27	51	36 54	23 43	
14	28	49.0		57	48.2	-14 11.0	134	20	03	25	51	23 59	34 38	
15	43	49.2		72	18.2	-13 57.6	134	30	18 00	24	52	3 08 64	46 33	
16	58	49.4		86	48.3	44.2	134	35	17 59	24	53	2 59 67	16 53 30	
17	73	49.5	+3 33.6	101	18.5	-13 30.7	135	40	17 57	18 24	18 55	2 49 71	17 01 26	
18	88	49.7	+3 34.5	115	48.7	-13 17.1	136	45	17 55	18 24	18 58	2 37 75	17 10 22	
19	103	49.9		130	19.0	-13 03.4	137	50	53	25	19 02	22 81	21 17	
20	118	50.1		144	49.4	-12 49.7	137	52	52	25	04	16 83	26 15	
21	133	50.3		159	19.9	36.0	137	54	51	26	07	2 08 86	31 13	
22	148	50.5		173	50.4	22.1	139	56	49	26	10	1 59 90	37 11	
23	163	50.7		188	21.0	-12 08.3	138	58	48	27	13	50 93	44 7	
24	178	50.9	+3 40.4	202	51.7	-11 54.3	140	60 S	17 47	18 28	19 16	1 38 98	17 52 3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 32 ^m 6		Mag: -4.4 PMG: 9 ^h 10 ^m		Mag: +1.1 PMG: 8 ^h 54 ^m		Mag: -2.1 PMG: 11 ^h 00 ^m		Mag: +0.9 PMG: 9 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	186	22.7	222 27.4	-13 06.0	226 29.6	-16 50.6	194 37.5	-4 39.0	221 56.0	-15 08.4
1	201	25.1	237 27.2	05.4	241 30.1	50.0	209 39.4	38.8	236 58.3	08.3
2	216	27.6	252 27.1	04.8	256 30.7	49.5	224 41.3	38.6	252 00.5	08.3
3	231	30.1	267 26.9	04.2	271 31.3	48.9	239 43.3	38.4	267 02.7	08.2
4	246	32.5	282 26.8	03.6	286 31.9	48.4	254 45.2	38.1	282 05.0	08.1
5	261	35.0	297 26.7	-13 03.0	301 32.5	-16 47.8	269 47.1	-4 37.9	297 07.2	-15 08.1
6	276	37.5	312 26.5	-13 02.3	316 33.0	-16 47.3	284 49.0	-4 37.7	312 09.4	-15 08.0
7	291	39.9	327 26.4	01.7	331 33.6	46.8	299 50.9	37.4	327 11.6	07.9
8	306	42.4	342 26.2	01.1	346 34.2	46.2	314 52.9	37.2	342 13.9	07.8
9	321	44.8	357 26.1	-13 00.5	1 34.8	45.7	329 54.8	37.0	357 16.1	07.8
10	336	47.3	12 25.9	-12 59.9	16 35.4	45.1	344 56.7	36.7	12 18.3	07.7
11	351	49.8	27 25.8	-12 59.3	31 35.9	-16 44.6	359 58.6	-4 36.5	27 20.6	-15 07.6
12	6	52.2	42 25.7	-12 58.7	46 36.5	-16 44.0	15 00.5	-4 36.3	42 22.8	-15 07.6
13	21	54.7	57 25.5	58.1	61 37.1	43.5	30 02.5	36.1	57 25.0	07.5
14	36	57.2	72 25.4	57.5	76 37.7	42.9	45 04.4	35.8	72 27.3	07.4
15	51	59.6	87 25.2	56.8	91 38.3	42.4	60 06.3	35.6	87 29.5	07.3
16	67	02.1	102 25.1	56.2	106 38.8	41.8	75 08.2	35.4	102 31.7	07.3
17	82	04.6	117 24.9	-12 55.6	121 39.4	-16 41.3	90 10.1	-4 35.1	117 34.0	-15 07.2
18	97	07.0	132 24.8	-12 55.0	136 40.0	-16 40.7	105 12.0	-4 34.9	132 36.2	-15 07.1
19	112	09.5	147 24.6	54.4	151 40.6	40.2	120 14.0	34.7	147 38.4	07.1
20	127	12.0	162 24.5	53.8	166 41.2	39.6	135 15.9	34.5	162 40.7	07.0
21	142	14.4	177 24.4	53.1	181 41.8	39.1	150 17.8	34.2	177 42.9	06.9
22	157	16.9	192 24.2	52.5	196 42.3	38.5	165 19.7	34.0	192 45.1	06.8
23	172	19.3	207 24.1	51.9	211 42.9	38.0	180 21.6	33.8	207 47.3	06.8
24	187	21.8	222 23.9	-12 51.3	226 43.5	-16 37.4	195 23.6	-4 33.5	222 49.6	-15 06.7
Dif	—		-1	+6	+6	+5	+19	+2	+22	+1

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 12 ^h 04 ^m 5			Edad: 27 ^d 3 PHE { SD: 15'8 PMG: 10 ^h 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	178	50.9	+3	40.4	202	51.7	-11 54.3	60 N	3 57	4 49	5 32	5 56	3	16 01	92			
1	193	51.0		41.4	217	22.5 ¹¹⁸	40.4 ¹³⁹	58	4 05	54	34	50	6	06	88			
2	208	51.2		42.3	231	53.3 ¹¹⁸	26.3 ¹⁴¹	56	13	4 58	36	45	9	10	85			
3	223	51.4		43.3	246	24.3 ¹²⁰	-11 12.3 ¹⁴⁰	54	19	5 02	38	40	12	14	82			
4	238	51.6		44.3	260	55.2 ¹¹⁹	-10 58.2 ¹⁴¹	52	25	06	40	36	14	17	79			
5	253	51.8	+3	45.2	275	26.3 ¹²¹	-10 44.0 ¹⁴²	50	4 30	5 09	5 41	5 32	16	16 20	77			
6	268	52.0	+3	46.2	289	57.4 ¹²¹	-10 29.8 ¹⁴²	45	4 40	5 15	5 45	5 23	21	16 27	72			
7	283	52.2		47.2	304	28.6 ¹²²	15.5 ¹⁴³	40	48	20	47	16	25	33	67			
8	298	52.3		48.2	318	59.8 ¹²²	-10 01.2 ¹⁴³	35	4 55	24	50	10	28	37	64			
9	313	52.5		49.1	333	31.1 ¹²³	-9 46.9 ¹⁴³	30	5 00	28	52	5 04	32	41	61			
10	328	52.7		50.1	348	02.5 ¹²⁴	32.5 ¹⁴⁴	20	08	33	55	4 55	37	49	54			
11	343	52.9	+3	51.1	2	34.0 ¹²⁵	-9 18.1 ¹⁴⁴	10 N	5 13	5 37	5 58	4 46	42	16 55	50			
12	358	53.1	+3	52.0	17	05.5 ¹²⁵	-9 03.7 ¹⁴⁴	0	5 16	5 40	6 01	4 38	47	17 01	45			
13	13	53.3		53.0	31	37.0 ¹²⁵	-8 49.2 ¹⁴⁵	10 S	18	43	04	30	51	06	41			
14	28	53.5		54.0	46	08.7 ¹²⁷	34.7 ¹⁴⁵	20	19	44	06	22	55	12	37			
15	43	53.7		55.0	60	40.4 ¹²⁷	20.1 ¹⁴⁶	30	18	46	09	12	61	19	31			
16	58	53.8		55.9	75	12.1 ¹²⁷	-8 05.5 ¹⁴⁶	35	16	46	11	06	65	23	28			
17	73	54.0	+3	56.9	89	43.9 ¹²⁸	-7 50.9 ¹⁴⁶	40	5 14	5 46	6 13	4 00	68	17 27	25			
18	88	54.2	+3	57.9	104	15.8 ¹²⁹	-7 36.3 ¹⁴⁶	45	5 12	5 46	6 15	3 52	73	17 32	21			
19	103	54.4		58.8	118	47.7 ¹²⁹	21.7 ¹⁴⁶	50	08	45	17	43	78	38	16			
20	118	54.6	+3	59.8	133	19.6 ¹²⁹	-7 07.0 ¹⁴⁷	52	06	45	18	39	80	41	14			
21	133	54.8	+4	00.8	147	51.7 ¹³¹	-6 52.3 ¹⁴⁷	54	03	44	20	34	83	44	11			
22	148	55.0		01.7	162	23.7 ¹³⁰	37.5 ¹⁴⁸	56	5 01	44	21	29	86	48	8			
23	163	55.1		02.7	176	55.9 ¹³²	22.8 ¹⁴⁷	58	4 58	43	22	23	89	51	6			
24	178	55.3	+4	03.7	191	28.0 ¹³¹	-6 08.0 ¹⁴⁸	60 S	4 54	5 43	6 24	3 16	94	17 55	3			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 11 ^h 28 ^m 7			Mag: -4.4 PMG: 9 ^h 10 ^m			Mag: +1.1 PMG: 8 ^h 53 ^m			Mag: -2.1 PMG: 10 ^h 57 ^m			Mag: +0.9 PMG: 9 ^h 07 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	187	21.8	222	23.9	-12	51.3	226	43.5	-16	37.4	195	23.6	-4	33.5	222	49.6	-15	06.7
1	202	24.3	237	23.8		50.7	241	44.1		36.9	210	25.5		33.3	237	51.8		06.6
2	217	26.7	252	23.6		50.0	256	44.7		36.3	225	27.4		33.1	252	54.0		06.6
3	232	29.2	267	23.5		49.4	271	45.2		35.8	240	29.3		32.9	267	56.3		06.5
4	247	31.7	282	23.3		48.8	286	45.8		35.2	255	31.2		32.6	282	58.5		06.4
5	262	34.1	297	23.2	-12	48.2	301	46.4	-16	34.6	270	33.2	-4	32.4	298	00.7	-15	06.4
6	277	36.6	312	23.0	-12	47.6	316	47.0	-16	34.1	285	35.1	-4	32.2	313	03.0	-15	06.3
7	292	39.1	327	22.9		46.9	331	47.6		33.5	300	37.0		31.9	328	05.2		06.2
8	307	41.5	342	22.7		46.3	346	48.2		33.0	315	38.9		31.7	343	07.4		06.1
9	322	44.0	357	22.6		45.7	1	48.7		32.4	330	40.8		31.5	358	09.7		06.1
10	337	46.4	12	22.4		45.0	16	49.3		31.9	345	42.8		31.3	13	11.9		06.0
11	352	48.9	27	22.3	-12	44.4	31	49.9	-16	31.3	0	44.7	-4	31.0	28	14.1	-15	05.9
12	7	51.4	42	22.1	-12	43.8	46	50.5	-16	30.8	15	46.6	-4	30.8	43	16.4	-15	05.9
13	22	53.8	57	22.0		43.2	61	51.1		30.2	30	48.5		30.6	58	18.6		05.8
14	37	56.3	72	21.8		42.5	76	51.7		29.7	45	50.4		30.3	73	20.8		05.7
15	52	58.8	87	21.7		41.9	91	52.3		29.1	60	52.4		30.1	88	23.1		05.7
16	68	01.2	102	21.5		41.3	106	52.8		28.5	75	54.3		29.9	103	25.3		05.6
17	83	03.7	117	21.4	-12	40.6	121	53.4	-16	28.0	90	56.2	-4	29.7	118	27.5	-15	05.5
18	98	06.2	132	21.2	-12	40.0	136	54.0	-16	27.4	105	58.1	-4	29.4	133	29.8	-15	05.4
19	113	08.6	147	21.1		39.4	151	54.6		26.9	121	00.0		29.2	148	32.0		05.4
20	128	11.1	162	20.9		38.7	166	55.2		26.3	136	02.0		29.0	163	34.3		05.3
21	143	13.6	177	20.8		38.1	181	55.8		25.8	151	03.9		28.7	178	36.5		05.2
22	158	16.0	192	20.6		37.5	196	56.3		25.2	166	05.8		28.5	193	38.7		05.2
23	173	18.5	207	20.5		36.8	211	56.9		24.6	181	07.7		28.3	208	41.0		05.1
24	188	20.9	222	20.3	-12	36.2	226	57.5	-16	24.1	196	09.6	-4	28.1	223	43.2	-15	05.0
Dif	—		-1	+6		+6	+6	+6		+19	+2		+22		+1			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 12 ^h 04 ^m 2			Edad: 28 ^d 3 PHE { 4 ^h : 57'4 12 ^h : 57'2 20 ^h : 57'0 R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	178	55.3	+4 03.7	191	28.0	-6 08.0	60 N	18 41	19 24	20 18	5 59	2	17 33	89	
1	193	55.5	04.7	206	00.3 ¹³³	-5 53.2 ¹⁴⁸	58	38	19	08	56	5	34	86	
2	208	55.7	05.6	220	32.5 ¹³²	38.4 ¹⁴⁸	56	36	14	20 01	54	8	35	82	
3	223	55.9	06.6	235	04.9 ¹³⁴	23.6 ¹⁴⁸	54	34	10	19 54	52	10	36	79	
4	238	56.1	07.6	249	37.2 ¹³³	-5 08.8 ¹⁴⁸	52	32	06	48	50	13	36	78	
5	253	56.3	+4 08.5	264	09.6 ¹³⁴	-4 53.9 ¹⁴⁹	50	18 30	19 03	19 42	5 48	15	17 37	75	
6	268	56.4	+4 09.5	278	42.1 ¹³⁵	-4 39.1 ¹⁴⁸	45	18 26	18 56	19 31	5 44	20	17 39	69	
7	283	56.6	10.5	293	14.6 ¹³⁵	24.2 ¹⁴⁹	40	23	50	23	41	24	40	65	
8	298	56.8	11.4	307	47.1 ¹³⁵	-4 09.3 ¹⁴⁹	35	20	46	16	38	28	41	62	
9	313	57.0	12.4	322	19.7 ¹³⁶	-3 54.4 ¹⁴⁹	30	18	42	10	36	30	42	59	
10	328	57.2	13.4	336	52.3 ¹³⁶	39.5 ¹⁴⁹	20	14	36	19 02	32	35	43	54	
11	343	57.4	+4 14.3	351	25.0 ¹³⁷	-3 24.6 ¹⁴⁹	10 N	18 11	18 32	18 56	5 28	40	17 45	49	
12	358	57.6	+4 15.3	5	57.7 ¹³⁷	-3 09.7 ¹⁴⁹	0	18 07	18 28	18 52	5 25	44	17 46	44	
13	13	57.7	16.3	20	30.4 ¹³⁷	-2 54.8 ¹⁴⁹	10 S	04	25	50	21	49	47	40	
14	28	57.9	17.2	35	03.2 ¹³⁸	39.9 ¹⁴⁹	20	18 01	23	49	17	54	49	35	
15	43	58.1	18.2	49	36.0 ¹³⁸	25.0 ¹⁴⁹	30	17 58	22	49	13	60	50	30	
16	58	58.3	19.2	64	08.8 ¹³⁸	-2 10.1 ¹⁴⁹	35	56	21	50	11	62	51	27	
17	73	58.5	+4 20.1	78	41.7 ¹³⁹	-1 55.2 ¹⁴⁹	40	17 54	18 21	18 52	5 08	66	17 52	23	
18	88	58.7	+4 21.1	93	14.6 ¹³⁹	-1 40.3 ¹⁴⁹	45	17 51	18 21	18 55	5 05	70	17 53	19	
19	103	58.9	22.1	107	47.6 ¹⁴⁰	25.4 ¹⁴⁹	50	49	21	18 58	5 01	75	54	15	
20	118	59.0	23.0	122	20.5 ¹³⁹	-1 10.5 ¹⁴⁹	52	47	21	19 00	4 59	78	55	12	
21	133	59.2	24.0	136	53.5 ¹⁴⁰	-0 55.6 ¹⁴⁹	54	46	21	02	57	80	55	11	
22	148	59.4	25.0	151	26.5 ¹⁴⁰	40.7 ¹⁴⁹	56	44	21	04	55	83	56	8	
23	163	59.6	25.9	165	59.6 ¹⁴¹	25.8 ¹⁴⁹	58	42	21	07	52	87	57	5	
24	178	59.8	+4 26.9	180	32.6 ¹⁴⁰	-0 11.0 ¹⁴⁸	60 S	17 41	18 22	19 10	4 50	90	17 58	2	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 11 ^h 24 ^m 7		Mag: -4.4 PMG: 9 ^h 11 ^m		Mag: +1.1 PMG: 8 ^h 52 ^m		Mag: -2.1 PMG: 10 ^h 54 ^m		Mag: +0.9 PMG: 9 ^h 04 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	188	20.9	222	20.3	-12	36.2	226	57.5	-16	24.1	196	09.6	-4	28.1	223	43.2	-15	05.0
1	203	23.4	237	20.2		35.5	241	58.1		23.5	211	11.6		27.8	238	45.4		05.0
2	218	25.9	252	20.0		34.9	256	58.7		23.0	226	13.5		27.6	253	47.7		04.9
3	233	28.3	267	19.9		34.3	271	59.3		22.4	241	15.4		27.4	268	49.9		04.8
4	248	30.8	282	19.7		33.6	286	59.9		21.8	256	17.3		27.2	283	52.1		04.7
5	263	33.3	297	19.6	-12	33.0	302	00.5	-16	21.3	271	19.3	-4	26.9	298	54.4	-15	04.7
6	278	35.7	312	19.4	-12	32.3	317	01.0	-16	20.7	286	21.2	-4	26.7	313	56.6	-15	04.6
7	293	38.2	327	19.3		31.7	332	01.6		20.2	301	23.1		26.5	328	58.8		04.5
8	308	40.7	342	19.1		31.0	347	02.2		19.6	316	25.0		26.2	344	01.1		04.5
9	323	43.1	357	19.0		30.4	2	02.8		19.0	331	26.9		26.0	359	03.3		04.4
10	338	45.6	12	18.8		29.8	17	03.4		18.5	346	28.9		25.8	14	05.5		04.3
11	353	48.0	27	18.7	-12	29.1	32	04.0	-16	17.9	1	30.8	-4	25.6	29	07.8	-15	04.3
12	8	50.5	42	18.5	-12	28.5	47	04.6	-16	17.4	16	32.7	-4	25.3	44	10.0	-15	04.2
13	23	53.0	57	18.4		27.8	62	05.2		16.8	31	34.6		25.1	59	12.3		04.1
14	38	55.4	72	18.2		27.2	77	05.7		16.2	46	36.5		24.9	74	14.5		04.0
15	53	57.9	87	18.0		26.5	92	06.3		15.7	61	38.5		24.6	89	16.7		04.0
16	69	00.4	102	17.9		25.9	107	06.9		15.1	76	40.4		24.4	104	19.0		03.9
17	84	02.8	117	17.7	-12	25.2	122	07.5	-16	14.6	91	42.3	-4	24.2	119	21.2	-15	03.8
18	99	05.3	132	17.6	-12	24.6	137	08.1	-16	14.0	106	44.2	-4	24.0	134	23.4	-15	03.8
19	114	07.8	147	17.4		23.9	152	08.7		13.4	121	46.2		23.7	149	25.7		03.7
20	129	10.2	162	17.3		23.3	167	09.3		12.9	136	48.1		23.5	164	27.9		03.6
21	144	12.7	177	17.1		22.6	182	09.9		12.3	151	50.0		23.3	179	30.2		03.6
22	159	15.2	192	17.0		22.0	197	10.5		11.7	166	51.9		23.0	194	32.4		03.5
23	174	17.6	207	16.8		21.3	212	11.0		11.2	181	53.8		22.8	209	34.6		03.4
24	189	20.1	222	16.7	-12	20.6	227	11.6	-16	10.6	196	55.8	-4	22.6	224	36.9	-15	03.4
Dif	—		-2		+6		+6		+6		+19		+2		+22		+	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna										
	SD: 16 ^h 0 PMG: 12 ^h 03 ^m 9			Edad: 29 ^d 3 PHE { SD: 15 ^h 5 PMG: 12 ^h 20 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m							
0	178	59.8	+4	26.9	180	32.6	-0	11.0	60 N	3	49	4	43	5	26	6	01	1	19	02	88		
1	194	00.0		27.9	195	05.7 ¹⁴¹	+0	03.9 ¹⁴⁹	58	3	59		48		28		01	5	19	00	84		
2	209	00.1		28.8	209	38.9 ¹⁴²		18.7 ¹⁴⁸	56	4	07		53		31		02	8	18	57	82		
3	224	00.3		29.8	224	12.0 ¹⁴¹		33.5 ¹⁴⁸	54	13		4	57		33		02	11		55	70		
4	239	00.5		30.8	238	45.2 ¹⁴²	+0	48.4 ¹⁴⁹	52	20		5	01		35		03	13		54	76		
5	254	00.7	+4	31.7	253	18.3 ¹⁴¹	+1	03.2 ¹⁴⁸	50	4	25		5	04		5	37	6	03	15	18	52	74
6	269	00.9	+4	32.7	267	51.5 ¹⁴²	+1	17.9 ¹⁴⁷	45	4	36		5	11		5	41	6	04	20	18	48	69
7	284	01.1		33.7	282	24.8 ¹⁴³		32.7 ¹⁴⁸	40		45		17		44		05	23		45	65		
8	299	01.3		34.6	296	58.0 ¹⁴²	+1	47.5 ¹⁴⁸	35		52		22		47		06	26		43	61		
9	314	01.4		35.6	311	31.3 ¹⁴³	+2	02.2 ¹⁴⁷	30	4	57		26		50		06	30		41	58		
10	329	01.6		36.6	326	04.5 ¹⁴²		16.9 ¹⁴⁷	20	5	06		32		54		07	35		37	53		
11	344	01.8	+4	37.5	340	37.8 ¹⁴³	+2	31.6 ¹⁴⁷	10 N	5	12		5	36		5	57	6	08	40	18	34	48
12	359	02.0	+4	38.5	355	11.1 ¹⁴³	+2	46.2 ¹⁴⁶	0	5	16		5	40		6	01	6	09	44	18	30	44
13	14	02.2		39.5	9	44.4 ¹⁴³	+3	00.9 ¹⁴⁷	10 S		18		43		04		10	49		27	40		
14	29	02.4		40.4	24	17.8 ¹⁴⁴		15.5 ¹⁴⁶	20		19		45		07		11	53		24	35		
15	44	02.5		41.4	38	51.1 ¹⁴³		30.1 ¹⁴⁶	30		19		47		11		13	58		20	30		
16	59	02.7		42.4	53	24.4 ¹⁴³		44.6 ¹⁴⁵	35		18		47		13		13	62		18	27		
17	74	02.9	+4	43.3	67	57.8 ¹⁴⁴	+3	59.2 ¹⁴⁶	40	5	16		5	48		6	15	6	14	65	18	15	24
18	89	03.1	+4	44.3	82	31.1 ¹⁴³	+4	13.7 ¹⁴⁵	45	5	14		5	48		6	17	6	15	69	18	12	20
19	104	03.3		45.2	97	04.5 ¹⁴⁴		28.1 ¹⁴⁴	50		11		48		20		16	74		09	15		
20	119	03.5		46.2	111	37.9 ¹⁴⁴		42.6 ¹⁴⁵	52		09		48		22		17	76		07	14		
21	134	03.6		47.2	126	11.3 ¹⁴⁴	+4	57.0 ¹⁴⁴	54		07		48		23		17	79		06	11		
22	149	03.8		48.1	140	44.6 ¹⁴³	+5	11.4 ¹⁴⁴	56		05		48		25		18	82		04	8		
23	164	04.0		49.1	155	18.0 ¹⁴⁴		25.7 ¹⁴³	58	5	02		48		27		19	85		02	5		
24	179	04.2	+4	50.1	169	51.4 ¹⁴⁴	+5	40.0 ¹⁴³	60 S	4	59		5	47		6	29	6	20	88	18	00	2
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO								
	PMG: 11 ^h 20 ^m 8		Mag: -4.4 PMG: 9 ^h 11 ^m				Mag: +1.1 PMG: 8 ^h 51 ^m				Mag: -2.1 PMG: 10 ^h 51 ^m				Mag: +0.9 PMG: 9 ^h 00 ^m								
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	189	20.1	222	16.7	-12	20.6	227	11.6	-16	10.6	196	55.8	-4	22.6	224	36.9	-15	03.4					
1	204	22.5	237	16.5		20.0	242	12.2		10.0	211	57.7		22.4	239	39.1		03.3					
2	219	25.0	252	16.3		19.3	257	12.8		09.5	226	59.6		22.1	254	41.3		03.2					
3	234	27.5	267	16.2		18.7	272	13.4		08.9	242	01.5		21.9	269	43.6		03.1					
4	249	29.9	282	16.0		18.0	287	14.0		08.3	257	03.5		21.7	284	45.8		03.1					
5	264	32.4	297	15.9	-12	17.4	302	14.6	-16	07.8	272	05.4	-4	21.5	299	48.1	-15	03.0					
6	279	34.9	312	15.7	-12	16.7	317	15.2	-16	07.2	287	07.3	-4	21.2	314	50.3	-15	02.9					
7	294	37.3	327	15.6		16.0	332	15.8		06.6	302	09.2		21.0	329	52.5		02.9					
8	309	39.8	342	15.4		15.4	347	16.4		06.1	317	11.1		20.8	344	54.8		02.8					
9	324	42.3	357	15.2		14.7	2	16.9		05.5	332	13.1		20.5	359	57.0		02.7					
10	339	44.7	12	15.1		14.0	17	17.5		04.9	347	15.0		20.3	14	59.2		02.7					
11	354	47.2	27	14.9	-12	13.4	32	18.1	-16	04.4	2	16.9	-4	20.1	30	01.5	-15	02.6					
12	9	49.6	42	14.8	-12	12.7	47	18.7	-16	03.8	17	18.8	-4	19.9	45	03.7	-15	02.5					
13	24	52.1	57	14.6		12.1	62	19.3		03.2	32	20.8		19.6	60	06.0		02.5					
14	39	54.6	72	14.5		11.4	77	19.9		02.7	47	22.7		19.4	75	08.2		02.4					
15	54	57.0	87	14.3		10.7	92	20.5		02.1	62	24.6		19.2	90	10.4		02.3					
16	69	59.5	102	14.1		10.1	107	21.1		01.5	77	26.5		19.0	105	12.7		02.3					
17	85	02.0	117	14.0	-12	09.4	122	21.7	-16	01.0	92	28.4	-4	18.7	120	14.9	-15	02.2					
18	100	04.4	132	13.8	-12	08.7	137	22.3	-16	00.4	107	30.4	-4	18.5	135	17.2	-15	02.1					
19	115	06.9	147	13.7		08.0	152	22.9	-15	59.8	122	32.3		18.3	150	19.4		02.0					
20	130	09.4	162	13.5		07.4	167	23.5		59.3	137	34.2		18.0	165	21.6		02.0					
21	145	11.8	177	13.4		06.7	182	24.1		58.7	152	36.1		17.8	180	23.9		01.9					
22	160	14.3	192	13.2		06.0	197	24.6		58.1	167	38.1		17.6	195	26.1		01.8					
23	175	16.8	207	13.0		05.4	212	25.2		57.5	182	40.0		17.4	210	28.4		01.8					
24	190	19.2	222	12.9	-12	04.7	227	25.8	-15	57.0	197	41.9	-4	17.1	225	30.6	-15	01.7					
Dif	—		-2		+7		+6		+6		+19		+2		+22		+1						

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/0 PMG: 12 ^h 03 ^m 6		Edad: 30 ^d 3 PHE { 4 ^h : 56/3 12 ^h : 56/1 20 ^h : 55/9 R°: 44 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	04.2	+4	50.1	169	51.4	+5	40.0	60 N	18 46	19 29	20 24	6 02 3	20 30 89
1	194	04.4		51.0	184	24.8 ¹⁴⁴	+5	54.3 ¹⁴³	58	43	24	14	06 6	24 85
2	209	04.6		52.0	198	58.2 ¹⁴⁴	+6	08.5 ¹⁴²	56	40	18	20 05	10 8	19 81
3	224	04.7		53.0	213	31.6 ¹⁴⁴		22.7 ¹⁴²	54	38	14	19 58	13 11	14 78
4	239	04.9		53.9	228	05.0 ¹⁴⁴		36.9 ¹⁴²	52	35	10	52	16 13	10 75
5	254	05.1	+4	54.9	242	38.4 ¹⁴⁴	+6	51.0 ¹⁴¹	50	18 33	19 06	19 46	6 18 16	20 06 73
6	269	05.3	+4	55.8	257	11.7 ¹⁴³	+7	05.1 ¹⁴¹	45	18 29	18 59	19 34	6 24 20	19 57 68
7	284	05.5		56.8	271	45.1 ¹⁴⁴		19.1 ¹⁴⁰	40	25	53	25	28 25	50 64
8	299	05.7		57.8	286	18.5 ¹⁴⁴		33.1 ¹⁴⁰	35	22	48	18	32 28	44 61
9	314	05.9		58.7	300	51.9 ¹⁴⁴	+7	47.0 ¹³⁹	30	19	43	12	36 31	39 58
10	329	06.0	+4	59.7	315	25.2 ¹⁴³	+8	00.9 ¹³⁹	20	15	37	19 03	42 36	30 53
11	344	06.2	+5	00.6	329	58.6 ¹⁴⁴	+8	14.8 ¹³⁹	10 N	18 11	18 32	18 56	6 48 40	19 22 48
12	359	06.4	+5	01.6	344	31.9 ¹⁴³	+8	28.6 ¹³⁸	0	18 07	18 28	18 52	6 53 44	19 14 45
13	14	06.6		02.6	359	05.2 ¹⁴³		42.3 ¹³⁷	10 S	03	24	49	6 59 48	19 07 40
14	29	06.8		03.5	13	38.6 ¹⁴⁴	+8	56.0 ¹³⁷	20	18 00	22	47	7 04 53	18 59 36
15	44	06.9		04.5	28	11.9 ¹⁴³	+9	09.7 ¹³⁷	30	17 56	19	47	11 58	50 32
16	59	07.1		05.4	42	45.2 ¹⁴³		23.3 ¹³⁶	35	53	18	48	15 61	45 29
17	74	07.3	+5	06.4	57	18.5 ¹⁴³	+9	36.9 ¹³⁶	40	17 51	18 18	18 49	7 19 64	18 39 26
18	89	07.5	+5	07.4	71	51.8 ¹⁴³	+9	50.4 ¹³⁵	45	17 48	18 17	18 51	7 24 69	18 32 22
19	104	07.7		08.3	86	25.0 ¹⁴²	+10	03.8 ¹³⁴	50	44	16	54	30 74	24 17
20	119	07.9		09.3	100	58.3 ¹⁴³		17.2 ¹³⁴	52	43	16	55	33 76	21 14
21	134	08.0		10.2	115	31.5 ¹⁴²		30.6 ¹³⁴	54	41	16	57	36 79	17 12
22	149	08.2		11.2	130	04.7 ¹⁴²		43.9 ¹³³	56	39	16	18 59	40 81	12 10
23	164	08.4		12.2	144	37.9 ¹⁴²	+10	57.1 ¹³²	58	37	16	19 01	44 84	07 7
24	179	08.6	+5	13.1	159	11.1 ¹⁴²	+11	10.3 ¹³²	60 S	17 35	18 16	19 04	7 48 88	18 02 3
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 11 ^h 16 ^m 9		Mag: -4.4 PMG: 9 ^h 11 ^m		Mag: +1.1 PMG: 8 ^h 50 ^m		Mag: -2.1 PMG: 10 ^h 48 ^m		Mag: +0.9 PMG: 8 ^h 57 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	190	19.2	222	12.9	227	25.8	197	41.9	225	30.6				
1	205	21.7	237	12.7	242	26.4	212	43.8	240	32.8				
2	220	24.1	252	12.6	257	27.0	227	45.8	255	35.1				
3	235	26.6	267	12.4	272	27.6	242	47.7	270	37.3				
4	250	29.1	282	12.2	287	28.2	257	49.6	285	39.6				
5	265	31.5	297	12.1	302	28.8	272	51.5	300	41.8				
6	280	34.0	312	11.9	317	29.4	287	53.5	315	44.0				
7	295	36.5	327	11.8	332	30.0	302	55.4	330	46.3				
8	310	38.9	342	11.6	347	30.6	317	57.3	345	48.5				
9	325	41.4	357	11.4	2	31.2	332	59.2	0	50.8				
10	340	43.9	12	11.3	17	31.8	348	01.1	15	53.0				
11	355	46.3	27	11.1	32	32.4	3	03.1	30	55.2				
12	10	48.8	42	11.0	47	33.0	18	05.0	45	57.5				
13	25	51.3	57	10.8	62	33.6	33	06.9	60	59.7				
14	40	53.7	72	10.6	77	34.2	48	08.8	76	02.0				
15	55	56.2	87	10.5	92	34.8	63	10.8	91	04.2				
16	70	58.6	102	10.3	107	35.4	78	12.7	106	06.4				
17	86	01.1	117	10.2	122	35.9	93	14.6	121	08.7				
18	101	03.6	132	10.0	137	36.5	108	16.5	136	10.9				
19	116	06.0	147	09.8	152	37.1	123	18.5	151	13.2				
20	131	08.5	162	09.7	167	37.7	138	20.4	166	15.4				
21	146	11.0	177	09.5	182	38.3	153	22.3	181	17.7				
22	161	13.4	192	09.3	197	38.9	168	24.2	196	19.9				
23	176	15.9	207	09.2	212	39.5	183	26.2	211	22.1				
24	191	18.4	222	09.0	227	40.1	198	28.1	226	24.4				
Dif	—		-2	+7	+6	+6	+19	+2	+22	+1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 03 ^m 3			Edad: 1 ^d 7 PHE { 4 ^h : 55'7 12 ^h : 55'5 20 ^h : 55'4 PMG: 13 ^h 48 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	08.6	+5 13.1	159	11.1	+11 10.3		60 N	3 42	4 36	5 20	6 05	4	21 59	89
1	194	08.8	14.1	173	44.3 ¹⁴²	23.4 ¹³¹		58	3 52	42	23	12	8	49	84
2	209	09.0	15.0	188	17.4 ¹⁴¹	36.4 ¹³⁰		56	4 01	47	26	18	11	40	80
3	224	09.1	16.0	202	50.5 ¹⁴¹	+11 49.4 ¹³⁰		54	08	52	28	24	14	32	77
4	239	09.3	17.0	217	23.6 ¹⁴¹	+12 02.4 ¹³⁰		52	14	4 56	31	29	16	25	75
5	254	09.5	+5 17.9	231	56.7 ¹⁴¹	+12 15.2 ¹²⁸		50	4 20	5 00	5 33	6 34	18	21 19	72
6	269	09.7	+5 18.9	246	29.8 ¹⁴¹	+12 28.0 ¹²⁸		45	4 32	5 08	5 37	6 44	23	21 05	68
7	284	09.9	19.8	261	02.8 ¹⁴⁰	40.8 ¹²⁸		40	41	14	41	6 53	26	20 54	64
8	299	10.0	20.8	275	35.8 ¹⁴⁰	+12 53.5 ¹²⁷		35	49	19	44	7 00	30	45	60
9	314	10.2	21.8	290	08.8 ¹⁴⁰	+13 06.1 ¹²⁶		30	4 55	23	47	07	32	37	58
10	329	10.4	22.7	304	41.8 ¹⁴⁰	18.6 ¹²⁵		20	5 04	30	52	18	37	23	53
11	344	10.6	+5 23.7	319	14.7 ¹³⁹	+13 31.1 ¹²⁵		10 N	5 11	5 35	5 56	7 28	41	20 10	50
12	359	10.8	+5 24.6	333	47.7 ¹⁴⁰	+13 43.5 ¹²⁴		0	5 15	5 39	6 00	7 37	45	19 59	46
13	14	11.0	25.6	348	20.6 ¹³⁹	+13 55.9 ¹²⁴		10 S	18	43	04	47	49	47	43
14	29	11.1	26.5	2	53.4 ¹³⁸	+14 08.1 ¹²²		20	20	45	08	7 57	53	35	39
15	44	11.3	27.5	17	26.3 ¹³⁹	20.3 ¹²²		30	20	48	12	8 09	58	22	33
16	59	11.5	28.4	31	59.1 ¹³⁸	32.5 ¹²²		35	20	49	14	16	60	14	31
17	74	11.7	+5 29.4	46	31.8 ¹³⁷	+14 44.5 ¹²⁰		40	5 18	5 50	6 17	8 23	64	19 05	28
18	89	11.9	+5 30.4	61	04.6 ¹³⁸	+14 56.5 ¹²⁰		45	5 17	5 51	6 20	8 33	67	18 54	25
19	104	12.0	31.3	75	37.3 ¹³⁷	+15 08.4 ¹¹⁹		50	14	51	24	44	73	41	20
20	119	12.2	32.3	90	10.0 ¹³⁷	20.3 ¹¹⁹		52	12	52	25	49	75	35	18
21	134	12.4	33.2	104	42.6 ¹³⁶	32.0 ¹¹⁷		54	11	52	27	8 55	78	29	15
22	149	12.6	34.2	119	15.3 ¹³⁷	43.7 ¹¹⁷		56	09	52	29	9 01	81	22	12
23	164	12.8	35.1	133	47.9 ¹³⁶	+15 55.3 ¹¹⁶		58	07	52	31	08	85	14	8
24	179	13.0	+5 36.1	148	20.4 ¹³⁵	+16 06.8 ¹¹⁵		60 S	5 04	5 52	6 34	9 16	89	18 05	4
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 12 ^m 9			Mag: -4.4 PMG: 9 ^h 11 ^m			Mag: +1.1 PMG: 8 ^h 49 ^m			Mag: -2.1 PMG: 10 ^h 45 ^m			Mag: +0.9 PMG: 8 ^h 53 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	191	18.4	222 09.0	-11 48.3	227 40.1	-15 43.2	198 28.1	-4 11.7	226 24.4	-15 00.1					
1	206	20.8	237 08.9	47.6	242 40.7	42.6	213 30.0	11.5	241 26.6	-15 00.0					
2	221	23.3	252 08.7	47.0	257 41.3	42.0	228 31.9	11.2	256 28.9	-14 59.9					
3	236	25.7	267 08.5	46.3	272 41.9	41.5	243 33.9	11.0	271 31.1	59.9					
4	251	28.2	282 08.4	45.6	287 42.5	40.9	258 35.8	10.8	286 33.4	59.8					
5	266	30.7	297 08.2	-11 44.9	302 43.1	-15 40.3	273 37.7	-4 10.6	301 35.6	-14 59.7					
6	281	33.1	312 08.0	-11 44.2	317 43.7	-15 39.7	288 39.6	-4 10.3	316 37.8	-14 59.7					
7	296	35.6	327 07.9	43.5	332 44.3	39.1	303 41.6	10.1	331 40.1	59.6					
8	311	38.1	342 07.7	42.8	347 44.9	38.6	318 43.5	09.9	346 42.3	59.5					
9	326	40.5	357 07.6	42.1	2 45.5	38.0	333 45.4	09.7	1 44.6	59.5					
10	341	43.0	12 07.4	41.4	17 46.1	37.4	348 47.3	09.4	16 46.8	59.4					
11	356	45.5	27 07.2	-11 40.7	32 46.7	-15 36.8	3 49.3	-4 09.2	31 49.1	-14 59.3					
12	11	47.9	42 07.1	-11 40.0	47 47.3	-15 36.2	18 51.2	-4 09.0	46 51.3	-14 59.3					
13	26	50.4	57 06.9	39.3	62 47.9	35.7	33 53.1	08.7	61 53.5	59.2					
14	41	52.9	72 06.7	38.6	77 48.5	35.1	48 55.0	08.5	76 55.8	59.1					
15	56	55.3	87 06.6	37.9	92 49.1	34.5	63 57.0	08.3	91 58.0	59.1					
16	71	57.8	102 06.4	37.2	107 49.7	33.9	78 58.9	08.1	107 00.3	59.0					
17	87	00.2	117 06.2	-11 36.5	122 50.3	-15 33.3	94 00.8	-4 07.8	122 02.5	-14 58.9					
18	102	02.7	132 06.1	-11 35.8	137 50.9	-15 32.8	109 02.7	-4 07.6	137 04.8	-14 58.9					
19	117	05.2	147 05.9	35.1	152 51.5	32.2	124 04.7	07.4	152 07.0	58.8					
20	132	07.6	162 05.8	34.4	167 52.1	31.6	139 06.6	07.2	167 09.3	58.7					
21	147	10.1	177 05.6	33.7	182 52.7	31.0	154 08.5	06.9	182 11.5	58.7					
22	162	12.6	192 05.4	33.0	197 53.3	30.4	169 10.5	06.7	197 13.7	58.6					
23	177	15.0	207 05.3	32.3	212 53.9	29.9	184 12.4	06.5	212 16.0	58.5					
24	192	17.5	222 05.1	-11 31.6	227 54.5	-15 29.3	199 14.3	-4 06.3	227 18.2	-14 58.5					
Dif	—			-2	+7	+6	+6	+19	+2	+22			+1		

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:0 PMG: 12 ^h 03 ^m 0		Edad: 2 ^d 7 PHE { 4 ^h : 55/2 12 ^h : 55/0 20 ^h : 54/9 PMG: 14 ^h 34 ^m R°: 47 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	′	°	′	°	′	°	h	m	h	m	h	m	h	m			
0	179	13.0	+5 36.1	148	20.4	+16 06.8	60 N	18 51	19 35	20 30	6 09	6	23 28	88				
1	194	13.1		162	52.9 ¹³⁵	18.3 ¹¹⁵	58	47	28	19	20	10	13	82				
2	209	13.3		177	25.4 ¹³⁵	29.7 ¹¹⁴	56	44	23	10	29	15	23 00	79				
3	224	13.5		191	57.9 ¹³⁵	41.0 ¹¹³	54	41	18	20 02	38	17	22 49	77				
4	239	13.7		206	30.3 ¹³⁴	+16 52.2 ¹¹²	52	39	13	19 56	45	20	40	72				
5	254	13.9	+5 40.9	221	02.7 ¹³⁴	+17 03.3 ¹¹¹	50	18 36	19 10	19 50	6 52	22	22 31	70				
6	269	14.0	+5 41.8	235	35.1 ¹³⁴	+17 14.3 ¹¹⁰	45	18 31	19 01	19 37	7 07	27	22 13	65				
7	284	14.2		250	07.4 ¹³³	25.3 ¹¹⁰	40	27	18 55	27	19	31	21 58	62				
8	299	14.4		264	39.7 ¹³³	36.2 ¹⁰⁹	35	24	49	19	30	33	45	60				
9	314	14.6		279	11.9 ¹³²	47.0 ¹⁰⁸	30	20	45	13	39	36	35	57				
10	329	14.8		293	44.1 ¹³²	+17 57.7 ¹⁰⁷	20	15	37	19 03	7 55	40	16	54				
11	344	14.9	+5 46.6	308	16.3 ¹³²	+18 08.3 ¹⁰⁶	10 N	18 10	18 32	18 56	8 09	44	21 00	50				
12	359	15.1	+5 47.5	322	48.4 ¹³¹	+18 18.8 ¹⁰⁵	0	18 06	18 27	18 51	8 22	47	20 45	47				
13	14	15.3		337	20.5 ¹³¹	29.3 ¹⁰⁵	10 S	18 02	23	48	36	50	30	44				
14	29	15.5		351	52.6 ¹³¹	39.7 ¹⁰⁴	20	17 58	20	46	8 50	54	20 14	41				
15	44	15.7		6	24.6 ¹³⁰	+18 49.9 ¹⁰²	30	53	17	45	9 07	57	19 55	38				
16	59	15.8		20	56.6 ¹³⁰	+19 00.1 ¹⁰²	35	50	16	45	16	61	45	35				
17	74	16.0	+5 52.3	35	28.5 ¹²⁹	+19 10.2 ¹⁰¹	40	17 47	18 15	18 46	9 27	64	19 33	32				
18	89	16.2	+5 53.3	50	00.4 ¹²⁹	+19 20.2 ¹⁰⁰	45	17 44	18 13	18 47	9 40	67	19 19	29				
19	104	16.4		64	32.3 ¹²⁹	30.1 ⁹⁹	50	40	12	50	9 57	71	19 01	25				
20	119	16.6		79	04.1 ¹²⁸	39.9 ⁹⁸	52	38	12	51	10 04	74	18 53	23				
21	134	16.7		93	35.9 ¹²⁸	49.6 ⁹⁷	54	36	11	52	13	76	44	20				
22	149	16.9		108	07.6 ¹²⁷	+19 59.3 ⁹⁷	56	34	11	54	22	80	34	17				
23	164	17.1		122	39.3 ¹²⁷	+20 08.8 ⁹⁵	58	31	11	56	33	84	22	13				
24	179	17.3	+5 59.0	137	11.0 ¹²⁷	+20 18.2 ⁹⁴	60 S	17 29	18 10	18 58	10 45	89	18 09	8				
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO								
	PMG: 11 ^h 09 ^m 0		Mag: -4.4 PMG: 9 ^h 12 ^m		Mag: +1.0 PMG: 8 ^h 48 ^m		Mag: -2.1 PMG: 10 ^h 42 ^m			Mag: +0.9 PMG: 8 ^h 49 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃		Dec	hG ♄		Dec						
h	°	′	°	′	°	′	°	′	°	′	°	′						
0	192	17.5	222	05.1	-11	31.6	227	54.5	-15	29.3	199	14.3	-4	06.3	227	18.2	-14	58.5
1	207	20.0	237	04.9		30.9	242	55.1		28.7	214	16.2		06.0	242	20.5		58.4
2	222	22.4	252	04.8		30.2	257	55.7		28.1	229	18.2		05.8	257	22.7		58.3
3	237	24.9	267	04.6		29.5	272	56.3		27.5	244	20.1		05.6	272	25.0		58.3
4	252	27.3	282	04.4		28.7	287	56.9		26.9	259	22.0		05.4	287	27.2		58.2
5	267	29.8	297	04.3	-11	28.0	302	57.5	-15	26.3	274	23.9	-4	05.1	302	29.5	-14	58.1
6	282	32.3	312	04.1	-11	27.3	317	58.1	-15	25.8	289	25.9	-4	04.9	317	31.7	-14	58.1
7	297	34.7	327	03.9		26.6	332	58.7		25.2	304	27.8		04.7	332	34.0		58.0
8	312	37.2	342	03.8		25.9	347	59.3		24.6	319	29.7		04.5	347	36.2		57.9
9	327	39.7	357	03.6		25.2	2	59.9		24.0	334	31.6		04.2	2	38.4		57.9
10	342	42.1	12	03.4		24.5	18	00.5		23.4	349	33.6		04.0	17	40.7		57.8
11	357	44.6	27	03.3	-11	23.8	33	01.1	-15	22.8	4	35.5	-4	03.8	32	42.9	-14	57.7
12	12	47.1	42	03.1	-11	23.0	48	01.7	-15	22.3	19	37.4	-4	03.5	47	45.2	-14	57.7
13	27	49.5	57	02.9		22.3	63	02.3		21.7	34	39.4		03.3	62	47.4		57.6
14	42	52.0	72	02.8		21.6	78	02.9		21.1	49	41.3		03.1	77	49.7		57.5
15	57	54.5	87	02.6		20.9	93	03.6		20.5	64	43.2		02.9	92	51.9		57.5
16	72	56.9	102	02.4		20.2	108	04.2		19.9	79	45.1		02.6	107	54.2		57.4
17	87	59.4	117	02.3	-11	19.5	123	04.8	-15	19.3	94	47.1	-4	02.4	122	56.4	-14	57.3
18	103	01.8	132	02.1	-11	18.7	138	05.4	-15	18.7	109	49.0	-4	02.2	137	58.7	-14	57.3
19	118	04.3	147	01.9		18.0	153	06.0		18.1	124	50.9		02.0	153	00.9		57.2
20	133	06.8	162	01.8		17.3	168	06.6		17.6	139	52.8		01.7	168	03.2		57.1
21	148	09.2	177	01.6		16.6	183	07.2		17.0	154	54.8		01.5	183	05.4		57.1
22	163	11.7	192	01.4		15.9	198	07.8		16.4	169	56.7		01.3	198	07.7		57.0
23	178	14.2	207	01.3		15.1	213	08.4		15.8	184	58.6		01.1	213	09.9		56.9
24	193	16.6	222	01.1	-11	14.4	228	09.0	-15	15.2	200	00.6	-4	00.8	228	12.2	-14	56.9
Dif	—		-2		+7		+6		+6		+19		+2		+22		+1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'0 PMG: 12 ^h 02 ^m 7			Edad: 3 ^d 7 PHE { 4 ^h : 54'8 12 ^h : 54'6 20 ^h : 54'5 PMG: 15 ^h 21 ^m R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	
0	179	17.3	+5	137	11.0	+20	18.2	60 N	3 35	4 30	5 14	6 15	11	**	**	
1	194	17.5	+5	151	42.6 ¹²⁶		27.6 ⁹⁴	58	45	36	17	30	17	**	**	
2	209	17.6	+6	166	14.2 ¹²⁶		36.8 ⁹²	56	3 55	42	20	44	20	**	**	
3	224	17.8		180	45.7 ¹²⁵		45.9 ⁹¹	54	4 02	47	23	6 55	23	**	**	
4	239	18.0		195	17.2 ¹²⁵	+20	55.0 ⁹¹	52	09	51	26	7 05	26	23	52	
5	254	18.2	+6	209	48.7 ¹²⁵	+21	03.9 ⁸⁹	50	4 15	4 55	5 28	7 14	28	23	41	
6	269	18.3	+6	224	20.1 ¹²⁴	+21	12.8 ⁸⁹	45	4 28	5 04	5 34	7 34	32	23	18	
7	284	18.5		238	51.5 ¹²⁴		21.5 ⁸⁷	40	38	10	38	7 50	35	23	00	
8	299	18.7		253	22.8 ¹²³		30.2 ⁸⁷	35	46	16	42	8 03	38	22	45	
9	314	18.9		267	54.1 ¹²³		38.7 ⁸⁵	30	4 52	21	45	15	39	32	56	
10	329	19.1		282	25.4 ¹²³		47.2 ⁸⁵	20	5 02	28	50	35	43	22	10	
11	344	19.2	+6	296	56.6 ¹²²	+21	55.5 ⁸³	10 N	5 09	5 34	5 55	8 53	45	21	50	
12	359	19.4	+6	311	27.7 ¹²¹	+22	03.7 ⁸²	0	5 15	5 39	5 59	9 09	48	21	32	
13	14	19.6		325	58.9 ¹²²		11.9 ⁸²	10 S	18	43	6 04	26	51	21	14	
14	29	19.8		340	29.9 ¹²⁰		19.9 ⁸⁰	20	20	46	08	9 44	53	20	55	
15	44	20.0		355	01.0 ¹²¹		27.8 ⁷⁹	30	21	49	13	10 04	57	33	42	
16	59	20.1		9	32.0 ¹²⁰		35.6 ⁷⁸	35	21	50	16	17	58	20	40	
17	74	20.3	+6	24	03.0 ¹²⁰	+22	43.3 ⁷⁷	40	5 20	5 52	6 19	10 31	61	20	05	
18	89	20.5	+6	38	33.9 ¹¹⁹	+22	50.9 ⁷⁶	45	5 19	5 53	6 22	10 47	65	19	48	
19	104	20.7		53	04.8 ¹¹⁹	+22	58.4 ⁷⁵	50	17	54	27	11 08	68	26	32	
20	119	20.8		67	35.6 ¹¹⁸	+23	05.8 ⁷⁴	52	16	55	29	18	70	16	29	
21	134	21.0		82	06.4 ¹¹⁸		13.1 ⁷³	54	14	55	31	29	73	19	04	
22	149	21.2		96	37.2 ¹¹⁸		20.3 ⁷²	56	13	56	33	42	76	18	51	
23	164	21.4		111	07.9 ¹¹⁷		27.3 ⁷⁰	58	11	56	36	11 57	80	35	21	
24	179	21.6	+6	125	38.6 ¹¹⁷	+23	34.3 ⁷⁰	60 S	5 09	5 57	6 39	12 14	87	18	17	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 05 ^m 1		Mag: -4.4 PMG: 9 ^h 12 ^m			Mag: +1.0 PMG: 8 ^h 47 ^m			Mag: -2.1 PMG: 10 ^h 39 ^m			Mag: +0.9 PMG: 8 ^h 46 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	193	16.6	222	01.1	-11	14.4	228	09.0	-15	15.2	200	00.6	-4	00.8	228	12.2
1	208	19.1	237	00.9		13.7	243	09.6		14.6	215	02.5		00.6	243	14.4
2	223	21.6	252	00.8		13.0	258	10.2		14.0	230	04.4		00.4	258	16.6
3	238	24.0	267	00.6		12.3	273	10.8		13.4	245	06.3	-4	00.2	273	18.9
4	253	26.5	282	00.4		11.5	288	11.4		12.8	260	08.3	-3	59.9	288	21.1
5	268	29.0	297	00.3	-11	10.8	303	12.0	-15	12.2	275	10.2	-3	59.7	303	23.4
6	283	31.4	312	00.1	-11	10.1	318	12.6	-15	11.7	290	12.1	-3	59.5	318	25.6
7	298	33.9	326	59.9		09.3	333	13.2		11.1	305	14.1		59.3	333	27.9
8	313	36.3	341	59.8		08.6	348	13.8		10.5	320	16.0		59.0	348	30.1
9	328	38.8	356	59.6		07.9	3	14.4		09.9	335	17.9		58.8	3	32.4
10	343	41.3	11	59.4		07.2	18	15.0		09.3	350	19.8		58.6	18	34.6
11	358	43.7	26	59.2	-11	06.4	33	15.7	-15	08.7	5	21.8	-3	58.4	33	36.9
12	13	46.2	41	59.1	-11	05.7	48	16.3	-15	08.1	20	23.7	-3	58.1	48	39.1
13	28	48.7	56	58.9		05.0	63	16.9		07.5	35	25.6		57.9	63	41.4
14	43	51.1	71	58.7		04.2	78	17.5		06.9	50	27.6		57.7	78	43.6
15	58	53.6	86	58.6		03.5	93	18.1		06.3	65	29.5		57.5	93	45.9
16	73	56.1	101	58.4		02.8	108	18.7		05.7	80	31.4		57.2	108	48.1
17	88	58.5	116	58.2	-11	02.0	123	19.3	-15	05.1	95	33.3	-3	57.0	123	50.4
18	104	01.0	131	58.1	-11	01.3	138	19.9	-15	04.6	110	35.3	-3	56.8	138	52.6
19	119	03.4	146	57.9	-11	00.6	153	20.5		04.0	125	37.2		56.6	153	54.9
20	134	05.9	161	57.7	-10	59.8	168	21.1		03.4	140	39.1		56.3	168	57.1
21	149	08.4	176	57.6		59.1	183	21.7		02.8	155	41.1		56.1	183	59.4
22	164	10.8	191	57.4		58.4	198	22.3		02.2	170	43.0		55.9	199	01.6
23	179	13.3	206	57.2		57.6	213	22.9		01.6	185	44.9		55.7	214	03.9
24	194	15.8	221	57.1	-10	56.9	228	23.6	-15	01.0	200	46.9	-3	55.4	229	06.1
Dif	—		-2		+7		+6		+6		+19		+2		+22	
															+1	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'0			Edad: 4 ^d 7	PHE { 4 ^h : 54'4 12 ^h : 54'4 20 ^h : 54'3	Civil			Náutico		Hora R°				
	PMG: 12 ^h 02 ^m 4					PMG: 16 ^h 09 ^m			R°: 50 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	21.6	+6 21.7	125	38.6	+23 34.3	68	60 N	18 56	19 40	20 36	6 26 21	0 56 82		
1	194	21.7	22.7	140	09.2 ¹¹⁶	41.1	68	58	52	33	25	6 47 26	35 77		
2	209	21.9	23.6	154	39.8 ¹¹⁶	47.8	67	56	48	27	15	7 04 30	19 72		
3	224	22.1	24.6	169	10.4 ¹¹⁶	+23 54.4	66	54	45	22	07	18 33	0 04 70		
4	239	22.3	25.5	183	40.9 ¹¹⁵	+24 00.9	65	52	42	17	20 00	31 35	** ** *	**	
5	254	22.4	+6 26.5	198	11.4 ¹¹⁵	+24 07.3	64	50	18 40	19 13	19 53	7 42 37	** ** *	**	
6	269	22.6	+6 27.4	212	41.8 ¹¹⁴	+24 13.6	63	45	18 34	19 04	19 40	8 06 39	** ** *	**	
7	284	22.8	28.4	227	12.2 ¹¹⁴	19.8	62	40	29	18 57	30	25 41	** ** *	**	
8	299	23.0	29.3	241	42.6 ¹¹⁴	25.8	60	35	25	51	21	41 42	23 43 54		
9	314	23.1	30.2	256	13.0 ¹¹⁴	31.7	59	30	22	46	14	8 54 45	28 54		
10	329	23.3	31.2	270	43.3 ¹¹³	37.5	58	20	16	38	19 04	9 18 46	23 03 53		
11	344	23.5	+6 32.1	285	13.5 ¹¹²	+24 43.2	57	10 N	18 10	18 32	18 56	9 38 49	22 41 52		
12	359	23.7	+6 33.1	299	43.8 ¹¹³	+24 48.8	56	0	18 06	18 27	18 51	9 57 50	22 21 51		
13	14	23.9	34.0	314	13.9 ¹¹¹	54.3	55	10 S	18 01	22	47	10 17 51	22 01 50		
14	29	24.0	35.0	328	44.1 ¹¹²	+24 59.6	53	20	17 56	18	44	10 37 53	21 40 48		
15	44	24.2	35.9	343	14.2 ¹¹¹	+25 04.8	52	30	51	15	43	11 01 55	15 47		
16	59	24.4	36.9	357	44.3 ¹¹¹	09.9	51	35	48	13	42	15 57	21 00 46		
17	74	24.6	+6 37.8	12	14.4 ¹¹¹	+25 14.9	50	40	17 44	18 11	18 43	11 32 58	20 43 45		
18	89	24.7	+6 38.7	26	44.4 ¹¹⁰	+25 19.8	49	45	17 40	18 10	18 44	11 52 59	20 23 43		
19	104	24.9	39.7	41	14.4 ¹¹⁰	24.5	47	50	36	08	45	12 16 63	19 58 41		
20	119	25.1	40.6	55	44.4 ¹¹⁰	29.2	47	52	34	07	46	28 64	45 40		
21	134	25.3	41.6	70	14.3 ¹⁰⁹	33.7	45	54	31	07	47	42 65	31 39		
22	149	25.4	42.5	84	44.2 ¹⁰⁹	38.1	44	56	29	06	49	12 58 68	19 15 36		
23	164	25.6	43.4	99	14.1 ¹⁰⁹	42.3	42	58	26	05	50	13 17 71	18 56 33		
24	179	25.8	+6 44.4	113	43.9 ¹⁰⁸	+25 46.5	42	60 S	17 23	18 04	18 52	13 41 76	18 32 28		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 11 ^h 01 ^m 1		Mag: -4.3 PMG: 9 ^h 12 ^m		Mag: +1.0 PMG: 8 ^h 46 ^m		Mag: -2.1 PMG: 10 ^h 36 ^m		Mag: +0.9 PMG: 8 ^h 42 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	194	15.8	221	57.1	-10	56.9	228	23.6	-15	01.0					
1	209	18.2	236	56.9		56.1	243	24.2	-15	00.4					
2	224	20.7	251	56.7		55.4	258	24.8	-14	59.8					
3	239	23.2	266	56.5		54.7	273	25.4		59.2					
4	254	25.6	281	56.4		53.9	288	26.0		58.6					
5	269	28.1	296	56.2	-10	53.2	303	26.6	-14	58.0					
6	284	30.6	311	56.0	-10	52.4	318	27.2	-14	57.4					
7	299	33.0	326	55.9		51.7	333	27.8		56.8					
8	314	35.5	341	55.7		51.0	348	28.4		56.2					
9	329	37.9	356	55.5		50.2	3 29.0			55.6					
10	344	40.4	11	55.3		49.5	18 29.7			55.0					
11	359	42.9	26	55.2	-10	48.7	33 30.3	-14	54.4						
12	14	45.3	41	55.0	-10	48.0	48 30.9	-14	53.8	21 10.0					
13	29	47.8	56	54.8		47.2	63 31.5		53.2	36 11.9					
14	44	50.3	71	54.7		46.5	78 32.1		52.6	51 13.9					
15	59	52.7	86	54.5		45.7	93 32.7		52.0	66 15.8					
16	74	55.2	101	54.3		45.0	108 33.3		51.4	81 17.7					
17	89	57.7	116	54.2	-10	44.2	123 33.9	-14	50.8	96 19.7					
18	105	00.1	131	54.0	-10	43.5	138 34.5	-14	50.2	111 21.6					
19	120	02.6	146	53.8		42.7	153 35.2		49.6	126 23.5					
20	135	05.1	161	53.6		42.0	168 35.8		49.0	141 25.5					
21	150	07.5	176	53.5		41.2	183 36.4		48.4	156 27.4					
22	165	10.0	191	53.3		40.5	198 37.0		47.8	171 29.3					
23	180	12.4	206	53.1		39.7	213 37.6		47.2	186 31.3					
24	195	14.9	221	53.0	-10	39.0	228 38.2	-14	46.6	201 33.2					
Dif	—		-2		+7		+6		+6	+19	+2	+23		+	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna									
	SD: 16'0 PMG: 12 ^h 02 ^m 1			Edad: 5 ^d 7 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 PMG: 16 ^h 59 ^m R°: 51 ^m																			
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m							
0	179	25.8	+6	44.4	113	43.9	+25	46.5	40	60 N	3	27	4	24	5	08	6	47	38	2	18	66	
1	194	26.0		45.3	128	13.7	108	50.5	39	58	39	30	12	7	13	41	1	52	63				
2	209	26.1		46.3	142	43.5	108	54.4	39	56	48	37	15	34	43		31	61					
3	224	26.3		47.2	157	13.3	108	+25	58.2	38	54	3	57	42	18	7	51	44	1	14	66		
4	239	26.5		48.2	171	43.0	107	+26	01.8	36	52	4	04	47	21	8	06	45	0	59	59		
5	254	26.7	+6	49.1	186	12.7	107	+26	05.3	35	50	4	11	4	51	5	24	8	19	46	0	47	58
6	269	26.8	+6	50.0	200	42.4	107	+26	08.7	34	45	4	24	5	00	5	30	8	45	47	0	21	56
7	284	27.0		51.0	215	12.0	106	12.0	33	40	34	07	35	9	06	48	0	00	56				
8	299	27.2		51.9	229	41.7	107	15.2	32	35	43	13	39	23	49		**	**	**				
9	314	27.4		52.9	244	11.3	106	18.2	30	30	4	50	18	42	9	39	49		**	**	**		
10	329	27.5		53.8	258	40.9	106	21.1	29	20	5	00	26	49	10	04	50	23	56	50			
11	344	27.7	+6	54.7	273	10.4	105	+26	23.9	28	10 N	5	08	5	33	5	54	10	27	50	23	33	51
12	359	27.9	+6	55.7	287	40.0	106	+26	26.5	26	0	5	14	5	38	5	59	10	47	51	23	12	51
13	14	28.1		56.6	302	09.5	105	29.1	26	10 S	18	43	6	04	11	08	51	22	51	51			
14	29	28.2		57.6	316	39.0	105	31.4	23	20	21	47	09	30	52		28	51					
15	44	28.4		58.5	331	08.5	105	33.7	23	30	22	50	14	11	56	53	22	02	51				
16	59	28.6	+6	59.4	345	38.0	105	35.9	22	35	23	52	17	12	12	52	21	46	51				
17	74	28.8	+7	00.4	0	07.4	104	+26	37.9	20	40	5	22	5	54	6	21	12	30	52	21	28	51
18	89	28.9	+7	01.3	14	36.8	104	+26	39.8	19	45	5	22	5	56	6	25	12	51	53	21	06	51
19	104	29.1		02.2	29	06.3	105	41.5	17	50	20	57	30	13	19	53	20	39	51				
20	119	29.3		03.2	43	35.7	104	43.2	17	52	19	58	32	32	54		25	51					
21	134	29.4		04.1	58	05.0	103	44.7	15	54	18	5	59	34	13	47	54	20	10	51			
22	149	29.6		05.1	72	34.4	104	46.1	14	56	17	6	00	37	14	06	54	19	51	51			
23	164	29.8		06.0	87	03.8	104	47.3	12	58	15	01	40	28	55		29	50					
24	179	30.0	+7	06.9	101	33.1	103	+26	48.5	12	60 S	5	13	6	02	6	43	14	57	55	19	00	50
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 10 ^h 57 ^m 2			Mag: -4.3 PMG: 9 ^h 13 ^m			Mag: +1.0 PMG: 8 ^h 45 ^m			Mag: -2.1 PMG: 10 ^h 32 ^m			Mag: +0.9 PMG: 8 ^h 39 ^m										
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	195	14.9		221	53.0	-10	39.0	228	38.2	-14	46.6	201	33.2	-3	50.1	230	00.2	-14	53.7				
1	210	17.4		236	52.8		38.2	243	38.8		46.0	216	35.1		49.8	245	02.4		53.7				
2	225	19.8		251	52.6		37.5	258	39.4		45.4	231	37.0		49.6	260	04.7		53.6				
3	240	22.3		266	52.4		36.7	273	40.1		44.8	246	39.0		49.4	275	06.9		53.6				
4	255	24.8		281	52.3		35.9	288	40.7		44.2	261	40.9		49.2	290	09.2		53.5				
5	270	27.2		296	52.1	-10	35.2	303	41.3	-14	43.6	276	42.8	-3	48.9	305	11.4	-14	53.4				
6	285	29.7		311	51.9	-10	34.4	318	41.9	-14	43.0	291	44.8	-3	48.7	320	13.7	-14	53.4				
7	300	32.2		326	51.7		33.7	333	42.5		42.4	306	46.7		48.5	335	16.0		53.3				
8	315	34.6		341	51.6		32.9	348	43.1		41.8	321	48.6		48.3	350	18.2		53.2				
9	330	37.1		356	51.4		32.2	3	43.7		41.2	336	50.6		48.0	5	20.5		53.2				
10	345	39.6		11	51.2		31.4	18	44.3		40.6	351	52.5		47.8	20	22.7		53.1				
11	0	42.0		26	51.1	-10	30.6	33	45.0	-14	40.0	6	54.4	-3	47.6	35	25.0	-14	53.0				
12	15	44.5		41	50.9	-10	29.9	48	45.6	-14	39.4	21	56.4	-3	47.4	50	27.2	-14	53.0				
13	30	46.9		56	50.7		29.1	63	46.2		38.8	36	58.3		47.1	65	29.5		52.9				
14	45	49.4		71	50.5		28.3	78	46.8		38.2	52	00.2		46.9	80	31.7		52.9				
15	60	51.9		86	50.4		27.6	93	47.4		37.6	67	02.2		46.7	95	34.0		52.8				
16	75	54.3		101	50.2		26.8	108	48.0		37.0	82	04.1		46.5	110	36.2		52.7				
17	90	56.8		116	50.0	-10	26.1	123	48.7	-14	36.4	97	06.0	-3	46.2	125	38.5	-14	52.7				
18	105	59.3		131	49.9	-10	25.3	138	49.3	-14	35.8	112	08.0	-3	46.0	140	40.8	-14	52.6				
19	121	01.7		146	49.7		24.5	153	49.9		35.2	127	09.9		45.8	155	43.0		52.5				
20	136	04.2		161	49.5		23.8	168	50.5		34.6	142	11.8		45.6	170	45.3		52.5				
21	151	06.7		176	49.3		23.0	183	51.1		34.0	157	13.8		45.4	185	47.5		52.4				
22	166	09.1		191	49.2		22.2	198	51.7		33.4	172	15.7		45.1	200	49.8		52.3				
23	181	11.6		206	49.0		21.4	213	52.3		32.8	187	17.6		44.9	215	52.0		52.3				
24	196	14.0		221	48.8	-10	20.7	228	53.0	-14	32.2	202	19.6	-3	44.7	230	54.3	-14	52.2				
Dif	—			-2			+8			+6			+19			+2			+23			+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/0 PMG: 12 ^h 01 ^m 9			Edad: 6 ^d 7 PHE { SD: 14/8 PMG: 17 ^h 50 ^m R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	30.0	+7	06.9	101	33.1	+26	48.5	60 N	19 01	19 45	20 43	7 25 62	3 24 44
1	194	30.1		07.9	116	02.5 ¹⁰⁴		49.5	58	18 56	38	31	7 54 60	2 55 46
2	209	30.3		08.8	130	31.8 ¹⁰³		50.3	56	52	32	20	8 17 58	32 47
3	224	30.5		09.7	145	01.1 ¹⁰³		51.1	54	49	26	11	35 58	2 14 47
4	239	30.7		10.7	159	30.4 ¹⁰³		51.7	52	46	21	20 04	8 51 57	1 58 48
5	254	30.8	+7	11.6	173	59.8 ¹⁰⁴	+26	52.2	50	18 43	19 16	19 57	9 05 56	1 45 48
6	269	31.0	+7	12.5	188	29.1 ¹⁰³	+26	52.5	45	18 36	19 07	19 43	9 32 55	1 17 49
7	284	31.2		13.5	202	58.3 ¹⁰²		52.7	40	31	18 59	32	9 54 54	0 56 49
8	299	31.4		14.4	217	27.6 ¹⁰³		52.8	35	27	53	23	10 12 54	37 50
9	314	31.5		15.3	231	56.9 ¹⁰³		52.8	30	23	47	16	28 53	0 22 50
10	329	31.7		16.3	246	26.2 ¹⁰³		52.6	20	16	38	19 05	10 54 52	** ** *
11	344	31.9	+7	17.2	260	55.5 ¹⁰³	+26	52.3	10 N	18 10	18 32	18 56	11 17 51	** ** *
12	359	32.0	+7	18.2	275	24.8 ¹⁰³	+26	51.9	0	18 05	18 26	18 50	11 38 51	** ** *
13	14	32.2		19.1	289	54.0 ¹⁰²		51.4	10 S	18 00	21	46	11 59 50	23 42 51
14	29	32.4		20.0	304	23.3 ¹⁰³		50.7	20	17 55	17	42	12 22 49	23 19 53
15	44	32.6		21.0	318	52.6 ¹⁰³		49.9	30	49	13	40	12 49 47	22 53 55
16	59	32.7		21.9	333	21.9 ¹⁰³		48.9	35	45	10	40	13 04 47	37 56
17	74	32.9	+7	22.8	347	51.2 ¹⁰³	+26	47.9	40	17 41	18 08	18 40	13 22 47	22 19 57
18	89	33.1	+7	23.8	2	20.5 ¹⁰³	+26	46.7	45	17 37	18 06	18 40	13 44 45	21 57 59
19	104	33.2		24.7	16	49.8 ¹⁰³		45.4	50	32	04	41	14 12 43	30 61
20	119	33.4		25.6	31	19.0 ¹⁰²		43.9	52	29	03	42	26 42	16 62
21	134	33.6		26.5	45	48.4 ¹⁰⁴		42.3	54	26	02	43	14 41 41	21 01 63
22	149	33.8		27.5	60	17.7 ¹⁰³		40.6	56	24	01	44	15 00 39	20 42 65
23	164	33.9		28.4	74	47.0 ¹⁰³		38.8	58	20	18 00	45	23 36	20 19 69
24	179	34.1	+7	29.3	89	16.3 ¹⁰³	+26	36.8	60 S	17 17	17 59	18 47	15 52 33	19 50 72

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 53 ^m 3		Mag: -4.3 PMG: 9 ^h 13 ^m		Mag: +1.0 PMG: 8 ^h 44 ^m		Mag: -2.1 PMG: 10 ^h 29 ^m		Mag: +0.9 PMG: 8 ^h 35 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	196	14.0	221	48.8	-10	20.7	228	53.0	-14	32.2
1	211	16.5	236	48.6		19.9	243	53.6		31.6
2	226	19.0	251	48.5		19.1	258	54.2		30.9
3	241	21.4	266	48.3		18.4	273	54.8		30.3
4	256	23.9	281	48.1		17.6	288	55.4		29.7
5	271	26.4	296	47.9	-10	16.8	303	56.0	-14	29.1
6	286	28.8	311	47.8	-10	16.1	318	56.7	-14	28.5
7	301	31.3	326	47.6		15.3	333	57.3		27.9
8	316	33.8	341	47.4		14.5	348	57.9		27.3
9	331	36.2	356	47.3		13.7	3	58.5		26.7
10	346	38.7	11	47.1		13.0	18	59.1		26.1
11	1	41.2	26	46.9	-10	12.2	33	59.8	-14	25.5
12	16	43.6	41	46.7	-10	11.4	49	00.4	-14	24.9
13	31	46.1	56	46.6		10.6	64	01.0		24.3
14	46	48.5	71	46.4		09.8	79	01.6		23.7
15	61	51.0	86	46.2		09.1	94	02.2		23.0
16	76	53.5	101	46.0		08.3	109	02.8		22.4
17	91	55.9	116	45.9	-10	07.5	124	03.5	-14	21.8
18	106	58.4	131	45.7	-10	06.7	139	04.1	-14	21.2
19	122	00.9	146	45.5		05.9	154	04.7		20.6
20	137	03.3	161	45.3		05.2	169	05.3		20.0
21	152	05.8	176	45.2		04.4	184	05.9		19.4
22	167	08.3	191	45.0		03.6	199	06.6		18.8
23	182	10.7	206	44.8		02.8	214	07.2		18.2
24	197	13.2	221	44.6	-10	02.0	229	07.8	-14	17.5
Dif	—		-2	+8		+6	+6		+19	+2
									+23	+1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 01 ^m 6			Edad: 7 ^d 7 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 PMG: 18 ^h 41 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	34.1	+7 29.3	89	16.3	+26 36.8	60 N	3 20	4 17	5 02	8 27	80	4 08	24	
1	194	34.3		103	45.7 ¹⁰⁴	34.7 ²¹	58	32	25	06	8 54	75	3 41	29	
2	209	34.4		118	15.0 ¹⁰³	32.5 ²²	56	42	31	10	9 15	72	19	33	
3	224	34.6		132	44.4 ¹⁰⁴	30.1 ²⁴	54	51	37	14	33	68	3 01	36	
4	239	34.8		147	13.7 ¹⁰³	27.6 ²⁵	52	3 59	42	17	9 48	66	2 46	37	
5	254	35.0	+7 34.0	161	43.1 ¹⁰⁴	+26 25.0 ²⁶	50	4 06	4 46	5 20	10 01	65	2 33	39	
6	269	35.1	+7 34.9	176	12.5 ¹⁰⁴	+26 22.3 ²⁷	45	4 20	4 56	5 26	10 27	62	2 06	42	
7	284	35.3		190	41.9 ¹⁰⁴	19.4 ²⁹	40	31	5 04	32	10 48	60	1 45	43	
8	299	35.5		205	11.3 ¹⁰⁴	16.4 ³⁰	35	40	10	36	11 06	58	27	45	
9	314	35.6		219	40.8 ¹⁰⁵	13.3 ³¹	30	47	16	40	21 56		1 12	46	
10	329	35.8		234	10.2 ¹⁰⁴	10.1 ³²	20	4 59	25	47	11 46	54	0 46	48	
11	344	36.0	+7 39.6	248	39.7 ¹⁰⁵	+26 06.7 ³⁴	10 N	5 07	5 32	5 53	12 08	52	0 24	49	
12	359	36.1	+7 40.5	263	09.2 ¹⁰⁵	+26 03.2 ³⁵	0	5 13	5 37	5 58	12 29	50	0 03	50	
13	14	36.3		277	38.7 ¹⁰⁵	+25 59.6 ³⁶	10 S	18	42	6 04	12 49	48	** ** *	**	
14	29	36.5		292	08.2 ¹⁰⁵	55.8 ³⁸	20	21	47	09	13 11	46	** ** *	**	
15	44	36.6		306	37.8 ¹⁰⁶	51.9 ³⁹	30	24	51	15	36	44	23 48	57	
16	59	36.8		321	07.4 ¹⁰⁶	47.9 ⁴⁰	35	24	54	19	13 51	42	33	59	
17	74	37.0	+7 45.1	335	36.9 ¹⁰⁵	+25 43.8 ⁴¹	40	5 24	5 56	6 23	14 09	39	23 16	62	
18	89	37.2	+7 46.1	350	06.6 ¹⁰⁷	+25 39.5 ⁴³	45	5 24	5 58	6 27	14 29	38	22 56	64	
19	104	37.3		4	36.2 ¹⁰⁶	35.2 ⁴³	50	23	6 00	33	14 55	34	31	68	
20	119	37.5		19	05.9 ¹⁰⁷	30.7 ⁴⁵	52	22	01	35	15 08	32	18	70	
21	134	37.7		33	35.5 ¹⁰⁶	26.0 ⁴⁷	54	22	03	38	22 30		22 04	73	
22	149	37.8		48	05.2 ¹⁰⁷	21.3 ⁴⁷	56	21	04	41	39 27		21 47	76	
23	164	38.0		62	35.0 ¹⁰⁸	16.4 ⁴⁹	58	19	05	44	15 59	23	28	79	
24	179	38.2	+7 51.6	77	04.7 ¹⁰⁷	+25 11.4 ⁵⁰	60 S	5 18	6 06	6 48	16 25	17	21 02	86	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 10 ^h 49 ^m 3		Mag: -4.3 PMG: 9 ^h 13 ^m			Mag: +1.0 PMG: 8 ^h 43 ^m			Mag: -2.1 PMG: 10 ^h 26 ^m			Mag: +0.9 PMG: 8 ^h 31 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	197	13.2	221	44.6	-10 02.0	229	07.8	-14 17.5	203	06.0	-3 39.3	231	48.5	-14 50.7	
1	212	15.7	236	44.5	01.2	244	08.4	16.9	218	07.9	39.1	246	50.7	50.6	
2	227	18.1	251	44.3	-10 00.5	259	09.0	16.3	233	09.8	38.9	261	53.0	50.6	
3	242	20.6	266	44.1	-9 59.7	274	09.7	15.7	248	11.8	38.7	276	55.2	50.5	
4	257	23.0	281	43.9	58.9	289	10.3	15.1	263	13.7	38.4	291	57.5	50.5	
5	272	25.5	296	43.8	-9 58.1	304	10.9	-14 14.5	278	15.6	-3 38.2	306	59.8	-14 50.4	
6	287	28.0	311	43.6	-9 57.3	319	11.5	-14 13.9	293	17.6	-3 38.0	322	02.0	-14 50.3	
7	302	30.4	326	43.4	56.5	334	12.1	13.3	308	19.5	37.8	337	04.3	50.3	
8	317	32.9	341	43.2	55.7	349	12.8	12.7	323	21.4	37.5	352	06.5	50.2	
9	332	35.4	356	43.1	54.9	4	13.4	12.0	338	23.4	37.3	7	08.8	50.1	
10	347	37.8	11	42.9	54.2	19	14.0	11.4	353	25.3	37.1	22	11.1	50.1	
11	2	40.3	26	42.7	-9 53.4	34	14.6	-14 10.8	8	27.3	-3 36.9	37	13.3	-14 50.0	
12	17	42.8	41	42.5	-9 52.6	49	15.2	-14 10.2	23	29.2	-3 36.7	52	15.6	-14 50.0	
13	32	45.2	56	42.4	51.8	64	15.9	09.6	38	31.1	36.4	67	17.8	49.9	
14	47	47.7	71	42.2	51.0	79	16.5	09.0	53	33.1	36.2	82	20.1	49.8	
15	62	50.2	86	42.0	50.2	94	17.1	08.4	68	35.0	36.0	97	22.4	49.8	
16	77	52.6	101	41.8	49.4	109	17.7	07.7	83	36.9	35.8	112	24.6	49.7	
17	92	55.1	116	41.7	-9 48.6	124	18.4	-14 07.1	98	38.9	-3 35.5	127	26.9	-14 49.7	
18	107	57.5	131	41.5	-9 47.8	139	19.0	-14 06.5	113	40.8	-3 35.3	142	29.1	-14 49.6	
19	123	00.0	146	41.3	47.0	154	19.6	05.9	128	42.7	35.1	157	31.4	49.5	
20	138	02.5	161	41.1	46.2	169	20.2	05.3	143	44.7	34.9	172	33.7	49.5	
21	153	04.9	176	41.0	45.4	184	20.9	04.7	158	46.6	34.7	187	35.9	49.4	
22	168	07.4	191	40.8	44.6	199	21.5	04.0	173	48.5	34.4	202	38.2	49.3	
23	183	09.9	206	40.6	43.8	214	22.1	03.4	188	50.5	34.2	217	40.4	49.3	
24	198	12.3	221	40.4	-9 43.0	229	22.7	-14 02.8	203	52.4	-3 34.0	232	42.7	-14 49.2	
Dif	—		-2 +8			+6 +6			+19 +2			+23 +1			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 12 ^h 01 ^m 3			Edad: 8 ^d 7 PHE { SD: 14:9 PMG: 19 ^h 31 ^m 4 ^h : 54:7 12 ^h : 54:8 20 ^h : 55:0 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	179	38.2	+7 51.6	77	04.7	+25 11.4	51	60 N	19 06	19 51	20 49	9 47	89	4 32	13
1	194	38.3		91	34.5 ¹⁰⁸	06.3	51	58	19 01	43	36	10 09	83	4 10	18
2	209	38.5	53.5	106	04.3 ¹⁰⁸	+25 01.0	53	56	18 56	36	25	27 78		3 52	22
3	224	38.7	54.4	120	34.1 ¹⁰⁸	+24 55.7	53	54	53	30	16	41 76		37	25
4	239	38.8	55.3	135	04.0 ¹⁰⁹	50.2	55	52	49	24	08	10 54	73	23	28
5	254	39.0	+7 56.3	149	33.9 ¹⁰⁹	+24 44.6	56	50	18 46	19 20	20 01	11 06	70	3 12	30
6	269	39.2	+7 57.2	164	03.8 ¹⁰⁹	+24 38.9	57	45	18 39	19 09	19 46	11 29	67	2 48	33
7	284	39.3	58.1	178	33.7 ¹⁰⁹	33.0	60	40	33	19 01	34	11 48	63	28	37
8	299	39.5	+7 59.0	193	03.7 ¹¹⁰	27.0	60	35	28	18 54	25	12 04	60	2 12	39
9	314	39.7	+8 00.0	207	33.7 ¹¹⁰	20.9	61	30	24	48	17	17 59		1 58	41
10	329	39.8	+8 00.9	222	03.7 ¹¹⁰	14.7	62	20	17	39	19 05	12 40	55	34	44
11	344	40.0	+8 01.8	236	33.8 ¹¹¹	+24 08.4	63	10 N	18 10	18 32	18 56	13 00	52	1 13	47
12	359	40.2	+8 02.7	251	03.9 ¹¹¹	+24 02.0	64	0	18 05	18 25	18 50	13 19	49	0 53	49
13	14	40.3	03.6	265	34.0 ¹¹¹	+23 55.4	66	10 S	17 59	20	45	37 46		33	52
14	29	40.5	04.6	280	04.2 ¹¹²	48.7	67	20	53	15	41	13 57	43	0 12	55
15	44	40.7	05.5	294	34.4 ¹¹²	41.9	68	30	46	10	38	14 20	39	** ** *	**
16	59	40.8	06.4	309	04.6 ¹¹²	35.0	69	35	42	08	37	33 37		** ** *	**
17	74	41.0	+8 07.3	323	34.8 ¹¹²	+23 27.9	71	40	17 38	18 05	18 37	14 48	35	** ** *	**
18	89	41.2	+8 08.3	338	05.1 ¹¹³	+23 20.8	71	45	17 33	18 03	18 37	15 07	31	** ** *	**
19	104	41.3	09.2	352	35.4 ¹¹³	13.5	73	50	27	18 00	37	29 27		23 39	72
20	119	41.5	10.1	7	05.8 ¹¹⁴	+23 06.2	73	52	25	17 59	38	40 24		28	75
21	134	41.7	11.0	21	36.1 ¹¹³	+22 58.7	75	54	22	57	38	15 52	22	17	77
22	149	41.8	11.9	36	06.5 ¹¹⁴	51.0	77	56	19	56	39	16 06	19	23 03	81
23	164	42.0	12.9	50	37.0 ¹¹⁵	43.3	77	58	15	54	40	22 15		22 47	86
24	179	42.2	+8 13.8	65	07.5 ¹¹⁵	+22 35.5	78	60 S	17 11	17 53	18 41	16 42	9	22 28	91

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 45 ^m 4		Mag: -4.3 PMG: 9 ^h 13 ^m		Mag: +1.0 PMG: 8 ^h 42 ^m		Mag: -2.1 PMG: 10 ^h 23 ^m		Mag: +0.9 PMG: 8 ^h 28 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	198	12.3	221 40.4	-9 43.0	229 22.7	-14 02.8	203 52.4	-3 34.0	232 42.7	-14 49.2
1	213	14.8	236 40.3	42.2	244 23.3	02.2	218 54.4	33.8	247 45.0	49.2
2	228	17.3	251 40.1	41.4	259 24.0	01.6	233 56.3	33.5	262 47.2	49.1
3	243	19.7	266 39.9	40.6	274 24.6	01.0	248 58.2	33.3	277 49.5	49.0
4	258	22.2	281 39.7	39.8	289 25.2	-14 00.3	264 00.2	33.1	292 51.8	49.0
5	273	24.6	296 39.5	-9 39.0	304 25.8	-13 59.7	279 02.1	-3 32.9	307 54.0	-14 48.9
6	288	27.1	311 39.4	-9 38.2	319 26.5	-13 59.1	294 04.0	-3 32.7	322 56.3	-14 48.9
7	303	29.6	326 39.2	37.4	334 27.1	58.5	309 06.0	32.4	337 58.5	48.8
8	318	32.0	341 39.0	36.6	349 27.7	57.9	324 07.9	32.2	353 00.8	48.7
9	333	34.5	356 38.8	35.8	4 28.3	57.2	339 09.9	32.0	8 03.1	48.7
10	348	37.0	11 38.7	35.0	19 29.0	56.6	354 11.8	31.8	23 05.3	48.6
11	3 39.4	26 38.5	-9 34.2	34 29.6	-13 56.0	9 13.7	-3 31.5	38 07.6	-14 48.5	
12	18 41.9	41 38.3	-9 33.4	49 30.2	-13 55.4	24 15.7	-3 31.3	53 09.9	-14 48.5	
13	33 44.4	56 38.1	32.6	64 30.8	54.8	39 17.6	31.1	68 12.1	48.4	
14	48 46.8	71 38.0	31.8	79 31.5	54.2	54 19.5	30.9	83 14.4	48.4	
15	63 49.3	86 37.8	31.0	94 32.1	53.5	69 21.5	30.7	98 16.6	48.3	
16	78 51.8	101 37.6	30.2	109 32.7	52.9	84 23.4	30.4	113 18.9	48.2	
17	93 54.2	116 37.4	-9 29.4	124 33.3	-13 52.3	99 25.4	-3 30.2	128 21.2	-14 48.2	
18	108 56.7	131 37.3	-9 28.5	139 34.0	-13 51.7	114 27.3	-3 30.0	143 23.4	-14 48.1	
19	123 59.1	146 37.1	27.7	154 34.6	51.1	129 29.2	29.8	158 25.7	48.1	
20	139 01.6	161 36.9	26.9	169 35.2	50.4	144 31.2	29.6	173 28.0	48.0	
21	154 04.1	176 36.7	26.1	184 35.9	49.8	159 33.1	29.3	188 30.2	47.9	
22	169 06.5	191 36.5	25.3	199 36.5	49.2	174 35.0	29.1	203 32.5	47.9	
23	184 09.0	206 36.4	24.5	214 37.1	48.6	189 37.0	28.9	218 34.8	47.8	
24	199 11.5	221 36.2	-9 23.7	229 37.7	-13 47.9	204 38.9	-3 28.7	233 37.0	-14 47.8	
Dif	—	-2	+8	+6	+6	+19	+2	+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 1			Edad: 9 ^d 7 PHE { SD: 15'0 PMG: 20 ^h 19 ^m											
				R ^c : 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	42.2	+8 13.8	65	07.5	+22 35.5		60 N	3 12	4 11	4 56	11 16	91	4 45	7
1	194	42.3		79	38.0 ¹¹⁵	27.5 ⁸⁰		58	25	19	5 01	32	86	28	12
2	209	42.5	15.6	94	08.5 ¹¹⁵	19.5 ⁸⁰		56	36	26	05	45	83	14	16
3	224	42.7	16.5	108	39.1 ¹¹⁶	11.3 ⁸²		54	45	32	09	11 57	79	4 02	19
4	239	42.8	17.5	123	09.7 ¹¹⁶	+22 03.0 ⁸³		52	3 54	37	12	12 07	77	3 51	22
5	254	43.0	+8 18.4	137	40.4 ¹¹⁷	+21 54.6 ⁸⁴		50	4 01	4 42	5 16	12 16	74	3 42	23
6	269	43.2	+8 19.3	152	11.0 ¹¹⁶	+21 46.1 ⁸⁵		45	4 16	4 52	5 23	12 36	68	3 21	29
7	284	43.3	20.2	166	41.8 ¹¹⁸	37.5 ⁸⁶		40	28	5 01	29	12 51	65	3 05	32
8	299	43.5	21.1	181	12.5 ¹¹⁷	28.8 ⁸⁷		35	37	08	33	13 04	62	2 51	35
9	314	43.7	22.1	195	43.3 ¹¹⁸	20.0 ⁸⁸		30	45	14	38	16	59	39	37
10	329	43.8	23.0	210	14.1 ¹¹⁸	11.1 ⁸⁹		20	4 57	23	45	35	55	18	41
11	344	44.0	+8 23.9	224	45.0 ¹¹⁹	+21 02.0 ⁹¹		10 N	5 06	5 31	5 52	13 52	51	2 00	44
12	359	44.2	+8 24.8	239	15.8 ¹¹⁸	+20 52.9 ⁹¹		0	5 13	5 37	5 58	14 08	47	1 42	48
13	14	44.3	25.7	253	46.8 ¹²⁰	43.6 ⁹³		10 S	18	42	6 04	23	44	25	51
14	29	44.5	26.6	268	17.7 ¹¹⁹	34.3 ⁹³		20	22	48	10	40	40	1 07	54
15	44	44.6	27.6	282	48.7 ¹²⁰	24.8 ⁹⁵		30	25	53	17	14 59	35	0 45	59
16	59	44.8	28.5	297	19.7 ¹²⁰	15.2 ⁹⁶		35	26	55	21	15 10	33	33	61
17	74	45.0	+8 29.4	311	50.8 ¹²¹	+20 05.6 ⁹⁶		40	5 26	5 58	6 25	15 23	29	0 18	64
18	89	45.1	+8 30.3	326	21.8 ¹²⁰	+19 55.8 ⁹⁸		45	5 26	6 00	6 30	15 38	26	0 00	68
19	104	45.3	31.2	340	53.0 ¹²²	45.9 ⁹⁹		50	26	03	36	15 56	21	** ** *	**
20	119	45.5	32.1	355	24.1 ¹²¹	35.9 ¹⁰⁰		52	26	05	39	16 04	19	** ** *	**
21	134	45.6	33.1	9	55.3 ¹²²	25.9 ¹⁰⁰		54	25	06	42	14	16	** ** *	**
22	149	45.8	34.0	24	26.5 ¹²²	15.7 ¹⁰²		56	25	08	45	25	13	** ** *	**
23	164	46.0	34.9	38	57.7 ¹²²	+19 05.4 ¹⁰³		58	24	09	49	37	9	** ** *	**
24	179	46.1	+8 35.8	53	29.0 ¹²³	+18 55.0 ¹⁰⁴		60 S	5 23	6 11	6 53	16 51	5	23 59	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 10 ^h 41 ^m 5		Mag: -4.3 PMG: 9 ^h 14 ^m		Mag: +1.0 PMG: 8 ^h 41 ^m		Mag: -2.1 PMG: 10 ^h 20 ^m		Mag: +0.9 PMG: 8 ^h 24 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	199	11.5	221 36.2	-9 23.7	229 37.7	-13 47.9	204 38.9	-3 28.7	233 37.0	-14 47.8
1	214	13.9	236 36.0	22.9	244 38.4	47.3	219 40.9	28.4	248 39.3	47.7
2	229	16.4	251 35.8	22.0	259 39.0	46.7	234 42.8	28.2	263 41.5	47.6
3	244	18.9	266 35.7	21.2	274 39.6	46.1	249 44.7	28.0	278 43.8	47.6
4	259	21.3	281 35.5	20.4	289 40.2	45.5	264 46.7	27.8	293 46.1	47.5
5	274	23.8	296 35.3	-9 19.6	304 40.9	-13 44.8	279 48.6	-3 27.6	308 48.3	-14 47.5
6	289	26.3	311 35.1	-9 18.8	319 41.5	-13 44.2	294 50.5	-3 27.3	323 50.6	-14 47.4
7	304	28.7	326 35.0	18.0	334 42.1	43.6	309 52.5	27.1	338 52.9	47.3
8	319	31.2	341 34.8	17.1	349 42.8	43.0	324 54.4	26.9	353 55.1	47.3
9	334	33.6	356 34.6	16.3	4 43.4	42.3	339 56.4	26.7	8 57.4	47.2
10	349	36.1	11 34.4	15.5	19 44.0	41.7	354 58.3	26.5	23 59.7	47.2
11	4 38.6	26 34.2	-9 14.7	34 44.6	-13 41.1	41.1	10 00.2	-3 26.2	39 01.9	-14 47.1
12	19 41.0	41 34.1	-9 13.9	49 45.3	-13 40.5	40.5	25 02.2	-3 26.0	54 04.2	-14 47.0
13	34 43.5	56 33.9	13.0	64 45.9	39.8	39.8	40 04.1	25.8	69 06.5	47.0
14	49 46.0	71 33.7	12.2	79 46.5	39.2	39.2	55 06.1	25.6	84 08.7	46.9
15	64 48.4	86 33.5	11.4	94 47.2	38.6	38.6	70 08.0	25.4	99 11.0	46.9
16	79 50.9	101 33.4	10.6	109 47.8	38.0	38.0	85 09.9	25.1	114 13.3	46.8
17	94 53.4	116 33.2	-9 09.8	124 48.4	-13 37.3	37.3	100 11.9	-3 24.9	129 15.5	-14 46.7
18	109 55.8	131 33.0	-9 08.9	139 49.1	-13 36.7	36.7	115 13.8	-3 24.7	144 17.8	-14 46.7
19	124 58.3	146 32.8	08.1	154 49.7	36.1	36.1	130 15.8	24.5	159 20.1	46.6
20	140 00.7	161 32.6	07.3	169 50.3	35.5	35.5	145 17.7	24.3	174 22.3	46.6
21	155 03.2	176 32.5	06.5	184 50.9	34.8	34.8	160 19.6	24.0	189 24.6	46.5
22	170 05.7	191 32.3	05.6	199 51.6	34.2	34.2	175 21.6	23.8	204 26.9	46.4
23	185 08.1	206 32.1	04.8	214 52.2	33.6	33.6	190 23.5	23.6	219 29.1	46.4
24	200 10.6	221 31.9	-9 04.0	229 52.8	-13 33.0	33.0	205 25.5	-3 23.4	234 31.4	-14 46.3
Dif	—	-2	+8	+6	+6		+19	+2	+23	+1

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 12 ^h 00 ^m 8			Edad: 10 ^d 7 PHE { SD: 15:2 PMG: 21 ^h 06 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	46.1	+8 35.8	53	29.0	+18 55.0	60 N	19 11	19 56	20 56	12 47 92	4 52 4		
1	194	46.3		68	00.3 ¹²³	44.6 ¹⁰⁴	58	05	48	42	12 58 88	40 8		
2	209	46.4		82	31.7 ¹²⁴	34.0 ¹⁰⁶	56	19 01	40	31	13 08 84	30 11		
3	224	46.6		97	03.0 ¹²³	23.3 ¹⁰⁷	54	18 56	34	21	16 81	21 17		
4	239	46.8		111	34.4 ¹²⁴	12.6 ¹⁰⁷	52	52	28	12	24 78	13 17		
5	254	46.9	+8 40.4	126	05.9 ¹²⁵	+18 01.7 ¹⁰⁹	50	18 49	19 23	20 04	13 30 76	4 05 20		
6	269	47.1	+8 41.3	140	37.3 ¹²⁴	+17 50.8 ¹⁰⁹	45	18 42	19 12	19 49	13 44 71	3 50 24		
7	284	47.3		155	08.8 ¹²⁵	39.7 ¹¹¹	40	35	19 03	37	13 56 67	37 28		
8	299	47.4		169	40.3 ¹²⁵	28.6 ¹¹¹	35	30	18 56	27	14 06 63	26 31		
9	314	47.6		184	11.9 ¹²⁶	17.4 ¹¹²	30	25	50	19	15 60	3 16 34		
10	329	47.7		198	43.5 ¹²⁶	+17 06.0 ¹¹⁴	20	17	40	19 06	30 55	2 59 39		
11	344	47.9	+8 45.8	213	15.1 ¹²⁶	+16 54.6 ¹¹⁴	10 N	18 10	18 32	18 57	14 43 50	2 44 43		
12	359	48.1	+8 46.8	227	46.7 ¹²⁶	+16 43.1 ¹¹⁵	0	18 04	18 25	18 49	14 55 46	2 30 47		
13	14	48.2		242	18.4 ¹²⁷	31.5 ¹¹⁶	10 S	17 58	19	44	15 07 42	16 51		
14	29	48.4		256	50.0 ¹²⁶	19.9 ¹¹⁶	20	51	14	39	20 38	2 01 55		
15	44	48.5		271	21.7 ¹²⁷	+16 08.1 ¹¹⁸	30	44	08	36	34 33	1 44 60		
16	59	48.7		285	53.5 ¹²⁸	+15 56.2 ¹¹⁹	35	40	05	35	43 30	34 62		
17	74	48.9	+8 51.3	300	25.2 ¹²⁷	+15 44.3 ¹¹⁹	40	17 35	18 02	18 34	15 52 27	1 22 66		
18	89	49.0	+8 52.2	314	57.0 ¹²⁸	+15 32.3 ¹²⁰	45	17 30	17 59	18 33	16 04 22	1 08 70		
19	104	49.2		329	28.8 ¹²⁸	20.1 ¹²²	50	23	56	33	17 18	0 51 75		
20	119	49.3		344	00.7 ¹²⁹	+15 07.9 ¹²²	52	20	54	33	23 16	43 78		
21	134	49.5		358	32.5 ¹²⁸	+14 55.7 ¹²²	54	17	53	34	30 13	34 80		
22	149	49.7		55.8	13 04.4 ¹²⁹	43.3 ¹²⁴	56	13	51	34	38 10	24 84		
23	164	49.8		56.8	27 36.3 ¹²⁹	30.9 ¹²⁴	58	10	49	35	46 8	0 13 87		
24	179	50.0	+8 57.7	42	08.2 ¹²⁹	+14 18.3 ¹²⁶	60 S	17 05	17 47	18 35	16 56 4	** ** *		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 37 ^m 5		Mag: -4.3 PMG: 9 ^h 14 ^m		Mag: +1.0 PMG: 8 ^h 40 ^m		Mag: -2.1 PMG: 10 ^h 17 ^m		Mag: +0.9 PMG: 8 ^h 21 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	200	10.6	221	31.9	-9	04.0	229	52.8	-13	33.0	205	25.5	-3	23.4	234	31.4	-14	46.3
1	215	13.1	236	31.8		03.2	244	53.5		32.3	220	27.4		23.1	249	33.7		46.3
2	230	15.5	251	31.6		02.3	259	54.1		31.7	235	29.3		22.9	264	35.9		46.2
3	245	18.0	266	31.4		01.5	274	54.7		31.1	250	31.3		22.7	279	38.2		46.1
4	260	20.5	281	31.2	-9	00.7	289	55.4		30.4	265	33.2		22.5	294	40.5		46.1
5	275	22.9	296	31.0	-8	59.8	304	56.0	-13	29.8	280	35.2	-3	22.3	309	42.7	-14	46.0
6	290	25.4	311	30.9	-8	59.0	319	56.6	-13	29.2	295	37.1	-3	22.0	324	45.0	-14	46.0
7	305	27.9	326	30.7		58.2	334	57.3		28.6	310	39.0		21.8	339	47.3		45.9
8	320	30.3	341	30.5		57.3	349	57.9		27.9	325	41.0		21.6	354	49.5		45.8
9	335	32.8	356	30.3		56.5	4	58.5		27.3	340	42.9		21.4	9	51.8		45.8
10	350	35.2	11	30.2		55.7	19	59.2		26.7	355	44.9		21.2	24	54.1		45.7
11	5	37.7	26	30.0	-8	54.8	34	59.8	-13	26.0	10	46.8	-3	20.9	39	56.3	-14	45.7
12	20	40.2	41	29.8	-8	54.0	50	00.4	-13	25.4	25	48.7	-3	20.7	54	58.6	-14	45.6
13	35	42.6	56	29.6		53.2	65	01.1		24.8	40	50.7		20.5	70	00.9		45.5
14	50	45.1	71	29.4		52.3	80	01.7		24.2	55	52.6		20.3	85	03.1		45.5
15	65	47.6	86	29.3		51.5	95	02.3		23.5	70	54.6		20.1	100	05.4		45.4
16	80	50.0	101	29.1		50.7	110	03.0		22.9	85	56.5		19.8	115	07.7		45.4
17	95	52.5	116	28.9	-8	49.8	125	03.6	-13	22.3	100	58.5	-3	19.6	130	10.0	-14	45.3
18	110	55.0	131	28.7	-8	49.0	140	04.2	-13	21.6	116	00.4	-3	19.4	145	12.2	-14	45.3
19	125	57.4	146	28.5		48.2	155	04.9		21.0	131	02.3		19.2	160	14.5		45.2
20	140	59.9	161	28.4		47.3	170	05.5		20.4	146	04.3		19.0	175	16.8		45.1
21	156	02.4	176	28.2		46.5	185	06.1		19.7	161	06.2		18.7	190	19.0		45.1
22	171	04.8	191	28.0		45.6	200	06.8		19.1	176	08.2		18.5	205	21.3		45.0
23	186	07.3	206	27.8		44.8	215	07.4		18.5	191	10.1		18.3	220	23.6		45.0
24	201	09.7	221	27.7	-8	44.0	230	08.0	-13	17.8	206	12.0	-3	18.1	235	25.8	-14	44.9
Dif	—		-2	+8		+6	+6		+19	+2		+2		+23		+1		

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 00 ^m 5			Edad: 11 ^d 7 PHE { 4 ^h : 56'5 12 ^h : 56'8 20 ^h : 57'1 PMG: 21 ^h 52 ^m R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	50.0	+8	57.7	42	08.2	+14	18.3	60 N	3 04	4 04	4 50	14 19	92	4 56	3
1	194	50.1		58.6	56	40.1 ¹²⁹	+14	05.7 ¹²⁶	58	18	13	4 55	26 88		48	6
2	209	50.3	+8	59.5	71	12.1 ¹³⁰	+13	53.0 ¹²⁷	56	30	20	5 00	32 85		41	10
3	224	50.5	+9	00.4	85	44.1 ¹³⁰		40.3 ¹²⁷	54	40	27	04	37 82		35	12
4	239	50.6		01.3	100	16.1 ¹³⁰		27.4 ¹²⁹	52	49	32	08	42 79		30	14
5	254	50.8	+9	02.2	114	48.1 ¹³⁰	+13	14.5 ¹²⁹	50	3 56	4 38	5 12	14 46	77	4 25	17
6	269	50.9	+9	03.1	129	20.1 ¹³⁰	+13	01.5 ¹³⁰	45	4 12	4 49	5 19	14 55	72	4 14	21
7	284	51.1		04.0	143	52.2 ¹³¹	+12	48.4 ¹³¹	40	24	4 58	25	15 03	67	4 05	25
8	299	51.3		04.9	158	24.2 ¹³⁰		35.3 ¹³¹	35	34	5 05	31	09 64		3 57	29
9	314	51.4		05.8	172	56.3 ¹³¹		22.1 ¹³²	30	42	11	36	15 60		50	32
10	329	51.6		06.7	187	28.4 ¹³¹	+12	08.8 ¹³³	20	4 55	21	44	25 55		38	37
11	344	51.7	+9	07.6	202	00.5 ¹³¹	+11	55.4 ¹³⁴	10 N	5 05	5 29	5 51	15 33	51	3 27	42
12	359	51.9	+9	08.5	216	32.6 ¹³¹	+11	42.0 ¹³⁴	0	5 12	5 36	5 57	15 41	46	3 17	46
13	14	52.0		09.4	231	04.7 ¹³¹		28.5 ¹³⁵	10 S	18	42	6 04	49 42		3 07	50
14	29	52.2		10.4	245	36.9 ¹³²		14.9 ¹³⁶	20	22	48	10	15 58	37	2 56	55
15	44	52.4		11.3	260	09.0 ¹³¹	+11	01.3 ¹³⁶	30	26	54	18	16 07	32	44	60
16	59	52.5		12.2	274	41.2 ¹³²	+10	47.6 ¹³⁷	35	27	5 57	22	13 28		36	63
17	74	52.7	+9	13.1	289	13.4 ¹³²	+10	33.8 ¹³⁸	40	5 28	6 00	6 27	16 19	25	2 28	67
18	89	52.8	+9	14.0	303	45.5 ¹³¹	+10	19.9 ¹³⁹	45	5 29	6 03	6 32	16 26	21	2 18	71
19	104	53.0		14.9	318	17.7 ¹³²	+10	06.0 ¹³⁹	50	29	06	39	35 16		06	76
20	119	53.1		15.8	332	49.9 ¹³²	+9	52.1 ¹³⁹	52	29	08	42	39 14		2 01	78
21	134	53.3		16.7	347	22.1 ¹³²		38.0 ¹⁴¹	54	29	10	45	43 12		1 54	82
22	149	53.5		17.6	1	54.3 ¹³²		23.9 ¹⁴¹	56	28	11	49	48 9		48	84
23	164	53.6		18.5	16	26.5 ¹³²	+9	09.8 ¹⁴¹	58	28	13	53	16 54	5	40	88
24	179	53.8	+9	19.4	30	58.7 ¹³²	+8	55.6 ¹⁴²	60 S	5 27	6 15	6 58	17 00	2	1 31	92

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 33 ^m 6		Mag: -4.3 PMG: 9 ^h 14 ^m		Mag: +1.0 PMG: 8 ^h 39 ^m		Mag: -2.1 PMG: 10 ^h 14 ^m		Mag: +0.9 PMG: 8 ^h 17 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	201	09.7	221	27.7	-8	44.0	230	08.0	-13	17.8
1	216	12.2	236	27.5		43.1	245	08.7		17.2
2	231	14.7	251	27.3		42.3	260	09.3		16.6
3	246	17.1	266	27.1		41.4	275	09.9		15.9
4	261	19.6	281	26.9		40.6	290	10.6		15.3
5	276	22.1	296	26.8	-8	39.7	305	11.2	-13	14.7
6	291	24.5	311	26.6	-8	38.9	320	11.8	-13	14.1
7	306	27.0	326	26.4		38.1	335	12.5		13.4
8	321	29.5	341	26.2		37.2	350	13.1		12.8
9	336	31.9	356	26.0		36.4	5	13.7		12.2
10	351	34.4	11	25.9		35.5	20	14.4		11.5
11	6	36.8	26	25.7	-8	34.7	35	15.0	-13	10.9
12	21	39.3	41	25.5	-8	33.8	50	15.6	-13	10.2
13	36	41.8	56	25.3		33.0	65	16.3		09.6
14	51	44.2	71	25.1		32.1	80	16.9		09.0
15	66	46.7	86	25.0		31.3	95	17.6		08.3
16	81	49.2	101	24.8		30.4	110	18.2		07.7
17	96	51.6	116	24.6	-8	29.6	125	18.8	-13	07.1
18	111	54.1	131	24.4	-8	28.7	140	19.5	-13	06.4
19	126	56.6	146	24.3		27.9	155	20.1		05.8
20	141	59.0	161	24.1		27.0	170	20.7		05.2
21	157	01.5	176	23.9		26.2	185	21.4		04.5
22	172	04.0	191	23.7		25.3	200	22.0		03.9
23	187	06.4	206	23.5		24.5	215	22.7		03.3
24	202	08.9	221	23.4	-8	23.6	230	23.3	-13	02.6
Dif	—		-2 +8		+6		+6		+19 +2	

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 12 ^h 00 ^m 3			Edad: 12 ^d 7 PHE { 4 ^h : 57/3 12 ^h : 57/6 20 ^h : 57/9 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	53.8	+9 19.4	30	58.7	+8 55.6		60 N	19 16	20 02	21 03	15 51 94	4 59 2		
1	194	53.9		45	30.9 ¹³²	41.3 ¹⁴³		58	10	19 53	20 48	54 90	54 6		
2	209	54.1	21.2	60	03.1 ¹³²	27.0 ¹⁴³		56	05	45	36	57 86	51 8		
3	224	54.2	22.1	74	35.3 ¹³²	+8 12.6 ¹⁴⁴		54	19 00	38	25	15 59 84	47 11		
4	239	54.4	23.0	89	07.6 ¹³³	+7 58.2 ¹⁴⁴		52	18 56	32	16	16 01 81	44 14		
5	254	54.6	+9 23.9	103	39.8 ¹³²	+7 43.7 ¹⁴⁵		50	18 52	19 26	20 08	16 03 78	4 42 15		
6	269	54.7	+9 24.8	118	12.0 ¹³²	+7 29.1 ¹⁴⁶		45	18 44	19 15	19 52	16 07 73	4 35 21		
7	284	54.9	25.7	132	44.2 ¹³²	+7 14.5 ¹⁴⁶		40	37	19 05	39	10 69	30 25		
8	299	55.0	26.6	147	16.4 ¹³²	+6 59.9 ¹⁴⁶		35	32	18 58	29	13 65	26 28		
9	314	55.2	27.5	161	48.6 ¹³²	45.2 ¹⁴⁷		30	27	51	20	15 62	22 31		
10	329	55.3	28.4	176	20.7 ¹³¹	30.4 ¹⁴⁸		20	18	40	19 07	20 56	15 37		
11	344	55.5	+9 29.3	190	52.9 ¹³²	+6 15.6 ¹⁴⁸		10 N	18 10	18 32	18 57	16 24 51	4 09 41		
12	359	55.6	+9 30.2	205	25.1 ¹³²	+6 00.8 ¹⁴⁸		0	18 04	18 25	18 49	16 27 47	4 03 46		
13	14	55.8	31.1	219	57.3 ¹³²	+5 45.9 ¹⁴⁹		10 S	17 57	18	43	31 42	3 57 51		
14	29	55.9	32.0	234	29.4 ¹³¹	30.9 ¹⁵⁰		20	50	12	38	35 37	51 55		
15	44	56.1	32.9	249	01.5 ¹³¹	15.9 ¹⁵⁰		30	42	06	34	39 31	44 61		
16	59	56.3	33.8	263	33.7 ¹³²	+5 00.9 ¹⁵⁰		35	37	18 03	32	41 29	39 65		
17	74	56.4	+9 34.7	278	05.8 ¹³¹	+4 45.8 ¹⁵¹		40	17 32	17 59	18 31	16 44 25	3 35 68		
18	89	56.6	+9 35.6	292	37.9 ¹³¹	+4 30.7 ¹⁵¹		45	17 26	17 56	18 30	16 47 21	3 29 73		
19	104	56.7	36.5	307	10.0 ¹³¹	15.6 ¹⁵¹		50	19	52	29	51 16	22 78		
20	119	56.9	37.4	321	42.0 ¹³⁰	+4 00.4 ¹⁵²		52	16	50	29	53 13	19 80		
21	134	57.0	38.3	336	14.1 ¹³¹	+3 45.2 ¹⁵²		54	12	48	29	55 11	16 83		
22	149	57.2	39.1	350	46.1 ¹³⁰	29.9 ¹⁵³		56	08	46	29	57 8	12 86		
23	164	57.3	40.0	5	18.1 ¹³⁰	+3 14.6 ¹⁵³		58	17 04	44	29	16 59 6	08 89		
24	179	57.5	+9 40.9	19	50.1 ¹³⁰	+2 59.3 ¹⁵³		60 S	16 59	17 42	18 30	17 02 2	3 03 93		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 10 ^h 29 ^m 7		Mag: -4.3 PMG: 9 ^h 15 ^m			Mag: +1.0 PMG: 8 ^h 38 ^m			Mag: -2.1 PMG: 10 ^h 11 ^m			Mag: +0.9 PMG: 8 ^h 13 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	
0	202	08.9	221	23.4	-8 23.6	230	23.3	-13 02.6	206	58.7	-3 12.8	236	20.4	-14 43.5	
1	217	11.3	236	23.2	22.8	245	23.9	02.0	222	00.6	12.6	251	22.6	43.4	
2	232	13.8	251	23.0	21.9	260	24.6	01.3	237	02.6	12.4	266	24.9	43.4	
3	247	16.3	266	22.8	21.1	275	25.2	00.7	252	04.5	12.2	281	27.2	43.3	
4	262	18.7	281	22.6	20.2	290	25.8	-13 00.1	267	06.5	12.0	296	29.5	43.3	
5	277	21.2	296	22.5	-8 19.3	305	26.5	-12 59.4	282	08.4	-3 11.7	311	31.7	-14 43.2	
6	292	23.7	311	22.3	-8 18.5	320	27.1	-12 58.8	297	10.3	-3 11.5	326	34.0	-14 43.2	
7	307	26.1	326	22.1	17.6	335	27.8	58.2	312	12.3	11.3	341	36.3	43.1	
8	322	28.6	341	21.9	16.8	350	28.4	57.5	327	14.2	11.1	356	38.6	43.0	
9	337	31.1	356	21.7	15.9	5	29.0	56.9	342	16.2	10.9	11	40.8	43.0	
10	352	33.5	11	21.6	15.0	20	29.7	56.2	357	18.1	10.6	26	43.1	42.9	
11	7	36.0	26	21.4	-8 14.2	35	30.3	-12 55.6	12	20.1	-3 10.4	41	45.4	-14 42.9	
12	22	38.4	41	21.2	-8 13.3	50	31.0	-12 55.0	27	22.0	-3 10.2	56	47.6	-14 42.8	
13	37	40.9	56	21.0	12.5	65	31.6	54.3	42	24.0	10.0	71	49.9	42.8	
14	52	43.4	71	20.8	11.6	80	32.2	53.7	57	25.9	09.8	86	52.2	42.7	
15	67	45.8	86	20.7	10.7	95	32.9	53.0	72	27.8	09.5	101	54.5	42.6	
16	82	48.3	101	20.5	09.9	110	33.5	52.4	87	29.8	09.3	116	56.7	42.6	
17	97	50.8	116	20.3	-8 09.0	125	34.2	-12 51.8	102	31.7	-3 09.1	131	59.0	-14 42.5	
18	112	53.2	131	20.1	-8 08.2	140	34.8	-12 51.1	117	33.7	-3 08.9	147	01.3	-14 42.5	
19	127	55.7	146	19.9	07.3	155	35.4	50.5	132	35.6	08.7	162	03.6	42.4	
20	142	58.2	161	19.8	06.4	170	36.1	49.8	147	37.6	08.5	177	05.8	42.4	
21	158	00.6	176	19.6	05.6	185	36.7	49.2	162	39.5	08.2	192	08.1	42.3	
22	173	03.1	191	19.4	04.7	200	37.4	48.6	177	41.5	08.0	207	10.4	42.2	
23	188	05.6	206	19.2	03.8	215	38.0	47.9	192	43.4	07.8	222	12.7	42.2	
24	203	08.0	221	19.0	-8 03.0	230	38.7	-12 47.3	207	45.4	-3 07.6	237	15.0	-14 42.1	
Dif	—		-2 +9		+6 +6		+19 +2		+23 +1		+23 +1		+23 +1		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 12 ^h 00 ^m 0			Edad: 13 ^d 7 PHE { SD: 15 ^h 8 PMG: 23 ^h 25 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	179	57.5	+9 40.9	19	50.1	+2 59.3	60 N	2 56	3 58	4 44	17 25	98	5 01	2
1	194	57.6	41.8	34	22.1 ¹³⁰	44.0 ¹⁵³	58	3 11	4 07	50	24	94	5 00	5
2	209	57.8	42.7	48	54.1 ¹³⁰	28.6 ¹⁵⁴	56	23	15	55	23	90	4 59	9
3	224	57.9	43.6	63	26.0 ¹²⁹	+2 13.1 ¹⁵⁵	54	34	22	4 59	23	86	58	12
4	239	58.1	44.5	77	57.9 ¹²⁹	+1 57.7 ¹⁵⁴	52	43	28	5 04	22	84	58	13
5	254	58.2	+9 45.4	92	29.8 ¹²⁹	+1 42.2 ¹⁵⁵	50	3 51	4 33	5 07	17 21	82	4 57	16
6	269	58.4	+9 46.3	107	01.6 ¹²⁸	+1 26.7 ¹⁵⁵	45	4 08	4 45	5 16	17 20	76	4 56	21
7	284	58.6	47.2	121	33.4 ¹²⁸	+1 11.2 ¹⁵⁵	40	21	4 54	22	19	71	55	25
8	299	58.7	48.1	136	05.2 ¹²⁸	+0 55.6 ¹⁵⁶	35	31	5 02	28	18	68	54	29
9	314	58.9	49.0	150	37.0 ¹²⁸	40.1 ¹⁵⁵	30	40	09	33	17	64	53	32
10	329	59.0	49.9	165	08.7 ¹²⁷	24.5 ¹⁵⁶	20	4 53	20	42	16	58	52	37
11	344	59.2	+9 50.8	179	40.4 ¹²⁷	+0 08.9 ¹⁵⁶	10 N	5 03	5 28	5 50	17 15	53	4 50	43
12	359	59.3	+9 51.7	194	12.1 ¹²⁷	-0 06.8 ¹⁵⁷	0	5 11	5 36	5 57	17 14	48	4 49	47
13	14	59.5	52.6	208	43.7 ¹²⁶	22.4 ¹⁵⁶	10 S	18	42	6 04	13	43	48	52
14	29	59.6	53.4	223	15.3 ¹²⁶	38.1 ¹⁵⁷	20	23	49	11	12	38	46	57
15	44	59.8	54.3	237	46.9 ¹²⁶	-0 53.7 ¹⁵⁶	30	27	55	19	10	33	45	63
16	59	59.9	55.2	252	18.4 ¹²⁵	-1 09.4 ¹⁵⁷	35	29	5 58	24	10	29	44	66
17	75	00.1	+9 56.1	266	49.9 ¹²⁵	-1 25.1 ¹⁵⁷	40	5 30	6 01	6 29	17 09	26	4 43	70
18	90	00.2	+9 57.0	281	21.4 ¹²⁵	-1 40.8 ¹⁵⁷	45	5 31	6 05	6 35	17 08	22	4 42	74
19	105	00.4	57.9	295	52.8 ¹²⁴	-1 56.5 ¹⁵⁷	50	32	09	42	07	16	40	80
20	120	00.5	58.8	310	24.1 ¹²³	-2 12.3 ¹⁵⁸	52	32	11	45	06	15	39	83
21	135	00.7	+9 59.7	324	55.5 ¹²⁴	28.0 ¹⁵⁷	54	32	13	49	06	12	39	85
22	150	00.8	+10 00.6	339	26.7 ¹²²	43.7 ¹⁵⁷	56	32	15	53	05	9	38	88
23	165	01.0	01.4	353	58.0 ¹²³	-2 59.5 ¹⁵⁸	58	32	17	6 58	05	6	37	91
24	180	01.1	+10 02.3	8	29.1 ¹²¹	-3 15.2 ¹⁵⁷	60 S	5 32	6 20	7 03	17 04	2	4 36	95

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 10 ^h 25 ^m 8		Mag: -4.3 PMG: 9 ^h 15 ^m		Mag: +1.0 PMG: 8 ^h 37 ^m		Mag: -2.1 PMG: 10 ^h 08 ^m		Mag: +0.9 PMG: 8 ^h 10 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	°	°	'	°	°	°	'	
0	203	08.0	221	19.0	-8 03.0	230 38.7	-12 47.3	207 45.4	-3 07.6	237 15.0	-14 42.1
1	218	10.5	236	18.9	02.1	245 39.3	46.6	222 47.3	07.4	252 17.2	42.1
2	233	12.9	251	18.7	01.2	260 39.9	46.0	237 49.2	07.2	267 19.5	42.0
3	248	15.4	266	18.5	-8 00.4	275 40.6	45.4	252 51.2	06.9	282 21.8	42.0
4	263	17.9	281	18.3	-7 59.5	290 41.2	44.7	267 53.1	06.7	297 24.1	41.9
5	278	20.3	296	18.1	-7 58.6	305 41.9	-12 44.1	282 55.1	-3 06.5	312 26.3	-14 41.8
6	293	22.8	311	18.0	-7 57.7	320 42.5	-12 43.4	297 57.0	-3 06.3	327 28.6	-14 41.8
7	308	25.3	326	17.8	56.9	335 43.1	42.8	312 59.0	06.1	342 30.9	41.7
8	323	27.7	341	17.6	56.0	350 43.8	42.1	328 00.9	05.8	357 33.2	41.7
9	338	30.2	356	17.4	55.1	5 44.4	41.5	343 02.9	05.6	12 35.4	41.6
10	353	32.7	11	17.2	54.3	20 45.1	40.9	358 04.8	05.4	27 37.7	41.6
11	8	35.1	26	17.1	-7 53.4	35 45.7	-12 40.2	13 06.8	-3 05.2	42 40.0	-14 41.5
12	23	37.6	41	16.9	-7 52.5	50 46.4	-12 39.6	28 08.7	-3 05.0	57 42.3	-14 41.5
13	38	40.1	56	16.7	51.6	65 47.0	38.9	43 10.7	04.8	72 44.6	41.4
14	53	42.5	71	16.5	50.8	80 47.6	38.3	58 12.6	04.5	87 46.8	41.3
15	68	45.0	86	16.3	49.9	95 48.3	37.6	73 14.6	04.3	102 49.1	41.3
16	83	47.4	101	16.2	49.0	110 48.9	37.0	88 16.5	04.1	117 51.4	41.2
17	98	49.9	116	16.0	-7 48.1	125 49.6	-12 36.3	103 18.4	-3 03.9	132 53.7	-14 41.2
18	113	52.4	131	15.8	-7 47.3	140 50.2	-12 35.7	118 20.4	-3 03.7	147 55.9	-14 41.1
19	128	54.8	146	15.6	46.4	155 50.9	35.1	133 22.3	03.5	162 58.2	41.1
20	143	57.3	161	15.4	45.5	170 51.5	34.4	148 24.3	03.2	178 00.5	41.0
21	158	59.8	176	15.3	44.6	185 52.2	33.8	163 26.2	03.0	193 02.8	41.0
22	174	02.2	191	15.1	43.8	200 52.8	33.1	178 28.2	02.8	208 05.1	40.9
23	189	04.7	206	14.9	42.9	215 53.4	32.5	193 30.1	02.6	223 07.3	40.8
24	204	07.2	221	14.7	-7 42.0	230 54.1	-12 31.8	208 32.1	-3 02.4	238 09.6	-14 40.8
Dif	—		-2	+9		+6	+6	+19	+2	+23	+1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 14 ^d 7 PHE	SD: 16 ^h 0	PMG: **h **m			R°: **m						
	hG ☉	Dec								hG ☾	Dif	Dec	Dif	Civil	Náutico
h	°	'	°	°	'	°	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	180	01.1	+10 02.3	8	29.1	-3 15.2	60 N	19 20	20 07	21 10	19 03 102		5 03 2		
1	195	01.3	03.2	23	00.3 ¹²²	30.9 ¹⁵⁷	58	14	19 58	20 55	18 58 97		05 6		
2	210	01.4	04.1	37	31.4 ¹²¹	-3 46.7 ¹⁵⁸	56	09	49	41	53 94		08 9		
3	225	01.6	05.0	52	02.4 ¹²⁰	-4 02.4 ¹⁵⁷	54	19 04	42	30	49 91		10 12		
4	240	01.7	05.9	66	33.4 ¹²⁰	18.1 ¹⁵⁷	52	18 59	36	21	46 87		11 15		
5	255	01.9	+10 06.8	81	04.3 ¹¹⁹	-4 33.9 ¹⁵⁸	50	18 55	19 30	20 12	18 43 85		5 13 18		
6	270	02.0	+10 07.7	95	35.2 ¹¹⁹	-4 49.6 ¹⁵⁷	45	18 47	19 17	19 55	18 36 79		5 17 22		
7	285	02.2	08.5	110	06.1 ¹¹⁹	-5 05.3 ¹⁵⁷	40	39	19 08	41	30 75		20 27		
8	300	02.3	09.4	124	36.8 ¹¹⁷	21.0 ¹⁵⁷	35	33	18 59	30	26 70		23 30		
9	315	02.4	10.3	139	07.6 ¹¹⁸	36.6 ¹⁵⁶	30	28	52	21	21 67		25 34		
10	330	02.6	11.2	153	38.2 ¹¹⁶	-5 52.3 ¹⁵⁷	20	19	41	19 07	14 61		29 40		
11	345	02.7	+10 12.1	168	08.8 ¹¹⁶	-6 08.0 ¹⁵⁷	10 N	18 11	18 32	18 57	18 08 56		5 33 45		
12	0	02.9	+10 13.0	182	39.4 ¹¹⁶	-6 23.6 ¹⁵⁶	0	18 03	18 24	18 49	18 02 51		5 36 50		
13	15	03.0	13.9	197	09.9 ¹¹⁵	39.2 ¹⁵⁶	10 S	17 56	17	42	17 56 46		40 54		
14	30	03.2	14.7	211	40.3 ¹¹⁴	-6 54.8 ¹⁵⁶	20	48	10	36	50 41		43 60		
15	45	03.3	15.6	226	10.6 ¹¹³	-7 10.4 ¹⁵⁶	30	40	04	32	43 36		48 65		
16	60	03.5	16.5	240	40.9 ¹¹³	25.9 ¹⁵⁵	35	35	18 00	30	39 33		50 69		
17	75	03.6	+10 17.4	255	11.2 ¹¹³	-7 41.4 ¹⁵⁵	40	17 29	17 57	18 28	17 35 28		5 53 72		
18	90	03.8	+10 18.3	269	41.3 ¹¹¹	-7 56.9 ¹⁵⁵	45	17 23	17 53	18 27	17 30 24		5 56 77		
19	105	03.9	19.2	284	11.4 ¹¹¹	-8 12.4 ¹⁵⁵	50	15	48	25	23 19		6 00 83		
20	120	04.1	20.0	298	41.5 ¹¹¹	27.8 ¹⁵⁴	52	12	46	25	21 16		02 85		
21	135	04.2	20.9	313	11.4 ¹⁰⁹	43.2 ¹⁵⁴	54	08	44	25	18 13		04 88		
22	150	04.4	21.8	327	41.3 ¹⁰⁹	-8 58.6 ¹⁵⁴	56	17 04	42	25	14 11		06 91		
23	165	04.5	22.7	342	11.1 ¹⁰⁸	-9 13.9 ¹⁵³	58	16 59	39	24	11 7		08 95		
24	180	04.6	+10 23.6	356	40.9 ¹⁰⁸	-9 29.2 ¹⁵³	60 S	16 54	17 36	18 24	17 06 4		6 11 99		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 10 ^h 21 ^m 8		Mag: -4.2 PMG: 9 ^h 15 ^m		Mag: +1.0 PMG: 8 ^h 36 ^m		Mag: -2.1 PMG: 10 ^h 05 ^m		Mag: +0.9 PMG: 8 ^h 06 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	204	07.2	221	14.7	230	54.1	208	32.1	238	09.6					
1	219	09.6	236	14.5	245	54.7	223	34.0	253	11.9					
2	234	12.1	251	14.3	260	55.4	238	36.0	268	14.2					
3	249	14.5	266	14.2	275	56.0	253	37.9	283	16.5					
4	264	17.0	281	14.0	290	56.7	268	39.9	298	18.7					
5	279	19.5	296	13.8	305	57.3	283	41.8	313	21.0					
6	294	21.9	311	13.6	320	58.0	298	43.8	328	23.3					
7	309	24.4	326	13.4	335	58.6	313	45.7	343	25.6					
8	324	26.9	341	13.3	350	59.3	328	47.7	358	27.9					
9	339	29.3	356	13.1	5	59.9	343	49.6	13	30.1					
10	354	31.8	11	12.9	21	00.5	358	51.6	28	32.4					
11	9	34.3	26	12.7	36	01.2	13	53.5	43	34.7					
12	24	36.7	41	12.5	51	01.8	28	55.5	58	37.0					
13	39	39.2	56	12.4	66	02.5	43	57.4	73	39.3					
14	54	41.7	71	12.2	81	03.1	58	59.4	88	41.5					
15	69	44.1	86	12.0	96	03.8	74	01.3	103	43.8					
16	84	46.6	101	11.8	111	04.4	89	03.3	118	46.1					
17	99	49.0	116	11.6	126	05.1	104	05.2	133	48.4					
18	114	51.5	131	11.5	141	05.7	119	07.2	148	50.7					
19	129	54.0	146	11.3	156	06.4	134	09.1	163	52.9					
20	144	56.4	161	11.1	171	07.0	149	11.1	178	55.2					
21	159	58.9	176	10.9	186	07.7	164	13.0	193	57.5					
22	175	01.4	191	10.7	201	08.3	179	15.0	208	59.8					
23	190	03.8	206	10.5	216	09.0	194	16.9	224	02.1					
24	205	06.3	221	10.4	231	09.6	209	18.9	239	04.3					
Dif	—		-2		+9		+19		+2						

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 6				Edad: 15 ^d 7 PHE { 4 ^h : 59 ^m 4 12 ^h : 59 ^m 6 20 ^h : 59 ^m 7 PMG: 0 ^h 14 ^m R°: 52 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	180	04.6	+10	23.6	356	40.9	-9	29.2	60 N	2 48	3 51	4 38	20 45 108	5 05	4		
1	195	04.8		24.4	11	10.6 ¹⁰⁷		44.5 ¹⁵³	58	3 04	4 01	44	35 102	11	9		
2	210	04.9		25.3	25	40.2 ¹⁰⁶	-9	59.7 ¹⁵²	56	17	09	50	27 98	17	12		
3	225	05.1		26.2	40	09.7 ¹⁰⁵	-10	14.9 ¹⁵²	54	28	17	55	20 93	22	15		
4	240	05.2		27.1	54	39.2 ¹⁰⁵		30.0 ¹⁵¹	52	38	23	4 59	13 91	26	19		
5	255	05.4	+10	28.0	69	08.5 ¹⁰³	-10	45.1 ¹⁵¹	50	3 47	4 29	5 03	20 08 87	5 31	20		
6	270	05.5	+10	28.8	83	37.8 ¹⁰³	-11	00.1 ¹⁵⁰	45	4 04	4 41	5 12	19 55 81	5 39	27		
7	285	05.7		29.7	98	07.1 ¹⁰³		15.1 ¹⁵⁰	40	18	4 51	19	45 76	47	30		
8	300	05.8		30.6	112	36.2 ¹⁰¹		30.0 ¹⁴⁹	35	28	5 00	26	36 73	53	35		
9	315	05.9		31.5	127	05.3 ¹⁰¹		44.9 ¹⁴⁹	30	38	07	31	28 70	5 59	38		
10	330	06.1		32.4	141	34.2 ⁹⁹	-11	59.7 ¹⁴⁸	20	4 52	18	41	15 64	6 09	43		
11	345	06.2	+10	33.2	156	03.1 ⁹⁹	-12	14.5 ¹⁴⁸	10 N	5 02	5 27	5 49	19 04 59	6 18	48		
12	0	06.4	+10	34.1	170	32.0 ⁹⁹	-12	29.2 ¹⁴⁷	0	5 11	5 35	5 56	18 53 55	6 26	52		
13	15	06.5		35.0	185	00.7 ⁹⁷		43.9 ¹⁴⁷	10 S	18	42	6 04	42 51	34	57		
14	30	06.7		35.9	199	29.3 ⁹⁶	-12	58.4 ¹⁴⁵	20	23	49	11	31 46	43	62		
15	45	06.8		36.8	213	57.9 ⁹⁶	-13	13.0 ¹⁴⁶	30	28	5 56	20	19 40	53	68		
16	60	07.0		37.6	228	26.4 ⁹⁵		27.4 ¹⁴⁴	35	30	6 00	25	12 37	6 59	71		
17	75	07.1	+10	38.5	242	54.8 ⁹⁴	-13	41.8 ¹⁴⁴	40	5 32	6 03	6 31	18 03 34	7 05	76		
18	90	07.2	+10	39.4	257	23.1 ⁹³	-13	56.1 ¹⁴³	45	5 33	6 08	6 37	17 54 29	7 13	80		
19	105	07.4		40.3	271	51.3 ⁹²	-14	10.4 ¹⁴³	50	35	12	45	42 24	23	86		
20	120	07.5		41.1	286	19.4 ⁹¹		24.5 ¹⁴¹	52	35	14	49	37 21	27	89		
21	135	07.7		42.0	300	47.4 ⁹⁰		38.6 ¹⁴¹	54	35	17	53	31 18	32	92		
22	150	07.8		42.9	315	15.4 ⁹⁰	-14	52.6 ¹⁴⁰	56	36	19	6 57	25 15	37	96		
23	165	07.9		43.8	329	43.2 ⁸⁸	-15	06.6 ¹⁴⁰	58	36	22	7 02	18 11	43	100		
24	180	08.1	+10	44.6	344	11.0 ⁸⁸	-15	20.4 ¹³⁸	60 S	5 36	6 24	7 07	17 10 6	7 50	105		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 17 ^m 9		Mag: -4.2 PMG: 9 ^h 15 ^m		Mag: +1.0 PMG: 8 ^h 35 ^m		Mag: -2.1 PMG: 10 ^h 01 ^m		Mag: +0.9 PMG: 8 ^h 02 ^m	
	hG ♂		hG ♀		hG ♂		hG ♀		hG ♀	
h	°	'	°	'	°	'	°	'	°	'
0	205	06.3	221	10.4	231	09.6	209	18.9	239	04.3
1	220	08.8	236	10.2	246	10.3	224	20.8	254	06.6
2	235	11.2	251	10.0	261	10.9	239	22.8	269	08.9
3	250	13.7	266	09.8	276	11.6	254	24.7	284	11.2
4	265	16.1	281	09.6	291	12.2	269	26.7	299	13.5
5	280	18.6	296	09.5	306	12.9	284	28.6	314	15.8
6	295	21.1	311	09.3	321	13.5	299	30.6	329	18.0
7	310	23.5	326	09.1	336	14.2	314	32.5	344	20.3
8	325	26.0	341	08.9	351	14.8	329	34.5	359	22.6
9	340	28.5	356	08.7	6	15.4	344	36.4	14	24.9
10	355	30.9	11	08.6	21	16.1	359	38.4	29	27.2
11	10	33.4	26	08.4	36	16.7	14	40.3	44	29.5
12	25	35.9	41	08.2	51	17.4	29	42.3	59	31.7
13	40	38.3	56	08.0	66	18.0	44	44.2	74	34.0
14	55	40.8	71	07.8	81	18.7	59	46.2	89	36.3
15	70	43.3	86	07.6	96	19.3	74	48.1	104	38.6
16	85	45.7	101	07.5	111	20.0	89	50.1	119	40.9
17	100	48.2	116	07.3	126	20.7	104	52.0	134	43.2
18	115	50.6	131	07.1	141	21.3	119	54.0	149	45.4
19	130	53.1	146	06.9	156	22.0	134	55.9	164	47.7
20	145	55.6	161	06.7	171	22.6	149	57.9	179	50.0
21	160	58.0	176	06.6	186	23.3	164	59.8	194	52.3
22	176	00.5	191	06.4	201	23.9	180	01.8	209	54.6
23	191	03.0	206	06.2	216	24.6	195	03.7	224	56.9
24	206	05.4	221	06.0	231	25.2	210	05.7	239	59.2
Dif	—		-2	+9	+6	+7	+20	+2	+23	+1

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 3				Edad: 16 ^d 7 PHE { 4 ^h : 59 ^m 8 12 ^h : 59 ^m 9 20 ^h : 60 ^m 0 SD: 16 ^h 3 PMG: 1 ^h 06 ^m R°: 55 ^m															
	hG ☉		Dec		hG ☾		Dif							Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	180	08.1	+10	44.6	344	11.0	-15	20.4	60 N	19	25	20	13	21	18	22 33 109	5	09	8	
1	195	08.2		45.5	358	38.7	87	34.2	58	19		20	03	21	01	17 103		20	13	
2	210	08.4		46.4	13	06.3	86	-15	47.9	56	13	19	54	20	47	22 05 97		29	17	
3	225	08.5		47.2	27	33.7	84	-16	01.5	54	08		46	35		21 53 93		37	21	
4	240	08.7		48.1	42	01.1	84		15.0	52	19	03		39	25	44 89		45	24	
5	255	08.8	+10	49.0	56	28.4	83	-16	28.4	50	18	58	19	33	20	16	21 35 86	5	51	27
6	270	08.9	+10	49.9	70	55.7	83	-16	41.7	45	18	49	19	20	19	58	21 16 81	6	06	32
7	285	09.1		50.7	85	22.8	81	-16	55.0	40	41		10	44		21 01 77		17	37	
8	300	09.2		51.6	99	49.8	80	-17	08.1	35	35		19	01	32	20 49 73		28	40	
9	315	09.4		52.5	114	16.7	79		21.1	30	29		18	54	23	38 71		37	43	
10	330	09.5		53.4	128	43.5	78		34.1	20	19		42	19	08	19 66	6	52	48	
11	345	09.6	+10	54.2	143	10.3	78	-17	46.9	10 N	18	11	18	32	18	57	20 03 62	7	06	52
12	0	09.8	+10	55.1	157	36.9	76	-17	59.6	0	18	03	18	24	18	48	19 48 59	7	18	57
13	15	09.9		56.0	172	03.5	76	-18	12.2	10 S	17	55		16	41	33 55		31	61	
14	30	10.0		56.8	186	29.9	74		24.7	20	47		09	35		19 17 51	7	45	65	
15	45	10.2		57.7	200	56.3	74		37.1	30	37		18	02	30	18 59 47	8	01	70	
16	60	10.3		58.6	215	22.5	72	-18	49.4	35	32		17	58	27	49 43		10	74	
17	75	10.5	+10	59.4	229	48.7	72	-19	01.6	40	17	26	17	54	18	25	18 37 40	8	21	77
18	90	10.6	+11	00.3	244	14.7	70	-19	13.7	45	17	19	17	49	18	23	18 23 36	8	33	82
19	105	10.7		01.2	258	40.7	70		25.6	50	11		44	22		18 06 31	49	87		
20	120	10.9		02.0	273	06.6	69		37.4	52	07		42	21		17 58 29	8	56	90	
21	135	11.0		02.9	287	32.3	67	-19	49.1	54	17	03	39	21		49 26	9	04	93	
22	150	11.2		03.8	301	58.0	67	-20	00.7	56	16	59	37	20		40 21	13	97		
23	165	11.3		04.6	316	23.6	66		12.2	58	54		34	20		29 16	23	102		
24	180	11.4	+11	05.5	330	49.1	65	-20	23.5	60 S	16	48	17	31	18	19	17 16 11	9	35	108

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 14 ^m 0		Mag: -4.2 PMG: 9 ^h 16 ^m		Mag: +1.0 PMG: 8 ^h 34 ^m		Mag: -2.1 PMG: 9 ^h 58 ^m		Mag: +0.9 PMG: 7 ^h 59 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	206	05.4	221	06.0	-6	59.2	231	25.2	-12	00.6
1	221	07.9	236	05.8		58.3	246	25.9	-11	59.9
2	236	10.4	251	05.6		57.4	261	26.5		59.3
3	251	12.8	266	05.5		56.5	276	27.2		58.6
4	266	15.3	281	05.3		55.6	291	27.8		58.0
5	281	17.8	296	05.1	-6	54.7	306	28.5	-11	57.3
6	296	20.2	311	04.9	-6	53.8	321	29.1	-11	56.7
7	311	22.7	326	04.7		52.9	336	29.8		56.0
8	326	25.1	341	04.6		52.0	351	30.4		55.3
9	341	27.6	356	04.4		51.0	6	31.1		54.7
10	356	30.1	11	04.2		50.1	21	31.7		54.0
11	11	32.5	26	04.0	-6	49.2	36	32.4	-11	53.4
12	26	35.0	41	03.8	-6	48.3	51	33.0	-11	52.7
13	41	37.5	56	03.6		47.4	66	33.7		52.1
14	56	39.9	71	03.5		46.5	81	34.3		51.4
15	71	42.4	86	03.3		45.6	96	35.0		50.7
16	86	44.9	101	03.1		44.7	111	35.7		50.1
17	101	47.3	116	02.9	-6	43.8	126	36.3	-11	49.4
18	116	49.8	131	02.7	-6	42.9	141	37.0	-11	48.8
19	131	52.2	146	02.5		41.9	156	37.6		48.1
20	146	54.7	161	02.4		41.0	171	38.3		47.5
21	161	57.2	176	02.2		40.1	186	38.9		46.8
22	176	59.6	191	02.0		39.2	201	39.6		46.1
23	192	02.1	206	01.8		38.3	216	40.2		45.5
24	207	04.6	221	01.6	-6	37.4	231	40.9	-11	44.8
Dif	—		-2		+9		+7		+7	
									+20	
									+2	
									+23	
									+1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 59 ^m 1				Edad: 17 ^d 7 PHE { 4 ^h : 60'0 12 ^h : 60'1 20 ^h : 60'0 PMG: 2 ^h 01 ^m R°: 60 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m	
0	180	11.4	+11	05.5	330	49.1	-20	23.5	60 N	2	40	3	45	4	32	*** ** *	
1	195	11.6		06.4	345	14.5	64	34.7 ¹¹²	58	2	57	3	55	39	*** ** *	5 17 14	
2	210	11.7		07.2	359	39.8	63	45.8 ¹¹¹	56	3	11	4	04	45	23 42 87	46 27	
3	225	11.8		08.1	14	05.0	62	-20 56.7 ¹⁰⁹	54	23	12	50		26 84	5 58 30		
4	240	12.0		09.0	28	30.1	61	-21 07.5 ¹⁰⁸	52	33	18	55		13 82	6 09 33		
5	255	12.1	+11	09.8	42	55.1	60	-21 18.2 ¹⁰⁷	50	3	42	4	25	4	59	23 01 80	6 18 36
6	270	12.2	+11	10.7	57	20.1	60	-21 28.7 ¹⁰⁵	45	4	00	4	38	5	09	22 37 77	6 38 41
7	285	12.4		11.6	71	44.9	58	39.1 ¹⁰⁴	40	14	48	17		18 74	6 54 45		
8	300	12.5		12.4	86	09.7	58	49.3 ¹⁰²	35	26	4	57	23	22 02 72	7 08 48		
9	315	12.7		13.3	100	34.3	56	-21 59.4 ¹⁰¹	30	35	5	04	29	21 49 69	20 50		
10	330	12.8		14.2	114	58.9	56	-22 09.4 ¹⁰⁰	20	4	50	16	39	25 67	40 55		
11	345	12.9	+11	15.0	129	23.4	55	-22 19.2 ⁹⁸	10 N	5	01	5	26	5	48	21 05 65	7 58 58
12	0	13.1	+11	15.9	143	47.8	54	-22 28.9 ⁹⁷	0	5	10	5	35	5	56	20 47 62	8 15 61
13	15	13.2		16.7	158	12.1	53	38.4 ⁹⁵	10 S	18	42	6	04	28 60	32 64		
14	30	13.3		17.6	172	36.3	52	47.8 ⁹⁴	20	24	50	12		20 08 57	8 50 67		
15	45	13.5		18.5	187	00.4	51	-22 57.0 ⁹²	30	29	5	57	21	19 46 54	9 11 71		
16	60	13.6		19.3	201	24.5	51	-23 06.0 ⁹⁰	35	32	6	01	27	32 53	24 73		
17	75	13.7	+11	20.2	215	48.4	49	-23 14.9 ⁸⁹	40	5	34	6	05	6	33	19 17 50	9 38 76
18	90	13.9	+11	21.1	230	12.3	49	-23 23.7 ⁸⁸	45	5	36	6	10	6	40	18 59 47	9 55 79
19	105	14.0		21.9	244	36.1	48	32.3 ⁸⁶	50	38	15	48		37 43	10 16 84		
20	120	14.1		22.8	258	59.8	47	40.7 ⁸⁴	52	38	18	52		27 40	26 86		
21	135	14.3		23.6	273	23.5	47	48.9 ⁸²	54	39	20	6	56	15 37	37 90		
22	150	14.4		24.5	287	47.1	46	-23 57.1 ⁸²	56	39	23	7	01	18 01 34	10 50 93		
23	165	14.5		25.4	302	10.6	45	-24 05.0 ⁷⁹	58	40	26	06		17 45 30	11 05 98		
24	180	14.7	+11	26.2	316	34.0	44	-24 12.8 ⁷⁸	60 S	5	40	6	29	7	12	17 27 22	11 23 106

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 10 ^m 0		Mag: -4.2 PMG: 9 ^h 16 ^m		Mag: +1.0 PMG: 8 ^h 33 ^m		Mag: -2.1 PMG: 9 ^h 55 ^m		Mag: +0.9 PMG: 7 ^h 55 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	207	04.6	221	01.6	-6	37.4	231	40.9	-11	44.8
1	222	07.0	236	01.5		36.5	246	41.5		44.2
2	237	09.5	251	01.3		35.5	261	42.2		43.5
3	252	12.0	266	01.1		34.6	276	42.9		42.8
4	267	14.4	281	00.9		33.7	291	43.5		42.2
5	282	16.9	296	00.7	-6	32.8	306	44.2	-11	41.5
6	297	19.4	311	00.5	-6	31.9	321	44.8	-11	40.9
7	312	21.8	326	00.4		31.0	336	45.5		40.2
8	327	24.3	341	00.2		30.0	351	46.1		39.5
9	342	26.7	356	00.0		29.1	6	46.8		38.9
10	357	29.2	10	59.8		28.2	21	47.4		38.2
11	12	31.7	25	59.6	-6	27.3	36	48.1	-11	37.6
12	27	34.1	40	59.4	-6	26.4	51	48.8	-11	36.9
13	42	36.6	55	59.3		25.4	66	49.4		36.2
14	57	39.1	70	59.1		24.5	81	50.1		35.6
15	72	41.5	85	58.9		23.6	96	50.7		34.9
16	87	44.0	100	58.7		22.7	111	51.4		34.2
17	102	46.5	115	58.5	-6	21.7	126	52.0	-11	33.6
18	117	48.9	130	58.3	-6	20.8	141	52.7	-11	32.9
19	132	51.4	145	58.2		19.9	156	53.4		32.3
20	147	53.9	160	58.0		19.0	171	54.0		31.6
21	162	56.3	175	57.8		18.1	186	54.7		30.9
22	177	58.8	190	57.6		17.1	201	55.3		30.3
23	193	01.2	205	57.4		16.2	216	56.0		29.6
24	208	03.7	220	57.2	-6	15.3	231	56.6	-11	28.9
Dif	—		-2		+9		+7		+7	
							+20		+2	
									+23	
									+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 18 ^d 7	PHE {	4 ^h : 60'0 12 ^h : 60'0 20 ^h : 59'9									
	PMG: 11 ^h 58 ^m 9								SD: 16'4			PMG: 3 ^h 01 ^m		Rº: 63 ^m	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m	
0	180	14.7	+11	26.2	316	34.0	-24	12.8	60 N	19 30	20 19	21 26	0 22 99	5 31 32	
1	195	14.8		27.1	330	57.3		20.4	58	23	20 08	21 07	0 00 92	5 54 39	
2	210	14.9		27.9	345	20.6		27.8	56	17	19 58	20 53	** ** *	6 13 43	
3	225	15.1		28.8	359	43.8		35.1	54	11	50	40	** ** *	28 46	
4	240	15.2		29.6	14	07.0		42.2	52	06	43	29	** ** *	42 48	
5	255	15.3	+11	30.5	28	30.1	-24	49.1	50	19 02	19 36	20 20	** ** *	6 54 50	
6	270	15.5	+11	31.4	42	53.1	-24	55.8	45	18 52	19 23	20 01	23 54 65	7 19 53	
7	285	15.6		32.2	57	16.0	-25	02.4	40	43	12	19 46	32 65	39 55	
8	300	15.7		33.1	71	38.9		08.8	35	36	19 03	34	23 14 65	7 56 56	
9	315	15.9		33.9	86	01.8		15.0	30	30	18 55	24	22 58 65	8 10 58	
10	330	16.0		34.8	100	24.6		21.1	20	20	42	19 09	32 64	35 59	
11	345	16.1	+11	35.6	114	47.3	-25	26.9	10 N	18 11	18 32	18 57	22 10 63	8 56 61	
12	0	16.2	+11	36.5	129	10.0	-25	32.6	0	18 02	18 23	18 48	21 49 63	9 16 63	
13	15	16.4		37.3	143	32.6		38.1	10 S	17 54	15	40	28 62	36 64	
14	30	16.5		38.2	157	55.2		43.4	20	45	08	34	21 05 62	9 57 66	
15	45	16.6		39.1	172	17.7		48.6	30	35	18 00	28	20 40 61	10 22 68	
16	60	16.8		39.9	186	40.2		53.5	35	30	17 56	25	25 60	37 68	
17	75	16.9	+11	40.8	201	02.6	-25	58.3	40	17 23	17 51	18 23	20 07 60	10 54 70	
18	90	17.0	+11	41.6	215	25.0	-26	02.9	45	17 16	17 46	18 20	19 46 59	11 14 72	
19	105	17.2		42.5	229	47.4		07.3	50	07	40	18	20 57	40 73	
20	120	17.3		43.3	244	09.7		11.5	52	17 03	38	17	19 07 56	11 52 75	
21	135	17.4		44.2	258	32.0		15.5	54	16 59	35	16	18 52 56	12 07 76	
22	150	17.5		45.0	272	54.3		19.3	56	54	32	16	35 54	23 78	
23	165	17.7		45.9	287	16.5		23.0	58	48	29	15	18 15 51	12 43 81	
24	180	17.8	+11	46.7	301	38.8	-26	26.5	60 S	16 42	17 26	18 14	17 49 48	13 09 85	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 06 ^m 1		Mag: -4.2 PMG: 9 ^h 16 ^m		Mag: +0.9 PMG: 8 ^h 32 ^m		Mag: -2.1 PMG: 9 ^h 52 ^m		Mag: +0.9 PMG: 7 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	208	03.7	220	57.2	231	56.6	211	39.5	241	49.0
1	223	06.2	235	57.1	246	57.3	226	41.4	256	51.3
2	238	08.6	250	56.9	261	58.0	241	43.4	271	53.6
3	253	11.1	265	56.7	276	58.6	256	45.4	286	55.9
4	268	13.6	280	56.5	291	59.3	271	47.3	301	58.2
5	283	16.0	295	56.3	306	59.9	286	49.3	317	00.4
6	298	18.5	310	56.1	322	00.6	301	51.2	332	02.7
7	313	21.0	325	56.0	337	01.3	316	53.2	347	05.0
8	328	23.4	340	55.8	352	01.9	331	55.1	2	07.3
9	343	25.9	355	55.6	7	02.6	346	57.1	17	09.6
10	358	28.4	10	55.4	22	03.2	1	59.1	32	11.9
11	13	30.8	25	55.2	37	03.9	17	01.0	47	14.2
12	28	33.3	40	55.0	52	04.6	32	03.0	62	16.5
13	43	35.7	55	54.9	67	05.2	47	04.9	77	18.8
14	58	38.2	70	54.7	82	05.9	62	06.9	92	21.1
15	73	40.7	85	54.5	97	06.5	77	08.8	107	23.4
16	88	43.1	100	54.3	112	07.2	92	10.8	122	25.7
17	103	45.6	115	54.1	127	07.9	107	12.8	137	28.0
18	118	48.1	130	53.9	142	08.5	122	14.7	152	30.3
19	133	50.5	145	53.8	157	09.2	137	16.7	167	32.5
20	148	53.0	160	53.6	172	09.8	152	18.6	182	34.8
21	163	55.5	175	53.4	187	10.5	167	20.6	197	37.1
22	178	57.9	190	53.2	202	11.2	182	22.6	212	39.4
23	194	00.4	205	53.0	217	11.8	197	24.5	227	41.7
24	209	02.8	220	52.8	232	12.5	212	26.5	242	44.0
Dif	—		-2	+9	+7	+7	+20	+2	+23	+1

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9				Edad: 19 ^d 7 PHE { 4 ^h : 59 ^h 8 12 ^h : 59 ^h 7 20 ^h : 59 ^h 6													
	PMG: 11 ^h 58 ^m 7				SD: 16 ^h 3 PMG: 4 ^h 04 ^m R°: 63 ^m					Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	hG ☾	Dif	Dec	Dif	°	h	m	h	m	h	m	h	m	m
0	180	17.8	+11	46.7	301	38.8	-26	26.5	60 N	2	31	3	38	4	26	2	01	68
1	195	17.9		47.6	316	01.0	32	29.7	58	2	49		49	33		1	32	67
2	210	18.1		48.4	330	23.1	31	32.8	56	3	04	3	58	40		1	09	67
3	225	18.2		49.3	344	45.3	32	35.7	54		17	4	07	46		0	50	67
4	240	18.3		50.1	359	07.4	31	38.4	52		28		14	51			35	66
5	255	18.4	+11	51.0	13	29.5	31	-26	50	3	37	4	20	4	55	0	21	66
6	270	18.6	+11	51.8	27	51.7	32	-26	45	3	56	4	34	5	05	**	**	**
7	285	18.7		52.7	42	13.8	31	45.4	40	4	11		45	14		**	**	**
8	300	18.8		53.5	56	35.9	31	47.3	35		23	4	54	21		**	**	**
9	315	18.9		54.4	70	58.0	31	49.0	30		33	5	02	27		**	**	**
10	330	19.1		55.2	85	20.1	31	50.6	20	4	48		15	38		23	36	59
11	345	19.2	+11	56.1	99	42.2	31	-26	10 N	5	00	5	25	5	47	23	13	61
12	0	19.3	+11	56.9	114	04.3	31	-26	0	5	10	5	34	5	55	22	52	62
13	15	19.4		57.8	128	26.4	31	54.1	10 S		18		42	6	04	30	63	10
14	30	19.6		58.6	142	48.5	31	54.9	20		24		50	13		22	07	65
15	45	19.7	+11	59.5	157	10.6	31	55.5	30		30	5	58	23		21	41	66
16	60	19.8	+12	00.3	171	32.8	32	55.9	35		33	6	03	28		25	67	11
17	75	19.9	+12	01.1	185	54.9	31	-26	40	5	36	6	07	6	35	21	07	68
18	90	20.1	+12	02.0	200	17.1	32	-26	45	5	38	6	12	6	42	20	45	69
19	105	20.2		02.8	214	39.3	32	56.0	50		40		18	51		17	71	12
20	120	20.3		03.7	229	01.5	32	55.6	52		41		21	6	55	20	03	72
21	135	20.4		04.5	243	23.8	33	55.1	54		42		23	7	00	19	48	73
22	150	20.6		05.4	257	46.1	33	54.3	56		43		26	05		29	75	13
23	165	20.7		06.2	272	08.4	33	53.4	58		44		30	11		19	06	77
24	180	20.8	+12	07.1	286	30.7	33	-26	60 S	5	45	6	33	7	17	18	37	80

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 10 ^h 02 ^m 2		Mag: -4.2 PMG: 9 ^h 17 ^m		Mag: +0.9 PMG: 8 ^h 31 ^m		Mag: -2.1 PMG: 9 ^h 49 ^m		Mag: +0.9 PMG: 7 ^h 48 ^m	
	hG ♊	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	209	02.8	220	52.8	-5	52.9	232	12.5	-11	13.0
1	224	05.3	235	52.7		52.0	247	13.1		12.3
2	239	07.8	250	52.5		51.0	262	13.8		11.6
3	254	10.2	265	52.3		50.1	277	14.5		11.0
4	269	12.7	280	52.1		49.2	292	15.1		10.3
5	284	15.2	295	51.9	-5	48.2	307	15.8	-11	09.6
6	299	17.6	310	51.7	-5	47.3	322	16.4	-11	09.0
7	314	20.1	325	51.6		46.4	337	17.1		08.3
8	329	22.6	340	51.4		45.4	352	17.8		07.6
9	344	25.0	355	51.2		44.5	7	18.4		07.0
10	359	27.5	10	51.0		43.5	22	19.1		06.3
11	14	30.0	25	50.8	-5	42.6	37	19.8	-11	05.6
12	29	32.4	40	50.6	-5	41.6	52	20.4	-11	05.0
13	44	34.9	55	50.5		40.7	67	21.1		04.3
14	59	37.3	70	50.3		39.8	82	21.7		03.6
15	74	39.8	85	50.1		38.8	97	22.4		02.9
16	89	42.3	100	49.9		37.9	112	23.1		02.3
17	104	44.7	115	49.7	-5	36.9	127	23.7	-11	01.6
18	119	47.2	130	49.5	-5	36.0	142	24.4	-11	00.9
19	134	49.7	145	49.4		35.0	157	25.1	-11	00.3
20	149	52.1	160	49.2		34.1	172	25.7	-10	59.6
21	164	54.6	175	49.0		33.2	187	26.4		58.9
22	179	57.1	190	48.8		32.2	202	27.1		58.2
23	194	59.5	205	48.6		31.3	217	27.7		57.6
24	210	02.0	220	48.4	-5	30.3	232	28.4	-10	56.9
Dif	—		-2		+9		+7		+7	
							+20		+2	
									+23	
									+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9			Edad: 20 ^d 7	PHE {	4 ^h : 59'5 12 ^h : 59'4 20 ^h : 59'2			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 58 ^m 5								R°: 61 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	180	20.8	+12 07.1	286	30.7	-26 52.3	13	60 N	19 35	20 24	21 34	3 09 33	7 07 95		
1	195	20.9	07.9	300	53.1	51.0	13	58	28	13	21 14	2 39 39	7 37 88		
2	210	21.1	08.7	315	15.6	49.5	15	56	21	20 03	20 58	2 16 43	8 00 84		
3	225	21.2	09.6	329	38.0	47.8	17	54	15	19 54	45	1 57 46	19 80		
4	240	21.3	10.4	344	00.5	46.0	18	52	10	47	34	41 48	35 78		
5	255	21.4	+12 11.3	358	23.1	-26 43.9	21	50	19 05	19 40	20 24	1 27 50	8 48 77		
6	270	21.5	+12 12.1	12	45.7	-26 41.7	22	45	18 54	19 26	20 04	0 59 53	9 16 73		
7	285	21.7	12.9	27	08.4	39.3	24	40	45	14	19 49	37 55	38 71		
8	300	21.8	13.8	41	31.1	36.7	26	35	38	19 05	36	19 56	9 56 69		
9	315	21.9	14.6	55	53.8	33.9	28	30	32	18 56	26	0 03 57	10 12 67		
10	330	22.0	15.5	70	16.7	30.9	30	20	20	43	19 10	** ** *	10 38 64		
11	345	22.2	+12 16.3	84	39.5	-26 27.8	31	10 N	18 11	18 32	18 58	** ** *	11 01 62		
12	0	22.3	+12 17.1	99	02.5	-26 24.5	33	0	18 02	18 23	18 48	23 54 58	11 22 60		
13	15	22.4	18.0	113	25.5	21.0	35	10 S	17 53	15	39	33 61	11 43 58		
14	30	22.5	18.8	127	48.5	17.3	37	20	44	18 06	32	23 12 64	12 05 56		
15	45	22.6	19.7	142	11.7	13.5	38	30	33	17 58	26	22 47 67	31 53		
16	60	22.8	20.5	156	34.9	09.4	41	35	27	53	23	32 69	12 46 51		
17	75	22.9	+12 21.3	170	58.2	-26 05.2	42	40	17 21	17 48	18 20	22 15 72	13 04 49		
18	90	23.0	+12 22.2	185	21.5	-26 00.8	44	45	17 13	17 43	18 17	21 54 75	13 25 46		
19	105	23.1	23.0	199	44.9	-25 56.3	45	50	17 03	37	14	28 80	13 51 43		
20	120	23.2	23.8	214	08.4	51.6	47	52	16 59	34	13	15 82	14 04 41		
21	135	23.4	24.7	228	32.0	46.7	49	54	54	31	12	21 01 84	19 38		
22	150	23.5	25.5	242	55.7	41.6	51	56	49	28	11	20 44 88	36 35		
23	165	23.6	26.3	257	19.4	36.4	52	58	43	24	10	20 23 93	14 57 30		
24	180	23.7	+12 27.2	271	43.2	-25 31.0	54	60 S	16 37	17 20	18 09	19 57 100	15 23 24		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 58 ^m 2		Mag: -4.2 PMG: 9 ^h 17 ^m		Mag: +0.9 PMG: 8 ^h 30 ^m		Mag: -2.1 PMG: 9 ^h 46 ^m		Mag: +0.9 PMG: 7 ^h 44 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	210	02.0	220	48.4	-5 30.3	232	28.4	-10 56.9	213	13.5	-2 31.5	243	39.1	-14 33.2
1	225	04.5	235	48.2	29.4	247	29.1	56.2	228	15.5	31.3	258	41.4	33.2
2	240	06.9	250	48.1	28.4	262	29.7	55.6	243	17.4	31.1	273	43.7	33.1
3	255	09.4	265	47.9	27.5	277	30.4	54.9	258	19.4	30.9	288	46.0	33.1
4	270	11.8	280	47.7	26.5	292	31.0	54.2	273	21.4	30.7	303	48.3	33.0
5	285	14.3	295	47.5	-5 25.6	307	31.7	-10 53.5	288	23.3	-2 30.4	318	50.6	-14 33.0
6	300	16.8	310	47.3	-5 24.6	322	32.4	-10 52.9	303	25.3	-2 30.2	333	52.9	-14 32.9
7	315	19.2	325	47.1	23.7	337	33.0	52.2	318	27.2	30.0	348	55.2	32.9
8	330	21.7	340	47.0	22.7	352	33.7	51.5	333	29.2	29.8	3	57.5	32.8
9	345	24.2	355	46.8	21.8	7	34.4	50.9	348	31.2	29.6	18	59.8	32.8
10	0	26.6	10	46.6	20.8	22	35.0	50.2	3	33.1	29.4	34	02.1	32.7
11	15	29.1	25	46.4	-5 19.9	37	35.7	-10 49.5	18	35.1	-2 29.2	49	04.4	-14 32.7
12	30	31.6	40	46.2	-5 18.9	52	36.4	-10 48.8	33	37.0	-2 29.0	64	06.7	-14 32.6
13	45	34.0	55	46.0	18.0	67	37.0	48.2	48	39.0	28.8	79	09.0	32.6
14	60	36.5	70	45.9	17.0	82	37.7	47.5	63	41.0	28.5	94	11.3	32.5
15	75	39.0	85	45.7	16.1	97	38.4	46.8	78	42.9	28.3	109	13.6	32.5
16	90	41.4	100	45.5	15.1	112	39.0	46.1	93	44.9	28.1	124	15.9	32.4
17	105	43.9	115	45.3	-5 14.2	127	39.7	-10 45.5	108	46.9	-2 27.9	139	18.2	-14 32.4
18	120	46.3	130	45.1	-5 13.2	142	40.4	-10 44.8	123	48.8	-2 27.7	154	20.5	-14 32.3
19	135	48.8	145	44.9	12.3	157	41.0	44.1	138	50.8	27.5	169	22.8	32.3
20	150	51.3	160	44.7	11.3	172	41.7	43.4	153	52.7	27.3	184	25.1	32.2
21	165	53.7	175	44.6	10.3	187	42.4	42.8	168	54.7	27.1	199	27.4	32.2
22	180	56.2	190	44.4	09.4	202	43.0	42.1	183	56.7	26.9	214	29.7	32.1
23	195	58.7	205	44.2	08.4	217	43.7	41.4	198	58.6	26.7	229	32.0	32.1
24	211	01.1	220	44.0	-5 07.5	232	44.4	-10 40.7	214	00.6	-2 26.4	244	34.3	-14 32.0
Dif	—		-2 +10		+7 +7		+20 +2		+23 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 3			Edad: 21 ^d 7 PHE { 4 ^h : 59'1 12 ^h : 58'9 20 ^h : 58'8 R°: 57 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	23.7	+12	27.2	271	43.2	-25	31.0	60 N	2	22	3	31	4	21	3	42
1	195	23.8		28.0	286	07.1	49	25.5	58	42	43	28	3	18	22	9	05
2	210	23.9		28.8	300	31.1	50	19.7	58	56	58	35	2	59	27	24	91
3	225	24.1		29.7	314	55.2	51	13.8	59	54	51	41	43	31	39	88	
4	240	24.2		30.5	329	19.3	51	07.8	60	52	22	09	47	29	34	9	53
5	255	24.3	+12	31.3	343	43.6	53	-25	01.6	50	3	32	4	16	4	51	2
6	270	24.4	+12	32.2	358	07.9	53	-24	55.2	45	3	52	4	31	5	02	1
7	285	24.5		33.0	12	32.3	54	48.7	65	40	4	08	42	11	32	43	10
8	300	24.7		33.8	26	56.9	56	42.0	67	35	20	4	52	18	15	46	11
9	315	24.8		34.7	41	21.5	56	35.2	68	30	31	5	00	25	1	00	49
10	330	24.9		35.5	55	46.2	57	28.2	70	20	47	13	36	0	35	53	11
11	345	25.0	+12	36.3	70	11.0	58	-24	21.1	10 N	4	59	5	24	5	46	0
12	0	25.1	+12	37.2	84	35.9	59	-24	13.8	0	5	09	5	34	5	55	**
13	15	25.2		38.0	99	00.9	60	-24	06.4	10 S	18	42	6	04	**	**	**
14	30	25.3		38.8	113	26.0	61	-23	58.8	20	25	51	13	**	**	**	**
15	45	25.5		39.7	127	51.2	62	51.1	77	30	31	5	59	24	23	54	66
16	60	25.6		40.5	142	16.5	63	43.2	79	35	34	6	04	30	41	69	37
17	75	25.7	+12	41.3	156	41.9	64	-23	35.2	40	5	37	6	09	6	37	23
18	90	25.8	+12	42.1	171	07.4	65	-23	27.1	45	5	40	6	15	6	45	23
19	105	25.9		43.0	185	33.0	66	18.8	83	50	43	21	54	22	48	81	34
20	120	26.0		43.8	199	58.7	67	10.3	85	52	44	24	6	59	37	85	45
21	135	26.2		44.6	214	24.5	68	-23	01.8	54	45	27	7	04	25	88	14
22	150	26.3		45.4	228	50.4	69	-22	53.1	56	47	30	09	22	12	91	15
23	165	26.4		46.3	243	16.5	71	44.3	88	58	48	34	15	21	56	96	27
24	180	26.5	+12	47.1	257	42.6	71	-22	35.3	60 S	5	49	6	38	7	22	21
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 9 ^h 54 ^m 3			Mag: -4.2 PMG: 9 ^h 17 ^m			Mag: +0.9 PMG: 8 ^h 29 ^m			Mag: -2.1 PMG: 9 ^h 43 ^m			Mag: +0.9 PMG: 7 ^h 41 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	211	01.1	220	44.0	-5	07.5	232	44.4	-10	40.7	214	00.6	-2	26.4	244	34.3	
1	226	03.6	235	43.8		06.5	247	45.0		40.1	229	02.6		26.2	259	36.6	
2	241	06.1	250	43.6		05.6	262	45.7		39.4	244	04.5		26.0	274	38.9	
3	256	08.5	265	43.4		04.6	277	46.4		38.7	259	06.5		25.8	289	41.2	
4	271	11.0	280	43.3		03.6	292	47.0		38.0	274	08.5		25.6	304	43.5	
5	286	13.5	295	43.1	-5	02.7	307	47.7	-10	37.4	289	10.4	-2	25.4	319	45.8	
6	301	15.9	310	42.9	-5	01.7	322	48.4	-10	36.7	304	12.4	-2	25.2	334	48.1	
7	316	18.4	325	42.7	-5	00.8	337	49.1		36.0	319	14.3		25.0	349	50.4	
8	331	20.8	340	42.5	-4	59.8	352	49.7		35.3	334	16.3		24.8	4	52.7	
9	346	23.3	355	42.3		58.8	7	50.4		34.7	349	18.3		24.5	19	55.0	
10	1	25.8	10	42.2		57.9	22	51.1		34.0	4	20.2		24.3	34	57.3	
11	16	28.2	25	42.0	-4	56.9	37	51.7	-10	33.3	19	22.2	-2	24.1	49	59.6	
12	31	30.7	40	41.8	-4	56.0	52	52.4	-10	32.6	34	24.2	-2	23.9	65	01.9	
13	46	33.2	55	41.6		55.0	67	53.1		32.0	49	26.1		23.7	80	04.2	
14	61	35.6	70	41.4		54.0	82	53.7		31.3	64	28.1		23.5	95	06.5	
15	76	38.1	85	41.2		53.1	97	54.4		30.6	79	30.1		23.3	110	08.8	
16	91	40.6	100	41.0		52.1	112	55.1		29.9	94	32.0		23.1	125	11.1	
17	106	43.0	115	40.9	-4	51.2	127	55.7	-10	29.2	109	34.0	-2	22.9	140	13.4	
18	121	45.5	130	40.7	-4	50.2	142	56.4	-10	28.6	124	36.0	-2	22.7	155	15.7	
19	136	48.0	145	40.5		49.2	157	57.1		27.9	139	37.9		22.5	170	18.1	
20	151	50.4	160	40.3		48.3	172	57.8		27.2	154	39.9		22.2	185	20.4	
21	166	52.9	175	40.1		47.3	187	58.4		26.5	169	41.8		22.0	200	22.7	
22	181	55.3	190	39.9		46.3	202	59.1		25.9	184	43.8		21.8	215	25.0	
23	196	57.8	205	39.7		45.4	217	59.8		25.2	199	45.8		21.6	230	27.3	
24	212	00.3	220	39.6	-4	44.4	233	00.4	-10	24.5	214	47.7	-2	21.4	245	29.6	
Dif	—			-2 +10			+7 +7			+20 +2			+23 0				

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9			Edad: 22 ^d 7	PHE { 4 ^h : 58'6 12 ^h : 58'4 20 ^h : 58'3									
	PMG: 11 ^h 58 ^m 1					SD: 16'0			PMG: 7 ^h 05 ^m		R°: 53 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	26.5	+12 47.1	257	42.6	-22 35.3	91	60 N	19 40	20 30	21 42	3 57 8	10 25 101	
1	195	26.6		272	08.8		26.2	58	32	18	21	40 13	41 96	
2	210	26.7		286	35.1		17.0	56	25	20 08	21 04	26 17	10 55 91	
3	225	26.8		301	01.6	-22 07.6	75	54	19	19 59	20 50	14 20	11 07 87	
4	240	26.9		315	28.1	-21 58.2	94	52	13	51	38	3 03 23	17 84	
5	255	27.1	+12 51.2	329	54.7	-21 48.6	96	50	19 08	19 43	20 28	2 53 26	11 26 82	
6	270	27.2	+12 52.0	344	21.5	-21 38.9	97	45	18 57	19 28	20 07	2 32 31	11 46 76	
7	285	27.3		358	48.3		29.0	40	47	16	19 51	15 36	12 01 72	
8	300	27.4		53.7	13 15.3		80	35	40	19 06	38	2 01 39	14 69	
9	315	27.5		54.5	27 42.3	-21 09.0	101	30	33	18 58	27	1 49 41	26 65	
10	330	27.6		55.3	42 09.5	-20 58.8	102	20	21	44	19 11	28 46	12 45 60	
11	345	27.7	+12 56.2	56	36.8	-20 48.5	103	10 N	18 11	18 33	18 58	1 09 50	13 02 56	
12	0	27.8	+12 57.0	71	04.2	-20 38.1	104	0	18 02	18 23	18 47	0 52 54	13 18 52	
13	15	27.9		85	31.6		27.6	10 S	17 52	14	39	34 58	33 48	
14	30	28.1		58.6	99 59.2		16.9	20	42	18 05	31	0 16 61	13 50 43	
15	45	28.2	+12 59.4	114	26.9	-20 06.2	107	30	31	17 56	24	** ** *	14 09 38	
16	60	28.3	+13 00.3	128	54.7	-19 55.4	108	35	25	51	21	** ** *	20 35	
17	75	28.4	+13 01.1	143	22.6	-19 44.4	110	40	17 18	17 46	18 17	** ** *	14 32 32	
18	90	28.5	+13 01.9	157	50.6	-19 33.4	110	45	17 10	17 40	18 14	** ** *	14 47 28	
19	105	28.6		02.7	172 18.7		22.2	50	17 00	33	11	** ** *	15 05 23	
20	120	28.7		03.5	186 46.9	-19 11.0	112	52	16 55	30	10	** ** *	13 21	
21	135	28.8		04.4	201 15.2	-18 59.6	114	54	50	27	08	23 53 86	22 18	
22	150	28.9		05.2	215 43.6		48.2	56	44	23	07	43 89	33 14	
23	165	29.0		06.0	230 12.1		36.6	58	38	19	06	32 93	45 10	
24	180	29.2	+13 06.8	244	40.7	-18 25.0	116	60 S	16 31	17 15	18 04	23 19 98	15 58 6	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 9 ^h 50 ^m 4		Mag: -4.2 PMG: 9 ^h 17 ^m		Mag: +0.9 PMG: 8 ^h 28 ^m		Mag: -2.1 PMG: 9 ^h 40 ^m		Mag: +0.9 PMG: 7 ^h 37 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	212	00.3	220	39.6	-4 44.4	233 00.4	-10 24.5	214 47.7	-2 21.4	245 29.6	-14 30.9
1	227	02.7	235	39.4	43.4	248 01.1	23.8	229 49.7	21.2	260 31.9	30.8
2	242	05.2	250	39.2	42.5	263 01.8	23.1	244 51.7	21.0	275 34.2	30.8
3	257	07.7	265	39.0	41.5	278 02.4	22.5	259 53.6	20.8	290 36.5	30.7
4	272	10.1	280	38.8	40.5	293 03.1	21.8	274 55.6	20.6	305 38.8	30.7
5	287	12.6	295	38.6	-4 39.6	308 03.8	-10 21.1	289 57.6	-2 20.4	320 41.1	-14 30.6
6	302	15.1	310	38.4	-4 38.6	323 04.5	-10 20.4	304 59.5	-2 20.1	335 43.4	-14 30.6
7	317	17.5	325	38.3	37.6	338 05.1	19.7	320 01.5	19.9	350 45.7	30.6
8	332	20.0	340	38.1	36.7	353 05.8	19.1	335 03.5	19.7	5 48.0	30.5
9	347	22.4	355	37.9	35.7	8 06.5	18.4	350 05.4	19.5	20 50.3	30.5
10	2	24.9	10	37.7	34.7	23 07.2	17.7	5 07.4	19.3	35 52.6	30.4
11	17	27.4	25	37.5	-4 33.7	38 07.8	-10 17.0	20 09.4	-2 19.1	50 54.9	-14 30.4
12	32	29.8	40	37.3	-4 32.8	53 08.5	-10 16.3	35 11.3	-2 18.9	65 57.2	-14 30.3
13	47	32.3	55	37.1	31.8	68 09.2	15.7	50 13.3	18.7	80 59.5	30.3
14	62	34.8	70	37.0	30.8	83 09.8	15.0	65 15.3	18.5	96 01.8	30.2
15	77	37.2	85	36.8	29.9	98 10.5	14.3	80 17.2	18.3	111 04.1	30.2
16	92	39.7	100	36.6	28.9	113 11.2	13.6	95 19.2	18.1	126 06.5	30.1
17	107	42.2	115	36.4	-4 27.9	128 11.9	-10 12.9	110 21.2	-2 17.9	141 08.8	-14 30.1
18	122	44.6	130	36.2	-4 26.9	143 12.5	-10 12.3	125 23.1	-2 17.6	156 11.1	-14 30.0
19	137	47.1	145	36.0	26.0	158 13.2	11.6	140 25.1	17.4	171 13.4	30.0
20	152	49.6	160	35.8	25.0	173 13.9	10.9	155 27.1	17.2	186 15.7	29.9
21	167	52.0	175	35.7	24.0	188 14.6	10.2	170 29.0	17.0	201 18.0	29.9
22	182	54.5	190	35.5	23.1	203 15.2	09.5	185 31.0	16.8	216 20.3	29.9
23	197	56.9	205	35.3	22.1	218 15.9	08.8	200 33.0	16.6	231 22.6	29.8
24	212	59.4	220	35.1	-4 21.1	233 16.6	-10 08.2	215 34.9	-2 16.4	246 24.9	-14 29.8
Dif	—		-2	+10		+7	+7	+20	+2	+23	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 0				Edad: 23 ^d 7 PHE { 4 ^h : 58'1 12 ^h : 57'9 20 ^h : 57'8 PMG: 7 ^h 58 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	29.2	+13	06.8	244	40.7	-18	25.0	60 N	2	13	3	25	4	15	4	05	4
1	195	29.3		07.6	259	09.4	97	13.3	58		34		37	23		3	53	8
2	210	29.4		08.4	273	38.2	98	-18	01.4	56	2	51		48	30		43	12
3	225	29.5		09.3	288	07.1	99	-17	49.5	54	3	05	3	57	37		34	15
4	240	29.6		10.1	302	36.2	101		37.5	52		17	4	05	42		26	18
5	255	29.7	+13	10.9	317	05.3	101	-17	25.5	50	3	27	4	12	4	48	3	19
6	270	29.8	+13	11.7	331	34.4	101	-17	13.3	45	3	48	4	27	4	59	3	03
7	285	29.9		12.5	346	03.7	103	-17	01.1	40	4	05		39	5	08	2	51
8	300	30.0		13.3	0	33.1	104	-16	48.7	35		18		49	16		40	33
9	315	30.1		14.2	15	02.6	105		36.3	30		28	4	58	23		30	36
10	330	30.2		15.0	29	32.2	106		23.9	20		45	5	12	35		2	14
11	345	30.3	+13	15.8	44	01.9	107	-16	11.3	10 N	4	58	5	23	5	45	1	59
12	0	30.4	+13	16.6	58	31.6	107	-15	58.7	0	5	09	5	33	5	55	1	46
13	15	30.5		17.4	73	01.5	109		46.0	10 S		18		42	6	04		32
14	30	30.6		18.2	87	31.4	109		33.2	20		25	5	51	14		17	59
15	45	30.8		19.0	102	01.5	111		20.3	30		32	6	01	25		1	00
16	60	30.9		19.8	116	31.6	111	-15	07.4	35		36		06	32		0	50
17	75	31.0	+13	20.6	131	01.8	112	-14	54.4	40	5	39	6	11	6	39	0	39
18	90	31.1	+13	21.5	145	32.1	113	-14	41.4	45	5	43	6	17	6	47	0	26
19	105	31.2		22.3	160	02.5	114		28.2	50		46		24	6	57		09
20	120	31.3		23.1	174	32.9	114		15.1	52		47		27	7	02		0
21	135	31.4		23.9	189	03.5	116	-14	01.8	54		49		30	07		**	**
22	150	31.5		24.7	203	34.1	116	-13	48.5	56		50		34	13		**	**
23	165	31.6		25.5	218	04.8	117		35.2	58		52		38	19		**	**
24	180	31.7	+13	26.3	232	35.6	118	-13	21.7	60 S	5	53	6	42	7	27	**	**

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 46 ^m 4		Mag: -4.2 PMG: 9 ^h 18 ^m		Mag: +0.9 PMG: 8 ^h 27 ^m		Mag: -2.1 PMG: 9 ^h 36 ^m		Mag: +0.9 PMG: 7 ^h 33 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	212	59.4	220	35.1	233	16.6	215	34.9	246	24.9
1	228	01.9	235	34.9	248	17.2	230	36.9	261	27.2
2	243	04.3	250	34.7	263	17.9	245	38.9	276	29.5
3	258	06.8	265	34.5	278	18.6	260	40.9	291	31.8
4	273	09.3	280	34.4	293	19.3	275	42.8	306	34.1
5	288	11.7	295	34.2	308	19.9	290	44.8	321	36.4
6	303	14.2	310	34.0	323	20.6	305	46.8	336	38.8
7	318	16.7	325	33.8	338	21.3	320	48.7	351	41.1
8	333	19.1	340	33.6	353	22.0	335	50.7	366	43.4
9	348	21.6	355	33.4	8	22.6	350	52.7	21	45.7
10	3	24.1	10	33.2	23	23.3	5	54.6	36	48.0
11	18	26.5	25	33.1	38	24.0	20	56.6	51	50.3
12	33	29.0	40	32.9	53	24.7	35	58.6	66	52.6
13	48	31.4	55	32.7	68	25.3	51	00.5	81	54.9
14	63	33.9	70	32.5	83	26.0	66	02.5	96	57.2
15	78	36.4	85	32.3	98	26.7	81	04.5	111	59.5
16	93	38.8	100	32.1	113	27.4	96	06.4	127	01.8
17	108	41.3	115	31.9	128	28.1	111	08.4	142	04.2
18	123	43.8	130	31.7	143	28.7	126	10.4	157	06.5
19	138	46.2	145	31.6	158	29.4	141	12.4	172	08.8
20	153	48.7	160	31.4	173	30.1	156	14.3	187	11.1
21	168	51.2	175	31.2	188	30.8	171	16.3	202	13.4
22	183	53.6	190	31.0	203	31.4	186	18.3	217	15.7
23	198	56.1	205	30.8	218	32.1	201	20.2	232	18.0
24	213	58.5	220	30.6	233	32.8	216	22.2	247	20.3
Dif	—		-2		+10		+20		+23	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9			Edad: 24 ^d 7	PHE {	4 ^h : 57 ^m 6 12 ^h : 57 ^m 4 20 ^h : 57 ^m 2			Civil		Náutico		Hora	R°	Hora	R°
	PMG: 11 ^h 57 ^m 8	PMG: 8 ^h 46 ^m	R°: 46 ^m						hG ☉	Dec	hG ☾	Dif				
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	
0	180	31.7	+13 26.3	232	35.6	-13 21.7		60 N	19 45	20 36	21 51	4 09	2	13 42	91	
1	195	31.8		247	06.5 ¹¹⁹	-13 08.3 ¹³⁴		58	37	23	28	4 01	6	48	88	
2	210	31.9	27.9	261	37.5 ¹²⁰	-12 54.7 ¹³⁶		56	29	12	21 10	3 55	9	53	85	
3	225	32.0	28.7	276	08.5 ¹²⁰	41.1 ¹³⁶		54	22	20 03	20 55	49	12	13 58	82	
4	240	32.1	29.5	290	39.6 ¹²¹	27.5 ¹³⁶		52	16	19 54	43	44	14	14 03	78	
5	255	32.2	+13 30.4	305	10.8 ¹²²	-12 13.8 ¹³⁷		50	19 11	19 47	20 32	3 39	17	14 07	76	
6	270	32.3	+13 31.2	319	42.1 ¹²³	-12 00.1 ¹³⁷		45	18 59	19 31	20 10	3 29	21	14 15	71	
7	285	32.4	32.0	334	13.4 ¹²³	-11 46.3 ¹³⁸		40	50	18	19 54	20	26	22	67	
8	300	32.5	32.8	348	44.8 ¹²⁴	32.5 ¹³⁸		35	41	19 08	40	13	29	28	63	
9	315	32.6	33.6	3	16.3 ¹²⁵	18.6 ¹³⁹		30	34	18 59	29	3 06	32	33	60	
10	330	32.7	34.4	17	47.9 ¹²⁶	-11 04.7 ¹³⁹		20	22	45	19 12	2 55	37	42	55	
11	345	32.8	+13 35.2	32	19.5 ¹²⁶	-10 50.7 ¹⁴⁰		10 N	18 11	18 33	18 58	2 45	42	14 50	50	
12	0	32.9	+13 36.0	46	51.2 ¹²⁷	-10 36.7 ¹⁴⁰		0	18 01	18 22	18 47	2 35	47	14 58	45	
13	15	33.0	36.8	61	22.9 ¹²⁷	22.6 ¹⁴¹		10 S	17 51	13	38	26	50	15 05	41	
14	30	33.1	37.6	75	54.8 ¹²⁹	-10 08.5 ¹⁴¹		20	41	18 04	30	16	55	13	36	
15	45	33.2	38.4	90	26.6 ¹²⁸	-9 54.4 ¹⁴¹		30	29	17 54	22	2 04	61	21	31	
16	60	33.3	39.2	104	58.6 ¹³⁰	40.3 ¹⁴¹		35	23	49	19	1 57	64	26	28	
17	75	33.4	+13 40.0	119	30.6 ¹³⁰	-9 26.1 ¹⁴²		40	17 15	17 43	18 15	1 49	68	15 32	24	
18	90	33.5	+13 40.8	134	02.7 ¹³¹	-9 11.8 ¹⁴³		45	17 06	17 37	18 11	1 40	72	15 38	21	
19	105	33.6	41.6	148	34.9 ¹³²	-8 57.6 ¹⁴²		50	16 56	30	08	29	78	46	16	
20	120	33.7	42.4	163	07.1 ¹³²	43.3 ¹⁴³		52	51	26	06	24	80	50	13	
21	135	33.8	43.2	177	39.3 ¹³²	28.9 ¹⁴⁴		54	46	23	04	19	82	53	11	
22	150	33.9	44.0	192	11.6 ¹³³	14.6 ¹⁴³		56	40	19	03	12	86	15 58	8	
23	165	34.0	44.8	206	44.0 ¹³⁴	-8 00.2 ¹⁴⁴		58	33	15	18 01	1 05	89	16 02	6	
24	180	34.1	+13 45.6	221	16.4 ¹³⁴	-7 45.8 ¹⁴⁴		60 S	16 26	17 10	17 59	0 57	93	16 08	2	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 42 ^m 5	Mag: -4.2 PMG: 9 ^h 18 ^m	Mag: +0.9 PMG: 8 ^h 25 ^m	Mag: -2.1 PMG: 9 ^h 33 ^m	Mag: +0.9 PMG: 7 ^h 29 ^m					
	hG ♈	hG ♀	hG ♂	hG ♃	hG ♄					
h	°	'	°	'	°	'	°	'	°	'
0	213	58.5	220	30.6	233	32.8	216	22.2	247	20.3
1	229	01.0	235	30.4	248	33.5	231	24.2	262	22.6
2	244	03.5	250	30.3	263	34.1	246	26.2	277	25.0
3	259	05.9	265	30.1	278	34.8	261	28.1	292	27.3
4	274	08.4	280	29.9	293	35.5	276	30.1	307	29.6
5	289	10.9	295	29.7	308	36.2	291	32.1	322	31.9
6	304	13.3	310	29.5	323	36.9	306	34.0	337	34.2
7	319	15.8	325	29.3	338	37.5	321	36.0	352	36.5
8	334	18.3	340	29.1	353	38.2	336	38.0	367	38.8
9	349	20.7	355	28.9	368	38.9	351	39.9	382	41.1
10	4	23.2	10	28.8	383	39.6	366	41.9	397	43.4
11	19	25.7	25	28.6	398	40.2	381	43.9	412	45.8
12	34	28.1	40	28.4	413	40.9	396	45.9	427	48.1
13	49	30.6	55	28.2	428	41.6	411	47.8	442	50.4
14	64	33.0	70	28.0	443	42.3	426	49.8	457	52.7
15	79	35.5	85	27.8	458	43.0	441	51.8	472	55.0
16	94	38.0	100	27.6	473	43.6	456	53.8	487	57.3
17	109	40.4	115	27.4	488	44.3	471	55.7	502	59.6
18	124	42.9	130	27.3	503	45.0	486	57.7	517	61.9
19	139	45.4	145	27.1	518	45.7	491	59.7	532	64.3
20	154	47.8	160	26.9	533	46.4	506	61.6	547	66.6
21	169	50.3	175	26.7	548	47.0	521	63.6	562	68.9
22	184	52.8	190	26.5	563	47.7	536	65.6	577	71.2
23	199	55.2	205	26.3	578	48.4	551	67.6	592	73.5
24	214	57.7	220	26.1	593	49.1	566	69.5	607	75.8
Dif	—	-2	+10		+7	+7	+20	+2	+23	0

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 7				Edad: 25 ^d 7 PHE { 4 ^h : 57 ^h 1 12 ^h : 56 ^h 9 20 ^h : 56 ^h 7 PMG: 9 ^h 32 ^m R°: 44 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	34.1	+13	45.6	221	16.4	-7	45.8	60 N	2 03	3 18	4 09	4 11	2	15	13	88	
1	195	34.2		46.4	235	48.9 ¹³⁵		31.4 ¹⁴⁴	58	26	31	18	07	5	16	84		
2	210	34.3		47.2	250	21.5 ¹³⁶		16.9 ¹⁴⁵	56	44	42	26	04	8	18	81		
3	225	34.4		48.0	264	54.1 ¹³⁶	-7	02.4 ¹⁴⁵	54	2 59	3 52	32	4 01	10	20	78		
4	240	34.5		48.8	279	26.7 ¹³⁶	-6	47.9 ¹⁴⁵	52	3 12	4 00	38	3 58	13	21	77		
5	255	34.6	+13	49.6	293	59.4 ¹³⁷	-6	33.4 ¹⁴⁵	50	3 23	4 08	4 44	3 56	14	15	23	74	
6	270	34.7	+13	50.4	308	32.1 ¹³⁷	-6	18.8 ¹⁴⁶	45	3 45	4 24	4 56	3 50	20	15	26	69	
7	285	34.8		51.2	323	04.9 ¹³⁸	-6	04.3 ¹⁴⁵	40	4 01	36	5 05	46	23	29	65		
8	300	34.9		52.0	337	37.8 ¹³⁹	-5	49.7 ¹⁴⁶	35	15	47	14	42	27	31	62		
9	315	35.0		52.8	352	10.6 ¹³⁸		35.1 ¹⁴⁶	30	26	4 56	21	38	30	33	59		
10	330	35.1		53.6	6	43.6 ¹⁴⁰		20.5 ¹⁴⁶	20	44	5 11	33	32	35	37	53		
11	345	35.2	+13	54.4	21	16.5 ¹³⁹	-5	05.9 ¹⁴⁶	10 N	4 57	5 23	5 44	3 27	39	15	40	48	
12	0	35.2	+13	55.2	35	49.5 ¹⁴⁰	-4	51.2 ¹⁴⁷	0	5 08	5 33	5 54	3 22	44	15	43	44	
13	15	35.3		55.9	50	22.6 ¹⁴¹		36.6 ¹⁴⁶	10 S	18	43	6 04	16	49	46	39		
14	30	35.4		56.7	64	55.7 ¹⁴¹		21.9 ¹⁴⁷	20	26	5 52	15	11	53	49	34		
15	45	35.5		57.5	79	28.8 ¹⁴¹	-4	07.2 ¹⁴⁷	30	34	6 02	26	05	59	52	30		
16	60	35.6		58.3	94	02.0 ¹⁴²	-3	52.6 ¹⁴⁶	35	37	07	33	3 01	62	54	26		
17	75	35.7	+13	59.1	108	35.2 ¹⁴²	-3	37.9 ¹⁴⁷	40	5 41	6 13	6 41	2 57	66	15	56	23	
18	90	35.8	+13	59.9	123	08.4 ¹⁴²	-3	23.2 ¹⁴⁷	45	5 45	6 19	6 50	2 52	70	15	59	19	
19	105	35.9	+14	00.7	137	41.7 ¹⁴³	-3	08.5 ¹⁴⁷	50	49	27	7 00	47	75	16	02	14	
20	120	36.0		01.5	152	15.0 ¹⁴³	-2	53.8 ¹⁴⁷	52	50	30	05	44	77	03	12		
21	135	36.1		02.3	166	48.3 ¹⁴³		39.1 ¹⁴⁷	54	52	34	11	41	80	04	11		
22	150	36.2		03.1	181	21.7 ¹⁴⁴		24.4 ¹⁴⁷	56	54	38	17	38	82	06	8		
23	165	36.3		03.9	195	55.1 ¹⁴⁴	-2	09.7 ¹⁴⁷	58	55	42	24	34	86	08	5		
24	180	36.4	+14	04.7	210	28.5 ¹⁴⁴	-1	55.0 ¹⁴⁷	60 S	5 57	6 47	7 31	2 30	90	16	10	2	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 38 ^m 6		Mag: -4.2 PMG: 9 ^h 18 ^m		Mag: +0.9 PMG: 8 ^h 24 ^m		Mag: -2.1 PMG: 9 ^h 30 ^m		Mag: +0.9 PMG: 7 ^h 26 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	214	57.7	220	26.1	-3	33.9	233	49.1	-9	35.3
1	230	00.1	235	25.9		32.9	248	49.8		34.6
2	245	02.6	250	25.8		31.9	263	50.4		33.9
3	260	05.1	265	25.6		30.9	278	51.1		33.2
4	275	07.5	280	25.4		29.9	293	51.8		32.5
5	290	10.0	295	25.2	-3	28.9	308	52.5	-9	31.8
6	305	12.5	310	25.0	-3	27.9	323	53.2	-9	31.1
7	320	14.9	325	24.8		27.0	338	53.8		30.4
8	335	17.4	340	24.6		26.0	353	54.5		29.7
9	350	19.9	355	24.4		25.0	8	55.2		29.0
10	5	22.3	10	24.3		24.0	23	55.9		28.4
11	20	24.8	25	24.1	-3	23.0	38	56.6	-9	27.7
12	35	27.3	40	23.9	-3	22.0	53	57.2	-9	27.0
13	50	29.7	55	23.7		21.0	68	57.9		26.3
14	65	32.2	70	23.5		20.0	83	58.6		25.6
15	80	34.6	85	23.3		19.0	98	59.3		24.9
16	95	37.1	100	23.1		18.0	114	00.0		24.2
17	110	39.6	115	22.9	-3	17.0	129	00.7	-9	23.5
18	125	42.0	130	22.7	-3	16.0	144	01.3	-9	22.8
19	140	44.5	145	22.6		15.0	159	02.0		22.1
20	155	47.0	160	22.4		14.0	174	02.7		21.4
21	170	49.4	175	22.2		13.0	189	03.4		20.8
22	185	51.9	190	22.0		12.0	204	04.1		20.1
23	200	54.4	205	21.8		11.0	219	04.8		19.4
24	215	56.8	220	21.6	-3	10.0	234	05.4	-9	18.7
Dif	—		-2		+10		+7		+7	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 57 ^m 5				Edad: 26 ^d 7 PHE { SD: 15°4 PMG: 10 ^h 16 ^m 4 ^h : 56/6 12 ^h : 56/4 20 ^h : 56/2 R°: 43 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	36.4	+14	04.7	210	28.5	-1	55.0	60 N	19 50	20 42	22 01	4 13 1	16 41 88		
1	195	36.5		05.4	225	02.0 ¹⁴⁵		40.3 ¹⁴⁷	58	41	29	21 36	12 5	40 84		
2	210	36.6		06.2	239	35.5 ¹⁴⁵		25.6 ¹⁴⁷	56	33	17	16	12 7	39 81		
3	225	36.6		07.0	254	09.0 ¹⁴⁵	-1	10.9 ¹⁴⁷	54	26	20 07	21 01	11 10	38 78		
4	240	36.7		07.8	268	42.5 ¹⁴⁵	-0	56.2 ¹⁴⁷	52	20	19 58	20 48	11 12	38 75		
5	255	36.8	+14	08.6	283	16.1 ¹⁴⁶	-0	41.5 ¹⁴⁷	50	19 14	19 50	20 36	4 10 15	16 37 73		
6	270	36.9	+14	09.4	297	49.6 ¹⁴⁵	-0	26.8 ¹⁴⁷	45	19 02	19 34	20 13	4 10 19	16 35 68		
7	285	37.0		10.2	312	23.2 ¹⁴⁶	-0	12.1 ¹⁴⁷	40	18 52	21	19 56	09 23	34 64		
8	300	37.1		11.0	326	56.8 ¹⁴⁶	+0	02.5 ¹⁴⁶	35	43	10	42	09 26	33 60		
9	315	37.2		11.7	341	30.5 ¹⁴⁷		17.2 ¹⁴⁷	30	35	19 01	31	08 29	32 57		
10	330	37.3		12.5	356	04.1 ¹⁴⁶		31.8 ¹⁴⁶	20	22	18 45	19 12	07 35	30 52		
11	345	37.4	+14	13.3	10	37.8 ¹⁴⁷	+0	46.5 ¹⁴⁷	10 N	18 11	18 33	18 58	4 06 39	16 28 48		
12	0	37.5	+14	14.1	25	11.5 ¹⁴⁷	+1	01.1 ¹⁴⁶	0	18 01	18 22	18 47	4 06 43	16 27 43		
13	15	37.6		14.9	39	45.2 ¹⁴⁷		15.7 ¹⁴⁶	10 S	17 51	12	37	05 48	25 39		
14	30	37.6		15.7	54	18.9 ¹⁴⁷		30.3 ¹⁴⁶	20	40	18 02	29	04 53	23 35		
15	45	37.7		16.4	68	52.6 ¹⁴⁷		44.9 ¹⁴⁶	30	28	17 52	21	04 57	22 29		
16	60	37.8		17.2	83	26.4 ¹⁴⁸	+1	59.4 ¹⁴⁵	35	21	47	17	03 61	20 27		
17	75	37.9	+14	18.0	98	00.1 ¹⁴⁷	+2	14.0 ¹⁴⁶	40	17 13	17 41	18 13	4 03 64	16 19 23		
18	90	38.0	+14	18.8	112	33.9 ¹⁴⁸	+2	28.5 ¹⁴⁵	45	17 03	17 34	18 09	4 02 69	16 18 19		
19	105	38.1		19.6	127	07.7 ¹⁴⁸		43.0 ¹⁴⁵	50	16 52	26	04	02 73	16 15		
20	120	38.2		20.4	141	41.4 ¹⁴⁷	+2	57.5 ¹⁴⁵	52	47	23	02	01 76	15 13		
21	135	38.3		21.1	156	15.2 ¹⁴⁸	+3	11.9 ¹⁴⁴	54	42	19	18 01	01 78	15 10		
22	150	38.3		21.9	170	49.0 ¹⁴⁸		26.3 ¹⁴⁴	56	35	15	17 59	00 81	14 7		
23	165	38.4		22.7	185	22.8 ¹⁴⁸		40.8 ¹⁴⁵	58	28	10	57	00 84	13 5		
24	180	38.5	+14	23.5	199	56.6 ¹⁴⁸	+3	55.1 ¹⁴³	60 S	16 20	17 05	17 55	4 00 87	16 12 1		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 9 ^h 34 ^m 6		Mag: -4.1 PMG: 9 ^h 19 ^m		Mag: +0.9 PMG: 8 ^h 23 ^m		Mag: -2.1 PMG: 9 ^h 27 ^m		Mag: +0.9 PMG: 7 ^h 22 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	215	56.8	220	21.6	234	05.4	217	56.9	249	11.4						
1	230	59.3	235	21.4	249	06.1	232	58.9	264	13.7						
2	246	01.8	250	21.2	264	06.8	248	00.9	279	16.0						
3	261	04.2	265	21.1	279	07.5	263	02.8	294	18.4						
4	276	06.7	280	20.9	294	08.2	278	04.8	309	20.7						
5	291	09.1	295	20.7	309	08.9	293	06.8	324	23.0						
6	306	11.6	310	20.5	324	09.5	308	08.8	339	25.3						
7	321	14.1	325	20.3	339	10.2	323	10.8	354	27.6						
8	336	16.5	340	20.1	354	10.9	338	12.7	9	30.0						
9	351	19.0	355	19.9	9	11.6	353	14.7	24	32.3						
10	6	21.5	10	19.7	24	12.3	8	16.7	39	34.6						
11	21	23.9	25	19.5	39	13.0	23	18.7	54	36.9						
12	36	26.4	40	19.4	54	13.6	38	20.6	69	39.2						
13	51	28.9	55	19.2	69	14.3	53	22.6	84	41.6						
14	66	31.3	70	19.0	84	15.0	68	24.6	99	43.9						
15	81	33.8	85	18.8	99	15.7	83	26.6	114	46.2						
16	96	36.2	100	18.6	114	16.4	98	28.5	129	48.5						
17	111	38.7	115	18.4	129	17.1	113	30.5	144	50.8						
18	126	41.2	130	18.2	144	17.8	128	32.5	159	53.2						
19	141	43.6	145	18.0	159	18.4	143	34.5	174	55.5						
20	156	46.1	160	17.8	174	19.1	158	36.5	189	57.8						
21	171	48.6	175	17.6	189	19.8	173	38.4	205	00.1						
22	186	51.0	190	17.5	204	20.5	188	40.4	220	02.4						
23	201	53.5	205	17.3	219	21.2	203	42.4	235	04.8						
24	216	56.0	220	17.1	234	21.9	218	44.4	250	07.1						
Dif	—		-2		+10		+20		+23							

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 57 ^m 2			Edad: 28 ^d 7 PHE { 4 ^h : 55/6 12 ^h : 55/5 20 ^h : 55/3 R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m			
0	180	40.5	+14 42.1	189	26.3	+9 30.5		60 N	19 55	20 48	22 11	4 16 3	19 36	89				
1	195	40.6	42.8	203	59.9 ¹⁴⁶	44.0 ¹³⁵		58	46	34	21 43	22 6	28	84				
2	210	40.7	43.6	218	33.5 ¹⁴⁶	+9 57.4 ¹³⁴		56	37	22	23	27 10	20	81				
3	225	40.8	44.4	233	07.0 ¹⁴⁵	+10 10.7 ¹³³		54	30	11	21 06	32 12	14	77				
4	240	40.9	45.1	247	40.6 ¹⁴⁶	24.1 ¹³⁴		52	23	20 02	20 52	36 15	08	75				
5	255	40.9	+14 45.9	262	14.1 ¹⁴⁵	+10 37.3 ¹³²		50	19 17	19 54	20 40	4 40 17	19 03	72				
6	270	41.0	+14 46.7	276	47.5 ¹⁴⁴	+10 50.5 ¹³²		45	19 04	19 37	20 17	4 48 22	18 51	68				
7	285	41.1	47.4	291	21.0 ¹⁴⁵	+11 03.7 ¹³²		40	18 54	23	19 59	4 55 26	42	63				
8	300	41.2	48.2	305	54.4 ¹⁴⁴	16.8 ¹³¹		35	45	12	44	5 01 29	33	61				
9	315	41.3	49.0	320	27.8 ¹⁴⁴	29.8 ¹³⁰		30	37	19 02	32	07 31	26	58				
10	330	41.3	49.7	335	01.2 ¹⁴⁴	42.8 ¹³⁰		20	23	18 46	19 13	16 36	14	53				
11	345	41.4	+14 50.5	349	34.6 ¹⁴⁴	+11 55.7 ¹²⁹		10 N	18 11	18 33	18 59	5 25 40	18 03	49				
12	0	41.5	+14 51.3	4	07.9 ¹⁴³	+12 08.6 ¹²⁹		0	18 01	18 22	18 47	5 32 45	17 54	45				
13	15	41.6	52.0	18	41.2 ¹⁴³	21.4 ¹²⁸		10 S	17 50	12	37	40 49	44	41				
14	30	41.7	52.8	33	14.5 ¹⁴³	34.1 ¹²⁷		20	39	18 01	28	49 52	33	37				
15	45	41.7	53.6	47	47.7 ¹⁴²	46.8 ¹²⁷		30	26	17 51	19	5 59 57	21	33				
16	60	41.8	54.3	62	20.9 ¹⁴²	+12 59.4 ¹²⁶		35	18	45	15	6 04 61	14	30				
17	75	41.9	+14 55.1	76	54.1 ¹⁴²	+13 12.0 ¹²⁶		40	17 10	17 38	18 10	6 11 64	17 07	26				
18	90	42.0	+14 55.8	91	27.3 ¹⁴²	+13 24.5 ¹²⁵		45	17 00	17 31	18 06	6 18 68	16 57	23				
19	105	42.0	56.6	106	00.4 ¹⁴¹	36.9 ¹²⁴		50	16 49	23	18 01	28 72	47	18				
20	120	42.1	57.4	120	33.5 ¹⁴¹	+13 49.3 ¹²⁴		52	43	19	17 59	32 75	42	16				
21	135	42.2	58.1	135	06.5 ¹⁴⁰	+14 01.6 ¹²³		54	37	15	57	37 77	36	14				
22	150	42.3	58.9	149	39.6 ¹⁴¹	13.8 ¹²²		56	31	11	55	42 81	30	11				
23	165	42.3	+14 59.6	164	12.6 ¹⁴⁰	26.0 ¹²²		58	23	06	52	48 84	23	8				
24	180	42.4	+15 00.4	178	45.5 ¹³⁹	+14 38.1 ¹²¹		60 S	16 15	17 00	17 50	6 54 89	16 15	4				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 9 ^h 26 ^m 8		Mag: -4.1 PMG: 9 ^h 19 ^m			Mag: +0.9 PMG: 8 ^h 21 ^m			Mag: -2.1 PMG: 9 ^h 21 ^m			Mag: +0.9 PMG: 7 ^h 15 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	217	55.1	220	12.5	-2	21.7	234	38.4	-8	45.3	219	31.9	-1	51.8	251	02.8	-14	24.6
1	232	57.6	235	12.3		20.7	249	39.1		44.6	234	33.9		51.6	266	05.1		24.5
2	248	00.0	250	12.1		19.7	264	39.8		43.9	249	35.8		51.3	281	07.5		24.5
3	263	02.5	265	12.0		18.7	279	40.5		43.2	264	37.8		51.1	296	09.8		24.4
4	278	05.0	280	11.8		17.7	294	41.1		42.5	279	39.8		50.9	311	12.1		24.4
5	293	07.4	295	11.6	-2	16.7	309	41.8	-8	41.8	294	41.8	-1	50.7	326	14.4	-14	24.4
6	308	09.9	310	11.4	-2	15.6	324	42.5	-8	41.1	309	43.8	-1	50.5	341	16.8	-14	24.3
7	323	12.3	325	11.2		14.6	339	43.2		40.4	324	45.7		50.3	356	19.1		24.3
8	338	14.8	340	11.0		13.6	354	43.9		39.7	339	47.7		50.1	11	21.4		24.2
9	353	17.3	355	10.8		12.6	9	44.6		39.0	354	49.7		49.9	26	23.7		24.2
10	8	19.7	10	10.6		11.6	24	45.3		38.3	9	51.7		49.7	41	26.1		24.2
11	23	22.2	25	10.4	-2	10.6	39	46.0	-8	37.6	24	53.7	-1	49.5	56	28.4	-14	24.1
12	38	24.7	40	10.2	-2	09.5	54	46.7	-8	36.9	39	55.7	-1	49.3	71	30.7	-14	24.1
13	53	27.1	55	10.0		08.5	69	47.4		36.2	54	57.6		49.1	86	33.1		24.0
14	68	29.6	70	09.9		07.5	84	48.0		35.5	69	59.6		48.9	101	35.4		24.0
15	83	32.1	85	09.7		06.5	99	48.7		34.8	85	01.6		48.7	116	37.7		24.0
16	98	34.5	100	09.5		05.5	114	49.4		34.1	100	03.6		48.5	131	40.0		23.9
17	113	37.0	115	09.3	-2	04.5	129	50.1	-8	33.4	115	05.6	-1	48.3	146	42.4	-14	23.9
18	128	39.5	130	09.1	-2	03.4	144	50.8	-8	32.7	130	07.6	-1	48.1	161	44.7	-14	23.8
19	143	41.9	145	08.9		02.4	159	51.5		32.0	145	09.5		47.9	176	47.0		23.8
20	158	44.4	160	08.7		01.4	174	52.2		31.3	160	11.5		47.7	191	49.3		23.8
21	173	46.8	175	08.5	-2	00.4	189	52.9		30.6	175	13.5		47.5	206	51.7		23.7
22	188	49.3	190	08.3	-1	59.4	204	53.6		29.9	190	15.5		47.3	221	54.0		23.7
23	203	51.8	205	08.1		58.4	219	54.3		29.2	205	17.5		47.1	236	56.3		23.7
24	218	54.2	220	07.9	-1	57.3	234	55.0	-8	28.5	220	19.5	-1	46.9	251	58.7	-14	23.6
Dif	—		-2		+10		+7		+7		+20		+2		+23		0	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 57 ^m 1			Edad: 0 ^d 1 PHE { SD: 15'0 PMG: 12 ^h 28 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	180	42.4	+15 00.4	178	45.5	+14 38.1	60 N	1 43	3 05	3 58	4 19	5	21 05	89	
1	195	42.5	01.2	193	18.4 ¹³⁹	+14 50.1 ¹²⁰	58	2 10	20	4 08	28	9	20 52	84	
2	210	42.6	01.9	207	51.3 ¹³⁹	+15 02.1 ¹²⁰	56	31	32	16	37	12	41	80	
3	225	42.7	02.7	222	24.2 ¹³⁹	14.0 ¹¹⁹	54	2 48	42	24	44	16	31	77	
4	240	42.7	03.4	236	57.0 ¹³⁸	25.8 ¹¹⁸	52	3 01	3 52	31	51	18	23	74	
5	255	42.8	+15 04.2	251	29.7 ¹³⁷	+15 37.5 ¹¹⁷	50	3 13	4 00	4 37	4 57	20	20 15	71	
6	270	42.9	+15 05.0	266	02.5 ¹³⁸	+15 49.2 ¹¹⁷	45	3 37	4 17	4 50	5 10	25	19 59	66	
7	285	42.9	05.7	280	35.2 ¹³⁷	+16 00.8 ¹¹⁶	40	3 55	31	5 00	21	28	45	63	
8	300	43.0	06.5	295	07.8 ¹³⁶	12.3 ¹¹⁵	35	4 10	42	09	30	32	34	60	
9	315	43.1	07.2	309	40.5 ¹³⁷	23.8 ¹¹⁵	30	22	4 52	17	38	34	24	58	
10	330	43.2	08.0	324	13.0 ¹³⁵	35.1 ¹¹³	20	41	5 08	31	5 52	39	19 07	54	
11	345	43.2	+15 08.7	338	45.6 ¹³⁶	+16 46.4 ¹¹³	10 N	4 55	5 21	5 43	6 05	42	18 52	50	
12	0	43.3	+15 09.5	353	18.1 ¹³⁵	+16 57.6 ¹¹²	0	5 07	5 32	5 54	6 17	46	18 39	46	
13	15	43.4	10.2	7	50.5 ¹³⁴	+17 08.8 ¹¹²	10 S	18	43	6 05	29	49	25	44	
14	30	43.5	11.0	22	23.0 ¹³⁵	19.8 ¹¹⁰	20	27	5 53	16	41	54	18 10	40	
15	45	43.5	11.7	36	55.3 ¹³³	30.8 ¹¹⁰	30	36	6 04	29	6 56	58	17 54	36	
16	60	43.6	12.5	51	27.7 ¹³⁴	41.6 ¹⁰⁸	35	40	10	36	7 05	60	44	34	
17	75	43.7	+15 13.3	66	00.0 ¹³³	+17 52.4 ¹⁰⁸	40	5 45	6 17	6 45	7 15	63	17 33	31	
18	90	43.8	+15 14.0	80	32.2 ¹³²	+18 03.2 ¹⁰⁸	45	5 49	6 24	6 55	7 26	67	17 20	28	
19	105	43.8	14.8	95	04.4 ¹³²	13.8 ¹⁰⁶	50	54	32	7 06	40	72	17 05	22	
20	120	43.9	15.5	109	36.6 ¹³²	24.3 ¹⁰⁵	52	56	36	12	47	75	16 58	20	
21	135	44.0	16.3	124	08.7 ¹³¹	34.8 ¹⁰⁵	54	5 58	40	18	7 54	78	50	17	
22	150	44.0	17.0	138	40.8 ¹³¹	45.2 ¹⁰⁴	56	6 00	45	25	8 03	80	41	14	
23	165	44.1	17.8	153	12.8 ¹³⁰	+18 55.4 ¹⁰²	58	03	50	32	12	84	31	10	
24	180	44.2	+15 18.5	167	44.8 ¹³⁰	+19 05.6 ¹⁰²	60 S	6 05	6 55	7 41	8 23	89	16 19	6	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 9 ^h 22 ^m 8			Mag: -4.1 PMG: 9 ^h 20 ^m			Mag: +0.9 PMG: 8 ^h 20 ^m			Mag: -2.1 PMG: 9 ^h 17 ^m			Mag: +0.9 PMG: 7 ^h 11 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	218	54.2	220 07.9	-1 57.3	234 55.0	-8 28.5	220 19.5	-1 46.9	251 58.7	-14 23.6	251 58.7	-14 23.6	251 58.7	-14 23.6	251 58.7
1	233	56.7	235 07.7	56.3	249 55.7	27.8	235 21.4	46.7	267 01.0	23.6	267 01.0	23.6	267 01.0	23.6	267 01.0
2	248	59.2	250 07.6	55.3	264 56.4	27.1	250 23.4	46.5	282 03.3	23.5	282 03.3	23.5	282 03.3	23.5	282 03.3
3	264	01.6	265 07.4	54.3	279 57.0	26.4	265 25.4	46.3	297 05.6	23.5	297 05.6	23.5	297 05.6	23.5	297 05.6
4	279	04.1	280 07.2	53.3	294 57.7	25.7	280 27.4	46.1	312 08.0	23.5	312 08.0	23.5	312 08.0	23.5	312 08.0
5	294	06.6	295 07.0	-1 52.2	309 58.4	-8 25.0	295 29.4	-1 45.9	327 10.3	23.4	327 10.3	23.4	327 10.3	23.4	327 10.3
6	309	09.0	310 06.8	-1 51.2	324 59.1	-8 24.3	310 31.4	-1 45.7	342 12.6	23.4	342 12.6	23.4	342 12.6	23.4	342 12.6
7	324	11.5	325 06.6	50.2	339 59.8	23.6	325 33.3	45.5	357 15.0	23.3	357 15.0	23.3	357 15.0	23.3	357 15.0
8	339	13.9	340 06.4	49.2	355 00.5	22.9	340 35.3	45.3	12 17.3	23.3	12 17.3	23.3	12 17.3	23.3	12 17.3
9	354	16.4	355 06.2	48.2	10 01.2	22.2	355 37.3	45.1	27 19.6	23.3	27 19.6	23.3	27 19.6	23.3	27 19.6
10	9	18.9	10 06.0	47.1	25 01.9	21.5	10 39.3	44.9	42 21.9	23.2	42 21.9	23.2	42 21.9	23.2	42 21.9
11	24	21.3	25 05.8	-1 46.1	40 02.6	-8 20.8	25 41.3	-1 44.7	57 24.3	23.2	57 24.3	23.2	57 24.3	23.2	57 24.3
12	39	23.8	40 05.6	-1 45.1	55 03.3	-8 20.1	40 43.3	-1 44.5	72 26.6	23.1	72 26.6	23.1	72 26.6	23.1	72 26.6
13	54	26.3	55 05.4	44.1	70 04.0	19.4	55 45.3	44.3	87 28.9	23.1	87 28.9	23.1	87 28.9	23.1	87 28.9
14	69	28.7	70 05.2	43.0	85 04.7	18.7	70 47.2	44.1	102 31.3	23.1	102 31.3	23.1	102 31.3	23.1	102 31.3
15	84	31.2	85 05.1	42.0	100 05.4	18.0	85 49.2	43.9	117 33.6	23.0	117 33.6	23.0	117 33.6	23.0	117 33.6
16	99	33.7	100 04.9	41.0	115 06.1	17.3	100 51.2	43.7	132 35.9	23.0	132 35.9	23.0	132 35.9	23.0	132 35.9
17	114	36.1	115 04.7	-1 40.0	130 06.8	-8 16.6	115 53.2	-1 43.5	147 38.2	23.0	147 38.2	23.0	147 38.2	23.0	147 38.2
18	129	38.6	130 04.5	-1 39.0	145 07.4	-8 15.9	130 55.2	-1 43.3	162 40.6	22.9	162 40.6	22.9	162 40.6	22.9	162 40.6
19	144	41.1	145 04.3	37.9	160 08.1	15.2	145 57.2	43.1	177 42.9	22.9	177 42.9	22.9	177 42.9	22.9	177 42.9
20	159	43.5	160 04.1	36.9	175 08.8	14.5	160 59.2	42.9	192 45.2	22.8	192 45.2	22.8	192 45.2	22.8	192 45.2
21	174	46.0	175 03.9	35.9	190 09.5	13.8	176 01.1	42.7	207 47.6	22.8	207 47.6	22.8	207 47.6	22.8	207 47.6
22	189	48.4	190 03.7	34.9	205 10.2	13.1	191 03.1	42.5	222 49.9	22.8	222 49.9	22.8	222 49.9	22.8	222 49.9
23	204	50.9	205 03.5	33.8	220 10.9	12.4	206 05.1	42.3	237 52.2	22.7	237 52.2	22.7	237 52.2	22.7	237 52.2
24	219	53.4	220 03.3	-1 32.8	235 11.6	-8 11.7	221 07.1	-1 42.1	252 54.6	22.7	252 54.6	22.7	252 54.6	22.7	252 54.6
Dif	—		-2	+10	+7	+7	+20	+2	+23	0	+23	0	+23	0	0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 0			Edad: 1 ^d 1 PHE { SD: 14'9 PMG: 13 ^h 14 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	180	44.2	+15	18.5	167	44.8	+19	05.6	60 N	20 00	20 55	22 22	4 24 8	22 34 86
1	195	44.2		19.3	182	16.8 ¹³⁰		15.7 ¹⁰¹	58	19 50	39	21 51	37 14	16 80
2	210	44.3		20.0	196	48.7 ¹²⁹		25.8 ¹⁰¹	56	41	26	29	4 49 18	22 01 76
3	225	44.4		20.7	211	20.6 ¹²⁹		35.7 ⁹⁹	54	33	15	21 12	5 00 20	21 48 70
4	240	44.5		21.5	225	52.4 ¹²⁸		45.5 ⁹⁸	52	26	20 06	20 57	09 23	37 70
5	255	44.5	+15	22.2	240	24.1 ¹²⁷	+19	55.3 ⁹⁸	50	19 20	19 57	20 45	5 17 25	21 26 69
6	270	44.6	+15	23.0	254	55.9 ¹²⁸	+20	04.9 ⁹⁶	45	19 07	19 39	20 20	5 35 29	21 05 65
7	285	44.7		23.7	269	27.5 ¹²⁶		14.4 ⁹⁵	40	18 56	25	20 01	5 49 33	20 48 62
8	300	44.7		24.5	283	59.2 ¹²⁷		23.9 ⁹⁵	35	46	13	19 46	6 02 35	34 59
9	315	44.8		25.2	298	30.8 ¹²⁶		33.3 ⁹⁴	30	38	19 03	34	12 38	22 57
10	330	44.9		26.0	313	02.3 ¹²⁵		42.5 ⁹²	20	24	18 47	19 14	31 42	20 01 54
11	345	44.9	+15	26.7	327	33.8 ¹²⁵	+20	51.7 ⁹²	10 N	18 12	18 34	18 59	6 47 45	19 42 52
12	0	45.0	+15	27.5	342	05.3 ¹²⁵	+21	00.8 ⁹¹	0	18 00	18 22	18 47	7 03 47	19 25 49
13	15	45.1		28.2	356	36.7 ¹²⁴		09.7 ⁸⁹	10 S	17 49	11	36	18 51	19 09 46
14	30	45.1		28.9	11	08.0 ¹²³		18.6 ⁸⁹	20	37	18 00	26	35 54	18 50 44
15	45	45.2		29.7	25	39.4 ¹²⁴		27.4 ⁸⁸	30	24	17 49	17	7 54 57	30 40
16	60	45.3		30.4	40	10.6 ¹²²		36.0 ⁸⁶	35	16	43	13	8 05 60	18 38
17	75	45.3	+15	31.2	54	41.9 ¹²³	+21	44.6 ⁸⁶	40	17 08	17 36	18 08	8 18 63	18 04 36
18	90	45.4	+15	31.9	69	13.1 ¹²²	+21	53.1 ⁸⁵	45	16 58	17 28	18 03	8 33 66	17 48 32
19	105	45.5		32.6	83	44.2 ¹²¹	+22	01.4 ⁸³	50	45	20	17 58	8 52 71	27 29
20	120	45.5		33.4	98	15.3 ¹²¹		09.7 ⁸³	52	40	16	56	9 02 72	18 26
21	135	45.6		34.1	112	46.4 ¹²¹		17.8 ⁸¹	54	33	11	53	12 75	17 07 24
22	150	45.7		34.9	127	17.4 ¹²⁰		25.9 ⁸¹	56	27	07	51	23 79	16 55 21
23	165	45.7		35.6	141	48.3 ¹¹⁹		33.8 ⁷⁹	58	19	17 02	48	36 83	41 17
24	180	45.8	+15	36.3	156	19.2 ¹¹⁹	+22	41.7 ⁷⁹	60 S	16 10	16 56	17 46	9 52 89	16 25 11

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 18 ^m 9		Mag: -4.1 PMG: 9 ^h 20 ^m		Mag: +0.9 PMG: 8 ^h 19 ^m		Mag: -2.2 PMG: 9 ^h 14 ^m		Mag: +0.9 PMG: 7 ^h 07 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	219	53.4	220	03.3	-1	32.8	235	11.6	-8	11.7
1	234	55.8	235	03.1		31.8	250	12.3		11.0
2	249	58.3	250	02.9		30.8	265	13.0		10.3
3	265	00.8	265	02.7		29.7	280	13.7		09.6
4	280	03.2	280	02.5		28.7	295	14.4		08.9
5	295	05.7	295	02.4	-1	27.7	310	15.1	-8	08.2
6	310	08.2	310	02.2	-1	26.7	325	15.8	-8	07.5
7	325	10.6	325	02.0		25.6	340	16.5		06.8
8	340	13.1	340	01.8		24.6	355	17.2		06.1
9	355	15.6	355	01.6		23.6	10	17.9		05.4
10	10	18.0	10	01.4		22.5	25	18.6		04.7
11	25	20.5	25	01.2	-1	21.5	40	19.3	-8	04.0
12	40	22.9	40	01.0	-1	20.5	55	20.0	-8	03.3
13	55	25.4	55	00.8		19.5	70	20.7		02.6
14	70	27.9	70	00.6		18.4	85	21.4		01.9
15	85	30.3	85	00.4		17.4	100	22.1		01.1
16	100	32.8	100	00.2		16.4	115	22.8	-8	00.4
17	115	35.3	115	00.0	-1	15.3	130	23.5	-7	59.7
18	130	37.7	129	59.8	-1	14.3	145	24.2	-7	59.0
19	145	40.2	144	59.6		13.3	160	24.9		58.3
20	160	42.7	159	59.4		12.3	175	25.6		57.6
21	175	45.1	174	59.3		11.2	190	26.3		56.9
22	190	47.6	189	59.1		10.2	205	26.9		56.2
23	205	50.0	204	58.9		09.2	220	27.6		55.5
24	220	52.5	219	58.7	-1	08.1	235	28.3	-7	54.8
Dif	—		-2		+10		+7		+7	
							+20		+2	
									+23	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 9				Edad: 2 ^d 1 PHE { 4 ^h : 54 ^m 5 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3 PMG: 14 ^h 02 ^m R°: 50 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	45.8	+15	36.3	156	19.2	+22	41.7	60 N	1	31	2	59	3	53	4	32	16
1	195	45.9		37.1	170	50.1 ¹¹⁹		49.4	58	2	02	3	14	4	03	4	51	21
2	210	45.9		37.8	185	21.0 ¹¹⁹	+22	57.0	56		24		27	12	5	07	25	
3	225	46.0		38.6	199	51.7 ¹¹⁷	+23	04.5	54		42		38	20	20	28	23	
4	240	46.0		39.3	214	22.5 ¹¹⁸		11.9	52		2	56	48	27	32	31	22	
5	255	46.1	+15	40.0	228	53.2 ¹¹⁷	+23	19.2	50		3	09	3	56	4	33	5	
6	270	46.2	+15	40.8	243	23.9 ¹¹⁷	+23	26.4	45		3	34	4	14	4	47	6	
7	285	46.2		41.5	257	54.5 ¹¹⁶		33.5	40		3	52		28	4	58	22	
8	300	46.3		42.2	272	25.1 ¹¹⁶		40.5	35		4	07		40	5	07	37	
9	315	46.4		43.0	286	55.6 ¹¹⁵		47.3	30		20	4	50	16	6	50	43	
10	330	46.4		43.7	301	26.1 ¹¹⁵	+23	54.0	20		39	5	07	30	7	13	45	
11	345	46.5	+15	44.4	315	56.6 ¹¹⁵	+24	00.7	10 N		4	55	5	20	5	42	7	
12	0	46.6	+15	45.2	330	27.0 ¹¹⁴	+24	07.2	0		5	07	5	32	5	53	7	
13	15	46.6		45.9	344	57.4 ¹¹⁴		13.6	10 S		18		43	6	05	8		
14	30	46.7		46.6	359	27.7 ¹¹³		19.8	20		28		5	54	17	29		
15	45	46.7		47.4	13	58.0 ¹¹³		26.0	30		37		6	05	30	8		
16	60	46.8		48.1	28	28.3 ¹¹³		32.1	35		42		12	38	9			
17	75	46.9	+15	48.8	42	58.5 ¹¹²	+24	38.0	40		5	46	6	18	6			
18	90	46.9	+15	49.6	57	28.7 ¹¹²	+24	43.8	45		5	51	6	26	6			
19	105	47.0		50.3	71	58.8 ¹¹¹		49.5	50		57		35	7				
20	120	47.0		51.0	86	29.0 ¹¹²	+24	55.1	56		5	59		39	15			
21	135	47.1		51.7	100	59.0 ¹¹⁰	+25	00.5	54		6	01		44	22			
22	150	47.2		52.5	115	29.1 ¹¹¹		05.9	54		04		48	29	42			
23	165	47.2		53.2	129	59.1 ¹¹⁰		11.1	52		06		54	37	10			
24	180	47.3	+15	53.9	144	29.1 ¹¹⁰	+25	16.2	51		6	09	6	59	7			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 9 ^h 15 ^m 0		Mag: -4.1 PMG: 9 ^h 20 ^m				Mag: +0.9 PMG: 8 ^h 18 ^m				Mag: -2.2 PMG: 9 ^h 11 ^m				Mag: +0.9 PMG: 7 ^h 04 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	220	52.5	219	58.7	-1	08.1	235	28.3	-7	54.8	221	54.8	-1	37.3	253	50.6	-14	21.8
1	235	55.0	234	58.5		07.1	250	29.0		54.1	236	56.8		37.1	268	52.9		21.8
2	250	57.4	249	58.3		06.1	265	29.7		53.4	251	58.8		36.9	283	55.2		21.7
3	265	59.9	264	58.1		05.0	280	30.4		52.7	267	00.8		36.7	298	57.6		21.7
4	281	02.4	279	57.9		04.0	295	31.1		52.0	282	02.8		36.5	313	59.9		21.6
5	296	04.8	294	57.7	-1	03.0	310	31.8	-7	51.3	297	04.8	-1	36.3	329	02.2	-14	21.6
6	311	07.3	309	57.5	-1	02.0	325	32.5	-7	50.6	312	06.8	-1	36.1	344	04.6	-14	21.6
7	326	09.8	324	57.3	-1	00.9	340	33.2		49.9	327	08.7		35.9	359	06.9		21.5
8	341	12.2	339	57.1	-0	59.9	355	33.9		49.2	342	10.7		35.7	14	09.2		21.5
9	356	14.7	354	56.9		58.9	10	34.6		48.5	357	12.7		35.5	29	11.6		21.5
10	11	17.2	9	56.7		57.8	25	35.3		47.7	12	14.7		35.3	44	13.9		21.4
11	26	19.6	24	56.5	-0	56.8	40	36.0	-7	47.0	27	16.7	-1	35.1	59	16.3	-14	21.4
12	41	22.1	39	56.3	-0	55.8	55	36.7	-7	46.3	42	18.7	-1	34.9	74	18.6	-14	21.4
13	56	24.5	54	56.1		54.7	70	37.4		45.6	57	20.7		34.7	89	20.9		21.3
14	71	27.0	69	55.9		53.7	85	38.1		44.9	72	22.7		34.6	104	23.3		21.3
15	86	29.5	84	55.7		52.7	100	38.8		44.2	87	24.7		34.4	119	25.6		21.2
16	101	31.9	99	55.5		51.6	115	39.5		43.5	102	26.7		34.2	134	27.9		21.2
17	116	34.4	114	55.3	-0	50.6	130	40.2	-7	42.8	117	28.7	-1	34.0	149	30.3	-14	21.2
18	131	36.9	129	55.2	-0	49.6	145	40.9	-7	42.1	132	30.6	-1	33.8	164	32.6	-14	21.1
19	146	39.3	144	55.0		48.5	160	41.6		41.4	147	32.6		33.6	179	35.0		21.1
20	161	41.8	159	54.8		47.5	175	42.3		40.7	162	34.6		33.4	194	37.3		21.1
21	176	44.3	174	54.6		46.5	190	43.0		40.0	177	36.6		33.2	209	39.6		21.0
22	191	46.7	189	54.4		45.4	205	43.7		39.3	192	38.6		33.0	224	42.0		21.0
23	206	49.2	204	54.2		44.4	220	44.4		38.6	207	40.6		32.8	239	44.3		21.0
24	221	51.7	219	54.0	-0	43.4	235	45.1	-7	37.8	222	42.6	-1	32.6	254	46.6	-14	20.9
Dif	—		-2 +10		+7 +7		+20 +2		+23 0									

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 56 ^m 8			Edad: 3 ^d 1 PHE { SD: 14'8 PMG: 14 ^h 52 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	m	m	m				
0	180	47.3	+15	53.9	144	29.1	+25	16.2	60 N	20 05	21 01	22 34	4 48	30	0 00	75			
1	195	47.3		54.7	158	59.0 ¹⁰⁹		21.2	58	19 55	20 45	22 00	5 12	35	** ** *	**			
2	210	47.4		55.4	173	28.9 ¹⁰⁹		26.1	56		45	31	21 36	32	38	** ** *	**		
3	225	47.5		56.1	187	58.8 ¹⁰⁹		30.8	54		37	20	17	5	48	40	** ** *	**	
4	240	47.5		56.8	202	28.7 ¹⁰⁹		35.4	52		30	09	21 02	6 03	40	23 50	52		
5	255	47.6	+15	57.6	216	58.5 ¹⁰⁸	+25	39.9	50	19 23	20 01	20 49	6 15	42	23 36	53			
6	270	47.6	+15	58.3	231	28.3 ¹⁰⁸	+25	44.3	45	19 09	19 42	20 23	6 41	44	23 09	52			
7	285	47.7		59.0	245	58.1 ¹⁰⁸		48.5	40	18 58	27	20 04	7 01	45	22 47	52			
8	300	47.7	+15	59.7	260	27.8 ¹⁰⁷		52.7	35		48	15	19 48	18	46	29	52		
9	315	47.8	+16	00.5	274	57.5 ¹⁰⁷	+25	56.7	30		39	19 05	35	33	47	22 14	52		
10	330	47.9		01.2	289	27.2 ¹⁰⁷	+26	00.5	20		25	18 48	15	7 58	48	21 48	51		
11	345	47.9	+16	01.9	303	56.9 ¹⁰⁷	+26	04.3	10 N	18 12	18 34	19 00	8 20	49	21 25	51			
12	0	48.0	+16	02.6	318	26.5 ¹⁰⁶	+26	07.9	0	18 00	18 22	18 47	8 40	50	21 04	51			
13	15	48.0		03.3	332	56.1 ¹⁰⁶		11.4	10 S	17 49	18 10	36	9 00	52	20 43	51			
14	30	48.1		04.1	347	25.7 ¹⁰⁶		14.8	20		36	17 59	26	22	53	20 21	50		
15	45	48.1		04.8	1	55.3 ¹⁰⁶		18.1	31		22	47	16	9 48	53	19 55	49		
16	60	48.2		05.5	16	24.8 ¹⁰⁵		21.2	35		14	41	11	10 03	54	39	50		
17	75	48.2	+16	06.2	30	54.3 ¹⁰⁵	+26	24.2	40	17 05	17 34	18 06	10 20	55	19 22	48			
18	90	48.3	+16	06.9	45	23.9 ¹⁰⁶	+26	27.1	45	16 55	17 26	18 01	10 41	56	19 00	48			
19	105	48.4		07.7	59	53.3 ¹⁰⁴		29.8	50		42	16	17 55	11 08	57	18 33	47		
20	120	48.4		08.4	74	22.8 ¹⁰⁵		32.4	52		36	12	53	21	58	20	46		
21	135	48.5		09.1	88	52.3 ¹⁰⁵		34.9	54		30	08	50	36	59	18 05	45		
22	150	48.5		09.8	103	21.7 ¹⁰⁴		37.3	56		22	17 03	47	11 54	60	17 47	45		
23	165	48.6		10.5	117	51.1 ¹⁰⁴		39.5	58		14	16 57	44	12 15	62	17 25	43		
24	180	48.6	+16	11.2	132	20.5 ¹⁰⁴	+26	41.7	60 S	16 05	16 51	17 41	12 43	65	16 57	41			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 9 ^h 11 ^m 0		Mag: -4.1 PMG: 9 ^h 21 ^m			Mag: +0.9 PMG: 8 ^h 17 ^m			Mag: -2.2 PMG: 9 ^h 08 ^m			Mag: +0.8 PMG: 7 ^h 00 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	221	51.7	219	54.0	-0	43.4	235	45.1	-7	37.8	222	42.6	-1	32.6	254	46.6	-14	20.9	
1	236	54.1	234	53.8		42.3	250	45.8		37.1	237	44.6		32.4	269	49.0		20.9	
2	251	56.6	249	53.6		41.3	265	46.5		36.4	252	46.6		32.2	284	51.3		20.9	
3	266	59.0	264	53.4		40.2	280	47.2		35.7	267	48.6		32.0	299	53.7		20.8	
4	282	01.5	279	53.2		39.2	295	47.9		35.0	282	50.6		31.8	314	56.0		20.8	
5	297	04.0	294	53.0	-0	38.2	310	48.6	-7	34.3	297	52.6	-1	31.6	329	58.3	-14	20.7	
6	312	06.4	309	52.8	-0	37.1	325	49.3	-7	33.6	312	54.6	-1	31.4	345	00.7	-14	20.7	
7	327	08.9	324	52.6		36.1	340	50.1		32.9	327	56.6		31.2	0	03.0		20.7	
8	342	11.4	339	52.4		35.1	355	50.8		32.2	342	58.5		31.0	15	05.4		20.6	
9	357	13.8	354	52.2		34.0	10	51.5		31.5	358	00.5		30.8	30	07.7		20.6	
10	12	16.3	9	52.0		33.0	25	52.2		30.8	13	02.5		30.6	45	10.0		20.6	
11	27	18.8	24	51.8	-0	32.0	40	52.9	-7	30.1	28	04.5	-1	30.4	60	12.4	-14	20.5	
12	42	21.2	39	51.6	-0	30.9	55	53.6	-7	29.3	43	06.5	-1	30.2	75	14.7	-14	20.5	
13	57	23.7	54	51.4		29.9	70	54.3		28.6	58	08.5		30.0	90	17.1		20.5	
14	72	26.2	69	51.2		28.8	85	55.0		27.9	73	10.5		29.8	105	19.4		20.4	
15	87	28.6	84	51.0		27.8	100	55.7		27.2	88	12.5		29.6	120	21.7		20.4	
16	102	31.1	99	50.8		26.8	115	56.4		26.5	103	14.5		29.4	135	24.1		20.4	
17	117	33.5	114	50.6	-0	25.7	130	57.1	-7	25.8	118	16.5	-1	29.2	150	26.4	-14	20.3	
18	132	36.0	129	50.4	-0	24.7	145	57.8	-7	25.1	133	18.5	-1	29.0	165	28.8	-14	20.3	
19	147	38.5	144	50.2		23.6	160	58.5		24.4	148	20.5		28.8	180	31.1		20.3	
20	162	40.9	159	50.0		22.6	175	59.2		23.7	163	22.5		28.6	195	33.5		20.2	
21	177	43.4	174	49.8		21.6	190	59.9		23.0	178	24.5		28.4	210	35.8		20.2	
22	192	45.9	189	49.6		20.5	206	00.6		22.3	193	26.5		28.3	225	38.1		20.2	
23	207	48.3	204	49.4		19.5	221	01.3		21.5	208	28.5		28.1	240	40.5		20.1	
24	222	50.8	219	49.2	-0	18.5	236	02.0	-7	20.8	223	30.5	-1	27.9	255	42.8	-14	20.1	
Dif	—		-2		+10		+7		+7		+20		+2		+23				

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'9 PMG: 11 ^h 56 ^m 7			Edad: 4 ^d 1 PHE { SD: 14'7 PMG: 15 ^h 43 ^m 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'1 R°: 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m
0	180	48.6	+16	11.2	132	20.5	+26	41.7	60 N	1	19	2	52	3	47	5	18
1	195	48.7		12.0	146	49.9 ¹⁰⁴		43.6	58	1	53	3	08	3	58	5	47
2	210	48.7		12.7	161	19.3 ¹⁰⁴		45.5	56	2	17		22	4	07	6	10
3	225	48.8		13.4	175	48.7 ¹⁰⁴		47.2	54		36		33		16	28	52
4	240	48.8		14.1	190	18.1 ¹⁰⁴		48.8	52	2	51		43		23	43	53
5	255	48.9	+16	14.8	204	47.4 ¹⁰³	+26	50.3	50	3	04	3	52	4	30	6	57
6	270	48.9	+16	15.5	219	16.7 ¹⁰³	+26	51.6	45	3	30	4	11	4	44	7	25
7	285	49.0		16.2	233	46.1 ¹⁰⁴		52.8	40	3	50		26	4	55	7	46
8	300	49.0		17.0	248	15.4 ¹⁰³		53.9	35	4	05		38	5	05	8	04
9	315	49.1		17.7	262	44.7 ¹⁰³		54.9	30		18	4	48		14	20	52
10	330	49.1		18.4	277	14.1 ¹⁰⁴		55.7	20		38		5	5	05	29	8
11	345	49.2	+16	19.1	291	43.4 ¹⁰³	+26	56.4	10 N	4	54	5	19	5	41	9	09
12	0	49.2	+16	19.8	306	12.7 ¹⁰³	+26	57.0	0	5	07	5	32	5	53	9	30
13	15	49.3		20.5	320	42.0 ¹⁰³		57.4	10 S		18		43	6	05	9	52
14	30	49.3		21.2	335	11.3 ¹⁰³		57.7	20		28		5	5	55	10	15
15	45	49.4		21.9	349	40.6 ¹⁰³		57.9	30		38		6	0	7	31	41
16	60	49.4		22.6	4	09.9 ¹⁰³		58.0	35		43		13		40	10	57
17	75	49.5	+16	23.4	18	39.2 ¹⁰³	+26	57.9	40	5	48	6	20	6	49	11	15
18	90	49.5	+16	24.1	33	08.6 ¹⁰⁴	+26	57.7	45	5	53	6	28	6	59	11	37
19	105	49.6		24.8	47	37.9 ¹⁰³		57.3	50	5	59		38	7	12	12	05
20	120	49.6		25.5	62	07.2 ¹⁰³		56.9	52	6	02		42		18	19	47
21	135	49.7		26.2	76	36.5 ¹⁰³		56.3	54		04		47		25	35	46
22	150	49.7		26.9	91	05.9 ¹⁰⁴		55.5	56		07		52		32	12	54
23	165	49.8		27.6	105	35.2 ¹⁰³		54.7	58	10	6	57	41		41	13	17
24	180	49.8	+16	28.3	120	04.6 ¹⁰⁴	+26	53.7	60 S	6	13	7	04	7	50	13	48

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 07 ^m 1		Mag: -4.1 PMG: 9 ^h 21 ^m		Mag: +0.8 PMG: 8 ^h 15 ^m		Mag: -2.2 PMG: 9 ^h 05 ^m		Mag: +0.8 PMG: 6 ^h 56 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	222	50.8	219	49.2	-0	18.5	223	30.5	-1	27.9
1	237	53.3	234	49.0		17.4	238	32.5		27.7
2	252	55.7	249	48.8		16.4	253	34.4		27.5
3	267	58.2	264	48.6		15.3	268	36.4		27.3
4	283	00.6	279	48.5		14.3	283	38.4		27.1
5	298	03.1	294	48.3	-0	13.3	298	40.4	-1	26.9
6	313	05.6	309	48.1	-0	12.2	313	42.4	-1	26.7
7	328	08.0	324	47.9		11.2	328	44.4		26.5
8	343	10.5	339	47.7		10.1	343	46.4		26.3
9	358	13.0	354	47.5		09.1	358	48.4		26.1
10	13	15.4	9	47.3		08.0	13	50.4		25.9
11	28	17.9	24	47.1	-0	07.0	28	52.4	-1	25.7
12	43	20.4	39	46.9	-0	06.0	43	54.4	-1	25.5
13	58	22.8	54	46.7		04.9	58	56.4		25.3
14	73	25.3	69	46.5		03.9	73	58.4		25.1
15	88	27.8	84	46.3		02.8	89	00.4		24.9
16	103	30.2	99	46.1		01.8	104	02.4		24.7
17	118	32.7	114	45.9	-0	00.8	119	04.4	-1	24.5
18	133	35.1	129	45.7	+0	00.3	134	06.4	-1	24.3
19	148	37.6	144	45.5		01.3	149	08.4		24.2
20	163	40.1	159	45.3		02.4	164	10.4		24.0
21	178	42.5	174	45.1		03.4	179	12.4		23.8
22	193	45.0	189	44.9		04.5	194	14.4		23.6
23	208	47.5	204	44.7		05.5	209	16.4		23.4
24	223	49.9	219	44.5	+0	06.5	224	18.4	-1	23.2
Dif	—		-2	+10	+7	+7	+20	+2	+23	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15:9 PMG: 11 ^h 56 ^m 6			Edad: 5 ^d 1 SD: 14:7 PMG: 16 ^h 33 ^m	PHE { 4 ^h : 54:1 12 ^h : 54:2 20 ^h : 54:2 R°: 50 ^m												
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	180	49.8	+16	28.3	120	04.6	+26	53.7	60 N	20 10	21 07	22 48	6 11	74	2 07	31	
1	195	49.9		29.0	134	33.9 ¹⁰³		52.6	58	19 59	20 50	22 08	6 40	69	1 38	35	
2	210	49.9		29.7	149	03.3 ¹⁰⁴		51.4	56		49	36	21 43	7 02	66	1 16	38
3	225	50.0		30.4	163	32.7 ¹⁰⁴		50.0	54		41	24	23	20 65	0 58	39	
4	240	50.0		31.1	178	02.1 ¹⁰⁴		48.5	52		33	13	21 07	36 62	42 41		
5	255	50.1	+16	31.8	192	31.5 ¹⁰⁴	+26	46.9	50	19 26	20 04	20 53	7 49	62	0 29	42	
6	270	50.1	+16	32.5	207	00.9 ¹⁰⁴	+26	45.1	45	19 12	19 45	20 26	8 17	59	0 01	44	
7	285	50.2		33.2	221	30.3 ¹⁰⁴		43.2	40	19 00		20 06	38 58		** ** *	**	
8	300	50.2		33.9	235	59.8 ¹⁰⁵		41.2	35	18 49	17	19 50	8 56 56		** ** *	**	
9	315	50.2		34.6	250	29.3 ¹⁰⁵		39.1	30		41	19 06	37	9 12 54	23 53 42		
10	330	50.3		35.3	264	58.7 ¹⁰⁴		36.8	20		25	18 49	16	9 38 53	28 45		
11	345	50.3	+16	36.0	279	28.2 ¹⁰⁵	+26	34.5	10 N	18 12	18 34	19 00	10 00 52	23 06 47			
12	0	50.4	+16	36.7	293	57.8 ¹⁰⁶	+26	31.9	0	18 00	18 22	18 47	10 21 50	22 46 49			
13	15	50.4		37.4	308	27.3 ¹⁰⁵		29.3	10 S	17 48	18 10	35	10 42 49	25 51			
14	30	50.5		38.1	322	56.9 ¹⁰⁶		26.5	20		35	17 58	25	11 05 47	22 03 54		
15	45	50.5		38.8	337	26.5 ¹⁰⁶		23.6	30		21	46	14	31 45	21 38 56		
16	60	50.6		39.5	351	56.1 ¹⁰⁶		20.6	35		13	39	09	11 46 44	23 57		
17	75	50.6	+16	40.2	6	25.7 ¹⁰⁶	+26	17.5	40	17 03	17 32	18 04	12 04 42	21 05 59			
18	90	50.6	+16	40.9	20	55.3 ¹⁰⁶	+26	14.2	45	16 52	17 23	17 58	12 25 40	20 44 62			
19	105	50.7		41.6	35	25.0 ¹⁰⁷		10.8	50		39	13	52	12 52 38	17 65		
20	120	50.7		42.3	49	54.7 ¹⁰⁷		07.3	52		33	09	50	13 06 35	20 04 67		
21	135	50.8		43.0	64	24.4 ¹⁰⁷	+26	03.7	54	26	17 04	47	21 33	19 49 69			
22	150	50.8		43.7	78	54.2 ¹⁰⁸	+25	59.9	56		18	16 59	44	13 39 31	32 71		
23	165	50.9		44.4	93	24.0 ¹⁰⁸		56.0	58		10	53	41	14 00 28	19 10 76		
24	180	50.9	+16	45.1	107	53.8 ¹⁰⁸	+25	52.0	60 S	16 00	16 47	17 37	14 28 22	18 42 82			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 9 ^h 03 ^m 2		Mag: -4.1 PMG: 9 ^h 21 ^m		Mag: +0.8 PMG: 8 ^h 14 ^m		Mag: -2.2 PMG: 9 ^h 02 ^m		Mag: +0.8 PMG: 6 ^h 52 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	223	49.9	219	44.5	+0	06.5	224	18.4	-1	23.2
1	238	52.4	234	44.3		07.6	239	20.4		23.0
2	253	54.9	249	44.1		08.6	254	22.4		22.8
3	268	57.3	264	43.9		09.7	269	24.4		22.6
4	283	59.8	279	43.7		10.7	284	26.4		22.4
5	299	02.3	294	43.5	+0	11.8	299	28.4	-1	22.2
6	314	04.7	309	43.3	+0	12.8	314	30.4	-1	22.0
7	329	07.2	324	43.1		13.9	329	32.4		21.8
8	344	09.6	339	42.9		14.9	344	34.4		21.6
9	359	12.1	354	42.7		15.9	359	36.4		21.4
10	14	14.6	9	42.5		17.0	14	38.4		21.2
11	29	17.0	24	42.3	+0	18.0	29	40.4	-1	21.0
12	44	19.5	39	42.1	+0	19.1	44	42.4	-1	20.9
13	59	22.0	54	41.9		20.1	59	44.4		20.7
14	74	24.4	69	41.6		21.2	74	46.4		20.5
15	89	26.9	84	41.4		22.2	89	48.4		20.3
16	104	29.4	99	41.2		23.3	104	50.4		20.1
17	119	31.8	114	41.0	+0	24.3	119	52.4	-1	19.9
18	134	34.3	129	40.8	+0	25.4	134	54.4	-1	19.7
19	149	36.8	144	40.6		26.4	149	56.4		19.5
20	164	39.2	159	40.4		27.5	164	58.4		19.3
21	179	41.7	174	40.2		28.5	180	00.4		19.1
22	194	44.1	189	40.0		29.5	195	02.4		18.9
23	209	46.6	204	39.8		30.6	210	04.4		18.7
24	224	49.1	219	39.6	+0	31.6	225	06.4	-1	18.5
Dif	—		-2		+10		+7		+2	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 56 ^m 6				Edad: 6 ^d 1 PHE { 4 ^h : 54 ^h 3 12 ^h : 54 ^h 4 20 ^h : 54 ^h 5 PMG: 17 ^h 23 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	50.9	+16	45.1	107	53.8	+25	52.0	60 N	1 05	2 45	3 42	7 25	85	2 38	16		
1	195	50.9		45.8	122	23.6 ¹⁰⁸		47.9	58	1 44	3 02	3 53	7 49	80	2 13	22		
2	210	51.0		46.5	136	53.5 ¹⁰⁹		43.6	56	2 10	17	4 03	8 08	76	1 54	25		
3	225	51.0		47.1	151	23.4 ¹⁰⁹		39.2	54	30	29	12	25	72	37	29		
4	240	51.1		47.8	165	53.3 ¹⁰⁹		34.7	52	2 46	39	19	38	70	23	31		
5	255	51.1	+16	48.5	180	23.3 ¹¹⁰	+25	30.1	50	3 00	3 49	4 26	8 51	67	1 11	32		
6	270	51.1	+16	49.2	194	53.2 ¹⁰⁹	+25	25.3	45	3 27	4 08	4 41	9 16	64	0 45	36		
7	285	51.2		49.9	209	23.3 ¹¹¹		20.5	40	3 47	23	4 53	36	61	25	38		
8	300	51.2		50.6	223	53.3 ¹¹⁰		15.5	35	4 03	36	5 03	9 52	59	0 07	41		
9	315	51.3		51.3	238	23.4 ¹¹¹		10.4	30	16	4 47	12	10 06	57	**	**	**	
10	330	51.3		52.0	252	53.5 ¹¹¹	+25	05.2	20	37	5 04	28	31	53	**	**	**	
11	345	51.3	+16	52.7	267	23.7 ¹¹²	+24	59.8	10 N	4 53	5 19	5 41	10 52	51	23	53	45	
12	0	51.4	+16	53.4	281	53.8 ¹¹¹	+24	54.4	0	5 06	5 32	5 53	11 11	49	23	35	48	
13	15	51.4		54.0	296	24.1 ¹¹³		48.8	10 S	18	43	6 05	31	46	23	16	51	
14	30	51.5		54.7	310	54.3 ¹¹²		43.1	20	29	5 55	18	11 52	43	22	57	53	
15	45	51.5		55.4	325	24.6 ¹¹³		37.3	30	39	6 08	33	12 16	40	34	57		
16	60	51.5		56.1	339	54.9 ¹¹³		31.3	35	44	15	41	30	38	20	60		
17	75	51.6	+16	56.8	354	25.3 ¹¹⁴	+24	25.3	40	5 50	6 22	6 51	12 46	36	22	04	63	
18	90	51.6	+16	57.5	8	55.7 ¹¹⁴	+24	19.1	45	5 55	6 31	7 02	13 05	33	21	46	65	
19	105	51.7		58.2	23	26.1 ¹¹⁴		12.9	50	6 02	41	15	30	28	22	70		
20	120	51.7		58.8	37	56.6 ¹¹⁵	+24	06.5	52	04	45	22	41	27	21	11	72	
21	135	51.7	+16	59.5	52	27.1 ¹¹⁵	+24	00.0	54	07	50	29	13	54	25	20	58	75
22	150	51.8	+17	00.2	66	57.6 ¹¹⁵	+23	53.3	56	10	6 55	36	14	10	21	43	78	
23	165	51.8		00.9	81	28.2 ¹¹⁶		46.6	58	14	7 01	45	28	17	26	82		
24	180	51.8	+17	01.6	95	58.8 ¹¹⁶	+23	39.8	60 S	6 17	7 08	7 55	14 50	11	20	04	88	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 59 ^m 3		Mag: -4.1 PMG: 9 ^h 21 ^m		Mag: +0.8 PMG: 8 ^h 13 ^m		Mag: -2.2 PMG: 8 ^h 58 ^m		Mag: +0.8 PMG: 6 ^h 49 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	224	49.1	219	39.6	+0	31.6	225	06.4	-1	18.5
1	239	51.5	234	39.4		32.7	240	08.4		18.3
2	254	54.0	249	39.2		33.7	255	10.4		18.1
3	269	56.5	264	39.0		34.8	270	12.4		18.0
4	284	58.9	279	38.8		35.8	285	14.4		17.8
5	300	01.4	294	38.6	+0	36.9	300	16.4	-1	17.6
6	315	03.9	309	38.4	+0	37.9	315	18.4	-1	17.4
7	330	06.3	324	38.2		39.0	330	20.4		17.2
8	345	08.8	339	38.0		40.0	345	22.4		17.0
9	0	11.3	354	37.8		41.1	0	24.4		16.8
10	15	13.7	9	37.6		42.1	15	26.4		16.6
11	30	16.2	24	37.4	+0	43.2	30	28.4	-1	16.4
12	45	18.6	39	37.2	+0	44.2	45	30.4	-1	16.2
13	60	21.1	54	37.0		45.3	60	32.4		16.0
14	75	23.6	69	36.8		46.3	75	34.4		15.8
15	90	26.0	84	36.6		47.4	90	36.4		15.6
16	105	28.5	99	36.4		48.4	105	38.4		15.5
17	120	31.0	114	36.2	+0	49.5	120	40.4	-1	15.3
18	135	33.4	129	36.0	+0	50.5	135	42.4	-1	15.1
19	150	35.9	144	35.8		51.6	150	44.4		14.9
20	165	38.4	159	35.6		52.6	165	46.4		14.7
21	180	40.8	174	35.4		53.7	180	48.4		14.5
22	195	43.3	189	35.1		54.7	195	50.5		14.3
23	210	45.7	204	34.9		55.8	210	52.5		14.1
24	225	48.2	219	34.7	+0	56.8	225	54.5	-1	13.9
Dif	—		-2		+10		+20		+2	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna	Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5			Edad: 7 ^d 1 SD: 14 ^h 9 PMG: 18 ^h 11 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m
0	180	51.8	+17 01.6	95	58.8	+23 39.8	70	60 N	20 15	21 13	23 05	8 50 90	2 54 8
1	195	51.9	02.2	110	29.5 ¹¹⁷	32.8	71	58	20 03	20 55	22 18	9 09 84	35 14
2	210	51.9	02.9	125	00.2 ¹¹⁷	25.7	72	56	19 53	41	21 49	24 80	19 18
3	225	51.9	03.6	139	30.9 ¹¹⁷	18.5	71	54	44	28	28	37 76	2 06 20
4	240	52.0	04.3	154	01.7 ¹¹⁸	11.3	72	52	36	17	21 11	48 74	1 54 23
5	255	52.0	+17 05.0	168	32.5 ¹¹⁸	+23 03.9	74	50	19 29	20 07	20 57	9 58 72	1 43 26
6	270	52.0	+17 05.6	183	03.3 ¹¹⁸	+22 56.3	76	45	19 14	19 47	20 29	10 20 66	1 21 30
7	285	52.1	06.3	197	34.2 ¹¹⁹	48.7	76	40	19 02	32	20 09	37 63	1 03 33
8	300	52.1	07.0	212	05.1 ¹¹⁹	41.0	77	35	18 51	19	19 52	10 51 60	0 48 36
9	315	52.2	07.7	226	36.1 ¹²⁰	33.2	78	30	42	19 08	39	11 03 58	35 38
10	330	52.2	08.4	241	07.1 ¹²⁰	25.2	80	20	26	18 50	17	24 54	0 13 41
11	345	52.2	+17 09.0	255	38.2 ¹²¹	+22 17.2	80	10 N	18 13	18 35	19 01	11 43 50	** ** *
12	0	52.3	+17 09.7	270	09.2 ¹²⁰	+22 09.0	82	0	18 00	18 22	18 47	12 00 47	** ** *
13	15	52.3	10.4	284	40.4 ¹²²	+22 00.7	83	10 S	17 48	18 09	35	17 44	** ** *
14	30	52.3	11.1	299	11.5 ¹²¹	+21 52.4	83	20	34	17 57	24	35 40	23 50 54
15	45	52.3	11.7	313	42.7 ¹²²	43.9	85	30	19	44	13	12 56 36	31 58
16	60	52.4	12.4	328	14.0 ¹²³	35.3	86	35	11	37	08	13 08 33	20 61
17	75	52.4	+17 13.1	342	45.2 ¹²²	+21 26.6	87	40	17 01	17 30	18 02	13 22 30	23 07 64
18	90	52.4	+17 13.7	357	16.5 ¹²³	+21 17.9	87	45	16 49	17 21	17 56	13 38 27	22 51 68
19	105	52.5	14.4	11	47.9 ¹²⁴	+21 09.0	89	50	36	11	49	13 58 23	32 73
20	120	52.5	15.1	26	19.3 ¹²⁴	+21 00.0	90	52	29	06	47	14 08 20	23 75
21	135	52.5	15.8	40	50.7 ¹²⁴	+20 50.9	91	54	22	17 01	44	19 17	13 78
22	150	52.6	16.4	55	22.2 ¹²⁵	41.7	92	56	14	16 55	40	31 14	22 01 81
23	165	52.6	17.1	69	53.7 ¹²⁵	32.4	93	58	16 05	49	37	14 45 10	21 48 85
24	180	52.6	+17 17.8	84	25.2 ¹²⁵	+20 23.0	94	60 S	15 55	16 42	17 33	15 01 6	21 32 90
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 8 ^h 55 ^m 3		Mag: -4.1 PMG: 9 ^h 22 ^m		Mag: +0.8 PMG: 8 ^h 12 ^m		Mag: -2.2 PMG: 8 ^h 55 ^m		Mag: +0.8 PMG: 6 ^h 45 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	°	°	°	°	°	°	°	°				
0	225	48.2	219 34.7	+0 56.8	236 53.0	-6 29.5	225 54.5	-1 13.9	258 31.9				
1	240	50.7	234 34.5	57.9	251 53.7	28.8	240 56.5	13.7	273 34.2				
2	255	53.1	249 34.3	+0 58.9	266 54.4	28.1	255 58.5	13.5	288 36.6				
3	270	55.6	264 34.1	+1 00.0	281 55.1	27.4	271 00.5	13.3	303 38.9				
4	285	58.1	279 33.9	+1 01.0	296 55.8	26.7	286 02.5	13.2	318 41.3				
5	301	00.5	294 33.7	+1 02.1	311 56.6	-6 25.9	301 04.5	-1 13.0	333 43.6				
6	316	03.0	309 33.5	+1 03.1	326 57.3	-6 25.2	316 06.5	-1 12.8	348 46.0				
7	331	05.5	324 33.3	04.2	341 58.0	24.5	331 08.5	12.6	3 48.3				
8	346	07.9	339 33.1	05.2	356 58.7	23.8	346 10.5	12.4	18 50.7				
9	1	10.4	354 32.9	06.3	11 59.4	23.1	1 12.5	12.2	33 53.0				
10	16	12.9	9 32.7	07.3	27 00.1	22.4	16 14.5	12.0	48 55.4				
11	31	15.3	24 32.5	+1 08.4	42 00.8	-6 21.6	31 16.5	-1 11.8	63 57.7				
12	46	17.8	39 32.3	+1 09.4	57 01.5	-6 20.9	46 18.5	-1 11.6	79 00.1				
13	61	20.2	54 32.1	10.5	72 02.3	20.2	61 20.5	11.4	94 02.5				
14	76	22.7	69 31.9	11.5	87 03.0	19.5	76 22.5	11.2	109 04.8				
15	91	25.2	84 31.6	12.6	102 03.7	18.8	91 24.5	11.1	124 07.2				
16	106	27.6	99 31.4	13.6	117 04.4	18.1	106 26.6	10.9	139 09.5				
17	121	30.1	114 31.2	+1 14.7	132 05.1	-6 17.3	121 28.6	-1 10.7	154 11.9				
18	136	32.6	129 31.0	+1 15.7	147 05.8	-6 16.6	136 30.6	-1 10.5	169 14.2				
19	151	35.0	144 30.8	16.8	162 06.5	15.9	151 32.6	10.3	184 16.6				
20	166	37.5	159 30.6	17.8	177 07.3	15.2	166 34.6	10.1	199 18.9				
21	181	40.0	174 30.4	18.9	192 08.0	14.5	181 36.6	09.9	214 21.3				
22	196	42.4	189 30.2	20.0	207 08.7	13.8	196 38.6	09.7	229 23.7				
23	211	44.9	204 30.0	21.0	222 09.4	13.0	211 40.6	09.5	244 26.0				
24	226	47.4	219 29.8	+1 22.1	237 10.1	-6 12.3	226 42.6	-1 09.3	259 28.4				
Dif	—	—	-2	+11	+7	+7	+20	+2	+24	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 5				Edad: 8 ^d 1 PHE { SD: 15'0 PMG: 18 ^h 58 ^m R°: 45 ^m 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'6													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	52.6	+17	17.8	84	25.2	+20	23.0	60 N	0 48	2 39	3 37	10 20	89	3 02	5		
1	195	52.7		18.4	98	56.8 ¹²⁶		13.5 ⁹⁵	58	1 35	2 57	49	33	85	2 49	9		
2	210	52.7		19.1	113	28.4 ¹²⁶	+20	04.0 ⁹⁵	56	2 03	3 12	3 59	44	81		37	12	
3	225	52.7		19.8	128	00.1 ¹²⁷	+19	54.3 ⁹⁷	54	24	24	4 08	10 53	79		26	16	
4	240	52.8		20.4	142	31.8 ¹²⁷		44.5 ⁹⁸	52	41	35	16	11 02	76		17	18	
5	255	52.8	+17	21.1	157	03.5 ¹²⁷	+19	34.6 ⁹⁹	50	2 55	3 45	4 23	11 10	73	2 09	20		
6	270	52.8	+17	21.8	171	35.2 ¹²⁷	+19	24.7 ⁹⁹	45	3 23	4 05	4 38	11 26	69	1 51	25		
7	285	52.8		22.4	186	07.0 ¹²⁸		14.6 ¹⁰¹	40	3 44	21	4 51	40	64		36	29	
8	300	52.9		23.1	200	38.9 ¹²⁹	+19	04.4 ¹⁰²	35	4 01	34	5 02	11 51	61		24	32	
9	315	52.9		23.8	215	10.7 ¹²⁸	+18	54.2 ¹⁰²	30	14	4 45	11	12 01	59	1 13	35		
10	330	52.9		24.4	229	42.6 ¹²⁹		43.8 ¹⁰⁴	20	36	5 03	27	18	54	0 54	39		
11	345	53.0	+17	25.1	244	14.6 ¹³⁰	+18	33.4 ¹⁰⁴	10 N	4 52	5 18	5 40	12 33	50	0 38	43		
12	0	53.0	+17	25.8	258	46.5 ¹²⁹	+18	22.9 ¹⁰⁵	0	5 06	5 31	5 53	12 47	45	0 23	46		
13	15	53.0		26.4	273	18.5 ¹³⁰		12.2 ¹⁰⁷	10 S	18	44	6 06	13 01	41	0 07	50		
14	30	53.0		27.1	287	50.6 ¹³¹	+18	01.5 ¹⁰⁷	20	29	5 56	19	15	38	** ** *	**		
15	45	53.1		27.8	302	22.6 ¹³⁰	+17	50.7 ¹⁰⁸	30	40	6 09	34	32	33	** ** *	**		
16	60	53.1		28.4	316	54.7 ¹³¹		39.8 ¹⁰⁹	35	46	16	43	41	31	** ** *	**		
17	75	53.1	+17	29.1	331	26.8 ¹³¹	+17	28.9 ¹⁰⁹	40	5 51	6 24	6 53	13 52	28	** ** *	**		
18	90	53.1	+17	29.7	345	59.0 ¹³²	+17	17.8 ¹¹¹	45	5 58	6 33	7 04	14 05	24	23 59	69		
19	105	53.2		30.4	0	31.2 ¹³²	+17	06.6 ¹¹²	50	6 04	43	18	21	19	45	74		
20	120	53.2		31.1	15	03.4 ¹³²	+16	55.4 ¹¹²	52	07	48	25	28	17	38	77		
21	135	53.2		31.7	29	35.6 ¹³²		44.1 ¹¹³	54	10	53	32	36	14	31	79		
22	150	53.2		32.4	44	07.9 ¹³³		32.7 ¹¹⁴	56	13	6 59	40	45	11	22	83		
23	165	53.3		33.0	58	40.2 ¹³³		21.2 ¹¹⁵	58	17	7 05	7 49	14 55	8	13	86		
24	180	53.3	+17	33.7	73	12.5 ¹³³	+16	09.6 ¹¹⁶	60 S	6 21	7 12	8 00	15 07	4	23 02	90		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 51 ^m 4		Mag: -4.1 PMG: 9 ^h 22 ^m		Mag: +0.8 PMG: 8 ^h 11 ^m		Mag: -2.2 PMG: 8 ^h 52 ^m		Mag: +0.8 PMG: 6 ^h 41 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	226	47.4	219	29.8	+1	22.1	237	10.1	-6	12.3
1	241	49.8	234	29.6		23.1	252	10.8		11.6
2	256	52.3	249	29.4		24.2	267	11.5		10.9
3	271	54.7	264	29.2		25.2	282	12.3		10.2
4	286	57.2	279	28.9		26.3	297	13.0		09.5
5	301	59.7	294	28.7	+1	27.3	312	13.7	-6	08.7
6	317	02.1	309	28.5	+1	28.4	327	14.4	-6	08.0
7	332	04.6	324	28.3		29.4	342	15.1		07.3
8	347	07.1	339	28.1		30.5	357	15.8		06.6
9	2	09.5	354	27.9		31.5	12	16.6		05.9
10	17	12.0	9	27.7		32.6	27	17.3		05.1
11	32	14.5	24	27.5	+1	33.6	42	18.0	-6	04.4
12	47	16.9	39	27.3	+1	34.7	57	18.7	-6	03.7
13	62	19.4	54	27.1		35.8	72	19.4		03.0
14	77	21.8	69	26.9		36.8	87	20.1		02.3
15	92	24.3	84	26.6		37.9	102	20.9		01.6
16	107	26.8	99	26.4		38.9	117	21.6		00.8
17	122	29.2	114	26.2	+1	40.0	132	22.3	-6	00.1
18	137	31.7	129	26.0	+1	41.0	147	23.0	-5	59.4
19	152	34.2	144	25.8		42.1	162	23.7		58.7
20	167	36.6	159	25.6		43.1	177	24.4		58.0
21	182	39.1	174	25.4		44.2	192	25.2		57.2
22	197	41.6	189	25.2		45.3	207	25.9		56.5
23	212	44.0	204	25.0		46.3	222	26.6		55.8
24	227	46.5	219	24.8	+1	47.4	237	27.3	-5	55.1
Dif	—		-2 +11		+7 +7		+20 +2		+24 0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 9 ^d 1	PHE {	4 ^h : 55 ^h /8 12 ^h : 56 ^h /1 20 ^h : 56 ^h /3			Civil		Náutico	Hora	R°	Hora	R°
	PMG: 11 ^h 56 ^m 4	hG ☉	Dec						hG ☾	Dif					
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	53.3	+17 33.7	73	12.5	+16 09.6		60 N	20 20	21 20	23 30	11 49 90	3 07 3		
1	195	53.3		87	44.9 ¹³⁴	+15 57.9 ¹¹⁷		58	20 08	21 01	22 28	11 58 86	2 58 6		
2	210	53.3		102	17.2 ¹³³	46.2 ¹¹⁷		56	19 57	20 45	21 57	12 05 83	49 10		
3	225	53.4		116	49.6 ¹³⁴	34.3 ¹¹⁹		54	48	32	34	12 80	42 12		
4	240	53.4		131	22.1 ¹³⁵	22.4 ¹¹⁹		52	40	21	16	18 77	35 15		
5	255	53.4	+17 37.0	145	54.5 ¹³⁴	+15 10.4 ¹²⁰		50	19 32	20 11	21 01	12 23 75	2 29 17		
6	270	53.4	+17 37.6	160	27.0 ¹³⁵	+14 58.4 ¹²⁰		45	19 16	19 50	20 32	12 35 70	2 16 22		
7	285	53.5		174	59.5 ¹³⁵	46.2 ¹²²		40	19 04	34	20 11	44 66	2 05 26		
8	300	53.5		189	32.0 ¹³⁵	34.0 ¹²²		35	18 53	20	19 54	12 52 63	1 56 29		
9	315	53.5		204	04.5 ¹³⁵	21.7 ¹²³		30	43	19 09	40	13 00 59	48 32		
10	330	53.5		218	37.1 ¹³⁶	+14 09.3 ¹²⁴		20	27	18 50	18	12 54	33 37		
11	345	53.5	+17 40.9	233	09.7 ¹³⁶	+13 56.8 ¹²⁵		10 N	18 13	18 35	19 01	13 23 49	1 21 41		
12	0	53.6	+17 41.5	247	42.3 ¹³⁶	+13 44.3 ¹²⁵		0	18 00	18 22	18 47	13 32 45	1 09 45		
13	15	53.6		262	14.9 ¹³⁶	31.7 ¹²⁶		10 S	17 47	18 09	34	42 41	0 57 49		
14	30	53.6		276	47.5 ¹³⁶	19.0 ¹²⁷		20	33	17 56	23	13 53 36	44 54		
15	45	53.6		291	20.1 ¹³⁶	+13 06.3 ¹²⁷		30	18	43	12	14 05 31	29 59		
16	60	53.7		305	52.8 ¹³⁷	+12 53.4 ¹²⁹		35	17 09	36	06	12 28	21 61		
17	75	53.7	+17 44.8	320	25.5 ¹³⁷	+12 40.5 ¹²⁹		40	16 59	17 28	18 00	14 20 25	0 11 65		
18	90	53.7	+17 45.4	334	58.2 ¹³⁷	+12 27.6 ¹²⁹		45	16 47	17 18	17 54	14 29 21	*** ** *		
19	105	53.7		349	30.9 ¹³⁷	14.5 ¹³¹		50	33	08	47	40 16	*** ** *		
20	120	53.7		4	03.6 ¹³⁷	+12 01.4 ¹³¹		52	26	17 03	44	45 14	*** ** *		
21	135	53.8		18	36.3 ¹³⁷	+11 48.2 ¹³²		54	19	16 58	41	50 12	*** ** *		
22	150	53.8		33	09.0 ¹³⁷	35.0 ¹³²		56	10	52	37	14 56 9	*** ** *		
23	165	53.8		47	41.8 ¹³⁸	21.7 ¹³³		58	16 01	45	33	15 03 6	*** ** *		
24	180	53.8	+17 49.3	62	14.5 ¹³⁷	+11 08.3 ¹³⁴		60 S	15 50	16 38	17 29	15 11 2	*** ** *		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 8 ^h 47 ^m 5		Mag: -4.1 PMG: 9 ^h 22 ^m			Mag: +0.8 PMG: 8 ^h 10 ^m			Mag: -2.2 PMG: 8 ^h 49 ^m			Mag: +0.8 PMG: 6 ^h 37 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	
0	227	46.5	219	24.8	+1 47.4	237	27.3	-5 55.1	227	30.8	-1 04.8	260	25.0	-14 16.4	
1	242	49.0	234	24.5	48.4	252	28.0	54.4	242	32.9	04.6	275	27.3	16.3	
2	257	51.4	249	24.3	49.5	267	28.7	53.7	257	34.9	04.4	290	29.7	16.3	
3	272	53.9	264	24.1	50.5	282	29.5	52.9	272	36.9	04.2	305	32.1	16.3	
4	287	56.3	279	23.9	51.6	297	30.2	52.2	287	38.9	04.0	320	34.4	16.2	
5	302	58.8	294	23.7	+1 52.6	312	30.9	-5 51.5	302	40.9	-1 03.9	335	36.8	-14 16.2	
6	318	01.3	309	23.5	+1 53.7	327	31.6	-5 50.8	317	42.9	-1 03.7	350	39.1	-14 16.2	
7	333	03.7	324	23.3	54.8	342	32.3	50.1	332	44.9	03.5	5 41.5	16.2		
8	348	06.2	339	23.1	55.8	357	33.0	49.3	347	46.9	03.3	20 43.9	16.1		
9	3	08.7	354	22.8	56.9	12 33.8	48.6	48.6	2 48.9	03.1	35 46.2	16.1			
10	18	11.1	9 22.6		57.9	27 34.5	47.9	47.9	17 51.0	02.9	50 48.6	16.1			
11	33	13.6	24 22.4	+1 59.0	42 35.2	-5 47.2	32 53.0	-1 02.7	32 53.0	-1 02.7	65 51.0	-14 16.1			
12	48	16.1	39 22.2	+2 00.0	57 35.9	-5 46.5	47 55.0	-1 02.5	47 55.0	-1 02.5	80 53.3	-14 16.0			
13	63	18.5	54 22.0	+2 01.1	72 36.6	45.7	62 57.0	02.4	62 57.0	02.4	95 55.7	16.0			
14	78	21.0	69 21.8		02.1	87 37.4	45.0	77 59.0	77 59.0	02.2	110 58.0	16.0			
15	93	23.5	84 21.6		03.2	102 38.1	44.3	93 01.0	93 01.0	02.0	126 00.4	15.9			
16	108	25.9	99 21.4		04.3	117 38.8	43.6	108 03.0	108 03.0	01.8	141 02.8	15.9			
17	123	28.4	114 21.1	+2 05.3	132 39.5	-5 42.9	123 05.1	-1 01.6	123 05.1	-1 01.6	156 05.1	-14 15.9			
18	138	30.8	129 20.9	+2 06.4	147 40.2	-5 42.1	138 07.1	-1 01.4	138 07.1	-1 01.4	171 07.5	-14 15.9			
19	153	33.3	144 20.7		07.4	162 41.0	41.4	153 09.1	153 09.1	01.2	186 09.9	15.8			
20	168	35.8	159 20.5		08.5	177 41.7	40.7	168 11.1	168 11.1	01.0	201 12.2	15.8			
21	183	38.2	174 20.3		09.5	192 42.4	40.0	183 13.1	183 13.1	00.9	216 14.6	15.8			
22	198	40.7	189 20.1		10.6	207 43.1	39.3	198 15.1	198 15.1	00.7	231 16.9	15.8			
23	213	43.2	204 19.9		11.7	222 43.8	38.5	213 17.1	213 17.1	00.5	246 19.3	15.7			
24	228	45.6	219 19.7	+2 12.7	237 44.6	-5 37.8	228 19.2	-1 00.3	228 19.2	-1 00.3	261 21.7	-14 15.7			
Dif	—		-2		+11	+7		+7	+20		+2	+24			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 10 ^d 1 PHE	SD: 15 ^h 4										
	PMG: 11 ^h 56 ^m 4				PMG: 20 ^h 28 ^m			R ^o : 46 ^m							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	180	53.8	+17	49.3	62	14.5	+11	08.3	60 N	0 22	2 32	3 32	13 19	92	3 10 2
1	195	53.8		49.9	76	47.3 ¹³⁸	+10	54.8 ¹³⁵	58	1 24	2 51	44	24 88		3 04 6
2	210	53.8		50.6	91	20.1 ¹³⁸		41.3 ¹³⁵	56	1 56	3 07	3 55	28 84		2 59 8
3	225	53.9		51.2	105	52.8 ¹³⁷		27.7 ¹³⁶	54	2 18	20	4 04	32 81		54 1
4	240	53.9		51.9	120	25.6 ¹³⁸		14.1 ¹³⁶	52	36	32	13	35 79		50 14
5	255	53.9	+17	52.5	134	58.4 ¹³⁸	+10	00.4 ¹³⁷	50	2 51	3 42	4 20	13 38	76	2 46 16
6	270	53.9	+17	53.2	149	31.2 ¹³⁸	+9	46.6 ¹³⁸	45	3 20	4 02	4 36	13 45	71	2 38 20
7	285	53.9		53.8	164	04.0 ¹³⁸		32.8 ¹³⁸	40	41	19	4 49	50 67		31 24
8	300	54.0		54.4	178	36.7 ¹³⁷		18.9 ¹³⁹	35	3 58	32	5 00	55 63		25 28
9	315	54.0		55.1	193	09.5 ¹³⁸	+9	04.9 ¹⁴⁰	30	4 12	4 43	09	13 59	60	20 30
10	330	54.0		55.7	207	42.3 ¹³⁸	+8	50.9 ¹⁴⁰	20	35	5 02	26	14 06	54	10 36
11	345	54.0	+17	56.4	222	15.1 ¹³⁸	+8	36.9 ¹⁴⁰	10 N	4 52	5 18	5 40	14 12	50	2 02 40
12	0	54.0	+17	57.0	236	47.9 ¹³⁸	+8	22.8 ¹⁴¹	0	5 06	5 31	5 53	14 17	46	1 54 45
13	15	54.0		57.6	251	20.7 ¹³⁸	+8	08.6 ¹⁴²	10 S	18	44	6 06	23 41		46 49
14	30	54.0		58.3	265	53.4 ¹³⁷	+7	54.3 ¹⁴³	20	30	5 57	20	29 36		38 54
15	45	54.1		58.9	280	26.2 ¹³⁸		40.1 ¹⁴²	30	41	6 10	35	36 31		28 59
16	60	54.1	+17	59.6	294	59.0 ¹³⁸		25.7 ¹⁴⁴	35	47	18	44	40 28		22 63
17	75	54.1	+18	00.2	309	31.7 ¹³⁷	+7	11.3 ¹⁴⁴	40	5 53	6 26	6 55	14 45	24	1 16 66
18	90	54.1	+18	00.8	324	04.5 ¹³⁸	+6	56.9 ¹⁴⁴	45	6 00	6 35	7 07	14 50	20	1 08 70
19	105	54.1		01.5	338	37.2 ¹³⁷		42.4 ¹⁴⁵	50	07	46	21	56 15		0 59 75
20	120	54.1		02.1	353	09.9 ¹³⁷		27.9 ¹⁴⁵	52	10	51	28	14 59	13	55 77
21	135	54.2		02.7	7	42.6 ¹³⁷	+6	13.3 ¹⁴⁶	54	13	6 56	35	15 02	11	50 80
22	150	54.2		03.4	22	15.3 ¹³⁷	+5	58.6 ¹⁴⁷	56	17	7 02	44	05 8		45 83
23	165	54.2		04.0	36	48.0 ¹³⁷		43.9 ¹⁴⁷	58	20	09	7 53	09 5		39 86
24	180	54.2	+18	04.6	51	20.7 ¹³⁷	+5	29.2 ¹⁴⁷	60 S	6 24	7 16	8 04	15 13	2	0 32 91

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 43 ^m 5		Mag: -4.1 PMG: 9 ^h 23 ^m		Mag: +0.8 PMG: 8 ^h 09 ^m		Mag: -2.2 PMG: 8 ^h 46 ^m		Mag: +0.8 PMG: 6 ^h 34 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	228	45.6	219	19.7	+2	12.7	237	44.6	-5	37.8
1	243	48.1	234	19.4		13.8	252	45.3		37.1
2	258	50.6	249	19.2		14.8	267	46.0		36.4
3	273	53.0	264	19.0		15.9	282	46.7		35.7
4	288	55.5	279	18.8		16.9	297	47.4		34.9
5	303	57.9	294	18.6	+2	18.0	312	48.2	-5	34.2
6	319	00.4	309	18.4	+2	19.1	327	48.9	-5	33.5
7	334	02.9	324	18.1		20.1	342	49.6		32.8
8	349	05.3	339	17.9		21.2	357	50.3		32.1
9	4	07.8	354	17.7		22.2	12	51.0		31.3
10	19	10.3	9	17.5		23.3	27	51.8		30.6
11	34	12.7	24	17.3	+2	24.3	42	52.5	-5	29.9
12	49	15.2	39	17.1	+2	25.4	57	53.2	-5	29.2
13	64	17.7	54	16.9		26.5	72	53.9		28.5
14	79	20.1	69	16.6		27.5	87	54.6		27.7
15	94	22.6	84	16.4		28.6	102	55.4		27.0
16	109	25.1	99	16.2		29.6	117	56.1		26.3
17	124	27.5	114	16.0	+2	30.7	132	56.8	-5	25.6
18	139	30.0	129	15.8	+2	31.8	147	57.5	-5	24.9
19	154	32.4	144	15.6		32.8	162	58.3		24.1
20	169	34.9	159	15.3		33.9	177	59.0		23.4
21	184	37.4	174	15.1		34.9	192	59.7		22.7
22	199	39.8	189	14.9		36.0	208	00.4		22.0
23	214	42.3	204	14.7		37.0	223	01.1		21.2
24	229	44.8	219	14.5	+2	38.1	238	01.9	-5	20.5
Dif	—		-2		+11		+7		+7	

0	22	32	32	13	19	92	3	10	2
1	24	51	44	24	88		3	04	6
2	56	07	355	28	84		2	59	8
3	18	20	404	32	81		54	1	
4	36	32	13	35	79		50	14	
5	51	42	420	13	38	76	2	46	16
6	20	402	436	13	45	71	2	38	20
7	41	19	449	50	67		31	24	
8	35	32	500	55	63		25	28	
9	42	443	09	13	59	60	20	30	
10	35	502	26	14	06	54	10	36	
11	52	518	540	14	12	50	2	02	40
12	06	531	553	14	17	46	1	54	45
13	18	44	606	23	41		46	49	
14	30	557	20	29	36		38	54	
15	41	610	35	36	31		28	59	
16	47	18	44	40	28		22	63	
17	53	626	655	14	45	24	1	16	66
18	00	635	707	14	50	20	1	08	70
19	07	46	21	56	15		0	59	75
20	10	51	28	14	59	13	55	77	
21	13	656	35	15	02	11	50	80	
22	17	702	44	05	8		45	83	
23	20	09	753	09	5		39	86	
24	624	716	804	15	13	2	0	32	91

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 11 ^d 1 PHE { SD: 15 ^h 6 PMG: 21 ^h 14 ^m 4 ^h : 57 ^m 5 12 ^h : 57 ^m 8 20 ^h : 58 ^m 1 R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	54.2	+18 04.6	51	20.7	+5 29.2		60 N	20 25	21 26	** **	14 51 94	3 12 2	
1	195	54.2	05.3	65	53.3 ¹³⁶	+5 14.4 ¹⁴⁸		58	12	21 06	22 39	52 90	10 5	
2	210	54.2	05.9	80	25.9 ¹³⁶	+4 59.6 ¹⁴⁸		56	20 01	20 50	22 04	52 88	07 8	
3	225	54.2	06.5	94	58.6 ¹³⁷	44.7 ¹⁴⁹		54	19 51	36	21 40	53 85	05 1	
4	240	54.2	07.1	109	31.1 ¹³⁵	29.8 ¹⁴⁹		52	43	24	21	54 82	04 13	
5	255	54.3	+18 07.8	124	03.7 ¹³⁶	+4 14.9 ¹⁴⁹		50	19 35	20 14	21 06	14 54 80	3 02 15	
6	270	54.3	+18 08.4	138	36.3 ¹³⁶	+3 59.9 ¹⁵⁰		45	19 19	19 53	20 36	14 56 74	2 58 20	
7	285	54.3	09.0	153	08.8 ¹³⁵	44.9 ¹⁵⁰		40	19 06	36	20 13	57 69	55 24	
8	300	54.3	09.7	167	41.3 ¹³⁵	29.8 ¹⁵¹		35	18 54	22	19 56	58 66	53 27	
9	315	54.3	10.3	182	13.8 ¹³⁵	+3 14.7 ¹⁵¹		30	44	19 10	42	14 59 62	50 31	
10	330	54.3	10.9	196	46.2 ¹³⁴	+2 59.5 ¹⁵²		20	28	18 51	19	15 00 57	46 36	
11	345	54.3	+18 11.5	211	18.6 ¹³⁴	+2 44.4 ¹⁵¹		10 N	18 13	18 36	19 02	15 02 51	2 42 42	
12	0	54.3	+18 12.2	225	51.0 ¹³⁴	+2 29.2 ¹⁵²		0	18 00	18 22	18 47	15 03 47	2 39 46	
13	15	54.3	12.8	240	23.4 ¹³⁴	+2 13.9 ¹⁵³		10 S	17 47	18 09	34	04 42	35 51	
14	30	54.3	13.4	254	55.7 ¹³³	+1 58.6 ¹⁵³		20	33	17 56	22	05 37	32 55	
15	45	54.4	14.0	269	28.0 ¹³³	43.3 ¹⁵³		30	17	42	11	07 31	27 61	
16	60	54.4	14.7	284	00.3 ¹³³	28.0 ¹⁵³		35	17 07	34	18 05	08 28	25 64	
17	75	54.4	+18 15.3	298	32.5 ¹³²	+1 12.7 ¹⁵³		40	16 57	17 26	17 58	15 09 25	2 22 68	
18	90	54.4	+18 15.9	313	04.7 ¹³²	+0 57.3 ¹⁵⁴		45	16 45	17 16	17 52	15 10 21	2 18 73	
19	105	54.4	16.5	327	36.8 ¹³¹	41.9 ¹⁵⁴		50	30	05	44	11 16	14 78	
20	120	54.4	17.2	342	08.9 ¹³¹	26.4 ¹⁵⁵		52	23	17 00	41	12 13	12 80	
21	135	54.4	17.8	356	41.0 ¹³¹	+0 11.0 ¹⁵⁴		54	15	16 55	38	13 11	10 83	
22	150	54.4	18.4	11	13.0 ¹³⁰	-0 04.5 ¹⁵⁵		56	16 06	48	34	13 9	08 86	
23	165	54.4	19.0	25	45.0 ¹³⁰	-0 20.0 ¹⁵⁵		58	15 57	42	30	14 6	05 89	
24	180	54.4	+18 19.6	40	17.0 ¹³⁰	-0 35.6 ¹⁵⁶		60 S	15 46	16 34	17 26	15 15 2	2 03 92	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 39 ^m 6		Mag: -4.1 PMG: 9 ^h 23 ^m		Mag: +0.8 PMG: 8 ^h 07 ^m		Mag: -2.2 PMG: 8 ^h 42 ^m		Mag: +0.8 PMG: 6 ^h 30 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	229	44.8	219	14.5	+2 38.1	238 01.9	-5 20.5	229 07.5	-0 55.8	262 18.5	-14 15.1
1	244	47.2	234	14.2	39.2	253 02.6	19.8	244 09.6	55.6	277 20.8	15.1
2	259	49.7	249	14.0	40.2	268 03.3	19.1	259 11.6	55.5	292 23.2	15.0
3	274	52.2	264	13.8	41.3	283 04.0	18.4	274 13.6	55.3	307 25.6	15.0
4	289	54.6	279	13.6	42.3	298 04.8	17.6	289 15.6	55.1	322 27.9	15.0
5	304	57.1	294	13.4	+2 43.4	313 05.5	-5 16.9	304 17.6	-0 54.9	337 30.3	-14 15.0
6	319	59.6	309	13.2	+2 44.5	328 06.2	-5 16.2	319 19.6	-0 54.7	352 32.7	-14 14.9
7	335	02.0	324	12.9	45.5	343 06.9	15.5	334 21.7	54.5	7 35.0	14.9
8	350	04.5	339	12.7	46.6	358 07.6	14.8	349 23.7	54.3	22 37.4	14.9
9	5	06.9	354	12.5	47.6	13 08.4	14.0	4 25.7	54.2	37 39.8	14.9
10	20	09.4	9	12.3	48.7	28 09.1	13.3	19 27.7	54.0	52 42.2	14.8
11	35	11.9	24	12.1	+2 49.8	43 09.8	-5 12.6	34 29.7	-0 53.8	67 44.5	-14 14.8
12	50	14.3	39	11.8	+2 50.8	58 10.5	-5 11.9	49 31.8	-0 53.6	82 46.9	-14 14.8
13	65	16.8	54	11.6	51.9	73 11.3	11.1	64 33.8	53.4	97 49.3	14.8
14	80	19.3	69	11.4	52.9	88 12.0	10.4	79 35.8	53.2	112 51.6	14.7
15	95	21.7	84	11.2	54.0	103 12.7	09.7	94 37.8	53.1	127 54.0	14.7
16	110	24.2	99	11.0	55.0	118 13.4	09.0	109 39.8	52.9	142 56.4	14.7
17	125	26.7	114	10.7	+2 56.1	133 14.2	-5 08.3	124 41.9	-0 52.7	157 58.7	-14 14.7
18	140	29.1	129	10.5	+2 57.2	148 14.9	-5 07.5	139 43.9	-0 52.5	173 01.1	-14 14.6
19	155	31.6	144	10.3	58.2	163 15.6	06.8	154 45.9	52.3	188 03.5	14.6
20	170	34.0	159	10.1	+2 59.3	178 16.3	06.1	169 47.9	52.1	203 05.9	14.6
21	185	36.5	174	09.9	+3 00.3	193 17.0	05.4	184 49.9	52.0	218 08.2	14.6
22	200	39.0	189	09.6	01.4	208 17.8	04.6	199 52.0	51.8	233 10.6	14.5
23	215	41.4	204	09.4	02.5	223 18.5	03.9	214 54.0	51.6	248 13.0	14.5
24	230	43.9	219	09.2	+3 03.5	238 19.2	-5 03.2	229 56.0	-0 51.4	263 15.3	-14 14.5
Dif	—	—	-2	+11	+7	+7	+7	+20	+2	+24	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				Edad: 12 ^d 1 PHE { SD: 15'9 PMG: 22 ^h 01 ^m															
					R°: 50 ^m															
	hG ☉		Dec		hG ☾		Dif		Dec		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180	54.4	+18	19.6	40	17.0	-0	35.6	60 N	**	**	2 26	3 27	16 25	100	3 14	2			
1	195	54.4		20.3	54	48.9 ¹²⁹	-0	51.1 ¹⁵⁵	58	1 14	2 46	40	22 96	15 5						
2	210	54.4		20.9	69	20.7 ¹²⁸	-1	06.7 ¹⁵⁶	56	1 48	3 02	3 51	20 92	15 9						
3	225	54.5		21.5	83	52.5 ¹²⁸		22.2 ¹⁵⁵	54	2 12	16	4 01	18 88	16 1						
4	240	54.5		22.1	98	24.3 ¹²⁸		37.8 ¹⁵⁶	52	31	28	09	16 85	17 14						
5	255	54.5	+18	22.7	112	56.0 ¹²⁷	-1	53.4 ¹⁵⁶	50	2 47	3 38	4 17	16 14	83	3 17	16				
6	270	54.5	+18	23.3	127	27.6 ¹²⁶	-2	09.1 ¹⁵⁷	45	3 17	4 00	4 33	16 10	77	3 18	22				
7	285	54.5		24.0	141	59.2 ¹²⁶		24.7 ¹⁵⁶	40	39	16	47	06 73	19 26						
8	300	54.5		24.6	156	30.8 ¹²⁶		40.3 ¹⁵⁶	35	3 56	30	4 58	04 68	20 30						
9	315	54.5		25.2	171	02.3 ¹²⁵	-2	56.0 ¹⁵⁷	30	4 11	4 42	5 08	16 01	65	21 33					
10	330	54.5		25.8	185	33.7 ¹²⁴	-3	11.6 ¹⁵⁶	20	33	5 01	25	15 57	59	22 39					
11	345	54.5	+18	26.4	200	05.1 ¹²⁴	-3	27.3 ¹⁵⁷	10 N	4 51	5 17	5 39	15 53	54	3 24	43				
12	0	54.5	+18	27.0	214	36.4 ¹²³	-3	42.9 ¹⁵⁶	0	5 06	5 31	5 53	15 50	49	3 25	48				
13	15	54.5		27.6	229	07.7 ¹²³	-3	58.6 ¹⁵⁷	10 S	19	44	6 06	46 45	26 52						
14	30	54.5		28.3	243	38.9 ¹²²	-4	14.3 ¹⁵⁷	20	31	5 57	20	42 40	27 58						
15	45	54.5		28.9	258	10.0 ¹²¹		29.9 ¹⁵⁶	30	42	6 11	37	38 34	28 64						
16	60	54.5		29.5	272	41.1 ¹²¹	-4	45.6 ¹⁵⁷	35	48	19	46	36 31	29 67						
17	75	54.5	+18	30.1	287	12.1 ¹²⁰	-5	01.3 ¹⁵⁷	40	5 55	6 27	6 56	15 34	27	3 30	71				
18	90	54.5	+18	30.7	301	43.0 ¹¹⁹	-5	16.9 ¹⁵⁶	45	6 02	6 37	7 09	15 31	22	3 31	75				
19	105	54.5		31.3	316	13.9 ¹¹⁹		32.6 ¹⁵⁷	50	09	48	24	27 18	32 81						
20	120	54.5		31.9	330	44.7 ¹¹⁸	-5	48.2 ¹⁵⁶	52	12	54	31	25 16	32 84						
21	135	54.5		32.5	345	15.5 ¹¹⁸	-6	03.9 ¹⁵⁷	54	16	6 59	39	24 12	33 86						
22	150	54.5		33.1	359	46.1 ¹¹⁶		19.5 ¹⁵⁶	56	20	7 05	47	22 9	34 89						
23	165	54.5		33.7	14	16.7 ¹¹⁶		35.1 ¹⁵⁶	58	24	12	7 57	20 6	34 93						
24	180	54.5	+18	34.3	28	47.2 ¹¹⁵	-6	50.7 ¹⁵⁶	60 S	6 28	7 20	8 09	15 17	3	3 35	97				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 8 ^h 35 ^m 7		Mag: -4.0 PMG: 9 ^h 24 ^m				Mag: +0.8 PMG: 8 ^h 06 ^m				Mag: -2.2 PMG: 8 ^h 39 ^m				Mag: +0.8 PMG: 6 ^h 26 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	230	43.9	219	09.2	+3	03.5	238	19.2	-5	03.2	229	56.0	-0	51.4	263	15.3	-14	14.5		
1	245	46.4	234	09.0		04.6	253	19.9		02.5	244	58.0		51.2	278	17.7		14.5		
2	260	48.8	249	08.7		05.6	268	20.7		01.8	260	00.0		51.0	293	20.1		14.4		
3	275	51.3	264	08.5		06.7	283	21.4		01.0	275	02.1		50.8	308	22.5		14.4		
4	290	53.8	279	08.3		07.8	298	22.1	-5	00.3	290	04.1		50.7	323	24.8		14.4		
5	305	56.2	294	08.1	+3	08.8	313	22.8	-4	59.6	305	06.1	-0	50.5	338	27.2	-14	14.4		
6	320	58.7	309	07.9	+3	09.9	328	23.6	-4	58.9	320	08.1	-0	50.3	353	29.6	-14	14.4		
7	336	01.2	324	07.6		10.9	343	24.3		58.1	335	10.2		50.1	8	31.9		14.3		
8	351	03.6	339	07.4		12.0	358	25.0		57.4	350	12.2		49.9	23	34.3		14.3		
9	6	06.1	354	07.2		13.1	13	25.7		56.7	5	14.2		49.7	38	36.7		14.3		
10	21	08.5	9	07.0		14.1	28	26.5		56.0	20	16.2		49.6	53	39.1		14.3		
11	36	11.0	24	06.7	+3	15.2	43	27.2	-4	55.2	35	18.2	-0	49.4	68	41.4	-14	14.2		
12	51	13.5	39	06.5	+3	16.2	58	27.9	-4	54.5	50	20.3	-0	49.2	83	43.8	-14	14.2		
13	66	15.9	54	06.3		17.3	73	28.7		53.8	65	22.3		49.0	98	46.2		14.2		
14	81	18.4	69	06.1		18.4	88	29.4		53.1	80	24.3		48.8	113	48.6		14.2		
15	96	20.9	84	05.8		19.4	103	30.1		52.4	95	26.3		48.7	128	50.9		14.1		
16	111	23.3	99	05.6		20.5	118	30.8		51.6	110	28.4		48.5	143	53.3		14.1		
17	126	25.8	114	05.4	+3	21.5	133	31.6	-4	50.9	125	30.4	-0	48.3	158	55.7	-14	14.1		
18	141	28.3	129	05.2	+3	22.6	148	32.3	-4	50.2	140	32.4	-0	48.1	173	58.1	-14	14.1		
19	156	30.7	144	04.9		23.7	163	33.0		49.5	155	34.4		47.9	189	00.4		14.0		
20	171	33.2	159	04.7		24.7	178	33.7		48.7	170	36.5		47.7	204	02.8		14.0		
21	186	35.6	174	04.5		25.8	193	34.5		48.0	185	38.5		47.6	219	05.2		14.0		
22	201	38.1	189	04.3		26.8	208	35.2		47.3	200	40.5		47.4	234	07.6		14.0		
23	216	40.6	204	04.0		27.9	223	35.9		46.6	215	42.5		47.2	249	09.9		14.0		
24	231	43.0	219	03.8	+3	29.0	238	36.6	-4	45.8	230	44.6	-0	47.0	264	12.3	-14	13.9		
Dif	—		-2		+11		+7		+7		+20		+2		+24					

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 13 ^d 1 PHE { SD: 16 ^h 1 PMG: 22 ^h 51 ^m														
	hG ☉		Dec		hG ☾		Dif												
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m		
0	180	54.5	+18	34.3	28	47.2	-6	50.7	60 N	20 30	21 33	** **	18 05	107	3 16	3			
1	195	54.5		34.9	43	17.7 ¹¹⁵	-7	06.3 ¹⁵⁶	58	16	21 12	22 51	17 58	101	20	7			
2	210	54.5		35.5	57	48.0 ¹¹³		21.8 ¹⁵⁵	56	20 05	20 55	22 12	52	97	24	11			
3	225	54.5		36.2	72	18.3 ¹¹³		37.4 ¹⁵⁶	54	19 55	40	21 46	46	94	27	14			
4	240	54.5		36.8	86	48.6 ¹¹³	-7	52.9 ¹⁵⁵	52	46	28	26	41	90	31	16			
5	255	54.5	+18	37.4	101	18.7 ¹¹¹	-8	08.4 ¹⁵⁵	50	19 38	20 17	21 10	17 37	87	3 33	19			
6	270	54.5	+18	38.0	115	48.7 ¹¹⁰	-8	23.9 ¹⁵⁵	45	19 21	19 55	20 39	17 27	81	3 40	24			
7	285	54.5		38.6	130	18.7 ¹¹⁰		39.3 ¹⁵⁴	40	19 07	38	20 16	19	77	45	29			
8	300	54.5		39.2	144	48.6 ¹⁰⁹	-8	54.7 ¹⁵⁴	35	18 56	24	19 58	12	73	50	32			
9	315	54.5		39.8	159	18.4 ¹⁰⁸	-9	10.1 ¹⁵⁴	30	46	19 12	43	17 06	69	3 54	35			
10	330	54.5		40.4	173	48.1 ¹⁰⁷		25.5 ¹⁵⁴	20	29	18 52	20	16 56	63	4 01	41			
11	345	54.5	+18	41.0	188	17.7 ¹⁰⁶	-9	40.8 ¹⁵³	10 N	18 14	18 36	19 02	16 47	58	4 07	46			
12	0	54.5	+18	41.6	202	47.3 ¹⁰⁶	-9	56.1 ¹⁵³	0	18 00	18 22	18 47	16 39	53	4 13	51			
13	15	54.5		42.2	217	16.7 ¹⁰⁴	-10	11.4 ¹⁵³	10 S	17 46	18 08	34	31	49	18	56			
14	30	54.5		42.8	231	46.1 ¹⁰⁴		26.6 ¹⁵²	20	32	17 55	22	22	44	25	61			
15	45	54.5		43.4	246	15.4 ¹⁰³		41.8 ¹⁵²	30	15	41	10	12	39	32	67			
16	60	54.5		44.0	260	44.6 ¹⁰²	-10	56.9 ¹⁵¹	35	17 06	33	18 03	07	35	36	70			
17	75	54.5	+18	44.6	275	13.7 ¹⁰¹	-11	12.0 ¹⁵¹	40	16 55	17 24	17 57	16 01	31	4 41	74			
18	90	54.5	+18	45.2	289	42.6 ⁹⁹	-11	27.1 ¹⁵¹	45	16 42	17 14	17 50	15 53	27	4 46	79			
19	105	54.5		45.8	304	11.5 ⁹⁹		42.1 ¹⁵⁰	50	27	17 03	42	45	21	53	85			
20	120	54.5		46.4	318	40.3 ⁹⁸	-11	57.0 ¹⁴⁹	52	20	16 57	39	41	18	56	87			
21	135	54.5		46.9	333	09.1 ⁹⁸	-12	11.9 ¹⁴⁹	54	12	52	35	36	16	4 59	91			
22	150	54.5		47.5	347	37.7 ⁹⁶		26.8 ¹⁴⁹	56	16 03	45	31	31	13	5 03	94			
23	165	54.5		48.1	2	06.2 ⁹⁵		41.6 ¹⁴⁸	58	15 53	38	27	26	9	5 07	98			
24	180	54.5	+18	48.7	16	34.6 ⁹⁴	-12	56.3 ¹⁴⁷	60 S	15 41	16 30	17 22	15 20	4	5 12	102			

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 8 ^h 31 ^m 7			Mag: -4.0 PMG: 9 ^h 24 ^m			Mag: +0.8 PMG: 8 ^h 05 ^m			Mag: -2.2 PMG: 8 ^h 36 ^m			Mag: +0.8 PMG: 6 ^h 22 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	231	43.0	219 03.8	+3 29.0	238	36.6	-4 45.8	230	44.6	-0 47.0	264	12.3	-14 13.9					
1	246	45.5	234 03.6	30.0	253	37.4	45.1	245	46.6	46.8	279	14.7	13.9					
2	261	48.0	249 03.4	31.1	268	38.1	44.4	260	48.6	46.6	294	17.1	13.9					
3	276	50.4	264 03.1	32.1	283	38.8	43.7	275	50.6	46.5	309	19.4	13.9					
4	291	52.9	279 02.9	33.2	298	39.5	42.9	290	52.7	46.3	324	21.8	13.8					
5	306	55.4	294 02.7	+3 34.3	313	40.3	-4 42.2	305	54.7	-0 46.1	339	24.2	-14 13.8					
6	321	57.8	309 02.5	+3 35.3	328	41.0	-4 41.5	320	56.7	-0 45.9	354	26.6	-14 13.8					
7	337	00.3	324 02.2	36.4	343	41.7	40.8	335	58.7	45.7	9	28.9	13.8					
8	352	02.8	339 02.0	37.4	358	42.5	40.1	351	00.8	45.6	24	31.3	13.8					
9	7	05.2	354 01.8	38.5	13	43.2	39.3	6	02.8	45.4	39	33.7	13.7					
10	22	07.7	9 01.6	39.6	28	43.9	38.6	21	04.8	45.2	54	36.1	13.7					
11	37	10.1	24 01.3	+3 40.6	43	44.6	-4 37.9	36	06.8	-0 45.0	69	38.4	-14 13.7					
12	52	12.6	39 01.1	+3 41.7	58	45.4	-4 37.2	51	08.9	-0 44.8	84	40.8	-14 13.7					
13	67	15.1	54 00.9	42.7	73	46.1	36.4	66	10.9	44.6	99	43.2	13.6					
14	82	17.5	69 00.6	43.8	88	46.8	35.7	81	12.9	44.5	114	45.6	13.6					
15	97	20.0	84 00.4	44.9	103	47.6	35.0	96	14.9	44.3	129	48.0	13.6					
16	112	22.5	99 00.2	45.9	118	48.3	34.3	111	17.0	44.1	144	50.3	13.6					
17	127	24.9	114 00.0	+3 47.0	133	49.0	-4 33.5	126	19.0	-0 43.9	159	52.7	-14 13.6					
18	142	27.4	128 59.7	+3 48.0	148	49.7	-4 32.8	141	21.0	-0 43.7	174	55.1	-14 13.5					
19	157	29.9	143 59.5	49.1	163	50.5	32.1	156	23.0	43.6	189	57.5	13.5					
20	172	32.3	158 59.3	50.2	178	51.2	31.4	171	25.1	43.4	204	59.8	13.5					
21	187	34.8	173 59.0	51.2	193	51.9	30.6	186	27.1	43.2	220	02.2	13.5					
22	202	37.3	188 58.8	52.3	208	52.7	29.9	201	29.1	43.0	235	04.6	13.4					
23	217	39.7	203 58.6	53.3	223	53.4	29.2	216	31.2	42.8	250	07.0	13.4					
24	232	42.2	218 58.3	+3 54.4	238	54.1	-4 28.5	231	33.2	-0 42.7	265	09.4	-14 13.4					
Dif	—		-2		+11		+7		+7		+20		+2		+24		0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4				Edad: 14 ^d 1 PHE { SD: 16 ^h 3 PMG: 23 ^h 46 ^m															
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	Náutico	Civil		Hora	Rº		Hora	Rº		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	180	54.5	+18	48.7	16	34.6	-12	56.3			60 N	** **	2 19	3 23	19 52	112		3 19	5	
1	195	54.5		49.3	31	02.9	93	-13	11.0	147	58	1 01	40	36	39	106		27	10	
2	210	54.5		49.9	45	31.1	92		25.6	146	56	1 41	2 58	47	29	100		35	14	
3	225	54.5		50.5	59	59.2	91		40.1	145	54	2 06	3 12	3 57	20	96		41	18	
4	240	54.5		51.1	74	27.2	90	-13	54.6	145	52	26	24	4 06	11	93		47	21	
5	255	54.5	+18	51.7	88	55.1	89	-14	09.1	145	50	2 43	3 35	4 14	19 04	90		3 52	24	
6	270	54.5	+18	52.3	103	22.9	88	-14	23.4	143	45	3 14	3 57	4 31	18 48	84		4 04	29	
7	285	54.5		52.9	117	50.5	86		37.7	143	40	36	4 14	45	36	79		14	33	
8	300	54.5		53.5	132	18.1	86	-14	51.9	142	35	3 54	29	4 57	25	75		22	38	
9	315	54.4		54.0	146	45.6	85	-15	06.0	141	30	4 09	4 41	5 07	18 15	73		29	41	
10	330	54.4		54.6	161	13.0	84		20.1	141	20	32	5 00	24	17 59	67		42	46	
11	345	54.4	+18	55.2	175	40.2	82	-15	34.0	139	10 N	4 51	5 17	5 39	17 45	63		4 53	51	
12	0	54.4	+18	55.8	190	07.3	81	-15	47.9	139	0	5 06	5 31	5 53	17 32	59		5 04	55	
13	15	54.4		56.4	204	34.4	81	-16	01.7	138	10 S	19	44	6 07	20	54		14	61	
14	30	54.4		57.0	219	01.3	79		15.5	138	20	31	5 58	21	17 06	50		26	65	
15	45	54.4		57.6	233	28.1	78		29.1	136	30	43	6 12	38	16 51	44		39	70	
16	60	54.4		58.1	247	54.8	77		42.6	135	35	50	20	47	42	41		46	74	
17	75	54.4	+18	58.7	262	21.4	76	-16	56.1	135	40	5 56	6 29	6 58	16 32	37		5 55	78	
18	90	54.4	+18	59.3	276	47.9	75	-17	09.4	133	45	6 03	6 39	7 11	16 20	33		6 05	83	
19	105	54.4	+18	59.9	291	14.2	73		22.7	133	50	11	51	27	16 06	27		18	88	
20	120	54.4	+19	00.5	305	40.5	73		35.9	132	52	15	6 56	34	15 59	25		23	92	
21	135	54.4		01.1	320	06.6	71	-17	48.9	130	54	19	7 02	42	52	22		30	95	
22	150	54.3		01.6	334	32.6	70	-18	01.9	130	56	23	08	7 51	44	18		37	99	
23	165	54.3		02.2	348	58.6	70		14.7	128	58	27	16	8 01	35	13		45	103	
24	180	54.3	+19	02.8	3	24.3	67	-18	27.5	128	60 S	6 32	7 24	8 13	15 24	9		6 54	109	
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 8 ^h 27 ^m 8				Mag: -4.0 PMG: 9 ^h 24 ^m				Mag: +0.8 PMG: 8 ^h 04 ^m				Mag: -2.2 PMG: 8 ^h 33 ^m				Mag: +0.8 PMG: 6 ^h 18 ^m			
	hG ♈				hG ♀				hG ♂				hG ♃				hG ♄			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	232	42.2	218	58.3	+3	54.4	238	54.1	-4	28.5	231	33.2	-0	42.7	265	09.4	-14	13.4		
1	247	44.6	233	58.1		55.5	253	54.8		27.7	246	35.2		42.5	280	11.7		13.4		
2	262	47.1	248	57.9		56.5	268	55.6		27.0	261	37.2		42.3	295	14.1		13.4		
3	277	49.6	263	57.7		57.6	283	56.3		26.3	276	39.3		42.1	310	16.5		13.3		
4	292	52.0	278	57.4		58.6	298	57.0		25.6	291	41.3		41.9	325	18.9		13.3		
5	307	54.5	293	57.2	+3	59.7	313	57.8	-4	24.8	306	43.3	-0	41.8	340	21.3	-14	13.3		
6	322	57.0	308	57.0	+4	00.8	328	58.5	-4	24.1	321	45.4	-0	41.6	355	23.6	-14	13.3		
7	337	59.4	323	56.7		01.8	343	59.2		23.4	336	47.4		41.4	10	26.0		13.3		
8	353	01.9	338	56.5		02.9	358	59.9		22.7	351	49.4		41.2	25	28.4		13.2		
9	8	04.4	353	56.3		03.9	14	00.7		21.9	6	51.4		41.0	40	30.8		13.2		
10	23	06.8	8	56.0		05.0	29	01.4		21.2	21	53.5		40.9	55	33.2		13.2		
11	38	09.3	23	55.8	+4	06.1	44	02.1	-4	20.5	36	55.5	-0	40.7	70	35.5	-14	13.2		
12	53	11.7	38	55.6	+4	07.1	59	02.9	-4	19.8	51	57.5	-0	40.5	85	37.9	-14	13.2		
13	68	14.2	53	55.3		08.2	74	03.6		19.0	66	59.6		40.3	100	40.3		13.1		
14	83	16.7	68	55.1		09.2	89	04.3		18.3	82	01.6		40.1	115	42.7		13.1		
15	98	19.1	83	54.9		10.3	104	05.1		17.6	97	03.6		40.0	130	45.1		13.1		
16	113	21.6	98	54.6		11.4	119	05.8		16.9	112	05.7		39.8	145	47.5		13.1		
17	128	24.1	113	54.4	+4	12.4	134	06.5	-4	16.1	127	07.7	-0	39.6	160	49.8	-14	13.1		
18	143	26.5	128	54.2	+4	13.5	149	07.2	-4	15.4	142	09.7	-0	39.4	175	52.2	-14	13.0		
19	158	29.0	143	53.9		14.5	164	08.0		14.7	157	11.7		39.2	190	54.6		13.0		
20	173	31.5	158	53.7		15.6	179	08.7		14.0	172	13.8		39.1	205	57.0		13.0		
21	188	33.9	173	53.5		16.7	194	09.4		13.2	187	15.8		38.9	220	59.4		13.0		
22	203	36.4	188	53.2		17.7	209	10.2		12.5	202	17.8		38.7	236	01.7		12.9		
23	218	38.9	203	53.0		18.8	224	10.9		11.8	217	19.9		38.5	251	04.1		12.9		
24	233	41.3	218	52.8	+4	19.8	239	11.6	-4	11.1	232	21.9	-0	38.3	266	06.5	-14	12.9		
Dif	—				-2 +11				+7 +7				+20 +2				+24 0			

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			Edad: 15 ^d 1 PHE { 4 ^h : 60'5 12 ^h : 60'7 20 ^h : 60'8 PMG: **h ***m R°: ***m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	180	54.3	+19 02.8	3	24.3	-18 27.5	67	60 N	20 34	21 39	** **	21 44 110	3 24 11		
1	195	54.3	03.4	17	50.0	40.1	126	58	20	21 17	23 05	25 102	37 17		
2	210	54.3	04.0	32	15.6	-18 52.6	125	56	20 08	20 59	22 19	21 09 97	49 22		
3	225	54.3	04.5	46	41.0	-19 05.0	124	54	19 58	44	21 52	20 56 92	3 59 26		
4	240	54.3	05.1	61	06.4	17.3	123	52	49	32	31	44 89	4 08 29		
5	255	54.3	+19 05.7	75	31.6	-19 29.5	122	50	19 41	20 21	21 14	20 34 86	4 16 32		
6	270	54.3	+19 06.3	89	56.7	-19 41.5	120	45	19 23	19 58	20 42	20 12 82	4 33 38		
7	285	54.2	06.8	104	21.7	-19 53.5	120	40	19 09	40	18	19 55 78	4 47 42		
8	300	54.2	07.4	118	46.6	-20 05.3	118	35	18 57	26	20 00	40 75	5 00 45		
9	315	54.2	08.0	133	11.4	17.0	117	30	47	19 13	19 45	28 73	10 48		
10	330	54.2	08.6	147	36.0	28.5	115	20	29	18 53	21	19 06 69	28 53		
11	345	54.2	+19 09.1	162	00.6	-20 39.9	114	10 N	18 14	18 36	19 03	18 48 66	5 44 57		
12	0	54.2	+19 09.7	176	25.0	-20 51.2	113	0	18 00	18 22	18 47	18 31 62	5 59 61		
13	15	54.2	10.3	190	49.3	-21 02.4	112	10 S	17 46	18 08	34	18 14 59	6 15 64		
14	30	54.2	10.9	205	13.5	13.4	110	20	31	17 54	21	17 56 56	31 68		
15	45	54.1	11.4	219	37.6	24.2	108	30	14	40	09	35 52	6 49 73		
16	60	54.1	12.0	234	01.6	35.0	108	35	17 04	31	18 02	23 50	7 00 76		
17	75	54.1	+19 12.6	248	25.5	-21 45.5	105	40	16 53	17 22	17 55	17 09 47	7 13 79		
18	90	54.1	+19 13.1	262	49.3	-21 56.0	105	45	16 40	17 12	17 48	16 53 43	7 28 83		
19	105	54.1	13.7	277	13.0	-22 06.3	103	50	24	17 00	40	33 38	46 89		
20	120	54.1	14.3	291	36.5	16.4	101	52	17	16 55	36	24 35	7 55 91		
21	135	54.1	14.8	306	00.0	26.4	100	54	16 09	49	32	14 32	8 05 95		
22	150	54.0	15.4	320	23.3	36.2	98	56	15 59	42	28	16 02 28	16 99		
23	165	54.0	16.0	334	46.6	45.9	97	58	49	35	24	15 48 24	28 105		
24	180	54.0	+19 16.5	349	09.7	-22 55.5	96	60 S	15 37	16 27	17 19	15 33 16	8 43 112		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 8 ^h 23 ^m 9		Mag: -4.0 PMG: 9 ^h 25 ^m		Mag: +0.8 PMG: 8 ^h 03 ^m		Mag: -2.2 PMG: 8 ^h 29 ^m		Mag: +0.8 PMG: 6 ^h 15 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	233	41.3	218	52.8	+4 19.8	239	11.6	-4 11.1	232	21.9	-0 38.3	266	06.5	-14 12.9
1	248	43.8	233	52.5	20.9	254	12.4	10.3	247	23.9	38.2	281	08.9	12.9
2	263	46.2	248	52.3	22.0	269	13.1	09.6	262	26.0	38.0	296	11.3	12.9
3	278	48.7	263	52.1	23.0	284	13.8	08.9	277	28.0	37.8	311	13.7	12.8
4	293	51.2	278	51.8	24.1	299	14.6	08.2	292	30.0	37.6	326	16.0	12.8
5	308	53.6	293	51.6	+4 25.1	314	15.3	-4 07.4	307	32.1	-0 37.4	341	18.4	-14 12.8
6	323	56.1	308	51.3	+4 26.2	329	16.0	-4 06.7	322	34.1	-0 37.3	356	20.8	-14 12.8
7	338	58.6	323	51.1	27.3	344	16.8	06.0	337	36.1	37.1	11	23.2	12.8
8	354	01.0	338	50.9	28.3	359	17.5	05.3	352	38.2	36.9	26	25.6	12.7
9	9	03.5	353	50.6	29.4	14	18.2	04.5	7	40.2	36.7	41	28.0	12.7
10	24	06.0	8	50.4	30.4	29	18.9	03.8	22	42.2	36.6	56	30.3	12.7
11	39	08.4	23	50.2	+4 31.5	44	19.7	-4 03.1	37	44.3	-0 36.4	71	32.7	-14 12.7
12	54	10.9	38	49.9	+4 32.6	59	20.4	-4 02.3	52	46.3	-0 36.2	86	35.1	-14 12.7
13	69	13.4	53	49.7	33.6	74	21.1	01.6	67	48.3	36.0	101	37.5	12.7
14	84	15.8	68	49.4	34.7	89	21.9	00.9	82	50.4	35.8	116	39.9	12.6
15	99	18.3	83	49.2	35.7	104	22.6	-4 00.2	97	52.4	35.7	131	42.3	12.6
16	114	20.7	98	49.0	36.8	119	23.3	-3 59.4	112	54.4	35.5	146	44.7	12.6
17	129	23.2	113	48.7	+4 37.9	134	24.1	-3 58.7	127	56.5	-0 35.3	161	47.0	-14 12.6
18	144	25.7	128	48.5	+4 38.9	149	24.8	-3 58.0	142	58.5	-0 35.1	176	49.4	-14 12.6
19	159	28.1	143	48.3	40.0	164	25.5	57.3	158	00.5	35.0	191	51.8	12.5
20	174	30.6	158	48.0	41.0	179	26.3	56.5	173	02.6	34.8	206	54.2	12.5
21	189	33.1	173	47.8	42.1	194	27.0	55.8	188	04.6	34.6	221	56.6	12.5
22	204	35.5	188	47.5	43.1	209	27.7	55.1	203	06.6	34.4	236	59.0	12.5
23	219	38.0	203	47.3	44.2	224	28.5	54.4	218	08.7	34.2	252	01.4	12.5
24	234	40.5	218	47.1	+4 45.3	239	29.2	-3 53.6	233	10.7	-0 34.1	267	03.7	-14 12.4
Dif	—		-2	+11		+7	+7		+20	+2		+24		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				Edad: 16 ^d 1 PHE { SD: 16/6 PMG: 0 ^h 45 ^m R°: 64 ^m 4 ^h : 60/8 12 ^h : 60/9 20 ^h : 60/9																						
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°							
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m					
0	180	54.0	+19	16.5	349	09.7	-22	55.5	93	60 N	**	**	2	13	3	18	23	34	86	3	35	23					
1	195	54.0		17.1	3	32.8	41	-23	04.8	93	58	0	47		35	23	07	81		3	54	31					
2	210	54.0		17.7	17	55.7	39		14.0	92	56	1	33	2	53	22	46	79		4	11	36					
3	225	54.0		18.2	32	18.6	39		23.1	91	54	2	01	3	08	3	54		28	78		25	39				
4	240	53.9		18.8	46	41.3	37		31.9	88	52	22		21		4	03		13	76		37	42				
5	255	53.9	+19	19.4	61	04.0	37	-23	40.6	87	50	2	39	3	32	4	12	22	00	75		4	48	45			
6	270	53.9	+19	19.9	75	26.6	36	-23	49.2	86	45	3	11	3	55	4	29	21	34	73		5	11	49			
7	285	53.9		20.5	89	49.0	34	-23	57.5	83	40	34		4	12		43	21	13	72			29	52			
8	300	53.9		21.1	104	11.4	34	-24	05.7	82	35	3	53	27		4	55	20	55	71			45	54			
9	315	53.8		21.6	118	33.7	33		13.8	81	30	4	08	4	39	5	06		41	69			5	58	57		
10	330	53.8		22.2	132	55.9	32		21.6	78	20	32	5	00		23		20	15	68			6	21	60		
11	345	53.8	+19	22.7	147	18.1	32	-24	29.3	77	10 N	4	50	5	16	5	39	19	54	66			6	41	62		
12	0	53.8	+19	23.3	161	40.1	30	-24	36.8	75	0	5	05	5	31	5	53	19	33	66			7	00	64		
13	15	53.8		23.9	176	02.1	30		44.1	73	10 S	19		45		6	07	19	13	64				19	66		
14	30	53.8		24.4	190	24.0	29		51.2	71	20	32	5	59		22		18	52	62			7	39	69		
15	45	53.7		25.0	204	45.8	28	-24	58.1	69	30	45	6	14		39		27	61				8	02	72		
16	60	53.7		25.5	219	07.5	27	-25	04.9	68	35	51		22		6	49	18	13	59				16	74		
17	75	53.7	+19	26.1	233	29.2	27	-25	11.5	66	40	5	58	6	31	7	00	17	56	58				8	32	76	
18	90	53.7	+19	26.6	247	50.8	26	-25	17.9	64	45	6	05	6	41	7	13	17	36	56				8	51	78	
19	105	53.7		27.2	262	12.3	25		24.1	62	50	14		53		29		17	11	53				9	15	82	
20	120	53.6		27.8	276	33.8	25		30.1	60	52	17	6	59		37		16	59	52					26	84	
21	135	53.6		28.3	290	55.2	24		35.9	58	54	21	7	05		45			46	49					40	86	
22	150	53.6		28.9	305	16.5	23		41.5	56	56	25		12		7	55		30	47					9	55	89
23	165	53.6		29.4	319	37.8	23		46.9	54	58	30		19		8	05	16	12	42					10	13	93
24	180	53.5	+19	30.0	333	59.0	22	-25	52.2	53	60 S	6	35	7	27		8	18	15	49	36				10	35	100

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO											
	PMG: 8 ^h 19 ^m 9		Mag: -4.0 PMG: 9 ^h 25 ^m		Mag: +0.8 PMG: 8 ^h 02 ^m		Mag: -2.2 PMG: 8 ^h 26 ^m		Mag: +0.8 PMG: 6 ^h 11 ^m											
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec											
h	°	'	°	'	°	'	°	'	°	'										
0	234	40.5	218	47.1	+4	45.3	239	29.2	-3	53.6	233	10.7	-0	34.1	267	03.7	-14	12.4		
1	249	42.9	233	46.8		46.3	254	29.9		52.9	248	12.7		33.9	282	06.1		12.4		
2	264	45.4	248	46.6		47.4	269	30.7		52.2	263	14.8		33.7	297	08.5		12.4		
3	279	47.9	263	46.3		48.4	284	31.4		51.5	278	16.8		33.5	312	10.9		12.4		
4	294	50.3	278	46.1		49.5	299	32.1		50.7	293	18.8		33.4	327	13.3		12.4		
5	309	52.8	293	45.9	+4	50.6	314	32.9	-3	50.0	308	20.9	-0	33.2	342	15.7	-14	12.3		
6	324	55.2	308	45.6	+4	51.6	329	33.6	-3	49.3	323	22.9	-0	33.0	357	18.1	-14	12.3		
7	339	57.7	323	45.4		52.7	344	34.3		48.6	338	25.0		32.8	12	20.5		12.3		
8	355	00.2	338	45.1		53.7	359	35.1		47.8	353	27.0		32.6	27	22.8		12.3		
9	10	02.6	353	44.9		54.8	14	35.8		47.1	8	29.0		32.5	42	25.2		12.3		
10	25	05.1	8	44.6		55.9	29	36.5		46.4	23	31.1		32.3	57	27.6		12.3		
11	40	07.6	23	44.4	+4	56.9	44	37.3	-3	45.6	38	33.1	-0	32.1	72	30.0	-14	12.2		
12	55	10.0	38	44.2	+4	58.0	59	38.0	-3	44.9	53	35.1	-0	31.9	87	32.4	-14	12.2		
13	70	12.5	53	43.9	+4	59.0	74	38.7		44.2	68	37.2		31.8	102	34.8		12.2		
14	85	15.0	68	43.7	+5	00.1	89	39.5		43.5	83	39.2		31.6	117	37.2		12.2		
15	100	17.4	83	43.4		01.1	104	40.2		42.7	98	41.2		31.4	132	39.6		12.2		
16	115	19.9	98	43.2		02.2	119	40.9		42.0	113	43.3		31.2	147	42.0		12.1		
17	130	22.4	113	42.9	+5	03.3	134	41.7	-3	41.3	128	45.3	-0	31.1	162	44.3	-14	12.1		
18	145	24.8	128	42.7	+5	04.3	149	42.4	-3	40.6	143	47.4	-0	30.9	177	46.7	-14	12.1		
19	160	27.3	143	42.5		05.4	164	43.1		39.8	158	49.4		30.7	192	49.1		12.1		
20	175	29.7	158	42.2		06.4	179	43.9		39.1	173	51.4		30.5	207	51.5		12.1		
21	190	32.2	173	42.0		07.5	194	44.6		38.4	188	53.5		30.4	222	53.9		12.1		
22	205	34.7	188	41.7		08.6	209	45.4		37.6	203	55.5		30.2	237	56.3		12.0		
23	220	37.1	203	41.5		09.6	224	46.1		36.9	218	57.6		30.0	252	58.7		12.0		
24	235	39.6	218	41.2	+5	10.7	239	46.8	-3	36.2	233	59.6	-0	29.8	268	01.1	-14	12.0		
Dif	—		-2		+11		+7		+7		+20		+2		+24		0			

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56 ^m 4			Edad: 17 ^d 1 PHE { 4 ^h : 60'8 12 ^h : 60'8 20 ^h : 60'7 PMG: 1 ^h 49 ^m R°: 65 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180	53.5	+19 30.0	333	59.0	-25 52.2	50	60 N	20 39	21 46	** ** *	** ** *	3 58	51
1	195	53.5	30.5	348	20.2	-25 57.2	22	58	24	22	23 24	** ** *	4 25	56
2	210	53.5	31.1	2	41.3	-26 02.1	49	56	12	21 04	22 28	** ** *	4 47	57
3	225	53.5	31.6	17	02.4	06.7	46	54	20 01	20 48	21 58	23 46 55	5 04	55
4	240	53.5	32.2	31	23.4	11.2	45	52	19 52	35	36	29 57	19	60
5	255	53.4	+19 32.7	45	44.4	-26 15.4	42	50	19 44	20 24	21 18	23 15 58	5 33	60
6	270	53.4	+19 33.3	60	05.4	-26 19.5	41	45	19 26	20 00	20 45	22 47 60	6 00	62
7	285	53.4	33.8	74	26.3	23.3	38	40	19 11	19 42	21	25 61	21	63
8	300	53.4	34.4	88	47.2	27.0	37	35	18 59	27	20 02	22 06 62	39	64
9	315	53.3	34.9	103	08.1	30.4	34	30	48	19 15	19 46	21 50 63	6 55	63
10	330	53.3	35.5	117	28.9	33.6	32	20	30	18 54	22	23 64	7 21	64
11	345	53.3	+19 36.0	131	49.7	-26 36.7	31	10 N	18 15	18 37	19 03	21 00 64	7 43	65
12	0	53.3	+19 36.6	146	10.5	-26 39.5	28	0	18 00	18 22	18 47	20 39 65	8 04	66
13	15	53.2	37.1	160	31.3	42.2	27	10 S	17 46	18 08	34	20 17 66	25	66
14	30	53.2	37.6	174	52.0	44.6	24	20	30	17 54	21	19 54 66	8 48	66
15	45	53.2	38.2	189	12.8	46.8	22	30	13	39	08	28 66	9 14	67
16	60	53.2	38.7	203	33.5	48.8	20	35	17 03	30	18 01	19 12 67	30	66
17	75	53.1	+19 39.3	217	54.3	-26 50.7	19	40	16 52	17 21	17 54	18 54 67	9 48	66
18	90	53.1	+19 39.8	232	15.0	-26 52.3	16	45	16 38	17 10	17 46	18 32 68	10 09	67
19	105	53.1	40.4	246	35.7	53.7	14	50	22	16 58	38	18 04 69	37	67
20	120	53.1	40.9	260	56.5	54.9	12	52	14	52	34	17 51 68	10 50	67
21	135	53.0	41.4	275	17.2	55.9	10	54	16 06	46	30	35 69	11 06	67
22	150	53.0	42.0	289	38.0	56.7	8	56	15 56	39	25	17 17 69	24	67
23	165	53.0	42.5	303	58.7	57.3	6	58	45	32	21	16 54 70	11 46	67
24	180	52.9	+19 43.1	318	19.5	-26 57.6	3	60 S	15 33	16 23	17 16	16 25 71	12 15	66

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 16 ^m 0		Mag: -4.0 PMG: 9 ^h 25 ^m		Mag: +0.8 PMG: 8 ^h 00 ^m		Mag: -2.2 PMG: 8 ^h 23 ^m		Mag: +0.8 PMG: 6 ^h 07 ^m	
	hG ♈	hG ♀	Dec		hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	235	39.6	218 41.2	+5 10.7	239 46.8	-3 36.2	233 59.6	-0 29.8	268 01.1	-14 12.0
1	250	42.1	233 41.0	11.7	254 47.6	35.5	249 01.6	29.7	283 03.5	12.0
2	265	44.5	248 40.7	12.8	269 48.3	34.7	264 03.7	29.5	298 05.9	12.0
3	280	47.0	263 40.5	13.8	284 49.0	34.0	279 05.7	29.3	313 08.3	12.0
4	295	49.5	278 40.2	14.9	299 49.8	33.3	294 07.7	29.1	328 10.6	11.9
5	310	51.9	293 40.0	+5 16.0	314 50.5	-3 32.6	309 09.8	-0 29.0	343 13.0	-14 11.9
6	325	54.4	308 39.8	+5 17.0	329 51.2	-3 31.8	324 11.8	-0 28.8	358 15.4	-14 11.9
7	340	56.9	323 39.5	18.1	344 52.0	31.1	339 13.9	28.6	13 17.8	11.9
8	355	59.3	338 39.3	19.1	359 52.7	30.4	354 15.9	28.4	28 20.2	11.9
9	11	01.8	353 39.0	20.2	14 53.4	29.7	9 17.9	28.2	43 22.6	11.9
10	26	04.2	8 38.8	21.2	29 54.2	28.9	24 20.0	28.1	58 25.0	11.8
11	41	06.7	23 38.5	+5 22.3	44 54.9	-3 28.2	39 22.0	-0 27.9	73 27.4	-14 11.8
12	56	09.2	38 38.3	+5 23.4	59 55.7	-3 27.5	54 24.1	-0 27.7	88 29.8	-14 11.8
13	71	11.6	53 38.0	24.4	74 56.4	26.7	69 26.1	27.6	103 32.2	11.8
14	86	14.1	68 37.8	25.5	89 57.1	26.0	84 28.1	27.4	118 34.6	11.8
15	101	16.6	83 37.5	26.5	104 57.9	25.3	99 30.2	27.2	133 37.0	11.8
16	116	19.0	98 37.3	27.6	119 58.6	24.6	114 32.2	27.0	148 39.4	11.7
17	131	21.5	113 37.0	+5 28.6	134 59.3	-3 23.8	129 34.3	-0 26.9	163 41.7	-14 11.7
18	146	24.0	128 36.8	+5 29.7	150 00.1	-3 23.1	144 36.3	-0 26.7	178 44.1	-14 11.7
19	161	26.4	143 36.5	30.8	165 00.8	22.4	159 38.4	26.5	193 46.5	11.7
20	176	28.9	158 36.3	31.8	180 01.5	21.7	174 40.4	26.3	208 48.9	11.7
21	191	31.3	173 36.0	32.9	195 02.3	20.9	189 42.4	26.2	223 51.3	11.7
22	206	33.8	188 35.8	33.9	210 03.0	20.2	204 44.5	26.0	238 53.7	11.6
23	221	36.3	203 35.5	35.0	225 03.8	19.5	219 46.5	25.8	253 56.1	11.6
24	236	38.7	218 35.3	+5 36.0	240 04.5	-3 18.7	234 48.6	-0 25.6	268 58.5	-14 11.6
Dif	—	—	-2	+11	+7	+7	+20	+2	+24	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 5				Edad: 18 ^d 1 PHE { SD: 16/5 PMG: 2 ^h 54 ^m													
					R°: 65 ^m													
	hG ☉ Dec				hG ☾ Dif Dec Dif							Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	180	52.9	+19	43.1	318	19.5	-26	57.6	2	60 N	** **	2 06	3 14	1 00	46	4 49	89	
1	195	52.9		43.6	332	40.3	18	57.8	0	58	0 28	30	28	0 28	52	5 21	83	
2	210	52.9		44.1	347	01.1	18	57.8	2	56	1 25	2 49	40	0 05	54	5 44	80	
3	225	52.9		44.7	1	22.0	19	57.6	2	54	1 55	3 04	3 51	** ** *	**	6 03	78	
4	240	52.8		45.2	15	42.9	19	57.1	5	52	2 17	17	4 00	** ** *	**	19	77	
5	255	52.8	+19	45.7	30	03.8	19	-26	56.5	6	50	2 35	3 29	4 09	** ** *	**	6 33	76
6	270	52.8	+19	46.3	44	24.7	19	-26	55.7	8	45	3 08	3 52	4 27	23 47	46	7 02	73
7	285	52.7		46.8	58	45.7	20	54.6	11	40	32	4 10	41	26	48	24	71	
8	300	52.7		47.4	73	06.8	21	53.4	12	35	3 51	25	4 54	23 08	51	43	69	
9	315	52.7		47.9	87	27.8	20	51.9	15	30	4 06	38	5 04	22 53	53	7 58	69	
10	330	52.7		48.4	101	48.9	21	50.3	16	20	31	4 59	23	27	56	8 25	67	
11	345	52.6	+19	49.0	116	10.1	22	-26	48.5	18	10 N	4 50	5 16	5 38	22 04	60	8 48	66
12	0	52.6	+19	49.5	130	31.3	22	-26	46.4	21	0	5 05	5 31	5 53	21 44	61	9 10	63
13	15	52.6		50.0	144	52.6	23	44.2	22	10 S	19	45	6 07	23	64	31	62	
14	30	52.5		50.5	159	13.9	23	41.8	24	20	33	5 59	23	21 00	67	9 54	60	
15	45	52.5		51.1	173	35.3	24	39.1	27	30	46	6 15	40	20 34	70	10 21	58	
16	60	52.5		51.6	187	56.8	25	36.3	28	35	5 52	23	6 50	19	71	36	57	
17	75	52.4	+19	52.1	202	18.3	25	-26	33.3	30	40	6 00	6 33	7 02	20 01	73	10 54	55
18	90	52.4	+19	52.7	216	39.9	26	-26	30.1	32	45	6 07	6 43	7 15	19 40	76	11 16	53
19	105	52.4		53.2	231	01.6	27	26.7	34	50	16	6 56	32	19 13	79	44	49	
20	120	52.3		53.7	245	23.3	27	23.1	36	52	20	7 01	40	18 59	82	11 57	48	
21	135	52.3		54.2	259	45.1	28	19.3	38	54	24	08	48	44	84	12	13	45
22	150	52.3		54.8	274	07.0	29	15.4	39	56	28	15	7 58	26	87	31	43	
23	165	52.2		55.3	288	28.9	29	11.2	42	58	33	22	8 09	18 04	92	12 53	39	
24	180	52.2	+19	55.8	302	51.0	31	-26	06.9	43	60 S	6 38	7 31	8 22	17 36	98	13 21	33

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 8 ^h 12 ^m 1		Mag: -4.0 PMG: 9 ^h 26 ^m		Mag: +0.8 PMG: 7 ^h 59 ^m		Mag: -2.2 PMG: 8 ^h 20 ^m		Mag: +0.8 PMG: 6 ^h 03 ^m	
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec	
h	°	'	°	'	°	'	°	'	°	'
0	236	38.7	218	35.3	+5	36.0	240	04.5	-3	18.7
1	251	41.2	233	35.0		37.1	255	05.2		18.0
2	266	43.7	248	34.8		38.2	270	06.0		17.3
3	281	46.1	263	34.5		39.2	285	06.7		16.6
4	296	48.6	278	34.3		40.3	300	07.4		15.8
5	311	51.1	293	34.0	+5	41.3	315	08.2	-3	15.1
6	326	53.5	308	33.8	+5	42.4	330	08.9	-3	14.4
7	341	56.0	323	33.5		43.4	345	09.6		13.6
8	356	58.5	338	33.3		44.5	0	10.4		12.9
9	12	00.9	353	33.0		45.5	15	11.1		12.2
10	27	03.4	8	32.7		46.6	30	11.9		11.5
11	42	05.8	23	32.5	+5	47.7	45	12.6	-3	10.7
12	57	08.3	38	32.2	+5	48.7	60	13.3	-3	10.0
13	72	10.8	53	32.0		49.8	75	14.1		09.3
14	87	13.2	68	31.7		50.8	90	14.8		08.6
15	102	15.7	83	31.5		51.9	105	15.6		07.8
16	117	18.2	98	31.2		52.9	120	16.3		07.1
17	132	20.6	113	31.0	+5	54.0	135	17.0	-3	06.4
18	147	23.1	128	30.7	+5	55.0	150	17.8	-3	05.6
19	162	25.6	143	30.5		56.1	165	18.5		04.9
20	177	28.0	158	30.2		57.1	180	19.2		04.2
21	192	30.5	173	29.9		58.2	195	20.0		03.5
22	207	33.0	188	29.7	+5	59.3	210	20.7		02.7
23	222	35.4	203	29.4	+6	00.3	225	21.5		02.0
24	237	37.9	218	29.2	+6	01.4	240	22.2	-3	01.3
Dif	—		-3		+11		+7		+7	
							+20		+2	
									+24	
									0	

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5			Edad: 19 ^d 1 PHE { 4 ^h : 60 ^h 1 12 ^h : 59 ^h 9 20 ^h : 59 ^h 6 PMG: 3 ^h 59 ^m R°: 60 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	180	52.2	+19 55.8	302	51.0	-26 06.9	45	60 N	20 43	21 53	** **	1 46	20	6 18	105	
1	195	52.2	56.3	317	13.1	-26 02.4	45	58	28	28	** **	1 20	27	6 44	97	
2	210	52.1	56.9	331	35.3	-25 57.7	47	56	16	21 08	22 36	0 59	32	7 04	93	
3	225	52.1	57.4	345	57.7	52.8	49	54	20 05	20 52	22 04	41	37	21	89	
4	240	52.1	57.9	0	20.1	47.7	51	52	19 55	39	21 40	26	40	36	85	
5	255	52.0	+19 58.4	14	42.5	-25 42.5	52	50	19 46	20 27	21 22	0 13	42	7 49	83	
6	270	52.0	+19 59.0	29	05.1	-25 37.1	54	45	19 28	20 03	20 48	** **	**	8 15	78	
7	285	52.0	+19 59.5	43	27.8	31.5	56	40	13	19 44	23	** **	**	35	75	
8	300	51.9	+20 00.0	57	50.6	25.7	58	35	19 00	29	20 04	23 59	42	8 52	72	
9	315	51.9	+20 00.5	72	13.5	19.8	59	30	18 50	19 16	19 48	46	45	9 07	70	
10	330	51.9	01.0	86	36.5	13.7	61	20	31	18 55	23	23	49	32	66	
11	345	51.8	+20 01.6	100	59.5	-25 07.4	63	10 N	18 15	18 37	19 04	23 04	53	9 54	62	
12	0	51.8	+20 02.1	115	22.7	-25 00.9	65	0	18 00	18 22	18 48	22 45	57	10 13	60	
13	15	51.7	02.6	129	46.0	-24 54.3	66	10 S	17 45	18 08	33	27	60	33	56	
14	30	51.7	03.1	144	09.4	47.6	67	20	30	17 53	20	22 07	64	10 54	53	
15	45	51.7	03.6	158	32.9	40.6	70	30	12	38	07	21 44	68	11 19	49	
16	60	51.6	04.1	172	56.5	33.5	71	35	17 02	29	18 00	30	71	33	46	
17	75	51.6	+20 04.7	187	20.3	-24 26.3	72	40	16 50	17 19	17 52	21 14	75	11 49	44	
18	90	51.6	+20 05.2	201	44.1	-24 18.9	74	45	16 36	17 09	17 45	20 56	78	12 09	40	
19	105	51.5	05.7	216	08.1	11.3	76	50	19	16 56	36	32	84	33	35	
20	120	51.5	06.2	230	32.1	-24 03.6	77	52	12	50	32	21	86	45	33	
21	135	51.4	06.7	244	56.3	-23 55.7	79	54	16 03	43	27	20 08	90	12 58	30	
22	150	51.4	07.2	259	20.6	47.7	80	56	15 53	36	23	19 53	94	13 14	26	
23	165	51.4	07.7	273	45.1	39.5	82	58	42	29	18	36	98	32	21	
24	180	51.3	+20 08.2	288	09.6	-23 31.2	83	60 S	15 29	16 20	17 13	19 14	105	13 54	14	

UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO		
	PMG: 8 ^h 08 ^m 1		Mag: -4.0 PMG: 9 ^h 26 ^m		Mag: +0.7 PMG: 7 ^h 58 ^m		Mag: -2.2 PMG: 8 ^h 16 ^m			Mag: +0.8 PMG: 5 ^h 59 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'
0	237	37.9	218 29.2	+6 01.4	240 22.2	-3 01.3	235 37.6	-0 21.5	269 56.0	-14 11.2		
1	252	40.3	233 28.9	02.4	255 22.9	-3 00.5	250 39.7	21.3	284 58.4	11.2		
2	267	42.8	248 28.7	03.5	270 23.7	-2 59.8	265 41.7	21.1	300 00.8	11.2		
3	282	45.3	263 28.4	04.5	285 24.4	59.1	280 43.8	21.0	315 03.2	11.2		
4	297	47.7	278 28.1	05.6	300 25.2	58.4	295 45.8	20.8	330 05.6	11.2		
5	312	50.2	293 27.9	+6 06.6	315 25.9	-2 57.6	310 47.9	-0 20.6	345 08.0	-14 11.2		
6	327	52.7	308 27.6	+6 07.7	330 26.6	-2 56.9	325 49.9	-0 20.4	0 10.4	-14 11.2		
7	342	55.1	323 27.4	08.7	345 27.4	56.2	340 52.0	20.3	15 12.8	11.1		
8	357	57.6	338 27.1	09.8	0 28.1	55.5	355 54.0	20.1	30 15.2	11.1		
9	13	00.1	353 26.8	10.8	15 28.9	54.7	10 56.1	19.9	45 17.6	11.1		
10	28	02.5	8 26.6	11.9	30 29.6	54.0	25 58.1	19.8	60 20.0	11.1		
11	43	05.0	23 26.3	+6 12.9	45 30.3	-2 53.3	41 00.1	-0 19.6	75 22.4	-14 11.1		
12	58	07.5	38 26.1	+6 14.0	60 31.1	-2 52.5	56 02.2	-0 19.4	90 24.8	-14 11.1		
13	73	09.9	53 25.8	15.1	75 31.8	51.8	71 04.2	19.2	105 27.2	11.1		
14	88	12.4	68 25.5	16.1	90 32.6	51.1	86 06.3	19.1	120 29.6	11.0		
15	103	14.8	83 25.3	17.2	105 33.3	50.4	101 08.3	18.9	135 32.0	11.0		
16	118	17.3	98 25.0	18.2	120 34.0	49.6	116 10.4	18.7	150 34.4	11.0		
17	133	19.8	113 24.8	+6 19.3	135 34.8	-2 48.9	131 12.4	-0 18.6	165 36.8	-14 11.0		
18	148	22.2	128 24.5	+6 20.3	150 35.5	-2 48.2	146 14.5	-0 18.4	180 39.2	-14 11.0		
19	163	24.7	143 24.2	21.4	165 36.3	47.4	161 16.5	18.2	195 41.6	11.0		
20	178	27.2	158 24.0	22.4	180 37.0	46.7	176 18.6	18.0	210 44.0	11.0		
21	193	29.6	173 23.7	23.5	195 37.7	46.0	191 20.6	17.9	225 46.4	10.9		
22	208	32.1	188 23.5	24.5	210 38.5	45.3	206 22.7	17.7	240 48.8	10.9		
23	223	34.6	203 23.2	25.6	225 39.2	44.5	221 24.7	17.5	255 51.2	10.9		
24	238	37.0	218 22.9	+6 26.6	240 40.0	-2 43.8	236 26.8	-0 17.4	270 53.6	-14 10.9		
Dif	—	—	-3	+11	+7	+7	+20	+2	+24	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 6				Edad: 20 ^d 1 PHE { 4 ^h : 59/4 12 ^h : 59/2 20 ^h : 58/9 PMG: 4 ^h 59 ^m R°: 55 ^m																					
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico		Civil		Hora		R°		Hora		R°	
h	°	'	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	h	m	h	m	
0	180	51.3	+20	08.2	288	09.6		56	-23	31.2	85	60 N	***	2	00	3	09	2	06	10		8	03	105		
1	195	51.3		08.7	302	34.2		58		22.7	86	58	***		25		24	1	47	16			21	99		
2	210	51.2		09.3	316	59.0		58		14.1	86	56	1	16	2	44	37	31	20			37	93			
3	225	51.2		09.8	331	23.9		59	-23	05.4	87	54	1	49	3	01	48	18	23			8	50	90		
4	240	51.2		10.3	345	48.9		60	-22	56.5	89	52	2	12		14	3	58			1	06	26	87		
5	255	51.1	+20	10.8	0	14.1		62	-22	47.5	90	50	2	31	3	26	4	07			0	55	29	83		
6	270	51.1	+20	11.3	14	39.3		62	-22	38.3	92	45	3	05	3	50	4	25			0	32	35	78		
7	285	51.0		11.8	29	04.7		64		29.1	92	40		30	4	09	40			0	14	39	9	50	74	
8	300	51.0		12.3	43	30.2		65		19.6	95	35	3	49	24	4	52	***	***	***				10	04	70
9	315	51.0		12.8	57	55.8		66		10.1	95	30	4	05		37	5	03	***	***	***			17	67	
10	330	50.9		13.3	72	21.5		67	-22	00.4	97	20		30	4	58	22	***	***	***			38	62		
11	345	50.9	+20	13.8	86	47.4		69	-21	50.6	98	10 N	4	49	5	16	5	38	23	57	47		10	56	58	
12	0	50.8	+20	14.3	101	13.4		70	-21	40.7	99	0	5	05	5	31	5	53	23	42	51		11	13	54	
13	15	50.8		14.8	115	39.5		71		30.6	101	10 S		20	5	46	6	08		27	55		29	51		
14	30	50.8		15.3	130	05.7		72		20.5	101	20		33	6	00	24	23	11	60		11	47	46		
15	45	50.7		15.8	144	32.1		74	-21	10.2	103	30		47		16	41	22	52	65		12	08	41		
16	60	50.7		16.3	158	58.5		74	-20	59.8	104	35	5	54		25	6	52		41	69		19	39		
17	75	50.6	+20	16.8	173	25.1		76	-20	49.3	105	40	6	01	6	34	7	04	22	29	72		12	33	35	
18	90	50.6	+20	17.3	187	51.8		77	-20	38.6	107	45	6	09	6	45	7	18	22	14	76		12	49	31	
19	105	50.5		17.8	202	18.7		79		27.9	107	50		18	6	58	35	21	56	82		13	08	26		
20	120	50.5		18.3	216	45.6		79		17.1	108	52	22		7	04	43		47	85			18	23		
21	135	50.4		18.8	231	12.7		81	-20	06.1	110	54	26		10	7	51		38	87			28	20		
22	150	50.4		19.3	245	39.9		82	-19	55.0	111	56	31		18	8	01		27	91			40	16		
23	165	50.4		19.8	260	07.2		83		43.9	111	58	36		26		13	21	14	96		13	53	12		
24	180	50.3	+20	20.3	274	34.7		85	-19	32.6	113	60 S	6	41	7	35	8	26	20	59	101		14	08	8	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 8 ^h 04 ^m 2		Mag: -4.0 PMG: 9 ^h 27 ^m		Mag: +0.7 PMG: 7 ^h 57 ^m		Mag: -2.2 PMG: 8 ^h 13 ^m		Mag: +0.8 PMG: 5 ^h 55 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	238	37.0	218	22.9	+6	26.6	240	40.0	-2	43.8
1	253	39.5	233	22.7		27.7	255	40.7		43.1
2	268	42.0	248	22.4		28.7	270	41.4		42.3
3	283	44.4	263	22.1		29.8	285	42.2		41.6
4	298	46.9	278	21.9		30.8	300	42.9		40.9
5	313	49.3	293	21.6	+6	31.9	315	43.7	-2	40.2
6	328	51.8	308	21.3	+6	32.9	330	44.4	-2	39.4
7	343	54.3	323	21.1		34.0	345	45.1		38.7
8	358	56.7	338	20.8		35.0	0	45.9		38.0
9	13	59.2	353	20.5		36.1	15	46.6		37.3
10	29	01.7	8	20.3		37.1	30	47.4		36.5
11	44	04.1	23	20.0	+6	38.2	45	48.1	-2	35.8
12	59	06.6	38	19.8	+6	39.2	60	48.9	-2	35.1
13	74	09.1	53	19.5		40.3	75	49.6		34.3
14	89	11.5	68	19.2		41.3	90	50.3		33.6
15	104	14.0	83	19.0		42.4	105	51.1		32.9
16	119	16.5	98	18.7		43.4	120	51.8		32.2
17	134	18.9	113	18.4	+6	44.5	135	52.6	-2	31.4
18	149	21.4	128	18.1	+6	45.5	150	53.3	-2	30.7
19	164	23.8	143	17.9		46.6	165	54.0		30.0
20	179	26.3	158	17.6		47.6	180	54.8		29.2
21	194	28.8	173	17.3		48.7	195	55.5		28.5
22	209	31.2	188	17.1		49.7	210	56.3		27.8
23	224	33.7	203	16.8		50.7	225	57.0		27.1
24	239	36.2	218	16.5	+6	51.8	240	57.8	-2	26.3
Dif	—		-3		+10		+7		+7	
									+21	
									+2	
									+24	
									0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 21 ^d 1 PHE { 4 ^h : 58 ^h /7 12 ^h : 58 ^h /5 20 ^h : 58 ^h /2										
	PMG: 11 ^h 56 ^m 7			SD: 16 ^h 0 PMG: 5 ^h 54 ^m R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	180	50.3	+20 20.3	274	34.7	-19 32.6	114	60 N	20 48	21 59	** **	2 16 4	9 48 98	
1	195	50.3	20.8	289	02.2	85	21.2	58	32	33	** **	2 03 9	10 00 94	
2	210	50.2	21.3	303	29.9	87	-19 09.8	56	19	21 13	22 45	1 51 13	10 90	
3	225	50.2	21.8	317	57.7	88	-18 58.2	54	20 08	20 56	22 10	41 17	20 86	
4	240	50.1	22.3	332	25.6	89	46.5	52	19 58	42	21 45	32 20	28 83	
5	255	50.1	+20 22.8	346	53.6	90	-18 34.8	50	19 49	20 30	21 26	1 24 22	10 35 81	
6	270	50.0	+20 23.3	1	21.8	92	-18 23.0	45	19 30	20 05	20 51	1 07 27	10 51 75	
7	285	50.0	23.8	15	50.0	92	-18 11.0	40	15	19 46	25	0 53 31	11 04 70	
8	300	49.9	24.3	30	18.4	94	-17 59.0	35	19 02	31	20 05	41 35	14 67	
9	315	49.9	24.8	44	46.9	95	46.9	30	18 51	19 17	19 49	31 37	24 64	
10	330	49.8	25.2	59	15.5	96	34.7	20	32	18 56	24	0 12 43	40 58	
11	345	49.8	+20 25.7	73	44.2	97	-17 22.4	10 N	18 15	18 38	19 04	** ** *	11 54 54	
12	0	49.8	+20 26.2	88	13.0	98	-17 10.1	0	18 00	18 22	18 48	** ** *	12 07 49	
13	15	49.7	26.7	102	41.9	99	-16 57.7	10 S	17 45	18 08	33	** ** *	20 45	
14	30	49.7	27.2	117	11.0	101	45.1	20	29	17 53	20	** ** *	33 41	
15	45	49.6	27.7	131	40.1	101	32.6	30	11	37	18 06	23 57 62	49 35	
16	60	49.6	28.2	146	09.4	103	19.9	35	17 01	28	17 59	50 65	12 58 32	
17	75	49.5	+20 28.7	160	38.8	104	-16 07.2	40	16 49	17 18	17 51	23 41 69	13 08 29	
18	90	49.5	+20 29.1	175	08.2	104	-15 54.4	45	16 34	17 07	17 43	23 30 74	13 20 24	
19	105	49.4	29.6	189	37.8	106	41.5	50	17	16 54	34	18 78	34 20	
20	120	49.4	30.1	204	07.5	107	28.5	52	09	48	30	12 81	41 17	
21	135	49.3	30.6	218	37.3	108	15.5	54	16 00	41	25	23 05 84	48 14	
22	150	49.3	31.1	233	07.2	109	-15 02.5	56	15 50	34	21	22 58 87	13 56 12	
23	165	49.2	31.6	247	37.1	109	-14 49.3	58	38	26	15	50 91	14 05 8	
24	180	49.2	+20 32.0	262	07.2	111	-14 36.1	60 S	15 25	16 16	17 10	22 40 95	14 16 4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 8 ^h 00 ^m 3		Mag: -4.0 PMG: 9 ^h 27 ^m		Mag: +0.7 PMG: 7 ^h 56 ^m		Mag: -2.2 PMG: 8 ^h 10 ^m		Mag: +0.8 PMG: 5 ^h 52 ^m		
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	239	36.2	218	16.5	+6 51.8	240 57.8	-2 26.3	237 16.0	-0 13.3	271 51.3	-14 10.6
1	254	38.6	233	16.3	52.9	255 58.5	25.6	252 18.1	13.1	286 53.7	10.6
2	269	41.1	248	16.0	53.9	270 59.2	24.9	267 20.1	13.0	301 56.1	10.6
3	284	43.6	263	15.7	55.0	286 00.0	24.1	282 22.2	12.8	316 58.5	10.6
4	299	46.0	278	15.5	56.0	301 00.7	23.4	297 24.2	12.6	332 01.0	10.6
5	314	48.5	293	15.2	+6 57.1	316 01.5	-2 22.7	312 26.3	-0 12.5	347 03.4	-14 10.5
6	329	50.9	308	14.9	+6 58.1	331 02.2	-2 22.0	327 28.4	-0 12.3	2 05.8	-14 10.5
7	344	53.4	323	14.6	+6 59.2	346 03.0	21.2	342 30.4	12.1	17 08.2	10.5
8	359	55.9	338	14.4	+7 00.2	1 03.7	20.5	357 32.5	11.9	32 10.6	10.5
9	14	58.3	353	14.1	01.3	16 04.4	19.8	12 34.5	11.8	47 13.0	10.5
10	30	00.8	8	13.8	02.3	31 05.2	19.0	27 36.6	11.6	62 15.4	10.5
11	45	03.3	23	13.6	+7 03.3	46 05.9	-2 18.3	42 38.6	-0 11.4	77 17.8	-14 10.5
12	60	05.7	38	13.3	+7 04.4	61 06.7	-2 17.6	57 40.7	-0 11.3	92 20.2	-14 10.5
13	75	08.2	53	13.0	05.4	76 07.4	16.9	72 42.7	11.1	107 22.6	10.4
14	90	10.7	68	12.7	06.5	91 08.2	16.1	87 44.8	10.9	122 25.0	10.4
15	105	13.1	83	12.5	07.5	106 08.9	15.4	102 46.9	10.8	137 27.4	10.4
16	120	15.6	98	12.2	08.6	121 09.6	14.7	117 48.9	10.6	152 29.8	10.4
17	135	18.1	113	11.9	+7 09.6	136 10.4	-2 13.9	132 51.0	-0 10.4	167 32.3	-14 10.4
18	150	20.5	128	11.6	+7 10.7	151 11.1	-2 13.2	147 53.0	-0 10.3	182 34.7	-14 10.4
19	165	23.0	143	11.4	11.7	166 11.9	12.5	162 55.1	10.1	197 37.1	10.4
20	180	25.4	158	11.1	12.8	181 12.6	11.8	177 57.1	09.9	212 39.5	10.4
21	195	27.9	173	10.8	13.8	196 13.4	11.0	192 59.2	09.8	227 41.9	10.4
22	210	30.4	188	10.5	14.9	211 14.1	10.3	208 01.3	09.6	242 44.3	10.4
23	225	32.8	203	10.3	15.9	226 14.9	09.6	223 03.3	09.4	257 46.7	10.3
24	240	35.3	218	10.0	+7 16.9	241 15.6	-2 08.9	238 05.4	-0 09.3	272 49.1	-14 10.3
Dif	—		-3	+10		+7	+7	+21	+2	+24	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 8				Edad: 22 ^d 1 PHE { SD: 15'8 PMG: 6 ^h 45 ^m R°: 46 ^m 4 ^h : 58'0 12 ^h : 57'7 20 ^h : 57'5													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	49.2	+20	32.0	262	07.2	-14	36.1	60 N	** **	1 54	3 05	2 20	3	11 26	93		
1	195	49.1		32.5	276	37.4 ¹¹²		22.9 ¹³²	58	** **	2 20	21	12	6	34	88		
2	210	49.1		33.0	291	07.7 ¹¹³	-14	09.5 ¹³⁴	56	1 08	40	34	2 04	10	40	85		
3	225	49.0		33.5	305	38.1 ¹¹⁴	-13	56.2 ¹³³	54	1 43	2 57	45	1 58	12	46	80		
4	240	49.0		34.0	320	08.6 ¹¹⁵		42.7 ¹³⁵	52	2 08	3 11	3 55	52	15	51	79		
5	255	48.9	+20	34.4	334	39.1 ¹¹⁵	-13	29.3 ¹³⁴	50	2 27	3 23	4 04	1 46	18	11 56	77		
6	270	48.8	+20	34.9	349	09.8 ¹¹⁷	-13	15.7 ¹³⁶	45	3 03	3 48	4 23	1 34	23	12 06	72		
7	285	48.8		35.4	3	40.5 ¹¹⁷	-13	02.1 ¹³⁶	40	28	4 07	38	24	27	14	68		
8	300	48.7		35.9	18	11.4 ¹¹⁹	-12	48.5 ¹³⁶	35	3 48	23	4 51	16	30	21	64		
9	315	48.7		36.4	32	42.3 ¹¹⁹		34.8 ¹³⁷	30	4 04	36	5 02	1 08	34	28	60		
10	330	48.6		36.8	47	13.3 ¹²⁰		21.1 ¹³⁷	20	29	4 58	21	0 55	39	38	55		
11	345	48.6	+20	37.3	61	44.4 ¹²¹	-12	07.3 ¹³⁸	10 N	4 49	5 15	5 38	0 44	43	12 48	50		
12	0	48.5	+20	37.8	76	15.6 ¹²²	-11	53.4 ¹³⁹	0	5 05	5 31	5 53	0 33	48	12 56	46		
13	15	48.5		38.3	90	46.9 ¹²³		39.6 ¹³⁸	10 S	20	5 46	6 08	22	52	13 05	41		
14	30	48.4		38.7	105	18.3 ¹²⁴		25.7 ¹³⁹	20	34	6 01	24	0 11	56	14	37		
15	45	48.4		39.2	119	49.7 ¹²⁴	-11	11.7 ¹⁴⁰	30	48	17	43	** ** *	**	24	32		
16	60	48.3		39.7	134	21.2 ¹²⁵	-10	57.7 ¹⁴⁰	35	5 55	26	6 53	** ** *	**	30	29		
17	75	48.3	+20	40.1	148	52.8 ¹²⁶	-10	43.7 ¹⁴⁰	40	6 03	6 36	7 05	** ** *	**	13 37	25		
18	90	48.2	+20	40.6	163	24.5 ¹²⁷	-10	29.6 ¹⁴¹	45	6 11	6 47	7 20	** ** *	**	13 44	21		
19	105	48.1		41.1	177	56.3 ¹²⁸		15.5 ¹⁴¹	50	20	7 00	37	** ** *	**	54	16		
20	120	48.1		41.6	192	28.1 ¹²⁸	-10	01.4 ¹⁴¹	52	24	06	45	** ** *	**	13 58	14		
21	135	48.0		42.0	207	00.0 ¹²⁹	-9	47.2 ¹⁴²	54	29	13	7 54	** ** *	**	14 02	12		
22	150	48.0		42.5	221	32.0 ¹³⁰		33.0 ¹⁴²	56	34	21	8 05	** ** *	**	08	8		
23	165	47.9		43.0	236	04.1 ¹³¹		18.8 ¹⁴²	58	39	29	16	** ** *	**	13	6		
24	180	47.9	+20	43.4	250	36.2 ¹³¹	-9	04.5 ¹⁴³	60 S	6 44	7 38	8 30	** ** *	**	14 20	2		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 56 ^m 3		Mag: -4.0 PMG: 9 ^h 28 ^m		Mag: +0.7 PMG: 7 ^h 55 ^m		Mag: -2.3 PMG: 8 ^h 07 ^m		Mag: +0.8 PMG: 5 ^h 48 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	240	35.3	218	10.0	+7	16.9	241	15.6	-2	08.9	238	05.4	-0	09.3	272	49.1	-14	10.3
1	255	37.8	233	09.7		18.0	256	16.3		08.1	253	07.4		09.1	287	51.5		10.3
2	270	40.2	248	09.4		19.0	271	17.1		07.4	268	09.5		08.9	302	53.9		10.3
3	285	42.7	263	09.2		20.1	286	17.8		06.7	283	11.5		08.8	317	56.4		10.3
4	300	45.2	278	08.9		21.1	301	18.6		05.9	298	13.6		08.6	332	58.8		10.3
5	315	47.6	293	08.6	+7	22.2	316	19.3	-2	05.2	313	15.7	-0	08.4	348	01.2	-14	10.3
6	330	50.1	308	08.3	+7	23.2	331	20.1	-2	04.5	328	17.7	-0	08.3	3	03.6	-14	10.3
7	345	52.6	323	08.0		24.2	346	20.8		03.8	343	19.8		08.1	18	06.0		10.3
8	0	55.0	338	07.8		25.3	1	21.6		03.0	358	21.8		07.9	33	08.4		10.2
9	15	57.5	353	07.5		26.3	16	22.3		02.3	13	23.9		07.8	48	10.8		10.2
10	30	59.9	8	07.2		27.4	31	23.0		01.6	28	26.0		07.6	63	13.2		10.2
11	46	02.4	23	06.9	+7	28.4	46	23.8	-2	00.8	43	28.0	-0	07.4	78	15.6	-14	10.2
12	61	04.9	38	06.6	+7	29.5	61	24.5	-2	00.1	58	30.1	-0	07.3	93	18.1	-14	10.2
13	76	07.3	53	06.4		30.5	76	25.3	-1	59.4	73	32.1		07.1	108	20.5		10.2
14	91	09.8	68	06.1		31.6	91	26.0		58.7	88	34.2		06.9	123	22.9		10.2
15	106	12.3	83	05.8		32.6	106	26.8		57.9	103	36.3		06.8	138	25.3		10.2
16	121	14.7	98	05.5		33.6	121	27.5		57.2	118	38.3		06.6	153	27.7		10.2
17	136	17.2	113	05.2	+7	34.7	136	28.3	-1	56.5	133	40.4	-0	06.4	168	30.1	-14	10.2
18	151	19.7	128	05.0	+7	35.7	151	29.0	-1	55.7	148	42.4	-0	06.3	183	32.5	-14	10.1
19	166	22.1	143	04.7		36.8	166	29.8		55.0	163	44.5		06.1	198	34.9		10.1
20	181	24.6	158	04.4		37.8	181	30.5		54.3	178	46.6		06.0	213	37.4		10.1
21	196	27.0	173	04.1		38.8	196	31.2		53.6	193	48.6		05.8	228	39.8		10.1
22	211	29.5	188	03.8		39.9	211	32.0		52.8	208	50.7		05.6	243	42.2		10.1
23	226	32.0	203	03.5		40.9	226	32.7		52.1	223	52.7		05.5	258	44.6		10.1
24	241	34.4	218	03.3	+7	42.0	241	33.5	-1	51.4	238	54.8	-0	05.3	273	47.0	-14	10.1
Dif	—		-3 +10		+7 +7		+21 +2		+24 0									

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 23 ^d 1	PHE {	4 ^h : 57 ^h 3 12 ^h : 57 ^h 0 20 ^h : 56 ^h 8			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 56 ^m 9								SD: 15 ^h 6			PMG: 7 ^h 31 ^m			Rº: 45 ^m
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	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	47.9	+20 43.4	250	36.2	-9 04.5		60 N	20 52	22 06	** **	2 23 2	12 59 88		
1	195	47.8		265	08.4 ¹³²	-8 50.3 ¹⁴²		58	36	21 38	** **	18 5	13 02 85		
2	210	47.8	44.4	279	40.7 ¹³³	35.9 ¹⁴⁴		56	22	17	22 55	14 8	05 82		
3	225	47.7	44.8	294	13.0 ¹³³	21.6 ¹⁴³		54	11	21 00	22 16	10 11	08 79		
4	240	47.6	45.3	308	45.4 ¹³⁴	-8 07.2 ¹⁴⁴		52	20 00	20 45	21 50	07 13	10 77		
5	255	47.6	+20 45.8	323	17.9 ¹³⁵	-7 52.9 ¹⁴³		50	19 51	20 33	21 30	2 04 15	13 13 74		
6	270	47.5	+20 46.2	337	50.4 ¹³⁵	-7 38.5 ¹⁴⁴		45	19 32	20 08	20 53	1 57 20	13 18 69		
7	285	47.5	46.7	352	23.0 ¹³⁶	24.0 ¹⁴⁵		40	16	19 48	27	51 24	22 64		
8	300	47.4	47.1	6	55.6 ¹³⁶	-7 09.6 ¹⁴⁴		35	19 03	32	20 07	46 27	25 61		
9	315	47.4	47.6	21	28.3 ¹³⁷	-6 55.1 ¹⁴⁵		30	18 52	19 19	19 51	42 30	28 58		
10	330	47.3	48.1	36	01.1 ¹³⁸	40.6 ¹⁴⁵		20	33	18 57	25	34 35	33 53		
11	345	47.2	+20 48.5	50	33.9 ¹³⁸	-6 26.1 ¹⁴⁵		10 N	18 16	18 39	19 05	1 27 40	13 38 48		
12	0	47.2	+20 49.0	65	06.8 ¹³⁹	-6 11.6 ¹⁴⁵		0	18 00	18 23	18 48	1 21 44	13 42 44		
13	15	47.1	49.4	79	39.8 ¹⁴⁰	-5 57.1 ¹⁴⁵		10 S	17 45	18 08	33	14 49	46 40		
14	30	47.1	49.9	94	12.7 ¹³⁹	42.6 ¹⁴⁵		20	29	17 52	19	1 07 54	51 34		
15	45	47.0	50.4	108	45.8 ¹⁴¹	28.0 ¹⁴⁶		30	10	36	18 05	0 59 60	56 29		
16	60	46.9	50.8	123	18.9 ¹⁴¹	-5 13.5 ¹⁴⁵		35	17 00	27	17 58	55 62	13 59 26		
17	75	46.9	+20 51.3	137	52.0 ¹⁴¹	-4 58.9 ¹⁴⁶		40	16 47	17 17	17 50	0 50 66	14 02 23		
18	90	46.8	+20 51.7	152	25.2 ¹⁴²	-4 44.3 ¹⁴⁶		45	16 33	17 05	17 42	0 44 70	14 05 20		
19	105	46.8	52.2	166	58.4 ¹⁴²	29.7 ¹⁴⁶		50	15	16 52	32	36 76	10 14		
20	120	46.7	52.6	181	31.7 ¹⁴³	15.1 ¹⁴⁶		52	16 07	46	28	33 78	12 12		
21	135	46.6	53.1	196	05.0 ¹⁴³	-4 00.5 ¹⁴⁶		54	15 57	39	23	29 80	14 10		
22	150	46.6	53.5	210	38.4 ¹⁴⁴	-3 45.9 ¹⁴⁶		56	47	31	18	25 83	16 8		
23	165	46.5	54.0	225	11.8 ¹⁴⁴	31.3 ¹⁴⁶		58	35	23	13	21 86	19 5		
24	180	46.4	+20 54.4	239	45.3 ¹⁴⁵	-3 16.7 ¹⁴⁶		60 S	15 21	16 13	17 07	0 15 90	14 22 2		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 7 ^h 52 ^m 4		Mag: -4.0 PMG: 9 ^h 28 ^m		Mag: +0.7 PMG: 7 ^h 53 ^m		Mag: -2.3 PMG: 8 ^h 03 ^m		Mag: +0.8 PMG: 5 ^h 44 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	241	34.4	218	03.3	+7	42.0	241	33.5	-1	51.4	238	54.8	-0	05.3	273	47.0	-14	10.1
1	256	36.9	233	03.0		43.0	256	34.2		50.6	253	56.9		05.1	288	49.4		10.1
2	271	39.4	248	02.7		44.0	271	35.0		49.9	268	58.9		05.0	303	51.8		10.1
3	286	41.8	263	02.4		45.1	286	35.7		49.2	284	01.0		04.8	318	54.3		10.1
4	301	44.3	278	02.1		46.1	301	36.5		48.5	299	03.1		04.6	333	56.7		10.1
5	316	46.8	293	01.8	+7	47.2	316	37.2	-1	47.7	314	05.1	-0	04.5	348	59.1	-14	10.0
6	331	49.2	308	01.6	+7	48.2	331	38.0	-1	47.0	329	07.2	-0	04.3	4	01.5	-14	10.0
7	346	51.7	323	01.3		49.2	346	38.7		46.3	344	09.2		04.1	19	03.9		10.0
8	1	54.2	338	01.0		50.3	1	39.5		45.6	359	11.3		04.0	34	06.3		10.0
9	16	56.6	353	00.7		51.3	16	40.2		44.8	14	13.4		03.8	49	08.7		10.0
10	31	59.1	8	00.4		52.4	31	41.0		44.1	29	15.4		03.6	64	11.2		10.0
11	47	01.5	23	00.1	+7	53.4	46	41.7	-1	43.4	44	17.5	-0	03.5	79	13.6	-14	10.0
12	62	04.0	37	59.8	+7	54.4	61	42.4	-1	42.6	59	19.6	-0	03.3	94	16.0	-14	10.0
13	77	06.5	52	59.6		55.5	76	43.2		41.9	74	21.6		03.2	109	18.4		10.0
14	92	08.9	67	59.3		56.5	91	43.9		41.2	89	23.7		03.0	124	20.8		10.0
15	107	11.4	82	59.0		57.6	106	44.7		40.5	104	25.8		02.8	139	23.2		10.0
16	122	13.9	97	58.7		58.6	121	45.4		39.7	119	27.8		02.7	154	25.7		10.0
17	137	16.3	112	58.4	+7	59.6	136	46.2	-1	39.0	134	29.9	-0	02.5	169	28.1	-14	09.9
18	152	18.8	127	58.1	+8	00.7	151	46.9	-1	38.3	149	31.9	-0	02.3	184	30.5	-14	09.9
19	167	21.3	142	57.8		01.7	166	47.7		37.5	164	34.0		02.2	199	32.9		09.9
20	182	23.7	157	57.5		02.7	181	48.4		36.8	179	36.1		02.0	214	35.3		09.9
21	197	26.2	172	57.3		03.8	196	49.2		36.1	194	38.1		01.8	229	37.7		09.9
22	212	28.7	187	57.0		04.8	211	49.9		35.4	209	40.2		01.7	244	40.2		09.9
23	227	31.1	202	56.7		05.9	226	50.7		34.6	224	42.3		01.5	259	42.6		09.9
24	242	33.6	217	56.4	+8	06.9	241	51.4	-1	33.9	239	44.3	-0	01.4	274	45.0	-14	09.9
Dif	—		-3		+10		+7		+7		+21		+2		+24			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 24 ^d 1	PHE { 4 ^h : 56 ^h /6 12 ^h : 56 ^h /4 20 ^h : 56 ^h /2									
	PMG: 11 ^h 57 ^m 0					SD: 15 ^h 4		PMG: 8 ^h 16 ^m			R°: 42 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	m
0	180	46.4	+20 54.4	239	45.3	-3 16.7	60 N	** **	1 47	3 01	2 25	1	14 27	86
1	195	46.4	54.9	254	18.7 ¹⁴⁴	-3 02.1 ¹⁴⁶	58	** **	2 15	17	23	5	27	83
2	210	46.3	55.4	268	52.3 ¹⁴⁶	-2 47.5 ¹⁴⁶	56	0 58	37	31	22	7	27	80
3	225	46.3	55.8	283	25.8 ¹⁴⁵	32.9 ¹⁴⁶	54	1 38	2 54	43	21	10	27	77
4	240	46.2	56.3	297	59.4 ¹⁴⁶	18.3 ¹⁴⁶	52	2 04	3 08	3 53	20	12	27	74
5	255	46.1	+20 56.7	312	33.1 ¹⁴⁷	-2 03.7 ¹⁴⁶	50	2 24	3 21	4 02	2 19	14	14 27	72
6	270	46.1	+20 57.1	327	06.7 ¹⁴⁶	-1 49.1 ¹⁴⁶	45	3 00	3 46	4 21	2 17	18	14 27	67
7	285	46.0	57.6	341	40.4 ¹⁴⁷	34.5 ¹⁴⁶	40	26	4 06	37	15	22	26	64
8	300	45.9	58.0	356	14.2 ¹⁴⁸	19.9 ¹⁴⁶	35	3 46	21	4 50	13	26	26	60
9	315	45.9	58.5	10	47.9 ¹⁴⁷	-1 05.3 ¹⁴⁶	30	4 03	35	5 02	12	29	26	57
10	330	45.8	58.9	25	21.7 ¹⁴⁸	-0 50.7 ¹⁴⁶	20	29	4 57	21	09	34	26	52
11	345	45.8	+20 59.4	39	55.5 ¹⁴⁸	-0 36.2 ¹⁴⁵	10 N	4 49	5 15	5 38	2 07	39	14 26	47
12	0	45.7	+20 59.8	54	29.4 ¹⁴⁹	-0 21.6 ¹⁴⁶	0	5 05	5 31	5 53	2 05	43	14 26	43
13	15	45.6	+21 00.3	69	03.2 ¹⁴⁸	-0 07.1 ¹⁴⁵	10 S	20	5 46	6 09	03	47	26	38
14	30	45.6	00.7	83	37.1 ¹⁴⁹	+0 07.5 ¹⁴⁶	20	35	6 02	25	2 01	52	25	34
15	45	45.5	01.2	98	11.0 ¹⁴⁹	22.0 ¹⁴⁵	30	49	18	44	1 59	57	25	29
16	60	45.4	01.6	112	45.0 ¹⁵⁰	36.5 ¹⁴⁵	35	5 56	27	6 55	57	61	25	26
17	75	45.4	+21 02.0	127	18.9 ¹⁴⁹	+0 51.0 ¹⁴⁵	40	6 04	6 37	7 07	1 56	64	14 25	22
18	90	45.3	+21 02.5	141	52.9 ¹⁵⁰	+1 05.5 ¹⁴⁵	45	6 13	6 49	7 22	1 54	68	14 25	18
19	105	45.2	02.9	156	26.9 ¹⁵⁰	20.0 ¹⁴⁵	50	22	7 03	39	52	72	24	15
20	120	45.2	03.4	171	00.9 ¹⁵⁰	34.4 ¹⁴⁴	52	26	09	48	51	75	24	13
21	135	45.1	03.8	185	34.9 ¹⁵⁰	+1 48.8 ¹⁴⁴	54	31	16	7 57	49	78	24	10
22	150	45.0	04.2	200	08.9 ¹⁵⁰	+2 03.2 ¹⁴⁴	56	36	23	8 08	48	81	24	7
23	165	45.0	04.7	214	43.0 ¹⁵¹	17.6 ¹⁴⁴	58	41	32	20	47	83	24	5
24	180	44.9	+21 05.1	229	17.1 ¹⁵¹	+2 32.0 ¹⁴⁴	60 S	6 47	7 41	8 34	1 45	87	14 24	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 48 ^m 5		Mag: -4.0 PMG: 9 ^h 28 ^m		Mag: +0.7 PMG: 7 ^h 52 ^m		Mag: -2.3 PMG: 8 ^h 00 ^m		Mag: +0.8 PMG: 5 ^h 40 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	242	33.6	217 56.4	+8 06.9	241 51.4	-1 33.9	239 44.3	-0 01.4	274 45.0	-14 09.9
1	257	36.0	232 56.1	07.9	256 52.2	33.2	254 46.4	01.2	289 47.4	09.9
2	272	38.5	247 55.8	09.0	271 52.9	32.5	269 48.5	01.0	304 49.8	09.9
3	287	41.0	262 55.5	10.0	286 53.7	31.7	284 50.5	00.9	319 52.2	09.9
4	302	43.4	277 55.2	11.0	301 54.4	31.0	299 52.6	00.7	334 54.7	09.9
5	317	45.9	292 54.9	+8 12.1	316 55.2	-1 30.3	314 54.7	-0 00.5	349 57.1	-14 09.9
6	332	48.4	307 54.6	+8 13.1	331 55.9	-1 29.5	329 56.7	-0 00.4	4 59.5	-14 09.8
7	347	50.8	322 54.3	14.1	346 56.7	28.8	344 58.8	00.2	20 01.9	09.8
8	2	53.3	337 54.0	15.2	1 57.4	28.1	0 00.9	-0 00.1	35 04.3	09.8
9	17	55.8	352 53.8	16.2	16 58.1	27.4	15 02.9	+0 00.1	50 06.8	09.8
10	32	58.2	7 53.5	17.2	31 58.9	26.6	30 05.0	00.3	65 09.2	09.8
11	48	00.7	22 53.2	+8 18.3	46 59.6	-1 25.9	45 07.1	+0 00.4	80 11.6	-14 09.8
12	63	03.1	37 52.9	+8 19.3	62 00.4	-1 25.2	60 09.1	+0 00.6	95 14.0	-14 09.8
13	78	05.6	52 52.6	20.3	77 01.1	24.4	75 11.2	00.8	110 16.4	09.8
14	93	08.1	67 52.3	21.4	92 01.9	23.7	90 13.3	00.9	125 18.9	09.8
15	108	10.5	82 52.0	22.4	107 02.6	23.0	105 15.3	01.1	140 21.3	09.8
16	123	13.0	97 51.7	23.4	122 03.4	22.3	120 17.4	01.2	155 23.7	09.8
17	138	15.5	112 51.4	+8 24.5	137 04.1	-1 21.5	135 19.5	+0 01.4	170 26.1	-14 09.8
18	153	17.9	127 51.1	+8 25.5	152 04.9	-1 20.8	150 21.6	+0 01.6	185 28.5	-14 09.8
19	168	20.4	142 50.8	26.5	167 05.6	20.1	165 23.6	01.7	200 31.0	09.8
20	183	22.9	157 50.5	27.6	182 06.4	19.4	180 25.7	01.9	215 33.4	09.7
21	198	25.3	172 50.2	28.6	197 07.1	18.6	195 27.8	02.1	230 35.8	09.7
22	213	27.8	187 49.9	29.6	212 07.9	17.9	210 29.8	02.2	245 38.2	09.7
23	228	30.3	202 49.6	30.7	227 08.6	17.2	225 31.9	02.4	260 40.7	09.7
24	243	32.7	217 49.3	+8 31.7	242 09.4	-1 16.4	240 34.0	+0 02.5	275 43.1	-14 09.7
Dif	—		-3	+10	+7	+7	+21	+2	+24	0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 1			Edad: 25 ^d 1 PHE { 4 ^h : 56 ⁰ 12 ^h : 55 ⁸ 20 ^h : 55 ⁷ SD: 15 ^h 3 PMG: 8 ^h 58 ^m R°: 43 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180	44.9	+21 05.1	229	17.1	+2 32.0	60 N	20 56	22 13	** **	2 26 2	15 53 87		
1	195	44.8	05.5	243	51.1 ¹⁵⁰	+2 46.4 ¹⁴⁴	58	40	21 43	** **	28 5	50 82		
2	210	44.8	06.0	258	25.2 ¹⁵¹	+3 00.7 ¹⁴³	56	26	21	23 06	29 8	47 79		
3	225	44.7	06.4	272	59.3 ¹⁵¹	15.0 ¹⁴³	54	14	21 03	22 22	31 10	44 77		
4	240	44.6	06.9	287	33.4 ¹⁵¹	29.3 ¹⁴³	52	20 03	20 48	21 54	32 12	41 74		
5	255	44.6	+21 07.3	302	07.5 ¹⁵¹	+3 43.5 ¹⁴²	50	19 54	20 36	21 34	2 33 14	15 39 72		
6	270	44.5	+21 07.7	316	41.6 ¹⁵¹	+3 57.8 ¹⁴³	45	19 34	20 10	20 56	2 35 19	15 34 67		
7	285	44.4	08.2	331	15.7 ¹⁵¹	+4 12.0 ¹⁴²	40	18	19 50	30	37 23	30 63		
8	300	44.4	08.6	345	49.9 ¹⁵²	26.1 ¹⁴¹	35	19 05	34	20 09	39 26	26 60		
9	315	44.3	09.0	0	24.0 ¹⁵¹	40.3 ¹⁴²	30	18 53	19 20	19 52	41 29	23 57		
10	330	44.2	09.4	14	58.1 ¹⁵¹	+4 54.4 ¹⁴¹	20	33	18 58	26	43 34	18 51		
11	345	44.1	+21 09.9	29	32.2 ¹⁵¹	+5 08.5 ¹⁴¹	10 N	18 16	18 39	19 06	2 46 38	15 13 47		
12	0	44.1	+21 10.3	44	06.4 ¹⁵²	+5 22.6 ¹⁴¹	0	18 01	18 23	18 49	2 48 43	15 09 42		
13	15	44.0	10.7	58	40.5 ¹⁵¹	36.6 ¹⁴⁰	10 S	17 45	18 08	33	50 47	15 04 39		
14	30	43.9	11.2	73	14.6 ¹⁵¹	+5 50.6 ¹⁴⁰	20	28	17 52	19	53 51	14 59 35		
15	45	43.9	11.6	87	48.7 ¹⁵¹	+6 04.5 ¹³⁹	30	17 10	35	18 05	56 57	54 30		
16	60	43.8	12.0	102	22.8 ¹⁵¹	18.5 ¹⁴⁰	35	16 59	26	17 57	2 58 59	51 27		
17	75	43.7	+21 12.4	116	56.9 ¹⁵¹	+6 32.4 ¹³⁹	40	16 46	17 16	17 49	3 00 63	14 47 24		
18	90	43.7	+21 12.9	131	31.0 ¹⁵¹	+6 46.2 ¹³⁸	45	16 31	17 04	17 40	3 02 67	14 43 20		
19	105	43.6	13.3	146	05.1 ¹⁵¹	+7 00.0 ¹³⁸	50	13	16 50	31	04 72	39 15		
20	120	43.5	13.7	160	39.2 ¹⁵¹	+7 13.8 ¹³⁸	52	16 05	44	26	06 74	37 12		
21	135	43.4	14.1	175	13.3 ¹⁵¹	27.5 ¹³⁷	54	15 55	37	21	07 77	34 11		
22	150	43.4	14.6	189	47.3 ¹⁵⁰	41.2 ¹³⁷	56	44	29	16	09 79	31 9		
23	165	43.3	15.0	204	21.4 ¹⁵¹	+7 54.9 ¹³⁷	58	32	20	11	10 83	29 5		
24	180	43.2	+21 15.4	218	55.4 ¹⁵⁰	+8 08.5 ¹³⁶	60 S	15 18	16 11	17 05	3 12 86	14 25 2		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 7 ^h 44 ^m 5		Mag: -4.0 PMG: 9 ^h 29 ^m		Mag: +0.7 PMG: 7 ^h 51 ^m		Mag: -2.3 PMG: 7 ^h 57 ^m		Mag: +0.8 PMG: 5 ^h 36 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	243	32.7	217	49.3	+8 31.7	242 09.4	-1 16.4	240 34.0	+0 02.5	275 43.1	-14 09.7			
1	258	35.2	232	49.0	32.7	257 10.1	15.7	255 36.0	02.7	290 45.5	09.7			
2	273	37.6	247	48.7	33.8	272 10.9	15.0	270 38.1	02.9	305 47.9	09.7			
3	288	40.1	262	48.4	34.8	287 11.6	14.3	285 40.2	03.0	320 50.3	09.7			
4	303	42.6	277	48.1	35.8	302 12.4	13.5	300 42.2	03.2	335 52.8	09.7			
5	318	45.0	292	47.8	+8 36.8	317 13.1	-1 12.8	315 44.3	+0 03.3	350 55.2	-14 09.7			
6	333	47.5	307	47.5	+8 37.9	332 13.9	-1 12.1	330 46.4	+0 03.5	5 57.6	-14 09.7			
7	348	50.0	322	47.2	38.9	347 14.6	11.4	345 48.5	03.7	21 00.0	09.7			
8	3	52.4	337	46.9	39.9	2 15.4	10.6	0 50.5	03.8	36 02.5	09.7			
9	18	54.9	352	46.6	41.0	17 16.1	09.9	15 52.6	04.0	51 04.9	09.7			
10	33	57.4	7	46.3	42.0	32 16.9	09.2	30 54.7	04.1	66 07.3	09.7			
11	48	59.8	22	46.0	+8 43.0	47 17.6	-1 08.4	45 56.7	+0 04.3	81 09.7	-14 09.7			
12	64	02.3	37	45.7	+8 44.1	62 18.4	-1 07.7	60 58.8	+0 04.5	96 12.1	-14 09.6			
13	79	04.7	52	45.4	45.1	77 19.1	07.0	76 00.9	04.6	111 14.6	09.6			
14	94	07.2	67	45.1	46.1	92 19.9	06.3	91 03.0	04.8	126 17.0	09.6			
15	109	09.7	82	44.8	47.1	107 20.6	05.5	106 05.0	04.9	141 19.4	09.6			
16	124	12.1	97	44.5	48.2	122 21.4	04.8	121 07.1	05.1	156 21.8	09.6			
17	139	14.6	112	44.2	+8 49.2	137 22.1	-1 04.1	136 09.2	+0 05.3	171 24.3	-14 09.6			
18	154	17.1	127	43.9	+8 50.2	152 22.9	-1 03.4	151 11.3	+0 05.4	186 26.7	-14 09.6			
19	169	19.5	142	43.6	51.2	167 23.6	02.6	166 13.3	05.6	201 29.1	09.6			
20	184	22.0	157	43.3	52.3	182 24.4	01.9	181 15.4	05.7	216 31.5	09.6			
21	199	24.5	172	43.0	53.3	197 25.1	01.2	196 17.5	05.9	231 34.0	09.6			
22	214	26.9	187	42.7	54.3	212 25.9	-1 00.4	211 19.5	06.1	246 36.4	09.6			
23	229	29.4	202	42.4	55.4	227 26.6	-0 59.7	226 21.6	06.2	261 38.8	09.6			
24	244	31.9	217	42.1	+8 56.4	242 27.4	-0 59.0	241 23.7	+0 06.4	276 41.2	-14 09.6			
Dif	—		-3		+10		+8		+21		+24		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 2				Edad: 26 ^d 1 PHE { 4 ^h : 55/5 12 ^h : 55/3 20 ^h : 55/2 PMG: 9 ^h 41 ^m R°: 44 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	43.2	+21	15.4	218	55.4	+8	08.5	60 N	** **	1 41	2 58	2 28	2	17 20	87		
1	195	43.2		15.8	233	29.4 ¹⁵⁰		22.1 ¹³⁶	58	** **	2 11	3 14	33	6	12	84		
2	210	43.1		16.3	248	03.4 ¹⁵⁰		35.6 ¹³⁵	56	0 48	33	28	37	9	06	80		
3	225	43.0		16.7	262	37.4 ¹⁵⁰	+8	49.1 ¹³⁵	54	1 32	2 51	40	41	11	17 01	76		
4	240	42.9		17.1	277	11.4 ¹⁵⁰	+9	02.6 ¹³⁵	52	2 00	3 06	3 51	44	14	16 55	75		
5	255	42.9	+21	17.5	291	45.4 ¹⁵⁰	+9	16.0 ¹³⁴	50	2 20	3 18	4 00	2 47	16	16 51	72		
6	270	42.8	+21	17.9	306	19.3 ¹⁴⁹	+9	29.3 ¹³³	45	2 58	3 44	4 20	2 54	21	16 41	67		
7	285	42.7		18.3	320	53.2 ¹⁴⁹		42.7 ¹³⁴	40	3 24	4 04	36	3 00	24	33	63		
8	300	42.6		18.8	335	27.1 ¹⁴⁹	+9	55.9 ¹³²	35	3 45	20	4 49	05	28	26	60		
9	315	42.6		19.2	350	01.0 ¹⁴⁹	+10	09.1 ¹³²	30	4 02	34	5 01	10	30	20	57		
10	330	42.5		19.6	4	34.9 ¹⁴⁹		22.3 ¹³²	20	28	4 57	21	17	36	09	52		
11	345	42.4	+21	20.0	19	08.7 ¹⁴⁸	+10	35.4 ¹³¹	10 N	4 48	5 15	5 38	3 24	40	16 00	48		
12	0	42.3	+21	20.4	33	42.5 ¹⁴⁸	+10	48.5 ¹³¹	0	5 06	5 31	5 54	3 31	43	15 51	45		
13	15	42.3		20.8	48	16.3 ¹⁴⁸	+11	01.5 ¹³⁰	10 S	21	5 47	6 09	37	48	43	40		
14	30	42.2		21.3	62	50.1 ¹⁴⁸		14.4 ¹²⁹	20	35	6 02	26	44	52	34	36		
15	45	42.1		21.7	77	23.8 ¹⁴⁷		27.3 ¹²⁹	30	50	19	45	53	56	24	31		
16	60	42.0		22.1	91	57.5 ¹⁴⁷		40.2 ¹²⁹	35	5 57	28	6 56	3 57	60	18	28		
17	75	42.0	+21	22.5	106	31.2 ¹⁴⁷	+11	53.0 ¹²⁸	40	6 05	6 39	7 09	4 03	63	15 11	25		
18	90	41.9	+21	22.9	121	04.9 ¹⁴⁷	+12	05.7 ¹²⁷	45	6 14	6 51	7 24	4 09	67	15 03	22		
19	105	41.8		23.3	135	38.5 ¹⁴⁶		18.4 ¹²⁷	50	24	7 05	42	16	72	14 54	17		
20	120	41.7		23.7	150	12.1 ¹⁴⁶		31.0 ¹²⁶	52	29	11	7 50	20	74	49	15		
21	135	41.7		24.1	164	45.7 ¹⁴⁶		43.6 ¹²⁶	54	33	18	8 00	24	76	45	12		
22	150	41.6		24.5	179	19.2 ¹⁴⁵	+12	56.1 ¹²⁵	56	38	26	11	28	80	40	9		
23	165	41.5		24.9	193	52.7 ¹⁴⁵	+13	08.5 ¹²⁴	58	44	35	23	33	83	34	6		
24	180	41.4	+21	25.3	208	26.2 ¹⁴⁵	+13	20.9 ¹²⁴	60 S	6 50	7 44	8 38	4 38	87	14 27	3		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 7 ^h 40 ^m 6		Mag: -4.0 PMG: 9 ^h 29 ^m		Mag: +0.7 PMG: 7 ^h 50 ^m		Mag: -2.3 PMG: 7 ^h 53 ^m		Mag: +0.8 PMG: 5 ^h 32 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	244	31.9	217	42.1	+8	56.4	241	23.7	+0	06.4	276	41.2	-14	09.6				
1	259	34.3	232	41.8		57.4	257	25.8		06.5	291	43.7		09.6				
2	274	36.8	247	41.5		58.4	272	27.8		06.7	306	46.1		09.6				
3	289	39.2	262	41.2	+8	59.5	287	29.7		06.9	321	48.5		09.6				
4	304	41.7	277	40.9	+9	00.5	302	30.4		07.0	336	51.0		09.6				
5	319	44.2	292	40.5	+9	01.5	317	31.2	-0	55.4	351	53.4	-14	09.6				
6	334	46.6	307	40.2	+9	02.5	332	31.9	-0	54.6	366	55.8	-14	09.6				
7	349	49.1	322	39.9		03.5	347	32.7		53.9	381	58.2		09.5				
8	4	51.6	337	39.6		04.6	2	33.4		53.2	1	40.3		09.5				
9	19	54.0	352	39.3		05.6	17	34.2		52.5	16	42.4		09.5				
10	34	56.5	7	39.0		06.6	32	34.9		51.7	31	44.4		09.5				
11	49	59.0	22	38.7	+9	07.6	47	35.7	-0	51.0	46	46.5	+0	08.1	82	07.9	-14	09.5
12	65	01.4	37	38.4	+9	08.7	62	36.4	-0	50.3	61	48.6	+0	08.3	97	10.4	-14	09.5
13	80	03.9	52	38.1		09.7	77	37.2		49.5	76	50.7		08.4	112	12.8		09.5
14	95	06.4	67	37.8		10.7	92	37.9		48.8	91	52.8		08.6	127	15.2		09.5
15	110	08.8	82	37.5		11.7	107	38.7		48.1	106	54.8		08.8	142	17.7		09.5
16	125	11.3	97	37.1		12.8	122	39.4		47.4	121	56.9		08.9	157	20.1		09.5
17	140	13.7	112	36.8	+9	13.8	137	40.2	-0	46.6	136	59.0	+0	09.1	172	22.5	-14	09.5
18	155	16.2	127	36.5	+9	14.8	152	40.9	-0	45.9	152	01.1	+0	09.2	187	24.9	-14	09.5
19	170	18.7	142	36.2		15.8	167	41.7		45.2	167	03.1		09.4	202	27.4		09.5
20	185	21.1	157	35.9		16.8	182	42.4		44.5	182	05.2		09.5	217	29.8		09.5
21	200	23.6	172	35.6		17.9	197	43.2		43.7	197	07.3		09.7	232	32.2		09.5
22	215	26.1	187	35.3		18.9	212	43.9		43.0	212	09.4		09.9	247	34.7		09.5
23	230	28.5	202	35.0		19.9	227	44.7		42.3	227	11.5		10.0	262	37.1		09.5
24	245	31.0	217	34.7	+9	20.9	242	45.5	-0	41.6	242	13.5	+0	10.2	277	39.5	-14	09.5
Dif	—		-3 +10		+8 +7		+21 +2		+24 0									

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 3				Edad: 27 ^d 1 PHE { 4 ^h : 55 ⁰ 12 ^h : 54 ⁹ 20 ^h : 54 ⁸ R°: 45 ^m															
	hG ☉		Dec		hG ☾		Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	m	m	m
0	180	41.4	+21	25.3	208	26.2	+13	20.9	60 N	21 00	22 19	** **	2 30	4	18 47	88				
1	195	41.4		25.8	222	59.6 ¹⁴⁴		33.2 ¹²³	58	20 43	21 48	** **	39	7	36	83				
2	210	41.3		26.2	237	33.0 ¹⁴⁴		45.5 ¹²³	56	29	25	23 19	46	11	26	80				
3	225	41.2		26.6	252	06.4 ¹⁴⁴	+13	57.7 ¹²²	54	16	21 07	22 28	52	14	17	77				
4	240	41.1		27.0	266	39.7 ¹⁴³	+14	09.8 ¹²¹	52	20 06	20 51	21 59	2 58	17	10	73				
5	255	41.0	+21	27.4	281	13.0 ¹⁴³	+14	21.9 ¹²¹	50	19 56	20 38	21 37	3 03	19	18 03	71				
6	270	41.0	+21	27.8	295	46.3 ¹⁴³	+14	33.9 ¹²⁰	45	19 36	20 12	20 59	3 15	23	17 48	67				
7	285	40.9		28.2	310	19.5 ¹⁴²		45.8 ¹¹⁹	40	20	19 52	32	24	27	36	63				
8	300	40.8		28.6	324	52.7 ¹⁴²	+14	57.7 ¹¹⁹	35	19 06	35	20 11	33	30	26	60				
9	315	40.7		29.0	339	25.9 ¹⁴²	+15	09.5 ¹¹⁸	30	18 54	19 21	19 54	40	33	17	57				
10	330	40.6		29.4	353	59.0 ¹⁴¹		21.2 ¹¹⁷	20	34	18 58	27	3 53	37	17 01	53				
11	345	40.6	+21	29.8	8	32.0 ¹⁴⁰	+15	32.8 ¹¹⁶	10 N	18 17	18 40	19 06	4 04	41	16 48	49				
12	0	40.5	+21	30.2	23	05.1 ¹⁴¹	+15	44.4 ¹¹⁶	0	18 01	18 23	18 49	4 14	45	16 36	45				
13	15	40.4		30.6	37	38.1 ¹⁴⁰	+15	55.9 ¹¹⁵	10 S	17 45	18 08	34	25	48	23	43				
14	30	40.3		31.0	52	11.0 ¹³⁹	+16	07.4 ¹¹⁵	20	28	17 52	19	36	53	16 10	39				
15	45	40.3		31.4	66	43.9 ¹³⁹		18.7 ¹¹³	30	17 09	35	18 04	49	57	15 55	34				
16	60	40.2		31.8	81	16.8 ¹³⁹		30.0 ¹¹³	35	16 58	25	17 57	4 57	60	46	32				
17	75	40.1	+21	32.2	95	49.6 ¹³⁸	+16	41.2 ¹¹²	40	16 45	17 15	17 48	5 06	63	15 36	29				
18	90	40.0	+21	32.6	110	22.4 ¹³⁸	+16	52.4 ¹¹²	45	16 30	17 03	17 39	5 16	67	15 25	25				
19	105	39.9		32.9	124	55.1 ¹³⁷	+17	03.4 ¹¹⁰	50	11	16 49	29	28	72	11	21				
20	120	39.8		33.3	139	27.8 ¹³⁷		14.4 ¹¹⁰	52	16 03	42	25	34	74	15 04	19				
21	135	39.8		33.7	154	00.5 ¹³⁷		25.3 ¹⁰⁹	54	15 53	35	20	40	77	14 57	16				
22	150	39.7		34.1	168	33.1 ¹³⁶		36.1 ¹⁰⁸	56	42	27	15	48	80	49	13				
23	165	39.6		34.5	183	05.7 ¹³⁶		46.9 ¹⁰⁸	58	29	18	09	5 56	84	40	10				
24	180	39.5	+21	34.9	197	38.2 ¹³⁵	+17	57.6 ¹⁰⁷	60 S	15 15	16 08	17 03	6 05	88	14 30	5				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG 7 ^h 36 ^m 7		Mag: -4.0 PMG: 9 ^h 30 ^m				Mag: +0.7 PMG: 7 ^h 49 ^m				Mag: -2.3 PMG: 7 ^h 50 ^m				Mag: +0.8 PMG: 5 ^h 28 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	245	31.0	217	34.7	+9	20.9	242	45.5	-0	41.6	242	13.5	+0	10.2	277	39.5	-14	09.5		
1	260	33.5	232	34.3		21.9	257	46.2		40.8	257	15.6		10.3	292	41.9		09.5		
2	275	35.9	247	34.0		23.0	272	47.0		40.1	272	17.7		10.5	307	44.4		09.5		
3	290	38.4	262	33.7		24.0	287	47.7		39.4	287	19.8		10.6	322	46.8		09.5		
4	305	40.8	277	33.4		25.0	302	48.5		38.7	302	21.8		10.8	337	49.2		09.5		
5	320	43.3	292	33.1	+9	26.0	317	49.2	-0	37.9	317	23.9	+0	11.0	352	51.7	-14	09.5		
6	335	45.8	307	32.8	+9	27.0	332	50.0	-0	37.2	332	26.0	+0	11.1	7	54.1	-14	09.5		
7	350	48.2	322	32.5		28.1	347	50.7		36.5	347	28.1		11.3	22	56.5		09.5		
8	5	50.7	337	32.1		29.1	2	51.5		35.8	2	30.2		11.4	37	59.0		09.4		
9	20	53.2	352	31.8		30.1	17	52.2		35.0	17	32.2		11.6	53	01.4		09.4		
10	35	55.6	7	31.5		31.1	32	53.0		34.3	32	34.3		11.7	68	03.8		09.4		
11	50	58.1	22	31.2	+9	32.1	47	53.7	-0	33.6	47	36.4	+0	11.9	83	06.3	-14	09.4		
12	66	00.6	37	30.9	+9	33.1	62	54.5	-0	32.8	62	38.5	+0	12.1	98	08.7	-14	09.4		
13	81	03.0	52	30.5		34.2	77	55.3		32.1	77	40.6		12.2	113	11.1		09.4		
14	96	05.5	67	30.2		35.2	92	56.0		31.4	92	42.6		12.4	128	13.6		09.4		
15	111	08.0	82	29.9		36.2	107	56.8		30.7	107	44.7		12.5	143	16.0		09.4		
16	126	10.4	97	29.6		37.2	122	57.5		29.9	122	46.8		12.7	158	18.4		09.4		
17	141	12.9	112	29.3	+9	38.2	137	58.3	-0	29.2	137	48.9	+0	12.8	173	20.8	-14	09.4		
18	156	15.3	127	29.0	+9	39.2	152	59.0	-0	28.5	152	51.0	+0	13.0	188	23.3	-14	09.4		
19	171	17.8	142	28.6		40.2	167	59.8		27.8	167	53.1		13.2	203	25.7		09.4		
20	186	20.3	157	28.3		41.3	183	00.5		27.0	182	55.1		13.3	218	28.1		09.4		
21	201	22.7	172	28.0		42.3	198	01.3		26.3	197	57.2		13.5	233	30.6		09.4		
22	216	25.2	187	27.7		43.3	213	02.0		25.6	212	59.3		13.6	248	33.0		09.4		
23	231	27.7	202	27.4		44.3	228	02.8		24.9	228	01.4		13.8	263	35.4		09.4		
24	246	30.1	217	27.0	+9	45.3	243	03.6	-0	24.1	243	03.5	+0	13.9	278	37.9	-14	09.4		
Dif	—		-3		+10		+8		+7		+21		+2		+24		0			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 4			Edad: 28 ^d 1 PHE { SD: 14 ^h 9 PMG: 11 ^h 10 ^m											
	hG ☉	Dec		hG ☾	Dif Dec Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	39.5	+21	34.9	197	38.2	+17 57.6	60 N	** **	1 35	2 54	2 34	7	20 15	88
1	195	39.4		35.3	212	10.6 ¹³⁴	+18 08.1 ¹⁰⁵	58	** **	2 06	3 11	46	12	19 59	82
2	210	39.4		35.7	226	43.1 ¹³⁵	18.6 ¹⁰⁵	56	0 35	29	26	2 57	15	46	77
3	225	39.3		36.1	241	15.5 ¹³⁴	29.1 ¹⁰⁵	54	1 27	2 48	38	3 06	19	34	74
4	240	39.2		36.5	255	47.8 ¹³³	39.4 ¹⁰³	52	1 56	3 03	49	15	21	23	72
5	255	39.1	+21	36.9	270	20.1 ¹³³	+18 49.6 ¹⁰²	50	2 17	3 16	3 58	3 22	23	19 14	69
6	270	39.0	+21	37.2	284	52.3 ¹³²	+18 59.8 ¹⁰²	45	2 56	3 43	4 18	3 38	28	18 55	65
7	285	38.9		37.6	299	24.5 ¹³²	+19 09.9 ¹⁰¹	40	3 23	4 03	35	3 51	31	39	62
8	300	38.9		38.0	313	56.6 ¹³¹	19.9 ¹⁰⁰	35	3 44	19	4 48	4 03	34	26	59
9	315	38.8		38.4	328	28.7 ¹³¹	29.8 ⁹⁹	30	4 01	33	5 00	13	36	18 14	57
10	330	38.7		38.8	343	00.8 ¹³¹	39.6 ⁹⁸	20	28	4 56	20	30	40	17 54	54
11	345	38.6	+21	39.2	357	32.8 ¹³⁰	+19 49.3 ⁹⁷	10 N	4 48	5 15	5 38	4 45	44	17 37	51
12	0	38.5	+21	39.5	12	04.7 ¹²⁹	+19 58.9 ⁹⁶	0	5 06	5 32	5 54	4 59	47	17 21	48
13	15	38.4		39.9	26	36.6 ¹²⁹	+20 08.4 ⁹⁵	10 S	21	5 47	6 10	5 13	50	17 06	45
14	30	38.4		40.3	41	08.5 ¹²⁹	17.9 ⁹⁵	20	36	6 03	27	29	53	16 49	42
15	45	38.3		40.7	55	40.3 ¹²⁸	27.2 ⁹³	30	51	20	46	46	58	29	39
16	60	38.2		41.1	70	12.1 ¹²⁸	36.5 ⁹³	35	5 58	30	6 57	5 57	59	18	36
17	75	38.1	+21	41.5	84	43.8 ¹²⁷	+20 45.7 ⁹²	40	6 07	6 40	7 10	6 09	62	16 05	34
18	90	38.0	+21	41.8	99	15.4 ¹²⁶	+20 54.7 ⁹⁰	45	6 16	6 52	7 25	6 23	66	15 50	30
19	105	37.9		42.2	113	47.0 ¹²⁶	+21 03.7 ⁹⁰	50	26	7 07	44	40	71	32	26
20	120	37.8		42.6	128	18.6 ¹²⁶	12.6 ⁸⁹	52	31	13	7 53	48	73	23	24
21	135	37.8		43.0	142	50.1 ¹²⁵	21.4 ⁸⁸	54	35	20	8 03	6 57	76	13	21
22	150	37.7		43.3	157	21.6 ¹²⁵	30.0 ⁸⁶	56	41	28	14	7 08	79	15 02	18
23	165	37.6		43.7	171	53.0 ¹²⁴	38.6 ⁸⁶	58	46	37	26	20	83	14 50	14
24	180	37.5	+21	44.1	186	24.4 ¹²⁴	+21 47.1 ⁸⁵	60 S	6 53	7 47	8 41	7 33	89	14 35	9

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 7 ^h 32 ^m 8		Mag: -4.0 PMG: 9 ^h 30 ^m		Mag: +0.7 PMG: 7 ^h 47 ^m		Mag: -2.3 PMG: 7 ^h 47 ^m		Mag: +0.8 PMG: 5 ^h 25 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	246	30.1	217	27.0	+9 45.3	243 03.6	-0 24.1	243 03.5	+0 13.9	278 37.9	-14 09.4
1	261	32.6	232	26.7	46.3	258 04.3	23.4	258 05.5	14.1	293 40.3	09.4
2	276	35.1	247	26.4	47.3	273 05.1	22.7	273 07.6	14.2	308 42.7	09.4
3	291	37.5	262	26.1	48.4	288 05.8	22.0	288 09.7	14.4	323 45.2	09.4
4	306	40.0	277	25.7	49.4	303 06.6	21.2	303 11.8	14.5	338 47.6	09.4
5	321	42.5	292	25.4	+9 50.4	318 07.3	-0 20.5	318 13.9	+0 14.7	353 50.1	-14 09.4
6	336	44.9	307	25.1	+9 51.4	333 08.1	-0 19.8	333 16.0	+0 14.9	8 52.5	-14 09.4
7	351	47.4	322	24.8	52.4	348 08.8	19.1	348 18.0	15.0	23 54.9	09.4
8	6	49.8	337	24.4	53.4	3 09.6	18.3	3 20.1	15.2	38 57.4	09.4
9	21	52.3	352	24.1	54.4	18 10.3	17.6	18 22.2	15.3	53 59.8	09.4
10	36	54.8	7	23.8	55.4	33 11.1	16.9	33 24.3	15.5	69 02.2	09.4
11	51	57.2	22	23.5	+9 56.4	48 11.9	-0 16.2	48 26.4	+0 15.6	84 04.7	-14 09.4
12	66	59.7	37	23.1	+9 57.5	63 12.6	-0 15.4	63 28.5	+0 15.8	99 07.1	-14 09.4
13	82	02.2	52	22.8	58.5	78 13.4	14.7	78 30.6	15.9	114 09.5	09.4
14	97	04.6	67	22.5	+9 59.5	93 14.1	14.0	93 32.6	16.1	129 12.0	09.4
15	112	07.1	82	22.2	+10 00.5	108 14.9	13.3	108 34.7	16.2	144 14.4	09.4
16	127	09.6	97	21.8	01.5	123 15.6	12.5	123 36.8	16.4	159 16.8	09.4
17	142	12.0	112	21.5	+10 02.5	138 16.4	-0 11.8	138 38.9	+0 16.6	174 19.3	-14 09.4
18	157	14.5	127	21.2	+10 03.5	153 17.1	-0 11.1	153 41.0	+0 16.7	189 21.7	-14 09.4
19	172	17.0	142	20.9	04.5	168 17.9	10.4	168 43.1	16.9	204 24.2	09.4
20	187	19.4	157	20.5	05.5	183 18.7	09.6	183 45.2	17.0	219 26.6	09.4
21	202	21.9	172	20.2	06.5	198 19.4	08.9	198 47.2	17.2	234 29.0	09.4
22	217	24.3	187	19.9	07.5	213 20.2	08.2	213 49.3	17.3	249 31.5	09.4
23	232	26.8	202	19.5	08.5	228 20.9	07.5	228 51.4	17.5	264 33.9	09.4
24	247	29.3	217	19.2	+10 09.5	243 21.7	-0 06.7	243 53.5	+0 17.6	279 36.3	-14 09.4
Dif	—		-3 +10		+8 +7		+21 +2		+24 0		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 57 ^m 6			Edad: 29 ^d 1 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'2 PMG: 11 ^h 57 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m		h m	m	h m	m
0	180	37.5	+21 44.1	186	24.4	+21 47.1	84	60 N	21 04	22 26	** **	2 41 13	21 43 79		
1	195	37.4	44.5	200	55.7 ¹²³	+21 55.5	84	58	20 46	21 53	** **	2 58 18	21 74		
2	210	37.3	44.8	215	26.9 ¹²²	+22 03.8	83	56	32	29	23 37	3 12 22	21 03 70		
3	225	37.2	45.2	229	58.2 ¹²³	11.9	81	54	19	21 10	22 34	25 25	20 48 68		
4	240	37.1	45.6	244	29.3 ¹²¹	20.0	81	52	20 08	20 54	22 03	36 27	35 66		
5	255	37.1	+21 46.0	259	00.5 ¹²²	+22 28.0	80	50	19 58	20 41	21 41	3 45 30	20 23 65		
6	270	37.0	+21 46.3	273	31.5 ¹²⁰	+22 35.8	78	45	19 38	20 14	21 01	4 06 33	20 00 61		
7	285	36.9	46.7	288	02.6 ¹²¹	43.6	78	40	21	19 53	20 34	22 37	19 41 59		
8	300	36.8	47.1	302	33.6 ¹²⁰	51.3	77	35	19 07	37	20 12	37 38	25 57		
9	315	36.7	47.4	317	04.5 ¹¹⁹	+22 58.8	75	30	18 55	19 22	19 55	4 49 41	19 11 56		
10	330	36.6	47.8	331	35.4 ¹¹⁹	+23 06.2	74	20	35	18 59	28	5 10 44	18 48 53		
11	345	36.5	+21 48.2	346	06.2 ¹¹⁸	+23 13.6	74	10 N	18 17	18 40	19 07	5 29 46	18 28 51		
12	0	36.4	+21 48.5	0	37.0 ¹¹⁸	+23 20.8	72	0	18 01	18 23	18 49	5 46 49	18 09 50		
13	15	36.4	48.9	15	07.8 ¹¹⁸	27.9	71	10 S	17 45	18 08	34	6 03 51	17 51 47		
14	30	36.3	49.3	29	38.5 ¹¹⁷	34.9	70	20	28	17 52	19	22 54	31 45		
15	45	36.2	49.6	44	09.1 ¹¹⁶	41.8	69	30	17 08	34	18 04	44 56	17 08 43		
16	60	36.1	50.0	58	39.8 ¹¹⁷	48.6	68	35	16 57	25	17 56	6 56 59	16 54 42		
17	75	36.0	+21 50.4	73	10.3 ¹¹⁵	+23 55.3	67	40	16 44	17 14	17 48	7 11 61	16 39 39		
18	90	35.9	+21 50.7	87	40.9 ¹¹⁶	+24 01.9	66	45	16 29	17 02	17 38	7 29 63	16 20 38		
19	105	35.8	51.1	102	11.3 ¹¹⁴	08.3	64	50	10	16 47	28	7 51 67	15 58 33		
20	120	35.7	51.5	116	41.8 ¹¹⁵	14.6	63	52	16 01	41	23	8 01 69	47 32		
21	135	35.6	51.8	131	12.2 ¹¹⁴	20.9	63	54	15 51	33	18	13 72	34 30		
22	150	35.5	52.2	145	42.5 ¹¹³	27.0	61	56	40	25	13	27 74	20 27		
23	165	35.5	52.5	160	12.9 ¹¹⁴	33.0	60	58	27	16	07	8 43 79	15 04 23		
24	180	35.4	+21 52.9	174	43.1 ¹¹²	+24 38.8	58	60 S	15 12	16 06	17 01	9 02 85	14 44 17		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 7 ^h 28 ^m 8		Mag: -4.0 PMG: 9 ^h 31 ^m		Mag: +0.7 PMG: 7 ^h 46 ^m		Mag: -2.3 PMG: 7 ^h 43 ^m		Mag: +0.8 PMG: 5 ^h 21 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	247	29.3	217	19.2	243	21.7	243	53.5	279	36.3					
1	262	31.7	232	18.9	258	22.4	258	55.6	294	38.8					
2	277	34.2	247	18.6	273	23.2	273	57.7	309	41.2					
3	292	36.7	262	18.2	288	24.0	288	59.8	324	43.7					
4	307	39.1	277	17.9	303	24.7	304	01.9	339	46.1					
5	322	41.6	292	17.6	318	25.5	319	03.9	354	48.5					
6	337	44.1	307	17.2	333	26.2	334	06.0	9	51.0					
7	352	46.5	322	16.9	348	27.0	349	08.1	24	53.4					
8	7	49.0	337	16.6	3	27.7	4	10.2	39	55.9					
9	22	51.4	352	16.2	18	28.5	19	12.3	54	58.3					
10	37	53.9	7	15.9	33	29.3	34	14.4	70	00.7					
11	52	56.4	22	15.6	48	30.0	49	16.5	85	03.2					
12	67	58.8	37	15.2	63	30.8	64	18.6	100	05.6					
13	83	01.3	52	14.9	78	31.5	79	20.7	115	08.0					
14	98	03.8	67	14.6	93	32.3	94	22.7	130	10.5					
15	113	06.2	82	14.2	108	33.0	109	24.8	145	12.9					
16	128	08.7	97	13.9	123	33.8	124	26.9	160	15.4					
17	143	11.2	112	13.6	138	34.6	139	29.0	175	17.8					
18	158	13.6	127	13.2	153	35.3	154	31.1	190	20.3					
19	173	16.1	142	12.9	168	36.1	169	33.2	205	22.7					
20	188	18.6	157	12.5	183	36.8	184	35.3	220	25.1					
21	203	21.0	172	12.2	198	37.6	199	37.4	235	27.6					
22	218	23.5	187	11.9	213	38.3	214	39.5	250	30.0					
23	233	25.9	202	11.5	228	39.1	229	41.6	265	32.5					
24	248	28.4	217	11.2	243	39.9	244	43.6	280	34.9					
Dif	—		-3	+10	+8	+7	+21	+2	+24	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 7				Edad: 0 ^d 5 PHE { SD: 14/8 PMG: 12 ^h 47 ^m R ^o : 50 ^m 4 ^h : 54/2 12 ^h : 54/1 20 ^h : 54/1													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	35.4	+21	52.9	174	43.1	+24	38.8	60 N	** **	1 29	2 51	2 54	24	23 02	62		
1	195	35.3		53.3	189	13.4		44.6	58	** **	2 02	3 08	3 16	30	22 35	59		
2	210	35.2		53.6	203	43.6		50.2	56	0 18	26	23	34	33	22 13	58		
3	225	35.1		54.0	218	13.7	+24	55.8	54	1 21	2 45	36	3 50	35	21 56	57		
4	240	35.0		54.3	232	43.9	+25	01.2	52	1 52	3 01	47	4 03	37	41	56		
5	255	34.9	+21	54.7	247	13.9	+25	06.5	50	2 14	3 14	3 57	4 15	38	21 28	55		
6	270	34.8	+21	55.0	261	44.0	+25	11.6	45	2 54	3 41	4 17	4 39	42	21 01	55		
7	285	34.7		55.4	276	14.0		16.7	40	3 22	4 02	34	4 59	43	20 40	54		
8	300	34.6		55.8	290	44.0		21.6	35	3 43	19	4 48	5 15	45	22	54		
9	315	34.5		56.1	305	13.9		26.4	30	4 00	33	5 00	30	45	20 07	53		
10	330	34.4		56.5	319	43.8		31.1	20	27	4 56	20	5 54	47	19 41	53		
11	345	34.3	+21	56.8	334	13.7	+25	35.7	10 N	4 48	5 15	5 38	6 15	49	19 19	52		
12	0	34.3	+21	57.2	348	43.6	+25	40.1	0	5 06	5 32	5 54	6 35	50	18 59	50		
13	15	34.2		57.5	3	13.4		44.4	10 S	22	5 48	6 10	6 54	52	38	50		
14	30	34.1		57.9	17	43.2		48.6	20	37	6 04	28	7 16	53	18 16	49		
15	45	34.0		58.2	32	12.9		52.7	30	5 52	21	47	40	55	17 51	48		
16	60	33.9		58.6	46	42.6	+25	56.7	35	6 00	31	6 59	7 55	56	36	47		
17	75	33.8	+21	58.9	61	12.3	+26	00.5	40	6 08	6 42	7 12	8 12	57	17 18	47		
18	90	33.7	+21	59.3	75	42.0	+26	04.2	45	6 17	6 54	7 27	8 32	59	16 58	45		
19	105	33.6	+21	59.6	90	11.6		07.8	50	28	7 09	46	8 58	60	31	44		
20	120	33.5	+22	00.0	104	41.3		11.3	52	32	15	7 55	9 10	62	19	42		
21	135	33.4	+22	00.3	119	10.9		14.6	54	37	23	8 05	25	63	16 04	41		
22	150	33.3		00.6	133	40.4		17.8	56	43	31	16	9 41	65	15 47	40		
23	165	33.2		01.0	148	10.0		20.9	58	49	40	29	10 02	67	27	37		
24	180	33.1	+22	01.3	162	39.5	+26	23.8	60 S	6 55	7 50	8 45	10 27	72	15 01	33		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 24 ^m 9		Mag: -4.0 PMG: 9 ^h 31 ^m		Mag: +0.7 PMG: 7 ^h 45 ^m		Mag: -2.3 PMG: 7 ^h 40 ^m		Mag: +0.8 PMG: 5 ^h 17 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	248	28.4	217	11.2	+10	33.6	243	39.9	+0	10.6
1	263	30.9	232	10.9		34.6	258	40.6		11.3
2	278	33.3	247	10.5		35.6	273	41.4		12.1
3	293	35.8	262	10.2		36.6	288	42.1		12.8
4	308	38.3	277	09.8		37.6	303	42.9		13.5
5	323	40.7	292	09.5	+10	38.6	318	43.7	+0	14.2
6	338	43.2	307	09.2	+10	39.6	333	44.4	+0	15.0
7	353	45.7	322	08.8		40.6	348	45.2		15.7
8	8	48.1	337	08.5		41.6	3	45.9		16.4
9	23	50.6	352	08.1		42.6	18	46.7		17.1
10	38	53.1	7	07.8		43.6	33	47.4		17.9
11	53	55.5	22	07.4	+10	44.6	48	48.2	+0	18.6
12	68	58.0	37	07.1	+10	45.6	63	49.0	+0	19.3
13	84	00.4	52	06.8		46.6	78	49.7		20.0
14	99	02.9	67	06.4		47.6	93	50.5		20.7
15	114	05.4	82	06.1		48.6	108	51.2		21.5
16	129	07.8	97	05.7		49.5	123	52.0		22.2
17	144	10.3	112	05.4	+10	50.5	138	52.8	+0	22.9
18	159	12.8	127	05.0	+10	51.5	153	53.5	+0	23.6
19	174	15.2	142	04.7		52.5	168	54.3		24.4
20	189	17.7	157	04.4		53.5	183	55.0		25.1
21	204	20.2	172	04.0		54.5	198	55.8		25.8
22	219	22.6	187	03.7		55.5	213	56.6		26.5
23	234	25.1	202	03.3		56.5	228	57.3		27.2
24	249	27.6	217	03.0	+10	57.5	243	58.1	+0	28.0
Dif	—		-3 +10		+8 +7		+21 +2		+24 0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 9			Edad: 1 ^d 5 PHE { 4 ^h : 54 ^h 0 12 ^h : 54 ^h 0 20 ^h : 54 ^h 0 SD: 14 ^h 7 PMG: 13 ^h 37 ^m R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m				
0	180	33.1	+22	01.3	162	39.5	+26 23.8	60 N	21 08	22 32	** ** *	3 18 44	** ** *	**				
1	195	33.0		01.7	177	09.0 ¹⁰⁵	26.7 ²⁹	58	20 50	21 57	** ** *	3 46 46	23 34 41					
2	210	32.9		02.0	191	38.5 ¹⁰⁵	29.4 ²⁷	56	34	32	** ** *	4 07 47	23 11 43					
3	225	32.8		02.4	206	08.0 ¹⁰⁵	31.9 ²⁵	54	22	21 13	22 40	25 48	22 53 44					
4	240	32.7		02.7	220	37.4 ¹⁰⁴	34.4 ²⁵	52	10	20 57	22 07	40 49	37 45					
5	255	32.6	+22	03.0	235	06.8 ¹⁰⁴	+26 36.7 ²³	50	20 00	20 43	21 44	4 53 49	22 23 46					
6	270	32.6	+22	03.4	249	36.3 ¹⁰⁵	+26 38.9 ²²	45	19 40	20 16	21 04	5 21 49	21 56 47					
7	285	32.5		03.7	264	05.7 ¹⁰⁴	40.9 ²⁰	40	23	19 55	20 35	5 42 50	34 47					
8	300	32.4		04.1	278	35.0 ¹⁰³	42.9 ²⁰	35	19 09	38	20 14	6 00 50	16 48					
9	315	32.3		04.4	293	04.4 ¹⁰⁴	44.7 ¹⁸	30	18 57	24	19 56	15 50	21 00 49					
10	330	32.2		04.7	307	33.8 ¹⁰⁴	46.4 ¹⁷	20	36	19 00	29	6 41 51	20 34 49					
11	345	32.1	+22	05.1	322	03.1 ¹⁰³	+26 47.9 ¹⁵	10 N	18 18	18 41	19 08	7 04 50	20 11 50					
12	0	32.0	+22	05.4	336	32.5 ¹⁰⁴	+26 49.3 ¹⁴	0	18 02	18 24	18 50	7 25 51	19 49 51					
13	15	31.9		05.7	351	01.8 ¹⁰³	50.6 ¹³	10 S	17 45	18 08	34	7 46 51	28 51					
14	30	31.8		06.1	5	31.2 ¹⁰⁴	51.8 ¹²	20	28	17 52	19	8 09 51	19 05 52					
15	45	31.7		06.4	20	00.5 ¹⁰³	52.8 ¹⁰	30	17 08	34	18 04	35 51	18 39 52					
16	60	31.6		06.7	34	29.8 ¹⁰³	53.7 ⁹	35	16 56	24	17 55	8 51 51	23 52					
17	75	31.5	+22	07.1	48	59.1 ¹⁰³	+26 54.5 ⁸	40	16 43	17 13	17 47	9 09 51	18 05 53					
18	90	31.4	+22	07.4	63	28.4 ¹⁰³	+26 55.2 ⁷	45	16 28	17 01	17 37	9 31 50	17 43 53					
19	105	31.3		07.7	77	57.7 ¹⁰³	55.7 ⁵	50	16 08	16 46	27	9 58 51	15 54					
20	120	31.2		08.1	92	27.1 ¹⁰⁴	56.1 ⁴	52	15 59	39	22	10 12 51	17 01 54					
21	135	31.1		08.4	106	56.4 ¹⁰³	56.3 ²	54	49	32	17	28 50	16 45 55					
22	150	31.0		08.7	121	25.7 ¹⁰³	56.4 ¹	56	38	23	11	10 46 51	27 54					
23	165	30.9		09.1	135	55.0 ¹⁰³	56.4 ⁰	58	24	14	17 05	11 09 50	16 04 55					
24	180	30.8	+22	09.4	150	24.3 ¹⁰³	+26 56.3 ¹	60 S	15 09	16 04	16 59	11 39 49	15 34 56					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 7 ^h 21 ^m 0		Mag: -3.9 PMG: 9 ^h 32 ^m			Mag: +0.7 PMG: 7 ^h 44 ^m			Mag: -2.3 PMG: 7 ^h 37 ^m			Mag: +0.8 PMG: 5 ^h 13 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	'	'				
0	249	27.6	217	03.0	+10	57.5	243	58.1	+0	28.0	245	33.9	+0	24.9	281	33.6	-14	09.4
1	264	30.0	232	02.6		58.5	258	58.8		28.7	260	36.0		25.0	296	36.0		09.4
2	279	32.5	247	02.3	+10	59.5	273	59.6		29.4	275	38.1		25.2	311	38.4		09.4
3	294	34.9	262	01.9	+11	00.5	289	00.4		30.1	290	40.2		25.3	326	40.9		09.4
4	309	37.4	277	01.6		01.4	304	01.1		30.9	305	42.3		25.5	341	43.3		09.4
5	324	39.9	292	01.2	+11	02.4	319	01.9	+0	31.6	320	44.4	+0	25.6	356	45.8	-14	09.4
6	339	42.3	307	00.9	+11	03.4	334	02.6	+0	32.3	335	46.5	+0	25.8	11	48.2	-14	09.4
7	354	44.8	322	00.5		04.4	349	03.4		33.0	350	48.6		25.9	26	50.7		09.4
8	9	47.3	337	00.2		05.4	4	04.2		33.7	5	50.7		26.1	41	53.1		09.4
9	24	49.7	351	59.8		06.4	19	04.9		34.5	20	52.8		26.2	56	55.6		09.4
10	39	52.2	6	59.5		07.4	34	05.7		35.2	35	54.9		26.4	71	58.0		09.4
11	54	54.7	21	59.1	+11	08.4	49	06.4	+0	35.9	50	57.0	+0	26.5	87	00.5	-14	09.4
12	69	57.1	36	58.8	+11	09.3	64	07.2	+0	36.6	65	59.1	+0	26.7	102	02.9	-14	09.4
13	84	59.6	51	58.4		10.3	79	08.0		37.4	81	01.2		26.8	117	05.4		09.4
14	100	02.1	66	58.1		11.3	94	08.7		38.1	96	03.3		27.0	132	07.8		09.4
15	115	04.5	81	57.7		12.3	109	09.5		38.8	111	05.4		27.1	147	10.3		09.4
16	130	07.0	96	57.4		13.3	124	10.2		39.5	126	07.5		27.3	162	12.7		09.4
17	145	09.4	111	57.0	+11	14.3	139	11.0	+0	40.2	141	09.6	+0	27.4	177	15.2	-14	09.4
18	160	11.9	126	56.7	+11	15.3	154	11.8	+0	41.0	156	11.7	+0	27.6	192	17.6	-14	09.4
19	175	14.4	141	56.3		16.2	169	12.5		41.7	171	13.8		27.7	207	20.1		09.4
20	190	16.8	156	55.9		17.2	184	13.3		42.4	186	15.9		27.8	222	22.5		09.4
21	205	19.3	171	55.6		18.2	199	14.0		43.1	201	18.0		28.0	237	25.0		09.4
22	220	21.8	186	55.2		19.2	214	14.8		43.8	216	20.1		28.1	252	27.4		09.4
23	235	24.2	201	54.9		20.2	229	15.6		44.6	231	22.2		28.3	267	29.9		09.4
24	250	26.7	216	54.5	+11	21.2	244	16.3	+0	45.3	246	24.3	+0	28.4	282	32.3	-14	09.4
Dif	—		-4 +10			+8 +7			+21 +1			+24 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 0			Edad: 2 ^d 5 SD: 14/7 PMG: 14 ^h 28 ^m	PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0 R°: 50 ^m																
	hG ☉	Dec	Dif			Náutico		Civil	Hora		R°	Hora	R°								
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m				
0	180	30.8	+22	09.4	150	24.3	+26 56.3	60 N	** **	1 23	2 48	4 02	67		0 04	37					
1	195	30.7		09.7	164	53.6 ¹⁰³	56.1	2	58	** **	1 58	3 06	32	64	** **	**	**				
2	210	30.6		10.0	179	23.0 ¹⁰⁴	55.7	4	56	** **	2 23	21	4 54	62	23 54	29					
3	225	30.5		10.4	193	52.3 ¹⁰³	55.2	5	54	1 16	43	34	5 13	60	37	32					
4	240	30.4		10.7	208	21.6 ¹⁰³	54.5	7	52	1 48	2 59	45	29	59	22	34					
5	255	30.3	+22	11.0	222	51.0 ¹⁰⁴	+26 53.7	8	50	2 12	3 12	3 55	5 42	58	23 09	36					
6	270	30.2	+22	11.3	237	20.3 ¹⁰³	+26 52.8	9	45	2 52	3 40	4 16	6 10	56	22 43	38					
7	285	30.1		11.7	251	49.7 ¹⁰⁴	51.8	10	40	3 20	4 01	33	32	55	21	41					
8	300	30.0		12.0	266	19.1 ¹⁰⁴	50.6	12	35	42	18	47	6 50	54	22 04	43					
9	315	29.9		12.3	280	48.5 ¹⁰⁴	49.4	12	30	3 59	32	4 59	7 05	54	21 49	44					
10	330	29.8		12.6	295	17.9 ¹⁰⁴	47.9	15	20	4 27	4 56	5 20	32	52	23	46					
11	345	29.7	+22	12.9	309	47.3 ¹⁰⁴	+26 46.4	15	10 N	4 48	5 15	5 38	7 54	52	21 01	48					
12	0	29.6	+22	13.3	324	16.8 ¹⁰⁵	+26 44.7	17	0	5 06	5 32	5 54	8 16	50	20 40	50					
13	15	29.5		13.6	338	46.2 ¹⁰⁴	42.9	18	10 S	22	5 48	6 11	8 37	49	20 19	52					
14	30	29.4		13.9	353	15.7 ¹⁰⁵	41.0	19	20	37	6 04	28	9 00	48	19 57	53					
15	45	29.3		14.2	7	45.2 ¹⁰⁵	38.9	21	30	5 53	22	6 48	26	46	31	55					
16	60	29.2		14.5	22	14.7 ¹⁰⁵	36.8	21	35	6 01	32	7 00	9 42	45	19 15	57					
17	75	29.1	+22	14.8	36	44.2 ¹⁰⁵	+26 34.4	24	40	6 09	6 43	7 13	10 00	44	18 58	57					
18	90	29.0	+22	15.2	51	13.8 ¹⁰⁶	+26 32.0	24	45	6 19	6 56	7 29	10 21	43	18 36	60					
19	105	28.9		15.5	65	43.4 ¹⁰⁶	29.5	25	50	29	7 10	48	10 49	41	18 09	62					
20	120	28.8		15.8	80	13.0 ¹⁰⁶	26.8	27	52	34	17	7 57	11 03	39	17 55	64					
21	135	28.7		16.1	94	42.6 ¹⁰⁶	24.0	28	54	39	25	8 07	18	38	40	65					
22	150	28.6		16.4	109	12.3 ¹⁰⁷	21.0	30	56	45	33	19	37	35	17 21	68					
23	165	28.5		16.7	123	41.9 ¹⁰⁶	18.0	30	58	51	42	32	11 59	32	16 59	71					
24	180	28.4	+22	17.0	138	11.6 ¹⁰⁷	+26 14.8	32	60 S	6 58	7 53	8 48	12 28	28	16 30	76					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 7 ^h 17 ^m 0			Mag: -3.9 PMG: 9 ^h 33 ^m			Mag: +0.7 PMG: 7 ^h 43 ^m			Mag: -2.3 PMG: 7 ^h 33 ^m			Mag: +0.7 PMG: 5 ^h 09 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	250	26.7	216	54.5	+11	21.2	244	16.3	+0	45.3	246	24.3	+0	28.4	282	32.3	-14	09.4			
1	265	29.2	231	54.2		22.1	259	17.1		46.0	261	26.4		28.6	297	34.8		09.5			
2	280	31.6	246	53.8		23.1	274	17.9		46.7	276	28.5		28.7	312	37.2		09.5			
3	295	34.1	261	53.5		24.1	289	18.6		47.4	291	30.6		28.9	327	39.7		09.5			
4	310	36.6	276	53.1		25.1	304	19.4		48.2	306	32.7		29.0	342	42.1		09.5			
5	325	39.0	291	52.7	+11	26.1	319	20.1	+0	48.9	321	34.8	+0	29.2	357	44.6	-14	09.5			
6	340	41.5	306	52.4	+11	27.1	334	20.9	+0	49.6	336	36.9	+0	29.3	12	47.0	-14	09.5			
7	355	43.9	321	52.0		28.0	349	21.7		50.3	351	39.0		29.5	27	49.5		09.5			
8	10	46.4	336	51.7		29.0	4	22.4		51.1	6	41.1		29.6	42	51.9		09.5			
9	25	48.9	351	51.3		30.0	19	23.2		51.8	21	43.2		29.8	57	54.4		09.5			
10	40	51.3	6	50.9		31.0	34	23.9		52.5	36	45.3		29.9	72	56.8		09.5			
11	55	53.8	21	50.6	+11	31.9	49	24.7	+0	53.2	51	47.4	+0	30.0	87	59.3	-14	09.5			
12	70	56.3	36	50.2	+11	32.9	64	25.5	+0	53.9	66	49.5	+0	30.2	103	01.7	-14	09.5			
13	85	58.7	51	49.9		33.9	79	26.2		54.7	81	51.6		30.3	118	04.2		09.5			
14	101	01.2	66	49.5		34.9	94	27.0		55.4	96	53.7		30.5	133	06.6		09.5			
15	116	03.7	81	49.1		35.9	109	27.8		56.1	111	55.8		30.6	148	09.1		09.5			
16	131	06.1	96	48.8		36.8	124	28.5		56.8	126	57.9		30.8	163	11.5		09.5			
17	146	08.6	111	48.4	+11	37.8	139	29.3	+0	57.5	142	00.0	+0	30.9	178	14.0	-14	09.5			
18	161	11.0	126	48.0	+11	38.8	154	30.0	+0	58.3	157	02.1	+0	31.1	193	16.4	-14	09.5			
19	176	13.5	141	47.7		39.8	169	30.8		59.0	172	04.2		31.2	208	18.9		09.5			
20	191	16.0	156	47.3		40.7	184	31.6	+0	59.7	187	06.3		31.4	223	21.3		09.5			
21	206	18.4	171	47.0		41.7	199	32.3	+1	00.4	202	08.4		31.5	238	23.8		09.5			
22	221	20.9	186	46.6		42.7	214	33.1		01.1	217	10.5		31.6	253	26.2		09.5			
23	236	23.4	201	46.2		43.7	229	33.9		01.8	232	12.6		31.8	268	28.7		09.5			
24	251	25.8	216	45.9	+11	44.6	244	34.6	+1	02.6	247	14.7	+0	31.9	283	31.1	-14	09.5			
Dif	—			-4			+10			+8			+7			+21			+1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 2			Edad: 3 ^d 5 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 2 R°: 48 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	h m	h m				
0	180	28.4	+22	17.0	138	11.6	+26	14.8	60 N	21 11	22 38	** **	5 09 83	0 41 20				
1	195	28.3		17.3	152	41.4 ¹⁰⁸		11.5 ³³	58	20 52	22 01	** **	36 76	0 15 25				
2	210	28.2		17.7	167	11.1 ¹⁰⁷		08.0 ³⁵	56	37	21 36	** **	5 56 73	** ** *				
3	225	28.0		18.0	181	40.9 ¹⁰⁸		04.5 ³⁵	54	24	21 16	22 45	6 13 70	** ** *				
4	240	27.9		18.3	196	10.7 ¹⁰⁸	+26	00.8 ³⁷	52	12	20 59	22 11	28 67	23 56 25				
5	255	27.8	+22	18.6	210	40.6 ¹⁰⁹	+25	57.0 ³⁸	50	20 02	20 46	21 47	6 40 66	23 45 27				
6	270	27.7	+22	18.9	225	10.5 ¹⁰⁹	+25	53.1 ³⁹	45	19 41	20 18	21 06	7 06 63	23 21 32				
7	285	27.6		19.2	239	40.4 ¹⁰⁹		49.0 ⁴¹	40	24	19 56	20 37	27 60	23 02 35				
8	300	27.5		19.5	254	10.3 ¹⁰⁹		44.9 ⁴¹	35	19 10	39	20 15	44 58	22 47 37				
9	315	27.4		19.8	268	40.3 ¹¹⁰		40.6 ⁴³	30	18 58	25	19 58	7 59 56	33 39				
10	330	27.3		20.1	283	10.3 ¹¹⁰		36.2 ⁴⁴	20	37	19 01	30	8 24 53	22 09 43				
11	345	27.2	+22	20.4	297	40.4 ¹¹¹	+25	31.6 ⁴⁶	10 N	18 19	18 41	19 08	8 46 51	21 49 45				
12	0	27.1	+22	20.7	312	10.5 ¹¹¹	+25	27.0 ⁴⁶	0	18 02	18 24	18 50	9 06 49	21 30 48				
13	15	27.0		21.0	326	40.6 ¹¹¹		22.2 ⁴⁸	10 S	17 45	18 08	34	26 47	21 11 50				
14	30	26.9		21.3	341	10.7 ¹¹¹		17.3 ⁴⁹	20	28	17 51	19	9 48 44	20 50 53				
15	45	26.8		21.6	355	40.9 ¹¹²		12.3 ⁵⁰	30	17 08	34	18 03	10 12 42	26 56				
16	60	26.7		21.9	10	11.2 ¹¹³		07.2 ⁵¹	35	16 56	24	17 55	27 40	20 12 58				
17	75	26.6	+22	22.2	24	41.5 ¹¹³	+25	01.9 ⁵³	40	16 42	17 13	17 46	10 44 38	19 55 61				
18	90	26.5	+22	22.5	39	11.8 ¹¹³	+24	56.6 ⁵³	45	16 27	17 00	17 37	11 04 35	19 36 64				
19	105	26.4		22.8	53	42.1 ¹¹³		51.1 ⁵⁵	50	16 07	16 45	26	30 31	19 11 68				
20	120	26.3		23.1	68	12.5 ¹¹⁴		45.5 ⁵⁶	52	15 58	38	21	42 29	18 59 70				
21	135	26.2		23.4	82	42.9 ¹¹⁴		39.8 ⁵⁷	54	48	30	16	11 56 27	45 73				
22	150	26.1		23.7	97	13.4 ¹¹⁵		34.0 ⁵⁸	56	36	22	10	12 12 24	29 76				
23	165	25.9		24.0	111	43.9 ¹¹⁵		28.1 ⁵⁹	58	22	12	17 04	31 20	18 10 80				
24	180	25.8	+22	24.3	126	14.5 ¹¹⁶	+24	22.0 ⁶¹	60 S	15 07	16 02	16 57	12 56 14	17 46 87				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 7 ^h 13 ^m 1		Mag: -3.9 PMG: 9 ^h 33 ^m				Mag: +0.7 PMG: 7 ^h 41 ^m				Mag: -2.3 PMG: 7 ^h 30 ^m				Mag: +0.7 PMG: 5 ^h 05 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	251	25.8	216	45.9	+11	44.6	244	34.6	+1	02.6	247	14.7	+0	31.9	283	31.1	-14	09.5
1	266	28.3	231	45.5		45.6	259	35.4		03.3	262	16.8		32.1	298	33.6		09.5
2	281	30.8	246	45.1		46.6	274	36.1		04.0	277	19.0		32.2	313	36.1		09.6
3	296	33.2	261	44.8		47.6	289	36.9		04.7	292	21.1		32.4	328	38.5		09.6
4	311	35.7	276	44.4		48.5	304	37.7		05.4	307	23.2		32.5	343	41.0		09.6
5	326	38.2	291	44.0	+11	49.5	319	38.4	+1	06.2	322	25.3	+0	32.7	358	43.4	-14	09.6
6	341	40.6	306	43.7	+11	50.5	334	39.2	+1	06.9	337	27.4	+0	32.8	13	45.9	-14	09.6
7	356	43.1	321	43.3		51.4	349	40.0		07.6	352	29.5		33.0	28	48.3		09.6
8	11	45.5	336	42.9		52.4	4	40.7		08.3	7	31.6		33.1	43	50.8		09.6
9	26	48.0	351	42.6		53.4	19	41.5		09.0	22	33.7		33.2	58	53.2		09.6
10	41	50.5	6	42.2		54.4	34	42.3		09.8	37	35.8		33.4	73	55.7		09.6
11	56	52.9	21	41.8	+11	55.3	49	43.0	+1	10.5	52	37.9	+0	33.5	88	58.1	-14	09.6
12	71	55.4	36	41.4	+11	56.3	64	43.8	+1	11.2	67	40.0	+0	33.7	104	00.6	-14	09.6
13	86	57.9	51	41.1		57.3	79	44.5		11.9	82	42.1		33.8	119	03.1		09.6
14	102	00.3	66	40.7		58.2	94	45.3		12.6	97	44.2		34.0	134	05.5		09.6
15	117	02.8	81	40.3	+11	59.2	109	46.1		13.4	112	46.3		34.1	149	08.0		09.6
16	132	05.3	96	40.0	+12	00.2	124	46.8		14.1	127	48.5		34.2	164	10.4		09.6
17	147	07.7	111	39.6	+12	01.1	139	47.6	+1	14.8	142	50.6	+0	34.4	179	12.9	-14	09.6
18	162	10.2	126	39.2	+12	02.1	154	48.4	+1	15.5	157	52.7	+0	34.5	194	15.3	-14	09.6
19	177	12.7	141	38.8		03.1	169	49.1		16.2	172	54.8		34.7	209	17.8		09.6
20	192	15.1	156	38.5		04.0	184	49.9		16.9	187	56.9		34.8	224	20.3		09.6
21	207	17.6	171	38.1		05.0	199	50.7		17.7	202	59.0		35.0	239	22.7		09.7
22	222	20.0	186	37.7		06.0	214	51.4		18.4	218	01.1		35.1	254	25.2		09.7
23	237	22.5	201	37.3		06.9	229	52.2		19.1	233	03.2		35.2	269	27.6		09.7
24	252	25.0	216	37.0	+12	07.9	244	52.9	+1	19.8	248	05.3	+0	35.4	284	30.1	-14	09.7
Dif	—		-4		+10		+8		+7		+21		+1		+25			

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 11 ^h 58 ^m 4			Edad: 4 ^d 5 SD: 14'8 PMG: 16 ^h 06 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	25.8	+22	24.3	126	14.5	+24	22.0	60 N	** **	1 18	2 45	6 32	87	1 01	11		
1	195	25.7		24.6	140	45.1 ¹¹⁶		15.9 ⁶¹	58	** **	1 55	3 04	6 52	82	0 40	16		
2	210	25.6		24.9	155	15.7 ¹¹⁶		09.6 ⁶³	56	** **	2 20	19	7 09	77	23	20		
3	225	25.5		25.2	169	46.4 ¹¹⁷	+24	03.2 ⁶⁴	54	1 11	40	32	23	74	0 09	22		
4	240	25.4		25.5	184	17.1 ¹¹⁷	+23	56.7 ⁶⁵	52	1 45	2 57	44	35	72	** **	**		
5	255	25.3	+22	25.8	198	47.9 ¹¹⁸	+23	50.1 ⁶⁶	50	2 09	3 11	3 54	7 46	70	** **	**		
6	270	25.2	+22	26.1	213	18.7 ¹¹⁸	+23	43.4 ⁶⁷	45	2 51	3 39	4 15	8 09	65	23 53	26		
7	285	25.1		26.4	227	49.6 ¹¹⁹		36.6 ⁶⁸	40	3 19	4 00	32	27	62	37	30		
8	300	25.0		26.6	242	20.5 ¹¹⁹		29.6 ⁷⁰	35	41	17	47	42	59	24	32		
9	315	24.9		26.9	256	51.4 ¹¹⁹		22.6 ⁷⁰	30	3 59	32	4 59	8 55	57	23 12	35		
10	330	24.8		27.2	271	22.4 ¹²⁰		15.4 ⁷²	20	4 27	4 56	5 20	9 17	54	22 52	39		
11	345	24.7	+22	27.5	285	53.5 ¹²¹	+23	08.2 ⁷²	10 N	4 48	5 15	5 38	9 37	50	22 34	43		
12	0	24.6	+22	27.8	300	24.5 ¹²⁰	+23	00.8 ⁷⁴	0	5 06	5 32	5 55	9 55	47	22 18	46		
13	15	24.4		28.1	314	55.7 ¹²²	+22	53.3 ⁷⁵	10 S	23	5 49	6 11	10 13	44	22 01	49		
14	30	24.3		28.4	329	26.8 ¹²¹		45.8 ⁷⁵	20	38	6 05	29	32	41	21 43	53		
15	45	24.2		28.6	343	58.1 ¹²³		38.1 ⁷⁷	30	5 53	23	6 49	10 54	37	22	58		
16	60	24.1		28.9	358	29.3 ¹²²		30.3 ⁷⁸	35	6 02	33	7 01	11 07	34	21 10	60		
17	75	24.0	+22	29.2	13	00.6 ¹²³	+22	22.4 ⁷⁹	40	6 10	6 44	7 14	11 22	32	20 56	63		
18	90	23.9	+22	29.5	27	32.0 ¹²⁴	+22	14.4 ⁸⁰	45	6 20	6 57	7 30	11 39	29	20 40	66		
19	105	23.8		29.8	42	03.4 ¹²⁴	+22	06.3 ⁸¹	50	31	7 12	50	12 01	24	19	71		
20	120	23.7		30.1	56	34.8 ¹²⁴	+21	58.1 ⁸²	52	36	19	7 59	11	22	20 09	73		
21	135	23.6		30.3	71	06.3 ¹²⁵		49.8 ⁸³	54	41	27	8 10	23	19	19 58	76		
22	150	23.5		30.6	85	37.9 ¹²⁶		41.4 ⁸⁴	56	47	35	21	36	16	45	79		
23	165	23.3		30.9	100	09.4 ¹²⁵		32.9 ⁸⁵	58	6 53	45	35	12 51	13	30	83		
24	180	23.2	+22	31.2	114	41.1 ¹²⁷	+21	24.4 ⁸⁵	60 S	7 00	7 56	8 51	13 10	7	19 13	88		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 7 ^h 09 ^m 2		Mag: -3.9 PMG: 9 ^h 34 ^m				Mag: +0.6 PMG: 7 ^h 40 ^m				Mag: -2.3 PMG: 7 ^h 27 ^m				Mag: +0.7 PMG: 5 ^h 01 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	252	25.0	216	37.0	+12	07.9	244	52.9	+1	19.8	248	05.3	+0	35.4	284	30.1	-14	09.7
1	267	27.4	231	36.6		08.9	259	53.7		20.5	263	07.4		35.5	299	32.5		09.7
2	282	29.9	246	36.2		09.8	274	54.5		21.2	278	09.5		35.7	314	35.0		09.7
3	297	32.4	261	35.8		10.8	289	55.2		22.0	293	11.7		35.8	329	37.5		09.7
4	312	34.8	276	35.5		11.7	304	56.0		22.7	308	13.8		36.0	344	39.9		09.7
5	327	37.3	291	35.1	+12	12.7	319	56.8	+1	23.4	323	15.9	+0	36.1	359	42.4	-14	09.7
6	342	39.8	306	34.7	+12	13.7	334	57.5	+1	24.1	338	18.0	+0	36.2	14	44.8	-14	09.7
7	357	42.2	321	34.3		14.6	349	58.3		24.8	353	20.1		36.4	29	47.3		09.7
8	12	44.7	336	34.0		15.6	4	59.1		25.6	8	22.2		36.5	44	49.8		09.7
9	27	47.2	351	33.6		16.6	19	59.8		26.3	23	24.3		36.7	59	52.2		09.7
10	42	49.6	6	33.2		17.5	35	00.6		27.0	38	26.4		36.8	74	54.7		09.7
11	57	52.1	21	32.8	+12	18.5	50	01.4	+1	27.7	53	28.6	+0	37.0	89	57.1	-14	09.7
12	72	54.5	36	32.4	+12	19.4	65	02.1	+1	28.4	68	30.7	+0	37.1	104	59.6	-14	09.8
13	87	57.0	51	32.1		20.4	80	02.9		29.1	83	32.8		37.2	120	02.1		09.8
14	102	59.5	66	31.7		21.3	95	03.7		29.9	98	34.9		37.4	135	04.5		09.8
15	118	01.9	81	31.3		22.3	110	04.4		30.6	113	37.0		37.5	150	07.0		09.8
16	133	04.4	96	30.9		23.3	125	05.2		31.3	128	39.1		37.7	165	09.4		09.8
17	148	06.9	111	30.5	+12	24.2	140	06.0	+1	32.0	143	41.2	+0	37.8	180	11.9	-14	09.8
18	163	09.3	126	30.2	+12	25.2	155	06.7	+1	32.7	158	43.3	+0	37.9	195	14.4	-14	09.8
19	178	11.8	141	29.8		26.1	170	07.5		33.4	173	45.5		38.1	210	16.8		09.8
20	193	14.3	156	29.4		27.1	185	08.2		34.2	188	47.6		38.2	225	19.3		09.8
21	208	16.7	171	29.0		28.0	200	09.0		34.9	203	49.7		38.4	240	21.7		09.8
22	223	19.2	186	28.6		29.0	215	09.8		35.6	218	51.8		38.5	255	24.2		09.8
23	238	21.6	201	28.2		30.0	230	10.5		36.3	233	53.9		38.6	270	26.7		09.8
24	253	24.1	216	27.8	+12	30.9	245	11.3	+1	37.0	248	56.0	+0	38.8	285	29.1	-14	09.8
Dif	—		-4		+10		+8		+7		+21		+1		+25			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 58 ^m 5			Edad: 5 ^d 5 PHE { 4 ^h : 54'6 12 ^h : 54'7 20 ^h : 54'9 R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	180	23.2	+22	31.2	114	41.1	+21 24.4	60 N	21 14	22 45	** **	7 59 88	1 12 5		
1	195	23.1		31.5	129	12.7 ¹²⁶	15.7 ⁸⁷	58	20 55	22 05	** **	8 14 83	0 56 11		
2	210	23.0		31.7	143	44.4 ¹²⁷	+21 06.9 ⁸⁸	56	39	21 39	** **	26 80	43 14		
3	225	22.9		32.0	158	16.2 ¹²⁸	+20 58.0 ⁸⁹	54	26	19	22 51	37 77	31 17		
4	240	22.8		32.3	172	48.0 ¹²⁸	49.0 ⁹⁰	52	14	21 02	22 15	47 74	21 20		
5	255	22.7	+22	32.6	187	19.8 ¹²⁸	+20 39.9 ⁹¹	50	20 04	20 48	21 50	8 56 71	0 12 22		
6	270	22.6	+22	32.8	201	51.7 ¹²⁹	+20 30.7 ⁹²	45	19 43	20 19	21 08	9 14 66	** ** *		
7	285	22.5		33.1	216	23.7 ¹³⁰	21.5 ⁹²	40	25	19 58	20 39	29 63	** ** *		
8	300	22.4		33.4	230	55.7 ¹³⁰	12.1 ⁹⁴	35	19 11	40	20 17	41 60	23 56 30		
9	315	22.2		33.7	245	27.7 ¹³⁰	+20 02.6 ⁹⁵	30	18 59	26	19 59	9 52 57	47 32		
10	330	22.1		33.9	259	59.7 ¹³⁰	+19 53.1 ⁹⁵	20	37	19 02	31	10 11 52	31 37		
11	345	22.0	+22	34.2	274	31.8 ¹³¹	+19 43.5 ⁹⁶	10 N	18 19	18 42	19 09	10 27 49	23 17 41		
12	0	21.9	+22	34.5	289	04.0 ¹³²	+19 33.7 ⁹⁸	0	18 02	18 25	18 51	10 42 45	23 04 44		
13	15	21.8		34.7	303	36.2 ¹³²	23.9 ⁹⁸	10 S	17 45	18 08	34	10 57 41	22 50 49		
14	30	21.7		35.0	318	08.4 ¹³²	14.0 ⁹⁹	20	28	17 51	19	11 13 38	36 52		
15	45	21.6		35.3	332	40.7 ¹³³	+19 04.0 ¹⁰⁰	30	17 07	33	18 03	31 33	20 57		
16	60	21.5		35.5	347	13.0 ¹³³	+18 53.9 ¹⁰¹	35	16 55	23	17 55	41 31	22 10 60		
17	75	21.3	+22	35.8	1	45.4 ¹³⁴	+18 43.7 ¹⁰²	40	16 42	17 12	17 46	11 54 27	21 59 63		
18	90	21.2	+22	36.1	16	17.8 ¹³⁴	+18 33.4 ¹⁰³	45	16 26	16 59	17 36	12 08 24	21 46 67		
19	105	21.1		36.3	30	50.2 ¹³⁴	23.1 ¹⁰³	50	16 06	44	25	25 20	30 72		
20	120	21.0		36.6	45	22.7 ¹³⁵	12.7 ¹⁰⁴	52	15 57	37	20	33 17	22 74		
21	135	20.9		36.9	59	55.2 ¹³⁵	+18 02.1 ¹⁰⁶	54	46	29	15	42 15	14 77		
22	150	20.8		37.1	74	27.7 ¹³⁵	+17 51.5 ¹⁰⁶	56	34	21	09	12 52 12	21 04 80		
23	165	20.7		37.4	89	00.3 ¹³⁶	40.8 ¹⁰⁷	58	21	11	17 03	13 04 8	20 53 84		
24	180	20.6	+22	37.7	103	32.9 ¹³⁶	+17 30.1 ¹⁰⁷	60 S	15 04	16 00	16 56	13 17 4	20 41 88		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 7 ^h 05 ^m 2		Mag: -3.9 PMG: 9 ^h 34 ^m		Mag: +0.6 PMG: 7 ^h 39 ^m		Mag: -2.3 PMG: 7 ^h 23 ^m		Mag: +0.7 PMG: 4 ^h 57 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	253	24.1	216	27.8	245	11.3	248	56.0	285	29.1
1	268	26.6	231	27.5	260	12.1	263	58.1	300	31.6
2	283	29.0	246	27.1	275	12.8	279	00.3	315	34.0
3	298	31.5	261	26.7	290	13.6	294	02.4	330	36.5
4	313	34.0	276	26.3	305	14.4	309	04.5	345	39.0
5	328	36.4	291	25.9	320	15.1	324	06.6	0	41.4
6	343	38.9	306	25.5	335	15.9	339	08.7	15	43.9
7	358	41.4	321	25.1	350	16.7	354	10.8	30	46.4
8	13	43.8	336	24.8	5	17.4	9	13.0	45	48.8
9	28	46.3	351	24.4	20	18.2	24	15.1	60	51.3
10	43	48.8	6	24.0	35	19.0	39	17.2	75	53.7
11	58	51.2	21	23.6	50	19.7	54	19.3	90	56.2
12	73	53.7	36	23.2	65	20.5	69	21.4	105	58.7
13	88	56.1	51	22.8	80	21.3	84	23.5	121	01.1
14	103	58.6	66	22.4	95	22.0	99	25.7	136	03.6
15	119	01.1	81	22.0	110	22.8	114	27.8	151	06.1
16	134	03.5	96	21.6	125	23.6	129	29.9	166	08.5
17	149	06.0	111	21.2	140	24.3	144	32.0	181	11.0
18	164	08.5	126	20.9	155	25.1	159	34.1	196	13.5
19	179	10.9	141	20.5	170	25.9	174	36.2	211	15.9
20	194	13.4	156	20.1	185	26.6	189	38.4	226	18.4
21	209	15.9	171	19.7	200	27.4	204	40.5	241	20.9
22	224	18.3	186	19.3	215	28.2	219	42.6	256	23.3
23	239	20.8	201	18.9	230	28.9	234	44.7	271	25.8
24	254	23.3	216	18.5	245	29.7	249	46.8	286	28.3
Dif	—		-4		+9		+21		+25	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 58 ^m 7			Edad: 6 ^d 5 PHE { 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'5 PMG: 17 ^h 38 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	180	20.6	+22 37.7	103	32.9	+17 30.1		60 N	** **	1 12	2 43	9 27	88	1 17	4
1	195	20.4		118	05.6 ¹³⁷	19.2 ¹⁰⁹		58	** **	1 52	3 02	37 84		1 07	7
2	210	20.3	38.2	132	38.3 ¹³⁷	+17 08.3 ¹⁰⁹		56	** **	2 18	18	46 80		0 57	10
3	225	20.2	38.4	147	11.0 ¹³⁷	+16 57.2 ¹¹¹		54	1 06	38	31	9 54	77	48	14
4	240	20.1	38.7	161	43.8 ¹³⁸	46.1 ¹¹¹		52	1 42	2 55	43	10 01	74	41	15
5	255	20.0	+22 39.0	176	16.6 ¹³⁸	+16 35.0 ¹¹¹		50	2 07	3 09	3 53	10 07	72	0 34	18
6	270	19.9	+22 39.2	190	49.4 ¹³⁸	+16 23.7 ¹¹³		45	2 49	3 38	4 14	10 20	68	0 19	22
7	285	19.8	39.5	205	22.3 ¹³⁹	12.4 ¹¹³		40	3 18	3 59	32	32 63		0 07	26
8	300	19.6	39.7	219	55.2 ¹³⁹	+16 00.9 ¹¹⁵		35	40	4 17	46	41 60		** **	**
9	315	19.5	40.0	234	28.1 ¹³⁹	+15 49.5 ¹¹⁴		30	3 58	31	4 59	10 49	57	** **	**
10	330	19.4	40.2	249	01.1 ¹⁴⁰	37.9 ¹¹⁶		20	4 26	4 55	5 20	11 03	53	** **	**
11	345	19.3	+22 40.5	263	34.1 ¹⁴⁰	+15 26.2 ¹¹⁷		10 N	4 48	5 15	5 38	11 16	48	23 58	39
12	0	19.2	+22 40.8	278	07.1 ¹⁴⁰	+15 14.5 ¹¹⁷		0	5 07	5 33	5 55	11 27	44	23 48	44
13	15	19.1	41.0	292	40.2 ¹⁴¹	+15 02.7 ¹¹⁸		10 S	23	5 49	6 12	38 40		39	47
14	30	19.0	41.3	307	13.3 ¹⁴¹	+14 50.9 ¹¹⁸		20	39	6 06	30	11 51	35	28	53
15	45	18.8	41.5	321	46.4 ¹⁴¹	38.9 ¹²⁰		30	5 54	24	6 50	12 04	31	17	57
16	60	18.7	41.8	336	19.5 ¹⁴¹	26.9 ¹²⁰		35	6 03	34	7 02	12 29		10	60
17	75	18.6	+22 42.0	350	52.7 ¹⁴²	+14 14.8 ¹²¹		40	6 12	6 45	7 16	12 21	25	23 02	64
18	90	18.5	+22 42.3	5	25.8 ¹⁴¹	+14 02.7 ¹²¹		45	6 21	6 58	7 32	12 32	21	22 53	68
19	105	18.4	42.5	19	59.1 ¹⁴³	+13 50.4 ¹²³		50	32	7 14	7 52	45 16		42	72
20	120	18.3	42.8	34	32.3 ¹⁴²	38.1 ¹²³		52	37	21	8 01	50 15		36	76
21	135	18.2	43.0	49	05.5 ¹⁴²	25.8 ¹²³		54	43	28	12	12 57	12	31	77
22	150	18.0	43.3	63	38.8 ¹⁴³	13.3 ¹²⁵		56	49	37	24	13 04	9	24	81
23	165	17.9	43.5	78	12.1 ¹⁴³	+13 00.8 ¹²⁵		58	6 55	47	37	12 6		17	84
24	180	17.8	+22 43.7	92	45.4 ¹⁴³	+12 48.3 ¹²⁵		60 S	7 02	7 58	8 54	13 21	3	22 09	88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 7 ^h 01 ^m 3		Mag: -3.9 PMG: 9 ^h 35 ^m		Mag: +0.6 PMG: 7 ^h 38 ^m		Mag: -2.3 PMG: 7 ^h 20 ^m		Mag: +0.7 PMG: 4 ^h 53 ^m						
	hG ♊	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	254	23.3	216	18.5	+12 53.7	245	29.7	+1 54.2	249	46.8	+0 42.1	286	28.3	-14 10.0	
1	269	25.7	231	18.1	54.6	260	30.5	54.9	264	49.0	42.3	301	30.7	10.0	
2	284	28.2	246	17.7	55.6	275	31.2	55.6	279	51.1	42.4	316	33.2	10.0	
3	299	30.6	261	17.3	56.5	290	32.0	56.3	294	53.2	42.5	331	35.7	10.1	
4	314	33.1	276	16.9	57.5	305	32.8	57.0	309	55.3	42.7	346	38.1	10.1	
5	329	35.6	291	16.5	+12 58.4	320	33.5	+1 57.8	324	57.4	+0 42.8	1	40.6	-14 10.1	
6	344	38.0	306	16.1	+12 59.3	335	34.3	+1 58.5	339	59.6	+0 43.0	16	43.0	-14 10.1	
7	359	40.5	321	15.7	+13 00.3	350	35.1	59.2	355	01.7	43.1	31	45.5	10.1	
8	14	43.0	336	15.3	01.2	5	35.8	+1 59.9	10	03.8	43.2	46	48.0	10.1	
9	29	45.4	351	14.9	02.2	20	36.6	+2 00.6	25	05.9	43.4	61	50.5	10.1	
10	44	47.9	6	14.5	03.1	35	37.4	01.3	40	08.1	43.5	76	52.9	10.1	
11	59	50.4	21	14.1	+13 04.0	50	38.2	+2 02.0	55	10.2	+0 43.6	91	55.4	-14 10.1	
12	74	52.8	36	13.7	+13 05.0	65	38.9	+2 02.8	70	12.3	+0 43.8	106	57.9	-14 10.1	
13	89	55.3	51	13.3	05.9	80	39.7	03.5	85	14.4	43.9	122	00.3	10.2	
14	104	57.8	66	12.9	06.9	95	40.5	04.2	100	16.5	44.1	137	02.8	10.2	
15	120	00.2	81	12.5	07.8	110	41.2	04.9	115	18.7	44.2	152	05.3	10.2	
16	135	02.7	96	12.1	08.7	125	42.0	05.6	130	20.8	44.3	167	07.7	10.2	
17	150	05.1	111	11.7	+13 09.7	140	42.8	+2 06.3	145	22.9	+0 44.5	182	10.2	-14 10.2	
18	165	07.6	126	11.3	+13 10.6	155	43.5	+2 07.0	160	25.0	+0 44.6	197	12.7	-14 10.2	
19	180	10.1	141	10.9	11.5	170	44.3	07.7	175	27.2	44.7	212	15.1	10.2	
20	195	12.5	156	10.5	12.5	185	45.1	08.5	190	29.3	44.9	227	17.6	10.2	
21	210	15.0	171	10.1	13.4	200	45.8	09.2	205	31.4	45.0	242	20.1	10.2	
22	225	17.5	186	09.7	14.3	215	46.6	09.9	220	33.5	45.1	257	22.5	10.2	
23	240	19.9	201	09.3	15.3	230	47.4	10.6	235	35.7	45.3	272	25.0	10.3	
24	255	22.4	216	08.9	+13 16.2	245	48.1	+2 11.3	250	37.8	+0 45.4	287	27.5	-14 10.3	
Dif	—		-4		+9	+8		+7	+21		+1	+25			0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 9			Edad: 7 ^d 5 PHE { 4 ^h : 55 ^m 7 12 ^h : 55 ^m 9 20 ^h : 56 ^m 2 PMG: 18 ^h 21 ^m R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	180	17.8	+22 43.7	92	45.4	+12 48.3	60 N	21 17	22 50	** **	10 55 88	1 21	2		
1	195	17.7		107	18.8 ¹⁴⁴	35.6 ¹²⁷	58	20 58	22 09	** **	11 01 84	14	5		
2	210	17.6		121	52.1 ¹⁴³	22.9 ¹²⁷	56	42	21 42	** **	06 81		07	9	
3	225	17.5		136	25.5 ¹⁴⁴	+12 10.2 ¹²⁷	54	28	21	22 56	11 78	1	02	1	
4	240	17.3		150	58.9 ¹⁴⁴	+11 57.4 ¹²⁸	52	16	21 04	22 18	15 76	0	56	14	
5	255	17.2	+22 45.0	165	32.3 ¹⁴⁴	+11 44.5 ¹²⁹	50	20 06	20 50	21 53	11 19 74	0	52	15	
6	270	17.1	+22 45.2	180	05.7 ¹⁴⁴	+11 31.5 ¹³⁰	45	19 44	20 21	21 10	11 28 68	0	41	21	
7	285	17.0		194	39.2 ¹⁴⁵	18.5 ¹³⁰	40	27	19 59	20 40	35 64		33	24	
8	300	16.9		209	12.6 ¹⁴⁴	+11 05.4 ¹³¹	35	19 12	42	18	41 61		26	27	
9	315	16.8		223	46.1 ¹⁴⁵	+10 52.3 ¹³¹	30	18 59	27	20 00	46 58		19	30	
10	330	16.6		238	19.5 ¹⁴⁴	39.1 ¹³²	20	38	19 03	19 32	11 56 52	0	08	35	
11	345	16.5	+22 46.4	252	53.0 ¹⁴⁵	+10 25.8 ¹³³	10 N	18 20	18 43	19 10	12 04 48	** ** *	** ** *		
12	0	16.4	+22 46.6	267	26.5 ¹⁴⁵	+10 12.5 ¹³³	0	18 03	18 25	18 51	12 11 44	** ** *	** ** *		
13	15	16.3		282	00.0 ¹⁴⁵	+9 59.2 ¹³³	10 S	17 46	18 08	35	18 40		** ** *	** ** *	
14	30	16.2		296	33.5 ¹⁴⁵	45.7 ¹³⁵	20	28	17 52	19	26 35		** ** *	** ** *	
15	45	16.1		311	07.0 ¹⁴⁵	32.2 ¹³⁵	30	17 07	33	18 03	35 30		** ** *	** ** *	
16	60	15.9		325	40.5 ¹⁴⁵	18.7 ¹³⁵	35	16 55	23	17 55	41 26		** ** *	** ** *	
17	75	15.8	+22 47.8	340	14.1 ¹⁴⁶	+9 05.1 ¹³⁶	40	16 41	17 12	17 46	12 46 24		** ** *	** ** *	
18	90	15.7	+22 48.0	354	47.6 ¹⁴⁵	+8 51.5 ¹³⁶	45	16 25	16 59	17 36	12 53 20		** ** *	** ** *	
19	105	15.6		9	21.1 ¹⁴⁵	37.8 ¹³⁷	50	16 05	43	24	13 01 15	23	54	75	
20	120	15.5		23	54.6 ¹⁴⁵	24.0 ¹³⁸	52	15 56	36	19	05 13		52	76	
21	135	15.3		38	28.2 ¹⁴⁶	+8 10.2 ¹³⁸	54	45	28	14	09 11		48	79	
22	150	15.2		53	01.7 ¹⁴⁵	+7 56.4 ¹³⁸	56	33	20	08	13 9		45	82	
23	165	15.1		67	35.2 ¹⁴⁵	42.5 ¹³⁹	58	19	16 10	17 02	18 6		41	85	
24	180	15.0	+22 49.4	82	08.7 ¹⁴⁵	+7 28.5 ¹⁴⁰	60 S	15 02	15 59	16 55	13 24 2	23	37	88	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 6 ^h 57 ^m 4		Mag: -3.9 PMG: 9 ^h 36 ^m			Mag: +0.6 PMG: 7 ^h 36 ^m			Mag: -2.3 PMG: 7 ^h 16 ^m			Mag: +0.7 PMG: 4 ^h 49 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	255	22.4	216	08.9	+13 16.2	245	48.1	+2 11.3	250	37.8	+0 45.4	287	27.5	-14 10.3	
1	270	24.9	231	08.5	17.2	260	48.9	12.0	265	39.9	45.6	302	29.9	10.3	
2	285	27.3	246	08.1	18.1	275	49.7	12.7	280	42.0	45.7	317	32.4	10.3	
3	300	29.8	261	07.7	19.0	290	50.4	13.4	295	44.2	45.8	332	34.9	10.3	
4	315	32.2	276	07.3	19.9	305	51.2	14.2	310	46.3	46.0	347	37.4	10.3	
5	330	34.7	291	06.9	+13 20.9	320	52.0	+2 14.9	325	48.4	+0 46.1	2	39.8	-14 10.3	
6	345	37.2	306	06.5	+13 21.8	335	52.8	+2 15.6	340	50.5	+0 46.2	17	42.3	-14 10.3	
7	0	39.6	321	06.1	22.7	350	53.5	16.3	355	52.7	46.4	32	44.8	10.3	
8	15	42.1	336	05.6	23.7	5	54.3	17.0	10	54.8	46.5	47	47.2	10.3	
9	30	44.6	351	05.2	24.6	20	55.1	17.7	25	56.9	46.6	62	49.7	10.4	
10	45	47.0	6	04.8	25.5	35	55.8	18.4	40	59.0	46.8	77	52.2	10.4	
11	60	49.5	21	04.4	+13 26.5	50	56.6	+2 19.1	56	01.2	+0 46.9	92	54.7	-14 10.4	
12	75	52.0	36	04.0	+13 27.4	65	57.4	+2 19.9	71	03.3	+0 47.0	107	57.1	-14 10.4	
13	90	54.4	51	03.6	28.3	80	58.1	20.6	86	05.4	47.2	122	59.6	10.4	
14	105	56.9	66	03.2	29.2	95	58.9	21.3	101	07.5	47.3	138	02.1	10.4	
15	120	59.4	81	02.8	30.2	110	59.7	22.0	116	09.7	47.4	153	04.5	10.4	
16	136	01.8	96	02.4	31.1	126	00.4	22.7	131	11.8	47.6	168	07.0	10.4	
17	151	04.3	111	02.0	+13 32.0	141	01.2	+2 23.4	146	13.9	+0 47.7	183	09.5	-14 10.4	
18	166	06.7	126	01.5	+13 32.9	156	02.0	+2 24.1	161	16.1	+0 47.8	198	12.0	-14 10.5	
19	181	09.2	141	01.1	33.9	171	02.8	24.8	176	18.2	48.0	213	14.4	10.5	
20	196	11.7	156	00.7	34.8	186	03.5	25.5	191	20.3	48.1	228	16.9	10.5	
21	211	14.1	171	00.3	35.7	201	04.3	26.3	206	22.4	48.3	243	19.4	10.5	
22	226	16.6	185	59.9	36.6	216	05.1	27.0	221	24.6	48.4	258	21.9	10.5	
23	241	19.1	200	59.5	37.6	231	05.8	27.7	236	26.7	48.5	273	24.3	10.5	
24	256	21.5	215	59.1	+13 38.5	246	06.6	+2 28.4	251	28.8	+0 48.7	288	26.8	-14 10.5	
Dif	—		-4		+9		+8	+7		+21	+1		+25		0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15/8 PMG: 11 ^h 59 ^m 1			Edad: 8 ^d 5 PHE { 4 ^h : 56/5 12 ^h : 56/8 20 ^h : 57/1 R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	15.0	+22	49.4	82	08.7	+7	28.5	60 N	** *	1 07	2 41	12 23	90	1 23	2		
1	195	14.9		49.7	96	42.2 ¹⁴⁵		14.5 ¹⁴⁰	58	** *	1 49	3 00		25 87	19	5		
2	210	14.7		49.9	111	15.8 ¹⁴⁶	+7	00.5 ¹⁴⁰	56	** *	2 16	16	27	84	16	8		
3	225	14.6		50.1	125	49.3 ¹⁴⁵	+6	46.4 ¹⁴¹	54	1 01	37	30	29	81	13	10		
4	240	14.5		50.3	140	22.7 ¹⁴⁴		32.2 ¹⁴²	52	1 40	2 54	42	31	78	10	13		
5	255	14.4	+22	50.6	154	56.2 ¹⁴⁵	+6	18.0 ¹⁴²	50	2 05	3 08	3 52	12 33	75	1 07	15		
6	270	14.3	+22	50.8	169	29.7 ¹⁴⁵	+6	03.8 ¹⁴²	45	2 48	3 37	4 14	12 36	71	1 02	19		
7	285	14.2		51.0	184	03.2 ¹⁴⁵	+5	49.5 ¹⁴³	40	3 18	3 59	31	39	67	0 57	23		
8	300	14.0		51.2	198	36.6 ¹⁴⁴		35.2 ¹⁴³	35	40	4 16	46	42	63	53	27		
9	315	13.9		51.4	213	10.1 ¹⁴⁵		20.8 ¹⁴⁴	30	3 58	31	4 58	44	60	49	30		
10	330	13.8		51.7	227	43.5 ¹⁴⁴	+5	06.4 ¹⁴⁴	20	4 26	4 55	5 20	48	54	43	35		
11	345	13.7	+22	51.9	242	16.9 ¹⁴⁴	+4	52.0 ¹⁴⁴	10 N	4 48	5 15	5 38	12 52	49	0 37	40		
12	0	13.6	+22	52.1	256	50.3 ¹⁴⁴	+4	37.5 ¹⁴⁵	0	5 07	5 33	5 55	12 55	44	0 32	44		
13	15	13.4		52.3	271	23.7 ¹⁴⁴		23.0 ¹⁴⁵	10 S	23	5 50	6 12	12 58	40	26	49		
14	30	13.3		52.6	285	57.0 ¹⁴³	+4	08.4 ¹⁴⁶	20	39	6 07	30	13 01	36	21	53		
15	45	13.2		52.8	300	30.4 ¹⁴⁴	+3	53.8 ¹⁴⁶	30	5 55	25	6 51	05	30	14	58		
16	60	13.1		53.0	315	03.7 ¹⁴³		39.2 ¹⁴⁶	35	6 04	35	7 03	07	27	10	62		
17	75	12.9	+22	53.2	329	37.0 ¹⁴³	+3	24.5 ¹⁴⁷	40	6 13	6 46	7 17	13 10	24	0 06	65		
18	90	12.8	+22	53.4	344	10.2 ¹⁴²	+3	09.8 ¹⁴⁷	45	6 23	7 00	7 33	13 13	19	0 01	69		
19	105	12.7		53.6	358	43.5 ¹⁴³	+2	55.1 ¹⁴⁷	50	34	15	7 53	16	15	** *	**		
20	120	12.6		53.9	13	16.7 ¹⁴²		40.3 ¹⁴⁸	52	39	22	8 03	18	13	** *	**		
21	135	12.5		54.1	27	49.9 ¹⁴²		25.5 ¹⁴⁸	54	44	30	13	20	10	** *	**		
22	150	12.3		54.3	42	23.0 ¹⁴¹	+2	10.7 ¹⁴⁸	56	50	39	26	22	7	** *	**		
23	165	12.2		54.5	56	56.1 ¹⁴¹	+1	55.8 ¹⁴⁹	58	6 57	7 49	40	24	5	** *	**		
24	180	12.1	+22	54.7	71	29.2 ¹⁴¹	+1	41.0 ¹⁴⁸	60 S	7 04	8 00	8 56	13 26	2	** *	**		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 6 ^h 53 ^m 4		Mag: -3.9 PMG: 9 ^h 36 ^m			Mag: +0.6 PMG: 7 ^h 35 ^m			Mag: -2.3 PMG: 7 ^h 13 ^m			Mag: +0.7 PMG: 4 ^h 45 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	256	21.5	215	59.1	+13	38.5	246	06.6	+2	28.4	251	28.8	+0	48.7	288	26.8	-14	10.5
1	271	24.0	230	58.6		39.4	261	07.4		29.1	266	31.0		48.8	303	29.3		10.5
2	286	26.5	245	58.2		40.3	276	08.1		29.8	281	33.1		48.9	318	31.7		10.5
3	301	28.9	260	57.8		41.2	291	08.9		30.5	296	35.2		49.1	333	34.2		10.6
4	316	31.4	275	57.4		42.2	306	09.7		31.2	311	37.3		49.2	348	36.7		10.6
5	331	33.9	290	57.0	+13	43.1	321	10.5	+2	31.9	326	39.5	+0	49.3	3	39.2	-14	10.6
6	346	36.3	305	56.6	+13	44.0	336	11.2	+2	32.6	341	41.6	+0	49.5	18	41.6	-14	10.6
7	1	38.8	320	56.1		44.9	351	12.0		33.4	356	43.7		49.6	33	44.1		10.6
8	16	41.2	335	55.7		45.8	6	12.8		34.1	11	45.9		49.7	48	46.6		10.6
9	31	43.7	350	55.3		46.8	21	13.5		34.8	26	48.0		49.9	63	49.1		10.6
10	46	46.2	5	54.9		47.7	36	14.3		35.5	41	50.1		50.0	78	51.5		10.6
11	61	48.6	20	54.5	+13	48.6	51	15.1	+2	36.2	56	52.3	+0	50.1	93	54.0	-14	10.7
12	76	51.1	35	54.0	+13	49.5	66	15.8	+2	36.9	71	54.4	+0	50.2	108	56.5	-14	10.7
13	91	53.6	50	53.6		50.4	81	16.6		37.6	86	56.5		50.4	123	59.0		10.7
14	106	56.0	65	53.2		51.3	96	17.4		38.3	101	58.7		50.5	139	01.4		10.7
15	121	58.5	80	52.8		52.3	111	18.2		39.0	117	00.8		50.6	154	03.9		10.7
16	137	01.0	95	52.4		53.2	126	18.9		39.7	132	02.9		50.8	169	06.4		10.7
17	152	03.4	110	51.9	+13	54.1	141	19.7	+2	40.4	147	05.1	+0	50.9	184	08.9	-14	10.7
18	167	05.9	125	51.5	+13	55.0	156	20.5	+2	41.2	162	07.2	+0	51.0	199	11.4	-14	10.7
19	182	08.3	140	51.1		55.9	171	21.2		41.9	177	09.3		51.2	214	13.8		10.8
20	197	10.8	155	50.7		56.8	186	22.0		42.6	192	11.5		51.3	229	16.3		10.8
21	212	13.3	170	50.2		57.7	201	22.8		43.3	207	13.6		51.4	244	18.8		10.8
22	227	15.7	185	49.8		58.6	216	23.6		44.0	222	15.7		51.6	259	21.3		10.8
23	242	18.2	200	49.4	+13	59.6	231	24.3		44.7	237	17.9		51.7	274	23.7		10.8
24	257	20.7	215	49.0	+14	00.5	246	25.1	+2	45.4	252	20.0	+0	51.8	289	26.2	-14	10.8
Dif	—		-4 +9			+8 +7			+21 +1			+1 +25						

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°8 PMG: 11 ^h 59 ^m 3			Edad: 9 ^d 5 SD: 15°6 PMG: 19 ^h 50 ^m	PHE { 4 ^h : 57/4 12 ^h : 57/7 20 ^h : 58/0 R°: 48 ^m													
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	12.1	+22	54.7	71	29.2	+1 41.0	60 N	21 19	22 56	** **	13 53	94	1 25	2			
1	195	12.0		54.9	86	02.3 ¹⁴¹	26.0 ¹⁵⁰	58	21 00	22 12	** **	52	90	24	5			
2	210	11.9		55.1	100	35.3 ¹⁴⁰	+1 11.1 ¹⁴⁹	56	20 44	21 45	** **	51	87	24	7			
3	225	11.7		55.3	115	08.3 ¹⁴⁰	+0 56.1 ¹⁵⁰	54	30	23	23 01	50	84	23	11			
4	240	11.6		55.5	129	41.3 ¹⁴⁰	41.1 ¹⁵⁰	52	18	21 06	22 21	49	82	23	12			
5	255	11.5	+22	55.8	144	14.2 ¹³⁹	+0 26.1 ¹⁵⁰	50	20 07	20 51	21 55	13 48	79	1 22	15			
6	270	11.4	+22	56.0	158	47.0 ¹³⁸	+0 11.1 ¹⁵⁰	45	19 45	20 22	21 11	13 47	74	1 21	20			
7	285	11.2		56.2	173	19.9 ¹³⁹	-0 04.0 ¹⁵¹	40	28	20 00	20 42	46	69	20	24			
8	300	11.1		56.4	187	52.7 ¹³⁸	19.1 ¹⁵¹	35	13	19 43	19	45	65	20	27			
9	315	11.0		56.6	202	25.4 ¹³⁷	34.2 ¹⁵¹	30	19 00	28	20 01	44	62	19	31			
10	330	10.9		56.8	216	58.1 ¹³⁷	-0 49.3 ¹⁵¹	20	18 39	19 03	19 32	42	56	18	36			
11	345	10.8	+22	57.0	231	30.8 ¹³⁷	-1 04.4 ¹⁵¹	10 N	18 20	18 43	19 10	13 41	51	1 17	41			
12	0	10.6	+22	57.2	246	03.4 ¹³⁶	-1 19.6 ¹⁵²	0	18 03	18 25	18 52	13 39	47	1 16	45			
13	15	10.5		57.4	260	36.0 ¹³⁶	34.8 ¹⁵²	10 S	17 46	18 09	35	38	42	15	50			
14	30	10.4		57.6	275	08.5 ¹³⁵	-1 50.0 ¹⁵²	20	28	17 52	19	37	37	14	55			
15	45	10.3		57.8	289	40.9 ¹³⁴	-2 05.2 ¹⁵²	30	17 07	33	18 03	35	32	12	61			
16	60	10.1		58.0	304	13.3 ¹³⁴	20.4 ¹⁵²	35	16 55	23	17 54	34	29	12	63			
17	75	10.0	+22	58.2	318	45.7 ¹³⁴	-2 35.6 ¹⁵²	40	16 41	17 11	17 45	13 34	25	1 11	67			
18	90	09.9	+22	58.4	333	18.0 ¹³³	-2 50.8 ¹⁵²	45	16 25	16 58	17 35	13 32	21	1 10	72			
19	105	09.8		58.6	347	50.2 ¹³²	-3 06.1 ¹⁵³	50	16 04	43	24	31	16	09	77			
20	120	09.7		58.8	2	22.4 ¹³²	21.3 ¹⁵²	52	15 55	35	19	31	13	08	79			
21	135	09.5		59.0	16	54.5 ¹³¹	36.6 ¹⁵³	54	44	27	13	30	11	07	82			
22	150	09.4		59.2	31	26.6 ¹³¹	-3 51.8 ¹⁵²	56	32	19	07	29	9	07	85			
23	165	09.3		59.4	45	58.6 ¹³⁰	-4 07.1 ¹⁵³	58	18	16 09	17 01	29	5	06	88			
24	180	09.2	+22	59.6	60	30.5 ¹²⁹	-4 22.4 ¹⁵³	60 S	15 01	15 57	16 54	13 28	2	1 05	92			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 6 ^h 49 ^m 5		Mag: -3.9 PMG: 9 ^h 37 ^m			Mag: +0.6 PMG: 7 ^h 34 ^m			Mag: -2.4 PMG: 7 ^h 10 ^m			Mag: +0.7 PMG: 4 ^h 41 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	257	20.7	215	49.0	+14	00.5	246	25.1	+2	45.4	252	20.0	+0	51.8	289	26.2	-14	10.8
1	272	23.1	230	48.5		01.4	261	25.9		46.1	267	22.1		52.0	304	28.7		10.8
2	287	25.6	245	48.1		02.3	276	26.6		46.8	282	24.3		52.1	319	31.2		10.8
3	302	28.1	260	47.7		03.2	291	27.4		47.5	297	26.4		52.2	334	33.6		10.9
4	317	30.5	275	47.3		04.1	306	28.2		48.2	312	28.5		52.4	349	36.1		10.9
5	332	33.0	290	46.8	+14	05.0	321	29.0	+2	48.9	327	30.7	+0	52.5	4	38.6	-14	10.9
6	347	35.5	305	46.4	+14	05.9	336	29.7	+2	49.7	342	32.8	+0	52.6	19	41.1	-14	10.9
7	2	37.9	320	46.0		06.8	351	30.5		50.4	357	34.9		52.8	34	43.6		10.9
8	17	40.4	335	45.6		07.7	6	31.3		51.1	12	37.1		52.9	49	46.0		10.9
9	32	42.8	350	45.1		08.6	21	32.0		51.8	27	39.2		53.0	64	48.5		10.9
10	47	45.3	5	44.7		09.5	36	32.8		52.5	42	41.4		53.1	79	51.0		10.9
11	62	47.8	20	44.3	+14	10.4	51	33.6	+2	53.2	57	43.5	+0	53.3	94	53.5	-14	11.0
12	77	50.2	35	43.8	+14	11.3	66	34.4	+2	53.9	72	45.6	+0	53.4	109	56.0	-14	11.0
13	92	52.7	50	43.4		12.2	81	35.1		54.6	87	47.8		53.5	124	58.4		11.0
14	107	55.2	65	43.0		13.2	96	35.9		55.3	102	49.9		53.7	140	00.9		11.0
15	122	57.6	80	42.5		14.1	111	36.7		56.0	117	52.0		53.8	155	03.4		11.0
16	138	00.1	95	42.1		15.0	126	37.4		56.7	132	54.2		53.9	170	05.9		11.0
17	153	02.6	110	41.7	+14	15.9	141	38.2	+2	57.4	147	56.3	+0	54.1	185	08.4	-14	11.0
18	168	05.0	125	41.2	+14	16.8	156	39.0	+2	58.1	162	58.5	+0	54.2	200	10.8	-14	11.1
19	183	07.5	140	40.8		17.7	171	39.8		58.9	178	00.6		54.3	215	13.3		11.1
20	198	09.9	155	40.4		18.6	186	40.5	+2	59.6	193	02.7		54.4	230	15.8		11.1
21	213	12.4	170	39.9		19.5	201	41.3	+3	00.3	208	04.9		54.6	245	18.3		11.1
22	228	14.9	185	39.5		20.4	216	42.1		01.0	223	07.0		54.7	260	20.8		11.1
23	243	17.3	200	39.1		21.3	231	42.8		01.7	238	09.2		54.8	275	23.2		11.1
24	258	19.8	215	38.6	+14	22.2	246	43.6	+3	02.4	253	11.3	+0	55.0	290	25.7	-14	11.1
Dif	—		-4			+9	+8		+7	+21		+1		+25		0		

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 11 ^h 59 ^m 5			Edad: 10 ^d 5 PHE SD: 15/8 PMG: 20 ^h 38 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	180	09.2	+22	59.6	60	30.5	−4	22.4	60 N	1 03	2 39	15 27	101	1 27 2
1	195	09.0	+22	59.8	75	02.4 ¹²⁹	37.6 ¹⁵²	58	1 46	2 59	22 97	29	6	
2	210	08.9	+23	00.0	89	34.2 ¹²⁸	−4	52.9 ¹⁵³	56	2 14	3 15	18 93	31	10
3	225	08.8	+23	00.2	104	06.0 ¹²⁸	−5	08.2 ¹⁵³	54	0 57	35	29	14 89	34 12
4	240	08.7		00.3	118	37.6 ¹²⁶	23.4 ¹⁵²	52	1 37	2 53	41	11 86	35	15
5	255	08.5	+23	00.5	133	09.2 ¹²⁶	−5	38.7 ¹⁵³	50	2 03	3 07	3 51	15 07	84 1 37 17
6	270	08.4	+23	00.7	147	40.8 ¹²⁶	−5	53.9 ¹⁵²	45	2 47	3 36	4 13	15 01	77 1 41 22
7	285	08.3		00.9	162	12.2 ¹²⁴	−6	09.2 ¹⁵³	40	3 17	3 58	31	14 55	73 44 26
8	300	08.2		01.1	176	43.6 ¹²⁴	24.4 ¹⁵²	35	40	4 16	46	50 69	47	30
9	315	08.0		01.3	191	14.9 ¹²³	39.6 ¹⁵²	30	3 58	31	4 58	46 66	50	33
10	330	07.9		01.5	205	46.1 ¹²²	−6	54.9 ¹⁵³	20	4 26	4 55	5 20	38 60	54 38
11	345	07.8	+23	01.7	220	17.3 ¹²²	−7	10.1 ¹⁵²	10 N	4 49	5 16	5 39	14 32	55 1 58 43
12	0	07.7	+23	01.9	234	48.3 ¹²⁰	−7	25.3 ¹⁵²	0	5 07	5 33	5 56	14 26	50 2 01 48
13	15	07.5		02.0	249	19.3 ¹²⁰	40.4 ¹⁵¹	10 S	24	5 50	6 13	20 46		05 53
14	30	07.4		02.2	263	50.2 ¹¹⁹	−7	55.6 ¹⁵²	20	40	6 07	31	14 41	09 58
15	45	07.3		02.4	278	21.1 ¹¹⁹	−8	10.8 ¹⁵²	30	5 56	26	6 52	07 35	13 64
16	60	07.2		02.6	292	51.8 ¹¹⁷	25.9 ¹⁵¹	35	6 04	36	7 04	14 03	32	15 67
17	75	07.0	+23	02.8	307	22.4 ¹¹⁶	−8	41.0 ¹⁵¹	40	6 14	6 48	7 18	13 59	28 2 18 71
18	90	06.9	+23	03.0	321	53.0 ¹¹⁶	−8	56.1 ¹⁵¹	45	6 24	7 01	7 34	13 53	24 2 22 75
19	105	06.8		03.1	336	23.5 ¹¹⁵	−9	11.1 ¹⁵⁰	50	35	16	7 55	47 19	26 80
20	120	06.7		03.3	350	53.9 ¹¹⁴	26.1 ¹⁵⁰	52	40	24	8 04	44 17	27	84
21	135	06.5		03.5	5	24.1 ¹¹²	41.1 ¹⁵⁰	54	46	32	15	41 14	29	87
22	150	06.4		03.7	19	54.3 ¹¹²	−9	56.1 ¹⁵⁰	56	52	40	27	38 11	32 89
23	165	06.3		03.9	34	24.4 ¹¹¹	−10	11.1 ¹⁵⁰	58	6 58	7 50	42	34 7	34 93
24	180	06.2	+23	04.0	48	54.5 ¹¹¹	−10	26.0 ¹⁴⁹	60 S	7 05	8 02	8 59	13 30	3 2 37 97

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 45 ^m 6		Mag: −3.9 PMG: 9 ^h 38 ^m		Mag: +0.6 PMG: 7 ^h 33 ^m		Mag: −2.4 PMG: 7 ^h 06 ^m		Mag: +0.7 PMG: 4 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	258	19.8	215	38.6	+14	22.2	246	43.6	+3	02.4
1	273	22.3	230	38.2		23.1	261	44.4		03.1
2	288	24.7	245	37.8		24.0	276	45.2		03.8
3	303	27.2	260	37.3		24.8	291	45.9		04.5
4	318	29.7	275	36.9		25.7	306	46.7		05.2
5	333	32.1	290	36.4	+14	26.6	321	47.5	+3	05.9
6	348	34.6	305	36.0	+14	27.5	336	48.3	+3	06.6
7	3	37.1	320	35.6		28.4	351	49.0		07.3
8	18	39.5	335	35.1		29.3	6	49.8		08.0
9	33	42.0	350	34.7		30.2	21	50.6		08.7
10	48	44.4	5	34.2		31.1	36	51.3		09.4
11	63	46.9	20	33.8	+14	32.0	51	52.1	+3	10.1
12	78	49.4	35	33.4	+14	32.9	66	52.9	+3	10.8
13	93	51.8	50	32.9		33.8	81	53.7		11.6
14	108	54.3	65	32.5		34.7	96	54.4		12.3
15	123	56.8	80	32.0		35.6	111	55.2		13.0
16	138	59.2	95	31.6		36.5	126	56.0		13.7
17	154	01.7	110	31.1	+14	37.3	141	56.8	+3	14.4
18	169	04.2	125	30.7	+14	38.2	156	57.5	+3	15.1
19	184	06.6	140	30.3		39.1	171	58.3		15.8
20	199	09.1	155	29.8		40.0	186	59.1		16.5
21	214	11.6	170	29.4		40.9	201	59.9		17.2
22	229	14.0	185	28.9		41.8	217	00.6		17.9
23	244	16.5	200	28.5		42.7	232	01.4		18.6
24	259	18.9	215	28.0	+14	43.6	247	02.2	+3	19.3
Dif	—		−4		+9		+8		+7	
										0

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 11 ^d 5 PHE { 4 ^h : 59 ^m /3 12 ^h : 59 ^m /6 20 ^h : 59 ^m /9 R°: 57 ^m												
	PMG: 11 ^h 59 ^m 7			SD: 16 ^h 1 PMG: 21 ^h 29 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	180	06.2	+23 04.0	48	54.5	-10 26.0		60 N	21 22	23 01	** **	17 08	109	1 29	4	
1	195	06.0	04.2	63	24.4 ¹⁰⁹	40.9 ¹⁴⁹		58	21 02	22 15	** **	16 59	103	35	8	
2	210	05.9	04.4	77	54.2 ¹⁰⁸	-10 55.7 ¹⁴⁸		56	20 45	21 47	** **	51	98	41	11	
3	225	05.8	04.6	92	23.9 ¹⁰⁷	-11 10.5 ¹⁴⁸		54	31	25	23 06	43	95	46	15	
4	240	05.7	04.8	106	53.5 ¹⁰⁶	25.3 ¹⁴⁸		52	19	21 08	22 24	37	91	50	18	
5	255	05.5	+23 04.9	121	23.0 ¹⁰⁵	-11 40.0 ¹⁴⁷		50	20 09	20 53	21 57	16 31	88	1 54	21	
6	270	05.4	+23 05.1	135	52.4 ¹⁰⁴	-11 54.7 ¹⁴⁷		45	19 47	20 24	21 13	16 18	82	2 03	26	
7	285	05.3	05.3	150	21.7 ¹⁰³	-12 09.3 ¹⁴⁶		40	29	20 02	20 43	16 08	77	10	31	
8	300	05.2	05.4	164	50.9 ¹⁰²	23.9 ¹⁴⁶		35	14	19 44	20	15 59	74	17	34	
9	315	05.0	05.6	179	20.0 ¹⁰¹	38.4 ¹⁴⁵		30	19 01	29	20 02	52	70	23	37	
10	330	04.9	05.8	193	49.0 ¹⁰⁰	-12 52.9 ¹⁴⁵		20	18 39	19 04	19 33	38	65	32	44	
11	345	04.8	+23 06.0	208	17.8 ⁹⁸	-13 07.3 ¹⁴⁴		10 N	18 21	18 44	19 11	15 27	60	2 41	48	
12	0	04.7	+23 06.1	222	46.6 ⁹⁸	-13 21.7 ¹⁴⁴		0	18 03	18 26	18 52	15 16	56	2 49	53	
13	15	04.5	06.3	237	15.2 ⁹⁶	36.1 ¹⁴⁴		10 S	17 46	18 09	35	15 06	51	2 58	57	
14	30	04.4	06.5	251	43.8 ⁹⁶	-13 50.3 ¹⁴²		20	28	17 52	19	14 55	46	3 07	62	
15	45	04.3	06.6	266	12.2 ⁹⁴	-14 04.5 ¹⁴²		30	17 07	33	18 03	42	41	17	67	
16	60	04.1	06.8	280	40.5 ⁹³	18.7 ¹⁴²		35	16 55	23	17 54	35	37	22	72	
17	75	04.0	+23 07.0	295	08.7 ⁹²	-14 32.8 ¹⁴¹		40	16 41	17 11	17 45	14 27	33	3 29	75	
18	90	03.9	+23 07.1	309	36.8 ⁹¹	-14 46.8 ¹⁴⁰		45	16 24	16 58	17 35	14 17	30	3 37	80	
19	105	03.8	07.3	324	04.7 ⁸⁹	-15 00.7 ¹³⁹		50	16 04	42	24	06	24	46	86	
20	120	03.6	07.5	338	32.6 ⁸⁹	14.6 ¹³⁹		52	15 54	35	18	14	01	21	51	88
21	135	03.5	07.6	353	00.3 ⁸⁷	28.4 ¹³⁸		54	43	27	13	13 55	18	3 56	91	
22	150	03.4	07.8	7	27.9 ⁸⁶	42.2 ¹³⁸		56	31	18	07	49	14	4 01	95	
23	165	03.3	07.9	21	55.4 ⁸⁵	-15 55.8 ¹³⁶		58	17	16 08	17 00	41	11	07	99	
24	180	03.1	+23 08.1	36	22.7 ⁸³	-16 09.4 ¹³⁶		60 S	15 00	15 57	16 53	13 33	6	4 14	104	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 6 ^h 41 ^m 6		Mag: -3.9 PMG: 9 ^h 38 ^m			Mag: +0.6 PMG: 7 ^h 31 ^m			Mag: -2.4 PMG: 7 ^h 03 ^m			Mag: +0.7 PMG: 4 ^h 34 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	'	'		
0	259	18.9	215	28.0	+14 43.6	247	02.2	+3 19.3	254	02.7	+0 58.0	291	25.3	-14 11.5		
1	274	21.4	230	27.6	44.4	262	02.9	20.0	269	04.8	58.2	306	27.8	11.5		
2	289	23.9	245	27.1	45.3	277	03.7	20.7	284	07.0	58.3	321	30.3	11.5		
3	304	26.3	260	26.7	46.2	292	04.5	21.4	299	09.1	58.4	336	32.8	11.5		
4	319	28.8	275	26.2	47.1	307	05.3	22.1	314	11.3	58.5	351	35.3	11.6		
5	334	31.3	290	25.8	+14 48.0	322	06.0	+3 22.8	329	13.4	+0 58.7	6	37.8	-14 11.6		
6	349	33.7	305	25.3	+14 48.9	337	06.8	+3 23.5	344	15.6	+0 58.8	21	40.2	-14 11.6		
7	4	36.2	320	24.9	49.7	352	07.6	24.2	359	17.7	58.9	36	42.7	11.6		
8	19	38.7	335	24.4	50.6	7	08.4	24.9	14	19.9	59.0	51	45.2	11.6		
9	34	41.1	350	24.0	51.5	22	09.1	25.6	29	22.0	59.2	66	47.7	11.6		
10	49	43.6	5	23.5	52.4	37	09.9	26.3	44	24.2	59.3	81	50.2	11.7		
11	64	46.0	20	23.1	+14 53.3	52	10.7	+3 27.0	59	26.3	+0 59.4	96	52.7	-14 11.7		
12	79	48.5	35	22.6	+14 54.1	67	11.5	+3 27.7	74	28.5	+0 59.5	111	55.2	-14 11.7		
13	94	51.0	50	22.2	55.0	82	12.2	28.4	89	30.6	59.7	126	57.7	11.7		
14	109	53.4	65	21.7	55.9	97	13.0	29.1	104	32.8	59.8	142	00.1	11.7		
15	124	55.9	80	21.3	56.8	112	13.8	29.8	119	34.9	+0 59.9	157	02.6	11.7		
16	139	58.4	95	20.8	57.6	127	14.6	30.6	134	37.0	+1 00.0	172	05.1	11.8		
17	155	00.8	110	20.4	+14 58.5	142	15.3	+3 31.3	149	39.2	+1 00.2	187	07.6	-14 11.8		
18	170	03.3	125	19.9	+14 59.4	157	16.1	+3 32.0	164	41.3	+1 00.3	202	10.1	-14 11.8		
19	185	05.8	140	19.4	+15 00.3	172	16.9	32.7	179	43.5	00.4	217	12.6	11.8		
20	200	08.2	155	19.0	01.1	187	17.7	33.4	194	45.6	00.5	232	15.1	11.8		
21	215	10.7	170	18.5	02.0	202	18.4	34.1	209	47.8	00.7	247	17.6	11.8		
22	230	13.2	185	18.1	02.9	217	19.2	34.8	224	49.9	00.8	262	20.1	11.9		
23	245	15.6	200	17.6	03.8	232	20.0	35.5	239	52.1	00.9	277	22.5	11.9		
24	260	18.1	215	17.2	+15 04.6	247	20.8	+3 36.2	254	54.2	+1 01.0	292	25.0	-14 11.9		
Dif	—		-5		+9	+8		+7	+21		+1	+25		0		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 9				Edad: 12 ^d 5 PHE { 4 ^h : 60 ^h 1 12 ^h : 60 ^h 4 20 ^h : 60 ^h 6 PMG: 22 ^h 26 ^m R°: 61 ^m													
	hG ☉	Dec			hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	180	03.1	+23	08.1	36	22.7	-16	09.4	60 N	** **	0 58	2 38	18 57	113	1 33	7		
1	195	03.0		08.3	50	49.9	82	22.9 ¹³⁵	58	** **	1 44	2 58	42	105	43	13		
2	210	02.9		08.4	65	17.1	82	36.3 ¹³⁴	56	** **	2 13	3 14	29	100	1 52	18		
3	225	02.7		08.6	79	44.0	79	-16 49.7 ¹³⁴	54	0 53	34	28	18	95	2 01	21		
4	240	02.6		08.7	94	10.9	79	-17 02.9 ¹³²	52	1 35	2 52	40	18 08	92	08	24		
5	255	02.5	+23	08.9	108	37.6	77	-17 16.1 ¹³²	50	2 02	3 06	3 51	17 59	89	2 15	27		
6	270	02.4	+23	09.1	123	04.3	77	-17 29.2 ¹³¹	45	2 46	3 36	4 13	17 40	84	2 29	33		
7	285	02.2		09.2	137	30.7	74	42.1 ¹²⁹	40	3 16	3 58	31	25	80	41	37		
8	300	02.1		09.4	151	57.1	74	-17 55.0 ¹²⁹	35	39	4 16	46	13	76	2 51	41		
9	315	02.0		09.5	166	23.3	72	-18 07.8 ¹²⁸	30	3 58	31	4 58	17 02	73	3 00	44		
10	330	01.8		09.7	180	49.4	71	20.5 ¹²⁷	20	4 26	4 56	5 20	16 43	68	16	49		
11	345	01.7	+23	09.8	195	15.4	70	-18 33.1 ¹²⁶	10 N	4 49	5 16	5 39	16 27	64	3 29	54		
12	0	01.6	+23	10.0	209	41.2	68	-18 45.5 ¹²⁴	0	5 08	5 34	5 56	16 12	60	3 42	58		
13	15	01.5		10.1	224	07.0	68	-18 57.9 ¹²⁴	10 S	24	5 51	6 13	15 57	57	3 55	62		
14	30	01.3		10.3	238	32.5	65	-19 10.2 ¹²³	20	40	6 08	32	41	53	4 09	66		
15	45	01.2		10.4	252	58.0	65	22.3 ¹²¹	30	5 57	26	6 53	23	48	24	72		
16	60	01.1		10.6	267	23.3	63	34.4 ¹²¹	35	6 05	37	7 05	12	46	34	74		
17	75	00.9	+23	10.7	281	48.5	62	-19 46.3 ¹¹⁹	40	6 14	6 48	7 19	15 00	42	4 44	79		
18	90	00.8	+23	10.9	296	13.6	61	-19 58.1 ¹¹⁸	45	6 25	7 02	7 35	14 47	37	4 57	83		
19	105	00.7		11.0	310	38.5	59	-20 09.8 ¹¹⁷	50	36	18	7 56	30	32	5 12	89		
20	120	00.6		11.2	325	03.3	58	21.4 ¹¹⁶	52	41	25	8 06	22	29	19	92		
21	135	00.4		11.3	339	28.0	57	32.8 ¹¹⁴	54	47	33	17	13	26	27	95		
22	150	00.3		11.5	353	52.6	56	44.1 ¹¹³	56	6 53	42	29	14 03	23	36	100		
23	165	00.2		11.6	8	17.0	54	-20 55.3 ¹¹²	58	7 00	7 52	8 43	13 52	18	46	105		
24	180	00.0	+23	11.8	22	41.3	53	-21 06.4 ¹¹¹	60 S	7 07	8 03	9 01	13 39	12	5 58	111		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 6 ^h 37 ^m 7		Mag: -3.9 PMG: 9 ^h 39 ^m		Mag: +0.6 PMG: 7 ^h 30 ^m		Mag: -2.4 PMG: 6 ^h 59 ^m		Mag: +0.7 PMG: 4 ^h 30 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	260	18.1	215	17.2	+15	247	20.8	+3	254	54.2	+1	292	25.0	-14	11.9
1	275	20.5	230	16.7		262	21.5		269	56.4		307	27.5		11.9
2	290	23.0	245	16.2		277	22.3		284	58.5		322	30.0		11.9
3	305	25.5	260	15.8		292	23.1		300	00.7		337	32.5		11.9
4	320	27.9	275	15.3		307	23.9		315	02.8		352	35.0		12.0
5	335	30.4	290	14.9	+15	322	24.6	+3	330	05.0	+1	7	37.5	-14	12.0
6	350	32.9	305	14.4	+15	337	25.4	+3	345	07.1	+1	22	40.0	-14	12.0
7	5	35.3	320	13.9		352	26.2		0	09.3		37	42.5		12.0
8	20	37.8	335	13.5		7	27.0		15	11.4		52	45.0		12.0
9	35	40.3	350	13.0		22	27.7		30	13.6		67	47.4		12.0
10	50	42.7	5	12.6		37	28.5		45	15.8		82	49.9		12.1
11	65	45.2	20	12.1	+15	52	29.3	+3	60	17.9	+1	97	52.4	-14	12.1
12	80	47.7	35	11.6	+15	67	30.1	+3	75	20.1	+1	112	54.9	-14	12.1
13	95	50.1	50	11.2		82	30.8		90	22.2		127	57.4		12.1
14	110	52.6	65	10.7		97	31.6		105	24.4		142	59.9		12.1
15	125	55.0	80	10.2		112	32.4		120	26.5		158	02.4		12.2
16	140	57.5	95	09.8		127	33.2		135	28.7		173	04.9		12.2
17	156	00.0	110	09.3	+15	142	33.9	+3	150	30.8	+1	188	07.4	-14	12.2
18	171	02.4	125	08.8	+15	157	34.7	+3	165	33.0	+1	203	09.9	-14	12.2
19	186	04.9	140	08.4		172	35.5		180	35.1		218	12.4		12.2
20	201	07.4	155	07.9		187	36.3		195	37.3		233	14.9		12.2
21	216	09.8	170	07.4		202	37.0		210	39.4		248	17.3		12.3
22	231	12.3	185	07.0		217	37.8		225	41.6		263	19.8		12.3
23	246	14.8	200	06.5		232	38.6		240	43.7		278	22.3		12.3
24	261	17.2	215	06.0	+15	247	39.4	+3	255	45.9	+1	293	24.8	-14	12.3
Dif	—		-5		+9	+8		+7	+22		+1	+25			0

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7				Edad: 13 ^d 5 PHE	$\left\{ \begin{array}{l} 4^h: 60'8 \\ 12^h: 61'0 \\ 20^h: 61'1 \\ R^{\circ}: 66^m \end{array} \right.$														
	PMG: 12 ^h 00 ^m 1										SD: 16 ^h 5		SD: 23 ^h 27 ^m							
	hG ☉	Dec			hG ☾	Dif	Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m					
0	180	00.0	+23	11.8	22	41.3	-21	06.4	60 N	21 24	23 05	** **	20 50 103		1 40 16					
1	194	59.9		11.9	37	05.5	52	17.3	58	21 03	22 18	** **	27 96		1 56 23					
2	209	59.8		12.0	51	29.5	50	28.1	56	20 47	21 49	** **	20 09 91		2 10 28					
3	224	59.7		12.2	65	53.4	49	38.7	54	33	27	23 10	19 53 88		22 32					
4	239	59.5		12.3	80	17.2	48	49.2	52	21	21 09	22 26	40 85		32 36					
5	254	59.4	+23	12.5	94	40.9	47	-21 59.6	50	20 10	20 54	21 59	19 28 83		2 42 38					
6	269	59.3	+23	12.6	109	04.4	45	-22 09.8	45	19 48	20 25	21 14	19 04 79		3 02 43					
7	284	59.1		12.8	123	27.8	44	19.9	40	30	20 03	20 44	18 45 77		18 47					
8	299	59.0		12.9	137	51.1	43	29.8	35	15	19 44	21	29 74		32 50					
9	314	58.9		13.0	152	14.3	42	39.6	30	19 02	29	20 03	18 15 73		3 44 52					
10	329	58.7		13.2	166	37.3	40	49.2	20	18 40	19 05	19 34	17 51 70		4 05 56					
11	344	58.6	+23	13.3	181	00.2	39	-22 58.7	10 N	18 21	18 44	19 11	17 31 68		4 23 60					
12	359	58.5	+23	13.4	195	23.0	38	-23 08.0	0	18 04	18 26	18 52	17 12 66		4 40 63					
13	14	58.4		13.6	209	45.7	37	17.1	10 S	17 46	18 09	36	16 54 63		4 57 66					
14	29	58.2		13.7	224	08.3	36	26.1	20	28	17 52	20	34 60		5 15 70					
15	44	58.1		13.8	238	30.7	34	34.9	30	17 07	33	18 03	16 11 57		36 74					
16	59	58.0		14.0	252	53.1	34	43.6	35	16 55	23	17 55	15 58 55		5 48 76					
17	74	57.8	+23	14.1	267	15.3	32	-23 52.1	40	16 41	17 11	17 45	15 42 53		6 03 78					
18	89	57.7	+23	14.2	281	37.4	31	-24 00.4	45	16 24	16 58	17 35	15 24 50		6 20 82					
19	104	57.6		14.4	295	59.4	30	08.5	50	16 04	42	23	15 02 46		41 87					
20	119	57.4		14.5	310	21.3	29	16.5	52	15 54	35	18	14 51 44		6 51 90					
21	134	57.3		14.6	324	43.1	28	24.3	54	43	26	13	39 41		7 02 93					
22	149	57.2		14.8	339	04.8	27	31.9	56	30	17	07	26 37		16 96					
23	164	57.0		14.9	353	26.4	26	39.4	58	15 16	16 07	17 00	14 10 32		31 101					
24	179	56.9	+23	15.0	7	47.9	25	-24 46.6	60 S	14 59	15 56	16 52	13 51 25		7 49 109					
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 33 ^m 8				Mag: -3.9 PMG: 9 ^h 40 ^m				Mag: +0.6 PMG: 7 ^h 29 ^m				Mag: -2.4 PMG: 6 ^h 56 ^m				Mag: +0.7 PMG: 4 ^h 26 ^m			
	hG ♈	Dec			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	261	17.2	215	06.0	+15	25.4	247	39.4	+3	53.0	255	45.9	+1	04.0	293	24.8	-14	12.3		
1	276	19.7	230	05.6		26.3	262	40.1		53.7	270	48.1		04.1	308	27.3		12.3		
2	291	22.2	245	05.1		27.1	277	40.9		54.4	285	50.2		04.2	323	29.8		12.4		
3	306	24.6	260	04.6		28.0	292	41.7		55.1	300	52.4		04.4	338	32.3		12.4		
4	321	27.1	275	04.1		28.8	307	42.5		55.8	315	54.5		04.5	353	34.8		12.4		
5	336	29.5	290	03.7	+15	29.7	322	43.2	+3	56.5	330	56.7	+1	04.6	8	37.3	-14	12.4		
6	351	32.0	305	03.2	+15	30.5	337	44.0	+3	57.2	345	58.8	+1	04.7	23	39.8	-14	12.4		
7	6	34.5	320	02.7		31.4	352	44.8		57.9	1	01.0		04.8	38	42.3		12.4		
8	21	36.9	335	02.3		32.2	7	45.6		58.6	16	03.1		05.0	53	44.8		12.5		
9	36	39.4	350	01.8		33.1	22	46.3	+3	59.3	31	05.3		05.1	68	47.3		12.5		
10	51	41.9	5	01.3		34.0	37	47.1	+4	00.0	46	07.5		05.2	83	49.8		12.5		
11	66	44.3	20	00.8	+15	34.8	52	47.9	+4	00.7	61	09.6	+1	05.3	98	52.3	-14	12.5		
12	81	46.8	35	00.4	+15	35.7	67	48.7	+4	01.4	76	11.8	+1	05.5	113	54.8	-14	12.5		
13	96	49.3	49	59.9		36.5	82	49.4		02.1	91	13.9		05.6	128	57.2		12.6		
14	111	51.7	64	59.4		37.4	97	50.2		02.8	106	16.1		05.7	143	59.7		12.6		
15	126	54.2	79	58.9		38.2	112	51.0		03.4	121	18.3		05.8	159	02.2		12.6		
16	141	56.7	94	58.5		39.1	127	51.8		04.1	136	20.4		05.9	174	04.7		12.6		
17	156	59.1	109	58.0	+15	39.9	142	52.6	+4	04.8	151	22.6	+1	06.1	189	07.2	-14	12.6		
18	172	01.6	124	57.5	+15	40.8	157	53.3	+4	05.5	166	24.7	+1	06.2	204	09.7	-14	12.7		
19	187	04.0	139	57.0		41.6	172	54.1		06.2	181	26.9		06.3	219	12.2		12.7		
20	202	06.5	154	56.5		42.5	187	54.9		06.9	196	29.0		06.4	234	14.7		12.7		
21	217	09.0	169	56.1		43.3	202	55.7		07.6	211	31.2		06.5	249	17.2		12.7		
22	232	11.4	184	55.6		44.1	217	56.4		08.3	226	33.4		06.7	264	19.7		12.7		
23	247	13.9	199	55.1		45.0	232	57.2		09.0	241	35.5		06.8	279	22.2		12.7		
24	262	16.4	214	54.6	+15	45.8	247	58.0	+4	09.7	256	37.7	+1	06.9	294	24.7	-14	12.8		
Dif	—				-5 +9				+8 +7				+22 +1				+25 0			

UT	SOL				LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 00 ^m 3				Edad: 14 ^d 5 PHE { SD: 16'7 PMG: **h **m R°: **m																	
	hG ☉		Dec		hG ☾		Dif		Dec			Dif			Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	179	56.9	+23	15.0	7	47.9	-24	46.6	71	60 N	** **	0 55	2 37	22 33	67	1 56	35					
1	194	56.8		15.1	22	09.3	24	-24	53.7	58	** **	1 42	2 57	22 03	67	2 19	43					
2	209	56.7		15.3	36	30.6	23	-25	00.6	56	** **	2 11	3 13	21 40	68	3 58	47					
3	224	56.5		15.4	50	51.8	22		07.3	54	0 50	33	27	21 68		2 54	50					
4	239	56.4		15.5	65	12.9	21		13.8	52	1 34	2 51	40	21 05	68	3 08	52					
5	254	56.3	+23	15.6	79	33.9	20	-25	20.1	50	2 01	3 06	3 50	20 51	69	3 20	53					
6	269	56.1	+23	15.8	93	54.9	20	-25	26.3	45	2 46	3 35	4 13	20 23	69	3 45	57					
7	284	56.0		15.9	108	15.7	18		32.2	40	3 16	3 58	31	20 02	68	4 05	59					
8	299	55.9		16.0	122	36.5	18		37.9	35	39	4 16	46	19 43	69	22	60					
9	314	55.7		16.1	136	57.2	17		43.5	30	3 58	31	4 58	28	68	4 36	62					
10	329	55.6		16.2	151	17.8	16		48.8	20	4 27	4 56	5 20	19 01	68	5 01	64					
11	344	55.5	+23	16.4	165	38.4	16	-25	54.0	10 N	4 49	5 16	5 39	18 39	67	5 23	65					
12	359	55.3	+23	16.5	179	58.9	15	-25	58.9	0	5 08	5 34	5 57	18 18	67	5 43	66					
13	14	55.2		16.6	194	19.3	14	-26	03.7	10 S	25	5 51	6 14	17 57	66	6 03	68					
14	29	55.1		16.7	208	39.6	13		08.2	20	41	6 08	32	34	66	25	69					
15	44	54.9		16.8	222	59.9	13		12.6	44	30	5 57	27	6 53	17 08	66	6 50	71				
16	59	54.8		16.9	237	20.2	13		16.7	35	6 06	38	7 06	16 53	65	7 04	72					
17	74	54.7	+23	17.1	251	40.3	11	-26	20.7	40	6 15	6 49	7 20	16 35	65	7 21	74					
18	89	54.6	+23	17.2	266	00.5	12	-26	24.4	37	6 25	7 03	7 36	16 14	64	7 42	75					
19	104	54.4		17.3	280	20.5	10		27.9	35	37	19	7 57	15 48	62	8 08	77					
20	119	54.3		17.4	294	40.6	11		31.2	33	42	26	8 07	35	61	21	77					
21	134	54.2		17.5	309	00.6	10		34.3	31	54	48	34	20	61	35	79					
22	149	54.0		17.6	323	20.5	9		37.2	29	56	6 54	43	30	15 03	59	8 52	81				
23	164	53.9		17.7	337	40.4	9		39.9	27	58	7 01	7 53	8 45	14 42	58	9 12	83				
24	179	53.8	+23	17.8	352	00.3	9	-26	42.3	24	60 S	7 08	8 05	9 02	14 16	54	9 38	87				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO					
	PMG 6 ^h 29 ^m 8				Mag: -3.9 PMG: 9 ^h 41 ^m				Mag: +0.6 PMG: 7 ^h 28 ^m				Mag: -2.4 PMG: 6 ^h 52 ^m				Mag: +0.7 PMG: 4 ^h 22 ^m					
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	262	16.4	214	54.6	+15	45.8	247	58.0	+4	09.7	256	37.7	+1	06.9	294	24.7	-14	12.8				
1	277	18.8	229	54.1		46.7	262	58.8		10.4	271	39.8		07.0	309	27.2		12.8				
2	292	21.3	244	53.7		47.5	277	59.5		11.1	286	42.0		07.1	324	29.7		12.8				
3	307	23.8	259	53.2		48.4	293	00.3		11.8	301	44.2		07.3	339	32.2		12.8				
4	322	26.2	274	52.7		49.2	308	01.1		12.5	316	46.3		07.4	354	34.7		12.8				
5	337	28.7	289	52.2	+15	50.0	323	01.9	+4	13.2	331	48.5	+1	07.5	9	37.2	-14	12.9				
6	352	31.2	304	51.7	+15	50.9	338	02.7	+4	13.9	346	50.7	+1	07.6	24	39.7	-14	12.9				
7	7	33.6	319	51.2		51.7	353	03.4		14.6	1	52.8		07.7	39	42.2		12.9				
8	22	36.1	334	50.8		52.6	8	04.2		15.3	16	55.0		07.9	54	44.7		12.9				
9	37	38.5	349	50.3		53.4	23	05.0		16.0	31	57.1		08.0	69	47.2		12.9				
10	52	41.0	4	49.8		54.2	38	05.8		16.7	46	59.3		08.1	84	49.7		13.0				
11	67	43.5	19	49.3	+15	55.1	53	06.5	+4	17.4	62	01.5	+1	08.2	99	52.2	-14	13.0				
12	82	45.9	34	48.8	+15	55.9	68	07.3	+4	18.1	77	03.6	+1	08.3	114	54.7	-14	13.0				
13	97	48.4	49	48.3		56.8	83	08.1		18.8	92	05.8		08.4	129	57.2		13.0				
14	112	50.9	64	47.8		57.6	98	08.9		19.5	107	08.0		08.6	144	59.7		13.0				
15	127	53.3	79	47.4		58.4	113	09.6		20.2	122	10.1		08.7	160	02.2		13.1				
16	142	55.8	94	46.9	+15	59.3	128	10.4		20.9	137	12.3		08.8	175	04.7		13.1				
17	157	58.3	109	46.4	+16	00.1	143	11.2	+4	21.5	152	14.4	+1	08.9	190	07.2	-14	13.1				
18	173	00.7	124	45.9	+16	00.9	158	12.0	+4	22.2	167	16.6	+1	09.0	205	09.7	-14	13.1				
19	188	03.2	139	45.4		01.8	173	12.8		22.9	182	18.8		09.2	220	12.2		13.2				
20	203	05.6	154	44.9		02.6	188	13.5		23.6	197	20.9		09.3	235	14.7		13.2				
21	218	08.1	169	44.4		03.4	203	14.3		24.3	212	23.1		09.4	250	17.2		13.2				
22	233	10.6	184	43.9		04.3	218	15.1		25.0	227	25.3		09.5	265	19.7		13.2				
23	248	13.0	199	43.4		05.1	233	15.9		25.7	242	27.4		09.6	280	22.2		13.2				
24	263	15.5	214	42.9	+16	05.9	248	16.6	+4	26.4	257	29.6	+1	09.7	295	24.7	-14	13.3				
Dif	—				-5 +8				+8 +7				+22 +1				+25 0					

UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 15 ^d 5	PHE { 4 ^h : 61 ^h 3 12 ^h : 61 ^h 3 20 ^h : 61 ^h 2	SD: 16 ^h 7				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 00 ^m 5					PMG: 0 ^h 33 ^m				R°: 68 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	53.8	+23 17.8	352	00.3	-26 42.3	23	60 N	21 25	23 09	** **	23 40 31	2 31 74		
1	194	53.6	18.0	6	20.2	9	44.6	58	21 05	22 20	** **	23 10 39	3 02 73		
2	209	53.5	18.1	20	40.0	8	46.6	56	20 48	21 50	** **	22 48 42	25 72		
3	224	53.4	18.2	34	59.8	8	48.5	54	34	28	23 14	29 46	3 44 71		
4	239	53.2	18.3	49	19.6	8	50.1	52	22	21 11	22 28	13 49	4 00 71		
5	254	53.1	+23 18.4	63	39.4	8	-26 51.5	50	20 11	20 55	22 01	22 00 50	4 13 71		
6	269	53.0	+23 18.5	77	59.1	7	-26 52.7	45	19 49	20 26	21 16	21 32 54	4 42 70		
7	284	52.8	18.6	92	18.9	8	53.6	40	31	20 03	20 45	21 10 56	5 04 70		
8	299	52.7	18.7	106	38.7	8	54.4	35	16	19 45	22	20 52 58	22 70		
9	314	52.6	18.8	120	58.4	7	54.9	30	19 03	30	20 03	36 59	5 38 69		
10	329	52.4	18.9	135	18.2	8	55.3	20	18 41	19 05	19 34	20 09 62	6 05 68		
11	344	52.3	+23 19.0	149	37.9	7	-26 55.4	10 N	18 22	18 45	19 12	19 46 64	6 28 68		
12	359	52.2	+23 19.1	163	57.7	8	-26 55.3	0	18 04	18 27	18 53	19 25 65	6 49 67		
13	14	52.0	19.2	178	17.5	8	55.0	10 S	17 47	18 10	36	19 03 68	7 11 66		
14	29	51.9	19.3	192	37.3	8	54.5	20	28	17 52	20	18 40 69	7 34 65		
15	44	51.8	19.4	206	57.1	8	53.7	30	17 07	34	18 03	18 14 71	8 01 64		
16	59	51.6	19.5	221	17.0	9	52.8	35	16 55	23	17 55	17 58 72	16 64		
17	74	51.5	+23 19.6	235	36.9	9	-26 51.6	40	16 41	17 11	17 45	17 40 74	8 35 62		
18	89	51.4	+23 19.7	249	56.8	9	-26 50.2	45	16 24	16 58	17 35	17 18 76	8 57 61		
19	104	51.2	19.8	264	16.7	9	48.6	50	16 03	42	23	16 50 78	9 25 59		
20	119	51.1	19.9	278	36.7	10	46.8	52	15 54	34	18	36 80	38 59		
21	134	51.0	20.0	292	56.8	11	44.8	54	43	26	12	21 81	9 54 57		
22	149	50.8	20.1	307	16.8	10	42.6	56	30	17	06	16 02 83	10 13 55		
23	164	50.7	20.2	321	37.0	12	40.2	58	15 15	16 07	17 00	15 40 86	10 35 53		
24	179	50.6	+23 20.3	335	57.1	11	-26 37.5	60 S	14 58	15 55	16 52	15 10 91	11 05 48		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 25 ^m 9		Mag: -3.9 PMG: 9 ^h 41 ^m		Mag: +0.6 PMG: 7 ^h 27 ^m		Mag: -2.4 PMG: 6 ^h 49 ^m		Mag: +0.7 PMG: 4 ^h 18 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	263	15.5	214 42.9	+16 05.9	248 16.6	+4 26.4	257 29.6	+1 09.7	295 24.7	-14 13.3
1	278	18.0	229 42.4	06.7	263 17.4	27.1	272 31.8	09.9	310 27.2	13.3
2	293	20.4	244 42.0	07.6	278 18.2	27.8	287 33.9	10.0	325 29.7	13.3
3	308	22.9	259 41.5	08.4	293 19.0	28.5	302 36.1	10.1	340 32.2	13.3
4	323	25.4	274 41.0	09.2	308 19.8	29.2	317 38.3	10.2	355 34.7	13.3
5	338	27.8	289 40.5	+16 10.1	323 20.5	+4 29.9	332 40.4	+1 10.3	10 37.2	-14 13.4
6	353	30.3	304 40.0	+16 10.9	338 21.3	+4 30.6	347 42.6	+1 10.4	25 39.7	-14 13.4
7	8 32.8	319 39.5	11.7	353 22.1	31.3	2 44.8	2 44.8	10.6	40 42.2	13.4
8	23 35.2	334 39.0	12.5	8 22.9	32.0	17 46.9	17 46.9	10.7	55 44.7	13.4
9	38 37.7	349 38.5	13.4	23 23.6	32.6	32 49.1	32 49.1	10.8	70 47.2	13.4
10	53 40.1	4 38.0	14.2	38 24.4	33.3	47 51.3	47 51.3	10.9	85 49.7	13.5
11	68 42.6	19 37.5	+16 15.0	53 25.2	+4 34.0	62 53.4	+1 11.0	100 52.2	-14 13.5	
12	83 45.1	34 37.0	+16 15.8	68 26.0	+4 34.7	77 55.6	+1 11.1	115 54.7	-14 13.5	
13	98 47.5	49 36.5	16.7	83 26.8	35.4	92 57.8	11.3	130 57.2	13.5	
14	113 50.0	64 36.0	17.5	98 27.5	36.1	107 59.9	11.4	145 59.7	13.6	
15	128 52.5	79 35.5	18.3	113 28.3	36.8	123 02.1	11.5	161 02.2	13.6	
16	143 54.9	94 35.0	19.1	128 29.1	37.5	138 04.3	11.6	176 04.7	13.6	
17	158 57.4	109 34.5	+16 19.9	143 29.9	+4 38.2	153 06.5	+1 11.7	191 07.2	-14 13.6	
18	173 59.9	124 34.0	+16 20.8	158 30.7	+4 38.9	168 08.6	+1 11.8	206 09.7	-14 13.6	
19	189 02.3	139 33.5	21.6	173 31.4	39.6	183 10.8	11.9	221 12.2	13.7	
20	204 04.8	154 33.0	22.4	188 32.2	40.3	198 13.0	12.1	236 14.7	13.7	
21	219 07.3	169 32.5	23.2	203 33.0	40.9	213 15.1	12.2	251 17.2	13.7	
22	234 09.7	184 32.0	24.0	218 33.8	41.6	228 17.3	12.3	266 19.7	13.7	
23	249 12.2	199 31.5	24.8	233 34.5	42.3	243 19.5	12.4	281 22.2	13.7	
24	264 14.6	214 31.0	+16 25.7	248 35.3	+4 43.0	258 21.6	+1 12.5	296 24.8	-14 13.8	
Dif	—	-5	+8	+8	+7	+22	+1	+25	0	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 00 ^m 7				Edad: 16 ^d 5 PHE { SD: 16'7 PMG: 1 ^h 41 ^m R°: 64 ^m 4 ^h : 61'1 12 ^h : 61'0 20 ^h : 60'8											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	50.6	+23	20.3	335	57.1	-26	37.5	60 N	** **	0 52	2 36	** **	**	3 45	105
1	194	50.4		20.4	350	17.4	13	34.7	58	** **	1 41	2 56	23 49	20	4 15	96
2	209	50.3		20.5	4	37.6	12	31.6	56	** **	2 11	3 13	30 26		37	92
3	224	50.2		20.5	18	58.0	14	28.4	54	0 48	33	27	15 29		4 55	89
4	239	50.0		20.6	33	18.4	14	24.9	52	1 33	2 51	39	23 02	32	5 11	86
5	254	49.9	+23	20.7	47	38.9	15	-26 21.2	50	2 00	3 06	3 50	22 50	35	5 24	84
6	269	49.8	+23	20.8	61	59.4	15	-26 17.4	45	2 46	3 35	4 13	22 26	40	5 52	79
7	284	49.6		20.9	76	20.0	16	13.3	40	3 16	3 58	31	22 06	44	6 14	76
8	299	49.5		21.0	90	40.7	17	09.1	35	39	4 16	46	21 50	47	32	74
9	314	49.4		21.1	105	01.5	18	-26 04.6	30	3 58	31	4 59	35 50		6 47	72
10	329	49.2		21.2	119	22.4	19	-25 59.9	20	4 27	4 56	5 21	21 11	54	7 13	69
11	344	49.1	+23	21.2	133	43.3	19	-25 55.1	10 N	4 49	5 16	5 40	20 50	58	7 36	66
12	359	49.0	+23	21.3	148	04.3	20	-25 50.0	0	5 08	5 35	5 57	20 30	61	7 56	64
13	14	48.8		21.4	162	25.4	21	44.8	10 S	25	5 52	6 14	20 11	64	8 17	61
14	29	48.7		21.5	176	46.7	23	39.4	20	41	6 09	33	19 49	68	8 39	58
15	44	48.6		21.6	191	08.0	23	33.7	30	5 58	28	6 54	25 72		9 05	55
16	59	48.4		21.7	205	29.3	23	27.9	35	6 07	38	7 06	19 10	75	20	53
17	74	48.3	+23	21.7	219	50.8	25	-25 21.9	40	6 16	6 50	7 21	18 54	77	9 37	50
18	89	48.2	+23	21.8	234	12.4	26	-25 15.8	45	6 26	7 04	7 37	18 34	80	9 58	47
19	104	48.0		21.9	248	34.1	27	09.4	50	38	20	7 58	18 08	86	10 24	42
20	119	47.9		22.0	262	55.9	28	-25 02.9	52	43	27	8 08	17 56	88	37	40
21	134	47.8		22.1	277	17.9	30	-24 56.2	54	49	35	19	42 91		10 51	37
22	149	47.6		22.1	291	39.9	30	49.3	56	6 55	44	32	25 96		11 08	33
23	164	47.5		22.2	306	02.0	31	42.2	58	7 02	7 54	8 46	17 06	101	28	28
24	179	47.4	+23	22.3	320	24.2	32	-24 35.0	60 S	7 09	8 06	9 04	16 41	108	11 53	21

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 6 ^h 22 ^m 0		Mag: -3.9 PMG: 9 ^h 42 ^m		Mag: +0.6 PMG: 7 ^h 25 ^m		Mag: -2.4 PMG: 6 ^h 46 ^m		Mag: +0.7 PMG: 4 ^h 14 ^m							
	hG ♈		Dec		hG ♂		Dec		hG ♄		Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'				
0	264	14.6			248	35.3	+4	43.0	258	21.6	+1	12.5				
1	279	17.1			263	36.1		43.7	273	23.8		12.6				
2	294	19.6			278	36.9		44.4	288	26.0		12.8				
3	309	22.0			293	37.7		45.1	303	28.2		12.9				
4	324	24.5			308	38.4		45.8	318	30.3		13.0				
5	339	27.0			323	39.2	+4	46.5	333	32.5	+1	13.1				
6	354	29.4			338	40.0	+4	47.2	348	34.7	+1	13.2				
7	9	31.9			353	40.8		47.9	3	36.9		13.3				
8	24	34.4			8	41.6		48.5	18	39.0		13.4				
9	39	36.8			23	42.3		49.2	33	41.2		13.6				
10	54	39.3			38	43.1		49.9	48	43.4		13.7				
11	69	41.8			53	43.9	+4	50.6	63	45.5	+1	13.8				
12	84	44.2			68	44.7	+4	51.3	78	47.7	+1	13.9				
13	99	46.7			83	45.4		52.0	93	49.9		14.0				
14	114	49.1			98	46.2		52.7	108	52.1		14.1				
15	129	51.6			113	47.0		53.4	123	54.2		14.2				
16	144	54.1			128	47.8		54.1	138	56.4		14.3				
17	159	56.5			143	48.6	+4	54.8	153	58.6	+1	14.5				
18	174	59.0			158	49.3	+4	55.4	169	00.8	+1	14.6				
19	190	01.5			173	50.1		56.1	184	02.9		14.7				
20	205	03.9			188	50.9		56.8	199	05.1		14.8				
21	220	06.4			203	51.7		57.5	214	07.3		14.9				
22	235	08.9			218	52.5		58.2	229	09.5		15.0				
23	250	11.3			233	53.2		58.9	244	11.6		15.1				
24	265	13.8			248	54.0	+4	59.6	259	13.8	+1	15.2				
Dif	—		-5		+8		+7		+22		+1		+25		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 7			Edad: 17 ^d 5 PHE					Civil			Náutico			Hora R°		
	PMG: 12 ^h 01 ^m 0			SD: 16 ^h 5													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		h m	h m	h m	h m	m	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°									
0	179	47.4	+23 22.3	320	24.2	-24 35.0	75	60 N	21 26	23 12	** **	0 11 13	5 30 110				
1	194	47.2	22.4	334	46.6	27.5	75	58	21 06	22 22	** **	** **	5 51 103				
2	209	47.1	22.4	349	09.1	20.0	75	56	20 49	21 52	** **	23 56 16	6 09 97				
3	224	47.0	22.5	3	31.7	12.2	78	54	35	30	23 16	44 20	24 93				
4	239	46.8	22.6	17	54.4	-24 04.3	79	52	23	21 12	22 30	34 23	37 90				
5	254	46.7	+23 22.7	32	17.2	-23 56.2	81	50	20 12	20 56	22 02	23 25 25	6 48 87				
6	269	46.6	+23 22.7	46	40.1	-23 48.0	82	45	19 49	20 27	21 16	23 06 31	7 11 82				
7	284	46.4	22.8	61	03.2	39.6	84	40	31	20 04	20 46	22 50 35	30 77				
8	299	46.3	22.9	75	26.4	31.0	86	35	16	19 46	23	37 39	46 73				
9	314	46.1	22.9	89	49.7	22.3	87	30	19 03	31	20 04	25 42	7 59 71				
10	329	46.0	23.0	104	13.2	13.4	89	20	18 41	19 06	19 35	22 05 47	8 22 66				
11	344	45.9	+23 23.1	118	36.7	-23 04.4	90	10 N	18 22	18 45	19 12	21 48 51	8 42 62				
12	359	45.7	+23 23.1	133	00.4	-22 55.3	91	0	18 05	18 27	18 53	21 31 56	9 00 58				
13	14	45.6	23.2	147	24.3	45.9	94	10 S	17 47	18 10	36	21 15 59	18 55				
14	29	45.5	23.3	161	48.2	36.5	94	20	29	17 53	20	20 57 64	9 37 51				
15	44	45.3	23.3	176	12.3	26.9	96	30	17 07	34	18 04	37 69	10 00 45				
16	59	45.2	23.4	190	36.5	17.1	98	35	16 55	23	17 55	25 72	13 42				
17	74	45.1	+23 23.5	205	00.8	-22 07.3	98	40	16 41	17 12	17 46	20 11 76	10 27 40				
18	89	44.9	+23 23.5	219	25.3	-21 57.3	100	45	16 24	16 58	17 35	19 54 81	10 45 35				
19	104	44.8	23.6	233	49.9	47.1	102	50	16 03	42	23	34 86	11 06 31				
20	119	44.7	23.7	248	14.7	36.8	103	52	15 54	34	18	24 89	17 27				
21	134	44.5	23.7	262	39.5	26.4	104	54	42	26	13	13 93	28 24				
22	149	44.4	23.8	277	04.5	15.9	105	56	30	17	06	19 01 96	41 21				
23	164	44.3	23.8	291	29.7	-21 05.2	107	58	15 15	16 07	17 00	18 47 100	11 56 16				
24	179	44.1	+23 23.9	305	54.9	-20 54.4	108	60 S	14 58	15 55	16 52	18 29 107	12 14 11				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 6 ^h 18 ^m 0			Mag: -3.9 PMG: 9 ^h 43 ^m			Mag: +0.6 PMG: 7 ^h 24 ^m			Mag: -2.4 PMG: 6 ^h 42 ^m			Mag: +0.7 PMG: 4 ^h 10 ^m				
	hG ♈			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	265	13.8	214 18.7	+16 45.0	248 54.0	+4 59.6	259 13.8	+1 15.2	297 24.9	-14 14.3							
1	280	16.3	229 18.2	45.8	263 54.8	+5 00.3	274 16.0	15.4	312 27.4	14.3							
2	295	18.7	244 17.7	46.6	278 55.6	01.0	289 18.2	15.5	327 29.9	14.4							
3	310	21.2	259 17.2	47.4	293 56.4	01.6	304 20.4	15.6	342 32.4	14.4							
4	325	23.6	274 16.7	48.2	308 57.1	02.3	319 22.5	15.7	357 35.0	14.4							
5	340	26.1	289 16.2	+16 49.0	323 57.9	+5 03.0	334 24.7	+1 15.8	12 37.5	-14 14.4							
6	355	28.6	304 15.6	+16 49.8	338 58.7	+5 03.7	349 26.9	+1 15.9	27 40.0	-14 14.5							
7	10	31.0	319 15.1	50.6	353 59.5	04.4	4 29.1	16.0	42 42.5	14.5							
8	25	33.5	334 14.6	51.4	9 00.3	05.1	19 31.2	16.1	57 45.0	14.5							
9	40	36.0	349 14.1	52.2	24 01.0	05.8	34 33.4	16.3	72 47.5	14.5							
10	55	38.4	4 13.6	53.0	39 01.8	06.5	49 35.6	16.4	87 50.0	14.6							
11	70	40.9	19 13.0	+16 53.8	54 02.6	+5 07.1	64 37.8	+1 16.5	102 52.5	-14 14.6							
12	85	43.4	34 12.5	+16 54.6	69 03.4	+5 07.8	79 40.0	+1 16.6	117 55.0	-14 14.6							
13	100	45.8	49 12.0	55.4	84 04.2	08.5	94 42.1	16.7	132 57.5	14.6							
14	115	48.3	64 11.5	56.1	99 04.9	09.2	109 44.3	16.8	148 00.1	14.7							
15	130	50.8	79 11.0	56.9	114 05.7	09.9	124 46.5	16.9	163 02.6	14.7							
16	145	53.2	94 10.4	57.7	129 06.5	10.6	139 48.7	17.0	178 05.1	14.7							
17	160	55.7	109 09.9	+16 58.5	144 07.3	+5 11.3	154 50.9	+1 17.1	193 07.6	-14 14.7							
18	175	58.1	124 09.4	+16 59.3	159 08.1	+5 11.9	169 53.0	+1 17.3	208 10.1	-14 14.8							
19	191	00.6	139 08.9	+17 00.1	174 08.8	12.6	184 55.2	17.4	223 12.6	14.8							
20	206	03.1	154 08.3	00.9	189 09.6	13.3	199 57.4	17.5	238 15.1	14.8							
21	221	05.5	169 07.8	01.7	204 10.4	14.0	214 59.6	17.6	253 17.6	14.8							
22	236	08.0	184 07.3	02.4	219 11.2	14.7	230 01.8	17.7	268 20.1	14.9							
23	251	10.5	199 06.7	03.2	234 12.0	15.4	245 03.9	17.8	283 22.7	14.9							
24	266	12.9	214 06.2	+17 04.0	249 12.7	+5 16.1	260 06.1	+1 17.9	298 25.2	-14 14.9							
Dif	—			-5	+8	+8	+7	+22	+1	+25	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 2				Edad: 18 ^d 5 PHE { SD: 16'3 PMG: 3 ^h 45 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	179	44.1	+23	23.9	305	54.9	-20	54.4	60 N	** ** *	0 50	2 36	0 24	7	7 20	104				
1	194	44.0		24.0	320	20.3	64	43.5	58	** ** *	1 40	2 56	0 09	12	34	99				
2	209	43.9		24.0	334	45.9	66	32.5	56	** ** *	2 10	3 13	** ** *	**	46	95				
3	224	43.7		24.1	349	11.5	66	21.3	54	0 46	33	27	** ** *	**	7 57	91				
4	239	43.6		24.1	3	37.3	68	-20 10.1	52	1 32	2 51	39	23 57	17	8 07	87				
5	254	43.4	+23	24.2	18	03.3	70	-19 58.7	50	2 00	3 06	3 50	23 50	20	8 15	85				
6	269	43.3	+23	24.2	32	29.3	70	-19 47.2	45	2 46	3 35	4 13	23 37	24	8 33	79				
7	284	43.2		24.3	46	55.5	72	35.6	40	3 16	3 58	31	25 29		47	75				
8	299	43.0		24.3	61	21.9	74	23.9	35	39	4 16	46	16 32		8 59	71				
9	314	42.9		24.4	75	48.3	74	12.1	30	3 58	31	4 59	23 07	36	9 10	67				
10	329	42.8		24.4	90	14.9	76	-19 00.2	20	4 27	4 56	5 21	22 52	41	28	62				
11	344	42.6	+23	24.5	104	41.6	77	-18 48.2	10 N	4 50	5 17	5 40	22 39	46	9 44	57				
12	359	42.5	+23	24.5	119	08.5	79	-18 36.1	0	5 09	5 35	5 57	22 27	50	9 58	53				
13	14	42.4		24.6	133	35.4	79	23.9	10 S	26	5 52	6 15	14 55		10 13	48				
14	29	42.2		24.6	148	02.5	81	-18 11.6	20	42	6 09	33	22 01	60	28	44				
15	44	42.1		24.7	162	29.8	83	-17 59.2	30	5 58	28	6 55	21 46	65	45	39				
16	59	42.0		24.7	176	57.1	83	46.8	35	6 07	39	7 07	37 68		10 55	36				
17	74	41.8	+23	24.8	191	24.6	85	-17 34.2	40	6 17	6 51	7 21	21 27	72	11 07	32				
18	89	41.7	+23	24.8	205	52.2	86	-17 21.5	45	6 27	7 04	7 38	21 15	76	11 20	28				
19	104	41.6		24.9	220	20.0	88	-17 08.8	50	39	20	7 59	21 00	82	37	22				
20	119	41.4		24.9	234	47.8	88	-16 56.0	52	44	28	8 09	20 53	85	44	20				
21	134	41.3		25.0	249	15.8	90	43.1	54	50	36	20	46 88		11 52	17				
22	149	41.1		25.0	263	43.9	91	30.1	56	6 56	45	32	37 91		12 02	13				
23	164	41.0		25.0	278	12.1	92	17.1	58	7 03	7 55	8 47	27 96		12 10					
24	179	40.9	+23	25.1	292	40.5	94	-16 03.9	60 S	7 10	8 07	9 05	20 16	100	12 25	5				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 6 ^h 14 ^m 1				Mag: -3.9 PMG: 9 ^h 44 ^m				Mag: +0.6 PMG: 7 ^h 23 ^m				Mag: -2.4 PMG: 6 ^h 39 ^m				Mag: +0.7 PMG: 4 ^h 06 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	266	12.9	214	06.2	+17	04.0	249	12.7	+5	16.1	260	06.1	+1	17.9	298	25.2	-14	14.9		
1	281	15.4	229	05.7		04.8	264	13.5		16.7	275	08.3		18.0	313	27.7		14.9		
2	296	17.9	244	05.2		05.6	279	14.3		17.4	290	10.5		18.1	328	30.2		15.0		
3	311	20.3	259	04.6		06.4	294	15.1		18.1	305	12.7		18.2	343	32.7		15.0		
4	326	22.8	274	04.1		07.1	309	15.9		18.8	320	14.9		18.4	358	35.2		15.0		
5	341	25.3	289	03.6	+17	07.9	324	16.6	+5	19.5	335	17.0	+1	18.5	13	37.7	-14	15.0		
6	356	27.7	304	03.0	+17	08.7	339	17.4	+5	20.2	350	19.2	+1	18.6	28	40.2	-14	15.1		
7	11	30.2	319	02.5		09.5	354	18.2		20.8	5	21.4		18.7	43	42.8		15.1		
8	26	32.6	334	02.0		10.3	9	19.0		21.5	20	23.6		18.8	58	45.3		15.1		
9	41	35.1	349	01.5		11.0	24	19.8		22.2	35	25.8		18.9	73	47.8		15.1		
10	56	37.6	4	00.9		11.8	39	20.6		22.9	50	28.0		19.0	88	50.3		15.2		
11	71	40.0	19	00.4	+17	12.6	54	21.3	+5	23.6	65	30.1	+1	19.1	103	52.8	-14	15.2		
12	86	42.5	33	59.9	+17	13.4	69	22.1	+5	24.3	80	32.3	+1	19.2	118	55.3	-14	15.2		
13	101	45.0	48	59.3		14.1	84	22.9		25.0	95	34.5		19.3	133	57.8		15.2		
14	116	47.4	63	58.8		14.9	99	23.7		25.6	110	36.7		19.4	149	00.4		15.3		
15	131	49.9	78	58.3		15.7	114	24.5		26.3	125	38.9		19.5	164	02.9		15.3		
16	146	52.4	93	57.7		16.5	129	25.2		27.0	140	41.1		19.7	179	05.4		15.3		
17	161	54.8	108	57.2	+17	17.2	144	26.0	+5	27.7	155	43.3	+1	19.8	194	07.9	-14	15.3		
18	176	57.3	123	56.6	+17	18.0	159	26.8	+5	28.4	170	45.4	+1	19.9	209	10.4	-14	15.4		
19	191	59.7	138	56.1		18.8	174	27.6		29.1	185	47.6		20.0	224	12.9		15.4		
20	207	02.2	153	55.6		19.5	189	28.4		29.7	200	49.8		20.1	239	15.5		15.4		
21	222	04.7	168	55.0		20.3	204	29.1		30.4	215	52.0		20.2	254	18.0		15.4		
22	237	07.1	183	54.5		21.1	219	29.9		31.1	230	54.2		20.3	269	20.5		15.5		
23	252	09.6	198	54.0		21.8	234	30.7		31.8	245	56.4		20.4	284	23.0		15.5		
24	267	12.1	213	53.4	+17	22.6	249	31.5	+5	32.5	260	58.6	+1	20.5	299	25.5	-14	15.5		
Dif	—				-5 +8				+8 +7				+22 +1				+25 0			

UT	SOL			LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 19 ^d 5 PHE { 4 ^h : 59 ^m 0 12 ^h : 58 ^m 7 20 ^h : 58 ^m 4 R°: 49 ^m												
	PMG: 12 ^h 01 ^m 4			SD: 16 ^h 1 PMG: 4 ^h 39 ^m												
	hG ☉		Dec	hG ☾		Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m m		h m m	
0	179	40.9	+23 25.1	292	40.5	-16 03.9			60 N	21 27	23 14	** **	0 31 3		9 04 97	
1	194	40.7		307	08.9	-15 50.7 ¹³²			58	21 07	22 23	** **	21 7		13 93	
2	209	40.6		321	37.5	37.5 ¹³²			56	20 50	21 53	** **	12 11		21 89	
3	224	40.5		336	06.2	24.1 ¹³⁴			54	36	30	23 18	0 04 14		28 86	
4	239	40.3		350	35.0	-15 10.7 ¹³⁴			52	23	21 12	22 31	** **	** **	34 83	
5	254	40.2	+23 25.3	5	04.0 ¹⁰⁰	-14 57.2 ¹³⁵			50	20 12	20 57	22 03	** **	** **	9 40 80	
6	269	40.1	+23 25.3	19	33.0 ¹⁰⁰	-14 43.7 ¹³⁵			45	19 50	20 27	21 17	** **	** **	9 52 75	
7	284	39.9		34	02.2 ¹⁰²	30.1 ¹³⁶			40	32	20 05	20 46	23 54 25		10 02 70	
8	299	39.8		48	31.5 ¹⁰³	16.5 ¹³⁶			35	17	19 47	23	48 29		10 67	
9	314	39.7		63	00.8 ¹⁰³	-14 02.7 ¹³⁸			30	19 04	31	20 05	43 31		17 64	
10	329	39.5		77	30.3 ¹⁰⁵	-13 49.0 ¹³⁷			20	18 42	19 06	19 35	33 37		30 58	
11	344	39.4	+23 25.5	91	59.9 ¹⁰⁶	-13 35.1 ¹³⁹			10 N	18 23	18 46	19 13	23 25 42		10 41 53	
12	359	39.2	+23 25.5	106	29.6 ¹⁰⁷	-13 21.3 ¹³⁸			0	18 05	18 28	18 54	23 17 46		10 51 48	
13	14	39.1		120	59.5 ¹⁰⁹	-13 07.3 ¹⁴⁰			10 S	17 48	18 10	37	09 51		11 01 44	
14	29	39.0		135	29.4 ¹⁰⁹	-12 53.3 ¹⁴⁰			20	29	17 53	21	23 01 55		12 39	
15	44	38.8		149	59.4 ¹¹⁰	39.3 ¹⁴⁰			30	17 08	34	18 04	22 51 61		24 34	
16	59	38.7		164	29.5 ¹¹¹	25.2 ¹⁴¹			35	16 55	24	17 55	45 65		31 30	
17	74	38.6	+23 25.7	178	59.7 ¹¹²	-12 11.1 ¹⁴¹			40	16 41	17 12	17 46	22 39 68		11 39 27	
18	89	38.4	+23 25.7	193	30.1 ¹¹⁴	-11 56.9 ¹⁴²			45	16 24	16 58	17 36	22 31 73		11 48 23	
19	104	38.3		208	00.5 ¹¹⁴	42.7 ¹⁴²			50	16 04	42	24	22 78		11 59 18	
20	119	38.2		222	31.0 ¹¹⁵	28.5 ¹⁴²			52	15 54	35	18	18 81		12 04 15	
21	134	38.0		237	01.6 ¹¹⁶	-11 14.2 ¹⁴³			54	43	26	13	14 83		09 13	
22	149	37.9		251	32.4 ¹¹⁸	-10 59.9 ¹⁴³			56	30	17	07	08 87		15 10	
23	164	37.8		266	03.2 ¹¹⁸	45.5 ¹⁴⁴			58	15 15	16 07	17 00	22 03 89		22 7	
24	179	37.6	+23 25.9	280	34.1 ¹¹⁹	-10 31.1 ¹⁴⁴			60 S	14 58	15 55	16 52	21 56 94		12 30 3	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 6 ^h 10 ^m 2		Mag: -3.9 PMG: 9 ^h 45 ^m		Mag: +0.5 PMG: 7 ^h 22 ^m		Mag: -2.4 PMG: 6 ^h 35 ^m		Mag: +0.7 PMG: 4 ^h 02 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	267	12.1	213	53.4	+17 22.6		249	31.5	+5 32.5		260	58.6	+1 20.5		299	25.5
1	282	14.5	228	52.9		23.4	264	32.3		33.1	276	00.8		20.6	314	28.0
2	297	17.0	243	52.3		24.1	279	33.1		33.8	291	02.9		20.7	329	30.5
3	312	19.5	258	51.8		24.9	294	33.8		34.5	306	05.1		20.8	344	33.1
4	327	21.9	273	51.3		25.7	309	34.6		35.2	321	07.3		20.9	359	35.6
5	342	24.4	288	50.7	+17 26.4		324	35.4	+5 35.9		336	09.5	+1 21.1		14	38.1
6	357	26.9	303	50.2	+17 27.2		339	36.2	+5 36.6		351	11.7	+1 21.2		29	40.6
7	12	29.3	318	49.6		28.0	354	37.0		37.2	6	13.9		21.3	44	43.1
8	27	31.8	333	49.1		28.7	9	37.7		37.9	21	16.1		21.4	59	45.6
9	42	34.2	348	48.5		29.5	24	38.5		38.6	36	18.3		21.5	74	48.2
10	57	36.7	3	48.0		30.2	39	39.3		39.3	51	20.5		21.6	89	50.7
11	72	39.2	18	47.5	+17 31.0		54	40.1	+5 40.0		66	22.7	+1 21.7		104	53.2
12	87	41.6	33	46.9	+17 31.8		69	40.9	+5 40.6		81	24.8	+1 21.8		119	55.7
13	102	44.1	48	46.4		32.5	84	41.7		41.3	96	27.0		21.9	134	58.2
14	117	46.6	63	45.8		33.3	99	42.4		42.0	111	29.2		22.0	150	00.8
15	132	49.0	78	45.3		34.0	114	43.2		42.7	126	31.4		22.1	165	03.3
16	147	51.5	93	44.7		34.8	129	44.0		43.4	141	33.6		22.2	180	05.8
17	162	54.0	108	44.2	+17 35.5		144	44.8	+5 44.0		156	35.8	+1 22.3		195	08.3
18	177	56.4	123	43.6	+17 36.3		159	45.6	+5 44.7		171	38.0	+1 22.4		210	10.8
19	192	58.9	138	43.1		37.0	174	46.3		45.4	186	40.2		22.5	225	13.4
20	208	01.4	153	42.5		37.8	189	47.1		46.1	201	42.4		22.6	240	15.9
21	223	03.8	168	42.0		38.6	204	47.9		46.8	216	44.6		22.7	255	18.4
22	238	06.3	183	41.4		39.3	219	48.7		47.4	231	46.8		22.8	270	20.9
23	253	08.7	198	40.9		40.1	234	49.5		48.1	246	49.0		23.0	285	23.4
24	268	11.2	213	40.3	+17 40.8		249	50.3	+5 48.8		261	51.1	+1 23.1		300	26.0
Dif	—		-5		+8		+8		+7		+22		+1		+25	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 01 ^m 6				Edad: 20 ^d 5 PHE SD: 15'9 PMG: 5 ^h 28 ^m															
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m		
0	179	37.6	+23	25.9	280	34.1	-10	31.1	60 N	** **	0 49	2 36	0 34	2	10 41	91				
1	194	37.5		25.9	295	05.1 ¹²⁰		16.7 ¹⁴⁴	58	** **	1 40	2 56	28	6	46	87				
2	209	37.3		25.9	309	36.1 ¹²⁰	-10	02.2 ¹⁴⁵	56	** **	2 10	3 13	23	8	50	84				
3	224	37.2		25.9	324	07.3 ¹²²	-9	47.7 ¹⁴⁵	54	0 45	33	27	18	11	54	8				
4	239	37.1		26.0	338	38.6 ¹²³		33.2 ¹⁴⁵	52	1 32	2 51	40	14	14	10 57	79				
5	254	36.9	+23	26.0	353	09.9 ¹²³	-9	18.7 ¹⁴⁵	50	2 00	3 06	3 50	0 10	16	11 00	76				
6	269	36.8	+23	26.0	7	41.3 ¹²⁴	-9	04.1 ¹⁴⁶	45	2 46	3 36	4 13	0 01	21	11 07	71				
7	284	36.7		26.0	22	12.8 ¹²⁵	-8	49.5 ¹⁴⁶	40	3 16	3 58	31	** **	**	12	67				
8	299	36.5		26.0	36	44.4 ¹²⁶		34.9 ¹⁴⁶	35	40	4 16	46	** **	**	17	63				
9	314	36.4		26.1	51	16.1 ¹²⁷		20.3 ¹⁴⁶	30	3 58	32	4 59	** **	**	21	60				
10	329	36.3		26.1	65	47.8 ¹²⁷	-8	05.6 ¹⁴⁷	20	4 27	4 57	5 21	** **	**	28	54				
11	344	36.1	+23	26.1	80	19.6 ¹²⁸	-7	50.9 ¹⁴⁷	10 N	4 50	5 17	5 40	** **	**	11 34	49				
12	359	36.0	+23	26.1	94	51.5 ¹²⁹	-7	36.2 ¹⁴⁷	0	5 09	5 35	5 58	** **	**	11 39	45				
13	14	35.8		26.1	109	23.5 ¹³⁰		21.5 ¹⁴⁷	10 S	26	5 53	6 15	** **	**	45	41				
14	29	35.7		26.1	123	55.6 ¹³¹	-7	06.8 ¹⁴⁷	20	42	6 10	34	23	56	51	36				
15	44	35.6		26.1	138	27.7 ¹³¹	-6	52.0 ¹⁴⁸	30	5 59	29	6 55	52	59	11 58	30				
16	59	35.4		26.2	152	59.9 ¹³²		37.3 ¹⁴⁷	35	6 08	39	7 08	50	62	12 01	28				
17	74	35.3	+23	26.2	167	32.1 ¹³²	-6	22.5 ¹⁴⁸	40	6 17	6 51	7 22	23	47	12 06	24				
18	89	35.2	+23	26.2	182	04.4 ¹³³	-6	07.7 ¹⁴⁸	45	6 27	7 05	7 39	23	44	12 11	20				
19	104	35.0		26.2	196	36.8 ¹³⁴	-5	52.9 ¹⁴⁸	50	39	21	7 59	40	75	17	15				
20	119	34.9		26.2	211	09.3 ¹³⁵		38.1 ¹⁴⁸	52	45	28	8 09	39	76	19	13				
21	134	34.8		26.2	225	41.8 ¹³⁵		23.3 ¹⁴⁸	54	50	37	20	37	79	22	11				
22	149	34.6		26.2	240	14.4 ¹³⁶	-5	08.5 ¹⁴⁸	56	6 56	46	33	35	82	25	9				
23	164	34.5		26.2	254	47.0 ¹³⁶	-4	53.7 ¹⁴⁸	58	7 03	7 56	8 48	32	85	29	5				
24	179	34.3	+23	26.2	269	19.7 ¹³⁷	-4	38.9 ¹⁴⁸	60 S	7 11	8 08	9 05	23	30	12 33	2				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG 6 ^h 06 ^m 2				Mag: -3.9 PMG: 9 ^h 46 ^m				Mag: +0.5 PMG: 7 ^h 20 ^m				Mag: -2.4 PMG: 6 ^h 32 ^m				Mag: +0.6 PMG: 3 ^h 58 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	268	11.2	213	40.3	+17	40.8			249	50.3	+5	48.8	261	51.1	+1	23.1	300	26.0	-14	16.2
1	283	13.7	228	39.8		41.6			264	51.0		49.5	276	53.3		23.2	315	28.5		16.2
2	298	16.1	243	39.2		42.3			279	51.8		50.2	291	55.5		23.3	330	31.0		16.2
3	313	18.6	258	38.7		43.1			294	52.6		50.8	306	57.7		23.4	345	33.5		16.2
4	328	21.1	273	38.1		43.8			309	53.4		51.5	321	59.9		23.5	0	36.0		16.3
5	343	23.5	288	37.6	+17	44.5			324	54.2	+5	52.2	337	02.1	+1	23.6	15	38.6	-14	16.3
6	358	26.0	303	37.0	+17	45.3			339	55.0	+5	52.9	352	04.3	+1	23.7	30	41.1	-14	16.3
7	13	28.5	318	36.5		46.0			354	55.7		53.5	7	06.5		23.8	45	43.6		16.3
8	28	30.9	333	35.9		46.8			9	56.5		54.2	22	08.7		23.9	60	46.1		16.4
9	43	33.4	348	35.3		47.5			24	57.3		54.9	37	10.9		24.0	75	48.6		16.4
10	58	35.8	3	34.8		48.3			39	58.1		55.6	52	13.1		24.1	90	51.2		16.4
11	73	38.3	18	34.2	+17	49.0			54	58.9	+5	56.3	67	15.3	+1	24.2	105	53.7	-14	16.5
12	88	40.8	33	33.7	+17	49.8			69	59.7	+5	56.9	82	17.5	+1	24.3	120	56.2	-14	16.5
13	103	43.2	48	33.1		50.5			85	00.4		57.6	97	19.7		24.4	135	58.7		16.5
14	118	45.7	63	32.6		51.2			100	01.2		58.3	112	21.9		24.5	151	01.2		16.5
15	133	48.2	78	32.0		52.0			115	02.0		59.0	127	24.1		24.6	166	03.8		16.6
16	148	50.6	93	31.4		52.7			130	02.8	+5	59.6	142	26.3		24.7	181	06.3		16.6
17	163	53.1	108	30.9	+17	53.4			145	03.6	+6	00.3	157	28.5	+1	24.8	196	08.8	-14	16.6
18	178	55.6	123	30.3	+17	54.2			160	04.4	+6	01.0	172	30.7	+1	24.9	211	11.3	-14	16.7
19	193	58.0	138	29.8		54.9			175	05.1		01.7	187	32.9		25.0	226	13.9		16.7
20	209	00.5	153	29.2		55.7			190	05.9		02.3	202	35.1		25.1	241	16.4		16.7
21	224	03.0	168	28.6		56.4			205	06.7		03.0	217	37.3		25.2	256	18.9		16.7
22	239	05.4	183	28.1		57.1			220	07.5		03.7	232	39.5		25.3	271	21.4		16.8
23	254	07.9	198	27.5		57.9			235	08.3		04.4	247	41.7		25.4	286	24.0		16.8
24	269	10.3	213	27.0	+17	58.6			250	09.1	+6	05.0	262	43.9	+1	25.5	301	26.5	-14	16.8
Dif	—		-6		+7		+8		+7		+22		+1		+25		0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 21 ^d 5 PHE { 4 ^h : 57 ^m /2 12 ^h : 57 ^m /0 20 ^h : 56 ^m /7										
	PMG: 12 ^h 01 ^m 8			SD: 15 ^h 6 PMG: 6 ^h 14 ^m R°: 44 ^m										
	hG ☉		Dec	hG ☾ Dif		Dec Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	
0	179	34.3	+23 26.2	269	19.7	-4 38.9	60 N	21 28	23 15	** **	0 36 2		12 12 88	
1	194	34.2	26.2	283	52.5 ¹³⁸	24.1 ¹⁴⁸	58	21 07	22 23	** **	34 4		13 84	
2	209	34.1	26.2	298	25.3 ¹³⁸	-4 09.3 ¹⁴⁸	56	20 50	21 53	** **	31 8		14 81	
3	224	33.9	26.3	312	58.2 ¹³⁹	-3 54.4 ¹⁴⁹	54	36	31	23 19	29 11		15 78	
4	239	33.8	26.3	327	31.1 ¹³⁹	39.6 ¹⁴⁸	52	24	21 13	22 31	28 12		16 75	
5	254	33.7	+23 26.3	342	04.1 ¹⁴⁰	-3 24.8 ¹⁴⁸	50	20 13	20 58	22 03	0 26 15		12 16 74	
6	269	33.5	+23 26.3	356	37.1 ¹⁴⁰	-3 10.0 ¹⁴⁸	45	19 50	20 28	21 18	0 22 20		12 18 68	
7	284	33.4	26.3	11	10.2 ¹⁴¹	-2 55.2 ¹⁴⁸	40	32	20 05	20 47	19 24		19 64	
8	299	33.3	26.3	25	43.3 ¹⁴¹	40.4 ¹⁴⁸	35	17	19 47	24	17 26		20 61	
9	314	33.1	26.3	40	16.5 ¹⁴²	25.6 ¹⁴⁸	30	19 04	32	20 05	14 30		21 57	
10	329	33.0	26.3	54	49.7 ¹⁴²	-2 10.8 ¹⁴⁸	20	18 42	19 07	19 36	10 35		22 52	
11	344	32.9	+23 26.3	69	22.9 ¹⁴²	-1 56.0 ¹⁴⁸	10 N	18 23	18 46	19 13	0 07 39		12 23 48	
12	359	32.7	+23 26.3	83	56.2 ¹⁴³	-1 41.2 ¹⁴⁸	0	18 06	18 28	18 54	0 03 44		12 24 44	
13	14	32.6	26.3	98	29.6 ¹⁴⁴	26.5 ¹⁴⁷	10 S	17 48	18 11	37	0 00 48		26 39	
14	29	32.4	26.3	113	03.0 ¹⁴⁴	-1 11.7 ¹⁴⁸	20	29	17 53	21	** ** *		27 34	
15	44	32.3	26.3	127	36.4 ¹⁴⁴	-0 57.0 ¹⁴⁷	30	17 08	35	18 04	** ** *		28 29	
16	59	32.2	26.3	142	09.9 ¹⁴⁵	42.2 ¹⁴⁸	35	16 56	24	17 56	** ** *		29 26	
17	74	32.0	+23 26.2	156	43.4 ¹⁴⁵	-0 27.5 ¹⁴⁷	40	16 42	17 12	17 46	** ** *		12 30 23	
18	89	31.9	+23 26.2	171	16.9 ¹⁴⁵	-0 12.8 ¹⁴⁷	45	16 25	16 59	17 36	** ** *		12 31 19	
19	104	31.8	26.2	185	50.5 ¹⁴⁶	+0 01.8 ¹⁴⁶	50	16 04	42	24	** ** *		32 14	
20	119	31.6	26.2	200	24.1 ¹⁴⁶	16.5 ¹⁴⁷	52	15 54	35	19	** ** *		32 13	
21	134	31.5	26.2	214	57.7 ¹⁴⁶	31.2 ¹⁴⁷	54	43	27	13	** ** *		33 10	
22	149	31.4	26.2	229	31.4 ¹⁴⁷	+0 45.8 ¹⁴⁶	56	30	18	07	** ** *		34 7	
23	164	31.2	26.2	244	05.0 ¹⁴⁶	+1 00.4 ¹⁴⁶	58	15 15	16 07	17 00	** ** *		34 5	
24	179	31.1	+23 26.2	258	38.8 ¹⁴⁸	+1 15.0 ¹⁴⁶	60 S	14 58	15 56	16 53	** ** *		12 35 2	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 6 ^h 02 ^m 3		Mag: -3.9 PMG: 9 ^h 47 ^m		Mag: +0.5 PMG: 7 ^h 19 ^m		Mag: -2.4 PMG: 6 ^h 28 ^m		Mag: +0.6 PMG: 3 ^h 54 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	269	10.3	213	27.0	+17 58.6	250	09.1	+6 05.0	262	43.9
1	284	12.8	228	26.4	+17 59.3	265	09.8	05.7	277	46.1
2	299	15.3	243	25.8	+18 00.1	280	10.6	06.4	292	48.3
3	314	17.7	258	25.3	00.8	295	11.4	07.1	307	50.5
4	329	20.2	273	24.7	01.5	310	12.2	07.7	322	52.7
5	344	22.7	288	24.1	+18 02.2	325	13.0	+6 08.4	337	54.9
6	359	25.1	303	23.6	+18 03.0	340	13.8	+6 09.1	352	57.1
7	14	27.6	318	23.0	03.7	355	14.5	09.8	7	59.3
8	29	30.1	333	22.4	04.4	10	15.3	10.4	23	01.5
9	44	32.5	348	21.9	05.2	25	16.1	11.1	38	03.7
10	59	35.0	3	21.3	05.9	40	16.9	11.8	53	05.9
11	74	37.5	18	20.7	+18 06.6	55	17.7	+6 12.5	68	08.1
12	89	39.9	33	20.2	+18 07.3	70	18.5	+6 13.1	83	10.3
13	104	42.4	48	19.6	08.0	85	19.2	13.8	98	12.5
14	119	44.8	63	19.0	08.8	100	20.0	14.5	113	14.7
15	134	47.3	78	18.5	09.5	115	20.8	15.2	128	16.9
16	149	49.8	93	17.9	10.2	130	21.6	15.8	143	19.1
17	164	52.2	108	17.3	+18 10.9	145	22.4	+6 16.5	158	21.3
18	179	54.7	123	16.7	+18 11.7	160	23.2	+6 17.2	173	23.5
19	194	57.2	138	16.2	12.4	175	23.9	17.9	188	25.7
20	209	59.6	153	15.6	13.1	190	24.7	18.5	203	27.9
21	225	02.1	168	15.0	13.8	205	25.5	19.2	218	30.1
22	240	04.6	183	14.4	14.5	220	26.3	19.9	233	32.3
23	255	07.0	198	13.9	15.2	235	27.1	20.5	248	34.5
24	270	09.5	213	13.3	+18 16.0	250	27.9	+6 21.2	263	36.7
Dif	—		-6		+7	+8		+7	+22	
									+1	
									+25	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 02 ^m 0				Edad: 22 ^d 5 PHE { SD: 15'4 PMG: 6 ^h 58 ^m											
					R°: 42 ^m											
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	179	31.1	+23	26.2	258	38.8	+1	15.0	60 N	** **	0 49	2 36	0 38	1	13 40	86
1	194	30.9		26.2	273	12.5 ¹⁴⁷		29.6 ¹⁴⁶	58	** **	1 41	2 57	38	5	37	83
2	209	30.8		26.2	287	46.3 ¹⁴⁸		44.1 ¹⁴⁵	56	** **	2 11	3 13	39	8	35	80
3	224	30.7		26.2	302	20.1 ¹⁴⁸	+1	58.6 ¹⁴⁵	54	0 45	33	28	40	10	33	77
4	239	30.5		26.1	316	53.9 ¹⁴⁸	+2	13.1 ¹⁴⁵	52	1 33	2 51	40	40	12	31	75
5	254	30.4	+23	26.1	331	27.7 ¹⁴⁸	+2	27.6 ¹⁴⁵	50	2 01	3 06	3 51	0 41	14	13 30	72
6	269	30.3	+23	26.1	346	01.6 ¹⁴⁹	+2	42.1 ¹⁴⁵	45	2 46	3 36	4 13	0 42	19	13 26	67
7	284	30.1		26.1	0	35.5 ¹⁴⁹	+2	56.5 ¹⁴⁴	40	3 17	3 59	32	43	22	23	63
8	299	30.0		26.1	15	09.4 ¹⁴⁹	+3	10.9 ¹⁴⁴	35	40	4 17	4 47	43	26	21	59
9	314	29.9		26.1	29	43.3 ¹⁴⁹		25.2 ¹⁴³	30	3 59	32	5 00	44	29	18	57
10	329	29.7		26.0	44	17.2 ¹⁴⁹		39.6 ¹⁴⁴	20	4 28	4 57	22	45	34	14	52
11	344	29.6	+23	26.0	58	51.1 ¹⁴⁹	+3	53.9 ¹⁴³	10 N	4 51	5 18	5 41	0 46	39	13 11	47
12	359	29.5	+23	26.0	73	25.1 ¹⁵⁰	+4	08.2 ¹⁴³	0	5 10	5 36	5 58	0 47	43	13 08	43
13	14	29.3		26.0	87	59.1 ¹⁵⁰		22.4 ¹⁴²	10 S	27	5 53	6 16	48	48	05	38
14	29	29.2		26.0	102	33.0 ¹⁴⁹		36.6 ¹⁴²	20	43	6 10	34	49	52	13 01	35
15	44	29.0		26.0	117	07.0 ¹⁵⁰	+4	50.8 ¹⁴²	30	5 59	29	6 56	51	57	12 57	30
16	59	28.9		25.9	131	41.0 ¹⁵⁰	+5	04.9 ¹⁴¹	35	6 08	40	7 08	52	60	55	27
17	74	28.8	+23	25.9	146	15.0 ¹⁵⁰	+5	19.1 ¹⁴²	40	6 18	6 52	7 22	0 52	64	12 53	23
18	89	28.6	+23	25.9	160	49.0 ¹⁵⁰	+5	33.1 ¹⁴⁰	45	6 28	7 05	7 39	0 54	67	12 50	19
19	104	28.5		25.9	175	23.0 ¹⁵⁰	+5	47.2 ¹⁴¹	50	40	21	8 00	55	72	46	15
20	119	28.4		25.8	189	57.1 ¹⁵¹	+6	01.2 ¹⁴⁰	52	45	29	10	55	75	45	12
21	134	28.2		25.8	204	31.1 ¹⁵⁰		15.1 ¹³⁹	54	51	37	21	56	77	43	10
22	149	28.1		25.8	219	05.1 ¹⁵⁰		29.1 ¹⁴⁰	56	6 57	46	34	57	80	41	8
23	164	28.0		25.8	233	39.1 ¹⁵⁰		42.9 ¹³⁸	58	7 04	7 56	8 48	57	84	39	5
24	179	27.8	+23	25.7	248	13.1 ¹⁵⁰	+6	56.8 ¹³⁹	60 S	7 11	8 08	9 06	0 58	87	12 37	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 5 ^h 58 ^m 4		Mag: -3.9 PMG: 9 ^h 47 ^m		Mag: +0.5 PMG: 7 ^h 18 ^m		Mag: -2.4 PMG: 6 ^h 25 ^m		Mag: +0.6 PMG: 3 ^h 50 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	270	09.5	213	13.3	+18	16.0	250	27.9	+6	21.2	263	36.7	+1	28.0	302	27.1	-14	17.5
1	285	11.9	228	12.7		16.7	265	28.7		21.9	278	38.9		28.1	317	29.6		17.6
2	300	14.4	243	12.2		17.4	280	29.4		22.6	293	41.1		28.2	332	32.2		17.6
3	315	16.9	258	11.6		18.1	295	30.2		23.2	308	43.3		28.3	347	34.7		17.6
4	330	19.3	273	11.0		18.8	310	31.0		23.9	323	45.5		28.4	2	37.2		17.7
5	345	21.8	288	10.4	+18	19.5	325	31.8	+6	24.6	338	47.7	+1	28.5	17	39.7	-14	17.7
6	0	24.3	303	09.8	+18	20.2	340	32.6	+6	25.2	353	49.9	+1	28.6	32	42.3	-14	17.7
7	15	26.7	318	09.3		20.9	355	33.4		25.9	8	52.2		28.6	47	44.8		17.7
8	30	29.2	333	08.7		21.6	10	34.1		26.6	23	54.4		28.7	62	47.3		17.8
9	45	31.7	348	08.1		22.4	25	34.9		27.3	38	56.6		28.8	77	49.8		17.8
10	60	34.1	3	07.5		23.1	40	35.7		27.9	53	58.8		28.9	92	52.4		17.8
11	75	36.6	18	06.9	+18	23.8	55	36.5	+6	28.6	69	01.0	+1	29.0	107	54.9	-14	17.9
12	90	39.1	33	06.4	+18	24.5	70	37.3	+6	29.3	84	03.2	+1	29.1	122	57.4	-14	17.9
13	105	41.5	48	05.8		25.2	85	38.1		29.9	99	05.4		29.2	138	00.0		17.9
14	120	44.0	63	05.2		25.9	100	38.9		30.6	114	07.6		29.3	153	02.5		18.0
15	135	46.4	78	04.6		26.6	115	39.6		31.3	129	09.8		29.4	168	05.0		18.0
16	150	48.9	93	04.0		27.3	130	40.4		31.9	144	12.0		29.5	183	07.6		18.0
17	165	51.4	108	03.5	+18	28.0	145	41.2	+6	32.6	159	14.2	+1	29.6	198	10.1	-14	18.0
18	180	53.8	123	02.9	+18	28.7	160	42.0	+6	33.3	174	16.4	+1	29.7	213	12.6	-14	18.1
19	195	56.3	138	02.3		29.4	175	42.8		34.0	189	18.7		29.8	228	15.1		18.1
20	210	58.8	153	01.7		30.1	190	43.6		34.6	204	20.9		29.9	243	17.7		18.1
21	226	01.2	168	01.1		30.8	205	44.4		35.3	219	23.1		30.0	258	20.2		18.2
22	241	03.7	183	00.5		31.5	220	45.1		36.0	234	25.3		30.1	273	22.7		18.2
23	256	06.2	197	59.9		32.2	235	45.9		36.6	249	27.5		30.2	288	25.3		18.2
24	271	08.6	212	59.4	+18	32.9	250	46.7	+6	37.3	264	29.7	+1	30.3	303	27.8	-14	18.3
Dif	—		-6 +7		+8 +7		+22 +1		+1		+25 0							

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7			Edad: 23 ^d 5	PHE { 4 ^h : 55 ^m 8 12 ^h : 55 ^m 6 20 ^h : 55 ^m 4										
	PMG: 12 ^h 02 ^m 3					SD: 15 ^h 2			PMG: 7 ^h 40 ^m		R°: 44 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	27.8	+23 25.7	248	13.1	+6 56.8	138	60 N	21 28	23 14	** **	0 39 3	15 06 87		
1	194	27.7	25.7	262	47.1 ¹⁵⁰	+7 10.6 ¹³⁸	138	58	21 08	22 23	** **	43 6	15 00 83		
2	209	27.6	25.7	277	21.2 ¹⁵¹	24.4 ¹³⁸	138	56	20 51	21 53	** **	47 8	14 55 79		
3	224	27.4	25.6	291	55.2 ¹⁵⁰	38.1 ¹³⁷	137	54	36	31	23 18	50 11	50 76		
4	239	27.3	25.6	306	29.2 ¹⁵⁰	+7 51.8 ¹³⁷	137	52	24	21 13	22 31	52 14	46 73		
5	254	27.1	+23 25.6	321	03.2 ¹⁵⁰	+8 05.4 ¹³⁶	136	50	20 13	20 58	22 04	0 55 15	14 42 71		
6	269	27.0	+23 25.6	335	37.2 ¹⁵⁰	+8 19.0 ¹³⁶	136	45	19 51	20 28	21 18	1 01 19	14 33 67		
7	284	26.9	25.5	350	11.2 ¹⁵⁰	32.5 ¹³⁵	135	40	33	20 06	20 47	05 24	26 63		
8	299	26.7	25.5	4	45.1 ¹⁴⁹	46.0 ¹³⁵	135	35	18	19 47	24	09 27	20 60		
9	314	26.6	25.5	19	19.1 ¹⁵⁰	+8 59.5 ¹³⁵	135	30	19 05	32	20 05	13 30	15 57		
10	329	26.5	25.4	33	53.1 ¹⁵⁰	+9 12.9 ¹³⁴	134	20	18 43	19 07	19 36	19 35	14 06 52		
11	344	26.3	+23 25.4	48	27.0 ¹⁴⁹	+9 26.2 ¹³³	133	10 N	18 24	18 47	19 14	1 25 39	13 58 48		
12	359	26.2	+23 25.3	63	00.9 ¹⁴⁹	+9 39.5 ¹³³	133	0	18 06	18 28	18 55	1 30 43	13 51 43		
13	14	26.1	25.3	77	34.9 ¹⁵⁰	+9 52.8 ¹³³	133	10 S	17 48	18 11	38	36 47	43 40		
14	29	25.9	25.3	92	08.8 ¹⁴⁹	+10 06.0 ¹³²	132	20	30	17 54	21	41 52	36 35		
15	44	25.8	25.2	106	42.6 ¹⁴⁸	19.1 ¹³¹	131	30	17 09	35	18 05	48 56	27 30		
16	59	25.7	25.2	121	16.5 ¹⁴⁹	32.2 ¹³¹	131	35	16 56	24	17 56	52 59	22 27		
17	74	25.5	+23 25.2	135	50.4 ¹⁴⁹	+10 45.2 ¹³⁰	130	40	16 42	17 13	17 47	1 56 63	13 16 24		
18	89	25.4	+23 25.1	150	24.2 ¹⁴⁸	+10 58.2 ¹³⁰	130	45	16 25	16 59	17 36	2 01 67	13 09 21		
19	104	25.3	25.1	164	58.0 ¹⁴⁸	+11 11.2 ¹³⁰	130	50	16 05	43	25	07 72	13 01 16		
20	119	25.1	25.0	179	31.8 ¹⁴⁸	24.0 ¹²⁸	128	52	15 55	36	19	10 74	12 57 15		
21	134	25.0	25.0	194	05.6 ¹⁴⁸	36.9 ¹²⁹	129	54	44	27	14	13 77	53 12		
22	149	24.8	24.9	208	39.3 ¹⁴⁷	+11 49.6 ¹²⁷	127	56	31	18	07	17 79	49 9		
23	164	24.7	24.9	223	13.1 ¹⁴⁸	+12 02.3 ¹²⁷	127	58	15 16	16 08	17 01	21 82	44 6		
24	179	24.6	+23 24.9	237	46.8 ¹⁴⁷	+12 15.0 ¹²⁷	127	60 S	14 59	15 56	16 53	2 25 86	12 39 2		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 5 ^h 54 ^m 5		Mag: -3.9 PMG: 9 ^h 48 ^m		Mag: +0.5 PMG: 7 ^h 17 ^m		Mag: -2.4 PMG: 6 ^h 21 ^m		Mag: +0.6 PMG: 3 ^h 46 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	°	°	°	°	°	°	°	°						
0	271	08.6	+18 32.9	250	46.7	+6 37.3	264	29.7	+1 30.3						
1	286	11.1	33.6	265	47.5	38.0	279	31.9	30.4						
2	301	13.6	34.3	280	48.3	38.6	294	34.1	30.5						
3	316	16.0	35.0	295	49.1	39.3	309	36.3	30.6						
4	331	18.5	35.7	310	49.9	40.0	324	38.6	30.7						
5	346	20.9	+18 36.4	325	50.6	+6 40.6	339	40.8	+1 30.8						
6	1	23.4	37.0	340	51.4	+6 41.3	354	43.0	+1 30.9						
7	16	25.9	37.7	355	52.2	42.0	9	45.2	31.0						
8	31	28.3	38.4	10	53.0	42.6	24	47.4	31.1						
9	46	30.8	39.1	25	53.8	43.3	39	49.6	31.2						
10	61	33.3	39.8	40	54.6	44.0	54	51.8	31.3						
11	76	35.7	+18 40.5	55	55.4	+6 44.6	69	54.0	+1 31.4						
12	91	38.2	41.2	70	56.1	+6 45.3	84	56.3	+1 31.5						
13	106	40.7	41.9	85	56.9	46.0	99	58.5	31.6						
14	121	43.1	42.5	100	57.7	46.6	115	00.7	31.7						
15	136	45.6	43.2	115	58.5	47.3	130	02.9	31.7						
16	151	48.0	43.9	130	59.3	48.0	145	05.1	31.8						
17	166	50.5	+18 44.6	146	00.1	+6 48.6	160	07.3	+1 31.9						
18	181	53.0	45.3	161	00.9	+6 49.3	175	09.5	+1 32.0						
19	196	55.4	46.0	176	01.6	50.0	190	11.8	32.1						
20	211	57.9	46.6	191	02.4	50.6	205	14.0	32.2						
21	227	00.4	47.3	206	03.2	51.3	220	16.2	32.3						
22	242	02.8	48.0	221	04.0	52.0	235	18.4	32.4						
23	257	05.3	48.7	236	04.8	52.6	250	20.6	32.5						
24	272	07.8	+18 49.4	251	05.6	+6 53.3	265	22.8	+1 32.6						
Dif	—	-6	+7	+8	+7	+22	+1	+25	0						

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 5				Edad: 24 ^d 5 PHE { 4 ^h : 55 ^m /2 12 ^h : 55 ^m /0 20 ^h : 54 ^m /9 PMG: 8 ^h 24 ^m R°: 44 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	179	24.6	+23	24.9	237	46.8	+12	15.0	60 N	** **	0 51	2 37	0 42	3	16 33	87		
1	194	24.4		24.8	252	20.4 ¹⁴⁶		27.6 ¹²⁶	58	** **	1 42	2 57	49	7	23	83		
2	209	24.3		24.8	266	54.1 ¹⁴⁷		40.1 ¹²⁵	56	** **	2 11	3 14	0 55	10	14	79		
3	224	24.2		24.7	281	27.7 ¹⁴⁶	+12	52.6 ¹²⁵	54	0 47	34	28	1 01	13	16 06	77		
4	239	24.0		24.7	296	01.3 ¹⁴⁶	+13	05.0 ¹²⁴	52	1 33	2 52	41	06	15	15 59	74		
5	254	23.9	+23	24.6	310	34.9 ¹⁴⁶	+13	17.3 ¹²³	50	2 01	3 07	3 51	1 10	18	15 53	71		
6	269	23.8	+23	24.6	325	08.4 ¹⁴⁵	+13	29.6 ¹²³	45	2 47	3 37	4 14	1 20	23	15 40	66		
7	284	23.6		24.5	339	42.0 ¹⁴⁶		41.8 ¹²²	40	3 17	3 59	32	29	26	29	63		
8	299	23.5		24.5	354	15.4 ¹⁴⁴	+13	54.0 ¹²²	35	41	4 17	4 47	36	29	20	59		
9	314	23.4		24.4	8	48.9 ¹⁴⁵	+14	06.0 ¹²⁰	30	3 59	33	5 00	43	31	15 12	57		
10	329	23.2		24.4	23	22.3 ¹⁴⁴		18.1 ¹²¹	20	4 28	4 58	22	1 54	36	14 58	52		
11	344	23.1	+23	24.3	37	55.7 ¹⁴⁴	+14	30.0 ¹¹⁹	10 N	4 51	5 18	5 41	2 04	40	14 46	48		
12	359	23.0	+23	24.3	52	29.1 ¹⁴⁴	+14	41.9 ¹¹⁹	0	5 10	5 36	5 59	2 13	44	14 34	45		
13	14	22.8		24.2	67	02.4 ¹⁴³	+14	53.7 ¹¹⁸	10 S	27	5 53	6 16	23	48	23	41		
14	29	22.7		24.2	81	35.7 ¹⁴³	+15	05.5 ¹¹⁸	20	5 43	6 11	35	33	52	14 11	38		
15	44	22.6		24.1	96	08.9 ¹⁴²		17.1 ¹¹⁶	30	6 00	30	6 56	44	57	13 57	33		
16	59	22.4		24.0	110	42.1 ¹⁴²		28.7 ¹¹⁶	35	09	40	7 08	51	60	49	31		
17	74	22.3	+23	24.0	125	15.3 ¹⁴²	+15	40.3 ¹¹⁶	40	6 18	6 52	7 23	2 59	63	13 40	28		
18	89	22.2	+23	23.9	139	48.4 ¹⁴¹	+15	51.7 ¹¹⁴	45	6 28	7 06	7 39	3 08	67	13 30	24		
19	104	22.0		23.9	154	21.5 ¹⁴¹	+16	03.1 ¹¹⁴	50	40	22	8 00	19	71	17	20		
20	119	21.9		23.8	168	54.6 ¹⁴¹		14.5 ¹¹⁴	52	45	29	10	24	74	12	17		
21	134	21.8		23.8	183	27.6 ¹⁴⁰		25.7 ¹¹²	54	51	37	21	30	76	13 05	15		
22	149	21.6		23.7	198	00.6 ¹⁴⁰		36.9 ¹¹²	56	6 57	46	34	36	80	12 58	12		
23	164	21.5		23.6	212	33.6 ¹⁴⁰		48.0 ¹¹¹	58	7 04	7 57	8 49	43	83	50	8		
24	179	21.4	+23	23.6	227	06.5 ¹³⁹	+16	59.0 ¹¹⁰	60 S	7 11	8 08	9 06	3 51	88	12 41	4		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 50 ^m 5		Mag: -3.9 PMG: 9 ^h 49 ^m				Mag: +0.5 PMG: 7 ^h 15 ^m				Mag: -2.5 PMG: 6 ^h 18 ^m				Mag: +0.6 PMG: 3 ^h 41 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	272	07.8	212	45.1	+18	49.4	251	05.6	+6	53.3	265	22.8	+1	32.6	304	28.6	-14	19.0
1	287	10.2	227	44.5		50.0	266	06.4		54.0	280	25.1		32.7	319	31.1		19.1
2	302	12.7	242	43.9		50.7	281	07.2		54.6	295	27.3		32.8	334	33.7		19.1
3	317	15.2	257	43.3		51.4	296	07.9		55.3	310	29.5		32.9	349	36.2		19.1
4	332	17.6	272	42.7		52.1	311	08.7		56.0	325	31.7		33.0	4	38.7		19.2
5	347	20.1	287	42.1	+18	52.7	326	09.5	+6	56.6	340	33.9	+1	33.1	19	41.3	-14	19.2
6	2	22.5	302	41.5	+18	53.4	341	10.3	+6	57.3	355	36.2	+1	33.2	34	43.8	-14	19.2
7	17	25.0	317	40.9		54.1	356	11.1		57.9	10	38.4		33.3	49	46.3		19.3
8	32	27.5	332	40.3		54.8	11	11.9		58.6	25	40.6		33.4	64	48.9		19.3
9	47	29.9	347	39.7		55.4	26	12.7		59.3	40	42.8		33.4	79	51.4		19.3
10	62	32.4	2	39.1		56.1	41	13.4	+6	59.9	55	45.0		33.5	94	54.0		19.4
11	77	34.9	17	38.5	+18	56.8	56	14.2	+7	00.6	70	47.2	+1	33.6	109	56.5	-14	19.4
12	92	37.3	32	37.9	+18	57.4	71	15.0	+7	01.3	85	49.5	+1	33.7	124	59.0	-14	19.4
13	107	39.8	47	37.3		58.1	86	15.8		01.9	100	51.7		33.8	140	01.6		19.5
14	122	42.3	62	36.7		58.8	101	16.6		02.6	115	53.9		33.9	155	04.1		19.5
15	137	44.7	77	36.1	+18	59.4	116	17.4		03.3	130	56.1		34.0	170	06.6		19.5
16	152	47.2	92	35.5	+19	00.1	131	18.2		03.9	145	58.3		34.1	185	09.2		19.6
17	167	49.7	107	34.9	+19	00.8	146	19.0	+7	04.6	161	00.6	+1	34.2	200	11.7	-14	19.6
18	182	52.1	122	34.3	+19	01.4	161	19.7	+7	05.2	176	02.8	+1	34.3	215	14.3	-14	19.6
19	197	54.6	137	33.7		02.1	176	20.5		05.9	191	05.0		34.4	230	16.8		19.7
20	212	57.0	152	33.1		02.7	191	21.3		06.6	206	07.2		34.5	245	19.3		19.7
21	227	59.5	167	32.5		03.4	206	22.1		07.2	221	09.5		34.6	260	21.9		19.7
22	243	02.0	182	31.9		04.1	221	22.9		07.9	236	11.7		34.6	275	24.4		19.8
23	258	04.4	197	31.3		04.7	236	23.7		08.5	251	13.9		34.7	290	26.9		19.8
24	273	06.9	212	30.6	+19	05.4	251	24.5	+7	09.2	266	16.1	+1	34.8	305	29.5	-14	19.8
Dif	—		-6		+7		+8		+7		+22		+1		+25		0	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 25 ^d 5 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 6 20 ^h : 54 ^m 5 R°: 47 ^m												
	PMG: 12 ^h 02 ^m 7				SD: 14 ^h 9 PMG: 9 ^h 08 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m		
0	179	21.4	+23	23.6	227	06.5	+16	59.0	60 N	21 28	23 12	** **	0 45 6		18 00 88		
1	194	21.2		23.5	241	39.3 ¹³⁸	+17	09.9 ¹⁰⁹	58	21 07	22 23	** **	0 56 10		17 46 82		
2	209	21.1		23.4	256	12.2 ¹³⁹		20.8 ¹⁰⁹	56	20 51	21 53	** **	1 05 14		33 78		
3	224	21.0		23.4	270	44.9 ¹³⁷		31.5 ¹⁰⁷	54	37	31	23 17	14 16		23 74		
4	239	20.8		23.3	285	17.7 ¹³⁸		42.2 ¹⁰⁷	52	24	21 13	22 31	21 20		13 72		
5	254	20.7	+23	23.3	299	50.4 ¹³⁷	+17	52.9 ¹⁰⁷	50	20 13	20 58	22 03	1 28 22		17 04 70		
6	269	20.5	+23	23.2	314	23.0 ¹³⁶	+18	03.4 ¹⁰⁵	45	19 51	20 28	21 18	1 43 26		16 46 66		
7	284	20.4		23.1	328	55.6 ¹³⁶		13.9 ¹⁰⁵	40	33	20 06	20 47	1 55 29		32 62		
8	299	20.3		23.1	343	28.2 ¹³⁶		24.2 ¹⁰³	35	18	19 48	24	2 05 33		19 60		
9	314	20.1		23.0	358	00.7 ¹³⁵		34.5 ¹⁰³	30	19 05	32	20 06	14 35		16 09 56		
10	329	20.0		22.9	12	33.2 ¹³⁵		44.7 ¹⁰²	20	18 43	19 07	19 37	30 39		15 50 53		
11	344	19.9	+23	22.8	27	05.6 ¹³⁴	+18	54.9 ¹⁰²	10 N	18 24	18 47	19 14	2 44 43		15 34 50		
12	359	19.7	+23	22.8	41	38.0 ¹³⁴	+19	04.9 ¹⁰⁰	0	18 06	18 29	18 55	2 57 46		15 19 47		
13	14	19.6		22.7	56	10.3 ¹³³		14.8 ⁹⁹	10 S	17 49	18 12	38	3 11 49		15 04 44		
14	29	19.5		22.6	70	42.6 ¹³³		24.7 ⁹⁹	20	30	17 54	22	25 52		14 49 40		
15	44	19.3		22.6	85	14.8 ¹³²		34.5 ⁹⁸	30	17 09	36	18 05	41 57		30 37		
16	59	19.2		22.5	99	47.0 ¹³²		44.2 ⁹⁷	35	16 57	25	17 57	3 51 59		20 35		
17	74	19.1	+23	22.4	114	19.2 ¹³²	+19	53.8 ⁹⁶	40	16 43	17 13	17 47	4 02 62		14 08 32		
18	89	18.9	+23	22.3	128	51.3 ¹³¹	+20	03.3 ⁹⁵	45	16 26	17 00	17 37	4 15 66		13 54 28		
19	104	18.8		22.3	143	23.3 ¹³⁰		12.7 ⁹⁴	50	16 05	16 44	25	30 71		37 24		
20	119	18.7		22.2	157	55.3 ¹³⁰		22.0 ⁹³	52	15 55	36	20	38 73		29 22		
21	134	18.6		22.1	172	27.3 ¹³⁰		31.2 ⁹²	54	44	28	14	46 76		20 19		
22	149	18.4		22.0	186	59.2 ¹²⁹		40.4 ⁹²	56	32	19	08	4 56 79		13 10 16		
23	164	18.3		22.0	201	31.0 ¹²⁸		49.4 ⁹⁰	58	15 17	16 09	17 01	5 06 83		12 58 13		
24	179	18.2	+23	21.9	216	02.8 ¹²⁸	+20	58.4 ⁹⁰	60 S	14 59	15 57	16 54	5 19 88		12 45 8		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 5 ^h 46 ^m 6		Mag: -3.9 PMG: 9 ^h 50 ^m		Mag: +0.5 PMG: 7 ^h 14 ^m		Mag: -2.5 PMG: 6 ^h 14 ^m		Mag: +0.6 PMG: 3 ^h 37 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	273	06.9	212	30.6	+19	05.4	251	24.5	+7	09.2	266	16.1	+1	34.8	305	29.5	
1	288	09.4	227	30.0		06.0	266	25.3		09.9	281	18.3		34.9	320	32.0	
2	303	11.8	242	29.4		06.7	281	26.0		10.5	296	20.6		35.0	335	34.6	
3	318	14.3	257	28.8		07.4	296	26.8		11.2	311	22.8		35.1	350	37.1	
4	333	16.8	272	28.2		08.0	311	27.6		11.9	326	25.0		35.2	5	39.6	
5	348	19.2	287	27.6	+19	08.7	326	28.4	+7	12.5	341	27.2	+1	35.3	20	42.2	
6	3	21.7	302	27.0	+19	09.3	341	29.2	+7	13.2	356	29.5	+1	35.4	35	44.7	
7	18	24.1	317	26.4		10.0	356	30.0		13.8	11	31.7		35.5	50	47.3	
8	33	26.6	332	25.8		10.6	11	30.8		14.5	26	33.9		35.6	65	49.8	
9	48	29.1	347	25.1		11.3	26	31.6		15.1	41	36.1		35.6	80	52.3	
10	63	31.5	2	24.5		11.9	41	32.3		15.8	56	38.4		35.7	95	54.9	
11	78	34.0	17	23.9	+19	12.6	56	33.1	+7	16.5	71	40.6	+1	35.8	110	57.4	
12	93	36.5	32	23.3	+19	13.2	71	33.9	+7	17.1	86	42.8	+1	35.9	126	00.0	
13	108	38.9	47	22.7		13.9	86	34.7		17.8	101	45.0		36.0	141	02.5	
14	123	41.4	62	22.1		14.5	101	35.5		18.4	116	47.3		36.1	156	05.0	
15	138	43.9	77	21.4		15.2	116	36.3		19.1	131	49.5		36.2	171	07.6	
16	153	46.3	92	20.8		15.8	131	37.1		19.8	146	51.7		36.3	186	10.1	
17	168	48.8	107	20.2	+19	16.5	146	37.9	+7	20.4	161	54.0	+1	36.4	201	12.7	
18	183	51.3	122	19.6	+19	17.1	161	38.7	+7	21.1	176	56.2	+1	36.5	216	15.2	
19	198	53.7	137	19.0		17.7	176	39.4		21.7	191	58.4		36.5	231	17.7	
20	213	56.2	152	18.4		18.4	191	40.2		22.4	207	00.6		36.6	246	20.3	
21	228	58.6	167	17.7		19.0	206	41.0		23.1	222	02.9		36.7	261	22.8	
22	244	01.1	182	17.1		19.7	221	41.8		23.7	237	05.1		36.8	276	25.4	
23	259	03.6	197	16.5		20.3	236	42.6		24.4	252	07.3		36.9	291	27.9	
24	274	06.0	212	15.9	+19	20.9	251	43.4	+7	25.0	267	09.6	+1	37.0	306	30.5	
Dif	—		-6		+6		+8		+7		+22		+1		+25		
															0		

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 02 ^m 9				Edad: 26 ^d 5 PHE SD: 14'8 PMG: 9 ^h 55 ^m R°: 48 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	18.2	+23	21.9	216	02.8	+20	58.4	60 N	** **	0 53	2 38	0 51	10	19 28	82		
1	194	18.0		21.8	230	34.6 ¹²⁸	+21	07.2 ⁸⁸	58	** **	1 43	2 58	1 06	16	19 08	76		
2	209	17.9		21.7	245	06.3 ¹²⁷		16.0 ⁸⁸	56	** **	2 13	3 15	19 20		18 51	73		
3	224	17.8		21.6	259	38.0 ¹²⁷		24.6 ⁸⁶	54	0 49	35	29	30 23		37 70			
4	239	17.6		21.6	274	09.6 ¹²⁶		33.2 ⁸⁶	52	1 35	2 53	41	41 25		25 68			
5	254	17.5	+23	21.5	288	41.1 ¹²⁵	+21	41.7 ⁸⁵	50	2 02	3 08	3 52	1 50	27	18 14	66		
6	269	17.4	+23	21.4	303	12.6 ¹²⁵	+21	50.0 ⁸³	45	2 48	3 37	4 15	2 09	31	17 52	62		
7	284	17.2		21.3	317	44.1 ¹²⁵	+21	58.3 ⁸³	40	3 18	4 00	33	24 35		34 59			
8	299	17.1		21.2	332	15.5 ¹²⁴	+22	06.5 ⁸²	35	3 41	18	4 48	38 37		19 57			
9	314	17.0		21.1	346	46.9 ¹²⁴		14.5 ⁸⁰	30	4 00	33	5 01	2 49	39	17 05	57		
10	329	16.8		21.0	1	18.2 ¹²³		22.5 ⁸⁰	20	29	4 58	23	3 09	43	16 43	54		
11	344	16.7	+23	21.0	15	49.5 ¹²³	+22	30.4 ⁷⁹	10 N	4 52	5 19	5 42	3 27	45	16 24	51		
12	359	16.6	+23	20.9	30	20.7 ¹²²	+22	38.1 ⁷⁷	0	5 10	5 37	5 59	3 43	48	16 06	49		
13	14	16.4		20.8	44	51.9 ¹²²		45.8 ⁷⁷	10 S	27	5 54	6 17	4 00	50	15 48	47		
14	29	16.3		20.7	59	23.0 ¹²¹	+22	53.3 ⁷⁵	20	5 44	6 11	35	17 54		29 45			
15	44	16.2		20.6	73	54.1 ¹²¹	+23	00.8 ⁷⁵	30	6 00	30	6 56	38 57		15 07	42		
16	59	16.0		20.5	88	25.1 ¹²⁰		08.1 ⁷³	35	09	40	7 09	4 50	59	14 55	39		
17	74	15.9	+23	20.4	102	56.1 ¹²⁰	+23	15.4 ⁷³	40	6 18	6 52	7 23	5 04	61	14 40	37		
18	89	15.8	+23	20.3	117	27.0 ¹¹⁹	+23	22.5 ⁷¹	45	6 28	7 06	7 40	5 21	64	14 22	35		
19	104	15.6		20.2	131	57.9 ¹¹⁹		29.5 ⁷⁰	50	40	22	8 00	41 68		14 01	31		
20	119	15.5		20.1	146	28.8 ¹¹⁹		36.4 ⁶⁹	52	45	29	10	5 51	70	13 51	29		
21	134	15.4		20.1	160	59.5 ¹¹⁷		43.2 ⁶⁸	54	51	37	21	6 02	73	39 27			
22	149	15.2		20.0	175	30.3 ¹¹⁸		49.9 ⁶⁷	56	6 57	46	34	15 76		26 24			
23	164	15.1		19.9	190	01.0 ¹¹⁷	+23	56.5 ⁶⁶	58	7 04	7 57	8 48	29 80		13 11	20		
24	179	15.0	+23	19.8	204	31.7 ¹¹⁷	+24	03.0 ⁶⁵	60 S	7 11	8 08	9 06	6 47	86	12 53	14		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 5 ^h 42 ^m 7		Mag: -3.9 PMG: 9 ^h 51 ^m				Mag: +0.5 PMG: 7 ^h 13 ^m				Mag: -2.5 PMG: 6 ^h 10 ^m				Mag: +0.6 PMG: 3 ^h 33 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	274	06.0	212	15.9	+19	20.9	251	43.4	+7	25.0	267	09.6	+1	37.0	306	30.5	-14	20.6
1	289	08.5	227	15.2		21.6	266	44.2		25.7	282	11.8		37.1	321	33.0		20.7
2	304	11.0	242	14.6		22.2	281	45.0		26.3	297	14.0		37.2	336	35.5		20.7
3	319	13.4	257	14.0		22.9	296	45.8		27.0	312	16.2		37.3	351	38.1		20.7
4	334	15.9	272	13.4		23.5	311	46.5		27.7	327	18.5		37.3	6	40.6		20.8
5	349	18.4	287	12.8	+19	24.1	326	47.3	+7	28.3	342	20.7	+1	37.4	21	43.2	-14	20.8
6	4	20.8	302	12.1	+19	24.8	341	48.1	+7	29.0	357	22.9	+1	37.5	36	45.7	-14	20.8
7	19	23.3	317	11.5		25.4	356	48.9		29.6	12	25.2		37.6	51	48.3		20.9
8	34	25.8	332	10.9		26.0	11	49.7		30.3	27	27.4		37.7	66	50.8		20.9
9	49	28.2	347	10.3		26.7	26	50.5		30.9	42	29.6		37.8	81	53.3		21.0
10	64	30.7	2	09.6		27.3	41	51.3		31.6	57	31.9		37.9	96	55.9		21.0
11	79	33.1	17	09.0	+19	27.9	56	52.1	+7	32.2	72	34.1	+1	38.0	111	58.4	-14	21.0
12	94	35.6	32	08.4	+19	28.5	71	52.9	+7	32.9	87	36.3	+1	38.0	127	01.0	-14	21.1
13	109	38.1	47	07.8		29.2	86	53.6		33.6	102	38.6		38.1	142	03.5		21.1
14	124	40.5	62	07.1		29.8	101	54.4		34.2	117	40.8		38.2	157	06.1		21.1
15	139	43.0	77	06.5		30.4	116	55.2		34.9	132	43.0		38.3	172	08.6		21.2
16	154	45.5	92	05.9		31.0	131	56.0		35.5	147	45.3		38.4	187	11.1		21.2
17	169	47.9	107	05.2	+19	31.7	146	56.8	+7	36.2	162	47.5	+1	38.5	202	13.7	-14	21.2
18	184	50.4	122	04.6	+19	32.3	161	57.6	+7	36.8	177	49.7	+1	38.6	217	16.2	-14	21.3
19	199	52.9	137	04.0		32.9	176	58.4		37.5	192	52.0		38.7	232	18.8		21.3
20	214	55.3	152	03.3		33.5	191	59.2		38.1	207	54.2		38.7	247	21.3		21.3
21	229	57.8	167	02.7		34.2	207	00.0		38.8	222	56.4		38.8	262	23.9		21.4
22	245	00.3	182	02.1		34.8	222	00.8		39.4	237	58.7		38.9	277	26.4		21.4
23	260	02.7	197	01.5		35.4	237	01.5		40.1	253	00.9		39.0	292	29.0		21.5
24	275	05.2	212	00.8	+19	36.0	252	02.3	+7	40.7	268	03.1	+1	39.1	307	31.5	-14	21.5
Dif	—		-6		+6		+8		+7		+22		+1		+25		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 27 ^d 5 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0 R°: 50 ^m													
	PMG: 12 ^h 03 ^m 1			SD: 14 ^h 8 PMG: 10 ^h 43 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	179	15.0	+23 19.8	204	31.7	+24 03.0		60 N	21 27	23 10	** **	1 01	20	20 50	68		
1	194	14.9		219	02.3 ¹¹⁶	09.3 ⁶³		58	21 07	22 22	** **	22	25	24	65		
2	209	14.7		233	32.8 ¹¹⁵	15.6 ⁶³		56	20 50	21 52	** **	39	29	20 04	62		
3	224	14.6		248	03.4 ¹¹⁶	21.7 ⁶¹		54	36	30	23 15	1 53	32	19 47	61		
4	239	14.5		262	33.8 ¹¹⁴	27.7 ⁶⁰		52	24	21 13	22 30	2 06	34	33	59		
5	254	14.3	+23 19.3	277	04.3 ¹¹⁵	+24 33.6 ⁵⁹		50	20 13	20 58	22 03	2 17	35	19 20	58		
6	269	14.2	+23 19.2	291	34.7 ¹¹⁴	+24 39.4 ⁵⁸		45	19 51	20 28	21 18	2 40	39	18 54	57		
7	284	14.1		306	05.0 ¹¹³	45.1 ⁵⁷		40	33	20 06	20 47	2 59	41	33	56		
8	299	13.9		320	35.3 ¹¹³	50.6 ⁵⁵		35	18	19 48	24	3 15	42	16	55		
9	314	13.8		335	05.6 ¹¹³	+24 56.1 ⁵⁵		30	19 05	33	20 06	28	44	18 02	53		
10	329	13.7		349	35.8 ¹¹²	+25 01.4 ⁵³		20	18 43	19 08	19 37	3 52	46	17 37	52		
11	344	13.5	+23 18.7	4	06.0 ¹¹²	+25 06.6 ⁵²		10 N	18 24	18 47	19 14	4 12	48	17 15	51		
12	359	13.4	+23 18.6	18	36.2 ¹¹²	+25 11.7 ⁵¹		0	18 07	18 29	18 55	4 31	50	16 55	50		
13	14	13.3		33	06.3 ¹¹¹	16.7 ⁵⁰		10 S	17 49	18 12	39	4 50	52	35	49		
14	29	13.2		47	36.4 ¹¹¹	21.5 ⁴⁸		20	31	17 55	22	5 11	53	16 14	47		
15	44	13.0		62	06.4 ¹¹⁰	26.3 ⁴⁸		30	17 10	36	18 06	35	55	15 49	46		
16	59	12.9		76	36.4 ¹¹⁰	30.9 ⁴⁶		35	16 58	26	17 57	5 49	56	34	46		
17	74	12.8	+23 18.0	91	06.4 ¹¹⁰	+25 35.4 ⁴⁵		40	16 43	17 14	17 48	6 05	58	15 17	45		
18	89	12.6	+23 17.9	105	36.3 ¹⁰⁹	+25 39.8 ⁴⁴		45	16 27	17 01	17 38	6 25	60	14 57	43		
19	104	12.5		120	06.2 ¹⁰⁹	44.0 ⁴²		50	16 06	16 45	26	6 49	63	32	40		
20	119	12.4		134	36.1 ¹⁰⁹	48.1 ⁴¹		52	15 56	37	21	7 01	64	20	39		
21	134	12.2		149	05.9 ¹⁰⁸	52.1 ⁴⁰		54	45	29	15	15	66	14 06	37		
22	149	12.1		163	35.8 ¹⁰⁹	56.0 ³⁹		56	33	20	09	31	68	13 50	35		
23	164	12.0		178	05.5 ¹⁰⁷	+25 59.8 ³⁸		58	18	16 10	17 02	7 49	72	31	32		
24	179	11.9	+23 17.2	192	35.3 ¹⁰⁸	+26 03.4 ³⁶		60 S	15 01	15 58	16 55	8 13	77	13 07	27		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 5 ^h 38 ^m 7		Mag: -3.9 PMG: 9 ^h 52 ^m			Mag: +0.5 PMG: 7 ^h 11 ^m			Mag: -2.5 PMG: 6 ^h 07 ^m			Mag: +0.6 PMG: 3 ^h 29 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'			
0	275	05.2	212	00.8	+19 36.0	252	02.3	+7 40.7	268	03.1	+1 39.1	307	31.5	-14 21.5			
1	290	07.6	227	00.2	36.6	267	03.1	41.4	283	05.4	39.2	322	34.1	21.5			
2	305	10.1	241	59.6	37.3	282	03.9	42.1	298	07.6	39.3	337	36.6	21.6			
3	320	12.6	256	58.9	37.9	297	04.7	42.7	313	09.8	39.3	352	39.1	21.6			
4	335	15.0	271	58.3	38.5	312	05.5	43.4	328	12.1	39.4	7	41.7	21.6			
5	350	17.5	286	57.7	+19 39.1	327	06.3	+7 44.0	343	14.3	+1 39.5	22	44.2	-14 21.7			
6	5	20.0	301	57.0	+19 39.7	342	07.1	+7 44.7	358	16.5	+1 39.6	37	46.8	-14 21.7			
7	20	22.4	316	56.4	40.3	357	07.9	45.3	13	18.8	39.7	52	49.3	21.7			
8	35	24.9	331	55.7	40.9	12	08.7	46.0	28	21.0	39.8	67	51.9	21.8			
9	50	27.4	346	55.1	41.5	27	09.5	46.6	43	23.3	39.9	82	54.4	21.8			
10	65	29.8	1	54.5	42.2	42	10.2	47.3	58	25.5	39.9	97	57.0	21.8			
11	80	32.3	16	53.8	+19 42.8	57	11.0	+7 47.9	73	27.7	+1 40.0	112	59.5	-14 21.9			
12	95	34.8	31	53.2	+19 43.4	72	11.8	+7 48.6	88	30.0	+1 40.1	128	02.1	-14 21.9			
13	110	37.2	46	52.6	44.0	87	12.6	49.2	103	32.2	40.2	143	04.6	22.0			
14	125	39.7	61	51.9	44.6	102	13.4	49.9	118	34.4	40.3	158	07.2	22.0			
15	140	42.1	76	51.3	45.2	117	14.2	50.5	133	36.7	40.4	173	09.7	22.0			
16	155	44.6	91	50.6	45.8	132	15.0	51.2	148	38.9	40.4	188	12.3	22.1			
17	170	47.1	106	50.0	+19 46.4	147	15.8	+7 51.8	163	41.2	+1 40.5	203	14.8	-14 22.1			
18	185	49.5	121	49.4	+19 47.0	162	16.6	+7 52.5	178	43.4	+1 40.6	218	17.4	-14 22.1			
19	200	52.0	136	48.7	47.6	177	17.4	53.1	193	45.6	40.7	233	19.9	22.2			
20	215	54.5	151	48.1	48.2	192	18.1	53.8	208	47.9	40.8	248	22.5	22.2			
21	230	56.9	166	47.4	48.8	207	18.9	54.4	223	50.1	40.9	263	25.0	22.3			
22	245	59.4	181	46.8	49.4	222	19.7	55.1	238	52.4	40.9	278	27.6	22.3			
23	261	01.9	196	46.2	50.0	237	20.5	55.7	253	54.6	41.0	293	30.1	22.3			
24	276	04.3	211	45.5	+19 50.6	252	21.3	+7 56.4	268	56.9	+1 41.1	308	32.7	-14 22.4			
Dif	—		-6			+6			+22			+1			+25		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 3				Edad: 28 ^d 5 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 53'9 Rº: 51 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	11.9	+23	17.2	192	35.3	+26	03.4	60 N	** **	0 57	2 39	1 21	37	21 58	45		
1	194	11.7		17.1	207	05.0 ¹⁰⁷		06.9 ³⁵	58	** **	1 45	3 00	1 47	41	29	46		
2	209	11.6		17.0	221	34.7 ¹⁰⁷		10.3 ³⁴	56	** **	2 14	16	2 08	42	21 06	47		
3	224	11.5		16.9	236	04.3 ¹⁰⁶		13.6 ³³	54	0 52	36	30	25	44	20 48	48		
4	239	11.3		16.8	250	34.0 ¹⁰⁷		16.7 ³¹	52	1 36	2 54	42	40	44	32	49		
5	254	11.2	+23	16.7	265	03.6 ¹⁰⁶	+26	19.8 ³¹	50	2 04	3 09	3 53	2 52	46	20 18	49		
6	269	11.1	+23	16.6	279	33.2 ¹⁰⁶	+26	22.7 ²⁹	45	2 49	3 38	4 16	3 19	47	19 51	49		
7	284	11.0		16.4	294	02.7 ¹⁰⁵		25.4 ²⁷	40	3 19	4 01	33	40	47	29	50		
8	299	10.8		16.3	308	32.3 ¹⁰⁶		28.1 ²⁷	35	3 42	19	4 48	3 57	48	19 11	50		
9	314	10.7		16.2	323	01.8 ¹⁰⁵		30.6 ²⁵	30	4 01	34	5 01	4 12	49	18 55	51		
10	329	10.6		16.1	337	31.3 ¹⁰⁵		33.0 ²⁴	20	30	4 59	23	4 38	50	29	51		
11	344	10.4	+23	16.0	352	00.8 ¹⁰⁵	+26	35.2 ²²	10 N	4 52	5 19	5 42	5 00	50	18 06	51		
12	359	10.3	+23	15.8	6	30.2 ¹⁰⁴	+26	37.4 ²²	0	5 11	5 37	6 00	5 21	51	17 45	51		
13	14	10.2		15.7	20	59.7 ¹⁰⁵		39.4 ²⁰	10 S	28	5 54	17	5 42	51	24	51		
14	29	10.1		15.6	35	29.1 ¹⁰⁴		41.2 ¹⁸	20	5 44	6 11	35	6 04	52	17 01	51		
15	44	09.9		15.5	49	58.5 ¹⁰⁴		43.0 ¹⁸	30	6 00	30	6 56	30	52	16 35	51		
16	59	09.8		15.3	64	27.9 ¹⁰⁴		44.6 ¹⁶	35	09	41	7 09	6 45	53	20	51		
17	74	09.7	+23	15.2	78	57.3 ¹⁰⁴	+26	46.1 ¹⁵	40	6 18	6 52	7 23	7 03	53	16 02	50		
18	89	09.5	+23	15.1	93	26.7 ¹⁰⁴	+26	47.5 ¹⁴	45	6 29	7 06	7 40	7 25	53	15 40	51		
19	104	09.4		15.0	107	56.1 ¹⁰⁴		48.7 ¹²	50	40	22	8 00	7 52	54	15 12	51		
20	119	09.3		14.8	122	25.4 ¹⁰³		49.8 ¹¹	52	45	29	10	8 05	54	14 59	50		
21	134	09.2		14.7	136	54.8 ¹⁰⁴		50.8 ¹⁰	54	51	37	21	21	54	43	51		
22	149	09.0		14.6	151	24.1 ¹⁰³		51.6 ⁸	56	6 57	46	33	8 39	55	25	50		
23	164	08.9		14.5	165	53.4 ¹⁰³		52.3 ⁷	58	7 04	7 56	8 48	9 01	56	14 03	49		
24	179	08.8	+23	14.3	180	22.8 ¹⁰⁴	+26	52.9 ⁶	60 S	7 11	8 08	9 05	9 30	57	13 34	48		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 5 ^h 34 ^m 8		Mag: -3.9 PMG: 9 ^h 53 ^m				Mag: +0.5 PMG: 7 ^h 10 ^m				Mag: -2.5 PMG: 6 ^h 03 ^m				Mag: +0.6 PMG: 3 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	276	04.3	211	45.5	+19	50.6	252	21.3	+7	56.4	268	56.9	+1	41.1	308	32.7	-14	22.4
1	291	06.8	226	44.9		51.2	267	22.1		57.0	283	59.1		41.2	323	35.2		22.4
2	306	09.2	241	44.2		51.8	282	22.9		57.7	299	01.3		41.3	338	37.8		22.4
3	321	11.7	256	43.6		52.4	297	23.7		58.3	314	03.6		41.4	353	40.3		22.5
4	336	14.2	271	42.9		53.0	312	24.5		59.0	329	05.8		41.4	8	42.9		22.5
5	351	16.6	286	42.3	+19	53.6	327	25.3	+7	59.6	344	08.1	+1	41.5	23	45.4	-14	22.6
6	6	19.1	301	41.6	+19	54.2	342	26.1	+8	00.3	359	10.3	+1	41.6	38	48.0	-14	22.6
7	21	21.6	316	41.0		54.8	357	26.9		00.9	14	12.6		41.7	53	50.5		22.6
8	36	24.0	331	40.3		55.4	12	27.6		01.6	29	14.8		41.8	68	53.1		22.7
9	51	26.5	346	39.7		56.0	27	28.4		02.2	44	17.0		41.9	83	55.6		22.7
10	66	29.0	1	39.0		56.5	42	29.2		02.9	59	19.3		41.9	98	58.2		22.7
11	81	31.4	16	38.4	+19	57.1	57	30.0	+8	03.5	74	21.5	+1	42.0	114	00.7	-14	22.8
12	96	33.9	31	37.7	+19	57.7	72	30.8	+8	04.1	89	23.8	+1	42.1	129	03.3	-14	22.8
13	111	36.4	46	37.1		58.3	87	31.6		04.8	104	26.0		42.2	144	05.8		22.9
14	126	38.8	61	36.4		58.9	102	32.4		05.4	119	28.3		42.3	159	08.4		22.9
15	141	41.3	76	35.8	+19	59.5	117	33.2		06.1	134	30.5		42.3	174	10.9		22.9
16	156	43.7	91	35.1	+20	00.1	132	34.0		06.7	149	32.8		42.4	189	13.5		23.0
17	171	46.2	106	34.5	+20	00.6	147	34.8	+8	07.4	164	35.0	+1	42.5	204	16.0	-14	23.0
18	186	48.7	121	33.8	+20	01.2	162	35.6	+8	08.0	179	37.2	+1	42.6	219	18.6	-14	23.0
19	201	51.1	136	33.2		01.8	177	36.4		08.7	194	39.5		42.7	234	21.1		23.1
20	216	53.6	151	32.5		02.4	192	37.1		09.3	209	41.7		42.8	249	23.7		23.1
21	231	56.1	166	31.9		03.0	207	37.9		10.0	224	44.0		42.8	264	26.2		23.2
22	246	58.5	181	31.2		03.5	222	38.7		10.6	239	46.2		42.9	279	28.8		23.2
23	262	01.0	196	30.6		04.1	237	39.5		11.2	254	48.5		43.0	294	31.3		23.2
24	277	03.5	211	29.9	+20	04.7	252	40.3	+8	11.9	269	50.7	+1	43.1	309	33.9	-14	23.3
Dif	—		-6		+6		+8		+6		+22		+1		+26		0	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 29 ^d 5	PHE { 4 ^h : 53 ^m /9 12 ^h : 53 ^m /9 20 ^h : 53 ^m /9												
	PMG: 12 ^h 03 ^m 5					SD: 14 ^h 7			PMG: 12 ^h 24 ^m			R°: 50 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	179	08.8	+23	14.3	180	22.8	+26	52.9	60 N	21 26	23 07	** **	1 58 61	22 43 24			
1	194	08.6		14.2	194	52.1 ¹⁰³		53.4	58	21 06	22 20	** **	2 28 58	22 15 30			
2	209	08.5		14.1	209	21.4 ¹⁰³		53.7	56	20 50	21 51	** **	2 50 58	21 53 34			
3	224	08.4		13.9	223	50.7 ¹⁰³		53.9	54	36	30	23 12	3 09 56	36 35			
4	239	08.3		13.8	238	20.1 ¹⁰⁴		54.0	52	24	21 12	22 29	24 56	21 37			
5	254	08.1	+23	13.7	252	49.4 ¹⁰³	+26	53.9	50	20 13	20 57	22 02	3 38 55	21 07 39			
6	269	08.0	+23	13.5	267	18.7 ¹⁰³	+26	53.8	45	19 51	20 28	21 17	4 06 54	20 40 41			
7	284	07.9		13.4	281	48.0 ¹⁰³		53.5	40	33	20 06	20 47	27 54	19 43			
8	299	07.8		13.3	296	17.3 ¹⁰³		53.0	35	18	19 48	24	4 45 54	20 01 44			
9	314	07.6		13.1	310	46.7 ¹⁰⁴		52.4	30	19 05	33	20 06	5 01 53	19 46 45			
10	329	07.5		13.0	325	16.0 ¹⁰³		51.7	20	18 43	19 08	19 37	28 52	19 20 47			
11	344	07.4	+23	12.8	339	45.4 ¹⁰⁴	+26	50.9	10 N	18 25	18 48	19 15	5 50 52	18 57 49			
12	359	07.3	+23	12.7	354	14.7 ¹⁰³	+26	49.9	0	18 07	18 30	18 56	6 12 50	18 36 50			
13	14	07.1		12.6	8	44.1 ¹⁰⁴		48.9	10 S	17 50	18 13	39	33 50	18 15 51			
14	29	07.0		12.4	23	13.4 ¹⁰³		47.6	20	32	17 56	23	6 56 49	17 52 53			
15	44	06.9		12.3	37	42.8 ¹⁰⁴		46.3	30	17 11	37	18 07	7 22 48	26 54			
16	59	06.7		12.1	52	12.2 ¹⁰⁴		44.8	35	16 58	26	17 58	38 47	17 11 55			
17	74	06.6	+23	12.0	66	41.6 ¹⁰⁴	+26	43.2	40	16 44	17 15	17 49	7 56 46	16 52 57			
18	89	06.5	+23	11.9	81	11.1 ¹⁰⁵	+26	41.5	45	16 28	17 01	17 39	8 18 45	16 31 58			
19	104	06.4		11.7	95	40.5 ¹⁰⁴		39.6	50	16 07	16 46	27	46 43	16 03 60			
20	119	06.2		11.6	110	10.0 ¹⁰⁵		37.6	52	15 57	38	22	8 59 43	15 49 61			
21	134	06.1		11.4	124	39.4 ¹⁰⁴		35.5	54	46	30	16	9 15 42	34 62			
22	149	06.0		11.3	139	08.9 ¹⁰⁵		33.3	56	34	21	10	34 40	15 15 64			
23	164	05.9		11.1	153	38.4 ¹⁰⁵		30.9	58	20	11	17 04	9 57 37	14 52 67			
24	179	05.7	+23	11.0	168	08.0 ¹⁰⁶	+26	28.4	60 S	15 02	16 00	16 56	10 27 33	14 22 72			
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO				
	PMG: 5 ^h 30 ^m 9		Mag: -3.9 PMG: 9 ^h 54 ^m			Mag: +0.5 PMG: 7 ^h 09 ^m			Mag: -2.5 PMG: 6 ^h 00 ^m				Mag: +0.6 PMG: 3 ^h 21 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	277	03.5	211	29.9	+20	04.7	252	40.3	+8	11.9	269	50.7	+1	43.1	309	33.9	
1	292	05.9	226	29.3		05.3	267	41.1		12.5	284	53.0		43.2	324	36.4	
2	307	08.4	241	28.6		05.8	282	41.9		13.2	299	55.2		43.2	339	39.0	
3	322	10.9	256	28.0		06.4	297	42.7		13.8	314	57.5		43.3	354	41.5	
4	337	13.3	271	27.3		07.0	312	43.5		14.5	329	59.7		43.4	9	44.1	
5	352	15.8	286	26.6	+20	07.6	327	44.3	+8	15.1	345	02.0	+1	43.5	24	46.7	
6	7	18.2	301	26.0	+20	08.1	342	45.1	+8	15.8	0	04.2	+1	43.6	39	49.2	
7	22	20.7	316	25.3		08.7	357	45.9		16.4	15	06.5		43.6	54	51.8	
8	37	23.2	331	24.7		09.3	12	46.7		17.0	30	08.7		43.7	69	54.3	
9	52	25.6	346	24.0		09.9	27	47.5		17.7	45	11.0		43.8	84	56.9	
10	67	28.1	1	23.4		10.4	42	48.2		18.3	60	13.2		43.9	99	59.4	
11	82	30.6	16	22.7	+20	11.0	57	49.0	+8	19.0	75	15.5	+1	44.0	115	02.0	
12	97	33.0	31	22.0	+20	11.6	72	49.8	+8	19.6	90	17.7	+1	44.0	130	04.5	
13	112	35.5	46	21.4		12.1	87	50.6		20.3	105	20.0		44.1	145	07.1	
14	127	38.0	61	20.7		12.7	102	51.4		20.9	120	22.2		44.2	160	09.6	
15	142	40.4	76	20.1		13.2	117	52.2		21.5	135	24.5		44.3	175	12.2	
16	157	42.9	91	19.4		13.8	132	53.0		22.2	150	26.7		44.3	190	14.7	
17	172	45.4	106	18.7	+20	14.4	147	53.8	+8	22.8	165	29.0	+1	44.4	205	17.3	
18	187	47.8	121	18.1	+20	14.9	162	54.6	+8	23.5	180	31.2	+1	44.5	220	19.9	
19	202	50.3	136	17.4		15.5	177	55.4		24.1	195	33.5		44.6	235	22.4	
20	217	52.7	151	16.7		16.1	192	56.2		24.8	210	35.7		44.7	250	25.0	
21	232	55.2	166	16.1		16.6	207	57.0		25.4	225	38.0		44.7	265	27.5	
22	247	57.7	181	15.4		17.2	222	57.8		26.0	240	40.2		44.8	280	30.1	
23	263	00.1	196	14.7		17.7	237	58.6		26.7	255	42.5		44.9	295	32.6	
24	278	02.6	211	14.1	+20	18.3	252	59.4	+8	27.3	270	44.8	+1	45.0	310	35.2	
Dif	—		-7			+6	+8			+6	+23		+1		+26		

UT	SOL			● LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 03 ^m 7			Edad: 0 ^d 9 PHE { 4 ^h : 54/0 12 ^h : 54/0 20 ^h : 54/0 R°: 49 ^m SD: 14'7 PMG: 13 ^h 14 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	05.7	+23	11.0	168	08.0	+26	28.4	60 N	** **	1 01	2 41	2 59	79	23 07	13		
1	194	05.6		10.8	182	37.5 ¹⁰⁵		25.8	58	** **	1 47	3 01	3 26	74	22 45	18		
2	209	05.5		10.7	197	07.1 ¹⁰⁶		23.1	56	** **	2 16	18	3 48	69	27	22		
3	224	05.4		10.5	211	36.7 ¹⁰⁶		20.2	54	0 56	38	32	4 05	68	22 11	27		
4	239	05.2		10.4	226	06.3 ¹⁰⁶		17.2	52	1 39	2 55	44	20	66	21 58	27		
5	254	05.1	+23	10.2	240	36.0 ¹⁰⁷	+26	14.1	50	2 05	3 10	3 54	4 33	64	21 46	30		
6	269	05.0	+23	10.1	255	05.7 ¹⁰⁷	+26	10.8	45	2 50	3 39	4 17	5 00	61	21 21	34		
7	284	04.9		09.9	269	35.4 ¹⁰⁷		07.5	40	3 20	4 02	34	21	59	21 02	36		
8	299	04.7		09.8	284	05.1 ¹⁰⁷		04.0	35	3 43	20	4 49	39	57	20 45	39		
9	314	04.6		09.6	298	34.9 ¹⁰⁸	+26	00.4	30	4 01	35	5 02	5 54	55	31	41		
10	329	04.5		09.5	313	04.7 ¹⁰⁸	+25	56.6	20	30	4 59	24	6 20	53	20 07	44		
11	344	04.4	+23	09.3	327	34.5 ¹⁰⁸	+25	52.8	10 N	4 53	5 20	5 43	6 42	51	19 46	46		
12	359	04.2	+23	09.2	342	04.4 ¹⁰⁹	+25	48.8	0	5 11	5 38	6 00	7 02	49	19 26	49		
13	14	04.1		09.0	356	34.3 ¹⁰⁹		44.7	10 S	28	5 54	17	23	47	19 06	51		
14	29	04.0		08.9	11	04.2 ¹⁰⁹		40.4	20	5 44	6 12	36	7 45	45	18 45	53		
15	44	03.9		08.7	25	34.2 ¹¹⁰		36.1	30	6 00	30	6 57	8 10	43	20	57		
16	59	03.8		08.5	40	04.2 ¹¹⁰		31.6	35	09	41	7 09	25	42	18 06	58		
17	74	03.6	+23	08.4	54	34.2 ¹¹⁰	+25	27.0	40	6 18	6 52	7 23	8 42	40	17 49	60		
18	89	03.5	+23	08.2	69	04.3 ¹¹¹	+25	22.3	45	6 28	7 06	7 39	9 03	37	17 29	62		
19	104	03.4		08.1	83	34.4 ¹¹¹		17.5	50	40	21	8 00	29	34	17 03	67		
20	119	03.3		07.9	98	04.5 ¹¹¹		12.5	50	52	29	10	42	32	16 50	69		
21	134	03.1		07.7	112	34.7 ¹¹²		07.5	54	51	37	20	9 57	30	36	71		
22	149	03.0		07.6	127	04.9 ¹¹²	+25	02.3	52	6 57	46	33	10 14	27	16 19	74		
23	164	02.9		07.4	141	35.2 ¹¹³	+24	57.0	53	7 03	7 56	8 47	10 34	23	15 59	78		
24	179	02.8	+23	07.2	156	05.5 ¹¹³	+24	51.6	54	7 11	8 07	9 04	11 00	17	15 34	84		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 5 ^h 26 ^m 9			Mag: -3.9 PMG: 9 ^h 56 ^m			Mag: +0.5 PMG: 7 ^h 08 ^m			Mag: -2.5 PMG: 5 ^h 56 ^m			Mag: +0.6 PMG: 3 ^h 17 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	278	02.6	211	14.1	+20	18.3	252	59.4	+8	27.3	270	44.8	+1	45.0	310	35.2	-14	24.2
1	293	05.1	226	13.4		18.8	268	00.1		28.0	285	47.0		45.0	325	37.8		24.2
2	308	07.5	241	12.8		19.4	283	00.9		28.6	300	49.3		45.1	340	40.3		24.3
3	323	10.0	256	12.1		19.9	298	01.7		29.2	315	51.5		45.2	355	42.9		24.3
4	338	12.5	271	11.4		20.5	313	02.5		29.9	330	53.8		45.3	10	45.4		24.4
5	353	14.9	286	10.8	+20	21.0	328	03.3	+8	30.5	345	56.0	+1	45.4	25	48.0	-14	24.4
6	8	17.4	301	10.1	+20	21.6	343	04.1	+8	31.2	0	58.3	+1	45.4	40	50.5	-14	24.4
7	23	19.9	316	09.4		22.1	358	04.9		31.8	16	00.5		45.5	55	53.1		24.5
8	38	22.3	331	08.7		22.7	13	05.7		32.4	31	02.8		45.6	70	55.7		24.5
9	53	24.8	346	08.1		23.2	28	06.5		33.1	46	05.1		45.7	85	58.2		24.6
10	68	27.2	1	07.4		23.8	43	07.3		33.7	61	07.3		45.7	101	00.8		24.6
11	83	29.7	16	06.7	+20	24.3	58	08.1	+8	34.3	76	09.6	+1	45.8	116	03.3	-14	24.6
12	98	32.2	31	06.1	+20	24.9	73	08.9	+8	35.0	91	11.8	+1	45.9	131	05.9	-14	24.7
13	113	34.6	46	05.4		25.4	88	09.7		35.6	106	14.1		46.0	146	08.4		24.7
14	128	37.1	61	04.7		26.0	103	10.5		36.3	121	16.3		46.0	161	11.0		24.8
15	143	39.6	76	04.1		26.5	118	11.3		36.9	136	18.6		46.1	176	13.6		24.8
16	158	42.0	91	03.4		27.0	133	12.1		37.5	151	20.9		46.2	191	16.1		24.8
17	173	44.5	106	02.7	+20	27.6	148	12.9	+8	38.2	166	23.1	+1	46.3	206	18.7	-14	24.9
18	188	47.0	121	02.0	+20	28.1	163	13.7	+8	38.8	181	25.4	+1	46.3	221	21.2	-14	24.9
19	203	49.4	136	01.4		28.7	178	14.4		39.5	196	27.6		46.4	236	23.8		25.0
20	218	51.9	151	00.7		29.2	193	15.2		40.1	211	29.9		46.5	251	26.4		25.0
21	233	54.4	166	00.0		29.7	208	16.0		40.7	226	32.2		46.6	266	28.9		25.0
22	248	56.8	180	59.3		30.3	223	16.8		41.4	241	34.4		46.6	281	31.5		25.1
23	263	59.3	195	58.7		30.8	238	17.6		42.0	256	36.7		46.7	296	34.0		25.1
24	279	01.7	210	58.0	+20	31.3	253	18.4	+8	42.6	271	38.9	+1	46.8	311	36.6	-14	25.2
Dif	—			-7 +5			+8 +6			+23 +1			+26 0					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 1 ^d 9	PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'2									
	PMG: 12 ^h 03 ^m 9	PMG: 14 ^h 03 ^m	Rº: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	02.8	+23 07.2	156	05.5	+24 51.6	56	60 N	21 25	23 03	** **	4 18 86	23 20 7	
1	194	02.6	07.1	170	35.8 ¹¹³	46.0	56	58	21 05	22 18	** **	40 80	23 03 12	
2	209	02.5	06.9	185	06.2 ¹¹⁴	40.4	56	56	20 49	21 50	** **	4 57 77	22 49 15	
3	224	02.4	06.7	199	36.6 ¹¹⁴	34.6	58	54	35	29	23 08	5 13 73	36 19	
4	239	02.3	06.6	214	07.1 ¹¹⁵	28.7	59	52	23	21 11	22 27	26 70	25 21	
5	254	02.2	+23 06.4	228	37.6 ¹¹⁵	+24 22.7	60	50	20 13	20 57	22 01	5 37 69	22 16 23	
6	269	02.0	+23 06.2	243	08.2 ¹¹⁶	+24 16.6	61	45	19 50	20 28	21 17	6 01 64	21 55 28	
7	284	01.9	06.1	257	38.8 ¹¹⁶	10.4	62	40	33	20 05	20 47	20 61	38 31	
8	299	01.8	05.9	272	09.4 ¹¹⁶	+24 04.1	63	35	18	19 48	24	36 59	24 34	
9	314	01.7	05.7	286	40.1 ¹¹⁷	+23 57.6	65	30	19 05	33	20 06	6 49 57	21 12 36	
10	329	01.6	05.6	301	10.9 ¹¹⁸	51.1	65	20	18 44	19 08	19 37	7 13 53	20 51 40	
11	344	01.4	+23 05.4	315	41.7 ¹¹⁸	+23 44.4	67	10 N	18 25	18 48	19 15	7 33 50	20 32 43	
12	359	01.3	+23 05.2	330	12.5 ¹¹⁸	+23 37.7	67	0	18 08	18 30	18 56	7 51 48	20 15 46	
13	14	01.2	05.0	344	43.4 ¹¹⁹	30.8	69	10 S	17 50	18 13	39	8 10 45	19 57 50	
14	29	01.1	04.9	359	14.3 ¹¹⁹	23.8	70	20	32	17 56	24	30 42	38 53	
15	44	00.9	04.7	13	45.3 ¹²⁰	16.7	71	30	17 11	38	18 07	8 53 38	17 57	
16	59	00.8	04.5	28	16.3 ¹²⁰	09.5	72	35	16 59	27	17 59	9 07 36	19 04 59	
17	74	00.7	+23 04.3	42	47.3 ¹²⁰	+23 02.2	73	40	16 45	17 16	17 50	9 22 34	18 49 62	
18	89	00.6	+23 04.2	57	18.5 ¹²²	+22 54.8	74	45	16 29	17 02	17 40	9 40 31	18 31 66	
19	104	00.5	04.0	71	49.6 ¹²¹	47.2	76	50	16 08	16 47	28	10 03 26	18 10 69	
20	119	00.3	03.8	86	20.8 ¹²²	39.6	76	52	15 59	39	23	14 24	17 59 72	
21	134	00.2	03.6	100	52.1 ¹²³	31.9	77	54	48	31	17	27 21	47 75	
22	149	00.1	03.5	115	23.4 ¹²³	24.1	78	56	35	22	11	41 18	33 79	
23	164	00.0	03.3	129	54.8 ¹²⁴	16.1	80	58	21	12	17 05	10 57 15	17 17 83	
24	178	59.9	+23 03.1	144	26.2 ¹²⁴	+22 08.1	80	60 S	15 04	16 01	16 58	11 17 9	16 58 88	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 5 ^h 23 ^m 0	Mag: -3.9 PMG: 9 ^h 57 ^m	Mag: +0.5 PMG: 7 ^h 06 ^m	Mag: -2.5 PMG: 5 ^h 53 ^m	Mag: +0.6 PMG: 3 ^h 13 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	°	'	°	'	°	'					
0	279	01.7	210 58.0	+20 31.3	253 18.4	+8 42.6	271 38.9	+1 46.8	311 36.6	-14 25.2				
1	294	04.2	225 57.3	31.9	268 19.2	43.3	286 41.2	46.9	326 39.2	25.2				
2	309	06.7	240 56.6	32.4	283 20.0	43.9	301 43.5	46.9	341 41.7	25.2				
3	324	09.1	255 56.0	32.9	298 20.8	44.5	316 45.7	47.0	356 44.3	25.3				
4	339	11.6	270 55.3	33.5	313 21.6	45.2	331 48.0	47.1	11 46.8	25.3				
5	354	14.1	285 54.6	+20 34.0	328 22.4	+8 45.8	346 50.2	+1 47.2	26 49.4	-14 25.4				
6	9	16.5	300 53.9	+20 34.5	343 23.2	+8 46.4	1 52.5	+1 47.2	41 52.0	-14 25.4				
7	24	19.0	315 53.2	35.1	358 24.0	47.1	16 54.8	47.3	56 54.5	25.4				
8	39	21.5	330 52.6	35.6	13 24.8	47.7	31 57.0	47.4	71 57.1	25.5				
9	54	23.9	345 51.9	36.1	28 25.6	48.3	46 59.3	47.5	86 59.6	25.5				
10	69	26.4	0 51.2	36.6	43 26.4	49.0	62 01.6	47.5	102 02.2	25.6				
11	84	28.8	15 50.5	+20 37.2	58 27.2	+8 49.6	77 03.8	+1 47.6	117 04.8	-14 25.6				
12	99	31.3	30 49.8	+20 37.7	73 28.0	+8 50.3	92 06.1	+1 47.7	132 07.3	-14 25.7				
13	114	33.8	45 49.2	38.2	88 28.8	50.9	107 08.4	47.8	147 09.9	25.7				
14	129	36.2	60 48.5	38.7	103 29.6	51.5	122 10.6	47.8	162 12.4	25.7				
15	144	38.7	75 47.8	39.2	118 30.4	52.2	137 12.9	47.9	177 15.0	25.8				
16	159	41.2	90 47.1	39.8	133 31.2	52.8	152 15.1	48.0	192 17.6	25.8				
17	174	43.6	105 46.4	+20 40.3	148 31.9	+8 53.4	167 17.4	+1 48.0	207 20.1	-14 25.9				
18	189	46.1	120 45.7	+20 40.8	163 32.7	+8 54.1	182 19.7	+1 48.1	222 22.7	-14 25.9				
19	204	48.6	135 45.1	41.3	178 33.5	54.7	197 21.9	48.2	237 25.3	25.9				
20	219	51.0	150 44.4	41.8	193 34.3	55.3	212 24.2	48.3	252 27.8	26.0				
21	234	53.5	165 43.7	42.3	208 35.1	55.9	227 26.5	48.3	267 30.4	26.0				
22	249	56.0	180 43.0	42.9	223 35.9	56.6	242 28.7	48.4	282 32.9	26.1				
23	264	58.4	195 42.3	43.4	238 36.7	57.2	257 31.0	48.5	297 35.5	26.1				
24	280	00.9	210 41.6	+20 43.9	253 37.5	+8 57.8	272 33.3	+1 48.6	312 38.1	-14 26.1				
Dif	—		-7	+5	+8	+6	+23	+1	+26	0				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 1			Edad: 2 ^d 9 PHE { 4 ^h : 54/3 12 ^h : 54/4 20 ^h : 54/5 PMG: 14 ^h 50 ^m R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	59.9	+23	03.1	144	26.2	+22	08.1	60 N	** **	1 06	2 43	5 44	88	23 27	4		
1	193	59.7		02.9	158	57.6 ¹²⁴	+22	00.0	81	** **	1 50	3 03	6 00	83	15	8		
2	208	59.6		02.7	173	29.1 ¹²⁵	+21	51.7	83	** **	2 18	19	14	79	23 04	11		
3	223	59.5		02.5	188	00.7 ¹²⁶		43.4	83	1 00	39	33	26	76	22 55	14		
4	238	59.4		02.4	202	32.3 ¹²⁶		35.0	84	1 41	2 57	45	36	73	46	17		
5	253	59.3	+23	02.2	217	04.0 ¹²⁷	+21	26.4	86	2 07	3 12	3 56	6 46	70	22 39	19		
6	268	59.1	+23	02.0	231	35.7 ¹²⁷	+21	17.8	86	2 51	3 41	4 18	7 05	66	22 23	23		
7	283	59.0		01.8	246	07.4 ¹²⁷		09.1	87	3 21	4 03	35	21	63	22 09	27		
8	298	58.9		01.6	260	39.2 ¹²⁸	+21	00.3	88	3 44	21	4 50	35	59	21 58	30		
9	313	58.8		01.4	275	11.1 ¹²⁹	+20	51.3	90	4 02	4 36	5 03	7 46	57	48	33		
10	328	58.7		01.2	289	43.0 ¹²⁹		42.3	90	31	5 00	25	8 06	52	31	37		
11	343	58.6	+23	01.1	304	14.9 ¹²⁹	+20	33.2	91	10 N	4 53	5 20	5 43	8 23	49	21 15	41	
12	358	58.4	+23	00.9	318	46.9 ¹³⁰	+20	24.0	92	0	5 12	5 38	6 00	8 39	45	21 01	45	
13	13	58.3		00.7	333	19.0 ¹³¹		14.8	92	10 S	29	5 55	18	8 55	42	20 47	48	
14	28	58.2		00.5	347	51.1 ¹³¹	+20	05.4	94	20	5 44	6 12	36	9 12	38	31	52	
15	43	58.1		00.3	2	23.2 ¹³¹	+19	55.9	95	30	6 01	30	6 57	31	35	14	56	
16	58	58.0	+23	00.1	16	55.4 ¹³²		46.3	96	35	09	41	7 09	43	31	20 03	59	
17	73	57.8	+22	59.9	31	27.6 ¹³²	+19	36.7	96	40	6 18	6 52	7 23	9 56	28	19 51	63	
18	88	57.7	+22	59.7	45	59.9 ¹³³	+19	27.0	97	45	6 28	7 05	7 39	10 11	25	19 37	66	
19	103	57.6		59.5	60	32.3 ¹³⁴		17.1	99	50	40	21	7 59	29	21	19	72	
20	118	57.5		59.3	75	04.6 ¹³³	+19	07.2	99	52	45	28	8 09	38	19	11	74	
21	133	57.4		59.1	89	37.1 ¹³⁵	+18	57.2 ¹⁰⁰	100	54	50	36	20	48	16	19 02	76	
22	148	57.3		58.9	104	09.5 ¹³⁴		47.1 ¹⁰¹	101	56	6 56	45	32	10 59	13	18 52	79	
23	163	57.1		58.7	118	42.1 ¹³⁶		37.0 ¹⁰¹	101	58	7 03	7 55	8 46	11 12	9	40	83	
24	178	57.0	+22	58.5	133	14.6 ¹³⁵	+18	26.7 ¹⁰³	103	60 S	7 10	8 06	9 03	11 26	5	18 26	87	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 5 ^h 19 ^m 1			Mag: -3.9 PMG: 9 ^h 58 ^m			Mag: +0.4 PMG: 7 ^h 05 ^m			Mag: -2.5 PMG: 5 ^h 49 ^m			Mag: +0.6 PMG: 3 ^h 09 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	280	00.9	210	41.6	+20	43.9	253	37.5	+8	57.8	272	33.3	+1	48.6	312	38.1	-14	26.1
1	295	03.3	225	41.0		44.4	268	38.3		58.5	287	35.5		48.6	327	40.6		26.2
2	310	05.8	240	40.3		44.9	283	39.1		59.1	302	37.8		48.7	342	43.2		26.2
3	325	08.3	255	39.6		45.4	298	39.9	+8	59.7	317	40.1		48.8	357	45.8		26.3
4	340	10.7	270	38.9		45.9	313	40.7	+9	00.4	332	42.3		48.8	12	48.3		26.3
5	355	13.2	285	38.2	+20	46.4	328	41.5	+9	01.0	347	44.6	+1	48.9	27	50.9	-14	26.4
6	10	15.7	300	37.5	+20	46.9	343	42.3	+9	01.6	2	46.9	+1	49.0	42	53.5	-14	26.4
7	25	18.1	315	36.8		47.4	358	43.1		02.3	17	49.2		49.1	57	56.0		26.4
8	40	20.6	330	36.1		47.9	13	43.9		02.9	32	51.4		49.1	72	58.6		26.5
9	55	23.1	345	35.4		48.4	28	44.7		03.5	47	53.7		49.2	88	01.1		26.5
10	70	25.5	0	34.8		48.9	43	45.5		04.1	62	56.0		49.3	103	03.7		26.6
11	85	28.0	15	34.1	+20	49.4	58	46.3	+9	04.8	77	58.2	+1	49.3	118	06.3	-14	26.6
12	100	30.5	30	33.4	+20	49.9	73	47.1	+9	05.4	93	00.5	+1	49.4	133	08.8	-14	26.7
13	115	32.9	45	32.7		50.4	88	47.9		06.0	108	02.8		49.5	148	11.4		26.7
14	130	35.4	60	32.0		50.9	103	48.7		06.7	123	05.0		49.5	163	14.0		26.7
15	145	37.8	75	31.3		51.4	118	49.5		07.3	138	07.3		49.6	178	16.5		26.8
16	160	40.3	90	30.6		51.9	133	50.3		07.9	153	09.6		49.7	193	19.1		26.8
17	175	42.8	105	29.9	+20	52.4	148	51.1	+9	08.5	168	11.9	+1	49.8	208	21.7	-14	26.9
18	190	45.2	120	29.2	+20	52.9	163	51.9	+9	09.2	183	14.1	+1	49.8	223	24.2	-14	26.9
19	205	47.7	135	28.5		53.4	178	52.7		09.8	198	16.4		49.9	238	26.8		26.9
20	220	50.2	150	27.8		53.9	193	53.5		10.4	213	18.7		50.0	253	29.4		27.0
21	235	52.6	165	27.1		54.4	208	54.3		11.1	228	20.9		50.0	268	31.9		27.0
22	250	55.1	180	26.4		54.9	223	55.1		11.7	243	23.2		50.1	283	34.5		27.1
23	265	57.6	195	25.7		55.4	238	55.9		12.3	258	25.5		50.2	298	37.1		27.1
24	281	00.0	210	25.0	+20	55.9	253	56.6	+9	12.9	273	27.8	+1	50.2	313	39.6	-14	27.2
Dif	—			-7			+5			+23			+1			+26		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 3 ^d 9	PHE {	4 ^h : 54 ^h :7 12 ^h : 54 ^h :8 20 ^h : 55 ^h :0								
	PMG: 12 ^h 04 ^m 3								PMG: 15 ^h 35 ^m		R°: 44 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	57.0	+22 58.5	133	14.6	+18 26.7		60 N	21 23	22 58	** **	7 12 86	23 31 3	
1	193	56.9	58.3	147	47.2 ¹³⁶	16.4 ¹⁰³		58	21 04	22 16	** **	23 83	23 6	
2	208	56.8	58.1	162	19.9 ¹³⁷	+18 06.0 ¹⁰⁴		56	20 48	21 48	** **	33 79	15 9	
3	223	56.7	57.9	176	52.6 ¹³⁷	+17 55.5 ¹⁰⁵		54	34	27	23 04	42 76	09 11	
4	238	56.6	57.7	191	25.3 ¹³⁷	44.9 ¹⁰⁶		52	22	21 10	22 25	49 74	23 03 14	
5	253	56.4	+22 57.5	205	58.1 ¹³⁸	+17 34.2 ¹⁰⁷		50	20 12	20 56	21 59	7 56 72	22 58 16	
6	268	56.3	+22 57.3	220	30.9 ¹³⁸	+17 23.5 ¹⁰⁷		45	19 50	20 27	21 16	8 11 67	22 46 20	
7	283	56.2	57.1	235	03.8 ¹³⁹	12.7 ¹⁰⁸		40	32	20 05	20 46	24 62	36 24	
8	298	56.1	56.9	249	36.7 ¹³⁹	+17 01.8 ¹⁰⁹		35	18	19 47	24	34 59	28 27	
9	313	56.0	56.7	264	09.7 ¹⁴⁰	+16 50.8 ¹¹⁰		30	19 05	32	20 06	43 56	21 30	
10	328	55.9	56.5	278	42.7 ¹⁴⁰	39.8 ¹¹⁰		20	18 44	19 08	19 37	8 58 52	22 08 35	
11	343	55.8	+22 56.3	293	15.7 ¹⁴⁰	+16 28.6 ¹¹²		10 N	18 25	18 48	19 15	9 12 48	21 56 40	
12	358	55.6	+22 56.1	307	48.8 ¹⁴¹	+16 17.4 ¹¹²		0	18 08	18 30	18 57	9 24 44	21 46 43	
13	13	55.5	55.9	322	21.9 ¹⁴¹	+16 06.2 ¹¹²		10 S	17 51	18 14	40	37 40	35 47	
14	28	55.4	55.7	336	55.0 ¹⁴¹	+15 54.8 ¹¹⁴		20	33	17 57	24	9 50 36	23 52	
15	43	55.3	55.5	351	28.2 ¹⁴²	43.4 ¹¹⁴		30	12	38	08	10 06 31	10 57	
16	58	55.2	55.3	6	01.5 ¹⁴³	31.9 ¹¹⁵		35	17 00	28	18 00	14 29	21 02 60	
17	73	55.1	+22 55.1	20	34.7 ¹⁴²	+15 20.3 ¹¹⁶		40	16 46	17 17	17 51	10 24 26	20 54 62	
18	88	55.0	+22 54.9	35	08.0 ¹⁴³	+15 08.7 ¹¹⁶		45	16 30	17 04	17 41	10 36 22	20 43 67	
19	103	54.8	54.7	49	41.4 ¹⁴⁴	+14 57.0 ¹¹⁷		50	10	16 48	29	50 17	31 71	
20	118	54.7	54.4	64	14.7 ¹⁴³	45.2 ¹¹⁸		52	16 00	41	24	10 57 15	25 73	
21	133	54.6	54.2	78	48.1 ¹⁴⁴	33.4 ¹¹⁸		54	15 49	33	19	11 04 12	18 76	
22	148	54.5	54.0	93	21.6 ¹⁴⁵	21.5 ¹¹⁹		56	37	24	13	12 10	11 79	
23	163	54.4	53.8	107	55.1 ¹⁴⁵	+14 09.5 ¹²⁰		58	23	14	17 06	21 7	20 03 82	
24	178	54.3	+22 53.6	122	28.6 ¹⁴⁵	+13 57.4 ¹²¹		60 S	15 06	16 03	16 59	11 31 3	19 53 87	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 5 ^h 15 ^m 1		Mag: -3.9 PMG: 9 ^h 59 ^m			Mag: +0.4 PMG: 7 ^h 04 ^m			Mag: -2.5 PMG: 5 ^h 45 ^m			Mag: +0.6 PMG: 3 ^h 05 ^m		
	hG ♈	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	°	°	'	°	°	'	°	°	'	°	°	'	
0	281	00.0	210	25.0	+20 55.9	253	56.6	+9 12.9	273	27.8	+1 50.2	313	39.6	-14 27.2
1	296	02.5	225	24.4	56.4	268	57.4	13.6	288	30.0	50.3	328	42.2	27.2
2	311	05.0	240	23.7	56.8	283	58.2	14.2	303	32.3	50.4	343	44.8	27.2
3	326	07.4	255	23.0	57.3	298	59.0	14.8	318	34.6	50.4	358	47.3	27.3
4	341	09.9	270	22.3	57.8	313	59.8	15.4	333	36.9	50.5	13	49.9	27.3
5	356	12.3	285	21.6	+20 58.3	329	00.6	+9 16.1	348	39.1	+1 50.6	28	52.5	-14 27.4
6	11	14.8	300	20.9	+20 58.8	344	01.4	+9 16.7	3	41.4	+1 50.6	43	55.0	-14 27.4
7	26	17.3	315	20.2	59.3	359	02.2	17.3	18	43.7	50.7	58	57.6	27.5
8	41	19.7	330	19.5	+20 59.8	14	03.0	18.0	33	46.0	50.8	74	00.2	27.5
9	56	22.2	345	18.8	+21 00.2	29	03.8	18.6	48	48.2	50.9	89	02.7	27.5
10	71	24.7	0	18.1	00.7	44	04.6	19.2	63	50.5	50.9	104	05.3	27.6
11	86	27.1	15	17.4	+21 01.2	59	05.4	+9 19.8	78	52.8	+1 51.0	119	07.9	-14 27.6
12	101	29.6	30	16.7	+21 01.7	74	06.2	+9 20.5	93	55.1	+1 51.1	134	10.4	-14 27.7
13	116	32.1	45	16.0	02.1	89	07.0	21.1	108	57.4	51.1	149	13.0	27.7
14	131	34.5	60	15.3	02.6	104	07.8	21.7	123	59.6	51.2	164	15.6	27.8
15	146	37.0	75	14.6	03.1	119	08.6	22.3	139	01.9	51.3	179	18.1	27.8
16	161	39.4	90	13.9	03.6	134	09.4	22.9	154	04.2	51.3	194	20.7	27.9
17	176	41.9	105	13.2	+21 04.0	149	10.2	+9 23.6	169	06.5	+1 51.4	209	23.3	-14 27.9
18	191	44.4	120	12.5	+21 04.5	164	11.0	+9 24.2	184	08.7	+1 51.5	224	25.8	-14 27.9
19	206	46.8	135	11.7	05.0	179	11.8	24.8	199	11.0	51.5	239	28.4	28.0
20	221	49.3	150	11.0	05.5	194	12.6	25.4	214	13.3	51.6	254	31.0	28.0
21	236	51.8	165	10.3	05.9	209	13.4	26.1	229	15.6	51.7	269	33.6	28.1
22	251	54.2	180	09.6	06.4	224	14.2	26.7	244	17.9	51.7	284	36.1	28.1
23	266	56.7	195	08.9	06.9	239	15.0	27.3	259	20.1	51.8	299	38.7	28.2
24	281	59.2	210	08.2	+21 07.3	254	15.8	+9 27.9	274	22.4	+1 51.9	314	41.3	-14 28.2
Dif	—		-7		+5	+8		+6	+23		+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 5				Edad: 4 ^d 9 PHE { SD: 15'0 PMG: 16 ^h 19 ^m 4 ^h : 55'1 12 ^h : 55'3 20 ^h : 55'5 R°: 42 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	54.3	+22	53.6	122	28.6	+13	57.4	60 N	** **	1 11	2 46	8 38	86	23 34	1		
1	193	54.2		53.4	137	02.1 ¹⁴⁵		45.3 ¹²¹	58	** **	1 53	3 05	46 82		29 5			
2	208	54.0		53.2	151	35.7 ¹⁴⁶		33.2 ¹²¹	56	** **	2 21	21	52 79		24 8			
3	223	53.9		52.9	166	09.2 ¹⁴⁵		20.9 ¹²³	54	1 05	42	35	8 58	76	20 11			
4	238	53.8		52.7	180	42.9 ¹⁴⁷	+13	08.6 ¹²³	52	1 44	2 59	47	9 03	74	17 12			
5	253	53.7	+22	52.5	195	16.5 ¹⁴⁶	+12	56.3 ¹²³	50	2 10	3 13	3 57	9 08	71	23 14	14		
6	268	53.6	+22	52.3	209	50.2 ¹⁴⁷	+12	43.8 ¹²⁵	45	2 53	3 42	4 19	9 18	67	23 06	20		
7	283	53.5		52.1	224	23.9 ¹⁴⁷		31.3 ¹²⁵	40	3 23	4 04	36	26 63		23 00	23		
8	298	53.4		51.9	238	57.6 ¹⁴⁷		18.8 ¹²⁵	35	3 45	22	4 51	33 60		22 55	26		
9	313	53.3		51.6	253	31.4 ¹⁴⁸	+12	06.2 ¹²⁶	30	4 03	4 36	5 04	39 57		51 29			
10	328	53.1		51.4	268	05.2 ¹⁴⁸	+11	53.5 ¹²⁷	20	32	5 01	25	9 50	52	43 34			
11	343	53.0	+22	51.2	282	39.0 ¹⁴⁸	+11	40.8 ¹²⁷	10 N	4 54	5 21	5 44	10 00	47	22 36	38		
12	358	52.9	+22	51.0	297	12.8 ¹⁴⁸	+11	28.0 ¹²⁸	0	5 12	5 38	6 01	10 08	43	22 29	43		
13	13	52.8		50.7	311	46.6 ¹⁴⁸		15.2 ¹²⁸	10 S	29	5 55	18	17 39		22 47			
14	28	52.7		50.5	326	20.5 ¹⁴⁹	+11	02.3 ¹²⁹	20	5 45	6 12	36	26 35		15 51			
15	43	52.6		50.3	340	54.4 ¹⁴⁹	+10	49.4 ¹²⁹	30	6 01	30	6 57	37 29		07 56			
16	58	52.5		50.1	355	28.3 ¹⁴⁹		36.4 ¹³⁰	35	09	41	7 09	43 27		22 02	59		
17	73	52.4	+22	49.8	10	02.2 ¹⁴⁹	+10	23.3 ¹³¹	40	6 18	6 52	7 22	10 50	23	21 56	63		
18	88	52.3	+22	49.6	24	36.2 ¹⁵⁰	+10	10.2 ¹³¹	45	6 28	7 05	7 39	10 58	19	21 50	67		
19	103	52.1		49.4	39	10.1 ¹⁴⁹	+9	57.0 ¹³²	50	39	21	7 59	11 07	15	42 72			
20	118	52.0		49.2	53	44.1 ¹⁵⁰		43.8 ¹³²	52	44	28	8 08	12 13		38 75			
21	133	51.9		48.9	68	18.1 ¹⁵⁰		30.6 ¹³²	54	50	36	19	16 11		34 77			
22	148	51.8		48.7	82	52.1 ¹⁵⁰		17.3 ¹³³	56	6 56	44	31	22 8		30 80			
23	163	51.7		48.5	97	26.1 ¹⁵⁰	+9	03.9 ¹³⁴	58	7 02	7 54	8 45	28 5		25 83			
24	178	51.6	+22	48.2	112	00.1 ¹⁵⁰	+8	50.5 ¹³⁴	60 S	7 09	8 05	9 02	11 34	2	21 20	86		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 5 ^h 11 ^m 2		Mag: -3.9 PMG: 10 ^h 00 ^m		Mag: +0.4 PMG: 7 ^h 03 ^m		Mag: -2.5 PMG: 5 ^h 42 ^m		Mag: +0.6 PMG: 3 ^h 01 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	281	59.2	210	08.2	+21	07.3	254	15.8	+9	27.9	274	22.4	+1	51.9	314	41.3	-14	28.2
1	297	01.6	225	07.5		07.8	269	16.6		28.6	289	24.7		51.9	329	43.8		28.2
2	312	04.1	240	06.8		08.3	284	17.4		29.2	304	27.0		52.0	344	46.4		28.3
3	327	06.6	255	06.1		08.7	299	18.2		29.8	319	29.3		52.1	359	49.0		28.3
4	342	09.0	270	05.4		09.2	314	19.0		30.4	334	31.5		52.1	14	51.5		28.4
5	357	11.5	285	04.7	+21	09.6	329	19.8	+9	31.0	349	33.8	+1	52.2	29	54.1	-14	28.4
6	12	13.9	300	04.0	+21	10.1	344	20.6	+9	31.7	4	36.1	+1	52.2	44	56.7	-14	28.5
7	27	16.4	315	03.3		10.6	359	21.4		32.3	19	38.4		52.3	59	59.3		28.5
8	42	18.9	330	02.6		11.0	14	22.2		32.9	34	40.7		52.4	75	01.8		28.6
9	57	21.3	345	01.9		11.5	29	23.0		33.5	49	43.0		52.4	90	04.4		28.6
10	72	23.8	0	01.1		11.9	44	23.8		34.1	64	45.2		52.5	105	07.0		28.6
11	87	26.3	15	00.4	+21	12.4	59	24.6	+9	34.8	79	47.5	+1	52.6	120	09.5	-14	28.7
12	102	28.7	29	59.7	+21	12.8	74	25.4	+9	35.4	94	49.8	+1	52.6	135	12.1	-14	28.7
13	117	31.2	44	59.0		13.3	89	26.2		36.0	109	52.1		52.7	150	14.7		28.8
14	132	33.7	59	58.3		13.7	104	27.0		36.6	124	54.4		52.8	165	17.3		28.8
15	147	36.1	74	57.6		14.2	119	27.8		37.2	139	56.7		52.8	180	19.8		28.9
16	162	38.6	89	56.9		14.6	134	28.6		37.9	154	58.9		52.9	195	22.4		28.9
17	177	41.1	104	56.2	+21	15.1	149	29.4	+9	38.5	170	01.2	+1	53.0	210	25.0	-14	29.0
18	192	43.5	119	55.4	+21	15.5	164	30.2	+9	39.1	185	03.5	+1	53.0	225	27.5	-14	29.0
19	207	46.0	134	54.7		16.0	179	31.0		39.7	200	05.8		53.1	240	30.1		29.0
20	222	48.4	149	54.0		16.4	194	31.8		40.3	215	08.1		53.1	255	32.7		29.1
21	237	50.9	164	53.3		16.9	209	32.6		41.0	230	10.4		53.2	270	35.3		29.1
22	252	53.4	179	52.6		17.3	224	33.4		41.6	245	12.7		53.3	285	37.8		29.2
23	267	55.8	194	51.9		17.8	239	34.2		42.2	260	14.9		53.3	300	40.4		29.2
24	282	58.3	209	51.2	+21	18.2	254	35.0	+9	42.8	275	17.2	+1	53.4	315	43.0	-14	29.3
Dif	—		-7		+5		+8		+6		+23		+1		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 5 ^d 9	PHE { 4 ^h : 55 ^h /7 12 ^h : 55 ^h /9 20 ^h : 56 ^h /2 R°: 44 ^m										
	PMG: 12 ^h 04 ^m 6														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m		
0	178	51.6	+22 48.2	112	00.1	+8 50.5	60 N	21 21	22 53	** **	10 04 87	23 35	2		
1	193	51.5	48.0	126	34.1 ¹⁵⁰	37.0 ¹³⁵	58	21 02	22 13	** **	08 83	34	4		
2	208	51.4	47.8	141	08.2 ¹⁵¹	23.5 ¹³⁵	56	20 47	21 46	** **	11 81	32	7		
3	223	51.3	47.5	155	42.2 ¹⁵⁰	+8 10.0 ¹³⁵	54	33	26	22 59	14 78	31	10		
4	238	51.2	47.3	170	16.3 ¹⁵¹	+7 56.4 ¹³⁶	52	21	21 09	22 22	17 75	29	13		
5	253	51.1	+22 47.1	184	50.3 ¹⁵⁰	+7 42.8 ¹³⁶	50	20 11	20 55	21 57	10 19 73	23 28	14		
6	268	50.9	+22 46.8	199	24.4 ¹⁵¹	+7 29.1 ¹³⁷	45	19 49	20 26	21 15	10 25 67	23 26	18		
7	283	50.8	46.6	213	58.4 ¹⁵⁰	15.4 ¹³⁷	40	32	20 05	20 46	29 64	23	23		
8	298	50.7	46.4	228	32.5 ¹⁵¹	+7 01.6 ¹³⁸	35	18	19 47	23	33 60	21	27		
9	313	50.6	46.1	243	06.6 ¹⁵¹	+6 47.8 ¹³⁸	30	19 05	32	20 05	36 57	20	29		
10	328	50.5	45.9	257	40.7 ¹⁵¹	33.9 ¹³⁹	20	18 44	19 08	19 37	42 52	17	34		
11	343	50.4	+22 45.7	272	14.7 ¹⁵⁰	+6 20.0 ¹³⁹	10 N	18 25	18 48	19 15	10 47 47	23 14	39		
12	358	50.3	+22 45.4	286	48.8 ¹⁵¹	+6 06.1 ¹³⁹	0	18 08	18 31	18 57	10 51 43	23 12	43		
13	13	50.2	45.2	301	22.9 ¹⁵¹	+5 52.1 ¹⁴⁰	10 S	17 51	18 14	40	10 56 39	09	48		
14	28	50.1	44.9	315	56.9 ¹⁵⁰	38.1 ¹⁴⁰	20	33	17 57	25	11 01 34	06	53		
15	43	50.0	44.7	330	31.0 ¹⁵¹	24.1 ¹⁴⁰	30	13	39	09	06 29	03	58		
16	58	49.9	44.5	345	05.0 ¹⁵⁰	+5 10.0 ¹⁴¹	35	17 01	29	18 01	10 26	23 01	61		
17	73	49.8	+22 44.2	359	39.1 ¹⁵¹	+4 55.9 ¹⁴¹	40	16 47	17 18	17 52	11 13 23	22 59	65		
18	88	49.6	+22 44.0	14	13.1 ¹⁵⁰	+4 41.8 ¹⁴¹	45	16 31	17 05	17 42	11 17 19	22 57	69		
19	103	49.5	43.7	28	47.2 ¹⁵¹	27.6 ¹⁴²	50	11	16 49	30	22 15	54	74		
20	118	49.4	43.5	43	21.2 ¹⁵⁰	+4 13.4 ¹⁴²	52	16 02	42	25	25 12	53	76		
21	133	49.3	43.2	57	55.2 ¹⁵⁰	+3 59.1 ¹⁴³	54	15 51	34	20	27 10	51	79		
22	148	49.2	43.0	72	29.2 ¹⁵⁰	44.9 ¹⁴²	56	39	26	14	30 7	50	81		
23	163	49.1	42.7	87	03.2 ¹⁵⁰	30.6 ¹⁴³	58	25	16	08	33 5	48	84		
24	178	49.0	+22 42.5	101	37.1 ¹⁴⁹	+3 16.2 ¹⁴⁴	60 S	15 09	16 05	17 01	11 36 2	22 46	87		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 5 ^h 07 ^m 3		Mag: -3.8 PMG: 10 ^h 01 ^m			Mag: +0.4 PMG: 7 ^h 01 ^m			Mag: -2.5 PMG: 5 ^h 38 ^m			Mag: +0.5 PMG: 2 ^h 57 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	282	58.3	209 51.2	+21 18.2	254 35.0	+9 42.8	275 17.2	+1 53.4	315 43.0	-14 29.3					
1	298	00.8	224 50.4	18.7	269 35.8	43.4	290 19.5	53.5	330 45.6	29.3					
2	313	03.2	239 49.7	19.1	284 36.6	44.0	305 21.8	53.5	345 48.1	29.4					
3	328	05.7	254 49.0	19.5	299 37.4	44.7	320 24.1	53.6	0 50.7	29.4					
4	343	08.2	269 48.3	20.0	314 38.2	45.3	335 26.4	53.7	15 53.3	29.4					
5	358	10.6	284 47.6	+21 20.4	329 39.0	+9 45.9	350 28.7	+1 53.7	30 55.8	-14 29.5					
6	13	13.1	299 46.9	+21 20.9	344 39.8	+9 46.5	5 31.0	+1 53.8	45 58.4	-14 29.5					
7	28	15.5	314 46.1	21.3	359 40.6	47.1	20 33.2	53.8	61 01.0	29.6					
8	43	18.0	329 45.4	21.7	14 41.4	47.7	35 35.5	53.9	76 03.6	29.6					
9	58	20.5	344 44.7	22.2	29 42.2	48.4	50 37.8	54.0	91 06.1	29.7					
10	73	22.9	359 44.0	22.6	44 43.0	49.0	65 40.1	54.0	106 08.7	29.7					
11	88	25.4	14 43.3	+21 23.0	59 43.8	+9 49.6	80 42.4	+1 54.1	121 11.3	-14 29.8					
12	103	27.9	29 42.5	+21 23.5	74 44.6	+9 50.2	95 44.7	+1 54.1	136 13.9	-14 29.8					
13	118	30.3	44 41.8	23.9	89 45.4	50.8	110 47.0	54.2	151 16.4	29.9					
14	133	32.8	59 41.1	24.3	104 46.2	51.4	125 49.3	54.3	166 19.0	29.9					
15	148	35.3	74 40.4	24.7	119 47.0	52.0	140 51.6	54.3	181 21.6	29.9					
16	163	37.7	89 39.7	25.2	134 47.8	52.7	155 53.9	54.4	196 24.2	30.0					
17	178	40.2	104 38.9	+21 25.6	149 48.6	+9 53.3	170 56.2	+1 54.5	211 26.7	-14 30.0					
18	193	42.7	119 38.2	+21 26.0	164 49.4	+9 53.9	185 58.4	+1 54.5	226 29.3	-14 30.1					
19	208	45.1	134 37.5	26.4	179 50.2	54.5	201 00.7	54.6	241 31.9	30.1					
20	223	47.6	149 36.8	26.9	194 51.0	55.1	216 03.0	54.6	256 34.5	30.2					
21	238	50.0	164 36.1	27.3	209 51.8	55.7	231 05.3	54.7	271 37.0	30.2					
22	253	52.5	179 35.3	27.7	224 52.6	56.3	246 07.6	54.8	286 39.6	30.3					
23	268	55.0	194 34.6	28.1	239 53.4	57.0	261 09.9	54.8	301 42.2	30.3					
24	283	57.4	209 33.9	+21 28.5	254 54.2	+9 57.6	276 12.2	+1 54.9	316 44.8	-14 30.4					
Dif	—	-7		+4	+8		+6	+23		+1	+26		0		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 8				Edad: 6 ^d 9 PHE { SD: 15 ^h 3 PMG: 17 ^h 45 ^m { 4 ^h : 56 ^m 4 12 ^h : 56 ^m 7 20 ^h : 56 ^m 9 R ^o : 44 ^m													
	hG ☉	Dec			hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	178	49.0	+22	42.5	101	37.1	+3	16.2	60 N	** **	1 17	2 48	11 31	90	23 37 2			
1	193	48.9		42.3	116	11.1 ¹⁵⁰	+3	01.9 ¹⁴³	58	** **	1 57	3 07	31	86	38 5			
2	208	48.8		42.0	130	45.0 ¹⁴⁹	+2	47.5 ¹⁴⁴	56	** **	2 23	23	32	82	39 0			
3	223	48.7		41.8	145	18.9 ¹⁴⁹		33.1 ¹⁴⁴	54	1 10	2 44	37	32	80	41 10			
4	238	48.6		41.5	159	52.8 ¹⁴⁹		18.6 ¹⁴⁵	52	1 47	3 01	48	32	77	42 13			
5	253	48.5	+22	41.3	174	26.7 ¹⁴⁹	+2	04.1 ¹⁴⁵	50	2 12	3 15	3 59	11 32	75	23 42 16			
6	268	48.4	+22	41.0	189	00.5 ¹⁴⁸	+1	49.6 ¹⁴⁵	45	2 55	3 43	4 20	11 32	70	23 44 21			
7	283	48.3		40.7	203	34.3 ¹⁴⁸		35.1 ¹⁴⁵	40	3 24	4 05	38	33	65	46 24			
8	298	48.2		40.5	218	08.1 ¹⁴⁸		20.6 ¹⁴⁵	35	3 46	23	4 52	33	62	48 27			
9	313	48.1		40.2	232	41.9 ¹⁴⁸	+1	06.0 ¹⁴⁶	30	4 04	4 37	5 05	33	59	49 31			
10	328	48.0		40.0	247	15.6 ¹⁴⁷	+0	51.4 ¹⁴⁶	20	32	5 01	26	34	53	51 36			
11	343	47.9	+22	39.7	261	49.4 ¹⁴⁸	+0	36.8 ¹⁴⁶	10 N	4 54	5 21	5 44	11 34	49	23 53 41			
12	358	47.8	+22	39.5	276	23.0 ¹⁴⁶	+0	22.2 ¹⁴⁶	0	5 13	5 39	6 01	11 34	44	23 55 45			
13	13	47.6		39.2	290	56.7 ¹⁴⁷	+0	07.6 ¹⁴⁶	10 S	29	5 55	18	35	39	57 50			
14	28	47.5		39.0	305	30.3 ¹⁴⁶	-0	07.1 ¹⁴⁷	20	5 45	6 12	36	35	35	23 59 55			
15	43	47.4		38.7	320	03.9 ¹⁴⁶		21.8 ¹⁴⁷	30	6 00	30	6 56	35	30	** ** *			
16	58	47.3		38.4	334	37.5 ¹⁴⁶		36.5 ¹⁴⁷	35	09	40	7 08	36	27	** ** *			
17	73	47.2	+22	38.2	349	11.0 ¹⁴⁵	-0	51.2 ¹⁴⁷	40	6 18	6 52	7 22	11 36	23	** ** *			
18	88	47.1	+22	37.9	3	44.5 ¹⁴⁵	-1	05.9 ¹⁴⁷	45	6 28	7 05	7 38	11 36	20	** ** *			
19	103	47.0		37.7	18	17.9 ¹⁴⁴		20.6 ¹⁴⁷	50	39	20	7 58	37	15	** ** *			
20	118	46.9		37.4	32	51.3 ¹⁴⁴		35.4 ¹⁴⁸	52	44	27	8 07	37	13	** ** *			
21	133	46.8		37.1	47	24.6 ¹⁴³	-1	50.1 ¹⁴⁷	54	49	35	18	37	11	** ** *			
22	148	46.7		36.9	61	58.0 ¹⁴⁴	-2	04.9 ¹⁴⁸	56	6 55	43	30	37	8	** ** *			
23	163	46.6		36.6	76	31.2 ¹⁴²		19.7 ¹⁴⁸	58	7 01	7 53	8 44	38	5	** ** *			
24	178	46.5	+22	36.4	91	04.5 ¹⁴³	-2	34.4 ¹⁴⁷	60 S	7 08	8 04	9 00	11 38	2	** ** *			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 5 ^h 03 ^m 3		Mag: -3.8 PMG: 10 ^h 02 ^m			Mag: +0.4 PMG: 7 ^h 00 ^m			Mag: -2.5 PMG: 5 ^h 34 ^m			Mag: +0.5 PMG: 2 ^h 53 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	283	57.4	209	33.9	+21	28.5	254	54.2	+9	57.6	276	12.2	+1	54.9	316	44.8	-14	30.4
1	298	59.9	224	33.2		29.0	269	55.0		58.2	291	14.5		54.9	331	47.4		30.4
2	314	02.4	239	32.4		29.4	284	55.8		58.8	306	16.8		55.0	346	49.9		30.4
3	329	04.8	254	31.7		29.8	299	56.6	+9	59.4	321	19.1		55.1	1	52.5		30.5
4	344	07.3	269	31.0		30.2	314	57.4	+10	00.0	336	21.4		55.1	16	55.1		30.5
5	359	09.8	284	30.3	+21	30.6	329	58.2	+10	00.6	351	23.7	+1	55.2	31	57.7	-14	30.6
6	14	12.2	299	29.5	+21	31.0	344	59.0	+10	01.2	6	26.0	+1	55.2	47	00.2	-14	30.6
7	29	14.7	314	28.8		31.4	359	59.9		01.8	21	28.3		55.3	62	02.8		30.7
8	44	17.1	329	28.1		31.9	15	00.7		02.5	36	30.6		55.4	77	05.4		30.7
9	59	19.6	344	27.3		32.3	30	01.5		03.1	51	32.9		55.4	92	08.0		30.8
10	74	22.1	359	26.6		32.7	45	02.3		03.7	66	35.2		55.5	107	10.5		30.8
11	89	24.5	14	25.9	+21	33.1	60	03.1	+10	04.3	81	37.5	+1	55.5	122	13.1	-14	30.9
12	104	27.0	29	25.2	+21	33.5	75	03.9	+10	04.9	96	39.8	+1	55.6	137	15.7	-14	30.9
13	119	29.5	44	24.4		33.9	90	04.7		05.5	111	42.0		55.6	152	18.3		31.0
14	134	31.9	59	23.7		34.3	105	05.5		06.1	126	44.3		55.7	167	20.9		31.0
15	149	34.4	74	23.0		34.7	120	06.3		06.7	141	46.6		55.8	182	23.4		31.0
16	164	36.9	89	22.2		35.1	135	07.1		07.3	156	48.9		55.8	197	26.0		31.1
17	179	39.3	104	21.5	+21	35.5	150	07.9	+10	08.0	171	51.2	+1	55.9	212	28.6	-14	31.1
18	194	41.8	119	20.8	+21	35.9	165	08.7	+10	08.6	186	53.5	+1	55.9	227	31.2	-14	31.2
19	209	44.3	134	20.0		36.3	180	09.5		09.2	201	55.8		56.0	242	33.7		31.2
20	224	46.7	149	19.3		36.7	195	10.3		09.8	216	58.1		56.1	257	36.3		31.3
21	239	49.2	164	18.6		37.1	210	11.1		10.4	232	00.4		56.1	272	38.9		31.3
22	254	51.6	179	17.8		37.5	225	11.9		11.0	247	02.7		56.2	287	41.5		31.4
23	269	54.1	194	17.1		37.9	240	12.7		11.6	262	05.0		56.2	302	44.1		31.4
24	284	56.6	209	16.4	+21	38.3	255	13.5	+10	12.2	277	07.3	+1	56.3	317	46.6	-14	31.5
Dif	—		-7		+4		+8		+6		+23		+1		+26		0	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 0			Edad: 7 ^d 9 SD: 15 ^h 5 PMG: 18 ^h 29 ^m	PHE { 4 ^h : 57 ^m 2 12 ^h : 57 ^m 5 20 ^h : 57 ^m 8 R°: 48 ^m												
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	178	46.5	+22	36.4	91	04.5	-2	34.4	60 N	21 19	22 48	** **	13 01	94	23 39	3	m
1	193	46.4		36.1	105	37.6 ¹⁴¹	-2	49.2 ¹⁴⁸	58	21 00	22 10	** **	12 57	91	43	7	
2	208	46.3		35.8	120	10.8 ¹⁴²	-3	04.0 ¹⁴⁸	56	20 45	21 44	** **		54 88	48	10	
3	223	46.2		35.6	134	43.8 ¹⁴⁰		18.8 ¹⁴⁸	54	32	24	22 55		52 84	51	13	
4	238	46.1		35.3	149	16.9 ¹⁴¹		33.6 ¹⁴⁸	52	20	21 07	22 20		49 82	55	15	
5	253	46.0	+22	35.0	163	49.8 ¹³⁹	-3	48.4 ¹⁴⁸	50	20 10	20 53	21 55	12 47	79	23 58	18	
6	268	45.9	+22	34.8	178	22.8 ¹⁴⁰	-4	03.2 ¹⁴⁸	45	19 49	20 25	21 13	12 42	74	** **	**	**
7	283	45.8		34.5	192	55.6 ¹³⁸		18.0 ¹⁴⁸	40	32	20 04	20 45	38	69	** **	**	**
8	298	45.7		34.2	207	28.4 ¹³⁸		32.8 ¹⁴⁸	35	17	19 46	23	35	65	** **	**	**
9	313	45.6		34.0	222	01.2 ¹³⁸	-4	47.6 ¹⁴⁸	30	19 05	32	20 05	32	62	** **	**	**
10	328	45.5		33.7	236	33.9 ¹³⁷	-5	02.5 ¹⁴⁹	20	18 44	19 08	19 37	27	56	** **	**	**
11	343	45.4	+22	33.4	251	06.5 ¹³⁶	-5	17.3 ¹⁴⁸	10 N	18 25	18 48	19 15	12 23	51	** **	**	**
12	358	45.3	+22	33.1	265	39.1 ¹³⁶	-5	32.0 ¹⁴⁷	0	18 09	18 31	18 57	12 18	47	** **	**	**
13	13	45.2		32.9	280	11.6 ¹³⁵	-5	46.8 ¹⁴⁸	10 S	17 52	18 15	41	14	43	** **	**	**
14	28	45.1		32.6	294	44.0 ¹³⁴	-6	01.6 ¹⁴⁸	20	34	17 58	25	10	38	** **	**	**
15	43	45.0		32.3	309	16.4 ¹³⁴		16.4 ¹⁴⁸	30	14	40	10	05	33	0 01	60	
16	58	44.9		32.0	323	48.7 ¹³³		31.1 ¹⁴⁷	35	17 02	30	18 01	12 03	29	02	64	
17	73	44.8	+22	31.8	338	21.0 ¹³³	-6	45.9 ¹⁴⁸	40	16 49	17 19	17 53	11 59	26	0 04	67	
18	88	44.7	+22	31.5	352	53.1 ¹³¹	-7	00.6 ¹⁴⁷	45	16 33	17 06	17 43	11 56	21	0 06	71	
19	103	44.6		31.2	7	25.2 ¹³¹		15.4 ¹⁴⁸	50	13	16 51	32	52	16	08	76	
20	118	44.5		30.9	21	57.3 ¹³¹		30.1 ¹⁴⁷	52	16 04	44	27	50	14	09	78	
21	133	44.4		30.7	36	29.2 ¹²⁹		44.8 ¹⁴⁷	54	15 53	36	22	48	11	10	81	
22	148	44.3		30.4	51	01.1 ¹²⁹	-7	59.5 ¹⁴⁷	56	41	28	16	45	9	11	84	
23	163	44.2		30.1	65	32.9 ¹²⁸	-8	14.1 ¹⁴⁶	58	28	18	10	43	6	12	88	
24	178	44.1	+22	29.8	80	04.6 ¹²⁷	-8	28.8 ¹⁴⁷	60 S	15 11	16 07	17 03	11 40	2	0 13	92	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 4 ^h 59 ^m 4			Mag: -3.8 PMG: 10 ^h 03 ^m			Mag: +0.4 PMG: 6 ^h 59 ^m			Mag: -2.5 PMG: 5 ^h 31 ^m			Mag: +0.5 PMG: 2 ^h 48 ^m				
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	284	56.6	209 16.4	+21	38.3	255 13.5	+10	12.2	277 07.3	+1	56.3	317 46.6	-14	31.5			
1	299	59.0	224 15.7		38.7	270 14.3		12.8	292 09.6		56.3	332 49.2		31.5			
2	315	01.5	239 14.9		39.1	285 15.1		13.4	307 11.9		56.4	347 51.8		31.6			
3	330	04.0	254 14.2		39.5	300 15.9		14.0	322 14.2		56.5	2 54.4		31.6			
4	345	06.4	269 13.4		39.9	315 16.7		14.6	337 16.5		56.5	17 57.0		31.7			
5	0	08.9	284 12.7	+21	40.3	330 17.5	+10	15.2	352 18.8	+1	56.6	32 59.5	-14	31.7			
6	15	11.4	299 12.0	+21	40.6	345 18.3	+10	15.9	7 21.1	+1	56.6	48 02.1	-14	31.7			
7	30	13.8	314 11.2		41.0	0 19.1		16.5	22 23.4		56.7	63 04.7		31.8			
8	45	16.3	329 10.5		41.4	15 19.9		17.1	37 25.8		56.7	78 07.3		31.8			
9	60	18.8	344 09.8		41.8	30 20.7		17.7	52 28.1		56.8	93 09.9		31.9			
10	75	21.2	359 09.0		42.2	45 21.5		18.3	67 30.4		56.8	108 12.4		31.9			
11	90	23.7	14 08.3	+21	42.6	60 22.3	+10	18.9	82 32.7	+1	56.9	123 15.0	-14	32.0			
12	105	26.1	29 07.6	+21	43.0	75 23.1	+10	19.5	97 35.0	+1	57.0	138 17.6	-14	32.0			
13	120	28.6	44 06.8		43.3	90 23.9		20.1	112 37.3		57.0	153 20.2		32.1			
14	135	31.1	59 06.1		43.7	105 24.8		20.7	127 39.6		57.1	168 22.8		32.1			
15	150	33.5	74 05.3		44.1	120 25.6		21.3	142 41.9		57.1	183 25.3		32.2			
16	165	36.0	89 04.6		44.5	135 26.4		21.9	157 44.2		57.2	198 27.9		32.2			
17	180	38.5	104 03.9	+21	44.9	150 27.2	+10	22.5	172 46.5	+1	57.2	213 30.5	-14	32.3			
18	195	40.9	119 03.1	+21	45.2	165 28.0	+10	23.1	187 48.8	+1	57.3	228 33.1	-14	32.3			
19	210	43.4	134 02.4		45.6	180 28.8		23.7	202 51.1		57.3	243 35.7		32.4			
20	225	45.9	149 01.6		46.0	195 29.6		24.3	217 53.4		57.4	258 38.3		32.4			
21	240	48.3	164 00.9		46.4	210 30.4		24.9	232 55.7		57.5	273 40.8		32.5			
22	255	50.8	179 00.2		46.7	225 31.2		25.5	247 58.0		57.5	288 43.4		32.5			
23	270	53.2	193 59.4		47.1	240 32.0		26.1	263 00.3		57.6	303 46.0		32.6			
24	285	55.7	208 58.7	+21	47.5	255 32.8	+10	26.7	278 02.6	+1	57.6	318 48.6	-14	32.6			
Dif	—		-7	+4		+8	+6		+23	+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 1			Edad: 8 ^d 9 SD: 15'8 PMG: 19 ^h 17 ^m				PHE { 4 ^h : 58'1 12 ^h : 58'4 20 ^h : 58'7 R°: 53 ^m			Hora		R°			
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	
0	178	44.1	+22	29.8	80	04.6	-8	28.8	60 N	** **	1 23	2 51	14 35	102	23 42	5
1	193	44.0		29.5	94	36.2 ¹²⁶		43.4 ¹⁴⁶	58	** **	2 00	3 10	28 97		50 10	
2	208	43.9		29.3	109	07.8 ¹²⁶	-8	58.0 ¹⁴⁶	56	** **	26	25	22 92		23 58	14
3	223	43.8		29.0	123	39.3 ¹²⁵	-9	12.6 ¹⁴⁶	54	1 16	2 46	39	16 89		** **	** **
4	238	43.7		28.7	138	10.7 ¹²⁴		27.1 ¹⁴⁵	52	1 51	3 03	3 50	11 86		** **	** **
5	253	43.6	+22	28.4	152	42.0 ¹²³	-9	41.6 ¹⁴⁵	50	2 15	3 17	4 00	14 06	83	** **	** **
6	268	43.5	+22	28.1	167	13.2 ¹²²	-9	56.1 ¹⁴⁵	45	2 57	3 45	4 22	13 56	77	0 05	23
7	283	43.4		27.8	181	44.3 ¹²¹	-10	10.6 ¹⁴⁵	40	3 26	4 06	39	47 73		10 28	
8	298	43.4		27.6	196	15.4 ¹²¹		25.0 ¹⁴⁴	35	3 48	24	4 53	40 70		15 31	
9	313	43.3		27.3	210	46.3 ¹¹⁹		39.4 ¹⁴⁴	30	4 05	4 38	5 06	34 66		20 34	
10	328	43.2		27.0	225	17.2 ¹¹⁹	-10	53.8 ¹⁴⁴	20	33	5 02	27	23 61		27 40	
11	343	43.1	+22	26.7	239	47.9 ¹¹⁷	-11	08.1 ¹⁴³	10 N	4 55	5 22	5 45	13 14	56	0 34	44
12	358	43.0	+22	26.4	254	18.6 ¹¹⁷	-11	22.4 ¹⁴³	0	5 13	5 39	6 01	13 05	52	0 40	49
13	13	42.9		26.1	268	49.2 ¹¹⁶		36.7 ¹⁴³	10 S	29	5 55	18	12 57	47	47 53	
14	28	42.8		25.8	283	19.7 ¹¹⁵	-11	50.9 ¹⁴²	20	5 45	6 12	36	48 42		0 54	58
15	43	42.7		25.5	297	50.0 ¹¹³	-12	05.1 ¹⁴²	30	6 00	30	6 56	38 36		1 01	64
16	58	42.6		25.3	312	20.3 ¹¹³		19.2 ¹⁴¹	35	09	40	7 08	32 33		06 67	
17	73	42.5	+22	25.0	326	50.5 ¹¹²	-12	33.3 ¹⁴¹	40	6 17	6 51	7 21	12 25	30	1 11	71
18	88	42.4	+22	24.7	341	20.6 ¹¹¹	-12	47.4 ¹⁴¹	45	6 27	7 04	7 37	12 17	26	1 17	75
19	103	42.3		24.4	355	50.5 ¹⁰⁹	-13	01.4 ¹⁴⁰	50	38	19	7 57	08 21		24 81	
20	118	42.2		24.1	10	20.4 ¹⁰⁹		15.3 ¹³⁹	52	43	26	8 06	12 04	18	27 84	
21	133	42.1		23.8	24	50.2 ¹⁰⁸		29.2 ¹³⁹	54	48	34	16	11 59	16	31 86	
22	148	42.0		23.5	39	19.8 ¹⁰⁶		46.1 ¹³⁹	56	6 54	42	28	54 12		35 90	
23	163	41.9		23.2	53	49.4 ¹⁰⁶	-13	53.9 ¹³⁸	58	7 00	7 52	42	49 8		40 93	
24	178	41.8	+22	22.9	68	18.8 ¹⁰⁴	-14	10.6 ¹³⁷	60 S	7 07	8 02	8 58	11 42	5	1 45	97

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 4 ^h 55 ^m 5		Mag: -3.8 PMG: 10 ^h 05 ^m		Mag: +0.4 PMG: 6 ^h 57 ^m		Mag: -2.5 PMG: 5 ^h 27 ^m		Mag: +0.5 PMG: 2 ^h 44 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	285	55.7	208	58.7	+21	47.5	255	32.8	+10	26.7	278	02.6	+1	57.6	318	48.6	-14	32.6
1	300	58.2	223	57.9		47.8	270	33.6		27.3	293	04.9		57.7	333	51.2		32.6
2	316	00.6	238	57.2		48.2	285	34.4		27.9	308	07.3		57.7	348	53.8		32.7
3	331	03.1	253	56.5		48.6	300	35.2		28.5	323	09.6		57.8	3	56.3		32.7
4	346	05.6	268	55.7		48.9	315	36.0		29.1	338	11.9		57.8	18	58.9		32.8
5	1	08.0	283	55.0	+21	49.3	330	36.8	+10	29.7	353	14.2	+1	57.9	34	01.5	-14	32.8
6	16	10.5	298	54.2	+21	49.7	345	37.6	+10	30.3	8	16.5	+1	57.9	49	04.1	-14	32.9
7	31	13.0	313	53.5		50.0	0	38.4		30.9	23	18.8		58.0	64	06.7		32.9
8	46	15.4	328	52.7		50.4	15	39.2		31.5	38	21.1		58.0	79	09.3		33.0
9	61	17.9	343	52.0		50.8	30	40.0		32.1	53	23.4		58.1	94	11.8		33.0
10	76	20.4	358	51.2		51.1	45	40.8		32.8	68	25.7		58.1	109	14.4		33.1
11	91	22.8	13	50.5	+21	51.5	60	41.7	+10	33.4	83	28.0	+1	58.2	124	17.0	-14	33.1
12	106	25.3	28	49.7	+21	51.8	75	42.5	+10	34.0	98	30.3	+1	58.3	139	19.6	-14	33.2
13	121	27.7	43	49.0		52.2	90	43.3		34.6	113	32.7		58.3	154	22.2		33.2
14	136	30.2	58	48.3		52.6	105	44.1		35.2	128	35.0		58.4	169	24.8		33.3
15	151	32.7	73	47.5		52.9	120	44.9		35.8	143	37.3		58.4	184	27.3		33.3
16	166	35.1	88	46.8		53.3	135	45.7		36.3	158	39.6		58.5	199	29.9		33.4
17	181	37.6	103	46.0	+21	53.6	150	46.5	+10	36.9	173	41.9	+1	58.5	214	32.5	-14	33.4
18	196	40.1	118	45.3	+21	54.0	165	47.3	+10	37.5	188	44.2	+1	58.6	229	35.1	-14	33.5
19	211	42.5	133	44.5		54.3	180	48.1		38.1	203	46.5		58.6	244	37.7		33.5
20	226	45.0	148	43.8		54.7	195	48.9		38.7	218	48.8		58.7	259	40.3		33.6
21	241	47.5	163	43.0		55.0	210	49.7		39.3	233	51.2		58.7	274	42.8		33.6
22	256	49.9	178	42.3		55.4	225	50.5		39.9	248	53.5		58.8	289	45.4		33.7
23	271	52.4	193	41.5		55.7	240	51.3		40.5	263	55.8		58.8	304	48.0		33.7
24	286	54.9	208	40.8	+21	56.1	255	52.1	+10	41.1	278	58.1	+1	58.9	319	50.6	-14	33.8
Dif	—		-7		+4		+8		+6		+23		+1		+26		0	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 9 ^d 9	PHE {	4 ^h : 59 ^m 0 12 ^h : 59 ^m 3 20 ^h : 59 ^m 6			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 05 ^m 3								SD: 16 ^h 0			R°: 57 ^m			
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	'	°	h m	h m	h m	h m	h m	h m
0	178	41.8	+22 22.9	68	18.8	-14 10.6	60 N	21 17	22 42	** **	** **	16 17 109	23 47 10		
1	193	41.7	22.6	82	48.1 ¹⁰³	24.3 ¹³⁷	58	20 58	22 06	** **	** **	16 05 102	** ** *		
2	208	41.6	22.3	97	17.3 ¹⁰²	37.9 ¹³⁶	56	43	21 41	** **	** **	15 54 97	** ** *		
3	223	41.6	22.0	111	46.4 ¹⁰¹	-14 51.5 ¹³⁶	54	30	22	22 50		45 93	0 04 18		
4	238	41.5	21.7	126	15.4 ¹⁰⁰	-15 05.0 ¹³⁵	52	19	21 06	22 16		37 89	10 21		
5	253	41.4	+22 21.4	140	44.3 ⁹⁹	-15 18.4 ¹³⁴	50	20 09	20 52	21 53		15 29 87	0 16 23		
6	268	41.3	+22 21.1	155	13.0 ⁹⁷	-15 31.8 ¹³⁴	45	19 48	20 24	21 12		15 13 81	0 28 28		
7	283	41.2	20.8	169	41.6 ⁹⁶	45.1 ¹³³	40	31	20 03	20 44		15 00 77	38 32		
8	298	41.1	20.5	184	10.2 ⁹⁶	-15 58.3 ¹³²	35	17	19 46	22		14 50 72	46 37		
9	313	41.0	20.2	198	38.5 ⁹³	-16 11.5 ¹³²	30	19 04	31	20 04		40 70	0 54 39		
10	328	40.9	19.9	213	06.8 ⁹³	24.6 ¹³¹	20	18 44	19 08	19 37		24 65	1 07 45		
11	343	40.8	+22 19.6	227	35.0 ⁹²	-16 37.6 ¹³⁰	10 N	18 26	18 48	19 15		14 10 60	1 18 50		
12	358	40.7	+22 19.3	242	03.0 ⁹⁰	-16 50.5 ¹²⁹	0	18 09	18 31	18 57		13 57 56	1 29 54		
13	13	40.6	19.0	256	30.9 ⁸⁹	-17 03.4 ¹²⁹	10 S	17 52	18 15	41		44 52	40 58		
14	28	40.5	18.7	270	58.7 ⁸⁸	16.2 ¹²⁸	20	35	17 59	26		30 48	1 52 62		
15	43	40.5	18.4	285	26.3 ⁸⁶	28.9 ¹²⁷	30	15	41	11		14 43	2 05 68		
16	58	40.4	18.1	299	53.9 ⁸⁶	41.5 ¹²⁶	35	17 03	31	18 02		13 05 40	13 71		
17	73	40.3	+22 17.8	314	21.3 ⁸⁴	-17 54.0 ¹²⁵	40	16 50	17 20	17 54		12 55 37	2 22 74		
18	88	40.2	+22 17.5	328	48.5 ⁸²	-18 06.4 ¹²⁴	45	16 34	17 07	17 44		12 43 32	2 32 79		
19	103	40.1	17.2	343	15.7 ⁸²	18.7 ¹²³	50	15	16 52	33		29 27	45 85		
20	118	40.0	16.8	357	42.7 ⁸⁰	31.0 ¹²³	52	16 05	45	29		22 24	51 88		
21	133	39.9	16.5	12	09.6 ⁷⁹	43.1 ¹²¹	54	15 55	38	23		15 21	2 57 91		
22	148	39.8	16.2	26	36.4 ⁷⁸	-18 55.2 ¹²¹	56	44	30	18		12 06 18	3 05 94		
23	163	39.7	15.9	41	03.0 ⁷⁶	-19 07.1 ¹¹⁹	58	30	20	12		11 57 14	13 99		
24	178	39.7	+22 15.6	55	29.5 ⁷⁵	-19 19.0 ¹¹⁹	60 S	15 14	16 09	17 05		11 47 8	3 22 105		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG: 4 ^h 51 ^m 5		Mag: -3.8 PMG: 10 ^h 06 ^m		Mag: +0.4 PMG: 6 ^h 56 ^m		Mag: -2.6 PMG: 5 ^h 23 ^m		Mag: +0.5 PMG: 2 ^h 40 ^m		
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄		
h	°	'	°	'	°	'	°	'	°	'	
0	286	54.9	208	40.8	+21 56.1	255 52.1	+10 41.1	278 58.1	+1 58.9	319 50.6	-14 33.8
1	301	57.3	223	40.0	56.4	270 52.9	41.7	294 00.4	58.9	334 53.2	33.8
2	316	59.8	238	39.3	56.8	285 53.7	42.3	309 02.7	59.0	349 55.8	33.9
3	332	02.2	253	38.5	57.1	300 54.5	42.9	324 05.0	59.0	4 58.4	33.9
4	347	04.7	268	37.8	57.4	315 55.4	43.5	339 07.4	59.1	20 00.9	34.0
5	2	07.2	283	37.0	+21 57.8	330 56.2	+10 44.1	354 09.7	+1 59.1	35 03.5	-14 34.0
6	17	09.6	298	36.3	+21 58.1	345 57.0	+10 44.7	9 12.0	+1 59.2	50 06.1	-14 34.1
7	32	12.1	313	35.5	58.5	0 57.8	45.3	24 14.3	59.2	65 08.7	34.1
8	47	14.6	328	34.8	58.8	15 58.6	45.9	39 16.6	59.3	80 11.3	34.2
9	62	17.0	343	34.0	59.1	30 59.4	46.5	54 18.9	59.3	95 13.9	34.2
10	77	19.5	358	33.3	59.5	46 00.2	47.1	69 21.3	59.4	110 16.5	34.2
11	92	22.0	13	32.5	+21 59.8	61 01.0	+10 47.7	84 23.6	+1 59.4	125 19.1	-14 34.3
12	107	24.4	28	31.7	+22 00.1	76 01.8	+10 48.3	99 25.9	+1 59.5	140 21.6	-14 34.3
13	122	26.9	43	31.0	00.5	91 02.6	48.9	114 28.2	59.5	155 24.2	34.4
14	137	29.3	58	30.2	00.8	106 03.4	49.5	129 30.5	59.6	170 26.8	34.4
15	152	31.8	73	29.5	01.1	121 04.2	50.1	144 32.8	59.6	185 29.4	34.5
16	167	34.3	88	28.7	01.5	136 05.0	50.7	159 35.2	59.7	200 32.0	34.5
17	182	36.7	103	28.0	+22 01.8	151 05.8	+10 51.3	174 37.5	+1 59.7	215 34.6	-14 34.6
18	197	39.2	118	27.2	+22 02.1	166 06.7	+10 51.9	189 39.8	+1 59.8	230 37.2	-14 34.6
19	212	41.7	133	26.5	02.4	181 07.5	52.5	204 42.1	59.8	245 39.7	34.7
20	227	44.1	148	25.7	02.8	196 08.3	53.0	219 44.6	59.9	260 42.3	34.7
21	242	46.6	163	24.9	03.1	211 09.1	53.6	234 46.8	+1 59.9	275 44.9	34.8
22	257	49.1	178	24.2	03.4	226 09.9	54.2	249 49.1	+2 00.0	290 47.5	34.8
23	272	51.5	193	23.4	03.7	241 10.7	54.8	264 51.4	+2 00.0	305 50.1	34.9
24	287	54.0	208	22.7	+22 04.1	256 11.5	+10 55.4	279 53.7	+2 00.1	320 52.7	-14 34.9
Dif	—		-8 +3		+8 +6		+23 0		+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 4			Edad: 10 ^d 9 SD: 16'3 PMG: 21 ^h 07 ^m	PHE { 4 ^h : 59'9 12 ^h : 60'1 20 ^h : 60'4 Rº: 63 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	39.7	+22	15.6	55	29.5	-19	19.0	60 N	** **	1 29	2 55	18 06	109	23 57	23
1	193	39.6		15.3	69	55.8	73	30.7 ¹¹⁷	58	** **	2 05	3 13	17 47	101	0 00	17
2	208	39.5		15.0	84	22.1	73	42.4 ¹¹⁷	56	** **	30	28	31	96	12	21
3	223	39.4		14.7	98	48.2	71	-19 53.9 ¹¹⁵	54	1 21	2 49	41	18	91	22	25
4	238	39.3		14.3	113	14.2	70	-20 05.3 ¹¹⁴	52	1 55	3 05	3 52	17 06	89	31	28
5	253	39.2	+22	14.0	127	40.0	68	-20 16.7 ¹¹⁴	50	2 18	3 19	4 02	16 56	86	0 39	31
6	268	39.1	+22	13.7	142	05.7	67	-20 27.9 ¹¹²	45	2 59	3 47	4 23	16 34	81	0 56	37
7	283	39.0		13.4	156	31.3	66	38.9 ¹¹⁰	40	3 27	4 08	40	17	77	1 10	41
8	298	39.0		13.1	170	56.7	64	-20 49.9 ¹¹⁰	35	3 49	25	4 54	16 02	75	23	44
9	313	38.9		12.8	185	22.0	63	-21 00.7 ¹⁰⁸	30	4 07	4 39	5 06	15 50	72	33	47
10	328	38.8		12.4	199	47.2	62	11.5 ¹⁰⁸	20	34	5 03	27	29	68	1 52	51
11	343	38.7	+22	12.1	214	12.2	60	-21 22.1 ¹⁰⁶	10 N	4 56	5 22	5 45	15 10	65	2 08	55
12	358	38.6	+22	11.8	228	37.1	59	-21 32.5 ¹⁰⁴	0	5 13	5 39	6 02	14 53	62	2 23	59
13	13	38.5		11.5	243	01.9	58	42.9 ¹⁰⁴	10 S	29	5 56	18	36	59	38	63
14	28	38.4		11.2	257	26.5	56	-21 53.1 ¹⁰²	20	5 45	6 12	36	14 18	56	2 54	67
15	43	38.3		10.8	271	51.0	55	-22 03.2 ¹⁰¹	30	6 00	30	6 56	13 57	52	3 13	71
16	58	38.3		10.5	286	15.4	54	13.1 ⁹⁹	35	08	39	7 07	45	50	24	74
17	73	38.2	+22	10.2	300	39.7	53	-22 22.9 ⁹⁸	40	6 17	6 50	7 21	13 32	46	3 36	78
18	88	38.1	+22	09.9	315	03.8	51	-22 32.6 ⁹⁷	45	6 26	7 03	7 36	13 15	43	3 51	82
19	103	38.0		09.5	329	27.7	49	42.1 ⁹⁵	50	37	18	7 56	12 56	37	4 10	87
20	118	37.9		09.2	343	51.6	49	-22 51.5 ⁹⁴	52	42	25	8 05	46	35	19	89
21	133	37.8		08.9	358	15.3	47	-23 00.7 ⁹²	54	47	32	15	36	32	28	93
22	148	37.8		08.6	12	38.9	46	09.8 ⁹¹	56	53	41	26	24	28	39	97
23	163	37.7		08.2	27	02.4	45	18.7 ⁸⁹	58	6 59	7 50	40	12 11	23	4 52	102
24	178	37.6	+22	07.9	41	25.7	43	-23 27.5 ⁸⁸	60 S	7 05	8 01	8 55	11 55	16	5 07	109

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 47 ^m 6		Mag: -3.8 PMG: 10 ^h 07 ^m		Mag: +0.4 PMG: 6 ^h 55 ^m		Mag: -2.6 PMG: 5 ^h 20 ^m		Mag: +0.5 PMG: 2 ^h 36 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	°	'	°	°	°	'								
0	287	54.0	208	22.7	+22	04.1	256	11.5	+10	55.4	279	53.7	+2	00.1	320	52.7	-14	34.9
1	302	56.5	223	21.9		04.4	271	12.3		56.0	294	56.0		00.1	335	55.3		35.0
2	317	58.9	238	21.2		04.7	286	13.1		56.6	309	58.4		00.2	350	57.9		35.0
3	333	01.4	253	20.4		05.0	301	13.9		57.2	325	00.7		00.2	6	00.5		35.1
4	348	03.8	268	19.6		05.3	316	14.7		57.8	340	03.0		00.3	21	03.0		35.1
5	3	06.3	283	18.9	+22	05.6	331	15.5	+10	58.4	355	05.3	+2	00.3	36	05.6	-14	35.2
6	18	08.8	298	18.1	+22	06.0	346	16.3	+10	59.0	10	07.7	+2	00.4	51	08.2	-14	35.2
7	33	11.2	313	17.4		06.3	1	17.2	+10	59.6	25	10.0		00.4	66	10.8		35.3
8	48	13.7	328	16.6		06.6	16	18.0	+11	00.2	40	12.3		00.4	81	13.4		35.3
9	63	16.2	343	15.8		06.9	31	18.8		00.7	55	14.6		00.5	96	16.0		35.4
10	78	18.6	358	15.1		07.2	46	19.6		01.3	70	16.9		00.5	111	18.6		35.4
11	93	21.1	13	14.3	+22	07.5	61	20.4	+11	01.9	85	19.3	+2	00.6	126	21.2	-14	35.5
12	108	23.6	28	13.6	+22	07.8	76	21.2	+11	02.5	100	21.6	+2	00.6	141	23.8	-14	35.5
13	123	26.0	43	12.8		08.1	91	22.0		03.1	115	23.9		00.7	156	26.4		35.6
14	138	28.5	58	12.0		08.4	106	22.8		03.7	130	26.2		00.7	171	28.9		35.6
15	153	31.0	73	11.3		08.7	121	23.6		04.3	145	28.6		00.8	186	31.5		35.7
16	168	33.4	88	10.5		09.1	136	24.4		04.9	160	30.9		00.8	201	34.1		35.7
17	183	35.9	103	09.7	+22	09.4	151	25.2	+11	05.5	175	33.2	+2	00.9	216	36.7	-14	35.8
18	198	38.3	118	09.0	+22	09.7	166	26.0	+11	06.1	190	35.5	+2	00.9	231	39.3	-14	35.8
19	213	40.8	133	08.2		10.0	181	26.9		06.6	205	37.9		01.0	246	41.9		35.9
20	228	43.3	148	07.5		10.3	196	27.7		07.2	220	40.2		01.0	261	44.5		35.9
21	243	45.7	163	06.7		10.6	211	28.5		07.8	235	42.5		01.0	276	47.1		36.0
22	258	48.2	178	05.9		10.9	226	29.3		08.4	250	44.9		01.1	291	49.7		36.0
23	273	50.7	193	05.2		11.2	241	30.1		09.0	265	47.2		01.1	306	52.3		36.1
24	288	53.1	208	04.4	+22	11.5	256	30.9	+11	09.6	280	49.5	+2	01.2	321	54.8	-14	36.1
Dif	—		-8		+3		+8		+6		+23		0		+26		-1	

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 11 ^d 9 PHE	4 ^h : 60 ^h 6 12 ^h : 60 ^h 8 20 ^h : 61 ^h 0 R°: 67 ^m										
	PMG: 12 ^h 05 ^m 6				SD: 16 ^h 5 PMG: 22 ^h 10 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	178	37.6	+22 07.9	41	25.7	-23 27.5	86	60 N	21 14	22 37	** **	19 55 87	** **	**	
1	193	37.5	07.6	55	48.9	42	36.1	58	20 56	22 03	** **	28 83	0 17	30	
2	208	37.4	07.2	70	12.0	41	44.6	56	41	21 38	** **	19 07 80	33	36	
3	223	37.3	06.9	84	35.0	40	-23 52.9	54	28	19	22 44	18 49 79	47	39	
4	238	37.2	06.6	98	57.8	38	-24 01.0	52	17	21 04	22 13	35 77	0 59	43	
5	253	37.2	+22 06.3	113	20.6	38	-24 09.0	50	20 07	20 50	21 50	18 22 76	1 10	45	
6	268	37.1	+22 05.9	127	43.2	36	-24 16.8	45	19 47	20 23	21 10	17 55 74	1 33	49	
7	283	37.0	05.6	142	05.7	35	24.5	40	30	20 02	20 42	34 73	1 51	52	
8	298	36.9	05.3	156	28.0	33	32.0	35	16	19 45	21	17 72	2 07	54	
9	313	36.8	04.9	170	50.3	33	39.3	30	19 04	31	20 04	17 02 71	20	56	
10	328	36.8	04.6	185	12.4	31	46.4	20	18 43	19 08	19 36	16 37 69	2 43	60	
11	343	36.7	+22 04.3	199	34.5	31	-24 53.4	10 N	18 26	18 48	19 15	16 15 68	3 03	62	
12	358	36.6	+22 03.9	213	56.4	29	-25 00.2	0	18 09	18 31	18 57	15 55 66	3 22	64	
13	13	36.5	03.6	228	18.2	28	06.8	10 S	17 53	18 15	42	35 65	3 41	66	
14	28	36.4	03.2	242	39.9	27	13.2	20	36	17 59	27	15 14 63	4 01	69	
15	43	36.3	02.9	257	01.5	26	19.5	30	16	42	11	14 49 61	24	72	
16	58	36.3	02.6	271	23.0	25	25.5	35	17 04	32	18 03	35 59	38	73	
17	73	36.2	+22 02.2	285	44.4	24	-25 31.4	40	16 51	17 21	17 55	14 18 58	4 54	75	
18	88	36.1	+22 01.9	300	05.7	23	-25 37.1	45	16 36	17 09	17 46	13 58 56	5 13	78	
19	103	36.0	01.6	314	26.9	22	42.6	50	17	16 54	35	33 54	37	81	
20	118	35.9	01.2	328	48.0	21	47.9	52	16 07	47	30	21 52	5 48	84	
21	133	35.9	00.9	343	09.0	20	53.1	54	15 57	40	25	13 08 50	6 01	86	
22	148	35.8	00.5	357	30.0	20	-25 58.0	56	46	32	20	12 52 47	16	89	
23	163	35.7	+22 00.2	11	50.8	18	-26 02.7	58	33	22	14	34 43	34	93	
24	178	35.6	+21 59.8	26	11.6	18	-26 07.3	60 S	15 17	16 12	17 07	12 11 37	6 56	100	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 43 ^m 7		Mag: -3.8 PMG: 10 ^h 08 ^m		Mag: +0.4 PMG: 6 ^h 54 ^m		Mag: -2.6 PMG: 5 ^h 16 ^m		Mag: +0.5 PMG: 2 ^h 32 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	288	53.1	208	04.4	+22 11.5	256	30.9	+11 09.6	280	49.5	+2 01.2	321	54.8	-14 36.1	
1	303	55.6	223	03.6	11.7	271	31.7	10.2	295	51.8	01.2	336	57.4	36.2	
2	318	58.1	238	02.9	12.0	286	32.5	10.8	310	54.2	01.3	352	00.0	36.2	
3	334	00.5	253	02.1	12.3	301	33.3	11.3	325	56.5	01.3	7	02.6	36.3	
4	349	03.0	268	01.3	12.6	316	34.1	11.9	340	58.8	01.4	22	05.2	36.3	
5	4	05.5	283	00.6	+22 12.9	331	34.9	+11 12.5	356	01.2	+2 01.4	37	07.8	-14 36.4	
6	19	07.9	297	59.8	+22 13.2	346	35.8	+11 13.1	11	03.5	+2 01.5	52	10.4	-14 36.4	
7	34	10.4	312	59.0	13.5	1	36.6	13.7	26	05.8	01.5	67	13.0	36.5	
8	49	12.8	327	58.3	13.8	16	37.4	14.3	41	08.1	01.5	82	15.6	36.5	
9	64	15.3	342	57.5	14.1	31	38.2	14.9	56	10.5	01.6	97	18.2	36.6	
10	79	17.8	357	56.7	14.4	46	39.0	15.4	71	12.8	01.6	112	20.8	36.6	
11	94	20.2	12	56.0	+22 14.6	61	39.8	+11 16.0	86	15.1	+2 01.7	127	23.4	-14 36.7	
12	109	22.7	27	55.2	+22 14.9	76	40.6	+11 16.6	101	17.5	+2 01.7	142	26.0	-14 36.7	
13	124	25.2	42	54.4	15.2	91	41.4	17.2	116	19.8	01.8	157	28.5	36.8	
14	139	27.6	57	53.7	15.5	106	42.2	17.8	131	22.1	01.8	172	31.1	36.8	
15	154	30.1	72	52.9	15.8	121	43.0	18.4	146	24.5	01.8	187	33.7	36.9	
16	169	32.6	87	52.1	16.0	136	43.9	19.0	161	26.8	01.9	202	36.3	37.0	
17	184	35.0	102	51.3	+22 16.3	151	44.7	+11 19.5	176	29.1	+2 01.9	217	38.9	-14 37.0	
18	199	37.5	117	50.6	+22 16.6	166	45.5	+11 20.1	191	31.5	+2 02.0	232	41.5	-14 37.1	
19	214	40.0	132	49.8	16.9	181	46.3	20.7	206	33.8	02.0	247	44.1	37.1	
20	229	42.4	147	49.0	17.1	196	47.1	21.3	221	36.1	02.1	262	46.7	37.2	
21	244	44.9	162	48.3	17.4	211	47.9	21.9	236	38.5	02.1	277	49.3	37.2	
22	259	47.3	177	47.5	17.7	226	48.7	22.5	251	40.8	02.1	292	51.9	37.3	
23	274	49.8	192	46.7	18.0	241	49.5	23.0	266	43.1	02.2	307	54.5	37.3	
24	289	52.3	207	45.9	+22 18.2	256	50.3	+11 23.6	281	45.5	+2 02.2	322	57.1	-14 37.4	
Dif	—		-8	+3		+8	+6		+23		0	+26		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7			Edad: 12 ^d 9	PHE { 4 ^h : 61 ^m 1 12 ^h : 61 ^m 2 20 ^h : 61 ^m 3 Rº: 67 ^m											
	PMG: 12 ^h 05 ^m 7					SD: 16 ^h 6										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m	
0	178	35.6	+21	59.8	26	11.6	-26	07.3	60 N	** **	1 35	2 58	21 22	47	0 20	53
1	193	35.5		59.5	40	32.3	17	11.6	58	** **	2 09	3 16	20 51	52	0 47	57
2	208	35.5		59.1	54	52.9	16	15.7	56	** **	33	31	27 55		1 09	59
3	223	35.4		58.8	69	13.4	15	19.7	54	1 27	2 52	43	20 08	57	26	61
4	238	35.3		58.5	83	33.9	15	23.4	52	1 59	3 08	3 54	19 52	58	42	61
5	253	35.2	+21	58.1	97	54.3	14	-26	50	2 21	3 22	4 04	19 38	60	1 55	62
6	268	35.2	+21	57.8	112	14.6	13	-26	45	3 01	3 49	4 25	19 09	62	2 22	63
7	283	35.1		57.4	126	34.9	13	33.4	40	29	4 09	41	18 47	63	2 43	65
8	298	35.0		57.1	140	55.1	12	36.3	35	3 50	26	4 55	29 63		3 01	65
9	313	34.9		56.7	155	15.3	12	39.0	30	4 08	4 40	5 08	18 13	64	16	66
10	328	34.8		56.4	169	35.4	11	41.5	20	35	5 04	28	17 46	65	3 43	66
11	343	34.8	+21	56.0	183	55.4	10	-26	10 N	4 56	5 23	5 46	17 23	66	4 05	67
12	358	34.7	+21	55.7	198	15.4	10	-26	0	5 14	5 40	6 02	17 01	67	4 26	67
13	13	34.6		55.3	212	35.4	10	47.8	10 S	30	5 56	18	16 40	68	4 47	68
14	28	34.5		55.0	226	55.3	9	49.5	20	5 45	6 12	36	16 17	68	5 10	67
15	43	34.5		54.6	241	15.2	9	50.9	30	6 00	29	6 55	15 50	69	36	68
16	58	34.4		54.3	255	35.1	9	52.2	35	08	39	7 07	34 70		5 51	69
17	73	34.3	+21	53.9	269	54.9	8	-26	40	6 16	6 50	7 20	15 16	70	6 09	69
18	88	34.2	+21	53.5	284	14.7	8	-26	45	6 25	7 02	7 35	14 54	71	6 31	68
19	103	34.2		53.2	298	34.5	8	54.6	50	36	17	7 54	27 71		6 58	69
20	118	34.1		52.8	312	54.2	7	55.0	52	41	23	8 03	14 13	72	7 12	68
21	133	34.0		52.5	327	14.0	8	55.2	54	46	31	13	13 58	72	27	68
22	148	33.9		52.1	341	33.7	7	55.1	56	51	39	25	39 73		7 45	68
23	163	33.9		51.8	355	53.4	7	54.9	58	6 57	48	38	13 17	73	8 07	68
24	178	33.8	+21	51.4	10	13.1	7	-26	60 S	7 04	7 59	8 53	12 48	74	8 36	67

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 4 ^h 39 ^m 7		Mag: -3.8 PMG: 10 ^h 09 ^m		Mag: +0.4 PMG: 6 ^h 52 ^m		Mag: -2.6 PMG: 5 ^h 12 ^m		Mag: +0.5 PMG: 2 ^h 28 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	289	52.3	207	45.9	+22	18.2	281	45.5	+2	02.2
1	304	54.7	222	45.2		18.5	296	47.8		02.3
2	319	57.2	237	44.4		18.8	311	50.1		02.3
3	334	59.7	252	43.6		19.0	326	52.5		02.4
4	350	02.1	267	42.9		19.3	341	54.8		02.4
5	5	04.6	282	42.1	+22	19.6	356	57.1	+2	02.4
6	20	07.1	297	41.3	+22	19.8	11	59.5	+2	02.5
7	35	09.5	312	40.5		20.1	27	01.8		02.5
8	50	12.0	327	39.8		20.4	42	04.2		02.6
9	65	14.5	342	39.0		20.6	57	06.5		02.6
10	80	16.9	357	38.2		20.9	72	08.8		02.6
11	95	19.4	12	37.4	+22	21.1	87	11.2	+2	02.7
12	110	21.8	27	36.7	+22	21.4	102	13.5	+2	02.7
13	125	24.3	42	35.9		21.7	117	15.8		02.8
14	140	26.8	57	35.1		21.9	132	18.2		02.8
15	155	29.2	72	34.3		22.2	147	20.5		02.8
16	170	31.7	87	33.6		22.4	162	22.9		02.9
17	185	34.2	102	32.8	+22	22.7	177	25.2	+2	02.9
18	200	36.6	117	32.0	+22	22.9	192	27.5	+2	03.0
19	215	39.1	132	31.2		23.2	207	29.9		03.0
20	230	41.6	147	30.4		23.4	222	32.2		03.0
21	245	44.0	162	29.7		23.7	237	34.6		03.1
22	260	46.5	177	28.9		23.9	252	36.9		03.1
23	275	49.0	192	28.1		24.2	267	39.3		03.2
24	290	51.4	207	27.3	+22	24.4	282	41.6	+2	03.2
Dif	—		-8		+3		+23		0	
									+26	
									-1	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 13 ^d 9 PHE { 4 ^h : 61 ^h /4 12 ^h : 61 ^h /4 20 ^h : 61 ^h /3 R°: ***m													
	PMG: 12 ^h 05 ^m 8				PMG: ***h ***m													
	hG ☉	Dec			hG ☾	Dif	Dec Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	33.8	+21	51.4	10	13.1	-26	54.4	60 N	21 11	22 31	** **	22 09 20		1 13 93			
1	193	33.7		51.0	24	32.9	8	53.7	58	20 53	21 59	** **	21 43 28		1 44 88			
2	208	33.6		50.7	38	52.6	7	52.8	56	39	35	23 34	22 34		2 08 84			
3	223	33.6		50.3	53	12.3	7	51.7	54	26	17	22 39	21 05 37		27 82			
4	238	33.5		50.0	67	32.0	7	50.3	52	15	21 01	22 09	20 50 41		43 81			
5	253	33.4	+21	49.6	81	51.8	8	-26 48.8	50	20 06	20 48	21 47	20 38 42		2 57 79			
6	268	33.3	+21	49.2	96	11.6	8	-26 47.0	45	19 45	20 21	21 08	20 11 47		3 25 77			
7	283	33.3		48.9	110	31.4	8	45.1	40	29	20 01	20 41	19 50 51		3 48 74			
8	298	33.2		48.5	124	51.2	8	42.9	35	15	19 44	20	32 54		4 06 73			
9	313	33.1		48.1	139	11.0	8	40.5	30	19 03	30	20 03	19 17 56		22 72			
10	328	33.1		47.8	153	30.9	9	37.9	20	18 43	19 07	19 36	18 51 60		4 49 70			
11	343	33.0	+21	47.4	167	50.8	9	-26 35.0	10 N	18 26	18 48	19 15	18 29 62		5 12 68			
12	358	32.9	+21	47.0	182	10.7	9	-26 32.0	0	18 09	18 32	18 58	18 08 65		5 33 67			
13	13	32.8		46.7	196	30.7	10	28.7	10 S	17 53	16	42	17 48 67		5 55 64			
14	28	32.8		46.3	210	50.7	10	25.3	20	36	18 00	27	17 25 70		6 17 63			
15	43	32.7		45.9	225	10.8	11	21.6	30	17	17 43	12	16 59 74		6 44 60			
16	58	32.6		45.6	239	30.9	11	17.7	35	17 05	33	18 04	44 75		7 00 58			
17	73	32.6	+21	45.2	253	51.1	12	-26 13.7	40	16 53	17 23	17 56	16 26 78		7 18 57			
18	88	32.5	+21	44.8	268	11.3	12	-26 09.4	45	16 37	17 10	17 47	16 05 81		7 39 55			
19	103	32.4		44.4	282	31.6	13	04.9	50	19	16 56	37	15 38 85		8 07 51			
20	118	32.3		44.1	296	52.0	14	-26 00.2	52	10	49	32	25 87		20 49			
21	133	32.3		43.7	311	12.4	14	-25 55.3	54	16 00	42	27	15 10 89		35 47			
22	148	32.2		43.3	325	32.9	15	50.2	56	15 49	34	22	14 52 93		8 53 44			
23	163	32.1		43.0	339	53.4	15	44.9	58	36	25	16	30 98		9 15 40			
24	178	32.1	+21	42.6	354	14.1	17	-25 39.4	60 S	15 21	16 15	17 09	14 02 105		9 43 33			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 35 ^m 8		Mag: -3.8 PMG: 10 ^h 11 ^m				Mag: +0.4 PMG: 6 ^h 51 ^m				Mag: -2.6 PMG: 5 ^h 08 ^m				Mag: +0.5 PMG: 2 ^h 24 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'		'	°	'	°	'	°	'	°	'	°	'		
0	290	51.4	207	27.3	+22	24.4	257	09.8	+11	37.5	282	41.6	+2	03.2	323	59.4		
1	305	53.9	222	26.5		24.6	272	10.6		38.1	297	43.9		03.2	339	02.0		
2	320	56.3	237	25.8		24.9	287	11.4		38.7	312	46.3		03.3	354	04.6		
3	335	58.8	252	25.0		25.1	302	12.2		39.3	327	48.6		03.3	9	07.2		
4	351	01.3	267	24.2		25.4	317	13.1		39.8	342	51.0		03.4	24	09.8		
5	6	03.7	282	23.4	+22	25.6	332	13.9	+11	40.4	357	53.3	+2	03.4	39	12.4		
6	21	06.2	297	22.6	+22	25.9	347	14.7	+11	41.0	12	55.7	+2	03.4	54	15.0		
7	36	08.7	312	21.9		26.1	2	15.5		41.6	27	58.0		03.5	69	17.6		
8	51	11.1	327	21.1		26.3	17	16.3		42.1	43	00.3		03.5	84	20.1		
9	66	13.6	342	20.3		26.6	32	17.1		42.7	58	02.7		03.6	99	22.7		
10	81	16.1	357	19.5		26.8	47	17.9		43.3	73	05.0		03.6	114	25.3		
11	96	18.5	12	18.7	+22	27.0	62	18.7	+11	43.9	88	07.4	+2	03.6	129	27.9		
12	111	21.0	27	18.0	+22	27.3	77	19.6	+11	44.4	103	09.7	+2	03.7	144	30.5		
13	126	23.5	42	17.2		27.5	92	20.4		45.0	118	12.1		03.7	159	33.1		
14	141	25.9	57	16.4		27.7	107	21.2		45.6	133	14.4		03.7	174	35.7		
15	156	28.4	72	15.6		27.9	122	22.0		46.2	148	16.8		03.8	189	38.3		
16	171	30.8	87	14.8		28.2	137	22.8		46.7	163	19.1		03.8	204	40.9		
17	186	33.3	102	14.0	+22	28.4	152	23.6	+11	47.3	178	21.5	+2	03.9	219	43.5		
18	201	35.8	117	13.3	+22	28.6	167	24.4	+11	47.9	193	23.8	+2	03.9	234	46.1		
19	216	38.2	132	12.5		28.9	182	25.3		48.5	208	26.1		03.9	249	48.7		
20	231	40.7	147	11.7		29.1	197	26.1		49.0	223	28.5		04.0	264	51.3		
21	246	43.2	162	10.9		29.3	212	26.9		49.6	238	30.8		04.0	279	53.9		
22	261	45.6	177	10.1		29.5	227	27.7		50.2	253	33.2		04.0	294	56.5		
23	276	48.1	192	09.3		29.7	242	28.5		50.7	268	35.5		04.1	309	59.1		
24	291	50.6	207	08.6	+22	30.0	257	29.3	+11	51.3	283	37.9	+2	04.1	325	01.7		
Dif	—		-8 +2				+8 +6				+23 0				+26 -			

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 9			Edad: 14 ^d 9 PHE { 4 ^h : 61 ^h 3 12 ^h : 61 ^h 2 20 ^h : 61 ^h 0 R°: 64 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	32.1	+21	42.6	354	14.1	-25	39.4	60 N	** **	1 41	3 02	22 29	10	2 46	113	
1	193	32.0		42.2	8	34.8	17	33.7	58	** **	2 13	19	22 11	15	3 12	104	
2	208	31.9		41.8	22	55.6	18	27.8	56	0 38	37	33	21 56	20	32	99	
3	223	31.9		41.4	37	16.5	19	21.8	54	1 33	2 55	46	42	24	3 49	95	
4	238	31.8		41.1	51	37.4	19	15.5	52	2 03	3 11	3 57	31	27	4 04	91	
5	253	31.7	+21	40.7	65	58.5	21	-25	50	2 25	3 24	4 06	21 20	31	4 16	88	
6	268	31.7	+21	40.3	80	19.6	21	-25	45	3 04	3 51	4 27	20 58	36	4 42	83	
7	283	31.6		39.9	94	40.9	23	-24	40	31	4 11	43	41	40	5 02	80	
8	298	31.5		39.6	109	02.2	23	48.5	35	3 52	28	4 57	26	43	19	77	
9	313	31.5		39.2	123	23.6	24	41.3	30	4 09	4 42	5 09	20 13	46	34	74	
10	328	31.4		38.8	137	45.1	25	33.9	20	36	5 05	29	19 51	51	5 59	69	
11	343	31.3	+21	38.4	152	06.8	27	-24	10 N	4 57	5 23	5 46	19 31	56	6 20	66	
12	358	31.3	+21	38.0	166	28.5	27	-24	0	5 14	5 40	6 02	19 13	60	6 40	62	
13	13	31.2		37.6	180	50.3	28	10.6	10 S	30	5 56	18	18 55	63	6 59	59	
14	28	31.1		37.3	195	12.3	30	-24	20	44	6 12	35	35	68	7 20	56	
15	43	31.1		36.9	209	34.3	30	-23	30	5 59	29	6 55	18 13	72	44	51	
16	58	31.0		36.5	223	56.5	32	45.8	35	6 07	38	7 06	17 59	76	7 58	49	
17	73	30.9	+21	36.1	238	18.8	33	-23	40	6 15	6 49	7 19	17 44	79	8 15	45	
18	88	30.9	+21	35.7	252	41.2	34	-23	45	6 24	7 01	7 34	17 26	83	8 34	41	
19	103	30.8		35.3	267	03.7	35	19.4	50	35	15	7 53	17 03	89	8 58	36	
20	118	30.7		34.9	281	26.3	36	10.3	52	39	22	8 01	16 52	92	9 09	34	
21	133	30.7		34.6	295	49.0	37	-23	54	44	29	11	39	96	22	31	
22	148	30.6		34.2	310	11.9	39	-22	56	49	37	22	25	99	37	27	
23	163	30.5		33.8	324	34.9	40	42.0	58	6 55	46	35	16 08	104	9 55	21	
24	178	30.5	+21	33.4	338	58.0	41	-22	60 S	7 02	7 56	8 50	15 47	112	10 16	15	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 4 ^h 31 ^m 9		Mag: -3.8 PMG: 10 ^h 12 ^m		Mag: +0.4 PMG: 6 ^h 50 ^m		Mag: -2.6 PMG: 5 ^h 05 ^m		Mag: +0.5 PMG: 2 ^h 19 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	291	50.6	207	08.6	+22	30.0	257	29.3	+11	51.3	283	37.9	+2	04.1	325	01.7	-14	39.9
1	306	53.0	222	07.8		30.2	272	30.1		51.9	298	40.2		04.1	340	04.3		39.9
2	321	55.5	237	07.0		30.4	287	30.9		52.5	313	42.6		04.2	355	06.9		40.0
3	336	58.0	252	06.2		30.6	302	31.8		53.0	328	44.9		04.2	10	09.5		40.0
4	352	00.4	267	05.4		30.8	317	32.6		53.6	343	47.3		04.2	25	12.1		40.1
5	7	02.9	282	04.6	+22	31.0	332	33.4	+11	54.2	358	49.6	+2	04.3	40	14.7	-14	40.1
6	22	05.3	297	03.8	+22	31.2	347	34.2	+11	54.7	13	52.0	+2	04.3	55	17.3	-14	40.2
7	37	07.8	312	03.1		31.5	2	35.0		55.3	28	54.3		04.4	70	19.9		40.2
8	52	10.3	327	02.3		31.7	17	35.8		55.9	43	56.7		04.4	85	22.5		40.3
9	67	12.7	342	01.5		31.9	32	36.6		56.4	58	59.0		04.4	100	25.1		40.3
10	82	15.2	357	00.7		32.1	47	37.5		57.0	74	01.4		04.5	115	27.7		40.4
11	97	17.7	11	59.9	+22	32.3	62	38.3	+11	57.6	89	03.7	+2	04.5	130	30.3	-14	40.5
12	112	20.1	26	59.1	+22	32.5	77	39.1	+11	58.2	104	06.1	+2	04.5	145	32.9	-14	40.5
13	127	22.6	41	58.3		32.7	92	39.9		58.7	119	08.5		04.6	160	35.5		40.6
14	142	25.1	56	57.5		32.9	107	40.7		59.3	134	10.8		04.6	175	38.1		40.6
15	157	27.5	71	56.8		33.1	122	41.5	+11	59.9	149	13.2		04.6	190	40.7		40.7
16	172	30.0	86	56.0		33.3	137	42.4	+12	00.4	164	15.5		04.7	205	43.3		40.7
17	187	32.4	101	55.2	+22	33.5	152	43.2	+12	01.0	179	17.9	+2	04.7	220	45.9	-14	40.8
18	202	34.9	116	54.4	+22	33.7	167	44.0	+12	01.6	194	20.2	+2	04.7	235	48.5	-14	40.8
19	217	37.4	131	53.6		33.9	182	44.8		02.1	209	22.6		04.8	250	51.1		40.9
20	232	39.8	146	52.8		34.1	197	45.6		02.7	224	24.9		04.8	265	53.7		40.9
21	247	42.3	161	52.0		34.3	212	46.4		03.3	239	27.3		04.8	280	56.3		41.0
22	262	44.8	176	51.2		34.5	227	47.2		03.8	254	29.6		04.9	295	58.9		41.0
23	277	47.2	191	50.4		34.7	242	48.1		04.4	269	32.0		04.9	311	01.6		41.1
24	292	49.7	206	49.6	+22	34.9	257	48.9	+12	05.0	284	34.4	+2	04.9	326	04.2	-14	41.1
Dif	—		-8 +2		+8 +6		+24 0		+26 -1									

UT	SOL				☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7				Edad: 15 ^d 9	PHE { 4 ^h : 60'9 12 ^h : 60'7 20 ^h : 60'4	SD: 16'6				PMG: 1 ^h 28 ^m	R°: 58 ^m						
	PMG: 12 ^h 06 ^m 0																	
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	30.5	+21	33.4	338	58.0	-22	32.3	60 N	21 07	22 25	** **	22 39 4		4 39 111			
1	193	30.4		33.0	353	21.2	42	22.4	58	20 50	21 54	** **	26 10		4 56 105			
2	208	30.3		32.6	7	44.5	43	12.3	56		36	32	23 21	16 13	5 11 100			
3	223	30.3		32.2	22	08.0	45	-22	54	24	21 14	22 33	22 06 17		24 95			
4	238	30.2		31.8	36	31.6	46	-21	52	13	20 59	22 05	21 58 20		35 92			
5	253	30.1	+21	31.4	50	55.3	47	-21	50	20 04	20 46	21 44	21 51 22		5 44 90			
6	268	30.1	+21	31.0	65	19.1	48	-21	45	19 44	20 20	21 06	21 34 28		6 05 83			
7	283	30.0		30.6	79	43.1	50	19.9	40	28	20 00	20 40	21 32		22 78			
8	298	30.0		30.2	94	07.2	51	-21	35	14	19 43	19	21 09 37		36 74			
9	313	29.9		29.9	108	31.5	53	-20	30	19 03	30	20 02	20 59 40		6 48 71			
10	328	29.8		29.5	122	55.8	53	46.9	20	18 43	19 07	19 36	42 45		7 08 66			
11	343	29.8	+21	29.1	137	20.3	55	-20	10 N	18 26	18 48	19 15	20 27 50		7 26 61			
12	358	29.7	+21	28.7	151	44.9	56	-20	0	18 10	18 32	18 58	20 13 54		7 42 57			
13	13	29.7		28.3	166	09.7	58	12.6	10 S	17 54	16	42	19 58 59		7 58 53			
14	28	29.6		27.9	180	34.5	58	-20	20	37	18 01	28	43 64		8 16 48			
15	43	29.5		27.5	194	59.5	60	-19	30	18	17 44	13	25 70		35 43			
16	58	29.5		27.1	209	24.7	62	37.2	35	17 07	34	18 06	15 73		8 47 40			
17	73	29.4	+21	26.7	223	49.9	62	-19	40	16 54	17 24	17 57	19 03 77		9 00 36			
18	88	29.3	+21	26.3	238	15.3	64	-19	45	16 39	17 12	17 48	18 49 81		9 15 32			
19	103	29.3		25.9	252	40.9	66	-19	50	21	16 58	38	32 87		34 26			
20	118	29.2		25.5	267	06.5	66	-18	52	12	51	34	24 90		43 23			
21	133	29.2		25.1	281	32.3	68	36.0	54	16 02	44	29	15 93		9 53 20			
22	148	29.1		24.6	295	58.2	69	23.4	56	15 51	36	24	18 04 97		10 04 17			
23	163	29.0		24.2	310	24.2	70	-18	58	39	28	18	17 52 102		16 13			
24	178	29.0	+21	23.8	324	50.4	72	-17	60 S	15 24	16 18	17 12	17 39 107		10 31 7			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 28 ^m 0		Mag: -3.8 PMG: 10 ^h 13 ^m				Mag: +0.3 PMG: 6 ^h 48 ^m				Mag: -2.6 PMG: 5 ^h 01 ^m				Mag: +0.5 PMG: 2 ^h 15 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	292	49.7	206	49.6	+22	34.9	257	48.9	+12	05.0	284	34.4	+2	04.9	326	04.2	-14	41.1
1	307	52.2	221	48.9		35.1	272	49.7		05.5	299	36.7		05.0	341	06.8		41.2
2	322	54.6	236	48.1		35.3	287	50.5		06.1	314	39.1		05.0	356	09.4		41.3
3	337	57.1	251	47.3		35.5	302	51.3		06.7	329	41.4		05.0	11	12.0		41.3
4	352	59.6	266	46.5		35.6	317	52.1		07.2	344	43.8		05.1	26	14.6		41.4
5	8	02.0	281	45.7	+22	35.8	332	52.9	+12	07.8	359	46.1	+2	05.1	41	17.2	-14	41.4
6	23	04.5	296	44.9	+22	36.0	347	53.8	+12	08.4	14	48.5	+2	05.1	56	19.8	-14	41.5
7	38	06.9	311	44.1		36.2	2	54.6		08.9	29	50.9		05.2	71	22.4		41.5
8	53	09.4	326	43.3		36.4	17	55.4		09.5	44	53.2		05.2	86	25.0		41.6
9	68	11.9	341	42.5		36.6	32	56.2		10.1	59	55.6		05.2	101	27.6		41.6
10	83	14.3	356	41.7		36.8	47	57.0		10.6	74	57.9		05.3	116	30.2		41.7
11	98	16.8	11	40.9	+22	36.9	62	57.8	+12	11.2	90	00.3	+2	05.3	131	32.8	-14	41.7
12	113	19.3	26	40.1	+22	37.1	77	58.7	+12	11.7	105	02.7	+2	05.3	146	35.4	-14	41.8
13	128	21.7	41	39.3		37.3	92	59.5		12.3	120	05.0		05.3	161	38.0		41.9
14	143	24.2	56	38.5		37.5	108	00.3		12.9	135	07.4		05.4	176	40.6		41.9
15	158	26.7	71	37.8		37.6	123	01.1		13.4	150	09.7		05.4	191	43.2		42.0
16	173	29.1	86	37.0		37.8	138	01.9		14.0	165	12.1		05.4	206	45.8		42.0
17	188	31.6	101	36.2	+22	38.0	153	02.7	+12	14.6	180	14.5	+2	05.5	221	48.4	-14	42.1
18	203	34.1	116	35.4	+22	38.2	168	03.6	+12	15.1	195	16.8	+2	05.5	236	51.0	-14	42.1
19	218	36.5	131	34.6		38.3	183	04.4		15.7	210	19.2		05.5	251	53.6		42.2
20	233	39.0	146	33.8		38.5	198	05.2		16.2	225	21.5		05.6	266	56.2		42.2
21	248	41.4	161	33.0		38.7	213	06.0		16.8	240	23.9		05.6	281	58.8		42.3
22	263	43.9	176	32.2		38.8	228	06.8		17.4	255	26.3		05.6	297	01.4		42.3
23	278	46.4	191	31.4		39.0	243	07.6		17.9	270	28.6		05.7	312	04.0		42.4
24	293	48.8	206	30.6	+22	39.2	258	08.5	+12	18.5	285	31.0	+2	05.7	327	06.6	-14	42.5
Dif	—		-8		+2		+8		+6		+24		0		+26		-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 1				Edad: 16 ^d 9 PHE { 4 ^h : 60 ^m 2 12 ^h : 59 ^m 9 20 ^h : 59 ^m 6 R°: 53 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	29.0	+21	23.8	324	50.4	-17	57.9	60 N	** **	1 48	3 05	22 43	3	6 30	103		
1	193	28.9		23.4	339	16.7	73	45.1	58	** **	2 18	22	36	6	41	99		
2	208	28.9		23.0	353	43.1	74	32.1	56	0 52	41	36	29	10	51	94		
3	223	28.8		22.6	8	09.7	76	19.0	54	1 39	2 59	48	23	13	6 59	91		
4	238	28.8		22.2	22	36.4	77	-17 05.9	52	2 07	3 14	3 59	18	15	7 07	88		
5	253	28.7	+21	21.8	37	03.2	78	-16 52.6	50	2 28	3 27	4 09	22	13	7 14	85		
6	268	28.6	+21	21.4	51	30.1	79	-16 39.3	45	3 06	3 53	4 28	22	02	7 28	79		
7	283	28.6		21.0	65	57.1	80	25.9	40	33	4 13	44	21	53	40	75		
8	298	28.5		20.6	80	24.3	82	-16 12.4	35	3 54	29	4 58	46	31	50	71		
9	313	28.5		20.2	94	51.6	83	-15 58.8	30	4 10	4 43	5 10	39	34	7 59	67		
10	328	28.4		19.7	109	19.0	84	45.1	20	37	5 05	30	27	40	8 14	61		
11	343	28.4	+21	19.3	123	46.6	86	-15 31.4	10 N	4 57	5 24	5 47	21	17	8 27	57		
12	358	28.3	+21	18.9	138	14.2	86	-15 17.6	0	5 14	5 40	6 03	21	07	8 39	52		
13	13	28.2		18.5	152	42.0	88	-15 03.7	10 S	30	5 56	18	20	57	8 51	47		
14	28	28.2		18.1	167	09.9	89	-14 49.8	20	44	6 11	35	47	59	9 04	42		
15	43	28.1		17.7	181	37.9	90	35.7	30	5 59	28	6 54	35	65	18	37		
16	58	28.1		17.3	196	06.1	92	21.6	35	6 06	38	7 05	28	68	27	33		
17	73	28.0	+21	16.9	210	34.3	92	-14 07.5	40	6 14	6 48	7 18	20	20	9 36	30		
18	88	28.0	+21	16.4	225	02.7	94	-13 53.3	45	6 23	7 00	7 33	20	10	9 47	25		
19	103	27.9		16.0	239	31.2	95	39.0	50	33	14	51	19	59	10 00	20		
20	118	27.9		15.6	253	59.8	96	24.7	52	38	20	7 59	54	85	06	18		
21	133	27.8		15.2	268	28.5	97	-13 10.3	54	43	27	8 09	48	88	13	15		
22	148	27.7		14.8	282	57.3	98	-12 55.8	56	48	35	20	41	92	21	11		
23	163	27.7		14.3	297	26.2	99	41.3	58	53	44	32	34	95	29	8		
24	178	27.6	+21	13.9	311	55.3	101	-12 26.8	60 S	6 59	7 54	8 47	19	26	10 38	4		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 4 ^h 24 ^m 0		Mag: -3.8 PMG: 10 ^h 15 ^m				Mag: +0.3 PMG: 6 ^h 47 ^m				Mag: -2.6 PMG: 4 ^h 57 ^m				Mag: +0.5 PMG: 2 ^h 11 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	293	48.8	206	30.6	+22	39.2	258	08.5	+12	18.5	285	31.0	+2	05.7	327	06.6	-14	42.5
1	308	51.3	221	29.8		39.3	273	09.3		19.1	300	33.4		05.7	342	09.2		42.5
2	323	53.8	236	29.0		39.5	288	10.1		19.6	315	35.7		05.7	357	11.9		42.6
3	338	56.2	251	28.2		39.7	303	10.9		20.2	330	38.1		05.8	12	14.5		42.6
4	353	58.7	266	27.4		39.8	318	11.7		20.7	345	40.4		05.8	27	17.1		42.7
5	9	01.2	281	26.6	+22	40.0	333	12.5	+12	21.3	0	42.8	+2	05.8	42	19.7	-14	42.7
6	24	03.6	296	25.8	+22	40.2	348	13.4	+12	21.9	15	45.2	+2	05.9	57	22.3	-14	42.8
7	39	06.1	311	25.0		40.3	3	14.2		22.4	30	47.5		05.9	72	24.9		42.8
8	54	08.6	326	24.2		40.5	18	15.0		23.0	45	49.9		05.9	87	27.5		42.9
9	69	11.0	341	23.4		40.6	33	15.8		23.5	60	52.3		05.9	102	30.1		42.9
10	84	13.5	356	22.6		40.8	48	16.6		24.1	75	54.6		06.0	117	32.7		43.0
11	99	15.9	11	21.8	+22	40.9	63	17.5	+12	24.6	90	57.0	+2	06.0	132	35.3	-14	43.1
12	114	18.4	26	21.0	+22	41.1	78	18.3	+12	25.2	105	59.4	+2	06.0	147	37.9	-14	43.1
13	129	20.9	41	20.2		41.2	93	19.1		25.8	121	01.7		06.1	162	40.5		43.2
14	144	23.3	56	19.4		41.4	108	19.9		26.3	136	04.1		06.1	177	43.1		43.2
15	159	25.8	71	18.6		41.5	123	20.7		26.9	151	06.5		06.1	192	45.7		43.3
16	174	28.3	86	17.8		41.7	138	21.5		27.4	166	08.8		06.1	207	48.3		43.3
17	189	30.7	101	17.0	+22	41.8	153	22.4	+12	28.0	181	11.2	+2	06.2	222	50.9	-14	43.4
18	204	33.2	116	16.2	+22	42.0	168	23.2	+12	28.5	196	13.6	+2	06.2	237	53.5	-14	43.4
19	219	35.7	131	15.4		42.1	183	24.0		29.1	211	15.9		06.2	252	56.2		43.5
20	234	38.1	146	14.6		42.3	198	24.8		29.7	226	18.3		06.3	267	58.8		43.5
21	249	40.6	161	13.8		42.4	213	25.6		30.2	241	20.7		06.3	283	01.4		43.6
22	264	43.0	176	13.0		42.6	228	26.5		30.8	256	23.1		06.3	298	04.0		43.7
23	279	45.5	191	12.2		42.7	243	27.3		31.3	271	25.4		06.3	313	06.6		43.7
24	294	48.0	206	11.4	+22	42.8	258	28.1	+12	31.9	286	27.8	+2	06.4	328	09.2	-14	43.8
Dif	—		-8		+2		+8		+6		+24		0		+26		-1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7				Edad: 17 ^d 9 PHE	$\left\{\begin{array}{l} 4^h: 59/3 \\ 12^h: 59/0 \\ 20^h: 58/7 \end{array}\right.$					R°: 49 ^m		R°		R°		R°	
	PMG: 12 ^h 06 ^m 2																	
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	27.6	+21	13.9	311	55.3	-12	26.8	60 N	21 04	22 18	** **	22 46 2		8 13 97			
1	193	27.6		13.5	326	24.4 ¹⁰¹	-12	12.2 ¹⁴⁶	58	20 47	21 50	** **	42 6		20 92			
2	208	27.5		13.1	340	53.6 ¹⁰²	-11	57.5 ¹⁴⁷	56	34	28	23 10	39 8		25 89			
3	223	27.5		12.7	355	23.0 ¹⁰⁴		42.9 ¹⁴⁶	54	22	21 11	22 28	36 11		30 86			
4	238	27.4		12.2	9	52.4 ¹⁰⁴		28.1 ¹⁴⁸	52	11	20 56	22 01	33 14		35 83			
5	253	27.4	+21	11.8	24	22.0 ¹⁰⁶	-11	13.3 ¹⁴⁸	50	20 02	20 44	21 41	22 31 15		8 39 80			
6	268	27.3	+21	11.4	38	51.7 ¹⁰⁷	-10	58.5 ¹⁴⁸	45	19 42	20 18	21 04	22 25 21		8 47 75			
7	283	27.3		11.0	53	21.4 ¹⁰⁷		43.7 ¹⁴⁸	40	27	19 58	20 38	21 24		8 55 70			
8	298	27.2		10.5	67	51.3 ¹⁰⁹		28.8 ¹⁴⁹	35	13	42	18	17 28		9 01 67			
9	313	27.2		10.1	82	21.2 ¹⁰⁹	-10	13.9 ¹⁴⁹	30	19 02	29	20 01	13 31		06 64			
10	328	27.1		09.7	96	51.3 ¹¹¹	-9	58.9 ¹⁵⁰	20	18 42	19 06	19 35	07 37		15 58			
11	343	27.1	+21	09.3	111	21.4 ¹¹¹	-9	43.9 ¹⁵⁰	10 N	18 25	18 48	19 15	22 02 41		9 24 52			
12	358	27.0	+21	08.8	125	51.7 ¹¹³	-9	28.9 ¹⁵⁰	0	18 10	18 32	18 58	21 57 46		9 31 48			
13	13	27.0		08.4	140	22.0 ¹¹³	-9	13.9 ¹⁵⁰	10 S	17 54	17	43	51 51		38 44			
14	28	26.9		08.0	154	52.4 ¹¹⁴	-8	58.8 ¹⁵¹	20	38	18 01	28	46 56		46 39			
15	43	26.9		07.5	169	22.9 ¹¹⁵		43.7 ¹⁵¹	30	19	17 45	14	40 61		9 55 33			
16	58	26.8		07.1	183	53.5 ¹¹⁶		28.6 ¹⁵¹	35	17 08	36	18 07	36 65		10 00 30			
17	73	26.8	+21	06.7	198	24.2 ¹¹⁷	-8	13.4 ¹⁵²	40	16 56	17 25	17 59	21 32 69		10 06 26			
18	88	26.7	+21	06.2	212	55.0 ¹¹⁸	-7	58.3 ¹⁵¹	45	16 41	17 14	17 50	21 27 73		10 12 22			
19	103	26.7		05.8	227	25.9 ¹¹⁹		43.1 ¹⁵²	50	23	17 00	40	22 78		20 17			
20	118	26.6		05.4	241	56.8 ¹¹⁹		27.9 ¹⁵²	52	14	16 53	36	19 80		24 14			
21	133	26.6		04.9	256	27.8 ¹²⁰	-7	12.7 ¹⁵²	54	16 05	47	31	16 83		28 12			
22	148	26.5		04.5	270	58.9 ¹²¹	-6	57.4 ¹⁵³	56	15 54	39	26	13 86		32 9			
23	163	26.5		04.1	285	30.1 ¹²²		42.2 ¹⁵²	58	42	30	21	09 90		37 6			
24	178	26.4	+21	03.6	300	01.4 ¹²³	-6	26.9 ¹⁵³	60 S	15 28	16 21	17 15	21 05 93		10 42 3			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 20 ^m 1		Mag: -3.8 PMG: 10 ^h 16 ^m				Mag: +0.3 PMG: 6 ^h 46 ^m				Mag: -2.6 PMG: 4 ^h 53 ^m				Mag: +0.5 PMG: 2 ^h 07 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	294	48.0	206	11.4	+22	42.8	258	28.1	+12	31.9	286	27.8	+2	06.4	328	09.2	-14	43.8
1	309	50.4	221	10.6		43.0	273	28.9		32.4	301	30.2		06.4	343	11.8		43.8
2	324	52.9	236	09.8		43.1	288	29.7		33.0	316	32.5		06.4	358	14.4		43.9
3	339	55.4	251	09.0		43.3	303	30.5		33.5	331	34.9		06.4	13	17.0		43.9
4	354	57.8	266	08.2		43.4	318	31.4		34.1	346	37.3		06.5	28	19.6		44.0
5	10	00.3	281	07.4	+22	43.5	333	32.2	+12	34.7	1	39.7	+2	06.5	43	22.2	-14	44.0
6	25	02.8	296	06.6	+22	43.7	348	33.0	+12	35.2	16	42.0	+2	06.5	58	24.8	-14	44.1
7	40	05.2	311	05.8		43.8	3	33.8		35.8	31	44.4		06.5	73	27.4		44.2
8	55	07.7	326	05.0		43.9	18	34.6		36.3	46	46.8		06.6	88	30.1		44.2
9	70	10.2	341	04.2		44.0	33	35.5		36.9	61	49.1		06.6	103	32.7		44.3
10	85	12.6	356	03.4		44.2	48	36.3		37.4	76	51.5		06.6	118	35.3		44.3
11	100	15.1	11	02.6	+22	44.3	63	37.1	+12	38.0	91	53.9	+2	06.6	133	37.9	-14	44.4
12	115	17.5	26	01.8	+22	44.4	78	37.9	+12	38.5	106	56.3	+2	06.7	148	40.5	-14	44.4
13	130	20.0	41	01.0		44.6	93	38.7		39.1	121	58.6		06.7	163	43.1		44.5
14	145	22.5	56	00.2		44.7	108	39.6		39.6	137	01.0		06.7	178	45.7		44.5
15	160	24.9	70	59.4		44.8	123	40.4		40.2	152	03.4		06.7	193	48.3		44.6
16	175	27.4	85	58.6		44.9	138	41.2		40.7	167	05.8		06.8	208	50.9		44.7
17	190	29.9	100	57.8	+22	45.0	153	42.0	+12	41.3	182	08.1	+2	06.8	223	53.5	-14	44.7
18	205	32.3	115	57.0	+22	45.2	168	42.8	+12	41.8	197	10.5	+2	06.8	238	56.1	-14	44.8
19	220	34.8	130	56.2		45.3	183	43.7		42.4	212	12.9		06.8	253	58.8		44.8
20	235	37.3	145	55.4		45.4	198	44.5		42.9	227	15.3		06.9	269	01.4		44.9
21	250	39.7	160	54.6		45.5	213	45.3		43.5	242	17.6		06.9	284	04.0		44.9
22	265	42.2	175	53.8		45.6	228	46.1		44.0	257	20.0		06.9	299	06.6		45.0
23	280	44.7	190	52.9		45.8	243	46.9		44.6	272	22.4		06.9	314	09.2		45.1
24	295	47.1	205	52.1	+22	45.9	258	47.8	+12	45.1	287	24.8	+2	07.0	329	11.8	-14	45.1
Dif	—		-8		+1		+8		+6		+24		0		+26		-1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 06 ^m 3			Edad: 18 ^d 9 PHE { SD: 15'9 PMG: 4 ^h 08 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m			
0	178	26.4	+21	03.6	300	01.4	-6	26.9	60 N	** *	1	55	3	09			
1	193	26.4		03.2	314	32.7 ¹²³	-6	11.7 ¹⁵²	58	** *	2	23	26	48			
2	208	26.3		02.8	329	04.1 ¹²⁴	-5	56.4 ¹⁵³	56	1	03	2	45	39	47		
3	223	26.3		02.3	343	35.6 ¹²⁵		41.1 ¹⁵³	54	1	45	3	02	3	51		
4	238	26.2		01.9	358	07.2 ¹²⁶		25.9 ¹⁵²	52	2	12	17	4	02	47	12	
5	253	26.2	+21	01.5	12	38.8 ¹²⁶	-5	10.6 ¹⁵³	50	2	32	3	29	4	11	22	46
6	268	26.1	+21	01.0	27	10.5 ¹²⁷	-4	55.3 ¹⁵³	45	3	09	3	55	4	30	22	46
7	283	26.1		00.6	41	42.3 ¹²⁸		40.0 ¹⁵³	40		35	4	14	46	45	24	
8	298	26.0	+21	00.1	56	14.1 ¹²⁸		24.7 ¹⁵³	35	3	55	30	4	59	45	27	
9	313	26.0	+20	59.7	70	46.0 ¹²⁹	-4	09.4 ¹⁵³	30	4	12	4	44	5	11	44	30
10	328	25.9		59.3	85	17.9 ¹²⁹	-3	54.1 ¹⁵³	20		38	5	06	30	44	35	
11	343	25.9	+20	58.8	99	50.0 ¹³¹	-3	38.8 ¹⁵³	10 N	4	58	5	24	5	47	22	43
12	358	25.9	+20	58.4	114	22.0 ¹³⁰	-3	23.5 ¹⁵³	0	5	15	5	41	6	03	22	43
13	13	25.8		57.9	128	54.2 ¹³²	-3	08.3 ¹⁵²	10 S		30	5	56	18	42	49	
14	28	25.8		57.5	143	26.4 ¹³²	-2	53.0 ¹⁵³	20		44	6	11	35	42	53	
15	43	25.7		57.0	157	58.6 ¹³²		37.7 ¹⁵³	30	5	58	27	6	53	41	59	
16	58	25.7		56.6	172	31.0 ¹³⁴		22.5 ¹⁵²	35	6	06	37	7	04	41	62	
17	73	25.6	+20	56.2	187	03.3 ¹³³	-2	07.3 ¹⁵²	40	6	14	6	47	7	17	22	41
18	88	25.6	+20	55.7	201	35.7 ¹³⁴	-1	52.0 ¹⁵³	45	6	22	6	58	7	31	22	40
19	103	25.5		55.3	216	08.2 ¹³⁵		36.8 ¹⁵²	50	32	7	12	49	40	75	37	15
20	118	25.5		54.8	230	40.7 ¹³⁵		21.6 ¹⁵²	52		36	18	7	57	39	78	
21	133	25.5		54.4	245	13.3 ¹³⁶	-1	06.4 ¹⁵²	54	41	25	8	07	39	80		
22	148	25.4		53.9	259	45.9 ¹³⁶	-0	51.3 ¹⁵¹	56		46	33	17	39	83		
23	163	25.4		53.5	274	18.6 ¹³⁷		36.1 ¹⁵²	58	51	41	29	39	86			
24	178	25.3	+20	53.0	288	51.3 ¹³⁷	-0	21.0 ¹⁵¹	60 S	6	57	7	51	8	44	22	38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 16 ^m 2		Mag: -3.8 PMG: 10 ^h 17 ^m		Mag: +0.3 PMG: 6 ^h 44 ^m		Mag: -2.6 PMG: 4 ^h 50 ^m		Mag: +0.5 PMG: 2 ^h 03 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	295	47.1	205	52.1	+22	45.9	258	47.8	+12	45.1
1	310	49.6	220	51.3		46.0	273	48.6		45.7
2	325	52.0	235	50.5		46.1	288	49.4		46.2
3	340	54.5	250	49.7		46.2	303	50.2		46.8
4	355	57.0	265	48.9		46.3	318	51.0		47.3
5	10	59.4	280	48.1	+22	46.4	333	51.9	+12	47.9
6	26	01.9	295	47.3	+22	46.5	348	52.7	+12	48.4
7	41	04.4	310	46.5		46.6	3	53.5		49.0
8	56	06.8	325	45.7		46.7	18	54.3		49.5
9	71	09.3	340	44.9		46.8	33	55.2		50.1
10	86	11.8	355	44.1		46.9	48	56.0		50.6
11	101	14.2	10	43.3	+22	47.0	63	56.8	+12	51.2
12	116	16.7	25	42.5	+22	47.1	78	57.6	+12	51.7
13	131	19.1	40	41.7		47.2	93	58.4		52.3
14	146	21.6	55	40.8		47.3	108	59.3		52.8
15	161	24.1	70	40.0		47.4	124	00.1		53.4
16	176	26.5	85	39.2		47.5	139	00.9		53.9
17	191	29.0	100	38.4	+22	47.6	154	01.7	+12	54.5
18	206	31.5	115	37.6	+22	47.7	169	02.6	+12	55.0
19	221	33.9	130	36.8		47.8	184	03.4		55.5
20	236	36.4	145	36.0		47.9	199	04.2		56.1
21	251	38.9	160	35.2		48.0	214	05.0		56.6
22	266	41.3	175	34.4		48.1	229	05.8		57.2
23	281	43.8	190	33.6		48.2	244	06.7		57.7
24	296	46.3	205	32.8	+22	48.2	259	07.5	+12	58.3
Dif	—		-8		+1		+8		+5	
							+24		0	
									+26	
									-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 19 ^d 9	PHE { 4 ^h : 57.4 12 ^h : 57.1 20 ^h : 56.8									
	PMG: 12 ^h 06 ^m 3					SD: 15 ^h 7			PMG: 4 ^h 53 ^m		R°: 45 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	178	25.3	+20 53.0	288	51.3	-0 21.0		60 N	21 00	22 12	** **	22 50 2	11 21 89	
1	193	25.3		303	24.0 ¹³⁷	-0 05.9 ¹⁵¹		58	20 44	21 45	** **	52 6	20 85	
2	208	25.2		317	56.8 ¹³⁸	+0 09.2 ¹⁵¹		56	31	24	23 00	55 8	19 82	
3	223	25.2		332	29.7 ¹³⁹	24.3 ¹⁵¹		54	19	21 08	22 22	57 11	18 79	
4	238	25.2		347	02.5 ¹³⁸	39.4 ¹⁵¹		52	09	20 53	21 57	22 59 13	17 76	
5	253	25.1	+20 50.8	1	35.5 ¹⁴⁰	+0 54.4 ¹⁵⁰		50	20 00	20 41	21 38	23 01 15	11 16 74	
6	268	25.1	+20 50.3	16	08.4 ¹³⁹	+1 09.4 ¹⁵⁰		45	19 41	20 16	21 02	23 05 20	11 14 69	
7	283	25.0		30	41.4 ¹⁴⁰	24.4 ¹⁵⁰		40	25	19 57	20 36	09 23	12 65	
8	298	25.0		45	14.4 ¹⁴⁰	39.3 ¹⁴⁹		35	12	41	16	12 27	11 61	
9	313	25.0		59	47.5 ¹⁴¹	+1 54.2 ¹⁴⁹		30	19 01	28	20 00	14 30	10 58	
10	328	24.9		74	20.5 ¹⁴⁰	+2 09.1 ¹⁴⁹		20	18 42	19 06	19 34	19 35	08 53	
11	343	24.9	+20 48.0	88	53.7 ¹⁴²	+2 24.0 ¹⁴⁹		10 N	18 25	18 48	19 14	23 23 40	11 06 48	
12	358	24.8	+20 47.6	103	26.8 ¹⁴¹	+2 38.8 ¹⁴⁸		0	18 10	18 32	18 58	23 27 44	11 04 44	
13	13	24.8		118	00.0 ¹⁴²	+2 53.6 ¹⁴⁸		10 S	17 55	17	43	31 48	02 40	
14	28	24.7		132	33.2 ¹⁴²	+3 08.4 ¹⁴⁸		20	38	18 02	29	35 53	11 00 35	
15	43	24.7		147	06.4 ¹⁴²	23.1 ¹⁴⁷		30	20	17 46	15	40 58	10 58 30	
16	58	24.7		161	39.6 ¹⁴²	37.8 ¹⁴⁷		35	17 09	37	08	43 61	57 27	
17	73	24.6	+20 45.3	176	12.9 ¹⁴³	+3 52.5 ¹⁴⁷		40	16 57	17 27	18 00	23 46 65	10 56 23	
18	88	24.6	+20 44.8	190	46.2 ¹⁴³	+4 07.1 ¹⁴⁶		45	16 43	17 15	17 52	23 50 69	10 54 20	
19	103	24.6		205	19.5 ¹⁴³	21.7 ¹⁴⁶		50	25	17 02	42	55 73	52 15	
20	118	24.5		219	52.9 ¹⁴⁴	36.2 ¹⁴⁵		52	17	16 56	38	57 75	51 13	
21	133	24.5		234	26.2 ¹⁴³	+4 50.8 ¹⁴⁶		54	16 08	49	33	23 59 78	50 11	
22	148	24.4		248	59.6 ¹⁴⁴	+5 05.2 ¹⁴⁴		56	15 57	41	29	** ** *	49 8	
23	163	24.4		263	33.0 ¹⁴⁴	19.7 ¹⁴⁵		58	45	33	23	** ** *	48 5	
24	178	24.4	+20 42.0	278	06.4 ¹⁴⁴	+5 34.1 ¹⁴⁴		60 S	15 31	16 24	17 17	** ** *	10 47 2	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 4 ^h 12 ^m 2		Mag: -3.8 PMG: 10 ^h 18 ^m		Mag: +0.3 PMG: 6 ^h 43 ^m		Mag: -2.6 PMG: 4 ^h 46 ^m		Mag: +0.4 PMG: 1 ^h 59 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	296	46.3	205	32.8	+22 48.2	259	07.5	+12 58.3	288	21.9	+2 07.5	330	14.5	-14 46.5
1	311	48.7	220	32.0		274	08.3		303	24.3		345	17.1	
2	326	51.2	235	31.1		289	09.1		318	26.7		0	19.7	
3	341	53.6	250	30.3		304	10.0	+12 59.9	333	29.1		15	22.3	
4	356	56.1	265	29.5		319	10.8	+13 00.4	348	31.5		30	24.9	
5	11	58.6	280	28.7	+22 48.7	334	11.6	+13 01.0	3	33.9	+2 07.6	45	27.5	-14 46.7
6	27	01.0	295	27.9	+22 48.7	349	12.4	+13 01.5	18	36.3	+2 07.6	60	30.2	-14 46.8
7	42	03.5	310	27.1		4	13.2		33	38.6		75	32.8	
8	57	06.0	325	26.3		19	14.1		48	41.0		90	35.4	
9	72	08.4	340	25.5		34	14.9		63	43.4		105	38.0	
10	87	10.9	355	24.7		49	15.7		78	45.8		120	40.6	
11	102	13.4	10	23.8	+22 49.1	64	16.5	+13 04.2	93	48.2	+2 07.7	135	43.2	-14 47.1
12	117	15.8	25	23.0	+22 49.2	79	17.4	+13 04.8	108	50.6	+2 07.7	150	45.8	-14 47.1
13	132	18.3	40	22.2		94	18.2		123	53.0		165	48.4	
14	147	20.7	55	21.4		109	19.0		138	55.4		180	51.1	
15	162	23.2	70	20.6		124	19.8		153	57.8		195	53.7	
16	177	25.7	85	19.8		139	20.7		169	00.1		210	56.3	
17	192	28.1	100	19.0	+22 49.5	154	21.5	+13 07.5	184	02.5	+2 07.8	225	58.9	-14 47.4
18	207	30.6	115	18.2	+22 49.6	169	22.3	+13 08.0	199	04.9	+2 07.8	241	01.5	-14 47.5
19	222	33.1	130	17.4		184	23.1		214	07.3		256	04.1	
20	237	35.5	145	16.5		199	24.0		229	09.7		271	06.7	
21	252	38.0	160	15.7		214	24.8		244	12.1		286	09.4	
22	267	40.5	175	14.9		229	25.6		259	14.5		301	12.0	
23	282	42.9	190	14.1		244	26.4		274	16.9		316	14.6	
24	297	45.4	205	13.3	+22 50.0	259	27.3	+13 11.2	289	19.3	+2 07.9	331	17.2	-14 47.8
Dif	—		-8	+1		+8	+5		+24	0		+26	-1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 4			Edad: 20 ^d 9 PHE { 4 ^h : 56'5 12 ^h : 56'3 20 ^h : 56'0 SD: 15'4 PMG: 5 ^h 38 ^m R°: 43 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	178	24.4	+20	42.0	278	06.4	+5 34.1	60 N	** ** *	2 01	3 14	22 52	2	12 50	88
1	193	24.3		41.6	292	39.8 ¹⁴⁴	+5 48.4 ¹⁴³	58	** ** *	28	29	22 58	6	45	84
2	208	24.3		41.1	307	13.2 ¹⁴⁴	+6 02.7 ¹⁴³	56	1 14	2 49	43	23 03	10	41	80
3	223	24.3		40.6	321	46.6 ¹⁴⁴	17.0 ¹⁴³	54	1 51	3 06	3 54	08 12		37	77
4	238	24.2		40.2	336	20.1 ¹⁴⁵	31.2 ¹⁴²	52	2 16	20	4 04	12 15		33	75
5	253	24.2	+20	39.7	350	53.5 ¹⁴⁴	+6 45.4 ¹⁴²	50	2 36	3 32	4 13	23 16	17	12 30	73
6	268	24.1	+20	39.2	5	27.0 ¹⁴⁵	+6 59.5 ¹⁴¹	45	3 11	3 57	4 32	23 25	22	12 23	68
7	283	24.1		38.8	20	00.5 ¹⁴⁵	+7 13.6 ¹⁴¹	40	37	4 16	4 48	32 26		17	64
8	298	24.1		38.3	34	33.9 ¹⁴⁴	27.6 ¹⁴⁰	35	3 57	32	5 01	39 28		12	61
9	313	24.0		37.8	49	07.4 ¹⁴⁵	41.6 ¹⁴⁰	30	4 13	4 45	12	44 32		08	58
10	328	24.0		37.3	63	40.9 ¹⁴⁵	+7 55.6 ¹⁴⁰	20	39	5 07	31	23 54	36	12 01	52
11	343	24.0	+20	36.9	78	14.4 ¹⁴⁵	+8 09.4 ¹³⁸	10 N	4 58	5 25	5 48	** ** *	**	11 54	48
12	358	23.9	+20	36.4	92	47.9 ¹⁴⁵	+8 23.3 ¹³⁹	0	5 15	5 41	6 03	** ** *	**	11 48	44
13	13	23.9		35.9	107	21.4 ¹⁴⁵	37.1 ¹³⁸	10 S	30	5 56	18	** ** *	**	42	40
14	28	23.9		35.5	121	54.8 ¹⁴⁴	+8 50.8 ¹³⁷	20	44	6 11	34	** ** *	**	35	36
15	43	23.8		35.0	136	28.3 ¹⁴⁵	+9 04.5 ¹³⁷	30	5 57	27	6 52	** ** *	**	28	31
16	58	23.8		34.5	151	01.8 ¹⁴⁵	18.1 ¹³⁶	35	6 05	36	7 03	** ** *	**	24	28
17	73	23.8	+20	34.0	165	35.3 ¹⁴⁵	+9 31.7 ¹³⁶	40	6 12	6 46	7 15	** ** *	**	11 19	25
18	88	23.7	+20	33.6	180	08.7 ¹⁴⁴	+9 45.2 ¹³⁵	45	6 21	6 57	7 30	** ** *	**	11 14	20
19	103	23.7		33.1	194	42.2 ¹⁴⁵	+9 58.7 ¹³⁵	50	30	7 10	47	** ** *	**	07	16
20	118	23.7		32.6	209	15.7 ¹⁴⁵	+10 12.1 ¹³⁴	52	34	16	7 55	** ** *	**	04	14
21	133	23.6		32.1	223	49.1 ¹⁴⁴	25.4 ¹³³	54	39	23	8 04	** ** *	**	11 01	11
22	148	23.6		31.6	238	22.5 ¹⁴⁴	38.7 ¹³³	56	44	30	15	0 02	81	10 57	9
23	163	23.6		31.2	252	56.0 ¹⁴⁵	+10 51.9 ¹³²	58	49	39	26	05 84		53	6
24	178	23.5	+20	30.7	267	29.4 ¹⁴⁴	+11 05.1 ¹³²	60 S	6 54	7 48	8 40	0 08	88	10 49	2

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 08 ^m 3		Mag: -3.8 PMG: 10 ^h 20 ^m			Mag: +0.3 PMG: 6 ^h 42 ^m			Mag: -2.6 PMG: 4 ^h 42 ^m			Mag: +0.4 PMG: 1 ^h 55 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	'	°	°	'	°
0	297	45.4	205	13.3	+22 50.0	259	27.3	+13 11.2	289	19.3	+2 07.9	331	17.2	-14 47.8
1	312	47.9	220	12.5	50.0	274	28.1	11.8	304	21.7	08.0	346	19.8	47.9
2	327	50.3	235	11.7	50.1	289	28.9	12.3	319	24.1	08.0	1	22.4	47.9
3	342	52.8	250	10.9	50.1	304	29.7	12.9	334	26.5	08.0	16	25.0	48.0
4	357	55.2	265	10.0	50.2	319	30.6	13.4	349	28.8	08.0	31	27.7	48.1
5	12	57.7	280	09.2	+22 50.2	334	31.4	+13 13.9	4	31.2	+2 08.0	46	30.3	-14 48.1
6	28	00.2	295	08.4	+22 50.3	349	32.2	+13 14.5	19	33.6	+2 08.0	61	32.9	-14 48.2
7	43	02.6	310	07.6	50.4	4	33.0	15.0	34	36.0	08.1	76	35.5	48.2
8	58	05.1	325	06.8	50.4	19	33.9	15.5	49	38.4	08.1	91	38.1	48.3
9	73	07.6	340	06.0	50.5	34	34.7	16.1	64	40.8	08.1	106	40.7	48.4
10	88	10.0	355	05.2	50.5	49	35.5	16.6	79	43.2	08.1	121	43.4	48.4
11	103	12.5	10	04.3	+22 50.5	64	36.3	+13 17.2	94	45.6	+2 08.1	136	46.0	-14 48.5
12	118	15.0	25	03.5	+22 50.6	79	37.2	+13 17.7	109	48.0	+2 08.1	151	48.6	-14 48.5
13	133	17.4	40	02.7	50.6	94	38.0	18.2	124	50.4	08.1	166	51.2	48.6
14	148	19.9	55	01.9	50.7	109	38.8	18.8	139	52.8	08.2	181	53.8	48.6
15	163	22.4	70	01.1	50.7	124	39.6	19.3	154	55.2	08.2	196	56.4	48.7
16	178	24.8	85	00.3	50.8	139	40.5	19.8	169	57.6	08.2	211	59.1	48.8
17	193	27.3	99	59.5	+22 50.8	154	41.3	+13 20.4	185	00.0	+2 08.2	227	01.7	-14 48.8
18	208	29.7	114	58.6	+22 50.8	169	42.1	+13 20.9	200	02.4	+2 08.2	242	04.3	-14 48.9
19	223	32.2	129	57.8	50.9	184	42.9	21.4	215	04.8	08.2	257	06.9	48.9
20	238	34.7	144	57.0	50.9	199	43.8	22.0	230	07.2	08.3	272	09.5	49.0
21	253	37.1	159	56.2	51.0	214	44.6	22.5	245	09.6	08.3	287	12.1	49.0
22	268	39.6	174	55.4	51.0	229	45.4	23.0	260	12.0	08.3	302	14.8	49.1
23	283	42.1	189	54.6	51.0	244	46.2	23.6	275	14.4	08.3	317	17.4	49.2
24	298	44.5	204	53.8	+22 51.1	259	47.1	+13 24.1	290	16.8	+2 08.3	332	20.0	-14 49.2
Dif	—		-8		0	+8		+5	+24		0	+26		-1

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna								
	SD: 15 ^h 7			Edad: 21 ^d 9	PHE { 4 ^h : 55 ^m /7 12 ^h : 55 ^m /5 20 ^h : 55 ^m /3																
	PMG: 12 ^h 06 ^m 5					PMG: 6 ^h 21 ^m			R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°							
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m							
0	178	23.5	+20	30.7	267	29.4	+11	05.1	60 N	20	56	22	06	** ** *	22	54	5	14	18	88	
1	193	23.5		30.2	282	02.8 ¹⁴⁴		18.2 ¹³¹	58	41	21	40	** ** *	23	04	9		09	84		
2	208	23.5		29.7	296	36.2 ¹⁴⁴		31.2 ¹³⁰	56	28		20	22	51	13	12		14	01	80	
3	223	23.4		29.3	311	09.6 ¹⁴⁴		44.2 ¹³⁰	54	16	21	04	22	17	20	16		13	54	77	
4	238	23.4		28.8	325	42.9 ¹⁴³	+11	57.1 ¹²⁹	52	20	06	20	50	21	53	27	18		48	75	
5	253	23.4	+20	28.3	340	16.3 ¹⁴⁴	+12	10.0 ¹²⁹	50	19	58	20	38	21	34	23	33	21	13	43	72
6	268	23.4	+20	27.8	354	49.6 ¹⁴³	+12	22.8 ¹²⁸	45	19	39	20	14	20	59	23	47	24	13	31	67
7	283	23.3		27.3	9	22.9 ¹⁴³		35.5 ¹²⁷	40	24	19	55	34	23	58	28		21	63		
8	298	23.3		26.8	23	56.2 ¹⁴³	+12	48.2 ¹²⁷	35	11	40	20	15	** ** *	** ** *	13	60				
9	313	23.3		26.4	38	29.5 ¹⁴³	+13	00.8 ¹²⁶	30	19	00	27	19	59	** ** *	** ** *	13	06	57		
10	328	23.2		25.9	53	02.7 ¹⁴²		13.3 ¹²⁵	20	18	41	19	05	34	** ** *	** ** *	12	53	53		
11	343	23.2	+20	25.4	67	36.0 ¹⁴³	+13	25.8 ¹²⁵	10 N	18	25	18	48	19	14	0	03	40	12	42	49
12	358	23.2	+20	24.9	82	09.2 ¹⁴²	+13	38.2 ¹²⁴	0	18	10	18	32	18	58	0	11	44	12	32	45
13	13	23.1		24.4	96	42.4 ¹⁴²	+13	50.5 ¹²³	10 S	17	55	17		43	19	48		22	41		
14	28	23.1		23.9	111	15.5 ¹⁴¹	+14	02.7 ¹²²	20	39	18	03	30	28	52	12	11	37			
15	43	23.1		23.4	125	48.7 ¹⁴²		14.9 ¹²²	30	21	17	47	16	38	57	11	59	32			
16	58	23.1		22.9	140	21.8 ¹⁴¹		27.0 ¹²¹	35	17	11	38	09	44	60	52	29				
17	73	23.0	+20	22.5	154	54.9 ¹⁴¹	+14	39.1 ¹²¹	40	16	59	17	28	18	01	0	51	63	11	44	26
18	88	23.0	+20	22.0	169	28.0 ¹⁴¹	+14	51.0 ¹¹⁹	45	16	45	17	17	17	53	0	59	67	11	34	23
19	103	23.0		21.5	184	01.0 ¹⁴⁰	+15	02.9 ¹¹⁹	50	27	17	04	44	1	08	72	23	18			
20	118	23.0		21.0	198	34.0 ¹⁴⁰		14.8 ¹¹⁹	52	19	16	58	40	12	75	18	16				
21	133	22.9		20.5	213	07.0 ¹⁴⁰		26.5 ¹¹⁷	54	10		51	36	17	78	12	14				
22	148	22.9		20.0	227	39.9 ¹³⁹		38.2 ¹¹⁷	56	16	00	44	31	23	80	11	06	11			
23	163	22.9		19.5	242	12.8 ¹³⁹	+15	49.8 ¹¹⁶	58	15	49	36	26	29	84	10	59	7			
24	178	22.8	+20	19.0	256	45.7 ¹³⁹	+16	01.3 ¹¹⁵	60 S	15	35	16	27	17	20	1	36	88	10	51	4

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 4 ^h 04 ^m 4		Mag: -3.8 PMG: 10 ^h 21 ^m			Mag: +0.3 PMG: 6 ^h 40 ^m			Mag: -2.6 PMG: 4 ^h 38 ^m			Mag: +0.4 PMG: 1 ^h 50 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	298	44.5	204	53.8	+22	51.1	259	47.1	+13	24.1	290	16.8	+2	08.3	332	20.0	-14	49.2
1	313	47.0	219	52.9		51.1	274	47.9		24.6	305	19.2		08.3	347	22.6		49.3
2	328	49.5	234	52.1		51.1	289	48.7		25.2	320	21.6		08.3	2	25.2		49.3
3	343	51.9	249	51.3		51.1	304	49.6		25.7	335	24.0		08.4	17	27.8		49.4
4	358	54.4	264	50.5		51.2	319	50.4		26.2	350	26.4		08.4	32	30.5		49.5
5	13	56.8	279	49.7	+22	51.2	334	51.2	+13	26.7	5	28.8	+2	08.4	47	33.1	-14	49.5
6	28	59.3	294	48.9	+22	51.2	349	52.0	+13	27.3	20	31.2	+2	08.4	62	35.7	-14	49.6
7	44	01.8	309	48.0		51.2	4	52.9		27.8	35	33.6		08.4	77	38.3		49.6
8	59	04.2	324	47.2		51.3	19	53.7		28.3	50	36.0		08.4	92	40.9		49.7
9	74	06.7	339	46.4		51.3	34	54.5		28.9	65	38.4		08.4	107	43.5		49.7
10	89	09.2	354	45.6		51.3	49	55.4		29.4	80	40.8		08.4	122	46.2		49.8
11	104	11.6	9	44.8	+22	51.3	64	56.2	+13	29.9	95	43.2	+2	08.5	137	48.8	-14	49.9
12	119	14.1	24	44.0	+22	51.3	79	57.0	+13	30.5	110	45.6	+2	08.5	152	51.4	-14	49.9
13	134	16.6	39	43.1		51.4	94	57.8		31.0	125	48.0		08.5	167	54.0		50.0
14	149	19.0	54	42.3		51.4	109	58.7		31.5	140	50.4		08.5	182	56.6		50.0
15	164	21.5	69	41.5		51.4	124	59.5		32.0	155	52.8		08.5	197	59.3		50.1
16	179	24.0	84	40.7		51.4	140	00.3		32.6	170	55.2		08.5	213	01.9		50.2
17	194	26.4	99	39.9	+22	51.4	155	01.1	+13	33.1	185	57.6	+2	08.5	228	04.5	-14	50.2
18	209	28.9	114	39.1	+22	51.4	170	02.0	+13	33.6	201	00.0	+2	08.5	243	07.1	-14	50.3
19	224	31.3	129	38.2		51.4	185	02.8		34.2	216	02.4		08.6	258	09.7		50.3
20	239	33.8	144	37.4		51.5	200	03.6		34.7	231	04.8		08.6	273	12.3		50.4
21	254	36.3	159	36.6		51.5	215	04.5		35.2	246	07.3		08.6	288	15.0		50.4
22	269	38.7	174	35.8		51.5	230	05.3		35.7	261	09.7		08.6	303	17.6		50.5
23	284	41.2	189	35.0		51.5	245	06.1		36.3	276	12.1		08.6	318	20.2		50.6
24	299	43.7	204	34.2	+22	51.5	260	07.0	+13	36.8	291	14.5	+2	08.6	333	22.8	-14	50.6
Dif	—		-8			0	+8			+5	+24			0	+26			-1

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				Edad: 22 ^d 9 PHE { 4 ^h : 55'1 12 ^h : 54'9 20 ^h : 54'8 SD: 15'0 PMG: 7 ^h 06 ^m R°: 46 ^m															
	hG ☉		Dec		hG ☾		Dif			Dif			Náutico	Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	178	22.8	+20	19.0	256	45.7	+16	01.3	60 N	** ** *	2 08	3 18	22 59	9	15 46	88				
1	193	22.8		18.5	271	18.6 ¹³⁹		12.7 ¹¹⁴	58	** ** *	33	33	23 13	14	33 83					
2	208	22.8		18.0	285	51.4 ¹³⁸		24.1 ¹¹⁴	56	1 23	2 53	46	25 18		21 79					
3	223	22.8		17.5	300	24.2 ¹³⁸		35.4 ¹¹³	54	1 57	3 09	3 57	36 20		11 76					
4	238	22.7		17.0	314	57.0 ¹³⁸		46.6 ¹¹²	52	2 21	23	4 07	45 23		15 03	73				
5	253	22.7	+20	16.5	329	29.7 ¹³⁷	+16	57.7 ¹¹¹	50	2 39	3 35	4 16	23 54	25	14 55	70				
6	268	22.7	+20	16.0	344	02.4 ¹³⁷	+17	08.7 ¹¹⁰	45	3 14	3 59	4 34	** ** *	**	14 38	66				
7	283	22.7		15.5	358	35.0 ¹³⁶		19.7 ¹¹⁰	40	39	4 18	4 49	** ** *	**	24 63					
8	298	22.6		15.0	13	07.6 ¹³⁶		30.6 ¹⁰⁹	35	3 59	33	5 02	0 07	32	13 59					
9	313	22.6		14.5	27	40.2 ¹³⁶		41.4 ¹⁰⁸	30	4 15	4 46	13	16 34		14 03	57				
10	328	22.6		14.0	42	12.8 ¹³⁶	+17	52.1 ¹⁰⁷	20	40	5 08	32	30 39		13 46	53				
11	343	22.6	+20	13.5	56	45.3 ¹³⁵	+18	02.7 ¹⁰⁶	10 N	4 59	5 25	5 48	0 43	42	13 31	49				
12	358	22.6	+20	13.0	71	17.7 ¹³⁴	+18	13.3 ¹⁰⁶	0	5 15	5 41	6 03	0 55	46	13 17	46				
13	13	22.5		12.5	85	50.2 ¹³⁵		23.7 ¹⁰⁴	10 S	30	5 55	18	1 07	49	13 03	43				
14	28	22.5		12.0	100	22.5 ¹³³		34.1 ¹⁰⁴	20	43	6 10	34	20 53		12 48	40				
15	43	22.5		11.5	114	54.9 ¹³⁴		44.4 ¹⁰³	30	5 57	26	6 52	35 57		31 36					
16	58	22.5		11.0	129	27.2 ¹³³	+18	54.6 ¹⁰²	35	6 04	35	7 02	44 60		21 34					
17	73	22.4	+20	10.5	143	59.5 ¹³³	+19	04.7 ¹⁰¹	40	6 11	6 44	7 14	1 54	63	12 10	31				
18	88	22.4	+20	10.0	158	31.7 ¹³²	+19	14.7 ¹⁰⁰	45	6 19	6 55	7 28	2 06	67	11 57	27				
19	103	22.4		09.5	173	03.9 ¹³²		24.6 ⁹⁹	50	28	7 08	45	20 72		41 23					
20	118	22.4		09.0	187	36.0 ¹³¹		34.5 ⁹⁹	52	32	14	7 53	27 74		34 20					
21	133	22.4		08.5	202	08.1 ¹³¹		44.2 ⁹⁷	54	37	21	8 02	35 76		26 18					
22	148	22.3		08.0	216	40.2 ¹³¹	+19	53.9 ⁹⁷	56	41	28	12	43 80		17 14					
23	163	22.3		07.5	231	12.2 ¹³⁰	+20	03.5 ⁹⁶	58	46	36	23	2 53	83	11 06	11				
24	178	22.3	+20	07.0	245	44.2 ¹³⁰	+20	12.9 ⁹⁴	60 S	6 52	7 45	8 36	3 04	88	10 55	6				
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 4 ^h 00 ^m 4				Mag: -3.8 PMG: 10 ^h 22 ^m				Mag: +0.3 PMG: 6 ^h 39 ^m				Mag: -2.6 PMG: 4 ^h 34 ^m				Mag: +0.4 PMG: 1 ^h 46 ^m			
	hG ♈		Dec		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	299	43.7			204	34.2	+22	51.5	260	07.0	+13	36.8	291	14.5	+2	08.6	333	22.8	-14	50.6
1	314	46.1			219	33.3		51.5	275	07.8		37.3	306	16.9		08.6	348	25.4		50.7
2	329	48.6			234	32.5		51.5	290	08.6		37.8	321	19.3		08.6	3	28.1		50.7
3	344	51.1			249	31.7		51.5	305	09.4		38.4	336	21.7		08.6	18	30.7		50.8
4	359	53.5			264	30.9		51.5	320	10.3		38.9	351	24.1		08.6	33	33.3		50.9
5	14	56.0			279	30.1	+22	51.5	335	11.1	+13	39.4	6	26.5	+2	08.7	48	35.9	-14	50.9
6	29	58.5			294	29.2	+22	51.5	350	11.9	+13	39.9	21	28.9	+2	08.7	63	38.5	-14	51.0
7	45	00.9			309	28.4		51.5	5	12.8		40.5	36	31.3		08.7	78	41.2		51.0
8	60	03.4			324	27.6		51.5	20	13.6		41.0	51	33.7		08.7	93	43.8		51.1
9	75	05.8			339	26.8		51.5	35	14.4		41.5	66	36.2		08.7	108	46.4		51.2
10	90	08.3			354	26.0		51.5	50	15.3		42.0	81	38.6		08.7	123	49.0		51.2
11	105	10.8			9	25.2	+22	51.5	65	16.1	+13	42.6	96	41.0	+2	08.7	138	51.6	-14	51.3
12	120	13.2			24	24.3	+22	51.4	80	16.9	+13	43.1	111	43.4	+2	08.7	153	54.3	-14	51.3
13	135	15.7			39	23.5		51.4	95	17.7		43.6	126	45.8		08.7	168	56.9		51.4
14	150	18.2			54	22.7		51.4	110	18.6		44.1	141	48.2		08.7	183	59.5		51.4
15	165	20.6			69	21.9		51.4	125	19.4		44.7	156	50.6		08.8	199	02.1		51.5
16	180	23.1			84	21.1		51.4	140	20.2		45.2	171	53.0		08.8	214	04.7		51.6
17	195	25.6			99	20.2	+22	51.4	155	21.1	+13	45.7	186	55.4	+2	08.8	229	07.4	-14	51.6
18	210	28.0			114	19.4	+22	51.4	170	21.9	+13	46.2	201	57.9	+2	08.8	244	10.0	-14	51.7
19	225	30.5			129	18.6		51.4	185	22.7		46.7	217	00.3		08.8	259	12.6		51.7
20	240	32.9			144	17.8		51.3	200	23.6		47.3	232	02.7		08.8	274	15.2		51.8
21	255	35.4			159	17.0		51.3	215	24.4		47.8	247	05.1		08.8	289	17.8		51.9
22	270	37.9			174	16.1		51.3	230	25.2		48.3	262	07.5		08.8	304	20.5		51.9
23	285	40.3			189	15.3		51.3	245	26.1		48.8	277	09.9		08.8	319	23.1		52.0
24	300	42.8			204	14.5	+22	51.3	260	26.9	+13	49.4	292	12.3	+2	08.8	334	25.7	-14	52.0
Dif	—				-8				+8				+24				+26			
					0				+5				0				-1			

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7			Edad: 23 ^d 9	PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 5 20 ^h : 54 ^m 4	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	PMG: 12 ^h 06 ^m 5					SD: 14 ^h 9			R°: 48 ^m						
	hG ☉	Dec		hG ☾	Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h m	h m	h m	h m	m	h m	m	
0	178	22.3	+20 07.0	245	44.2	+20 12.9	60 N	20 51	22 00	** **	23 08	16	17 14	85	
1	193	22.3	06.5	260	16.1	22.3	58	37	21 35	** **	27 22		16 56	78	
2	208	22.3	06.0	274	48.0	31.6	56	24	16	22 42	43 26		40 75		
3	223	22.2	05.5	289	19.9	40.8	54	13	21 01	22 11	23 56	29	27 72		
4	238	22.2	05.0	303	51.7	49.9	52	20 04	20 47	21 48	** **	** *	16 69		
5	253	22.2	+20 04.4	318	23.4	+20 58.9	50	19 55	20 36	21 30	** **	** *	16 05	68	
6	268	22.2	+20 03.9	332	55.1	+21 07.8	45	19 37	20 12	20 57	0 11	30	15 44	63	
7	283	22.2	03.4	347	26.8	16.6	40	22	19 53	32	26 33		27 60		
8	298	22.1	02.9	1	58.4	25.3	35	19 10	38	20 13	39 35		12 59		
9	313	22.1	02.4	16	30.0	33.9	30	18 59	26	19 57	0 50	37	15 00	56	
10	328	22.1	01.9	31	01.6	42.4	20	41	19 05	33	1 09	41	14 39	53	
11	343	22.1	+20 01.4	45	33.0	+21 50.8	10 N	18 25	18 47	19 14	1 25	45	14 20	51	
12	358	22.1	+20 00.9	60	04.5	+21 59.1	0	18 10	18 32	18 58	1 41	47	14 03	49	
13	13	22.1	+20 00.3	74	35.9	+22 07.3	10 S	17 55	18	43	1 56	50	13 46	46	
14	28	22.0	+19 59.8	89	07.2	15.4	20	40	18 03	30	2 13	53	28 43		
15	43	22.0	59.3	103	38.6	23.4	30	22	17 48	17	32 57		13 07	40	
16	58	22.0	58.8	118	09.8	31.3	35	12	39	10	44 59		12 55	38	
17	73	22.0	+19 58.3	132	41.0	+22 39.1	40	17 00	17 30	18 03	2 57	62	12 41	36	
18	88	22.0	+19 57.8	147	12.2	+22 46.8	45	16 47	17 19	17 55	3 13	64	12 24	33	
19	103	22.0	57.2	161	43.4	+22 54.3	50	30	06	46	32 69		12 04	29	
20	118	21.9	56.7	176	14.4	+23 01.8	52	22	17 00	42	41 71		11 54	27	
21	133	21.9	56.2	190	45.5	09.2	54	13	16 54	38	3 51	74	44 24		
22	148	21.9	55.7	205	16.5	16.4	56	16 04	47	34	4 03	77	31 21		
23	163	21.9	55.2	219	47.4	23.6	58	15 52	39	29	16 82		17 17		
24	178	21.9	+19 54.6	234	18.3	+23 30.6	60 S	15 39	16 30	17 23	4 32	88	11 01	11	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 56 ^m 5		Mag: -3.8 PMG: 10 ^h 24 ^m		Mag: +0.3 PMG: 6 ^h 38 ^m		Mag: -2.7 PMG: 4 ^h 30 ^m		Mag: +0.4 PMG: 1 ^h 42 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	300	42.8	204 14.5	+22 51.3	260 26.9	+13 49.4	292 12.3	+2 08.8	334 25.7	-14 52.0
1	315	45.3	219 13.7	51.2	275 27.7	49.9	307 14.8	08.8	349 28.3	52.1
2	330	47.7	234 12.9	51.2	290 28.6	50.4	322 17.2	08.8	4 31.0	52.2
3	345	50.2	249 12.0	51.2	305 29.4	50.9	337 19.6	08.9	19 33.6	52.2
4	0	52.7	264 11.2	51.1	320 30.2	51.4	352 22.0	08.9	34 36.2	52.3
5	15	55.1	279 10.4	+22 51.1	335 31.0	+13 52.0	7 24.4	+2 08.9	49 38.8	-14 52.3
6	30	57.6	294 09.6	+22 51.1	350 31.9	+13 52.5	22 26.8	+2 08.9	64 41.4	-14 52.4
7	46	00.1	309 08.8	51.1	5 32.7	53.0	37 29.3	08.9	79 44.1	52.5
8	61	02.5	324 07.9	51.0	20 33.5	53.5	52 31.7	08.9	94 46.7	52.5
9	76	05.0	339 07.1	51.0	35 34.4	54.0	67 34.1	08.9	109 49.3	52.6
10	91	07.4	354 06.3	51.0	50 35.2	54.5	82 36.5	08.9	124 51.9	52.6
11	106	09.9	9 05.5	+22 50.9	65 36.0	+13 55.1	97 38.9	+2 08.9	139 54.6	-14 52.7
12	121	12.4	24 04.7	+22 50.9	80 36.9	+13 55.6	112 41.3	+2 08.9	154 57.2	-14 52.7
13	136	14.8	39 03.8	50.9	95 37.7	56.1	127 43.8	08.9	169 59.8	52.8
14	151	17.3	54 03.0	50.8	110 38.5	56.6	142 46.2	08.9	185 02.4	52.9
15	166	19.8	69 02.2	50.8	125 39.4	57.1	157 48.6	08.9	200 05.0	52.9
16	181	22.2	84 01.4	50.7	140 40.2	57.6	172 51.0	08.9	215 07.7	53.0
17	196	24.7	99 00.6	+22 50.7	155 41.0	+13 58.2	187 53.4	+2 08.9	230 10.3	-14 53.0
18	211	27.2	113 59.7	+22 50.6	170 41.9	+13 58.7	202 55.9	+2 08.9	245 12.9	-14 53.1
19	226	29.6	128 58.9	50.6	185 42.7	59.2	217 58.3	08.9	260 15.5	53.2
20	241	32.1	143 58.1	50.6	200 43.5	+13 59.7	233 00.7	09.0	275 18.2	53.2
21	256	34.6	158 57.3	50.5	215 44.4	+14 00.2	248 03.1	09.0	290 20.8	53.3
22	271	37.0	173 56.5	50.5	230 45.2	00.7	263 05.5	09.0	305 23.4	53.3
23	286	39.5	188 55.6	50.4	245 46.0	01.3	278 08.0	09.0	320 26.0	53.4
24	301	41.9	203 54.8	+22 50.4	260 46.9	+14 01.8	293 10.4	+2 09.0	335 28.7	-14 53.5
Dif	—		-8 0		+8 +5		+24 0		+26 -1	

UT	SOL				☾ LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 6				Edad: 24 ^d 9 PHE { SD: 14'8 PMG: 8 ^h 40 ^m 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'1 R°: 49 ^m													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	21.9	+19	54.6	234	18.3	+23	30.6	60 N	**	**	2	14	3	22	23	24	31
1	193	21.9		54.1	248	49.2	119	37.6	58	0	25	38	37			23	49	35
2	208	21.9		53.6	263	20.0	118	44.4	56	1	32	2	57	3	49	**	**	**
3	223	21.8		53.1	277	50.8	118	51.1	54	2	03	3	13	4	00	**	**	**
4	238	21.8		52.5	292	21.5	117	+23	57.7	25	26	10				0	08	31
5	253	21.8	+19	52.0	306	52.2	117	+24	04.2	50	2	43	3	38	4	18	0	19
6	268	21.8	+19	51.5	321	22.9	117	+24	10.6	45	3	17	4	02	4	36	0	41
7	283	21.8		51.0	335	53.5	116	16.9	63	40	3	41	20	4	51	0	59	39
8	298	21.8		50.4	350	24.0	115	23.0	61	35	4	00	35	5	03	1	14	41
9	313	21.8		49.9	4	54.6	116	29.1	61	30	16	4	48	14		27	43	
10	328	21.8		49.4	19	25.0	114	35.0	59	20	4	40	5	09	33	1	50	45
11	343	21.7	+19	48.9	33	55.5	115	+24	40.8	10 N	5	00	5	26	5	48	2	10
12	358	21.7	+19	48.3	48	25.9	114	+24	46.5	0	5	15	5	41	6	03	2	28
13	13	21.7		47.8	62	56.2	113	52.1	56	10 S	30	5	55	18		2	46	52
14	28	21.7		47.3	77	26.5	113	+24	57.5	20	43	6	10	33		3	06	54
15	43	21.7		46.7	91	56.8	113	+25	02.9	54	5	56	25	6	50	29	56	
16	58	21.7		46.2	106	27.1	113	08.1	52	35	6	03	33	7	01	43	57	
17	73	21.7	+19	45.7	120	57.3	112	+25	13.2	40	6	10	6	43	7	12	3	59
18	88	21.7	+19	45.1	135	27.4	111	+25	18.2	45	6	18	6	54	7	26	4	17
19	103	21.7		44.6	149	57.6	112	23.1	49	50	26	7	06	42		4	41	65
20	118	21.7		44.1	164	27.7	111	27.9	48	52	30	12	50			4	52	67
21	133	21.6		43.5	178	57.7	110	32.5	46	54	34	18	7	59		5	05	69
22	148	21.6		43.0	193	27.7	110	37.0	45	56	39	25	8	08		20	71	
23	163	21.6		42.5	207	57.7	110	41.4	44	58	44	33	20			5	38	75
24	178	21.6	+19	41.9	222	27.7	110	+25	45.7	60 S	6	49	7	42	8	32	6	00

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 52 ^m 6		Mag: -3.8 PMG: 10 ^h 25 ^m		Mag: +0.3 PMG: 6 ^h 37 ^m		Mag: -2.7 PMG: 4 ^h 27 ^m		Mag: +0.4 PMG: 1 ^h 38 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	301	41.9	203	54.8	+22	50.4	260	46.9	+14	01.8
1	316	44.4	218	54.0		50.3	275	47.7		02.3
2	331	46.9	233	53.2		50.3	290	48.6		02.8
3	346	49.3	248	52.4		50.2	305	49.4		03.3
4	1	51.8	263	51.5		50.2	320	50.2		03.8
5	16	54.3	278	50.7	+22	50.1	335	51.1	+14	04.3
6	31	56.7	293	49.9	+22	50.0	350	51.9	+14	04.9
7	46	59.2	308	49.1		50.0	5	52.7		05.4
8	62	01.7	323	48.3		49.9	20	53.6		05.9
9	77	04.1	338	47.4		49.9	35	54.4		06.4
10	92	06.6	353	46.6		49.8	50	55.2		06.9
11	107	09.1	8	45.8	+22	49.7	65	56.1	+14	07.4
12	122	11.5	23	45.0	+22	49.7	80	56.9	+14	07.9
13	137	14.0	38	44.1		49.6	95	57.7		08.4
14	152	16.4	53	43.3		49.5	110	58.6		08.9
15	167	18.9	68	42.5		49.5	125	59.4		09.5
16	182	21.4	83	41.7		49.4	141	00.2		10.0
17	197	23.8	98	40.9	+22	49.3	156	01.1	+14	10.5
18	212	26.3	113	40.0	+22	49.3	171	01.9	+14	11.0
19	227	28.8	128	39.2		49.2	186	02.8		11.5
20	242	31.2	143	38.4		49.1	201	03.6		12.0
21	257	33.7	158	37.6		49.1	216	04.4		12.5
22	272	36.2	173	36.8		49.0	231	05.3		13.0
23	287	38.6	188	35.9		48.9	246	06.1		13.5
24	302	41.1	203	35.1	+22	48.8	261	06.9	+14	14.0
Dif	—		-8		-1		+8		+5	
							+24		0	
									+26	
									-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7			Edad: 25 ^d 9 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 0 20 ^h : 54 ^m 0 R°: 51 ^m														
	PMG: 12 ^h 06 ^m 6				SD: 14 ^h 7 PMG: 9 ^h 29 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m				
0	178	21.6	+19	41.9	222	27.7	+25	45.7	60 N	20 47	21 53	** **	23 55 54	19 52 52				
1	193	21.6		41.4	236	57.6 ¹⁰⁹		49.9 42	58	33	30	23 24	** ** *	23 52				
2	208	21.6		40.9	251	27.5 ¹⁰⁹		53.9 40	56	21	21 12	22 34	0 09 38	19 01 52				
3	223	21.6		40.3	265	57.4 ¹⁰⁹	+25	57.8 39	54	10	20 57	22 05	25 40	18 42 52				
4	238	21.6		39.8	280	27.2 ¹⁰⁸	+26	01.6 38	52	20 01	44	21 44	39 42	27 52				
5	253	21.6	+19	39.3	294	57.0 ¹⁰⁸	+26	05.3 37	50	19 53	20 33	21 26	0 52 42	18 14 51				
6	268	21.6	+19	38.7	309	26.8 ¹⁰⁸	+26	08.8 35	45	19 35	20 10	20 54	1 17 45	17 46 52				
7	283	21.6		38.2	323	56.5 ¹⁰⁷		12.2 34	40	21	19 52	30	38 45	24 52				
8	298	21.6		37.6	338	26.2 ¹⁰⁷		15.5 33	35	19 09	37	20 11	1 55 47	17 07 51				
9	313	21.6		37.1	352	55.9 ¹⁰⁷		18.7 32	30	18 58	24	19 56	2 10 47	16 51 52				
10	328	21.5		36.6	7	25.5 ¹⁰⁶		21.7 30	20	40	19 04	32	35 49	25 51				
11	343	21.5	+19	36.0	21	55.2 ¹⁰⁷	+26	24.6 29	10 N	18 25	18 47	19 13	2 57 49	16 02 51				
12	358	21.5	+19	35.5	36	24.8 ¹⁰⁶	+26	27.4 28	0	18 10	18 32	18 58	3 17 51	15 41 51				
13	13	21.5		34.9	50	54.4 ¹⁰⁶		30.1 27	10 S	17 56	18	44	3 38 51	15 20 51				
14	28	21.5		34.4	65	23.9 ¹⁰⁵		32.6 25	20	41	18 04	31	4 00 52	14 58 50				
15	43	21.5		33.8	79	53.5 ¹⁰⁶		35.0 24	30	23	17 49	18	25 53	32 50				
16	58	21.5		33.3	94	23.0 ¹⁰⁵		37.3 23	35	13	41	11	40 54	14 17 49				
17	73	21.5	+19	32.8	108	52.5 ¹⁰⁵	+26	39.5 22	40	17 02	17 31	18 04	4 58 54	13 59 49				
18	88	21.5	+19	32.2	123	22.0 ¹⁰⁵	+26	41.5 20	45	16 49	17 21	17 57	5 19 55	13 37 49				
19	103	21.5		31.7	137	51.5 ¹⁰⁵		43.4 19	50	32	09	48	46 56	13 10 48				
20	118	21.5		31.1	152	20.9 ¹⁰⁴		45.2 17	52	25	17 03	45	5 59 57	12 57 47				
21	133	21.5		30.6	166	50.3 ¹⁰⁴		46.9 15	54	16	16 57	41	6 14 58	42 46				
22	148	21.5		30.0	181	19.8 ¹⁰⁵		48.4 15	56	16 07	50	36	31 60	24 45				
23	163	21.5		29.5	195	49.2 ¹⁰⁴		49.8 14	58	15 56	42	32	6 53 61	12 02 44				
24	178	21.5	+19	28.9	210	18.6 ¹⁰⁴	+26	51.0 12	60 S	15 44	16 34	17 27	7 21 63	11 34 42				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 48 ^m 6		Mag: -3.8 PMG: 10 ^h 26 ^m				Mag: +0.3 PMG: 6 ^h 35 ^m				Mag: -2.7 PMG: 4 ^h 23 ^m				Mag: +0.4 PMG: 1 ^h 34 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	302	41.1	203	35.1	+22	48.8	261	06.9	+14	14.0	294	08.6	+2	09.0	336	31.6	-14	54.9
1	317	43.6	218	34.3		48.7	276	07.8		14.5	309	11.1		09.0	351	34.3		55.0
2	332	46.0	233	33.5		48.7	291	08.6		15.1	324	13.5		09.0	6	36.9		55.0
3	347	48.5	248	32.7		48.6	306	09.5		15.6	339	15.9		09.0	21	39.5		55.1
4	2	50.9	263	31.8		48.5	321	10.3		16.1	354	18.3		09.0	36	42.1		55.1
5	17	53.4	278	31.0	+22	48.4	336	11.1	+14	16.6	9	20.8	+2	09.0	51	44.8	-14	55.2
6	32	55.9	293	30.2	+22	48.3	351	12.0	+14	17.1	24	23.2	+2	09.0	66	47.4	-14	55.3
7	47	58.3	308	29.4		48.3	6	12.8		17.6	39	25.6		09.0	81	50.0		55.3
8	63	00.8	323	28.5		48.2	21	13.6		18.1	54	28.1		09.0	96	52.7		55.4
9	78	03.3	338	27.7		48.1	36	14.5		18.6	69	30.5		09.0	111	55.3		55.5
10	93	05.7	353	26.9		48.0	51	15.3		19.1	84	32.9		09.0	126	57.9		55.5
11	108	08.2	8	26.1	+22	47.9	66	16.2	+14	19.6	99	35.4	+2	09.0	142	00.5	-14	55.6
12	123	10.7	23	25.3	+22	47.8	81	17.0	+14	20.1	114	37.8	+2	09.0	157	03.2	-14	55.6
13	138	13.1	38	24.4		47.7	96	17.8		20.6	129	40.2		09.0	172	05.8		55.7
14	153	15.6	53	23.6		47.6	111	18.7		21.1	144	42.7		09.0	187	08.4		55.8
15	168	18.0	68	22.8		47.5	126	19.5		21.6	159	45.1		09.0	202	11.0		55.8
16	183	20.5	83	22.0		47.4	141	20.4		22.1	174	47.5		09.0	217	13.7		55.9
17	198	23.0	98	21.2	+22	47.3	156	21.2	+14	22.6	189	50.0	+2	09.0	232	16.3	-14	55.9
18	213	25.4	113	20.3	+22	47.2	171	22.0	+14	23.1	204	52.4	+2	09.0	247	18.9	-14	56.0
19	228	27.9	128	19.5		47.1	186	22.9		23.7	219	54.8		09.0	262	21.5		56.1
20	243	30.4	143	18.7		47.0	201	23.7		24.2	234	57.3		09.0	277	24.2		56.1
21	258	32.8	158	17.9		46.9	216	24.5		24.7	249	59.7		09.0	292	26.8		56.2
22	273	35.3	173	17.0		46.8	231	25.4		25.2	265	02.2		09.0	307	29.4		56.2
23	288	37.8	188	16.2		46.7	246	26.2		25.7	280	04.6		09.0	322	32.1		56.3
24	303	40.2	203	15.4	+22	46.6	261	27.1	+14	26.2	295	07.0	+2	09.0	337	34.7	-14	56.4
Dif	—		-8		-1		+8		+5		+24		0		+26		-1	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15:7 PMG: 12 ^h 06 ^m 6				Edad: 26 ^d 9 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:0 R°: 51 ^m												
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	21.5	+19	28.9	210	18.6	+26	51.0	12	60 N	** **	2 21	3 27	** **	**	20 44	29
1	193	21.5		28.4	224	47.9 ¹⁰³		52.2	10	58	0 50	2 44	41	0 24	54	20 15	34
2	208	21.5		27.8	239	17.3 ¹⁰⁴		53.2	9	56	1 40	3 02	3 53	0 47	53	19 53	37
3	223	21.5		27.3	253	46.7 ¹⁰⁴		54.1	9	54	2 09	17	4 03	1 05	53	34	39
4	238	21.5		26.7	268	16.0 ¹⁰³		54.8	7	52	30	30	13	21	52	19	40
5	253	21.5	+19	26.2	282	45.4 ¹⁰⁴	+26	55.4	6	50	2 47	3 41	4 21	1 34	53	19 05	42
6	268	21.5	+19	25.6	297	14.7 ¹⁰³	+26	55.9	5	45	3 20	4 04	4 39	2 02	52	18 38	43
7	283	21.5		25.1	311	44.0 ¹⁰³		56.3	4	40	3 44	22	4 53	23	53	18 16	45
8	298	21.5		24.5	326	13.4 ¹⁰⁴		56.5	2	35	4 02	37	5 05	42	52	17 58	46
9	313	21.5		24.0	340	42.7 ¹⁰³		56.6	1	30	17	4 49	15	2 57	52	43	47
10	328	21.5		23.4	355	12.0 ¹⁰³		56.6	0	20	4 41	5 10	33	3 24	51	17 16	49
11	343	21.5	+19	22.8	9	41.3 ¹⁰³	+26	56.4	2	10 N	5 00	5 26	5 49	3 46	51	16 53	50
12	358	21.5	+19	22.3	24	10.6 ¹⁰³	+26	56.2	2	0	5 16	5 41	6 03	4 08	50	16 32	51
13	13	21.5		21.7	38	40.0 ¹⁰⁴		55.7	5	10 S	29	5 55	17	29	50	16 11	51
14	28	21.5		21.2	53	09.3 ¹⁰³		55.2	5	20	42	6 09	32	4 52	50	15 48	53
15	43	21.5		20.6	67	38.6 ¹⁰³		54.5	7	30	5 55	24	49	5 18	50	22	53
16	58	21.5		20.1	82	08.0 ¹⁰⁴		53.7	8	35	6 01	32	6 59	34	49	15 06	54
17	73	21.5	+19	19.5	96	37.3 ¹⁰³	+26	52.8	9	40	6 08	6 41	7 11	5 52	49	14 48	55
18	88	21.5	+19	18.9	111	06.6 ¹⁰³	+26	51.7	11	45	6 16	6 52	7 24	6 14	48	14 26	56
19	103	21.5		18.4	125	36.0 ¹⁰⁴		50.5	12	50	24	7 04	40	42	47	13 58	57
20	118	21.5		17.8	140	05.3 ¹⁰³		49.2	13	52	28	09	47	6 56	46	44	58
21	133	21.5		17.3	154	34.7 ¹⁰⁴		47.8	14	54	32	16	7 56	7 12	45	28	59
22	148	21.5		16.7	169	04.1 ¹⁰⁴		46.2	16	56	36	22	8 05	31	44	13 09	61
23	163	21.5		16.1	183	33.5 ¹⁰⁴		44.5	17	58	41	30	16	7 54	42	12 46	63
24	178	21.5	+19	15.6	198	02.9 ¹⁰⁴	+26	42.6	19	60 S	6 46	7 38	8 28	8 24	40	12 16	65

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 3 ^h 44 ^m 7		Mag: -3.8 PMG: 10 ^h 28 ^m		Mag: +0.3 PMG: 6 ^h 34 ^m		Mag: -2.7 PMG: 4 ^h 19 ^m		Mag: +0.4 PMG: 1 ^h 29 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	303	40.2	203	15.4	+22	46.6	261	27.1	+14	26.2	295	07.0	+2	09.0	337	34.7	-14	56.4
1	318	42.7	218	14.6		46.5	276	27.9		26.7	310	09.5		09.0	352	37.3		56.4
2	333	45.2	233	13.8		46.4	291	28.7		27.2	325	11.9		09.0	7	39.9		56.5
3	348	47.6	248	12.9		46.3	306	29.6		27.7	340	14.3		09.0	22	42.6		56.5
4	3	50.1	263	12.1		46.2	321	30.4		28.2	355	16.8		09.0	37	45.2		56.6
5	18	52.5	278	11.3	+22	46.1	336	31.3	+14	28.7	10	19.2	+2	09.0	52	47.8	-14	56.7
6	33	55.0	293	10.5	+22	46.0	351	32.1	+14	29.2	25	21.7	+2	09.0	67	50.4	-14	56.7
7	48	57.5	308	09.7		45.9	6	33.0		29.7	40	24.1		09.0	82	53.1		56.8
8	63	59.9	323	08.8		45.7	21	33.8		30.2	55	26.5		09.0	97	55.7		56.8
9	79	02.4	338	08.0		45.6	36	34.6		30.7	70	29.0		09.0	112	58.3		56.9
10	94	04.9	353	07.2		45.5	51	35.5		31.2	85	31.4		09.0	128	01.0		57.0
11	109	07.3	8	06.4	+22	45.4	66	36.3	+14	31.7	100	33.9	+2	09.0	143	03.6	-14	57.0
12	124	09.8	23	05.6	+22	45.3	81	37.2	+14	32.2	115	36.3	+2	09.0	158	06.2	-14	57.1
13	139	12.3	38	04.7		45.2	96	38.0		32.7	130	38.7		09.0	173	08.8		57.2
14	154	14.7	53	03.9		45.0	111	38.8		33.2	145	41.2		09.0	188	11.5		57.2
15	169	17.2	68	03.1		44.9	126	39.7		33.7	160	43.6		09.0	203	14.1		57.3
16	184	19.7	83	02.3		44.8	141	40.5		34.2	175	46.1		09.0	218	16.7		57.3
17	199	22.1	98	01.4	+22	44.7	156	41.4	+14	34.7	190	48.5	+2	09.0	233	19.4	-14	57.4
18	214	24.6	113	00.6	+22	44.5	171	42.2	+14	35.2	205	51.0	+2	09.0	248	22.0	-14	57.5
19	229	27.0	127	59.8		44.4	186	43.1		35.7	220	53.4		09.0	263	24.6		57.5
20	244	29.5	142	59.0		44.3	201	43.9		36.2	235	55.8		09.0	278	27.2		57.6
21	259	32.0	157	58.2		44.2	216	44.7		36.7	250	58.3		09.0	293	29.9		57.6
22	274	34.4	172	57.3		44.0	231	45.6		37.1	266	00.7		09.0	308	32.5		57.7
23	289	36.9	187	56.5		43.9	246	46.4		37.6	281	03.2		08.9	323	35.1		57.8
24	304	39.4	202	55.7	+22	43.8	261	47.3	+14	38.1	296	05.6	+2	08.9	338	37.8	-14	57.8
Dif	—		-8		-1		+8		+5		+24		0		+26		-1	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7				Edad: 27 ^d 9 PHE { 4 ^h : 54 ^o 0 12 ^h : 54 ^o 0 20 ^h : 54 ^o 1 R°: 49 ^m												
	PMG: 12 ^h 06 ^m 6				SD: 14 ^h 7 PMG: 11 ^h 11 ^m												
	hG ☉		Dec		hG ☾ Dif		Dec Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	178	21.5	+19	15.6	198	02.9	+26	42.6	60 N	20 43	21 47	** **	0 49 75	21 13 16			
1	193	21.5		15.0	212	32.3 ¹⁰⁴		40.7 ¹⁹	58	29	25	23 08	1 18 70	20 49 21			
2	208	21.5		14.5	227	01.7 ¹⁰⁴		38.6 ²¹	56	17	21 07	22 26	40 67	30 25			
3	223	21.5		13.9	241	31.2 ¹⁰⁵		36.4 ²²	54	20 07	20 53	21 59	1 58 65	20 13 28			
4	238	21.5		13.3	256	00.6 ¹⁰⁴		34.0 ²⁴	52	19 58	40	39	2 13 64	19 59 31			
5	253	21.5	+19	12.8	270	30.1 ¹⁰⁵	+26	31.6 ²⁴	50	19 50	20 29	21 22	2 27 62	19 47 32			
6	268	21.5	+19	12.2	284	59.6 ¹⁰⁵	+26	29.0 ²⁶	45	19 33	20 07	20 51	2 54 59	19 21 36			
7	283	21.6		11.6	299	29.1 ¹⁰⁵		26.2 ²⁸	40	19	19 50	28	3 16 57	19 01 39			
8	298	21.6		11.1	313	58.7 ¹⁰⁶		23.4 ²⁸	35	19 07	35	20 09	34 56	18 44 41			
9	313	21.6		10.5	328	28.2 ¹⁰⁵		20.4 ³⁰	30	18 57	23	19 54	3 49 55	30 42			
10	328	21.6		09.9	342	57.8 ¹⁰⁶		17.3 ³¹	20	39	19 03	31	4 15 53	18 05 44			
11	343	21.6	+19	09.4	357	27.4 ¹⁰⁶	+26	14.1 ³²	10 N	18 24	18 46	19 13	4 37 52	17 43 47			
12	358	21.6	+19	08.8	11	57.1 ¹⁰⁷	+26	10.7 ³⁴	0	18 10	18 32	18 57	4 58 50	17 23 49			
13	13	21.6		08.2	26	26.7 ¹⁰⁶		07.2 ³⁵	10 S	17 56	18	44	5 19 49	17 02 52			
14	28	21.6		07.7	40	56.4 ¹⁰⁷	+26	03.6 ³⁶	20	41	18 05	31	5 42 46	16 41 53			
15	43	21.6		07.1	55	26.1 ¹⁰⁷	+25	59.9 ³⁷	30	25	17 50	19	6 08 44	15 56			
16	58	21.6		06.5	69	55.9 ¹⁰⁸		56.0 ³⁹	35	15	42	13	23 43	16 00 58			
17	73	21.6	+19	05.9	84	25.6 ¹⁰⁷	+25	52.0 ⁴⁰	40	17 04	17 33	18 06	6 41 41	15 43 59			
18	88	21.6	+19	05.4	98	55.4 ¹⁰⁸	+25	47.9 ⁴¹	45	16 51	17 23	17 59	7 02 40	15 22 62			
19	103	21.6		04.8	113	25.3 ¹⁰⁹		43.7 ⁴²	50	35	11	50	29 37	14 55 66			
20	118	21.7		04.2	127	55.1 ¹⁰⁸		39.4 ⁴³	52	28	05	47	42 35	42 67			
21	133	21.7		03.6	142	25.0 ¹⁰⁹		34.9 ⁴⁵	54	19	17 00	43	7 57 33	27 70			
22	148	21.7		03.1	156	54.9 ¹⁰⁹		30.3 ⁴⁶	56	10	16 53	39	8 15 30	14 10 72			
23	163	21.7		02.5	171	24.9 ¹¹⁰		25.6 ⁴⁷	58	16 00	46	35	8 36 27	13 49 76			
24	178	21.7	+19	01.9	185	54.9 ¹¹⁰	+25	20.7 ⁴⁹	60 S	15 48	16 38	17 30	9 04 21	13 21 82			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 40 ^m 8		Mag: -3.8 PMG: 10 ^h 29 ^m		Mag: +0.2 PMG: 6 ^h 32 ^m		Mag: -2.7 PMG: 4 ^h 15 ^m		Mag: +0.4 PMG: 1 ^h 25 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	304	39.4	202	55.7	+22	43.8	261	47.3	+14	38.1
1	319	41.8	217	54.9		43.6	276	48.1		38.6
2	334	44.3	232	54.1		43.5	291	49.0		39.1
3	349	46.8	247	53.2		43.4	306	49.8		39.6
4	4	49.2	262	52.4		43.2	321	50.6		40.1
5	19	51.7	277	51.6	+22	43.1	336	51.5	+14	40.6
6	34	54.2	292	50.8	+22	43.0	351	52.3	+14	41.1
7	49	56.6	307	50.0		42.8	6	53.2		41.6
8	64	59.1	322	49.1		42.7	21	54.0		42.1
9	80	01.5	337	48.3		42.5	36	54.9		42.6
10	95	04.0	352	47.5		42.4	51	55.7		43.1
11	110	06.5	7	46.7	+22	42.2	66	56.5	+14	43.6
12	125	08.9	22	45.9	+22	42.1	81	57.4	+14	44.1
13	140	11.4	37	45.0		41.9	96	58.2		44.6
14	155	13.9	52	44.2		41.8	111	59.1		45.1
15	170	16.3	67	43.4		41.7	126	59.9		45.5
16	185	18.8	82	42.6		41.5	142	00.8		46.0
17	200	21.3	97	41.8	+22	41.3	157	01.6	+14	46.5
18	215	23.7	112	40.9	+22	41.2	172	02.5	+14	47.0
19	230	26.2	127	40.1		41.0	187	03.3		47.5
20	245	28.7	142	39.3		40.9	202	04.2		48.0
21	260	31.1	157	38.5		40.7	217	05.0		48.5
22	275	33.6	172	37.7		40.6	232	05.8		49.0
23	290	36.0	187	36.8		40.4	247	06.7		49.5
24	305	38.5	202	36.0	+22	40.3	262	07.5	+14	50.0
Dif	—		-8		-1		+8		+5	
							+24		0	
									+26	
									-	

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 5				Edad: 28 ^d 9 PHE { 4 ^h : 54 ^h /1 12 ^h : 54 ^h /2 20 ^h : 54 ^h /2 Rº: 48 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	21.7	+19	01.9	185	54.9	+25	20.7	60 N	** *	2	27	3	31	2	04	85	
1	193	21.7		01.3	200	24.9 ¹¹⁰		15.8 ⁴⁹	58	1	06	2	49		28	79	21 10 13	
2	208	21.7		00.8	214	55.0 ¹¹¹		10.7 ⁵¹	56	1	48	3	06	3	56	2	47 75	
3	223	21.7	+19	00.2	229	25.1 ¹¹¹		05.5 ⁵²	54	2	14	21	4	07	3	03	72	
4	238	21.7	+18	59.6	243	55.3 ¹¹²	+25	00.2 ⁵³	52		35	33	16		17	70	30 22	
5	253	21.7	+18	59.0	258	25.4 ¹¹¹	+24	54.8 ⁵⁴	50	2	51	3	44	4	24	3	29 68	
6	268	21.8	+18	58.5	272	55.7 ¹¹³	+24	49.2 ⁵⁶	45	3	23	4	06	4	41	3	53 64	
7	283	21.8		57.9	287	25.9 ¹¹²		43.6 ⁵⁸	40	3	46		24	4	55	4	13 61	
8	298	21.8		57.3	301	56.2 ¹¹³		37.8 ⁵⁸	35	4	04		38	5	06		30 58	
9	313	21.8		56.7	316	26.6 ¹¹⁴		31.9 ⁵⁹	30		19	4	50	17		4	44 57	
10	328	21.8		56.1	330	56.9 ¹¹³		25.9 ⁶⁰	20	4	42	5	10	34		5	08 54	
11	343	21.8	+18	55.6	345	27.4 ¹¹⁵	+24	19.7 ⁶²	10 N	5	01	5	27	5	49	5	29 51	
12	358	21.8	+18	55.0	359	57.8 ¹¹⁴	+24	13.5 ⁶²	0	5	16	5	41	6	03	5	48 49	
13	13	21.9		54.4	14	28.4 ¹¹⁶		07.2 ⁶³	10 S		29	5	55	17		6	08 45	
14	28	21.9		53.8	28	58.9 ¹¹⁵	+24	00.7 ⁶⁵	20		42	6	08	32		28	43	
15	43	21.9		53.2	43	29.5 ¹¹⁶	+23	54.1 ⁶⁶	30	5	54		23	48		6	52 40	
16	58	21.9		52.6	58	00.1 ¹¹⁶		47.4 ⁶⁷	35	6	00		31	6	58	7	06 38	
17	73	21.9	+18	52.1	72	30.8 ¹¹⁷	+23	40.6 ⁶⁸	40	6	07	6	40	7	09	7	22 36	
18	88	21.9	+18	51.5	87	01.6 ¹¹⁸	+23	33.7 ⁶⁹	45	6	14	6	50	7	22	7	42 32	
19	103	21.9		50.9	101	32.4 ¹¹⁸		26.7 ⁷⁰	50		22	7	02	37		8	06 28	
20	118	22.0		50.3	116	03.2 ¹¹⁸		19.5 ⁷²	52		26		07	45		17	26	
21	133	22.0		49.7	130	34.0 ¹¹⁸		12.3 ⁷²	54		29	13	7	53		30	24	
22	148	22.0		49.1	145	05.0 ¹²⁰	+23	04.9 ⁷⁴	56		33	19	8	02		8	45 21	
23	163	22.0		48.5	159	35.9 ¹¹⁹	+22	57.5 ⁷⁴	58		38		26	12		9	03 16	
24	178	22.0	+18	47.9	174	06.9 ¹²⁰	+22	49.9 ⁷⁶	60 S	6	42	7	34	8	24	9	25 10	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 36 ^m 8		Mag: -3.8 PMG: 10 ^h 30 ^m				Mag: +0.2 PMG: 6 ^h 31 ^m				Mag: -2.7 PMG: 4 ^h 11 ^m				Mag: +0.4 PMG: 1 ^h 21 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	305	38.5	202	36.0	+22	40.3	262	07.5	+14	50.0	297	04.4	+2	08.8	339	40.9	-14	59.3
1	320	41.0	217	35.2		40.1	277	08.4		50.5	312	06.9		08.8	354	43.5		59.4
2	335	43.4	232	34.4		39.9	292	09.2		50.9	327	09.3		08.8	9	46.1		59.4
3	350	45.9	247	33.6		39.8	307	10.1		51.4	342	11.8		08.8	24	48.8		59.5
4	5	48.4	262	32.7		39.6	322	10.9		51.9	357	14.2		08.7	39	51.4		59.6
5	20	50.8	277	31.9	+22	39.4	337	11.8	+14	52.4	12	16.7	+2	08.7	54	54.0	-14	59.6
6	35	53.3	292	31.1	+22	39.3	352	12.6	+14	52.9	27	19.1	+2	08.7	69	56.7	-14	59.7
7	50	55.8	307	30.3		39.1	7	13.5		53.4	42	21.6		08.7	84	59.3		59.7
8	65	58.2	322	29.5		38.9	22	14.3		53.9	57	24.0		08.7	100	01.9		59.8
9	81	00.7	337	28.6		38.8	37	15.2		54.4	72	26.5		08.7	115	04.6		59.9
10	96	03.1	352	27.8		38.6	52	16.0		54.8	87	28.9		08.7	130	07.2	-14	59.9
11	111	05.6	7	27.0	+22	38.4	67	16.9	+14	55.3	102	31.4	+2	08.7	145	09.8	-15	00.0
12	126	08.1	22	26.2	+22	38.3	82	17.7	+14	55.8	117	33.9	+2	08.7	160	12.5	-15	00.0
13	141	10.5	37	25.4		38.1	97	18.6		56.3	132	36.3		08.7	175	15.1	-15	00.1
14	156	13.0	52	24.6		37.9	112	19.4		56.8	147	38.8		08.6	190	17.7		00.2
15	171	15.5	67	23.7		37.7	127	20.2		57.3	162	41.2		08.6	205	20.4		00.2
16	186	17.9	82	22.9		37.5	142	21.1		57.8	177	43.7		08.6	220	23.0		00.3
17	201	20.4	97	22.1	+22	37.4	157	21.9	+14	58.3	192	46.1	+2	08.6	235	25.6	-15	00.4
18	216	22.9	112	21.3	+22	37.2	172	22.8	+14	58.7	207	48.6	+2	08.6	250	28.3	-15	00.4
19	231	25.3	127	20.5		37.0	187	23.6		59.2	222	51.1		08.6	265	30.9		00.5
20	246	27.8	142	19.6		36.8	202	24.5	+14	59.7	237	53.5		08.6	280	33.5		00.5
21	261	30.3	157	18.8		36.6	217	25.3	+15	00.2	252	56.0		08.6	295	36.1		00.6
22	276	32.7	172	18.0		36.5	232	26.2		00.7	267	58.4		08.6	310	38.8		00.7
23	291	35.2	187	17.2		36.3	247	27.0		01.2	283	00.9		08.5	325	41.4		00.7
24	306	37.6	202	16.4	+22	36.1	262	27.9	+15	01.6	298	03.4	+2	08.5	340	44.0	-15	00.8
Dif	—		-8		-2		+8		+5		+25		0		+26		-1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8			Edad: 29 ^d 9 PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /4 20 ^h : 54 ^h /5											
	PMG: 12 ^h 06 ^m 5			SD: 14 ^h 8 PMG: 12 ^h 48 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m
0	178	22.0	+18 47.9	174	06.9	+22 49.9	76	60 N	20 38	21 40	** **	3 29 89	21 37 4		
1	193	22.0	47.4	188	38.0 ¹²¹	42.3	76	58	25	20	22 55	3 47 83	23 9		
2	208	22.1	46.8	203	09.1 ¹²¹	34.5	78	56	14	21 03	22 18	4 02 79	12 12		
3	223	22.1	46.2	217	40.3 ¹²²	26.6	79	54	20 04	20 49	21 53	15 76	21 01 15		
4	238	22.1	45.6	232	11.5 ¹²²	18.6	80	52	19 55	37	34	27 73	20 52 18		
5	253	22.1	+18 45.0	246	42.7 ¹²²	+22 10.5	81	50	19 47	20 26	21 18	4 37 70	20 44 20		
6	268	22.1	+18 44.4	261	14.0 ¹²³	+22 02.3	82	45	19 31	20 05	20 48	4 57 67	20 27 24		
7	283	22.1	43.8	275	45.4 ¹²⁴	+21 54.1	82	40	17	19 47	25	5 14 63	12 28		
8	298	22.2	43.2	290	16.8 ¹²⁴	45.7	84	35	19 05	33	20 07	28 60	20 00 31		
9	313	22.2	42.6	304	48.2 ¹²⁴	37.2	85	30	18 55	22	19 53	5 41 57	19 49 34		
10	328	22.2	42.0	319	19.7 ¹²⁵	28.6	86	20	38	19 02	30	6 02 53	31 38		
11	343	22.2	+18 41.4	333	51.3 ¹²⁶	+21 19.9	87	10 N	18 24	18 46	19 12	6 20 49	19 14 42		
12	358	22.2	+18 40.8	348	22.9 ¹²⁶	+21 11.1	88	0	18 10	18 32	18 57	6 37 46	18 59 46		
13	13	22.3	40.2	2	54.5 ¹²⁶	+21 02.2	89	10 S	17 56	19	44	6 53 43	44 49		
14	28	22.3	39.7	17	26.2 ¹²⁷	+20 53.3	89	20	42	18 05	32	7 11 40	27 53		
15	43	22.3	39.1	31	58.0 ¹²⁸	44.2	91	30	26	17 51	20	32 35	18 08 57		
16	58	22.3	38.5	46	29.8 ¹²⁸	35.0	92	35	16	43	14	44 33	17 57 60		
17	73	22.3	+18 37.9	61	01.6 ¹²⁸	+20 25.7	93	40	17 06	17 35	18 07	7 58 30	17 44 63		
18	88	22.4	+18 37.3	75	33.5 ¹²⁹	+20 16.4	93	45	16 53	17 25	18 00	8 14 26	17 29 67		
19	103	22.4	36.7	90	05.5 ¹³⁰	+20 06.9	95	50	38	13	17 53	34 22	10 72		
20	118	22.4	36.1	104	37.5 ¹³⁰	+19 57.4	95	52	31	08	49	43 20	17 01 74		
21	133	22.4	35.5	119	09.5 ¹³⁰	47.8	96	54	23	17 02	46	8 54 17	16 51 77		
22	148	22.4	34.9	133	41.6 ¹³¹	38.0	98	56	14	16 56	42	9 06 14	40 80		
23	163	22.5	34.3	148	13.7 ¹³¹	28.2	98	58	16 04	49	38	19 11	27 83		
24	178	22.5	+18 33.7	162	45.9 ¹³²	+19 18.3	99	60 S	15 52	16 41	17 33	9 35 6	16 11 89		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 3 ^h 32 ^m 9		Mag: -3.8 PMG: 10 ^h 31 ^m			Mag: +0.2 PMG: 6 ^h 30 ^m			Mag: -2.7 PMG: 4 ^h 07 ^m			Mag: +0.4 PMG: 1 ^h 17 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	306	37.6	202 16.4	+22 36.1	262 27.9	+15 01.6	298 03.4	+2 08.5	340 44.0	-15 00.8					
1	321	40.1	217 15.5	35.9	277 28.7	02.1	313 05.8	08.5	355 46.7	00.9					
2	336	42.6	232 14.7	35.7	292 29.6	02.6	328 08.3	08.5	10 49.3	00.9					
3	351	45.0	247 13.9	35.5	307 30.4	03.1	343 10.7	08.5	25 51.9	01.0					
4	6	47.5	262 13.1	35.3	322 31.3	03.6	358 13.2	08.5	40 54.6	01.0					
5	21	50.0	277 12.3	+22 35.1	337 32.1	+15 04.1	13 15.7	+2 08.5	55 57.2	-15 01.1					
6	36	52.4	292 11.5	+22 34.9	352 33.0	+15 04.5	28 18.1	+2 08.5	70 59.8	-15 01.2					
7	51	54.9	307 10.6	34.7	7 33.8	05.0	43 20.6	08.4	86 02.5	01.2					
8	66	57.4	322 09.8	34.5	22 34.7	05.5	58 23.1	08.4	101 05.1	01.3					
9	81	59.8	337 09.0	34.3	37 35.5	06.0	73 25.5	08.4	116 07.7	01.4					
10	97	02.3	352 08.2	34.2	52 36.4	06.5	88 28.0	08.4	131 10.4	01.4					
11	112	04.8	7 07.4	+22 34.0	67 37.2	+15 06.9	103 30.4	+2 08.4	146 13.0	-15 01.5					
12	127	07.2	22 06.6	+22 33.8	82 38.1	+15 07.4	118 32.9	+2 08.4	161 15.6	-15 01.5					
13	142	09.7	37 05.7	33.5	97 38.9	07.9	133 35.4	08.4	176 18.3	01.6					
14	157	12.1	52 04.9	33.3	112 39.8	08.4	148 37.8	08.4	191 20.9	01.7					
15	172	14.6	67 04.1	33.1	127 40.6	08.9	163 40.3	08.3	206 23.5	01.7					
16	187	17.1	82 03.3	32.9	142 41.5	09.3	178 42.8	08.3	221 26.2	01.8					
17	202	19.5	97 02.5	+22 32.7	157 42.4	+15 09.8	193 45.2	+2 08.3	236 28.8	-15 01.8					
18	217	22.0	112 01.7	+22 32.5	172 43.2	+15 10.3	208 47.7	+2 08.3	251 31.4	-15 01.9					
19	232	24.5	127 00.8	32.3	187 44.1	10.8	223 50.2	08.3	266 34.1	02.0					
20	247	26.9	142 00.0	32.1	202 44.9	11.3	238 52.6	08.3	281 36.7	02.0					
21	262	29.4	156 59.2	31.9	217 45.8	11.7	253 55.1	08.3	296 39.3	02.1					
22	277	31.9	171 58.4	31.7	232 46.6	12.2	268 57.6	08.2	311 42.0	02.2					
23	292	34.3	186 57.6	31.5	247 47.5	12.7	284 00.0	08.2	326 44.6	02.2					
24	307	36.8	201 56.8	+22 31.3	262 48.3	+15 13.2	299 02.5	+2 08.2	341 47.2	-15 02.3					
Dif	—		-8		-2	+9	+5	+25	0	+26	-1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 5			Edad: 1 ^d 3 SD: 14 ^h 9 PMG: 13 ^h 34 ^m										
				PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 8 R°: 44 ^m										
	hG ☉		Dec	hG ☾ Dif		Dec Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h m	h m	h m	h m m		h m m	m
0	178	22.5	+18 33.7	162	45.9	+19 18.3	60 N	** *	2 34	3 36	4 58	87	21 41	3
1	193	22.5	33.1	177	18.2 ¹³³	+19 08.3 ¹⁰⁰	58	1 19	2 54	3 49	5 10	84	32	6
2	208	22.5	32.5	191	50.4 ¹³²	+18 58.3 ¹⁰⁰	56	1 55	3 11	4 00	21	80	24	9
3	223	22.6	31.9	206	22.8 ¹³⁴	48.1 ¹⁰²	54	2 20	25	10	31	77	16	12
4	238	22.6	31.3	220	55.2 ¹³⁴	37.9 ¹⁰²	52	40	37	19	40	74	10	14
5	253	22.6	+18 30.6	235	27.6 ¹³⁴	+18 27.5 ¹⁰⁴	50	2 55	3 47	4 26	5 47	72	21 04	16
6	268	22.6	+18 30.0	250	00.1 ¹³⁵	+18 17.1 ¹⁰⁴	45	3 26	4 09	4 43	6 04	66	20 51	21
7	283	22.7	29.4	264	32.6 ¹³⁵	+18 06.6 ¹⁰⁵	40	3 48	26	4 56	17	63	40	25
8	298	22.7	28.8	279	05.1 ¹³⁵	+17 56.0 ¹⁰⁶	35	4 06	40	5 08	28	60	31	28
9	313	22.7	28.2	293	37.8 ¹³⁷	45.4 ¹⁰⁶	30	20	4 52	18	38	57	23	31
10	328	22.7	27.6	308	10.4 ¹³⁶	34.6 ¹⁰⁸	20	4 43	5 11	35	6 55	52	20 09	35
11	343	22.8	+18 27.0	322	43.1 ¹³⁷	+17 23.8 ¹⁰⁸	10 N	5 01	5 27	5 49	7 09	48	19 56	40
12	358	22.8	+18 26.4	337	15.9 ¹³⁸	+17 12.9 ¹⁰⁹	0	5 16	5 41	6 03	7 23	44	19 45	43
13	13	22.8	25.8	351	48.7 ¹³⁸	+17 01.9 ¹¹⁰	10 S	29	5 54	16	36	41	33	47
14	28	22.8	25.2	6	21.5 ¹³⁸	+16 50.9 ¹¹⁰	20	41	6 08	31	7 51	37	20	52
15	43	22.9	24.6	20	54.4 ¹³⁹	39.7 ¹¹²	30	53	22	47	8 07	32	19 05	57
16	58	22.9	24.0	35	27.3 ¹³⁹	28.5 ¹¹²	35	5 59	29	6 56	17	29	18 57	59
17	73	22.9	+18 23.4	50	00.3 ¹⁴⁰	+16 17.2 ¹¹³	40	6 05	6 38	7 07	8 28	26	18 47	63
18	88	23.0	+18 22.8	64	33.3 ¹⁴⁰	+16 05.9 ¹¹³	45	6 12	6 48	7 19	8 40	23	18 36	66
19	103	23.0	22.1	79	06.3 ¹⁴⁰	+15 54.4 ¹¹⁵	50	20	6 59	34	8 56	18	22	71
20	118	23.0	21.5	93	39.4 ¹⁴¹	42.9 ¹¹⁵	52	23	7 04	42	9 03	16	15	74
21	133	23.0	20.9	108	12.6 ¹⁴²	31.4 ¹¹⁵	54	27	10	49	11	13	08	76
22	148	23.1	20.3	122	45.7 ¹⁴¹	19.7 ¹¹⁷	56	30	16	7 58	20	10	18 00	79
23	163	23.1	19.7	137	18.9 ¹⁴²	+15 08.0 ¹¹⁷	58	34	23	8 08	30	7	17 50	83
24	178	23.1	+18 19.1	151	52.2 ¹⁴³	+14 56.2 ¹¹⁸	60 S	6 39	7 31	8 19	9 41	4	17 40	87

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO				
	PMG: 3 ^h 29 ^m 0		Mag: -3.8 PMG: 10 ^h 33 ^m		Mag: +0.2 PMG: 6 ^h 28 ^m		Mag: -2.7 PMG: 4 ^h 03 ^m		Mag: +0.4 PMG: 1 ^h 13 ^m				
	hG ♂		hG ♀		hG ♂		hG ♀		hG ♄				
h	°	'	°	'	°	'	°	'	°	'			
0	307	36.8	201	56.8	+22 31.3	262 48.3	+15 13.2	299 02.5	+2 08.2	341 47.2	-15 02.3		
1	322	39.3	216	55.9	31.0	277 49.2	13.6	314 05.0	08.2	356 49.9	02.3		
2	337	41.7	231	55.1	30.8	292 50.0	14.1	329 07.4	08.2	11 52.5	02.4		
3	352	44.2	246	54.3	30.6	307 50.9	14.6	344 09.9	08.2	26 55.2	02.5		
4	7	46.6	261	53.5	30.4	322 51.7	15.1	359 12.4	08.2	41 57.8	02.5		
5	22	49.1	276	52.7	+22 30.2	337 52.6	+15 15.5	14 14.8	+2 08.1	57 00.4	-15 02.6		
6	37	51.6	291	51.9	+22 29.9	352 53.4	+15 16.0	29 17.3	+2 08.1	72 03.1	-15 02.7		
7	52	54.0	306	51.1	29.7	7 54.3	16.5	44 19.8	08.1	87 05.7	02.7		
8	67	56.5	321	50.2	29.5	22 55.1	17.0	59 22.3	08.1	102 08.3	02.8		
9	82	59.0	336	49.4	29.3	37 56.0	17.4	74 24.7	08.1	117 11.0	02.8		
10	98	01.4	351	48.6	29.1	52 56.9	17.9	89 27.2	08.1	132 13.6	02.9		
11	113	03.9	6	47.8	+22 28.8	67 57.7	+15 18.4	104 29.7	+2 08.0	147 16.2	-15 03.0		
12	128	06.4	21	47.0	+22 28.6	82 58.6	+15 18.9	119 32.1	+2 08.0	162 18.9	-15 03.0		
13	143	08.8	36	46.2	28.4	97 59.4	19.3	134 34.6	08.0	177 21.5	03.1		
14	158	11.3	51	45.4	28.1	113 00.3	19.8	149 37.1	08.0	192 24.1	03.2		
15	173	13.7	66	44.5	27.9	128 01.1	20.3	164 39.6	08.0	207 26.8	03.2		
16	188	16.2	81	43.7	27.7	143 02.0	20.8	179 42.0	08.0	222 29.4	03.3		
17	203	18.7	96	42.9	+22 27.4	158 02.8	+15 21.2	194 44.5	+2 07.9	237 32.0	-15 03.4		
18	218	21.1	111	42.1	+22 27.2	173 03.7	+15 21.7	209 47.0	+2 07.9	252 34.7	-15 03.4		
19	233	23.6	126	41.3	27.0	188 04.6	22.2	224 49.5	07.9	267 37.3	03.5		
20	248	26.1	141	40.5	26.7	203 05.4	22.6	239 51.9	07.9	282 39.9	03.5		
21	263	28.5	156	39.7	26.5	218 06.3	23.1	254 54.4	07.9	297 42.6	03.6		
22	278	31.0	171	38.8	26.3	233 07.1	23.6	269 56.9	07.9	312 45.2	03.7		
23	293	33.5	186	38.0	26.0	248 08.0	24.1	284 59.3	07.8	327 47.9	03.7		
24	308	35.9	201	37.2	+22 25.8	263 08.8	+15 24.5	300 01.8	+2 07.8	342 50.5	-15 03.8		
Dif	—		-8		-2	+9	+5	+25	0	+26	-		-1

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4				Edad: 2 ^d 3 PHE { 4 ^h : 55 ^h 0 12 ^h : 55 ^h 1 20 ^h : 55 ^h 3 R°: 43 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m		
0	178	23.1	+18	19.1	151	52.2	+14	56.2	60 N	20 33	21 34	** **	6 25	87	21 44	2		
1	193	23.2		18.5	166	25.5 ¹⁴³		44.4 ¹¹⁸	58	20	21 14	22 43	34	82	38	5		
2	208	23.2		17.8	180	58.8 ¹⁴³		32.5 ¹¹⁹	56	10	20 58	22 11	41	79	33	8		
3	223	23.2		17.2	195	32.2 ¹⁴⁴		20.5 ¹²⁰	54	20 00	45	21 47	48	76	28	11		
4	238	23.2		16.6	210	05.6 ¹⁴⁴	+14	08.4 ¹²¹	52	19 52	33	29	54	73	24	13		
5	253	23.3	+18	16.0	224	39.0 ¹⁴⁴	+13	56.3 ¹²¹	50	19 44	20 23	21 14	6 59	71	21 20	15		
6	268	23.3	+18	15.4	239	12.5 ¹⁴⁵	+13	44.1 ¹²²	45	19 28	20 02	20 44	7 10	67	21 12	19		
7	283	23.3		14.8	253	46.0 ¹⁴⁵		31.9 ¹²²	40	15	19 45	23	20	62	21 05	23		
8	298	23.4		14.1	268	19.5 ¹⁴⁵		19.6 ¹²³	35	19 04	32	20 05	28	59	20 59	26		
9	313	23.4		13.5	282	53.1 ¹⁴⁶	+13	07.2 ¹²⁴	30	18 54	20	19 51	35	56	54	29		
10	328	23.4		12.9	297	26.7 ¹⁴⁶	+12	54.8 ¹²⁴	20	38	19 01	29	47	51	44	34		
11	343	23.5	+18	12.3	312	00.3 ¹⁴⁶	+12	42.3 ¹²⁵	10 N	18 23	18 45	19 11	7 57	48	20 36	38		
12	358	23.5	+18	11.7	326	34.0 ¹⁴⁷	+12	29.7 ¹²⁶	0	18 10	18 32	18 57	8 07	43	20 28	43		
13	13	23.5		11.0	341	07.7 ¹⁴⁷		17.1 ¹²⁶	10 S	17 57	19	44	17	39	20	47		
14	28	23.6		10.4	355	41.4 ¹⁴⁷	+12	04.4 ¹²⁷	20	43	18 06	33	28	34	12	51		
15	43	23.6		09.8	10	15.2 ¹⁴⁸	+11	51.7 ¹²⁷	30	27	17 52	21	39	30	20 02	56		
16	58	23.6		09.2	24	49.0 ¹⁴⁸		38.9 ¹²⁸	35	18	45	15	46	27	19 56	60		
17	73	23.7	+18	08.6	39	22.8 ¹⁴⁸	+11	26.1 ¹²⁸	40	17 07	17 36	18 09	8 54	24	19 50	63		
18	88	23.7	+18	07.9	53	56.6 ¹⁴⁸	+11	13.2 ¹²⁹	45	16 55	17 27	18 02	9 03	20	19 42	67		
19	103	23.7		07.3	68	30.5 ¹⁴⁹	+11	00.3 ¹²⁹	50	40	16	17 55	14	15	33	72		
20	118	23.8		06.7	83	04.4 ¹⁴⁹	+10	47.3 ¹³⁰	52	33	11	52	19	13	29	74		
21	133	23.8		06.1	97	38.3 ¹⁴⁹		34.2 ¹³¹	54	26	17 05	48	24	11	24	77		
22	148	23.8		05.4	112	12.2 ¹⁴⁹		21.1 ¹³¹	56	17	16 59	45	30	9	19	79		
23	163	23.9		04.8	126	46.2 ¹⁵⁰	+10	08.0 ¹³¹	58	16 08	53	41	37	6	13	83		
24	178	23.9	+18	04.2	141	20.2 ¹⁵⁰	+9	54.8 ¹³²	60 S	15 56	16 45	17 37	9 45	2	19 07	86		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 25 ^m 0		Mag: -3.8 PMG: 10 ^h 34 ^m				Mag: +0.2 PMG: 6 ^h 27 ^m				Mag: -2.7 PMG: 3 ^h 59 ^m				Mag: +0.4 PMG: 1 ^h 08 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	308	35.9	201	37.2	+22	25.8	263	08.8	+15	24.5	300	01.8	+2	07.8	342	50.5	-15	03.8
1	323	38.4	216	36.4		25.5	278	09.7		25.0	315	04.3		07.8	357	53.1		03.9
2	338	40.9	231	35.6		25.3	293	10.5		25.5	330	06.8		07.8	12	55.8		03.9
3	353	43.3	246	34.8		25.0	308	11.4		25.9	345	09.3		07.8	27	58.4		04.0
4	8	45.8	261	34.0		24.8	323	12.3		26.4	0	11.7		07.7	43	01.0		04.0
5	23	48.2	276	33.2	+22	24.5	338	13.1	+15	26.9	15	14.2	+2	07.7	58	03.7	-15	04.1
6	38	50.7	291	32.3	+22	24.3	353	14.0	+15	27.4	30	16.7	+2	07.7	73	06.3	-15	04.2
7	53	53.2	306	31.5		24.1	8	14.8		27.8	45	19.2		07.7	88	08.9		04.2
8	68	55.6	321	30.7		23.8	23	15.7		28.3	60	21.6		07.7	103	11.6		04.3
9	83	58.1	336	29.9		23.6	38	16.5		28.8	75	24.1		07.6	118	14.2		04.4
10	99	00.6	351	29.1		23.3	53	17.4		29.2	90	26.6		07.6	133	16.8		04.4
11	114	03.0	6	28.3	+22	23.0	68	18.3	+15	29.7	105	29.1	+2	07.6	148	19.5	-15	04.5
12	129	05.5	21	27.5	+22	22.8	83	19.1	+15	30.2	120	31.6	+2	07.6	163	22.1	-15	04.5
13	144	08.0	36	26.7		22.5	98	20.0		30.6	135	34.0		07.6	178	24.8		04.6
14	159	10.4	51	25.8		22.3	113	20.8		31.1	150	36.5		07.5	193	27.4		04.7
15	174	12.9	66	25.0		22.0	128	21.7		31.6	165	39.0		07.5	208	30.0		04.7
16	189	15.4	81	24.2		21.8	143	22.6		32.0	180	41.5		07.5	223	32.7		04.8
17	204	17.8	96	23.4	+22	21.5	158	23.4	+15	32.5	195	44.0	+2	07.5	238	35.3	-15	04.9
18	219	20.3	111	22.6	+22	21.2	173	24.3	+15	33.0	210	46.4	+2	07.5	253	37.9	-15	04.9
19	234	22.7	126	21.8		21.0	188	25.1		33.4	225	48.9		07.4	268	40.6		05.0
20	249	25.2	141	21.0		20.7	203	26.0		33.9	240	51.4		07.4	283	43.2		05.1
21	264	27.7	156	20.2		20.4	218	26.9		34.4	255	53.9		07.4	298	45.9		05.1
22	279	30.1	171	19.4		20.2	233	27.7		34.8	270	56.4		07.4	313	48.5		05.2
23	294	32.6	186	18.6		19.9	248	28.6		35.3	285	58.8		07.4	328	51.1		05.2
24	309	35.1	201	17.7	+22	19.6	263	29.4	+15	35.7	301	01.3	+2	07.3	343	53.8	-15	05.3
Dif	—		-8		-3		+9		+5		+25		0		+26		-	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 4			Edad: 3 ^d 3 PHE { SD: 15 ^h 1 PMG: 15 ^h 01 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	23.9	+18	04.2	141	20.2	+9	54.8	60 N	** *	2	40	3	41	7	52		
1	193	23.9		03.6	155	54.2 ¹⁵⁰		41.5 ¹³³	58	1	30	2	59	3	56			
2	208	24.0		02.9	170	28.2 ¹⁵⁰		28.2 ¹³³	56	2	03	3	15	4	00			
3	223	24.0		02.3	185	02.3 ¹⁵¹		14.9 ¹³³	54		26		29	13	04			
4	238	24.1		01.7	199	36.3 ¹⁵⁰	+9	01.5 ¹³⁴	52		44		40	22	07			
5	253	24.1	+18	01.0	214	10.4 ¹⁵¹	+8	48.1 ¹³⁴	50	2	59	3	50	4	10			
6	268	24.1	+18	00.4	228	44.5 ¹⁵¹	+8	34.6 ¹³⁵	45	3	29	4	11	4	17			
7	283	24.2	+17	59.8	243	18.6 ¹⁵¹		21.1 ¹³⁵	40	3	51		28	4	22			
8	298	24.2		59.2	257	52.7 ¹⁵¹	+8	07.5 ¹³⁶	35	4	08		42	5	27			
9	313	24.2		58.5	272	26.9 ¹⁵²	+7	53.9 ¹³⁶	30		22		43	19	31			
10	328	24.3		57.9	287	01.0 ¹⁵¹		40.3 ¹³⁶	20	4	44	5	12	35	38			
11	343	24.3	+17	57.3	301	35.2 ¹⁵²	+7	26.6 ¹³⁷	10 N	5	02	5	27	5	45			
12	358	24.4	+17	56.6	316	09.3 ¹⁵¹	+7	12.9 ¹³⁷	0	5	16	5	41	6	50			
13	13	24.4		56.0	330	43.5 ¹⁵²	+6	59.1 ¹³⁸	10 S		28	5	54	16	56			
14	28	24.4		55.4	345	17.7 ¹⁵²		45.3 ¹³⁸	20		40	6	07	30	02			
15	43	24.5		54.7	359	51.9 ¹⁵²		31.5 ¹³⁸	30		52		20	46	09			
16	58	24.5		54.1	14	26.1 ¹⁵²		17.6 ¹³⁹	35	5	57		28	6	13			
17	73	24.6	+17	53.5	29	00.3 ¹⁵²	+6	03.7 ¹³⁹	40	6	03	6	36	7	18			
18	88	24.6	+17	52.8	43	34.5 ¹⁵²	+5	49.7 ¹⁴⁰	45	6	10	6	45	7	23			
19	103	24.6		52.2	58	08.7 ¹⁵²		35.8 ¹³⁹	50		17	6	56	32	29			
20	118	24.7		51.6	72	43.0 ¹⁵³		21.7 ¹⁴¹	52	20	7	01	38		32			
21	133	24.7		50.9	87	17.2 ¹⁵²	+5	07.7 ¹⁴⁰	54	24		07	46		35			
22	148	24.8		50.3	101	51.4 ¹⁵²	+4	53.6 ¹⁴¹	56	27		13	7	54	39			
23	163	24.8		49.6	116	25.6 ¹⁵²		39.5 ¹⁴¹	58	31		19	8	04	43			
24	178	24.8	+17	49.0	130	59.8 ¹⁵²	+4	25.4 ¹⁴¹	60 S	6	35	7	27	8	15			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 21 ^m 1		Mag: -3.8 PMG: 10 ^h 35 ^m				Mag: +0.2 PMG: 6 ^h 26 ^m				Mag: -2.7 PMG: 3 ^h 55 ^m				Mag: +0.4 PMG: 1 ^h 04 ^m			
h	°	'	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♄	Dec				
0	309	35.1	201	17.7	+22	19.6	263	29.4	+15	35.7	301	01.3	+2	07.3	343	53.8	-15	05.3
1	324	37.5	216	16.9		19.4	278	30.3		36.2	316	03.8		07.3	358	56.4		05.4
2	339	40.0	231	16.1		19.1	293	31.2		36.7	331	06.3		07.3	13	59.0		05.4
3	354	42.5	246	15.3		18.8	308	32.0		37.1	346	08.8		07.3	29	01.7		05.5
4	9	44.9	261	14.5		18.6	323	32.9		37.6	1	11.3		07.3	44	04.3		05.6
5	24	47.4	276	13.7	+22	18.3	338	33.7	+15	38.1	16	13.8	+2	07.2	59	06.9	-15	05.6
6	39	49.8	291	12.9	+22	18.0	353	34.6	+15	38.5	31	16.2	+2	07.2	74	09.6	-15	05.7
7	54	52.3	306	12.1		17.7	8	35.5		39.0	46	18.7		07.2	89	12.2		05.7
8	69	54.8	321	11.3		17.5	23	36.3		39.5	61	21.2		07.2	104	14.9		05.8
9	84	57.2	336	10.5		17.2	38	37.2		39.9	76	23.7		07.1	119	17.5		05.9
10	99	59.7	351	09.7		16.9	53	38.0		40.4	91	26.2		07.1	134	20.1		05.9
11	115	02.2	6	08.8	+22	16.6	68	38.9	+15	40.8	106	28.7	+2	07.1	149	22.8	-15	06.0
12	130	04.6	21	08.0	+22	16.3	83	39.8	+15	41.3	121	31.2	+2	07.1	164	25.4	-15	06.1
13	145	07.1	36	07.2		16.0	98	40.6		41.8	136	33.6		07.1	179	28.0		06.1
14	160	09.6	51	06.4		15.8	113	41.5		42.2	151	36.1		07.0	194	30.7		06.2
15	175	12.0	66	05.6		15.5	128	42.4		42.7	166	38.6		07.0	209	33.3		06.3
16	190	14.5	81	04.8		15.2	143	43.2		43.1	181	41.1		07.0	224	36.0		06.3
17	205	17.0	96	04.0	+22	14.9	158	44.1	+15	43.6	196	43.6	+2	07.0	239	38.6	-15	06.4
18	220	19.4	111	03.2	+22	14.6	173	44.9	+15	44.1	211	46.1	+2	06.9	254	41.2	-15	06.4
19	235	21.9	126	02.4		14.3	188	45.8		44.5	226	48.6		06.9	269	43.9		06.5
20	250	24.3	141	01.6		14.0	203	46.7		45.0	241	51.1		06.9	284	46.5		06.6
21	265	26.8	156	00.8		13.7	218	47.5		45.4	256	53.5		06.9	299	49.2		06.6
22	280	29.3	171	00.0		13.4	233	48.4		45.9	271	56.0		06.8	314	51.8		06.7
23	295	31.7	185	59.2		13.2	248	49.3		46.4	286	58.5		06.8	329	54.4		06.8
24	310	34.2	200	58.4	+22	12.9	263	50.1	+15	46.8	302	01.0	+2	06.8	344	57.1	-15	06.8
Dif	—		-8 -3		+9 +5		+25		0		+26		-					

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 3				Edad: 4 ^d 3 PHE { 4 ^h : 55 ^m 9 12 ^h : 56 ^m 1 20 ^h : 56 ^m 3 PMG: 15 ^h 43 ^m R°: 43 ^m											
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	m
0	178	24.8	+17	49.0	130	59.8	+4	25.4	60 N	20 28	21 27	23 26	9 18 87		21 47	2
1	193	24.9		48.4	145	34.1 ¹⁵³	+4	11.2 ¹⁴²	58	16	21 09	22 33	19 84		48	4
2	208	24.9		47.7	160	08.3 ¹⁵²	+3	57.0 ¹⁴²	56	20 06	20 53	22 03	20 81		48	8
3	223	25.0		47.1	174	42.5 ¹⁵²		42.8 ¹⁴²	54	19 57	40	21 42	21 78		48	10
4	238	25.0		46.4	189	16.7 ¹⁵²		28.6 ¹⁴²	52	48	29	24	22 75		49	12
5	253	25.1	+17	45.8	203	50.9 ¹⁵²	+3	14.3 ¹⁴³	50	19 41	20 19	21 10	9 22 74		21 49	15
6	268	25.1	+17	45.2	218	25.1 ¹⁵²	+3	00.0 ¹⁴³	45	19 26	19 59	20 41	9 24 68		21 50	19
7	283	25.1		44.5	232	59.2 ¹⁵¹	+2	45.7 ¹⁴³	40	13	43	20	25 65		50	23
8	298	25.2		43.9	247	33.4 ¹⁵²		31.4 ¹⁴³	35	19 02	30	20 03	27 60		51	26
9	313	25.2		43.2	262	07.6 ¹⁵²		17.0 ¹⁴⁴	30	18 53	18	19 49	28 57		51	30
10	328	25.3		42.6	276	41.7 ¹⁵¹	+2	02.6 ¹⁴⁴	20	37	19 00	28	30 52		52	35
11	343	25.3	+17	41.9	291	15.8 ¹⁵¹	+1	48.2 ¹⁴⁴	10 N	18 23	18 45	19 11	9 31 48		21 53	39
12	358	25.4	+17	41.3	305	50.0 ¹⁵²	+1	33.8 ¹⁴⁴	0	18 10	18 31	18 57	9 33 43		21 53	44
13	13	25.4		40.7	320	24.1 ¹⁵¹		19.4 ¹⁴⁴	10 S	17 57	19	44	34 39		54	48
14	28	25.5		40.0	334	58.1 ¹⁵⁰	+1	04.9 ¹⁴⁵	20	43	18 07	33	36 34		55	52
15	43	25.5		39.4	349	32.2 ¹⁵¹	+0	50.5 ¹⁴⁴	30	28	17 53	22	38 29		55	59
16	58	25.6		38.7	4	06.2 ¹⁵⁰		36.0 ¹⁴⁵	35	19	46	16	39 26		56	61
17	73	25.6	+17	38.1	18	40.3 ¹⁵¹	+0	21.5 ¹⁴⁵	40	17 09	17 38	18 10	9 40 23		21 56	65
18	88	25.7	+17	37.4	33	14.3 ¹⁵⁰	+0	07.0 ¹⁴⁵	45	16 57	17 29	18 04	9 42 19		21 57	69
19	103	25.7		36.8	47	48.3 ¹⁵⁰	-0	07.6 ¹⁴⁶	50	43	18	17 57	44 14		57	74
20	118	25.7		36.1	62	22.2 ¹⁴⁹		22.1 ¹⁴⁵	52	36	13	54	44 12		57	77
21	133	25.8		35.5	76	56.1 ¹⁴⁹		36.6 ¹⁴⁵	54	29	08	51	45 10		58	79
22	148	25.8		34.8	91	30.0 ¹⁴⁹	-0	51.2 ¹⁴⁶	56	21	17 02	48	46 7		58	82
23	163	25.9		34.2	106	03.9 ¹⁴⁹	-1	05.8 ¹⁴⁶	58	12	16 56	44	47 5		58	85
24	178	25.9	+17	33.5	120	37.8 ¹⁴⁹	-1	20.4 ¹⁴⁶	60 S	16 01	16 49	17 40	9 48 2		21 59	88
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 3 ^h 17 ^m 2		Mag: -3.8 PMG: 10 ^h 37 ^m		Mag: +0.2 PMG: 6 ^h 24 ^m		Mag: -2.7 PMG: 3 ^h 51 ^m		Mag: +0.4 PMG: 1 ^h 00 ^m							
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄							
h	°	'	°	'	°	'	°	'	°	'						
0	310	34.2	200	58.4	+22	12.9	263	50.1	+15	46.8						
1	325	36.7	215	57.5		12.6	278	51.0		47.3						
2	340	39.1	230	56.7		12.3	293	51.9		47.7						
3	355	41.6	245	55.9		12.0	308	52.7		48.2						
4	10	44.1	260	55.1		11.7	323	53.6		48.6						
5	25	46.5	275	54.3	+22	11.4	338	54.4	+15	49.1						
6	40	49.0	290	53.5	+22	11.1	353	55.3	+15	49.6						
7	55	51.4	305	52.7		10.8	8	56.2		50.0						
8	70	53.9	320	51.9		10.5	23	57.0		50.5						
9	85	56.4	335	51.1		10.1	38	57.9		50.9						
10	100	58.8	350	50.3		09.8	53	58.8		51.4						
11	116	01.3	5	49.5	+22	09.5	68	59.6	+15	51.8						
12	131	03.8	20	48.7	+22	09.2	84	00.5	+15	52.3						
13	146	06.2	35	47.9		08.9	99	01.4		52.7						
14	161	08.7	50	47.1		08.6	114	02.2		53.2						
15	176	11.2	65	46.3		08.3	129	03.1		53.6						
16	191	13.6	80	45.5		08.0	144	04.0		54.1						
17	206	16.1	95	44.7	+22	07.7	159	04.8	+15	54.6						
18	221	18.6	110	43.9	+22	07.3	174	05.7	+15	55.0						
19	236	21.0	125	43.1		07.0	189	06.6		55.5						
20	251	23.5	140	42.3		06.7	204	07.4		55.9						
21	266	25.9	155	41.5		06.4	219	08.3		56.4						
22	281	28.4	170	40.7		06.1	234	09.2		56.8						
23	296	30.9	185	39.9		05.8	249	10.0		57.3						
24	311	33.3	200	39.1	+22	05.4	264	10.9	+15	57.7						
Dif	—		-8		-3		+9		+5							
							+25		0							
									+26							
									-1							

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 2			Edad: 5 ^d 3 PHE { 4 ^h : 56 ^m 5 12 ^h : 56 ^m 7 20 ^h : 57 ^m 0 Rº: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	178	25.9	+17	33.5	120	37.8	-1	20.4	60 N	0 47	2 46	3 45	10 45	91	21 49	2
1	193	26.0		32.9	135	11.6 ¹⁴⁸		34.9 ¹⁴⁵	58	1 40	3 05	3 57	43	87	52	6
2	208	26.0		32.2	149	45.4 ¹⁴⁸	-1	49.5 ¹⁴⁶	56	2 10	20	4 08	41	83	56	8
3	223	26.1		31.6	164	19.1 ¹⁴⁷	-2	04.1 ¹⁴⁶	54	32	33	17	39	80	21 58	12
4	238	26.1		30.9	178	52.8 ¹⁴⁷		18.7 ¹⁴⁶	52	2 49	44	25	37	78	22 01	14
5	253	26.2	+17	30.3	193	26.5 ¹⁴⁷	-2	33.3 ¹⁴⁶	50	3 04	3 54	4 32	10 36	75	22 04	16
6	268	26.2	+17	29.6	208	00.2 ¹⁴⁷	-2	47.9 ¹⁴⁶	45	3 32	4 14	4 47	10 32	71	22 09	21
7	283	26.3		29.0	222	33.8 ¹⁴⁶	-3	02.5 ¹⁴⁶	40	3 53	30	5 00	30	66	13	26
8	298	26.3		28.3	237	07.4 ¹⁴⁶		17.1 ¹⁴⁶	35	4 10	43	11	27	63	17	29
9	313	26.4		27.7	251	40.9 ¹⁴⁵		31.7 ¹⁴⁶	30	23	4 54	20	25	60	21	32
10	328	26.4		27.0	266	14.4 ¹⁴⁵	-3	46.3 ¹⁴⁶	20	4 45	5 13	36	22	54	27	37
11	343	26.5	+17	26.3	280	47.8 ¹⁴⁴	-4	00.9 ¹⁴⁶	10 N	5 02	5 28	5 50	10 19	49	22 32	42
12	358	26.5	+17	25.7	295	21.3 ¹⁴⁵	-4	15.5 ¹⁴⁶	0	5 16	5 41	6 03	10 16	45	22 37	46
13	13	26.6		25.0	309	54.6 ¹⁴³		30.1 ¹⁴⁶	10 S	28	5 53	15	13	41	42	51
14	28	26.6		24.4	324	27.9 ¹⁴³		44.7 ¹⁴⁶	20	39	6 06	29	10	36	47	56
15	43	26.7		23.7	339	01.2 ¹⁴³	-4	59.3 ¹⁴⁶	30	50	19	44	07	31	54	60
16	58	26.8		23.1	353	34.4 ¹⁴²	-5	13.9 ¹⁴⁶	35	5 56	26	6 53	05	28	22 57	64
17	73	26.8	+17	22.4	8	07.6 ¹⁴²	-5	28.4 ¹⁴⁵	40	6 02	6 34	7 03	10 03	24	23 01	68
18	88	26.9	+17	21.7	22	40.7 ¹⁴¹	-5	43.0 ¹⁴⁶	45	6 08	6 43	7 14	10 01	20	23 06	72
19	103	26.9		21.1	37	13.8 ¹⁴¹	-5	57.5 ¹⁴⁵	50	15	54	29	9 58	15	11	78
20	118	27.0		20.4	51	46.8 ¹⁴⁰	-6	12.0 ¹⁴⁵	52	18	6 58	35	56	14	14	80
21	133	27.0		19.8	66	19.7 ¹³⁹		26.6 ¹⁴⁶	54	21	7 03	42	55	11	17	82
22	148	27.1		19.1	80	52.6 ¹³⁹		41.1 ¹⁴⁵	56	24	09	7 51	53	9	20	85
23	163	27.1		18.4	95	25.5 ¹³⁹	-6	55.5 ¹⁴⁴	58	28	15	8 00	52	5	23	90
24	178	27.2	+17	17.8	109	58.3 ¹³⁸	-7	10.0 ¹⁴⁵	60 S	6 31	7 22	8 10	9 50	2	23 27	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 13 ^m 2		Mag: -3.8 PMG: 10 ^h 38 ^m		Mag: +0.2 PMG: 6 ^h 23 ^m		Mag: -2.7 PMG: 3 ^h 47 ^m		Mag: +0.3 PMG: 0 ^h 56 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	311	33.3	200	39.1	+22	05.4	264	10.9	+15	57.7
1	326	35.8	215	38.3		05.1	279	11.8		58.2
2	341	38.3	230	37.5		04.8	294	12.6		58.6
3	356	40.7	245	36.7		04.5	309	13.5		59.1
4	11	43.2	260	35.9		04.1	324	14.4	+15	59.5
5	26	45.7	275	35.0	+22	03.8	339	15.3	+16	00.0
6	41	48.1	290	34.2	+22	03.5	354	16.1	+16	00.4
7	56	50.6	305	33.4		03.1	9	17.0		00.9
8	71	53.0	320	32.6		02.8	24	17.9		01.3
9	86	55.5	335	31.8		02.5	39	18.7		01.8
10	101	58.0	350	31.0		02.1	54	19.6		02.2
11	117	00.4	5	30.2	+22	01.8	69	20.5	+16	02.7
12	132	02.9	20	29.4	+22	01.5	84	21.3	+16	03.1
13	147	05.4	35	28.6		01.1	99	22.2		03.6
14	162	07.8	50	27.8		00.8	114	23.1		04.0
15	177	10.3	65	27.1		00.5	129	23.9		04.5
16	192	12.8	80	26.3	+22	00.1	144	24.8		04.9
17	207	15.2	95	25.5	+21	59.8	159	25.7	+16	05.3
18	222	17.7	110	24.7	+21	59.4	174	26.6	+16	05.8
19	237	20.2	125	23.9		59.1	189	27.4		06.2
20	252	22.6	140	23.1		58.7	204	28.3		06.7
21	267	25.1	155	22.3		58.4	219	29.2		07.1
22	282	27.5	170	21.5		58.1	234	30.0		07.6
23	297	30.0	185	20.7		57.7	249	30.9		08.0
24	312	32.5	200	19.9	+21	57.4	264	31.8	+16	08.5
Dif	—		-8		-3		+9		+4	
			</							

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 15'8 PMG: 12 ^h 06 ^m 1			Edad: 6 ^d 3 PHE { 4 ^h : 57'2 12 ^h : 57'4 20 ^h : 57'7 R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	178	27.2	+17	17.8	109	58.3	-7	10.0	60 N	20 23	21 21	23 06	12 16	96	21 51	3		
1	193	27.2		17.1	124	31.0 ¹³⁷		24.5 ¹⁴⁵	58	11	21 03	22 23	10	92	21 58	8		
2	208	27.3		16.4	139	03.7 ¹³⁷		38.9 ¹⁴⁴	56	20 02	20 48	21 56	12 04	88	22 04	12		
3	223	27.4		15.8	153	36.3 ¹³⁶	-7	53.3 ¹⁴⁴	54	19 53	36	36	11 59	85	10	15		
4	238	27.4		15.1	168	08.8 ¹³⁵	-8	07.7 ¹⁴⁴	52	45	25	19	55	82	15	18		
5	253	27.5	+17	14.5	182	41.3 ¹³⁵	-8	22.1 ¹⁴⁴	50	19 38	20 16	21 05	11 51	80	22 20	20		
6	268	27.5	+17	13.8	197	13.7 ¹³⁴	-8	36.4 ¹⁴³	45	19 23	19 56	20 38	11 43	74	22 30	25		
7	283	27.6		13.1	211	46.0 ¹³³	-8	50.7 ¹⁴³	40	11	41	17	36	69	39	29		
8	298	27.6		12.5	226	18.3 ¹³³	-9	05.0 ¹⁴³	35	19 00	28	20 01	30	66	46	33		
9	313	27.7		11.8	240	50.5 ¹³²		19.3 ¹⁴³	30	18 51	19 17	19 48	25	62	22 53	36		
10	328	27.8		11.1	255	22.6 ¹³¹		33.5 ¹⁴²	20	36	18 59	26	16	57	23 04	41		
11	343	27.8	+17	10.5	269	54.6 ¹³⁰	-9	47.8 ¹⁴³	10 N	18 22	18 44	19 10	11 08	53	23 14	46		
12	358	27.9	+17	09.8	284	26.6 ¹³⁰	-10	01.9 ¹⁴¹	0	18 10	18 31	18 56	11 01	48	23 23	50		
13	13	27.9		09.1	298	58.5 ¹²⁹		16.1 ¹⁴²	10 S	17 57	19	44	10 54	43	33	54		
14	28	28.0		08.5	313	30.3 ¹²⁸		30.2 ¹⁴¹	20	44	18 07	34	46	39	43	59		
15	43	28.1		07.8	328	02.1 ¹²⁸		44.3 ¹⁴¹	30	29	17 54	23	38	33	23 54	65		
16	58	28.1		07.1	342	33.8 ¹²⁷	-10	58.3 ¹⁴⁰	35	21	47	18	33	30	** ** *	**		
17	73	28.2	+17	06.4	357	05.4 ¹²⁶	-11	12.3 ¹⁴⁰	40	17 11	17 40	18 12	10 27	27	** ** *	**		
18	88	28.2	+17	05.8	11	36.9 ¹²⁵	-11	26.3 ¹⁴⁰	45	17 00	17 31	18 06	10 21	23	** ** *	**		
19	103	28.3		05.1	26	08.3 ¹²⁴		40.2 ¹³⁹	50	16 46	21	18 00	13	18	** ** *	**		
20	118	28.4		04.4	40	39.6 ¹²³	-11	54.1 ¹³⁹	52	39	16	17 57	10	15	** ** *	**		
21	133	28.4		03.8	55	10.9 ¹²³	-12	08.0 ¹³⁹	54	32	11	54	06	13	** ** *	**		
22	148	28.5		03.1	69	42.0 ¹²¹		21.8 ¹³⁸	56	24	06	51	10 02	10	** ** *	**		
23	163	28.5		02.4	84	13.1 ¹²¹		35.5 ¹³⁷	58	16	17 00	47	9 57	7	** ** *	**		
24	178	28.6	+17	01.7	98	44.1 ¹²⁰	-12	49.2 ¹³⁷	60 S	16 05	16 53	17 44	9 52	3	** ** *	**		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 3 ^h 09 ^m 3		Mag: -3.8 PMG: 10 ^h 39 ^m				Mag: +0.2 PMG: 6 ^h 22 ^m				Mag: -2.7 PMG: 3 ^h 43 ^m				Mag: +0.3 PMG: 0 ^h 52 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	312	32.5	200	19.9	+21	57.4	264	31.8	+16	08.5	304	00.9	+2	05.5	347	03.8	-15	09.9
1	327	34.9	215	19.1		57.0	279	32.7		08.9	319	03.5		05.4	2	06.4		09.9
2	342	37.4	230	18.3		56.7	294	33.5		09.4	334	06.0		05.4	17	09.0		10.0
3	357	39.9	245	17.5		56.3	309	34.4		09.8	349	08.5		05.4	32	11.7		10.1
4	12	42.3	260	16.7		56.0	324	35.3		10.2	4	11.0		05.3	47	14.3		10.1
5	27	44.8	275	15.9	+21	55.6	339	36.2	+16	10.7	19	13.5	+2	05.3	62	17.0	-15	10.2
6	42	47.3	290	15.1	+21	55.2	354	37.0	+16	11.1	34	16.0	+2	05.3	77	19.6	-15	10.3
7	57	49.7	305	14.3		54.9	9	37.9		11.6	49	18.5		05.2	92	22.3		10.3
8	72	52.2	320	13.5		54.5	24	38.8		12.0	64	21.0		05.2	107	24.9		10.4
9	87	54.7	335	12.7		54.2	39	39.6		12.5	79	23.5		05.2	122	27.5		10.5
10	102	57.1	350	11.9		53.8	54	40.5		12.9	94	26.0		05.1	137	30.2		10.5
11	117	59.6	5	11.1	+21	53.4	69	41.4	+16	13.3	109	28.5	+2	05.1	152	32.8	-15	10.6
12	133	02.0	20	10.3	+21	53.1	84	42.3	+16	13.8	124	31.0	+2	05.1	167	35.5	-15	10.6
13	148	04.5	35	09.5		52.7	99	43.1		14.2	139	33.5		05.0	182	38.1		10.7
14	163	07.0	50	08.7		52.4	114	44.0		14.7	154	36.1		05.0	197	40.7		10.8
15	178	09.4	65	07.9		52.0	129	44.9		15.1	169	38.6		05.0	212	43.4		10.8
16	193	11.9	80	07.1		51.6	144	45.8		15.6	184	41.1		04.9	227	46.0		10.9
17	208	14.4	95	06.3	+21	51.3	159	46.6	+16	16.0	199	43.6	+2	04.9	242	48.7	-15	11.0
18	223	16.8	110	05.6	+21	50.9	174	47.5	+16	16.4	214	46.1	+2	04.9	257	51.3	-15	11.0
19	238	19.3	125	04.8		50.5	189	48.4		16.9	229	48.6		04.8	272	53.9		11.1
20	253	21.8	140	04.0		50.1	204	49.3		17.3	244	51.1		04.8	287	56.6		11.2
21	268	24.2	155	03.2		49.8	219	50.1		17.8	259	53.6		04.8	302	59.2		11.2
22	283	26.7	170	02.4		49.4	234	51.0		18.2	274	56.2		04.7	318	01.9		11.3
23	298	29.1	185	01.6		49.0	249	51.9		18.6	289	58.7		04.7	333	04.5		11.3
24	313	31.6	200	00.8	+21	48.6	264	52.8	+16	19.1	305	01.2	+2	04.7	348	07.2	-15	11.4
Dif	—		-8		-4		+9		+4		+25		0		+26		-1	

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/8 PMG: 12 ^h 06 ^m 0				Edad: 7 ^d 3 PHE { SD: 15/7 PMG: 18 ^h 01 ^m R ^o : 54 ^m 4 ^h : 57/9 12 ^h : 58/2 20 ^h : 58/4													
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m
0	178	28.6	+17	01.7	98	44.1	-12	49.2	60 N	1 07	2 52	3 50	13 52	103	21 54	8		
1	193	28.7		01.1	113	15.0	-13	02.9	58	1 50	3 10	4 01	42 97		22 06	13		
2	208	28.7	+17	00.4	127	45.8		16.5	56	2 17	24	11	32 93		16	17		
3	223	28.8	+16	59.7	142	16.5		30.1	54	37	37	20	24 89		25	21		
4	238	28.8		59.0	156	47.1		43.6	52	2 54	47	28	17 86		33	24		
5	253	28.9	+16	58.4	171	17.7	-13	57.0	50	3 08	3 57	4 35	13 11	83	22 40	26		
6	268	29.0	+16	57.7	185	48.1	-14	10.4	45	3 35	4 17	4 50	12 57	77	22 55	32		
7	283	29.0		57.0	200	18.4		23.8	40	3 55	32	5 02	45 73		23 08	36		
8	298	29.1		56.3	214	48.6		37.1	35	4 12	45	12	36 69		19	39		
9	313	29.2		55.7	229	18.8	-14	50.3	30	25	4 56	21	27 67		29	42		
10	328	29.2		55.0	243	48.8	-15	03.5	20	4 46	5 14	37	13 61		23 45	47		
11	343	29.3	+16	54.3	258	18.7	-15	16.6	10 N	5 02	5 28	5 50	12 01	56	** ** *	**		
12	358	29.4	+16	53.6	272	48.5	-15	29.6	0	5 16	5 41	6 03	11 49	52	** ** *	**		
13	13	29.4		52.9	287	18.3		42.6	10 S	28	5 53	15	37 49		** ** *	**		
14	28	29.5		52.3	301	47.9	-15	55.5	20	38	6 05	28	25 44		** ** *	**		
15	43	29.6		51.6	316	17.4	-16	08.3	30	49	18	43	11 39		** ** *	**		
16	58	29.6		50.9	330	46.8		21.1	35	5 54	24	6 51	11 03	36	0 01	67		
17	73	29.7	+16	50.2	345	16.1	-16	33.8	40	6 00	6 32	7 01	10 54	33	0 09	71		
18	88	29.8	+16	49.5	359	45.3	-16	46.4	45	6 06	6 41	7 12	10 44	28	0 18	75		
19	103	29.8		48.8	14	14.3	-16	59.0	50	12	51	25	31 23		29	81		
20	118	29.9		48.2	28	43.3	-17	11.4	52	15	6 55	32	25 21		34	83		
21	133	30.0		47.5	43	12.2		23.8	54	18	7 00	39	19 18		39	87		
22	148	30.0		46.8	57	40.9		36.1	56	21	05	47	12 14		45	91		
23	163	30.1		46.1	72	09.5	-17	48.3	58	24	11	7 55	10 04	10	0 53	94		
24	178	30.2	+16	45.4	86	38.0	-18	00.5	60 S	6 27	7 18	8 05	9 55	6	1 00	100		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 05 ^m 4		Mag: -3.8 PMG: 10 ^h 41 ^m		Mag: +0.2 PMG: 6 ^h 20 ^m		Mag: -2.7 PMG: 3 ^h 39 ^m		Mag: +0.3 PMG: 0 ^h 47 ^m	
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄	
h	°	'	°	'	°	'	°	'	°	'
0	313	31.6	200	00.8	+21	48.6	264	52.8	+16	19.1
1	328	34.1	215	00.0		48.3	279	53.6		19.5
2	343	36.5	229	59.2		47.9	294	54.5		19.9
3	358	39.0	244	58.4		47.5	309	55.4		20.4
4	13	41.5	259	57.6		47.1	324	56.3		20.8
5	28	43.9	274	56.8	+21	46.8	339	57.2	+16	21.3
6	43	46.4	289	56.1	+21	46.4	354	58.0	+16	21.7
7	58	48.9	304	55.3		46.0	9	58.9		22.1
8	73	51.3	319	54.5		45.6	24	59.8		22.6
9	88	53.8	334	53.7		45.2	40	00.7		23.0
10	103	56.3	349	52.9		44.8	55	01.5		23.4
11	118	58.7	4	52.1	+21	44.4	70	02.4	+16	23.9
12	134	01.2	19	51.3	+21	44.1	85	03.3	+16	24.3
13	149	03.6	34	50.5		43.7	100	04.2		24.7
14	164	06.1	49	49.7		43.3	115	05.1		25.2
15	179	08.6	64	48.9		42.9	130	05.9		25.6
16	194	11.0	79	48.2		42.5	145	06.8		26.0
17	209	13.5	94	47.4	+21	42.1	160	07.7	+16	26.5
18	224	16.0	109	46.6	+21	41.7	175	08.6	+16	26.9
19	239	18.4	124	45.8		41.3	190	09.5		27.3
20	254	20.9	139	45.0		40.9	205	10.3		27.8
21	269	23.4	154	44.2		40.5	220	11.2		28.2
22	284	25.8	169	43.4		40.1	235	12.1		28.6
23	299	28.3	184	42.6		39.7	250	13.0		29.1
24	314	30.8	199	41.9	+21	39.3	265	13.9	+16	29.5
Dif	—		-8		-4		+9		+4	
									+25	
									0	
									+26	
									-1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15 ^h 8			Edad: 8 ^d 3	PHE {	4 ^h : 58 ^h /7 12 ^h : 58 ^h /9 20 ^h : 59 ^h /2 R°: 59 ^m											
	PMG: 12 ^h 05 ^m 9								SD: 16 ^h 0			PMG: 18 ^h 55 ^m			R°: 59 ^m		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	178	30.2	+16 45.4	86	38.0	-18 00.5	94	60 N	20 18	21 14	22 51	15 35 107		22 02 15			
1	193	30.2		101	06.4		12.5	58	20 07	20 57	22 14	19 99		19 22			
2	208	30.3		115	34.7		24.5	56	19 57	43	21 49	15 05 94		33 28			
3	223	30.4		130	02.9		36.4	54		49	32 30	14 53 90		46 31			
4	238	30.4		144	30.9		48.2	52		41	21 14	43 87		22 57 34			
5	253	30.5	+16 42.0	158	58.8	89	-18 59.9	50	19 35	20 12	21 01	14 34 84		23 06 37			
6	268	30.6	+16 41.3	173	26.6	88	-19 11.5	45	19 20	19 53	20 34	14 14 79		23 27 42			
7	283	30.6		187	54.3	87	23.0	40	19 08	38	20 14	13 58 75		44 45			
8	298	30.7		202	21.9	86	34.4	35	18 58	26	19 59	45 72		23 58 48			
9	313	30.8		216	49.3	84	45.7	30		49 19 15	46 34 69	** ** *		** ** *			
10	328	30.9		231	16.7	84	-19 56.9	20		34 18 58	25 13 14 65	** ** *		** ** *			
11	343	30.9	+16 37.9	245	43.9	82	-20 08.0	10 N	18 21	18 43	19 09	12 57 61		0 00 51			
12	358	31.0	+16 37.2	260	10.9	80	-20 19.0	0	18 09	18 31	18 56	12 41 58		0 13 55			
13	13	31.1		274	37.9	80	29.9	10 S	17 57	19 45	26 54	27 59					
14	28	31.1		289	04.7	78	40.7	20		45 18 08	34 12 09 51	42 62					
15	43	31.2		303	31.5	78	-20 51.3	30		30 17 55	24 11 50 47	0 59 67					
16	58	31.3		317	58.0	75	-21 01.9	35		22 49 19	39 44 1 08 71						
17	73	31.4	+16 33.7	332	24.5	75	-21 12.3	40	17 13	17 41	18 14	11 27 40		1 20 74			
18	88	31.4	+16 33.0	346	50.9	74	-21 22.7	45	17 02	17 33	18 08	11 12 37		1 33 78			
19	103	31.5		32.3	1 17.1	72	32.9	50	16 49	23 18 02	10 54 32	50 83					
20	118	31.6		15 43.2	71 43.0	101	43.0	52		42 19 17 59	46 29 1 57 87						
21	133	31.6		30 09.1	69 -21 52.9	99	52.9	54		36 14 57	37 26 2 06 90						
22	148	31.7		30.2 44 35.0	69 -22 02.8	99	02.8	56		28 09 54	26 22 16 93						
23	163	31.8		29.5 59 00.7	67 12.5	97	12.5	58		20 17 03	51 14 18 27 98						
24	178	31.9	+16 28.8	73 26.3	66 -22 22.1	96	22.1	60 S	16 10	16 57	17 47	10 01 11		2 40 104			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 3 ^h 01 ^m 5		Mag: -3.8 PMG: 10 ^h 42 ^m		Mag: +0.2 PMG: 6 ^h 19 ^m		Mag: -2.7 PMG: 3 ^h 35 ^m		Mag: +0.3 PMG: 0 ^h 43 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	314	30.8	199 41.9	+21 39.3	265 13.9	+16 29.5	306 01.6	+2 03.8	349 10.6	-15 13.0				
1	329	33.2	214 41.1	38.9	280 14.7	29.9	321 04.1	03.8	4 13.2	13.0				
2	344	35.7	229 40.3	38.5	295 15.6	30.4	336 06.6	03.7	19 15.9	13.1				
3	359	38.1	244 39.5	38.1	310 16.5	30.8	351 09.2	03.7	34 18.5	13.1				
4	14	40.6	259 38.7	37.7	325 17.4	31.2	6 11.7	03.7	49 21.1	13.2				
5	29	43.1	274 37.9	+21 37.3	340 18.3	+16 31.7	21 14.2	+2 03.6	64 23.8	-15 13.3				
6	44	45.5	289 37.1	+21 36.9	355 19.1	+16 32.1	36 16.7	+2 03.6	79 26.4	-15 13.3				
7	59	48.0	304 36.4	36.5	10 20.0	32.5	51 19.2	03.5	94 29.1	13.4				
8	74	50.5	319 35.6	36.1	25 20.9	33.0	66 21.8	03.5	109 31.7	13.5				
9	89	52.9	334 34.8	35.6	40 21.8	33.4	81 24.3	03.5	124 34.4	13.5				
10	104	55.4	349 34.0	35.2	55 22.7	33.8	96 26.8	03.4	139 37.0	13.6				
11	119	57.9	4 33.2	+21 34.8	70 23.5	+16 34.2	111 29.3	+2 03.4	154 39.6	-15 13.7				
12	135	00.3	19 32.4	+21 34.4	85 24.4	+16 34.7	126 31.9	+2 03.4	169 42.3	-15 13.7				
13	150	02.8	34 31.7	34.0	100 25.3	35.1	141 34.4	03.3	184 44.9	13.8				
14	165	05.2	49 30.9	33.6	115 26.2	35.5	156 36.9	03.3	199 47.6	13.8				
15	180	07.7	64 30.1	33.1	130 27.1	36.0	171 39.4	03.2	214 50.2	13.9				
16	195	10.2	79 29.3	32.7	145 28.0	36.4	186 42.0	03.2	229 52.9	14.0				
17	210	12.6	94 28.5	+21 32.3	160 28.8	+16 36.8	201 44.5	+2 03.2	244 55.5	-15 14.0				
18	225	15.1	109 27.7	+21 31.9	175 29.7	+16 37.2	216 47.0	+2 03.1	259 58.1	-15 14.1				
19	240	17.6	124 27.0	31.5	190 30.6	37.7	231 49.6	03.1	275 00.8	14.2				
20	255	20.0	139 26.2	31.0	205 31.5	38.1	246 52.1	03.0	290 03.4	14.2				
21	270	22.5	154 25.4	30.6	220 32.4	38.5	261 54.6	03.0	305 06.1	14.3				
22	285	25.0	169 24.6	30.2	235 33.3	38.9	276 57.1	03.0	320 08.7	14.4				
23	300	27.4	184 23.8	29.8	250 34.2	39.4	291 59.7	02.9	335 11.4	14.4				
24	315	29.9	199 23.1	+21 29.3	265 35.0	+16 39.8	307 02.2	+2 02.9	350 14.0	-15 14.5				
Dif	—	-8		-4	+9		+4	+25		0	+26		-1	

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 8			Edad: 9 ^d 3 PHE { 4 ^h : 59 ^m 4 12 ^h : 59 ^m 7 20 ^h : 59 ^m 9 Rº: 63 ^m																	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif			Náutico	Civil		Hora	Rº	Hora	Rº				
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m			
0	178	31.9	+16	28.8	73	26.3	-22	22.1	60 N	1	22	2	59	3	55	17	22	97	22 17 35		
1	193	31.9		28.1	87	51.8	65	31.5	58	1	58	3	15	4	06	16	58	90	22 41 42		
2	208	32.0		27.5	102	17.1	63	40.9	56	2	23		29	15		39	86		23 01 46		
3	223	32.1		26.8	116	42.4	63	50.0	54	43		41		24		23	83		17 49		
4	238	32.2		26.1	131	07.5	61	-22	59.1	52	2	58	3	51	31	16	10	80	31 51		
5	253	32.2	+16	25.4	145	32.5	60	-23	08.0	50	3	12	4	00	4	38	15	58	78	23 43 53	
6	268	32.3	+16	24.7	159	57.3	58	-23	16.8	45	3	38	4	19	4	52	15	33	75	** ** *	
7	283	32.4		24.0	174	22.1	58	25.5	87	40	3	58		34	5	04	15	13	73	** ** *	
8	298	32.5		23.3	188	46.7	56	34.0	85	35	4	13		46	14		14	57	71	** ** *	
9	313	32.6		22.6	203	11.2	55	42.3	83	30	26	4	57	23			43	69		0 11 50	
10	328	32.6		21.9	217	35.6	54	50.5	82	20	4	47	5	14	38		14	19	67	32 54	
11	343	32.7	+16	21.2	231	59.8	52	-23	58.6	10 N	5	03	5	28	5	50	13	58	65	0 51 57	
12	358	32.8	+16	20.5	246	24.0	52	-24	06.5	0	5	16	5	41	6	02	13	39	63	1 08 60	
13	13	32.9		19.8	260	48.0	50		14.2	10 S	27		5	52	14		20	60		26 63	
14	28	32.9		19.1	275	11.9	49		21.8	20	37		6	04	27		13	00	58	1 44 66	
15	43	33.0		18.3	289	35.7	48		29.3	73	30		16		41		12	37	55	2 06 70	
16	58	33.1		17.6	303	59.4	47		36.6	73	35		23		49		23	53		19 72	
17	73	33.2	+16	16.9	318	22.9	45	-24	43.7	71	40	5	58	6	30	6	58	12	07	52	2 34 74
18	88	33.3	+16	16.2	332	46.4	45	-24	50.7	70	45	6	03	6	38	7	09	11	49	48	2 51 78
19	103	33.3		15.5	347	09.7	43	-24	57.5	68	50	09		48	22		26	44		3 13 82	
20	118	33.4		14.8	1	33.0	43	-25	04.1	66	52	12		52	28		15	42		24 84	
21	133	33.5		14.1	15	56.1	41		10.6	65	54	14	6	57	35		11	03	39	36 87	
22	148	33.6		13.4	30	19.1	40		16.9	63	56	17	7	02	42		10	48	37	3 49 91	
23	163	33.7		12.7	44	42.1	40		23.1	62	58	20	07		7	51	32	32		4 05 96	
24	178	33.7	+16	12.0	59	04.9	38	-25	29.0	59	60 S	6	23	7	14	8	00	10	12	25	4 24 103
UT	ARIES			VENUS				MARTE				JÚPITER				SATURNO					
	PMG 2 ^h 57 ^m 5			Mag: -3.8 PMG: 10 ^h 43 ^m				Mag: +0.1 PMG: 6 ^h 17 ^m				Mag: -2.8 PMG: 3 ^h 31 ^m				Mag: +0.3 PMG: 0 ^h 39 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♅	Dec	hG ♄	Dec	hG ♁	Dec	hG ♇	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	315	29.9	199	23.1	+21	29.3	265	35.0	+16	39.8	307	02.2	+2	02.9	350	14.0	-15	14.5			
1	330	32.4	214	22.3		28.9	280	35.9		40.2	322	04.7		02.8	5	16.6		14.6			
2	345	34.8	229	21.5		28.5	295	36.8		40.6	337	07.2		02.8	20	19.3		14.6			
3	0	37.3	244	20.7		28.0	310	37.7		41.1	352	09.8		02.8	35	21.9		14.7			
4	15	39.7	259	19.9		27.6	325	38.6		41.5	7	12.3		02.7	50	24.6		14.7			
5	30	42.2	274	19.2	+21	27.2	340	39.5	+16	41.9	22	14.8	+2	02.7	65	27.2	-15	14.8			
6	45	44.7	289	18.4	+21	26.7	355	40.4	+16	42.3	37	17.4	+2	02.6	80	29.9	-15	14.9			
7	60	47.1	304	17.6		26.3	10	41.2		42.8	52	19.9		02.6	95	32.5		14.9			
8	75	49.6	319	16.8		25.9	25	42.1		43.2	67	22.4		02.6	110	35.1		15.0			
9	90	52.1	334	16.0		25.4	40	43.0		43.6	82	25.0		02.5	125	37.8		15.1			
10	105	54.5	349	15.3		25.0	55	43.9		44.0	97	27.5		02.5	140	40.4		15.1			
11	120	57.0	4	14.5	+21	24.6	70	44.8	+16	44.5	112	30.0	+2	02.4	155	43.1	-15	15.2			
12	135	59.5	19	13.7	+21	24.1	85	45.7	+16	44.9	127	32.6	+2	02.4	170	45.7	-15	15.3			
13	151	01.9	34	12.9		23.7	100	46.6		45.3	142	35.1		02.3	185	48.4		15.3			
14	166	04.4	49	12.2		23.2	115	47.4		45.7	157	37.6		02.3	200	51.0		15.4			
15	181	06.9	64	11.4		22.8	130	48.3		46.1	172	40.2		02.3	215	53.7		15.5			
16	196	09.3	79	10.6		22.3	145	49.2		46.6	187	42.7		02.2	230	56.3		15.5			
17	211	11.8	94	09.8	+21	21.9	160	50.1	+16	47.0	202	45.2	+2	02.2	245	58.9	-15	15.6			
18	226	14.2	109	09.1	+21	21.4	175	51.0	+16	47.4	217	47.8	+2	02.1	261	01.6	-15	15.6			
19	241	16.7	124	08.3		21.0	190	51.9		47.8	232	50.3		02.1	276	04.2		15.7			
20	256	19.2	139	07.5		20.5	205	52.8		48.2	247	52.8		02.0	291	06.9		15.8			
21	271	21.6	154	06.7		20.1	220	53.7		48.7	262	55.4		02.0	306	09.5		15.8			
22	286	24.1	169	06.0		19.6	235	54.6		49.1	277	57.9		02.0	321	12.2		15.9			
23	301	26.6	184	05.2		19.2	250	55.4		49.5	293	00.4		01.9	336	14.8		16.0			
24	316	29.0	199	04.4	+21	18.7	265	56.3	+16	49.9	308	03.0	+2	01.9	351	17.4	-15	16.0			
Dif	—			-8 -4				+9 +4				+25 0				+26 -1					

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 7			Edad: 10 ^d 3 PHE { SD: 16 ^h 3 PMG: 20 ^h 57 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	178	33.7	+16	12.0	59	04.9	-25 29.0	60 N	20 12	21 07	22 37	18 59 64	22 52 74	
1	193	33.8		11.3	73	27.6	37 34.8	58	20 02	20 52	22 05	28 65	23 23 73	
2	208	33.9		10.6	87	50.2	36 40.4	56	19 53	38	21 42	18 05 66	23 47 71	
3	223	34.0		09.9	102	12.7	35 45.9	55	45	27	24	17 46 66	** ** *	
4	238	34.1		09.2	116	35.1	34 51.2	53	38	17	21 09	30 66	** ** *	
5	253	34.1	+16	08.5	130	57.4	33 -25 56.2	50	19 31	20 08	20 56	17 16 66	** ** *	
6	268	34.2	+16	07.7	145	19.7	33 -26 01.2	50	19 17	19 50	20 31	16 48 66	0 09 55	
7	283	34.3		07.0	159	41.8	31 05.9	47	19 06	35	20 12	26 66	29 57	
8	298	34.4		06.3	174	03.9	31 10.4	45	18 56	23	19 56	16 08 66	0 46 59	
9	313	34.5		05.6	188	25.8	29 14.8	44	30	48	19 13	44	15 52 66	
10	328	34.6		04.9	202	47.7	29 18.9	41	33	18 56	24	26 65	26 62	
11	343	34.6	+16	04.2	217	09.5	28 -26 22.9	40	18 21	18 43	19 08	15 03 65	1 48 63	
12	358	34.7	+16	03.5	231	31.2	27 -26 26.7	38	18 09	18 31	18 56	14 42 65	2 08 65	
13	13	34.8		02.8	245	52.9	27 30.3	36	17 58	19	45	14 20 66	29 65	
14	28	34.9		02.1	260	14.5	26 33.7	34	20	45	18 08	35	13 58 65	
15	43	35.0		01.3	274	36.0	25 37.0	33	32	17 57	25	32 64	3 16 68	
16	58	35.1	+16	00.6	288	57.4	24 40.0	30	35	24	50	20	13 16 64	
17	73	35.2	+15	59.9	303	18.7	23 -26 42.8	28	40	17 15	17 43	18 15	12 59 63	
18	88	35.2	+15	59.2	317	40.0	23 -26 45.5	27	45	17 04	17 35	18 10	12 37 63	
19	103	35.3		58.5	332	01.3	23 47.9	24	50	16 51	26	05	12 10 62	
20	118	35.4		57.8	346	22.4	21 50.1	22	52	46	22	02	11 57 61	
21	133	35.5		57.0	0	43.6	22 52.2	21	54	39	17	18 00	42 60	
22	148	35.6		56.3	15	04.6	20 54.0	18	56	32	12	17 57	25 59	
23	163	35.7		55.6	29	25.6	20 55.7	17	58	24	07	54	11 04 57	
24	178	35.8	+15	54.9	43	46.6	20 -26 57.1	14	60 S	16 14	17 01	17 51	10 37 54	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 53 ^m 6		Mag: -3.8 PMG: 10 ^h 44 ^m		Mag: +0.1 PMG: 6 ^h 16 ^m		Mag: -2.8 PMG: 3 ^h 27 ^m		Mag: +0.3 PMG: 0 ^h 35 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	316	29.0	199	04.4	+21	18.7	265	56.3	+16	49.9
1	331	31.5	214	03.6		18.3	280	57.2		50.3
2	346	34.0	229	02.9		17.8	295	58.1		50.8
3	1	36.4	244	02.1		17.4	310	59.0		51.2
4	16	38.9	259	01.3		16.9	325	59.9		51.6
5	31	41.4	274	00.5	+21	16.5	341	00.8	+16	52.0
6	46	43.8	288	59.8	+21	16.0	356	01.7	+16	52.4
7	61	46.3	303	59.0		15.5	11	02.6		52.9
8	76	48.7	318	58.2		15.1	26	03.5		53.3
9	91	51.2	333	57.5		14.6	41	04.3		53.7
10	106	53.7	348	56.7		14.1	56	05.2		54.1
11	121	56.1	3	55.9	+21	13.7	71	06.1	+16	54.5
12	136	58.6	18	55.1	+21	13.2	86	07.0	+16	54.9
13	152	01.1	33	54.4		12.7	101	07.9		55.4
14	167	03.5	48	53.6		12.3	116	08.8		55.8
15	182	06.0	63	52.8		11.8	131	09.7		56.2
16	197	08.5	78	52.1		11.3	146	10.6		56.6
17	212	10.9	93	51.3	+21	10.9	161	11.5	+16	57.0
18	227	13.4	108	50.5	+21	10.4	176	12.4	+16	57.4
19	242	15.9	123	49.8		09.9	191	13.3		57.8
20	257	18.3	138	49.0		09.4	206	14.2		58.3
21	272	20.8	153	48.2		09.0	221	15.1		58.7
22	287	23.2	168	47.4		08.5	236	16.0		59.1
23	302	25.7	183	46.7		08.0	251	16.8		59.5
24	317	28.2	198	45.9	+21	07.5	266	17.7	+16	59.9
Dif	—		-8		-5		+9		+4	
								+25	0	
									+26	-

UT	SOL				O LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 5				Edad: 11 ^d 3 PHE { 4 ^h : 60 ^h 6 12 ^h : 60 ^h 7 20 ^h : 60 ^h 8 Rº: 64 ^m																
	hG ☉ Dec		hG ☾ Dif Dec Dif		Náutico		Civil		Hora Rº			Hora Rº									
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m	
0	178	35.8	+15	54.9	43	46.6	-26	57.1	12	58	60 N	1	35	3	05	4	00	20	03	30	*** ** *
1	193	35.8		54.2	58	07.5	19	58.3	11	58		2	07		20	10	19	33	38	*** ** *	
2	208	35.9		53.5	72	28.4	19	-26	59.4	8	56		30		34	19	19	11	42	*** ** *	
3	223	36.0		52.7	86	49.3	19	-27	00.2	8	54		2	48		45	18	52	45	0 06 70	
4	238	36.1		52.0	101	10.1	18		00.8	6	52		3	03		3	36		48	22 70	
5	253	36.2	+15	51.3	115	30.8	17	-27	01.3	5	50		3	16		4	18	22	50	0 36 70	
6	268	36.3	+15	50.6	129	51.6	18	-27	01.5	2	45		3	41		4	17	54	54	1 04 70	
7	283	36.4		49.9	144	12.3	17		01.5	0	40		4	00		36	32	56		26 69	
8	298	36.5		49.1	158	33.0	17		01.3	2	35		15		48	15	17	14	58	1 45 68	
9	313	36.6		48.4	172	53.7	17		00.9	4	30		28		4	58	16	58	59	2 01 68	
10	328	36.6		47.7	187	14.3	16	-27	00.3	6	20		4	48		5	31	62		28 67	
11	343	36.7	+15	47.0	201	35.0	17	-26	59.5	8	10 N		5	03		5	16	08	64	2 51 66	
12	358	36.8	+15	46.3	215	55.6	16	-26	58.5	10	0		5	16		5	15	47	65	3 13 65	
13	13	36.9		45.5	230	16.2	16		57.3	12	10 S		27		5	52	26	66		34 65	
14	28	37.0		44.8	244	36.8	16		55.8	15	20		36		6	03	15	03	68	3 57 64	
15	43	37.1		44.1	258	57.5	17		54.2	16	30		46		14	39	14	36	71	4 24 63	
16	58	37.2		43.4	273	18.1	16		52.3	19	35		51		21	47	20	72		40 62	
17	73	37.3	+15	42.6	287	38.7	16	-26	50.3	20	40		5	55		6	14	02	73	4 58 61	
18	88	37.4	+15	41.9	301	59.3	16	-26	48.0	23	45		6	01		6	13	40	75	5 20 60	
19	103	37.5		41.2	316	20.0	17		45.6	24	50		06		44	19	13	12	78	5 48 58	
20	118	37.6		40.5	330	40.6	16		42.9	27	52		08		49	25	12	58	79	6 02 57	
21	133	37.6		39.7	345	01.3	17		40.0	29	54		11		53	31		42	81	18 55	
22	148	37.7		39.0	359	22.0	17		36.9	31	56		13		6	58	24	83		6 37 53	
23	163	37.8		38.3	13	42.7	17		33.7	32	58		16		7	03	12	01	86	7 00 50	
24	178	37.9	+15	37.5	28	03.5	18	-26	30.2	35	60 S		6	19		7	09	11	31	91	7 29 46
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO						
	PMG 2 ^h 49 ^m 7		Mag: -3.8 PMG: 10 ^h 45 ^m				Mag: +0.1 PMG: 6 ^h 14 ^m				Mag: -2.8 PMG: 3 ^h 23 ^m				Mag: +0.3 PMG: 0 ^h 31 ^m						
	hG ♈		hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	317	28.2	198	45.9	+21	07.5	266	17.7	+16	59.9	309	03.9	+2	00.8	352	20.9	-15	17.6			
1	332	30.6	213	45.1		07.0	281	18.6	+17	00.3	324	06.5		00.7	7	23.6		17.6			
2	347	33.1	228	44.4		06.6	296	19.5		00.7	339	09.0		00.7	22	26.2		17.7			
3	2	35.6	243	43.6		06.1	311	20.4		01.1	354	11.5		00.7	37	28.9		17.8			
4	17	38.0	258	42.8		05.6	326	21.3		01.6	9	14.1		00.6	52	31.5		17.8			
5	32	40.5	273	42.1	+21	05.1	341	22.2	+17	02.0	24	16.6	+2	00.6	67	34.1	-15	17.9			
6	47	43.0	288	41.3	+21	04.6	356	23.1	+17	02.4	39	19.2	+2	00.5	82	36.8	-15	18.0			
7	62	45.4	303	40.6		04.1	11	24.0		02.8	54	21.7		00.5	97	39.4		18.0			
8	77	47.9	318	39.8		03.7	26	24.9		03.2	69	24.3		00.4	112	42.1		18.1			
9	92	50.4	333	39.0		03.2	41	25.8		03.6	84	26.8		00.4	127	44.7		18.2			
10	107	52.8	348	38.3		02.7	56	26.7		04.0	99	29.4		00.3	142	47.4		18.2			
11	122	55.3	3	37.5	+21	02.2	71	27.6	+17	04.4	114	31.9	+2	00.3	157	50.0	-15	18.3			
12	137	57.7	18	36.7	+21	01.7	86	28.5	+17	04.8	129	34.5	+2	00.2	172	52.7	-15	18.3			
13	153	00.2	33	36.0		01.2	101	29.4		05.2	144	37.0		00.2	187	55.3		18.4			
14	168	02.7	48	35.2		00.7	116	30.3		05.7	159	39.6		00.1	202	57.9		18.5			
15	183	05.1	63	34.4	+21	00.2	131	31.2		06.1	174	42.1	+2	00.1	218	00.6		18.5			
16	198	07.6	78	33.7	+20	59.7	146	32.1		06.5	189	44.7	+2	00.0	233	03.2		18.6			
17	213	10.1	93	32.9	+20	59.2	161	33.0	+17	06.9	204	47.2	+2	00.0	248	05.9	-15	18.7			
18	228	12.5	108	32.2	+20	58.7	176	33.9	+17	07.3	219	49.7	+1	59.9	263	08.5	-15	18.7			
19	243	15.0	123	31.4		58.2	191	34.8		07.7	234	52.3		59.9	278	11.2		18.8			
20	258	17.5	138	30.6		57.7	206	35.7		08.1	249	54.8		59.8	293	13.8		18.9			
21	273	19.9	153	29.9		57.2	221	36.6		08.5	264	57.4		59.8	308	16.5		18.9			
22	288	22.4	168	29.1		56.7	236	37.5		08.9	279	59.9		59.7	323	19.1		19.0			
23	303	24.9	183	28.3		56.2	251	38.4		09.3	295	02.5		59.7	338	21.8		19.1			
24	318	27.3	198	27.6	+20	55.7	266	39.3	+17	09.7	310	05.0	+1	59.6	353	24.4	-15	19.1			
Dif	—		-8 -5				+9 +4				+25 0				+26 -1						

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 05 ^m 4				Edad: 12 ^d 3 PHE { SD: 16'6 PMG: 23 ^h 07 ^m														
	hG ☉ Dec				hG ☾ Dif Dec Dif						Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m			
0	178	37.9	+15	37.5	28	03.5	-26	30.2	60 N	20 07	21 01	22 26	20 33 13		0 06	106			
1	193	38.0		36.8	42	24.2	17	26.5	58	19 57	20 46	21 57	20 11 20		36	97			
2	208	38.1		36.1	56	45.0	18	22.6	56		48	33	19 53 25		0 58	93			
3	223	38.2		35.4	71	05.9	19	18.5	54		41	22	37 30		1 17	89			
4	238	38.3		34.6	85	26.8	19	14.2	52		34	13	21 04		32	87			
5	253	38.4	+15	33.9	99	47.7	19	-26 09.7	50	19 28	20 04	20 51	19 12 36		1 46	84			
6	268	38.5	+15	33.2	114	08.7	20	-26 05.0	45	19 14	19 47	20 27	18 48 40		2 14	80			
7	283	38.6		32.4	128	29.7	20	-26 00.1	40	19 03		33	20 09		35	77			
8	298	38.7		31.7	142	50.7	20	-25 55.0	35	18 54		21	19 54		2 53	75			
9	313	38.8		31.0	157	11.9	22	49.7	30		46	19 11	42	17 57 51	3 09	72			
10	328	38.9		30.2	171	33.0	21	44.2	20		32	18 55	22	33 55	35	69			
11	343	39.0	+15	29.5	185	54.3	23	-25 38.5	10 N	18 20	18 42	19 07	17 12 59		3 57	67			
12	358	39.1	+15	28.8	200	15.5	22	-25 32.6	0	18 09	18 30	18 55	16 52 62		4 18	64			
13	13	39.2		28.0	214	36.9	24	26.6	10 S	17 58		19	45	32 66	4 39	61			
14	28	39.3		27.3	228	58.3	24	20.3	20		46	18 09	35	16 11 69	5 01	59			
15	43	39.4		26.6	243	19.8	25	13.8	30		33	17 58	26	15 47 73	27	55			
16	58	39.5		25.8	257	41.4	26	07.2	35		25	51	21	32 76	42	53			
17	73	39.6	+15	25.1	272	03.0	26	-25 00.4	40	17 16	17 45	18 17	15 15 79		5 59	51			
18	88	39.6	+15	24.4	286	24.7	27	-24 53.4	45	17 06	17 37	18 12	14 55 83		6 20	47			
19	103	39.7		23.6	300	46.5	28	46.2	50	16 54		29	07	30 88	46	43			
20	118	39.8		22.9	315	08.3	28	38.8	52		49	25	05	17 91	6 59	40			
21	133	39.9		22.2	329	30.3	30	31.2	54		42	20	03	14 03 94	7 13	37			
22	148	40.0		21.4	343	52.3	30	23.5	56		36	16	18 00	13 47 98	30	33			
23	163	40.1		20.7	358	14.4	31	15.5	58		28	11	17 58	27 103	7 50	28			
24	178	40.2	+15	19.9	12	36.6	32	-24 07.4	60 S	16 19	17 05	17 55	13 02 111		8 15	21			

UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG 2 ^h 45 ^m 7			Mag: -3.8 PMG: 10 ^h 47 ^m			Mag: +0.1 PMG: 6 ^h 13 ^m			Mag: -2.8 PMG: 3 ^h 19 ^m			Mag: +0.3 PMG: 0 ^h 26 ^m								
	hG ♈			hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	318	27.3	198	27.6	+20	55.7	266	39.3	+17	09.7	310	05.0	+1	59.6	353	24.4	-15	19.1			
1	333	29.8	213	26.8		55.2	281	40.2		10.1	325	07.6		59.6	8	27.0		19.2			
2	348	32.2	228	26.1		54.7	296	41.1		10.5	340	10.2		59.5	23	29.7		19.2			
3	3	34.7	243	25.3		54.2	311	42.0		10.9	355	12.7		59.5	38	32.3		19.3			
4	18	37.2	258	24.5		53.7	326	42.9		11.3	10	15.3		59.4	53	35.0		19.4			
5	33	39.6	273	23.8	+20	53.2	341	43.8	+17	11.8	25	17.8	+1	59.4	68	37.6	-15	19.4			
6	48	42.1	288	23.0	+20	52.6	356	44.7	+17	12.2	40	20.4	+1	59.3	83	40.3	-15	19.5			
7	63	44.6	303	22.3		52.1	11	45.6		12.6	55	22.9		59.3	98	42.9		19.6			
8	78	47.0	318	21.5		51.6	26	46.5		13.0	70	25.5		59.2	113	45.6		19.6			
9	93	49.5	333	20.8		51.1	41	47.4		13.4	85	28.0		59.2	128	48.2		19.7			
10	108	52.0	348	20.0		50.6	56	48.3		13.8	100	30.6		59.1	143	50.9		19.8			
11	123	54.4	3	19.2	+20	50.1	71	49.2	+17	14.2	115	33.1	+1	59.1	158	53.5	-15	19.8			
12	138	56.9	18	18.5	+20	49.6	86	50.1	+17	14.6	130	35.7	+1	59.0	173	56.1	-15	19.9			
13	153	59.3	33	17.7		49.0	101	51.0		15.0	145	38.2		59.0	188	58.8		20.0			
14	169	01.8	48	17.0		48.5	116	51.9		15.4	160	40.8		58.9	204	01.4		20.0			
15	184	04.3	63	16.2		48.0	131	52.8		15.8	175	43.3		58.9	219	04.1		20.1			
16	199	06.7	78	15.5		47.5	146	53.7		16.2	190	45.9		58.8	234	06.7		20.1			
17	214	09.2	93	14.7	+20	47.0	161	54.6	+17	16.6	205	48.5	+1	58.8	249	09.4	-15	20.2			
18	229	11.7	108	14.0	+20	46.4	176	55.5	+17	17.0	220	51.0	+1	58.7	264	12.0	-15	20.3			
19	244	14.1	123	13.2		45.9	191	56.4		17.4	235	53.6		58.7	279	14.7		20.3			
20	259	16.6	138	12.4		45.4	206	57.3		17.8	250	56.1		58.6	294	17.3		20.4			
21	274	19.1	153	11.7		44.9	221	58.2		18.2	265	58.7		58.6	309	20.0		20.5			
22	289	21.5	168	10.9		44.3	236	59.1		18.6	281	01.2		58.5	324	22.6		20.5			
23	304	24.0	183	10.2		43.8	252	00.0		19.0	296	03.8		58.5	339	25.2		20.6			
24	319	26.5	198	09.4	+20	43.3	267	00.9	+17	19.4	311	06.4	+1	58.4	354	27.9	-15	20.7			
Dif	—			-8			-5			+9			+4			+26			-1		

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna								
	SD: 15 ^h /8			Edad: 13 ^d 3 PHE { 4 ^h : 60 ^m /9 12 ^h : 60 ^m /8 20 ^h : 60 ^m /8 R°: **m																			
	PMG: 12 ^h 05 ^m 2			PMG: **h **m																			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m							
0	178	40.2	+15	19.9	12	36.6	-24	07.4	60 N	1	46	3	11	4	04	20	46	6	1	52	113		
1	193	40.3			26	58.9	33	-23	59.2	82	2	15	26	14		31	12		2	13	107		
2	208	40.4			41	21.3	34		50.7	85	36	38	23		18	16			31	101			
3	223	40.5			55	43.8	35		42.1	86	2	53	49	31		20	07	19		46	96		
4	238	40.6			70	06.3	35		33.3	88	3	08	3	58	37		19	57	23		2	59	93
5	253	40.7	+15	16.2	84	29.0	37	-23	24.3	90	3	20	4	07	4	44	19	48	25		3	10	90
6	268	40.8	+15	15.5	98	51.7	37	-23	15.2	91	3	44	4	24	4	57	19	28	32		3	34	84
7	283	40.9			113	14.6	39	-23	05.9	93	4	02	38	5	08		13	36		3	52	80	
8	298	41.0			127	37.6	40	-22	56.4	95	17	4	50	17		19	00	39		4	08	76	
9	313	41.1			142	00.6	40		46.8	96	29	5	00	25		18	48	43		21	73		
10	328	41.2			156	23.8	42		37.1	97	4	49	16	39		28	48		4	44	68		
11	343	41.4	+15	11.8	170	47.1	43	-22	27.1	100	5	03	5	29	5	51	18	11	53		5	04	64
12	358	41.5	+15	11.0	185	10.4	43	-22	17.0	101	5	15	5	40	6	02	17	54	58		5	22	60
13	13	41.6			199	33.9	45	-22	06.8	102	26	5	51	13		38	62		5	40	56		
14	28	41.7			213	57.5	46	-21	56.4	104	35	6	02	24		20	67		6	00	51		
15	43	41.8			228	21.2	47		45.9	105	44	13	37		17	00	72		22	47			
16	58	41.9			242	45.0	48		35.2	107	49	19	45		16	48	75		35	44			
17	73	42.0	+15	07.3	257	08.9	49	-21	24.3	109	5	53	6	25	6	54	16	34	79		6	50	40
18	88	42.1	+15	06.6	271	32.9	50	-21	13.4	109	5	58	6	33	7	03	16	18	83		7	07	36
19	103	42.2			285	57.1	52	-21	02.3	111	6	03	41	15		15	58	89		29	30		
20	118	42.3			300	21.3	52	-20	51.0	113	05	45	21		48	93		39	27				
21	133	42.4			314	45.7	54		39.6	114	07	49	27		37	96		7	50	25			
22	148	42.5			329	10.1	54		28.1	115	10	54	34		25	100		8	03	21			
23	163	42.6			343	34.7	56		16.4	117	12	6	59	41		15	10	105		18	16		
24	178	42.7	+15	02.1	357	59.4	57	-20	04.7	117	6	15	7	04	7	50	14	53	111		8	36	10
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 2 ^h 41 ^m 8		Mag: -3.8 PMG: 10 ^h 48 ^m			Mag: +0.1 PMG: 6 ^h 12 ^m			Mag: -2.8 PMG: 3 ^h 15 ^m			Mag: +0.3 PMG: 0 ^h 22 ^m											
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'						
0	319	26.5	198	09.4	+20	43.3	267	00.9	+17	19.4	311	06.4	+1	58.4	354	27.9	-15	20.7					
1	334	28.9	213	08.7		42.7	282	01.8		19.8	326	08.9		58.4	9	30.5		20.7					
2	349	31.4	228	07.9		42.2	297	02.7		20.2	341	11.5		58.3	24	33.2		20.8					
3	4	33.8	243	07.2		41.7	312	03.6		20.6	356	14.0		58.3	39	35.8		20.9					
4	19	36.3	258	06.4		41.1	327	04.5		21.0	11	16.6		58.2	54	38.5		20.9					
5	34	38.8	273	05.7	+20	40.6	342	05.4	+17	21.4	26	19.2	+1	58.1	69	41.1	-15	21.0					
6	49	41.2	288	04.9	+20	40.1	357	06.3	+17	21.8	41	21.7	+1	58.1	84	43.8	-15	21.0					
7	64	43.7	303	04.2		39.5	12	07.2		22.2	56	24.3		58.0	99	46.4		21.1					
8	79	46.2	318	03.4		39.0	27	08.1		22.6	71	26.8		58.0	114	49.1		21.2					
9	94	48.6	333	02.7		38.5	42	09.0		23.0	86	29.4		57.9	129	51.7		21.2					
10	109	51.1	348	01.9		37.9	57	09.9		23.4	101	32.0		57.9	144	54.4		21.3					
11	124	53.6	3	01.2	+20	37.4	72	10.9	+17	23.8	116	34.5	+1	57.8	159	57.0	-15	21.4					
12	139	56.0	18	00.4	+20	36.8	87	11.8	+17	24.2	131	37.1	+1	57.8	174	59.6	-15	21.4					
13	154	58.5	32	59.7		36.3	102	12.7		24.6	146	39.6		57.7	190	02.3		21.5					
14	170	01.0	47	58.9		35.7	117	13.6		25.0	161	42.2		57.7	205	04.9		21.6					
15	185	03.4	62	58.2		35.2	132	14.5		25.4	176	44.8		57.6	220	07.6		21.6					
16	200	05.9	77	57.4		34.7	147	15.4		25.8	191	47.3		57.6	235	10.2		21.7					
17	215	08.3	92	56.7	+20	34.1	162	16.3	+17	26.1	206	49.9	+1	57.5	250	12.9	-15	21.8					
18	230	10.8	107	55.9	+20	33.6	177	17.2	+17	26.5	221	52.5	+1	57.4	265	15.5	-15	21.8					
19	245	13.3	122	55.2		33.0	192	18.1		26.9	236	55.0		57.4	280	18.2		21.9					
20	260	15.7	137	54.4		32.5	207	19.0		27.3	251	57.6		57.3	295	20.8		21.9					
21	275	18.2	152	53.7		31.9	222	19.9		27.7	267	00.1		57.3	310	23.5		22.0					
22	290	20.7	167	52.9		31.4	237	20.8		28.1	282	02.7		57.2	325	26.1		22.1					
23	305	23.1	182	52.2		30.8	252	21.7		28.5	297	05.3		57.2	340	28.8		22.1					
24	320	25.6	197	51.5	+20	30.2	267	22.7	+17	28.9	312	07.8	+1	57.1	355	31.4	-15	22.2					
Dif	—		-7	-5			+9	+4			+26	-1			+26	-1							

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 05 ^m 1			Edad: 14 ^d 3 PHE { 4 ^h : 60'6 12 ^h : 60'5 20 ^h : 60'3 PMG: 0 ^h 08 ^m R°: 57 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	178	42.7	+15 02.1	357	59.4	-20 04.7	58	60 N	20 02	20 54	22 15	20 52	4	3 45
1	193	42.8	01.3	12	24.2	58 -19 52.7	120	58	19 52	40	21 48	43	7	4 00
2	208	42.9	+15 00.6	26	49.2	60 40.7	120	56	44	28	28	34	11	12 99
3	223	43.0	+14 59.8	41	14.2	60 28.5	122	54	37	18	21 12	26	15	22 95
4	238	43.1	59.1	55	39.4	62 16.3	122	52	30	09	20 58	20	17	32 91
5	253	43.2	+14 58.3	70	04.7	63 -19 03.9	124	50	19 24	20 00	20 47	20 13	20	4 40
6	268	43.3	+14 57.6	84	30.0	63 -18 51.3	126	45	19 11	19 44	20 23	20 00	25	4 58
7	283	43.4	56.8	98	55.6	66 38.7	126	40	19 01	30	20 06	19 49	30	5 12
8	298	43.6	56.1	113	21.2	66 26.0	127	35	18 52	19	19 51	39	34	24 74
9	313	43.7	55.3	127	46.9	67 13.1	129	30	44	19 09	40	31	37	34 71
10	328	43.8	54.6	142	12.8	69 -18 00.1	130	20	31	18 54	21	16	43	5 52
11	343	43.9	+14 53.8	156	38.7	69 -17 47.1	130	10 N	18 19	18 41	19 06	19 04	48	6 08
12	358	44.0	+14 53.1	171	04.8	71 -17 33.9	132	0	18 08	18 30	18 55	18 52	52	6 22
13	13	44.1	52.3	185	31.0	72 20.6	133	10 S	17 58	20	45	40	57	36 51
14	28	44.2	51.6	199	57.3	73 -17 07.2	134	20	47	18 09	36	27	62	6 51
15	43	44.3	50.8	214	23.7	74 -16 53.8	134	30	34	17 59	27	12	68	7 09
16	58	44.4	50.1	228	50.3	76 40.2	136	35	27	53	23	18 03	72	19 36
17	73	44.5	+14 49.3	243	16.9	76 -16 26.5	137	40	17 18	17 46	18 19	17 53	76	7 30
18	88	44.6	+14 48.6	257	43.7	78 -16 12.8	137	45	17 09	17 39	18 14	17 41	81	7 43
19	103	44.7	47.8	272	10.6	79 -15 59.0	138	50	16 57	31	09	27	87	7 59
20	118	44.9	47.0	286	37.6	80 45.0	140	52	52	28	08	21	89	8 06
21	133	45.0	46.3	301	04.7	81 31.0	140	54	46	24	05	13	93	15 17
22	148	45.1	45.5	315	31.9	82 16.9	141	56	39	19	03	17 05	96	24 14
23	163	45.2	44.8	329	59.2	83 -15 02.8	141	58	32	14	18 01	16 55	101	34 10
24	178	45.3	+14 44.0	344	26.6	84 -14 48.5	143	60 S	16 24	17 09	17 59	16 44	106	8 46
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 37 ^m 9		Mag: -3.8 PMG: 10 ^h 49 ^m			Mag: +0.1 PMG: 6 ^h 10 ^m			Mag: -2.8 PMG: 3 ^h 11 ^m			Mag: +0.3 PMG: 0 ^h 18 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°
0	320	25.6	197 51.5	+20 30.2	267 22.7	+17 28.9	312 07.8	+1 57.1	355 31.4	-15 57.1	22.2			
1	335	28.1	212 50.7	29.7	282 23.6	29.3	327 10.4	57.1	10 34.0	22.3				
2	350	30.5	227 50.0	29.1	297 24.5	29.7	342 13.0	57.0	25 36.7	22.3				
3	5 33.0	242 49.2	28.6	312 25.4	30.1	357 15.5	56.9	40 39.3	22.4					
4	20 35.5	257 48.5	28.0	327 26.3	30.5	12 18.1	56.9	55 42.0	22.5					
5	35 37.9	272 47.7	+20 27.5	342 27.2	+17 30.9	27 20.7	+1 56.8	70 44.6	-15 22.5					
6	50 40.4	287 47.0	+20 26.9	357 28.1	+17 31.3	42 23.2	+1 56.8	85 47.3	-15 22.6					
7	65 42.8	302 46.2	26.3	12 29.0	31.7	57 25.8	56.7	100 49.9	22.7					
8	80 45.3	317 45.5	25.8	27 29.9	32.0	72 28.4	56.7	115 52.6	22.7					
9	95 47.8	332 44.8	25.2	42 30.8	32.4	87 30.9	56.6	130 55.2	22.8					
10	110 50.2	347 44.0	24.6	57 31.8	32.8	102 33.5	56.5	145 57.9	22.8					
11	125 52.7	2 43.3	+20 24.1	72 32.7	+17 33.2	117 36.1	+1 56.5	161 00.5	-15 22.9					
12	140 55.2	17 42.5	+20 23.5	87 33.6	+17 33.6	132 38.6	+1 56.4	176 03.2	-15 23.0					
13	155 57.6	32 41.8	22.9	102 34.5	34.0	147 41.2	56.4	191 05.8	23.0					
14	171 00.1	47 41.1	22.4	117 35.4	34.4	162 43.8	56.3	206 08.4	23.1					
15	186 02.6	62 40.3	21.8	132 36.3	34.8	177 46.4	56.3	221 11.1	23.2					
16	201 05.0	77 39.6	21.2	147 37.2	35.2	192 48.9	56.2	236 13.7	23.2					
17	216 07.5	92 38.8	+20 20.7	162 38.1	+17 35.6	207 51.5	+1 56.1	251 16.4	-15 23.3					
18	231 09.9	107 38.1	+20 20.1	177 39.1	+17 35.9	222 54.1	+1 56.1	266 19.0	-15 23.4					
19	246 12.4	122 37.4	19.5	192 40.0	36.3	237 56.6	56.0	281 21.7	23.4					
20	261 14.9	137 36.6	18.9	207 40.9	36.7	252 59.2	56.0	296 24.3	23.5					
21	276 17.3	152 35.9	18.4	222 41.8	37.1	268 01.8	55.9	311 27.0	23.6					
22	291 19.8	167 35.1	17.8	237 42.7	37.5	283 04.4	55.9	326 29.6	23.6					
23	306 22.3	182 34.4	17.2	252 43.6	37.9	298 06.9	55.8	341 32.3	23.7					
24	321 24.7	197 33.7	+20 16.6	267 44.5	+17 38.3	313 09.5	+1 55.7	356 34.9	-15 23.7					
Dif	—	-7	-6	+9	+4	+26	-1	+26	-1					

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 9			Edad: 15 ^d 3 PHE { 4 ^h : 60 ^m 1 12 ^h : 59 ^m 9 20 ^h : 59 ^m 6 PMG: 1 ^h 05 ^m R°: 51 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	45.3	+14	44.0	344	26.6	-14	48.5	60 N	1 56	3 17	4 09	20 56	2	5 35	102	
1	193	45.4		43.2	358	54.1 85		34.2 143	58	2 22	31	19	50	6	43	98	
2	208	45.5		42.5	13	21.8 87		19.8 144	56	42	43	27	45	9	51	94	
3	223	45.6		41.7	27	49.5 87	-14	05.3 145	54	2 59	3 53	34	41	12	5 57	91	
4	238	45.7		41.0	42	17.4 89	-13	50.8 145	52	3 12	4 02	41	37	14	6 03	88	
5	253	45.9	+14	40.2	56	45.3 89	-13	36.2 146	50	3 24	4 10	4 47	20 33	17	6 09	85	
6	268	46.0	+14	39.4	71	13.4 91	-13	21.5 147	45	3 47	4 27	4 59	20 25	22	6 20	79	
7	283	46.1		38.7	85	41.6 92	-13	06.8 147	40	4 05	40	5 10	19	26	30	74	
8	298	46.2		37.9	100	09.9 93	-12	52.0 148	35	19	4 51	18	13	30	38	70	
9	313	46.3		37.2	114	38.2 93		37.1 149	30	31	5 01	26	20 08	33	45	67	
10	328	46.4		36.4	129	06.7 95		22.2 149	20	4 49	16	39	19 59	39	6 57	61	
11	343	46.5	+14	35.6	143	35.3 96	-12	07.3 149	10 N	5 04	5 29	5 51	19 52	44	7 07	56	
12	358	46.6	+14	34.9	158	03.9 96	-11	52.2 151	0	5 15	5 40	6 01	19 44	49	7 17	51	
13	13	46.8		34.1	172	32.7 98		37.2 150	10 S	25	5 50	12	37	54	27	46	
14	28	46.9		33.3	187	01.6 99		22.1 151	20	34	6 00	23	29	59	37	41	
15	43	47.0		32.6	201	30.5 99	-11	06.9 152	30	43	11	36	20	65	49	35	
16	58	47.1		31.8	215	59.6 101	-10	51.7 152	35	47	17	43	15	68	7 55	32	
17	73	47.2	+14	31.1	230	28.8 102	-10	36.4 153	40	5 51	6 23	6 51	19 09	72	8 03	28	
18	88	47.3	+14	30.3	244	58.0 102	-10	21.1 153	45	5 55	6 30	7 00	19 02	77	8 11	24	
19	103	47.5		29.5	259	27.3 103	-10	05.8 153	50	6 00	38	12	18 54	82	22	18	
20	118	47.6		28.8	273	56.8 105	-9	50.4 154	52	02	42	17	50	85	27	15	
21	133	47.7		28.0	288	26.3 105		35.0 154	54	04	45	23	46	88	32	13	
22	148	47.8		27.2	302	55.9 106		19.6 154	56	06	50	29	41	91	38	10	
23	163	47.9		26.5	317	25.6 107	-9	04.1 155	58	08	6 54	37	36	94	44	7	
24	178	48.0	+14	25.7	331	55.4 108	-8	48.6 155	60 S	6 10	7 00	7 45	18 30	98	8 51	3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 33 ^m 9		Mag: -3.8 PMG: 10 ^h 50 ^m		Mag: +0.1 PMG: 6 ^h 09 ^m		Mag: -2.8 PMG: 3 ^h 07 ^m		Mag: +0.3 PMG: 0 ^h 14 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	321	24.7	197	33.7	+20	16.6	267	44.5	+17	38.3	313	09.5	+1	55.7	356	34.9	-15	23.7
1	336	27.2	212	32.9		16.0	282	45.5		38.7	328	12.1		55.7	11	37.6		23.8
2	351	29.7	227	32.2		15.5	297	46.4		39.0	343	14.6		55.6	26	40.2		23.9
3	6	32.1	242	31.5		14.9	312	47.3		39.4	358	17.2		55.6	41	42.9		23.9
4	21	34.6	257	30.7		14.3	327	48.2		39.8	13	19.8		55.5	56	45.5		24.0
5	36	37.1	272	30.0	+20	13.7	342	49.1	+17	40.2	28	22.4	+1	55.4	71	48.1	-15	24.1
6	51	39.5	287	29.3	+20	13.1	357	50.0	+17	40.6	43	24.9	+1	55.4	86	50.8	-15	24.1
7	66	42.0	302	28.5		12.5	12	50.9		41.0	58	27.5		55.3	101	53.4		24.2
8	81	44.4	317	27.8		12.0	27	51.9		41.4	73	30.1		55.3	116	56.1		24.3
9	96	46.9	332	27.0		11.4	42	52.8		41.7	88	32.7		55.2	131	58.7		24.3
10	111	49.4	347	26.3		10.8	57	53.7		42.1	103	35.2		55.1	147	01.4		24.4
11	126	51.8	2	25.6	+20	10.2	72	54.6	+17	42.5	118	37.8	+1	55.1	162	04.0	-15	24.5
12	141	54.3	17	24.8	+20	09.6	87	55.5	+17	42.9	133	40.4	+1	55.0	177	06.7	-15	24.5
13	156	56.8	32	24.1		09.0	102	56.4		43.3	148	43.0		55.0	192	09.3		24.6
14	171	59.2	47	23.4		08.4	117	57.4		43.7	163	45.5		54.9	207	12.0		24.6
15	187	01.7	62	22.7		07.8	132	58.3		44.0	178	48.1		54.8	222	14.6		24.7
16	202	04.2	77	21.9		07.2	147	59.2		44.4	193	50.7		54.8	237	17.3		24.8
17	217	06.6	92	21.2	+20	06.6	163	00.1	+17	44.8	208	53.3	+1	54.7	252	19.9	-15	24.8
18	232	09.1	107	20.5	+20	06.0	178	01.0	+17	45.2	223	55.9	+1	54.7	267	22.6	-15	24.9
19	247	11.6	122	19.7		05.4	193	02.0		45.6	238	58.4		54.6	282	25.2		25.0
20	262	14.0	137	19.0		04.8	208	02.9		45.9	254	01.0		54.5	297	27.8		25.0
21	277	16.5	152	18.3		04.2	223	03.8		46.3	269	03.6		54.5	312	30.5		25.1
22	292	18.9	167	17.5		03.6	238	04.7		46.7	284	06.2		54.4	327	33.1		25.2
23	307	21.4	182	16.8		03.0	253	05.6		47.1	299	08.8		54.4	342	35.8		25.2
24	322	23.9	197	16.1	+20	02.4	268	06.5	+17	47.5	314	11.3	+1	54.3	357	38.4	-15	25.3
Dif	—		-7		-6		+9		+4		+26		-1		+26		-1	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 04 ^m 7			Edad: 16 ^d 3 PHE { 4 ^h : 59'3 12 ^h : 59'0 20 ^h : 58'8 SD: 16'2 PMG: 1 ^h 56 ^m R°: 48 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	178	48.0	+14	25.7	331	55.4	-8	48.6	60 N	19 56	20 48	22 04	20 58 1	7 17 96
1	193	48.1		24.9	346	25.2 ¹⁰⁸		33.0 ¹⁵⁶	58	47	34	21 40	56 5	21 93
2	208	48.3		24.1	0	55.2 ¹¹⁰		17.5 ¹⁵⁵	56	39	23	22	54 8	25 89
3	223	48.4		23.4	15	25.2 ¹¹⁰		-8 01.9 ¹⁵⁶	54	32	13	21 06	53 10	28 86
4	238	48.5		22.6	29	55.3 ¹¹¹		-7 46.3 ¹⁵⁶	52	26	20 04	20 53	51 13	31 83
5	253	48.6	+14	21.8	44	25.5 ¹¹²		-7 30.6 ¹⁵⁷	50	19 20	19 56	20 42	20 50 15	7 34 80
6	268	48.7	+14	21.1	58	55.8 ¹¹³		-7 15.0 ¹⁵⁶	45	19 08	19 40	20 20	20 47 21	7 39 75
7	283	48.9		20.3	73	26.1 ¹¹³		-6 59.3 ¹⁵⁷	40	18 58	27	20 02	45 24	44 71
8	298	49.0		19.5	87	56.5 ¹¹⁴		43.6 ¹⁵⁷	35	50	17	19 49	43 28	48 67
9	313	49.1		18.8	102	27.0 ¹¹⁵		27.9 ¹⁵⁷	30	42	19 07	37	41 32	52 63
10	328	49.2		18.0	116	57.6 ¹¹⁶		-6 12.2 ¹⁵⁷	20	29	18 52	19	38 37	7 58 57
11	343	49.3	+14	17.2	131	28.2 ¹¹⁶		-5 56.5 ¹⁵⁷	10 N	18 18	18 40	19 05	20 36 41	8 03 52
12	358	49.5	+14	16.4	145	58.9 ¹¹⁷		-5 40.7 ¹⁵⁸	0	18 08	18 29	18 54	20 33 47	8 08 47
13	13	49.6		15.7	160	29.7 ¹¹⁸		25.0 ¹⁵⁷	10 S	17 58	20	45	31 51	13 43
14	28	49.7		14.9	175	00.6 ¹¹⁹		-5 09.2 ¹⁵⁸	20	47	10	36	28 56	18 38
15	43	49.8		14.1	189	31.5 ¹¹⁹		-4 53.5 ¹⁵⁷	30	35	18 00	28	25 62	24 32
16	58	49.9		13.3	204	02.5 ¹²⁰		37.7 ¹⁵⁸	35	28	17 54	24	23 65	27 29
17	73	50.1	+14	12.6	218	33.5 ¹²⁰		-4 21.9 ¹⁵⁸	40	17 20	17 48	18 20	20 21 69	8 31 25
18	88	50.2	+14	11.8	233	04.7 ¹²²		-4 06.2 ¹⁵⁷	45	17 11	17 42	18 16	20 19 73	8 35 21
19	103	50.3		11.0	247	35.8 ¹²¹		-3 50.4 ¹⁵⁸	50	17 00	34	12	16 79	40 16
20	118	50.4		10.2	262	07.1 ¹²³		34.6 ¹⁵⁸	52	16 55	30	10	15 81	42 14
21	133	50.5		09.5	276	38.4 ¹²³		18.9 ¹⁵⁷	54	49	27	08	14 83	45 11
22	148	50.7		08.7	291	09.7 ¹²³		-3 03.1 ¹⁵⁸	56	43	23	07	12 87	48 8
23	163	50.8		07.9	305	41.1 ¹²⁴		-2 47.3 ¹⁵⁸	58	36	18	05	10 90	51 5
24	178	50.9	+14	07.1	320	12.6 ¹²⁵		-2 31.6 ¹⁵⁷	60 S	16 28	17 13	18 03	20 08 94	8 54 2
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 30 ^m 0		Mag: -3.8 PMG: 10 ^h 51 ^m			Mag: +0.1 PMG: 6 ^h 07 ^m			Mag: -2.8 PMG: 3 ^h 03 ^m			Mag: +0.3 PMG: 0 ^h 09 ^m		
	hG ♈		hG ♀ Dec			hG ♂ Dec			hG ♃ Dec			hG ♄ Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	322	23.9	197	16.1	+20	02.4	268	06.5	+17	47.5	314	11.3	+1	54.3
1	337	26.3	212	15.3		01.8	283	07.5		47.8	329	13.9		54.2
2	352	28.8	227	14.6		01.2	298	08.4		48.2	344	16.5		54.2
3	7	31.3	242	13.9	+20	00.6	313	09.3		48.6	359	19.1		54.1
4	22	33.7	257	13.2	+20	00.0	328	10.2		49.0	14	21.7		54.0
5	37	36.2	272	12.4	+19	59.4	343	11.2	+17	49.4	29	24.2	+1	54.0
6	52	38.7	287	11.7	+19	58.8	358	12.1	+17	49.7	44	26.8	+1	53.9
7	67	41.1	302	11.0		58.2	13	13.0		50.1	59	29.4		53.9
8	82	43.6	317	10.3		57.6	28	13.9		50.5	74	32.0		53.8
9	97	46.0	332	09.5		56.9	43	14.8		50.9	89	34.6		53.7
10	112	48.5	347	08.8		56.3	58	15.8		51.3	104	37.1		53.7
11	127	51.0	2	08.1	+19	55.7	73	16.7	+17	51.6	119	39.7	+1	53.6
12	142	53.4	17	07.4	+19	55.1	88	17.6	+17	52.0	134	42.3	+1	53.5
13	157	55.9	32	06.6		54.5	103	18.5		52.4	149	44.9		53.5
14	172	58.4	47	05.9		53.9	118	19.4		52.8	164	47.5		53.4
15	188	00.8	62	05.2		53.2	133	20.4		53.1	179	50.1		53.4
16	203	03.3	77	04.5		52.6	148	21.3		53.5	194	52.6		53.3
17	218	05.8	92	03.7	+19	52.0	163	22.2	+17	53.9	209	55.2	+1	53.2
18	233	08.2	107	03.0	+19	51.4	178	23.1	+17	54.3	224	57.8	+1	53.2
19	248	10.7	122	02.3		50.8	193	24.1		54.6	240	00.4		53.1
20	263	13.2	137	01.6		50.1	208	25.0		55.0	255	03.0		53.0
21	278	15.6	152	00.8		49.5	223	25.9		55.4	270	05.6		53.0
22	293	18.1	167	00.1		48.9	238	26.8		55.8	285	08.2		52.9
23	308	20.5	181	59.4		48.3	253	27.8		56.1	300	10.7		52.8
24	323	23.0	196	58.7	+19	47.6	268	28.7	+17	56.5	315	13.3	+1	52.8
Dif	—		-7 -6			+9 +4			+26 -1			+26 -1		

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 5				Edad: 17 ^d 3 PHE { 4 ^h : 58 ^m 5 12 ^h : 58 ^m 1 20 ^h : 57 ^m 8 PMG: 2 ^h 44 ^m R°: 46 ^m																
	hG ☉		Dec		hG ☾		Dif			Náutico	Civil		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m			
0	178	50.9	+14	07.1	320	12.6	-2	31.6	60 N	2	06	3	22	4	14	20	59	2			
1	193	51.0		06.4	334	44.1 ¹²⁵		15.9 ¹⁵⁷	58	30	36	23			21	01	5	54	88		
2	208	51.1		05.6	349	15.7 ¹²⁶	-2	00.1 ¹⁵⁸	56	2	48	47	31		02	8		54	85		
3	223	51.3		04.8	3	47.4 ¹²⁷	-1	44.4 ¹⁵⁷	54	3	04	3	57	38	03	11		54	8		
4	238	51.4		04.0	18	19.0 ¹²⁶		28.7 ¹⁵⁷	52	17	4	06	44		04	13		54	80		
5	253	51.5	+14	03.2	32	50.8 ¹²⁸	-1	13.0 ¹⁵⁷	50	3	28	4	13	4	50	21	05	16	8	54	78
6	268	51.6	+14	02.5	47	22.5 ¹²⁷	-0	57.4 ¹⁵⁶	45	3	50	4	30	5	02	21	08	20	8	54	73
7	283	51.8		01.7	61	54.4 ¹²⁹		41.7 ¹⁵⁷	40	4	07	42	11		09	24		55	67		
8	298	51.9		00.9	76	26.3 ¹²⁹		26.1 ¹⁵⁶	35	21	4	53	20		11	28		55	64		
9	313	52.0	+14	00.1	90	58.2 ¹²⁹	-0	10.4 ¹⁵⁷	30	32	5	02	27		13	30		55	61		
10	328	52.1	+13	59.3	105	30.1 ¹²⁹	+0	05.2 ¹⁵⁶	20	4	50	17	40		15	36		55	55		
11	343	52.3	+13	58.6	120	02.1 ¹³⁰	+0	20.7 ¹⁵⁵	10 N	5	04	5	29	5	51	21	17	41	8	55	51
12	358	52.4	+13	57.8	134	34.2 ¹³¹	+0	36.3 ¹⁵⁶	0	5	15	5	40	6	01	21	20	45	8	55	46
13	13	52.5		57.0	149	06.3 ¹³¹	+0	51.8 ¹⁵⁵	10 S	25	50	11			22	49		56	41		
14	28	52.6		56.2	163	38.4 ¹³¹	+1	07.3 ¹⁵⁵	20	33	5	59	22		24	55		56	36		
15	43	52.8		55.4	178	10.6 ¹³²		22.8 ¹⁵⁵	30	41	6	09	34		27	60		56	31		
16	58	52.9		54.6	192	42.8 ¹³²		38.2 ¹⁵⁴	35	45	15	41			28	64		56	28		
17	73	53.0	+13	53.9	207	15.0 ¹³²	+1	53.7 ¹⁵⁵	40	5	49	6	20	6	48	21	30	67	8	56	24
18	88	53.1	+13	53.1	221	47.3 ¹³³	+2	09.0 ¹⁵³	45	5	52	6	27	6	57	21	32	71	8	56	20
19	103	53.3		52.3	236	19.6 ¹³³		24.4 ¹⁵⁴	50	56	34	7	08		35	76		56	15		
20	118	53.4		51.5	250	51.9 ¹³³		39.7 ¹⁵³	52	5	58	38	13		36	79		56	13		
21	133	53.5		50.7	265	24.2 ¹³³	+2	55.0 ¹⁵³	54	6	00	42	19		37	82		56	11		
22	148	53.6		49.9	279	56.6 ¹³⁴	+3	10.3 ¹⁵³	56	02	46	25			39	84		56	8		
23	163	53.8		49.2	294	29.1 ¹³⁵		25.5 ¹⁵²	58	04	50	32			40	88		56	5		
24	178	53.9	+13	48.4	309	01.5 ¹³⁴	+3	40.7 ¹⁵²	60 S	6	06	6	55	7	39	21	42	92	8	56	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 2 ^h 26 ^m 1		Mag: -3.8 PMG: 10 ^h 53 ^m		Mag: +0.1 PMG: 6 ^h 06 ^m		Mag: -2.8 PMG: 2 ^h 59 ^m		Mag: +0.3 PMG: 0 ^h 05 ^m									
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄									
h	°	'	°	'	°	'	°	'	°	'								
0	323	23.0	196	58.7	+19	47.6	268	28.7	+17	56.5	315	13.3	+1	52.8	358	42.0	-15	26.8
1	338	25.5	211	58.0		47.0	283	29.6		56.9	330	15.9		52.7	13	44.6		26.9
2	353	27.9	226	57.2		46.4	298	30.5		57.3	345	18.5		52.6	28	47.2		27.0
3	8	30.4	241	56.5		45.7	313	31.5		57.6	0	21.1		52.6	43	49.9		27.0
4	23	32.9	256	55.8		45.1	328	32.4		58.0	15	23.7		52.5	58	52.5		27.1
5	38	35.3	271	55.1	+19	44.5	343	33.3	+17	58.4	30	26.3	+1	52.5	73	55.2	-15	27.1
6	53	37.8	286	54.4	+19	43.9	358	34.3	+17	58.8	45	28.9	+1	52.4	88	57.8	-15	27.2
7	68	40.3	301	53.7		43.2	13	35.2		59.1	60	31.5		52.3	104	00.5		27.3
8	83	42.7	316	52.9		42.6	28	36.1		59.5	75	34.0		52.3	119	03.1		27.3
9	98	45.2	331	52.2		41.9	43	37.0	+17	59.9	90	36.6		52.2	134	05.8		27.4
10	113	47.6	346	51.5		41.3	58	38.0	+18	00.2	105	39.2		52.1	149	08.4		27.5
11	128	50.1	1	50.8	+19	40.7	73	38.9	+18	00.6	120	41.8	+1	52.1	164	11.1	-15	27.5
12	143	52.6	16	50.1	+19	40.0	88	39.8	+18	01.0	135	44.4	+1	52.0	179	13.7	-15	27.6
13	158	55.0	31	49.3		39.4	103	40.7		01.4	150	47.0		51.9	194	16.4		27.7
14	173	57.5	46	48.6		38.7	118	41.7		01.7	165	49.6		51.9	209	19.0		27.7
15	189	00.0	61	47.9		38.1	133	42.6		02.1	180	52.2		51.8	224	21.7		27.8
16	204	02.4	76	47.2		37.5	148	43.5		02.5	195	54.8		51.7	239	24.3		27.8
17	219	04.9	91	46.5	+19	36.8	163	44.5	+18	02.8	210	57.4	+1	51.7	254	27.0	-15	27.9
18	234	07.4	106	45.8	+19	36.2	178	45.4	+18	03.2	226	00.0	+1	51.6	269	29.6	-15	28.0
19	249	09.8	121	45.1		35.5	193	46.3		03.6	241	02.5		51.5	284	32.2		28.0
20	264	12.3	136	44.3		34.9	208	47.3		03.9	256	05.1		51.5	299	34.9		28.1
21	279	14.8	151	43.6		34.2	223	48.2		04.3	271	07.7		51.4	314	37.5		28.2
22	294	17.2	166	42.9		33.6	238	49.1		04.7	286	10.3		51.3	329	40.2		28.2
23	309	19.7	181	42.2		32.9	253	50.0		05.0	301	12.9		51.3	344	42.8		28.3
24	324	22.1	196	41.5	+19	32.3	268	51.0	+18	05.4	316	15.5	+1	51.2	359	45.5	-15	28.4
Dif	—		-7		-6		+9		+4		+26		-1		+26		-1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna						
	SD: 15°8 PMG: 12 ^h 04 ^m 3			Edad: 18 ^d 3 PHE { SD: 15°7 PMG: 3 ^h 30 ^m					4 ^h : 57/5 12 ^h : 57/2 20 ^h : 56/9 R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico		Hora	R°	Hora	R°					
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m				
0	178	53.9	+13	48.4	309	01.5	+3	40.7	60 N	19	50	20	41	21	01	2	10	26	91		
1	193	54.0		47.6	323	34.0 ¹³⁵	+3	55.8 ¹⁵¹	58	42		28		32	06	6	22	87			
2	208	54.2		46.8	338	06.5 ¹³⁵	+4	10.9 ¹⁵¹	56	35		17		15	10	9	19	84			
3	223	54.3		46.0	352	39.0 ¹³⁵		26.0 ¹⁵¹	54	28		08	21	00	14	12	16	81			
4	238	54.4		45.2	7	11.5 ¹³⁵		41.0 ¹⁵⁰	52	22	20	00	20	48	17	15	14	78			
5	253	54.5	+13	44.4	21	44.1 ¹³⁶	+4	56.0 ¹⁵⁰	50	19	17	19	52	20	37	21	21	16	10	12	75
6	268	54.7	+13	43.6	36	16.7 ¹³⁶	+5	11.0 ¹⁵⁰	45	19	05	19	37	20	16	21	28	21	10	07	70
7	283	54.8		42.8	50	49.3 ¹³⁶		25.9 ¹⁴⁹	40	18	56		24	19	59	33	26		10	02	67
8	298	54.9		42.1	65	21.9 ¹³⁶		40.7 ¹⁴⁸	35	47		14		46	39	28		9	59	62	
9	313	55.1		41.3	79	54.5 ¹³⁶	+5	55.5 ¹⁴⁸	30	40		19	05	35	43	32		56	59		
10	328	55.2		40.5	94	27.1 ¹³⁶	+6	10.3 ¹⁴⁸	20	28		18	51	18	51	37		50	54		
11	343	55.3	+13	39.7	108	59.8 ¹³⁷	+6	25.0 ¹⁴⁷	10 N	18	17	18	39	19	04	21	58	41	9	46	49
12	358	55.4	+13	38.9	123	32.5 ¹³⁷	+6	39.7 ¹⁴⁷	0	18	08	18	29	18	54	22	05	45	9	41	45
13	13	55.6		38.1	138	05.2 ¹³⁷	+6	54.3 ¹⁴⁶	10 S	17	58		20		44	11	50		37	40	
14	28	55.7		37.3	152	37.9 ¹³⁷	+7	08.8 ¹⁴⁵	20		48		10		36	19	53		32	36	
15	43	55.8		36.5	167	10.6 ¹³⁷		23.3 ¹⁴⁵	30	36		18	01	29	27	59		27	31		
16	58	56.0		35.7	181	43.3 ¹³⁷		37.8 ¹⁴⁵	35	30		17	56	25	32	62		24	27		
17	73	56.1	+13	34.9	196	16.0 ¹³⁷	+7	52.2 ¹⁴⁴	40	17	22	17	50	18	22	37	66	9	20	25	
18	88	56.2	+13	34.1	210	48.7 ¹³⁷	+8	06.6 ¹⁴⁴	45	17	13	17	44	18	18	22	43	70	9	16	21
19	103	56.4		33.3	225	21.4 ¹³⁷		20.9 ¹⁴³	50	17	03		37	15		51	75		11	16	
20	118	56.5		32.6	239	54.2 ¹³⁸		35.1 ¹⁴²	52	16	58		33	13		55	77		09	14	
21	133	56.6		31.8	254	26.9 ¹³⁷	+8	49.3 ¹⁴²	54	53		30	12		22	59	80		07	11	
22	148	56.8		31.0	268	59.7 ¹³⁸	+9	03.4 ¹⁴¹	56	47		26	10		23	03	83		04	8	
23	163	56.9		30.2	283	32.4 ¹³⁷		17.5 ¹⁴¹	58	40		22	08		08	86		9	01	6	
24	178	57.0	+13	29.4	298	05.1 ¹³⁷	+9	31.5 ¹⁴⁰	60 S	16	33	17	17	18	06	23	14	90	8	58	2
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO									
	PMG: 2 ^h 22 ^m 1		Mag: -3.8 PMG: 10 ^h 54 ^m			Mag: +0.1 PMG: 6 ^h 04 ^m			Mag: -2.8 PMG: 2 ^h 54 ^m			Mag: +0.3 PMG: 0 ^h 01 ^m									
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	324	22.1	196	41.5	+19	32.3	268	51.0	+18	05.4	316	15.5	+1	51.2	359	45.5	-15	28.4			
1	339	24.6	211	40.8		31.6	283	51.9		05.8	331	18.1		51.1	14	48.1		28.4			
2	354	27.1	226	40.1		31.0	298	52.8		06.1	346	20.7		51.1	29	50.8		28.5			
3	9	29.5	241	39.4		30.3	313	53.8		06.5	1	23.3		51.0	44	53.4		28.5			
4	24	32.0	256	38.7		29.7	328	54.7		06.9	16	25.9		50.9	59	56.1		28.6			
5	39	34.5	271	37.9	+19	29.0	343	55.6	+18	07.2	31	28.5	+1	50.8	74	58.7	-15	28.7			
6	54	36.9	286	37.2	+19	28.4	358	56.6	+18	07.6	46	31.1	+1	50.8	90	01.4	-15	28.7			
7	69	39.4	301	36.5		27.7	13	57.5		08.0	61	33.7		50.7	105	04.0		28.8			
8	84	41.9	316	35.8		27.0	28	58.4		08.3	76	36.3		50.6	120	06.7		28.9			
9	99	44.3	331	35.1		26.4	43	59.4		08.7	91	38.9		50.6	135	09.3		28.9			
10	114	46.8	346	34.4		25.7	59	00.3		09.1	106	41.5		50.5	150	11.9		29.0			
11	129	49.3	1	33.7	+19	25.1	74	01.2	+18	09.4	121	44.1	+1	50.4	165	14.6	-15	29.1			
12	144	51.7	16	33.0	+19	24.4	89	02.2	+18	09.8	136	46.7	+1	50.4	180	17.2	-15	29.1			
13	159	54.2	31	32.3		23.7	104	03.1		10.2	151	49.3		50.3	195	19.9		29.2			
14	174	56.6	46	31.6		23.1	119	04.0		10.5	166	51.9		50.2	210	22.5		29.2			
15	189	59.1	61	30.9		22.4	134	05.0		10.9	181	54.5		50.2	225	25.2		29.3			
16	205	01.6	76	30.2		21.7	149	05.9		11.3	196	57.1		50.1	240	27.8		29.4			
17	220	04.0	91	29.5	+19	21.1	164	06.9	+18	11.6	211	59.7	+1	50.0	255	30.5	-15	29.4			
18	235	06.5	106	28.7	+19	20.4	179	07.8	+18	12.0	227	02.3	+1	50.0	270	33.1	-15	29.5			
19	250	09.0	121	28.0		19.7	194	08.7		12.3	242	04.9		49.9	285	35.8		29.6			
20	265	11.4	136	27.3		19.1	209	09.7		12.7	257	07.5		49.8	300	38.4		29.6			
21	280	13.9	151	26.6		18.4	224	10.6		13.1	272	10.1		49.7	315	41.1		29.7			
22	295	16.4	166	25.9		17.7	239	11.5		13.4	287	12.7		49.7	330	43.7		29.8			
23	310	18.8	181	25.2		17.0	254	12.5		13.8	302	15.3		49.6	345	46.4		29.8			
24	325	21.3	196	24.5	+19	16.4	269	13.4	+18	14.1	317	17.9	+1	49.5	0	49.0	-15	29.9			
Dif	—		-7			-7	+9			+4	+26			-1	-8974			-1			

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 04 ^m 1			Edad: 19 ^d 3 PHE { 4 ^h : 56/6 12 ^h : 56/4 20 ^h : 56/1 SD: 15/5 PMG: 4 ^h 15 ^m R°: 46 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	57.0	+13	29.4	298	05.1	+9	31.5	60 N	2	15	3	28	4	19	21	03
1	193	57.2		28.6	312	37.9 ¹³⁸		45.4 ¹³⁹	58		37		41		27	12	8
2	208	57.3		27.8	327	10.6 ¹³⁷	+9	59.3 ¹³⁹	56	2	54	3	52		35	19	11
3	223	57.4		27.0	341	43.4 ¹³⁸	+10	13.1 ¹³⁸	54	3	09	4	01		41	26	14
4	238	57.6		26.2	356	16.1 ¹³⁷		26.9 ¹³⁸	52		21		09		47	32	17
5	253	57.7	+13	25.4	10	48.8 ¹³⁷	+10	40.6 ¹³⁷	50	3	32	4	17	4	52	21	37
6	268	57.8	+13	24.6	25	21.6 ¹³⁸	+10	54.2 ¹³⁶	45	3	53	4	32	5	04	21	49
7	283	58.0		23.8	39	54.3 ¹³⁷	+11	07.8 ¹³⁶	40	4	10		45		13	21	59
8	298	58.1		23.0	54	27.0 ¹³⁷		21.3 ¹³⁵	35		23	4	55		21	22	07
9	313	58.2		22.2	68	59.7 ¹³⁷		34.7 ¹³⁴	30		34	5	03		28	15	33
10	328	58.4		21.4	83	32.4 ¹³⁷	+11	48.1 ¹³⁴	20	4	51		18		41	28	38
11	343	58.5	+13	20.6	98	05.1 ¹³⁷	+12	01.4 ¹³³	10 N	5	04	5	29	5	51	22	39
12	358	58.6	+13	19.8	112	37.7 ¹³⁶	+12	14.6 ¹³²	0	5	15	5	39	6	01	22	50
13	13	58.8		19.0	127	10.4 ¹³⁷		27.8 ¹³²	10 S		24		49		10	23	01
14	28	58.9		18.2	141	43.0 ¹³⁶		40.8 ¹³⁰	20		32	5	58	20		12	54
15	43	59.0		17.4	156	15.7 ¹³⁷	+12	53.9 ¹³¹	30	39	6	07		32		26	58
16	58	59.2		16.6	170	48.3 ¹³⁶	+13	06.8 ¹²⁹	35		43		12		38	34	61
17	73	59.3	+13	15.8	185	20.9 ¹³⁶	+13	19.7 ¹²⁹	40	5	46	6	18	6	46	23	43
18	88	59.5	+13	15.0	199	53.5 ¹³⁶	+13	32.5 ¹²⁸	45	5	50	6	24	6	54	23	53
19	103	59.6		14.2	214	26.0 ¹³⁵		45.2 ¹²⁷	50		53		31	7	05	**	**
20	118	59.7		13.4	228	58.6 ¹³⁶	+13	57.8 ¹²⁶	52		55		34		09	**	**
21	133	59.9		12.6	243	31.1 ¹³⁵	+14	10.4 ¹²⁶	54		56		38		15	**	**
22	149	00.0		11.8	258	03.6 ¹³⁵		22.9 ¹²⁵	56		58		41		20	**	**
23	164	00.1		11.0	272	36.1 ¹³⁵		35.3 ¹²⁴	58	5	59		45		27	**	**
24	179	00.3	+13	10.2	287	08.6 ¹³⁵	+14	47.6 ¹²³	60 S	6	01	6	50	7	34	**	**

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 2 ^h 18 ^m 2		Mag: -3.8 PMG: 10 ^h 55 ^m			Mag: 0.0 PMG: 6 ^h 03 ^m			Mag: -2.8 PMG: 2 ^h 50 ^m			Mag: +0.3 PMG: 23 ^h 53 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	325	21.3	196	24.5	+19	16.4	269	13.4	+18	14.1	317	17.9	+1	49.5	0	49.0	-15	29.9
1	340	23.7	211	23.8		15.7	284	14.4		14.5	332	20.5		49.5	15	51.7		29.9
2	355	26.2	226	23.1		15.0	299	15.3		14.9	347	23.1		49.4	30	54.3		30.0
3	10	28.7	241	22.4		14.3	314	16.2		15.2	2	25.7		49.3	45	56.9		30.1
4	25	31.1	256	21.7		13.7	329	17.2		15.6	17	28.3		49.2	60	59.6		30.1
5	40	33.6	271	21.0	+19	13.0	344	18.1	+18	15.9	32	30.9	+1	49.2	76	02.2	-15	30.2
6	55	36.1	286	20.3	+19	12.3	359	19.0	+18	16.3	47	33.5	+1	49.1	91	04.9	-15	30.3
7	70	38.5	301	19.6		11.6	14	20.0		16.7	62	36.1		49.0	106	07.5		30.3
8	85	41.0	316	18.9		10.9	29	20.9		17.0	77	38.7		49.0	121	10.2		30.4
9	100	43.5	331	18.2		10.3	44	21.9		17.4	92	41.3		48.9	136	12.8		30.5
10	115	45.9	346	17.5		09.6	59	22.8		17.7	107	43.9		48.8	151	15.5		30.5
11	130	48.4	1	16.8	+19	08.9	74	23.7	+18	18.1	122	46.5	+1	48.7	166	18.1	-15	30.6
12	145	50.9	16	16.1	+19	08.2	89	24.7	+18	18.5	137	49.1	+1	48.7	181	20.8	-15	30.6
13	160	53.3	31	15.4		07.5	104	25.6		18.8	152	51.7		48.6	196	23.4		30.7
14	175	55.8	46	14.7		06.8	119	26.6		19.2	167	54.3		48.5	211	26.1		30.8
15	190	58.2	61	14.0		06.1	134	27.5		19.5	182	56.9		48.5	226	28.7		30.8
16	206	00.7	76	13.3		05.5	149	28.5		19.9	197	59.5		48.4	241	31.4		30.9
17	221	03.2	91	12.6	+19	04.8	164	29.4	+18	20.2	213	02.1	+1	48.3	256	34.0	-15	31.0
18	236	05.6	106	11.9	+19	04.1	179	30.3	+18	20.6	228	04.7	+1	48.2	271	36.6	-15	31.0
19	251	08.1	121	11.2		03.4	194	31.3		21.0	243	07.3		48.2	286	39.3		31.1
20	266	10.6	136	10.5		02.7	209	32.2		21.3	258	09.9		48.1	301	41.9		31.1
21	281	13.0	151	09.8		02.0	224	33.2		21.7	273	12.6		48.0	316	44.6		31.2
22	296	15.5	166	09.2		01.3	239	34.1		22.0	288	15.2		48.0	331	47.2		31.3
23	311	18.0	181	08.5	+19	00.6	254	35.1		22.4	303	17.8		47.9	346	49.9		31.3
24	326	20.4	196	07.8	+18	59.9	269	36.0	+18	22.7	318	20.4	+1	47.8	1	52.5	-15	31.4
Dif	—		-7			-7	+9			+4	+26			-1	+26			-1

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°8 PMG: 12 ^h 03 ^m 9		Edad: 20 ^d 3 PHE { 4 ^h : 55°8 12 ^h : 55°6 20 ^h : 55°4 SD: 15°2 PMG: 5 ^h 01 ^m R°: 46 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	179	00.3	+13 10.2		287	08.6	+14 47.6	60 N	19 45	20 34	21 45	21 07	7	13 27 90
1	194	00.4		09.4	301	41.0 ¹³⁴	+14 59.9 ¹²³	58	37	22	25	20	11	15 85
2	209	00.6		08.5	316	13.5 ¹³⁵	+15 12.1 ¹²²	56	30	12	21 08	30	16	13 05 81
3	224	00.7		07.7	330	45.9 ¹³⁴	24.2 ¹²¹	54	24	20 03	20 54	40	19	12 56 78
4	239	00.8		06.9	345	18.3 ¹³⁴	36.2 ¹²⁰	52	18	19 55	43	49	21	48 75
5	254	01.0	+13 06.1		359	50.6 ¹³³	+15 48.1 ¹¹⁹	50	19 13	19 48	20 33	21 56	24	12 41 73
6	269	01.1	+13 05.3		14	23.0 ¹³⁴	+16 00.0 ¹¹⁹	45	19 02	19 33	20 12	22 13	28	12 26 68
7	284	01.2		04.5	28	55.3 ¹³³	+16 11.8 ¹¹⁸	40	18 53	21	19 56	26	32	14 64
8	299	01.4		03.7	43	27.5 ¹³²	23.4 ¹¹⁶	35	45	12	43	38	34	12 03 61
9	314	01.5		02.9	57	59.8 ¹³³	35.0 ¹¹⁶	30	38	19 03	33	22 48	37	11 54 58
10	329	01.7		02.1	72	32.0 ¹³²	46.6 ¹¹⁶	20	27	18 49	16	23 06	41	38 54
11	344	01.8	+13 01.3		87	04.2 ¹³²	+16 58.0 ¹¹⁴	10 N	18 17	18 38	19 03	23 21	44	11 24 51
12	359	01.9	+13 00.5		101	36.4 ¹³²	+17 09.3 ¹¹³	0	18 07	18 28	18 53	23 36	47	11 12 46
13	14	02.1	+12 59.7		116	08.5 ¹³¹	20.6 ¹¹³	10 S	17 58	20	44	23 50	51	10 59 43
14	29	02.2		58.9	130	40.6 ¹³¹	31.8 ¹¹²	20	48	11	37	** ** *	**	45 40
15	44	02.4		58.0	145	12.7 ¹³¹	42.8 ¹¹⁰	30	37	18 02	30	** ** *	**	30 35
16	59	02.5		57.2	159	44.8 ¹³¹	+17 53.8 ¹¹⁰	35	31	17 57	27	** ** *	**	21 33
17	74	02.7	+12 56.4		174	16.8 ¹³⁰	+18 04.7 ¹⁰⁹	40	17 24	17 52	18 24	** ** *	**	10 11 29
18	89	02.8	+12 55.6		188	48.8 ¹³⁰	+18 15.5 ¹⁰⁸	45	17 16	17 46	18 20	** ** *	**	9 59 26
19	104	02.9		54.8	203	20.7 ¹²⁹	26.3 ¹⁰⁸	50	06	39	17	0 06	73	45 21
20	119	03.1		54.0	217	52.6 ¹²⁹	36.9 ¹⁰⁶	52	17 01	36	16	12	76	38 19
21	134	03.2		53.2	232	24.5 ¹²⁹	47.4 ¹⁰⁵	54	16 56	33	15	19	78	31 16
22	149	03.4		52.4	246	56.4 ¹²⁹	+18 57.9 ¹⁰⁵	56	51	30	13	26	82	22 14
23	164	03.5		51.6	261	28.2 ¹²⁸	+19 08.2 ¹⁰³	58	44	26	12	34	86	13 10
24	179	03.6	+12 50.7		276	00.0 ¹²⁸	+19 18.5 ¹⁰³	60 S	16 37	17 22	18 10	0 44	91	9 03 5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 14 ^m 3		Mag: -3.8 PMG: 10 ^h 56 ^m		Mag: 0.0 PMG: 6 ^h 01 ^m		Mag: -2.8 PMG: 2 ^h 46 ^m		Mag: +0.3 PMG: 23 ^h 48 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	326	20.4	196	07.8	+18 59.9	269	36.0	+18 22.7	318	20.4	+1 47.8	1 52.5	-15 31.4	
1	341	22.9	211	07.1	59.2	284	36.9	23.1	333	23.0	47.7	16 55.2	31.5	
2	356	25.3	226	06.4	58.5	299	37.9	23.4	348	25.6	47.7	31 57.8	31.5	
3	11	27.8	241	05.7	57.8	314	38.8	23.8	3	28.2	47.6	47 00.5	31.6	
4	26	30.3	256	05.0	57.1	329	39.8	24.1	18	30.8	47.5	62 03.1	31.7	
5	41	32.7	271	04.3	+18 56.4	344	40.7	+18 24.5	33	33.4	+1 47.4	77 05.8	-15 31.7	
6	56	35.2	286	03.6	+18 55.7	359	41.7	+18 24.8	48	36.0	+1 47.4	92 08.4	-15 31.8	
7	71	37.7	301	02.9	55.0	14	42.6	25.2	63	38.6	47.3	107 11.1	31.8	
8	86	40.1	316	02.2	54.3	29	43.6	25.6	78	41.3	47.2	122 13.7	31.9	
9	101	42.6	331	01.5	53.6	44	44.5	25.9	93	43.9	47.1	137 16.3	32.0	
10	116	45.1	346	00.8	52.9	59	45.5	26.3	108	46.5	47.1	152 19.0	32.0	
11	131	47.5	1	00.2	+18 52.2	74	46.4	+18 26.6	123	49.1	+1 47.0	167 21.6	-15 32.1	
12	146	50.0	15	59.5	+18 51.5	89	47.3	+18 27.0	138	51.7	+1 46.9	182 24.3	-15 32.2	
13	161	52.5	30	58.8	50.8	104	48.3	27.3	153	54.3	46.8	197 26.9	32.2	
14	176	54.9	45	58.1	50.0	119	49.2	27.7	168	56.9	46.8	212 29.6	32.3	
15	191	57.4	60	57.4	49.3	134	50.2	28.0	183	59.5	46.7	227 32.2	32.4	
16	206	59.8	75	56.7	48.6	149	51.1	28.4	199	02.2	46.6	242 34.9	32.4	
17	222	02.3	90	56.0	+18 47.9	164	52.1	+18 28.7	214	04.8	+1 46.5	257 37.5	-15 32.5	
18	237	04.8	105	55.3	+18 47.2	179	53.0	+18 29.1	229	07.4	+1 46.5	272 40.2	-15 32.5	
19	252	07.2	120	54.7	46.5	194	54.0	29.4	244	10.0	46.4	287 42.8	32.6	
20	267	09.7	135	54.0	45.8	209	54.9	29.8	259	12.6	46.3	302 45.5	32.7	
21	282	12.2	150	53.3	45.0	224	55.9	30.1	274	15.2	46.2	317 48.1	32.7	
22	297	14.6	165	52.6	44.3	239	56.8	30.5	289	17.8	46.2	332 50.8	32.8	
23	312	17.1	180	51.9	43.6	254	57.8	30.8	304	20.4	46.1	347 53.4	32.9	
24	327	19.6	195	51.2	+18 42.9	269	58.7	+18 31.2	319	23.1	+1 46.0	2 56.0	-15 32.9	
Dif	—		-7		-7	+9		+4	+26		-1	+26		-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 03 ^m 6			Edad: 21 ^d 3 PHE { 4 ^h : 55/2 12 ^h : 55/0 20 ^h : 54/8 R°: 48 ^m											
	hG ☉	Dec			hG ☾	Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	03.6	+12 50.7	276	00.0	+19 18.5	60 N	2	23	3	34	4	24	21	14 13
1	194	03.8		290	31.7 ¹²⁷	28.6 ¹⁰¹	58	2	44	46	32		31	19	40 82
2	209	03.9		305	03.4 ¹²⁷	38.7 ¹⁰¹	56	3	00	3	56	39	46	23	26 78
3	224	04.1		319	35.1 ¹²⁷	48.7 ¹⁰⁰	54	14	4	05	45		21	59	25 14 74
4	239	04.2		334	06.7 ¹²⁶	+19 58.5 ⁹⁸	52	25	13	50	50	22	10	28	14 03 72
5	254	04.4	+12 46.7	348	38.3 ¹²⁶	+20 08.3 ⁹⁸	50	3	36	4	20	4	55	22	20 30 13 54 69
6	269	04.5	+12 45.9	3	09.9 ¹²⁶	+20 18.0 ⁹⁷	45	3	56	4	35	5	06	22	41 34 13 34 65
7	284	04.7		17	41.4 ¹²⁵	27.5 ⁹⁵	40	4	12	47	15	22	58	37	18 62
8	299	04.8		32	12.9 ¹²⁵	37.0 ⁹⁵	35	25	4	56	23	23	12	40	13 04 60
9	314	04.9		46	44.4 ¹²⁵	46.4 ⁹⁴	30	35	5	05	30	25	41		12 52 58
10	329	05.1		61	15.8 ¹²⁴	+20 55.7 ⁹³	20	4	52	18	41	23	47	44	32 54
11	344	05.2	+12 41.8	75	47.2 ¹²⁴	+21 04.8 ⁹¹	10 N	5	04	5	29	5	51	** ** *	12 15 51
12	359	05.4	+12 41.0	90	18.5 ¹²³	+21 13.9 ⁹¹	0	5	14	5	39	6	00	** ** *	11 58 49
13	14	05.5		104	49.8 ¹²³	22.9 ⁹⁰	10 S	23	48	09	09	** ** *			42 46
14	29	05.7		119	21.1 ¹²³	31.7 ⁸⁸	20	31	5	56	19	0	06	54	25 42
15	44	05.8		133	52.3 ¹²²	40.5 ⁸⁸	30	37	6	05	30	24	58	11	05 39
16	59	06.0		148	23.5 ¹²²	49.2 ⁸⁷	35	40	10	36	35	60	10	54	36
17	74	06.1	+12 36.9	162	54.6 ¹²¹	+21 57.7 ⁸⁵	40	5	43	6	15	6	43	0	47 63 10 40 34
18	89	06.3	+12 36.0	177	25.8 ¹²²	+22 06.2 ⁸⁵	45	5	47	6	21	6	51	1	01 67 10 25 31
19	104	06.4		191	56.8 ¹²⁰	14.5 ⁸³	50	50	27	7	01	19	72	10	06 26
20	119	06.5		206	27.9 ¹²¹	22.7 ⁸²	52	51	30	05	05	28	73	9	57 24
21	134	06.7		220	58.8 ¹¹⁹	30.9 ⁸²	54	52	33	10	37	77	47	22	
22	149	06.8		235	29.8 ¹²⁰	38.9 ⁸⁰	56	53	37	16	1	48	80	36	18
23	164	07.0		31.9	250 00.7 ¹¹⁹	46.8 ⁷⁹	58	55	41	22	2	00	84	23	14
24	179	07.1	+12 31.1	264	31.6 ¹¹⁹	+22 54.6 ⁷⁸	60 S	5	56	6	45	7	29	2	15 89 9 08 8

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 2 ^h 10 ^m 3		Mag: -3.8 PMG: 10 ^h 57 ^m		Mag: 0.0 PMG: 6 ^h 00 ^m		Mag: -2.8 PMG: 2 ^h 42 ^m		Mag: +0.3 PMG: 23 ^h 44 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	°	°	'	°	°	°	'				
0	327	19.6	195	51.2	+18 42.9	269	58.7	+18 31.2	319	23.1	+1 46.0	2	56.0	-15 32.9
1	342	22.0	210	50.5	42.2	284	59.7	31.5	334	25.7	45.9	17	58.7	33.0
2	357	24.5	225	49.9	41.4	300	00.6	31.9	349	28.3	45.9	33	01.3	33.0
3	12	27.0	240	49.2	40.7	315	01.6	32.2	4	30.9	45.8	48	04.0	33.1
4	27	29.4	255	48.5	40.0	330	02.5	32.5	19	33.5	45.7	63	06.6	33.2
5	42	31.9	270	47.8	+18 39.3	345	03.5	+18 32.9	34	36.1	+1 45.6	78	09.3	-15 33.2
6	57	34.3	285	47.1	+18 38.6	0	04.4	+18 33.2	49	38.8	+1 45.6	93	11.9	-15 33.3
7	72	36.8	300	46.4	37.8	15	05.4	33.6	64	41.4	45.5	108	14.6	33.4
8	87	39.3	315	45.8	37.1	30	06.4	33.9	79	44.0	45.4	123	17.2	33.4
9	102	41.7	330	45.1	36.4	45	07.3	34.3	94	46.6	45.3	138	19.9	33.5
10	117	44.2	345	44.4	35.6	60	08.3	34.6	109	49.2	45.2	153	22.5	33.5
11	132	46.7	0	43.7	+18 34.9	75	09.2	+18 35.0	124	51.9	+1 45.2	168	25.2	-15 33.6
12	147	49.1	15	43.0	+18 34.2	90	10.2	+18 35.3	139	54.5	+1 45.1	183	27.8	-15 33.7
13	162	51.6	30	42.4	33.5	105	11.1	35.7	154	57.1	45.0	198	30.4	33.7
14	177	54.1	45	41.7	32.7	120	12.1	36.0	169	59.7	44.9	213	33.1	33.8
15	192	56.5	60	41.0	32.0	135	13.0	36.3	185	02.3	44.9	228	35.7	33.9
16	207	59.0	75	40.3	31.3	150	14.0	36.7	200	04.9	44.8	243	38.4	33.9
17	223	01.4	90	39.6	+18 30.5	165	14.9	+18 37.0	215	07.6	+1 44.7	258	41.0	-15 34.0
18	238	03.9	105	39.0	+18 29.8	180	15.9	+18 37.4	230	10.2	+1 44.6	273	43.7	-15 34.0
19	253	06.4	120	38.3	29.0	195	16.9	37.7	245	12.8	44.5	288	46.3	34.1
20	268	08.8	135	37.6	28.3	210	17.8	38.1	260	15.4	44.5	303	49.0	34.2
21	283	11.3	150	36.9	27.6	225	18.8	38.4	275	18.1	44.4	318	51.6	34.2
22	298	13.8	165	36.3	26.8	240	19.7	38.7	290	20.7	44.3	333	54.3	34.3
23	313	16.2	180	35.6	26.1	255	20.7	39.1	305	23.3	44.2	348	56.9	34.4
24	328	18.7	195	34.9	+18 25.3	270	21.6	+18 39.4	320	25.9	+1 44.1	3	59.6	-15 34.4
Dif	—		-7 -7		+10 +3		+26		-1		+26		-	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 22 ^d 3 PHE	SD: 14 ^h 9				Final del crepúsculo		Salida de Luna		Puesta de Luna	
	PMG: 12 ^h 03 ^m 4				PMG: 6 ^h 35 ^m				R°: 49 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	07.1	+12 31.1	264	31.6	+22 54.6	77	60 N	19 39	20 28	21 36	21 27 24	16 25 79	
1	194	07.3	30.3	279	02.4 ¹¹⁸	+23 02.3	77	58	32	17	17	21 50 30	16 02 74	
2	209	07.4	29.5	293	33.2 ¹¹⁸	09.9	76	56	25	20 07	21 02	22 09 33	15 44 70	
3	224	07.6	28.6	308	04.0 ¹¹⁸	17.3	74	54	19	19 58	20 49	24 36	28 68	
4	239	07.7	27.8	322	34.7 ¹¹⁷	24.7	74	52	14	51	37	38 38	15 65	
5	254	07.9	+12 27.0	337	05.4 ¹¹⁷	+23 32.0	73	50	19 09	19 44	20 28	22 50 39	15 03 64	
6	269	08.0	+12 26.2	351	36.0 ¹¹⁶	+23 39.1	71	45	18 58	19 30	20 08	23 15 42	14 39 61	
7	284	08.2	25.4	6	06.6 ¹¹⁶	46.1	70	40	50	18	19 53	35 43	20 58	
8	299	08.3	24.5	20	37.2 ¹¹⁶	53.0	69	35	43	09	41	23 52 44	14 04 57	
9	314	08.5	23.7	35	07.7 ¹¹⁵	+23 59.8	68	30	36	19 01	30	*** ** *	13 50 55	
10	329	08.6	22.9	49	38.2 ¹¹⁵	+24 06.5	67	20	25	18 48	14	*** ** *	26 53	
11	344	08.8	+12 22.1	64	08.6 ¹¹⁴	+24 13.1	66	10 N	18 16	18 37	19 02	0 05 47	13 06 51	
12	359	08.9	+12 21.2	78	39.1 ¹¹⁵	+24 19.5	64	0	18 07	18 28	18 52	0 23 49	12 47 49	
13	14	09.1	20.4	93	09.4 ¹¹³	25.9	64	10 S	17 58	19	44	0 41 51	28 47	
14	29	09.2	19.6	107	39.8 ¹¹⁴	32.1	62	20	49	11	37	1 00 54	12 07 46	
15	44	09.4	18.7	122	10.1 ¹¹³	38.2	61	30	38	18 03	31	22 57	11 44 43	
16	59	09.5	17.9	136	40.4 ¹¹³	44.2	60	35	32	17 58	28	35 59	30 42	
17	74	09.7	+12 17.1	151	10.6 ¹¹²	+24 50.0	58	40	17 26	17 54	18 25	1 50 61	11 14 41	
18	89	09.8	+12 16.3	165	40.8 ¹¹²	+24 55.8	58	45	17 18	17 48	18 22	2 08 63	10 56 37	
19	104	10.0	15.4	180	10.9 ¹¹¹	+25 01.4	56	50	09	42	20	31 67	32 35	
20	119	10.1	14.6	194	41.1 ¹¹²	06.9	55	52	04	39	19	41 69	21 33	
21	134	10.3	13.8	209	11.2 ¹¹¹	12.3	54	54	17 00	36	18	2 54 71	10 09 30	
22	149	10.4	13.0	223	41.2 ¹¹⁰	17.6	53	56	16 54	33	17	3 08 74	9 54 28	
23	164	10.6	12.1	238	11.3 ¹¹¹	22.8	52	58	49	30	16	24 79	37 23	
24	179	10.7	+12 11.3	252	41.3 ¹¹⁰	+25 27.8	50	60 S	16 42	17 26	18 15	3 44 86	9 16 18	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 2 ^h 06 ^m 4		Mag: -3.9 PMG: 10 ^h 58 ^m		Mag: 0.0 PMG: 5 ^h 58 ^m		Mag: -2.8 PMG: 2 ^h 38 ^m		Mag: +0.3 PMG: 23 ^h 40 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	328	18.7	195 34.9	+18 25.3	270 21.6	+18 39.4	320 25.9	+1 44.1	3 59.6	-15 34.4
1	343	21.2	210 34.2	24.6	285 22.6	39.8	335 28.5	44.1	19 02.2	34.5
2	358	23.6	225 33.6	23.9	300 23.6	40.1	350 31.2	44.0	34 04.8	34.6
3	13	26.1	240 32.9	23.1	315 24.5	40.5	5 33.8	43.9	49 07.5	34.6
4	28	28.6	255 32.2	22.4	330 25.5	40.8	20 36.4	43.8	64 10.1	34.7
5	43	31.0	270 31.5	+18 21.6	345 26.4	+18 41.1	35 39.0	+1 43.8	79 12.8	-15 34.7
6	58	33.5	285 30.9	+18 20.9	0 27.4	+18 41.5	50 41.7	+1 43.7	94 15.4	-15 34.8
7	73	35.9	300 30.2	20.1	15 28.4	41.8	65 44.3	43.6	109 18.1	34.9
8	88	38.4	315 29.5	19.4	30 29.3	42.2	80 46.9	43.5	124 20.7	34.9
9	103	40.9	330 28.9	18.6	45 30.3	42.5	95 49.5	43.4	139 23.4	35.0
10	118	43.3	345 28.2	17.9	60 31.2	42.8	110 52.2	43.4	154 26.0	35.1
11	133	45.8	0 27.5	+18 17.1	75 32.2	+18 43.2	125 54.8	+1 43.3	169 28.7	-15 35.1
12	148	48.3	15 26.8	+18 16.4	90 33.2	+18 43.5	140 57.4	+1 43.2	184 31.3	-15 35.2
13	163	50.7	30 26.2	15.6	105 34.1	43.8	156 00.0	43.1	199 34.0	35.2
14	178	53.2	45 25.5	14.9	120 35.1	44.2	171 02.7	43.0	214 36.6	35.3
15	193	55.7	60 24.8	14.1	135 36.0	44.5	186 05.3	43.0	229 39.2	35.4
16	208	58.1	75 24.2	13.4	150 37.0	44.9	201 07.9	42.9	244 41.9	35.4
17	224	00.6	90 23.5	+18 12.6	165 38.0	+18 45.2	216 10.5	+1 42.8	259 44.5	-15 35.5
18	239	03.1	105 22.8	+18 11.8	180 38.9	+18 45.5	231 13.2	+1 42.7	274 47.2	-15 35.6
19	254	05.5	120 22.2	11.1	195 39.9	45.9	246 15.8	42.6	289 49.8	35.6
20	269	08.0	135 21.5	10.3	210 40.9	46.2	261 18.4	42.5	304 52.5	35.7
21	284	10.4	150 20.8	09.6	225 41.8	46.5	276 21.0	42.5	319 55.1	35.7
22	299	12.9	165 20.2	08.8	240 42.8	46.9	291 23.7	42.4	334 57.8	35.8
23	314	15.4	180 19.5	08.0	255 43.8	47.2	306 26.3	42.3	350 00.4	35.9
24	329	17.8	195 18.8	+18 07.3	270 44.7	+18 47.5	321 28.9	+1 42.2	5 03.1	-15 35.9
Dif	—		-7	-8	+10	+3	+26	-1	+26	-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15'8 PMG: 12 ^h 03 ^m 2			Edad: 23 ^d 3 PHE { 4 ^h : 54'3 12 ^h : 54'2 20 ^h : 54'2 SD: 14'8 PMG: 7 ^h 24 ^m R°: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	179	10.7	+12	11.3	252	41.3	+25	27.8	60 N	2 31	3 40	4 28	21 51	46	17 44	60		
1	194	10.9		10.5	267	11.2 ¹⁰⁹		32.7 ⁴⁹	58	2 50	3 51	36	22 20	47	17 16	58		
2	209	11.0		09.6	281	41.2 ¹¹⁰		37.5 ⁴⁸	56	3 06	4 01	42	22 42	48	16 54	57		
3	224	11.2		08.8	296	11.1 ¹⁰⁹		42.2 ⁴⁷	54		19	09	48	23 00	49	36	56	
4	239	11.4		08.0	310	40.9 ¹⁰⁸		46.7 ⁴⁵	52		30	17	54		16	49	20 56	
5	254	11.5	+12	07.1	325	10.8 ¹⁰⁹	+25	51.1 ⁴⁴	50	3 39	4 23	4 58	23 29	50	16 07	55		
6	269	11.7	+12	06.3	339	40.6 ¹⁰⁸	+25	55.4 ⁴³	45	3 59	4 37	5 09	23 57	50	15 40	54		
7	284	11.8		05.5	354	10.4 ¹⁰⁸	+25	59.6 ⁴²	40	4 14		49	17		** ** *	18	54	
8	299	12.0		04.6	8	40.1 ¹⁰⁷	+26	03.7 ⁴¹	35		26	4 58	24		** ** *	15 01	53	
9	314	12.1		03.8	23	09.8 ¹⁰⁷		07.6 ³⁹	30		36	5 06	31	0 06	46	14 45	53	
10	329	12.3		03.0	37	39.6 ¹⁰⁸		11.4 ³⁸	20	4 52	19		42	31	47	14 19	52	
11	344	12.4	+12	02.1	52	09.2 ¹⁰⁶	+26	15.1 ³⁷	10 N	5 04	5 30	5 51	0 52	49	13 57	51		
12	359	12.6	+12	01.3	66	38.9 ¹⁰⁷	+26	18.6 ³⁵	0	5 14	5 39	6 00	1 12	50	13 36	51		
13	14	12.7	+12	00.5	81	08.5 ¹⁰⁶		22.0 ³⁴	10 S		22	47	08	32	52	13 15	50	
14	29	12.9	+11	59.6	95	38.1 ¹⁰⁶		25.3 ³³	20	29	5 55	17	1 54	53	12 53	49		
15	44	13.1		58.8	110	07.7 ¹⁰⁶		28.5 ³²	30	35	6 03	28	2 19	54	27	49		
16	59	13.2		58.0	124	37.2 ¹⁰⁵		31.6 ³¹	35	38		08	34	34	55	12 12	48	
17	74	13.4	+11	57.1	139	06.8 ¹⁰⁶	+26	34.5 ²⁹	40	5 41	6 12	6 40	2 51	56	11 55	46		
18	89	13.5	+11	56.3	153	36.3 ¹⁰⁵	+26	37.3 ²⁸	45	5 43	6 18	6 48	3 11	58	11 33	46		
19	104	13.7		55.5	168	05.8 ¹⁰⁵		39.9 ²⁶	50	46	24	6 57	38	59	11 07	44		
20	119	13.8		54.6	182	35.3 ¹⁰⁵		42.5 ²⁶	52	47	26	7 01	3 50	61	10 54	43		
21	134	14.0		53.8	197	04.7 ¹⁰⁴		44.9 ²⁴	54	48	29	06	4 05	62	39	42		
22	149	14.1		52.9	211	34.2 ¹⁰⁵		47.2 ²³	56	49	32	11	22	64	22	40		
23	164	14.3		52.1	226	03.6 ¹⁰⁴		49.3 ²¹	58	50	36	17	4 43	67	10 00	39		
24	179	14.5	+11	51.3	240	33.0 ¹⁰⁴	+26	51.4 ²¹	60 S	5 51	6 39	7 23	5 10	71	9 34	34		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 2 ^h 02 ^m 5			Mag: -3.9 PMG: 10 ^h 59 ^m			Mag: 0.0 PMG: 5 ^h 57 ^m			Mag: -2.8 PMG: 2 ^h 34 ^m			Mag: +0.3 PMG: 23 ^h 36 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	329	17.8			195	18.8	+18	07.3	270	44.7	+18	47.5	321	28.9	+1	42.2	5 03.1 -15 35.9	
1	344	20.3			210	18.2		06.5	285	45.7		47.9	336	31.6		42.1	20 05.7 36.0	
2	359	22.8			225	17.5		05.7	300	46.7		48.2	351	34.2		42.1	35 08.3 36.1	
3	14	25.2			240	16.8		05.0	315	47.6		48.6	6	36.8		42.0	50 11.0 36.1	
4	29	27.7			255	16.2		04.2	330	48.6		48.9	21	39.5		41.9	65 13.6 36.2	
5	44	30.2			270	15.5	+18	03.4	345	49.6	+18	49.2	36	42.1	+1	41.8	80 16.3 -15 36.2	
6	59	32.6			285	14.8	+18	02.7	0	50.5	+18	49.6	51	44.7	+1	41.7	95 18.9 -15 36.3	
7	74	35.1			300	14.2		01.9	15	51.5		49.9	66	47.3		41.6	110 21.6 36.4	
8	89	37.6			315	13.5		01.1	30	52.5		50.2	81	50.0		41.6	125 24.2 36.4	
9	104	40.0			330	12.8	+18	00.4	45	53.4		50.6	96	52.6		41.5	140 26.9 36.5	
10	119	42.5			345	12.2	+17	59.6	60	54.4		50.9	111	55.2		41.4	155 29.5 36.5	
11	134	44.9			0	11.5	+17	58.8	75	55.4	+18	51.2	126	57.9	+1	41.3	170 32.2 -15 36.6	
12	149	47.4			15	10.9	+17	58.0	90	56.3	+18	51.5	142	00.5	+1	41.2	185 34.8 -15 36.7	
13	164	49.9			30	10.2		57.3	105	57.3		51.9	157	03.1		41.1	200 37.4 36.7	
14	179	52.3			45	09.5		56.5	120	58.3		52.2	172	05.8		41.1	215 40.1 36.8	
15	194	54.8			60	08.9		55.7	135	59.2		52.5	187	08.4		41.0	230 42.7 36.9	
16	209	57.3			75	08.2		54.9	151	00.2		52.9	202	11.0		40.9	245 45.4 36.9	
17	224	59.7			90	07.6	+17	54.2	166	01.2	+18	53.2	217	13.7	+1	40.8	260 48.0 -15 37.0	
18	240	02.2			105	06.9	+17	53.4	181	02.1	+18	53.5	232	16.3	+1	40.7	275 50.7 -15 37.0	
19	255	04.7			120	06.3		52.6	196	03.1		53.9	247	18.9		40.6	290 53.3 37.1	
20	270	07.1			135	05.6		51.8	211	04.1		54.2	262	21.6		40.6	305 56.0 37.2	
21	285	09.6			150	04.9		51.0	226	05.1		54.5	277	24.2		40.5	320 58.6 37.2	
22	300	12.1			165	04.3		50.2	241	06.0		54.9	292	26.8		40.4	336 01.3 37.3	
23	315	14.5			180	03.6		49.5	256	07.0		55.2	307	29.5		40.3	351 03.9 37.4	
24	330	17.0			195	03.0	+17	48.7	271	08.0	+18	55.5	322	32.1	+1	40.2	6 06.5 -15 37.4	
Dif	—			-7 -8			+10 +3			+26 -1			+26 -1			—		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8			Edad: 24 ^d 3 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1										
	PMG: 12 ^h 02 ^m 9			SD: 14 ^h 7 PMG: 8 ^h 15 ^m R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	14.5	+11 51.3	240	33.0	+26 51.4	19	60 N	19 33	20 21	21 27	22 37 70	18 44 35	
1	194	14.6	50.4	255	02.4 ¹⁰⁴	53.3	19	58	26	11	21 10	23 07 66	18 14 39	
2	209	14.8	49.6	269	31.8 ¹⁰⁴	55.0	17	56	20	20 01	20 55	30 64	17 51 41	
3	224	14.9	48.8	284	01.1 ¹⁰³	56.7	17	54	14	19 53	43	23 49 62	32 43	
4	239	15.1	47.9	298	30.5 ¹⁰⁴	58.2	15	52	09	46	32	** ** *	16 44	
5	254	15.2	+11 47.1	312	59.8 ¹⁰³	+26 59.6	14	50	19 05	19 40	20 23	** ** *	17 02 45	
6	269	15.4	+11 46.2	327	29.2 ¹⁰⁴	+27 00.8	12	45	18 55	19 26	20 04	** ** *	16 34 46	
7	284	15.6	45.4	341	58.5 ¹⁰³	01.9	11	40	47	15	19 50	0 18 51	16 12 47	
8	299	15.7	44.6	356	27.8 ¹⁰³	02.9	10	35	40	19 06	38	36 51	15 54 48	
9	314	15.9	43.7	10	57.1 ¹⁰³	03.8	9	30	34	18 59	28	0 52 51	38 49	
10	329	16.0	42.9	25	26.4 ¹⁰³	04.5	7	20	24	46	13	1 18 51	15 11 50	
11	344	16.2	+11 42.0	39	55.7 ¹⁰³	+27 05.1	6	10 N	18 15	18 36	19 01	1 41 51	14 48 51	
12	359	16.4	+11 41.2	54	25.0 ¹⁰³	+27 05.6	5	0	18 06	18 27	18 52	2 02 51	14 27 51	
13	14	16.5	40.3	68	54.3 ¹⁰³	05.9	3	10 S	17 58	19	44	24 51	14 05 52	
14	29	16.7	39.5	83	23.6 ¹⁰³	06.2	3	20	49	12	38	2 47 50	13 42 52	
15	44	16.8	38.7	97	52.8 ¹⁰²	06.2	0	30	40	04	32	3 13 51	16 52	
16	59	17.0	37.8	112	22.1 ¹⁰³	06.2	0	35	34	18 00	29	29 51	13 00 53	
17	74	17.2	+11 37.0	126	51.4 ¹⁰³	+27 06.0	2	40	17 28	17 55	18 27	3 47 51	12 41 54	
18	89	17.3	+11 36.1	141	20.7 ¹⁰³	+27 05.7	3	45	17 20	17 50	18 25	4 09 51	12 19 54	
19	104	17.5	35.3	155	50.0 ¹⁰³	05.3	4	50	12	45	22	37 51	11 51 55	
20	119	17.6	34.4	170	19.3 ¹⁰³	04.7	6	52	08	42	22	4 51 50	37 55	
21	134	17.8	33.6	184	48.6 ¹⁰³	04.0	7	54	17 03	40	21	5 07 50	21 56	
22	149	18.0	32.8	199	17.9 ¹⁰³	03.2	8	56	16 58	37	20	26 49	11 02 56	
23	164	18.1	31.9	213	47.2 ¹⁰³	02.2	10	58	53	34	19	5 50 48	10 39 57	
24	179	18.3	+11 31.1	228	16.5 ¹⁰³	+27 01.1	11	60 S	16 47	17 30	18 19	6 21 47	10 08 58	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 58 ^m 5		Mag: -3.9 PMG: 11 ^h 00 ^m			Mag: 0.0 PMG: 5 ^h 55 ^m			Mag: -2.8 PMG: 2 ^h 29 ^m			Mag: +0.3 PMG: 23 ^h 31 ^m		
	hG ♈	Dec	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	330	17.0	195 03.0	+17 48.7	271 08.0	+18 55.5	322 32.1	+1 40.2	6 06.5	-15 37.4				
1	345	19.4	210 02.3	47.9	286 08.9	55.8	337 34.7	40.1	21 09.2	37.5				
2	0	21.9	225 01.7	47.1	301 09.9	56.2	352 37.4	40.1	36 11.8	37.5				
3	15	24.4	240 01.0	46.3	316 10.9	56.5	7 40.0	40.0	51 14.5	37.6				
4	30	26.8	255 00.3	45.5	331 11.9	56.8	22 42.7	39.9	66 17.1	37.7				
5	45	29.3	269 59.7	+17 44.7	346 12.8	+18 57.2	37 45.3	+1 39.8	81 19.8	-15 37.7				
6	60	31.8	284 59.0	+17 44.0	1 13.8	+18 57.5	52 47.9	+1 39.7	96 22.4	-15 37.8				
7	75	34.2	299 58.4	43.2	16 14.8	57.8	67 50.6	39.6	111 25.1	37.9				
8	90	36.7	314 57.7	42.4	31 15.8	58.1	82 53.2	39.5	126 27.7	37.9				
9	105	39.2	329 57.1	41.6	46 16.7	58.5	97 55.8	39.5	141 30.3	38.0				
10	120	41.6	344 56.4	40.8	61 17.7	58.8	112 58.5	39.4	156 33.0	38.0				
11	135	44.1	359 55.8	+17 40.0	76 18.7	+18 59.1	128 01.1	+1 39.3	171 35.6	-15 38.1				
12	150	46.5	14 55.1	+17 39.2	91 19.7	+18 59.4	143 03.8	+1 39.2	186 38.3	-15 38.2				
13	165	49.0	29 54.5	38.4	106 20.6	+18 59.8	158 06.4	39.1	201 40.9	38.2				
14	180	51.5	44 53.8	37.6	121 21.6	+19 00.1	173 09.0	39.0	216 43.6	38.3				
15	195	53.9	59 53.2	36.8	136 22.6	00.4	188 11.7	38.9	231 46.2	38.3				
16	210	56.4	74 52.5	36.0	151 23.6	00.7	203 14.3	38.9	246 48.9	38.4				
17	225	58.9	89 51.9	+17 35.2	166 24.6	+19 01.1	218 17.0	+1 38.8	261 51.5	-15 38.5				
18	241	01.3	104 51.2	+17 34.4	181 25.5	+19 01.4	233 19.6	+1 38.7	276 54.2	-15 38.5				
19	256	03.8	119 50.6	33.6	196 26.5	01.7	248 22.2	38.6	291 56.8	38.6				
20	271	06.3	134 49.9	32.8	211 27.5	02.0	263 24.9	38.5	306 59.4	38.7				
21	286	08.7	149 49.3	32.0	226 28.5	02.4	278 27.5	38.4	322 02.1	38.7				
22	301	11.2	164 48.6	31.2	241 29.5	02.7	293 30.2	38.3	337 04.7	38.8				
23	316	13.7	179 48.0	30.4	256 30.4	03.0	308 32.8	38.3	352 07.4	38.8				
24	331	16.1	194 47.3	+17 29.6	271 31.4	+19 03.3	323 35.4	+1 38.2	7 10.0	-15 38.9				
Dif	—		-7	-8	+10	+3	+26	-1	+26	-1				

UT	SOL				 LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 7				Edad: 25 ^d 3 PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 1 20 ^h : 54 ^h 1 PMG: 9 ^h 05 ^m R°: 51 ^m																	
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m			
0	179	18.3	+11	31.1	228	16.5	+27	01.1	60 N	2	39	3	45	4	33	23	47	84	19	19		
1	194	18.4		30.2	242	45.8 ¹⁰³	+26	59.9	58	2	57	3	56		40	**	**	**	18	53	24	
2	209	18.6		29.4	257	15.1 ¹⁰³		58.6	56	3	11	4	05		46	**	**	**		32	28	
3	224	18.8		28.5	271	44.4 ¹⁰³		57.1	54		24		13		52	**	**	**		15	3	
4	239	18.9		27.7	286	13.8 ¹⁰⁴		55.5	52		34		20		4	57	0	05	60	18	00	33
5	254	19.1	+11	26.8	300	43.1 ¹⁰³	+26	53.7	50	3	43	4	27	5	01	0	19	59	17	47	35	
6	269	19.3	+11	26.0	315	12.5 ¹⁰⁴	+26	51.9	45	4	02	4	40	5	11	0	47	57	17	20	39	
7	284	19.4		25.1	329	41.9 ¹⁰⁴		49.9	40		17		51		19	1	09	56	16	59	41	
8	299	19.6		24.3	344	11.3 ¹⁰⁴		47.8	35		28		50		26		27	55		42	42	
9	314	19.7		23.4	358	40.7 ¹⁰⁴		45.5	30		38		07		32	1	43	54		27	43	
10	329	19.9		22.6	13	10.1 ¹⁰⁴		43.1	20	4	53		20		42	2	09	53	16	01	46	
11	344	20.1	+11	21.7	27	39.6 ¹⁰⁵	+26	40.6	10 N	5	05	5	30	5	51	2	32	51	15	39	48	
12	359	20.2	+11	20.9	42	09.1 ¹⁰⁵	+26	38.0	0	5	14	5	38	5	59	2	53	51	15	18	50	
13	14	20.4		20.0	56	38.5 ¹⁰⁴		35.2	10 S		21		46		6	07	3	15	49	14	57	51
14	29	20.6		19.2	71	08.1 ¹⁰⁶		32.3	20		28		5	54	16	3	37	48		34	54	
15	44	20.7		18.3	85	37.6 ¹⁰⁵		29.3	30		33		6	01	26	4	04	46	14	08	56	
16	59	20.9		17.5	100	07.1 ¹⁰⁵		26.2	35		36		05		31		20	45	13	53	57	
17	74	21.1	+11	16.6	114	36.7 ¹⁰⁶	+26	22.9	40	5	38	6	10	6	37	4	38	44	13	35	58	
18	89	21.2	+11	15.8	129	06.3 ¹⁰⁶	+26	19.5	45	5	40	6	14	6	44	5	00	42	13	13	61	
19	104	21.4		14.9	143	35.9 ¹⁰⁶		16.0	50		42		20		53		28	39	12	46	63	
20	119	21.6		14.1	158	05.6 ¹⁰⁷		12.3	52		43		22		6	57	41	38		32	65	
21	134	21.7		13.2	172	35.2 ¹⁰⁶		08.5	38		44		25		7	01	5	57	36	12	17	66
22	149	21.9		12.4	187	04.9 ¹⁰⁷		04.6	56		44		28		06		6	15	35	11	58	70
23	164	22.1		11.5	201	34.7 ¹⁰⁸	+26	00.6	58		45		31		11		6	38	31		36	73
24	179	22.2	+11	10.7	216	04.4 ¹⁰⁷	+25	56.5	60 S	5	46	6	34	7	17	7	08	25	11	06	79	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 1 ^h 54 ^m 6		Mag: -3.9 PMG: 11 ^h 01 ^m				Mag: 0.0 PMG: 5 ^h 54 ^m				Mag: -2.8 PMG: 2 ^h 25 ^m				Mag: +0.3 PMG: 23 ^h 27 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	331	16.1	194	47.3	+17	29.6	271	31.4	+19	03.3	323	35.4	+1	38.2	7	10.0	-15	38.9
1	346	18.6	209	46.7		28.8	286	32.4		03.6	338	38.1		38.1	22	12.7		39.0
2	1	21.0	224	46.1		28.0	301	33.4		04.0	353	40.7		38.0	37	15.3		39.0
3	16	23.5	239	45.4		27.2	316	34.4		04.3	8	43.4		37.9	52	18.0		39.1
4	31	26.0	254	44.8		26.4	331	35.3		04.6	23	46.0		37.8	67	20.6		39.1
5	46	28.4	269	44.1	+17	25.5	346	36.3	+19	04.9	38	48.7	+1	37.7	82	23.2	-15	39.2
6	61	30.9	284	43.5	+17	24.7	1	37.3	+19	05.3	53	51.3	+1	37.6	97	25.9	-15	39.3
7	76	33.4	299	42.8		23.9	16	38.3		05.6	68	54.0		37.6	112	28.5		39.3
8	91	35.8	314	42.2		23.1	31	39.3		05.9	83	56.6		37.5	127	31.2		39.4
9	106	38.3	329	41.5		22.3	46	40.3		06.2	98	59.2		37.4	142	33.8		39.5
10	121	40.8	344	40.9		21.5	61	41.2		06.5	114	01.9		37.3	157	36.5		39.5
11	136	43.2	359	40.3	+17	20.7	76	42.2	+19	06.9	129	04.5	+1	37.2	172	39.1	-15	39.6
12	151	45.7	14	39.6	+17	19.8	91	43.2	+19	07.2	144	07.2	+1	37.1	187	41.8	-15	39.6
13	166	48.2	29	39.0		19.0	106	44.2		07.5	159	09.8		37.0	202	44.4		39.7
14	181	50.6	44	38.3		18.2	121	45.2		07.8	174	12.5		36.9	217	47.0		39.8
15	196	53.1	59	37.7		17.4	136	46.2		08.1	189	15.1		36.8	232	49.7		39.8
16	211	55.5	74	37.1		16.6	151	47.1		08.4	204	17.8		36.8	247	52.3		39.9
17	226	58.0	89	36.4	+17	15.8	166	48.1	+19	08.8	219	20.4	+1	36.7	262	55.0	-15	39.9
18	242	00.5	104	35.8	+17	14.9	181	49.1	+19	09.1	234	23.1	+1	36.6	277	57.6	-15	40.0
19	257	02.9	119	35.1		14.1	196	50.1		09.4	249	25.7		36.5	293	00.3		40.1
20	272	05.4	134	34.5		13.3	211	51.1		09.7	264	28.3		36.4	308	02.9		40.1
21	287	07.9	149	33.9		12.5	226	52.1		10.0	279	31.0		36.3	323	05.5		40.2
22	302	10.3	164	33.2		11.6	241	53.1		10.3	294	33.6		36.2	338	08.2		40.3
23	317	12.8	179	32.6		10.8	256	54.1		10.7	309	36.3		36.1	353	10.8		40.3
24	332	15.3	194	32.0	+17	10.0	271	55.0	+19	11.0	324	38.9	+1	36.0	8	13.5	-15	40.4
Dif	—		-6		-8		+10		+3		+26		-1		+26		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 02 ^m 4			Edad: 26 ^d 3 PHE { SD: 14'8 PMG: 9 ^h 56 ^m					4 ^h : 54'2 12 ^h : 54'2 20 ^h : 54'3 R°: 48 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	m	
0	179	22.2	+11	10.7	216	04.4	+25 56.5	60 N	19 27	20 15	21 19	**	**	**	19 38	9	
1	194	22.4		09.8	230	34.2 ¹⁰⁸	52.2 ⁴³	58	21	20 05	21 02	0	13	78	17	15	
2	209	22.6		09.0	245	04.0 ¹⁰⁸	47.8 ⁴⁴	56	15	19 56	20 49		34	74	19 00	19	
3	224	22.7		08.1	259	33.8 ¹⁰⁸	43.3 ⁴⁵	54	10	48	37	0	51	71	18 46	22	
4	239	22.9		07.3	274	03.7 ¹⁰⁹	38.6 ⁴⁷	52	05	41	27	1	05	69	33	25	
5	254	23.1	+11	06.4	288	33.6 ¹⁰⁹	+25 33.9 ⁴⁷	50	19 01	19 35	20 18	1	18	67	18 22	27	
6	269	23.2	+11	05.5	303	03.6 ¹¹⁰	+25 29.0 ⁴⁹	45	18 52	19 23	20 00	1	44	63	17 59	31	
7	284	23.4		04.7	317	33.5 ¹⁰⁹	24.0 ⁵⁰	40	44	12	19 46	2	05	60	40	34	
8	299	23.6		03.8	332	03.6 ¹¹¹	18.9 ⁵¹	35	38	19 04	35		22	58	24	37	
9	314	23.7		03.0	346	33.6 ¹¹⁰	13.6 ⁵³	30	32	18 56	26	2	37	56	17 10	39	
10	329	23.9		02.1	1	03.7 ¹¹¹	08.2 ⁵⁴	20	22	45	11	3	02	54	16 47	42	
11	344	24.1	+11	01.3	15	33.8 ¹¹¹	+25 02.7 ⁵⁵	10 N	18 14	18 35	19 00	3	23	52	16 27	45	
12	359	24.2	+11	00.4	30	03.9 ¹¹¹	+24 57.1 ⁵⁶	0	18 06	18 27	18 51	3	44	49	16 08	48	
13	14	24.4	+10	59.6	44	34.1 ¹¹²	51.4 ⁵⁷	10 S	17 58	19	44	4	04	47	15 48	51	
14	29	24.6		58.7	59	04.4 ¹¹³	45.6 ⁵⁸	20	50	12	38		25	45	28	54	
15	44	24.7		57.8	73	34.6 ¹¹²	39.6 ⁶⁰	30	41	05	33	4	50	41	15 04	57	
16	59	24.9		57.0	88	04.9 ¹¹³	33.5 ⁶¹	35	35	18 01	31	5	05	39	14 50	59	
17	74	25.1	+10	56.1	102	35.3 ¹¹⁴	+24 27.3 ⁶²	40	17 30	17 57	18 29	5	22	37	14 33	62	
18	89	25.2	+10	55.3	117	05.7 ¹¹⁴	+24 21.0 ⁶³	45	17 23	17 53	18 27	5	42	34	14 14	65	
19	104	25.4		54.4	131	36.1 ¹¹⁴	14.6 ⁶⁴	50	15	48	25	6	07	31	13 49	69	
20	119	25.6		53.5	146	06.6 ¹¹⁵	08.0 ⁶⁶	52	11	45	25		19	29	37	72	
21	134	25.8		52.7	160	37.1 ¹¹⁵	+24 01.4 ⁶⁶	54	07	43	24		33	26	23	75	
22	149	25.9		51.8	175	07.6 ¹¹⁵	+23 54.6 ⁶⁸	56	17 02	40	24	6	50	22	13 08	77	
23	164	26.1		51.0	189	38.2 ¹¹⁶	47.7 ⁶⁹	58	16 57	38	23	7	09	19	12 49	81	
24	179	26.3	+10	50.1	204	08.8 ¹¹⁶	+23 40.7 ⁷⁰	60 S	16 51	17 34	18 23	7	33	13	12 25	88	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 50 ^m 7		Mag: -3.9 PMG: 11 ^h 02 ^m			Mag: 0.0 PMG: 5 ^h 52 ^m			Mag: -2.9 PMG: 2 ^h 21 ^m			Mag: +0.3 PMG: 23 ^h 23 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	332	15.3	194	32.0	+17 10.0	271	55.0	+19 11.0	324	38.9	+1 36.0	8	13.5	-15 40.4
1	347	17.7	209	31.3	09.2	286	56.0	11.3	339	41.6	36.0	23	16.1	40.4
2	2	20.2	224	30.7	08.3	301	57.0	11.6	354	44.2	35.9	38	18.8	40.5
3	17	22.7	239	30.1	07.5	316	58.0	11.9	9	46.9	35.8	53	21.4	40.6
4	32	25.1	254	29.4	06.7	331	59.0	12.2	24	49.5	35.7	68	24.1	40.6
5	47	27.6	269	28.8	+17 05.8	347	00.0	+19 12.6	39	52.2	+1 35.6	83	26.7	-15 40.7
6	62	30.0	284	28.1	+17 05.0	2	01.0	+19 12.9	54	54.8	+1 35.5	98	29.3	-15 40.7
7	77	32.5	299	27.5	04.2	17	02.0	13.2	69	57.5	35.4	113	32.0	40.8
8	92	35.0	314	26.9	03.3	32	03.0	13.5	85	00.1	35.3	128	34.6	40.9
9	107	37.4	329	26.2	02.5	47	04.0	13.8	100	02.8	35.2	143	37.3	40.9
10	122	39.9	344	25.6	01.7	62	04.9	14.1	115	05.4	35.1	158	39.9	41.0
11	137	42.4	359	25.0	+17 00.8	77	05.9	+19 14.4	130	08.1	+1 35.1	173	42.6	-15 41.0
12	152	44.8	14	24.4	+17 00.0	92	06.9	+19 14.8	145	10.7	+1 35.0	188	45.2	-15 41.1
13	167	47.3	29	23.7	+16 59.2	107	07.9	15.1	160	13.4	34.9	203	47.8	41.2
14	182	49.8	44	23.1	58.3	122	08.9	15.4	175	16.1	34.8	218	50.5	41.2
15	197	52.2	59	22.5	57.5	137	09.9	15.7	190	18.7	34.7	233	53.1	41.3
16	212	54.7	74	21.8	56.7	152	10.9	16.0	205	21.4	34.6	248	55.8	41.4
17	227	57.1	89	21.2	+16 55.8	167	11.9	+19 16.3	220	24.0	+1 34.5	263	58.4	-15 41.4
18	242	59.6	104	20.6	+16 55.0	182	12.9	+19 16.6	235	26.7	+1 34.4	279	01.1	-15 41.5
19	258	02.1	119	19.9	54.1	197	13.9	16.9	250	29.3	34.3	294	03.7	41.5
20	273	04.5	134	19.3	53.3	212	14.9	17.2	265	32.0	34.2	309	06.3	41.6
21	288	07.0	149	18.7	52.4	227	15.9	17.6	280	34.6	34.1	324	09.0	41.7
22	303	09.5	164	18.1	51.6	242	16.9	17.9	295	37.3	34.0	339	11.6	41.7
23	318	11.9	179	17.4	50.8	257	17.9	18.2	310	39.9	34.0	354	14.3	41.8
24	333	14.4	194	16.8	+16 49.9	272	18.9	+19 18.5	325	42.6	+1 33.9	9	16.9	-15 41.8
Dif	—		-6	-8		+10	+3		+27	-1		+26	-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 02 ^m 1			Edad: 27 ^d 3 PHE { 4 ^h : 54'4 12 ^h : 54'5 20 ^h : 54'6 R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	26.3	+10 50.1	204	08.8	+23 40.7	71	60 N	2 47	3 51	4 38		1 11	89	19 47 5
1	194	26.4		218	39.5 ¹¹⁷		33.6	58	3 03	4 01	45		31	84	32 10
2	209	26.6		233	10.2 ¹¹⁷		26.4	56	17	09	50		1 48	79	19 13
3	224	26.8		247	41.0 ¹¹⁸		19.1	54	28	17	4 56		2 02	76	19 08 16
4	239	26.9		262	11.8 ¹¹⁸		11.7	52	38	24	5 00		14	73	18 58 19
5	254	27.1	+10 45.8	276	42.7 ¹¹⁹	+23 04.1	76	50	3 47	4 30	5 04		2 25	71	18 49 21
6	269	27.3	+10 44.9	291	13.6 ¹¹⁹	+22 56.5	76	45	4 05	4 43	5 13		2 47	66	18 30 25
7	284	27.5		305	44.5 ¹¹⁹		48.7	40	19	4 53	21		3 05	63	14 30
8	299	27.6		320	15.5 ¹²⁰		40.8	35	30	5 01	27		20	60	18 01 32
9	314	27.8		334	46.5 ¹²⁰		32.8	30	39	08	33		33	58	17 49 35
10	329	28.0		349	17.6 ¹²¹		24.8	20	4 54	20	43		3 56	53	29 40
11	344	28.1	+10 40.6	3	48.8 ¹²²	+22 16.6	82	10 N	5 05	5 30	5 51		4 15	50	17 12 43
12	359	28.3	+10 39.8	18	19.9 ¹²¹	+22 08.3	83	0	5 13	5 38	5 59		4 33	47	16 56 46
13	14	28.5		32	51.1 ¹²²	+21 59.9	84	10 S	20	45	6 06		4 51	44	39 50
14	29	28.7		47	22.4 ¹²³		51.4	20	26	52	14		5 10	40	22 53
15	44	28.8		61	53.7 ¹²³		42.8	30	31	5 59	23		31	37	16 01 58
16	59	29.0		76	25.1 ¹²⁴		34.1	35	33	6 03	29		44	35	15 49 60
17	74	29.2	+10 35.4	90	56.5 ¹²⁴	+21 25.3	88	40	5 35	6 07	6 34		5 59	32	15 35 64
18	89	29.4	+10 34.6	105	27.9 ¹²⁴	+21 16.4	89	45	5 37	6 11	6 41		6 16	28	15 19 67
19	104	29.5		119	59.4 ¹²⁵	+21 07.4	90	50	39	16	49		38	23	14 58 72
20	119	29.7		134	31.0 ¹²⁶	+20 58.3	91	52	39	18	53		48	21	49 74
21	134	29.9		149	02.6 ¹²⁶		49.1	54	40	21	6 57		6 59	19	38 77
22	149	30.1		163	34.2 ¹²⁶		39.8	56	40	23	7 01		7 12	16	25 80
23	164	30.2		178	05.9 ¹²⁷		30.4	58	40	26	06		28	11	14 10 85
24	179	30.4	+10 29.4	192	37.6 ¹²⁷	+20 20.9	95	60 S	5 41	6 29	7 12		7 46	6	13 53 90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 1 ^h 46 ^m 7		Mag: -3.9 PMG: 11 ^h 03 ^m		Mag: 0.0 PMG: 5 ^h 50 ^m		Mag: -2.9 PMG: 2 ^h 17 ^m		Mag: +0.3 PMG: 23 ^h 19 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	333	14.4	194	16.8	+16 49.9	272	18.9	+19 18.5	325	42.6	+1 33.9	9	16.9	-15 41.8	
1	348	16.9	209	16.2	49.1	287	19.9	18.8	340	45.2	33.8	24	19.6	41.9	
2	3	19.3	224	15.6	48.2	302	20.9	19.1	355	47.9	33.7	39	22.2	42.0	
3	18	21.8	239	14.9	47.4	317	21.9	19.4	10	50.6	33.6	54	24.8	42.0	
4	33	24.3	254	14.3	46.5	332	22.9	19.7	25	53.2	33.5	69	27.5	42.1	
5	48	26.7	269	13.7	+16 45.7	347	23.9	+19 20.0	40	55.9	+1 33.4	84	30.1	-15 42.1	
6	63	29.2	284	13.1	+16 44.8	2	24.9	+19 20.3	55	58.5	+1 33.3	99	32.8	-15 42.2	
7	78	31.6	299	12.4	44.0	17	25.9	20.6	71	01.2	33.2	114	35.4	42.3	
8	93	34.1	314	11.8	43.1	32	26.9	21.0	86	03.8	33.1	129	38.1	42.3	
9	108	36.6	329	11.2	42.3	47	27.9	21.3	101	06.5	33.0	144	40.7	42.4	
10	123	39.0	344	10.6	41.4	62	28.9	21.6	116	09.2	32.9	159	43.3	42.4	
11	138	41.5	359	09.9	+16 40.5	77	29.9	+19 21.9	131	11.8	+1 32.8	174	46.0	-15 42.5	
12	153	44.0	14	09.3	+16 39.7	92	30.9	+19 22.2	146	14.5	+1 32.7	189	48.6	-15 42.6	
13	168	46.4	29	08.7	38.8	107	31.9	22.5	161	17.1	32.7	204	51.3	42.6	
14	183	48.9	44	08.1	38.0	122	32.9	22.8	176	19.8	32.6	219	53.9	42.7	
15	198	51.4	59	07.5	37.1	137	33.9	23.1	191	22.5	32.5	234	56.6	42.7	
16	213	53.8	74	06.8	36.3	152	34.9	23.4	206	25.1	32.4	249	59.2	42.8	
17	228	56.3	89	06.2	+16 35.4	167	35.9	+19 23.7	221	27.8	+1 32.3	265	01.8	-15 42.9	
18	243	58.8	104	05.6	+16 34.5	182	36.9	+19 24.0	236	30.4	+1 32.2	280	04.5	-15 42.9	
19	259	01.2	119	05.0	33.7	197	37.9	24.3	251	33.1	32.1	295	07.1	43.0	
20	274	03.7	134	04.4	32.8	212	38.9	24.6	266	35.7	32.0	310	09.8	43.0	
21	289	06.1	149	03.7	32.0	227	39.9	24.9	281	38.4	31.9	325	12.4	43.1	
22	304	08.6	164	03.1	31.1	242	40.9	25.2	296	41.1	31.8	340	15.1	43.2	
23	319	11.1	179	02.5	30.2	257	41.9	25.5	311	43.7	31.7	355	17.7	43.2	
24	334	13.5	194	01.9	+16 29.4	272	42.9	+19 25.8	326	46.4	+1 31.6	10	20.3	-15 43.3	
Dif	—		-6	-9		+10	+3		+27	-1		+26	-1		

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 8			Edad: 28 ^d 3 PHE { 4 ^h : 54 ^m 7 12 ^h : 54 ^m 8 20 ^h : 54 ^m 9 R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m		
0	179	30.4	+10	29.4	192	37.6	+20 20.9	60 N	19 22	20 08	21 10	2 40 89	19 52 3		
1	194	30.6		28.5	207	09.4 ¹²⁸	11.3 ⁹⁶	58	15	19 59	20 55	2 55 84	42 6		
2	209	30.8		27.6	221	41.2 ¹²⁸	+20 01.6 ⁹⁷	56	10	50	42	3 07 80	32 10		
3	224	30.9		26.8	236	13.1 ¹²⁹	+19 51.8 ⁹⁸	54	05	43	31	18 77	24 13		
4	239	31.1		25.9	250	45.0 ¹²⁹	42.0 ⁹⁸	52	19 01	37	22	27 75	17 15		
5	254	31.3	+10	25.0	265	17.0 ¹³⁰	+19 32.0 ¹⁰⁰	50	18 57	19 31	20 13	3 36 72	19 10 17		
6	269	31.5	+10	24.2	279	49.0 ¹³⁰	+19 22.0 ¹⁰⁰	45	18 48	19 19	19 56	3 53 68	18 55 22		
7	284	31.6		23.3	294	21.0 ¹³⁰	11.8 ¹⁰²	40	41	09	43	4 08 63	44 25		
8	299	31.8		22.4	308	53.1 ¹³¹	+19 01.6 ¹⁰²	35	35	19 01	32	20 61	33 29		
9	314	32.0		21.5	323	25.3 ¹³²	+18 51.3 ¹⁰³	30	30	18 54	23	31 58	24 32		
10	329	32.2		20.7	337	57.5 ¹³²	40.9 ¹⁰⁴	20	20	43	19 09	4 49 53	18 09 36		
11	344	32.3	+10	19.8	352	29.7 ¹³²	+18 30.4 ¹⁰⁵	10 N	18 12	18 34	18 59	5 05 49	17 55 40		
12	359	32.5	+10	18.9	7	02.0 ¹³³	+18 19.8 ¹⁰⁶	0	18 05	18 26	18 51	5 20 45	17 42 44		
13	14	32.7		18.1	21	34.3 ¹³³	+18 09.1 ¹⁰⁷	10 S	17 58	19	44	35 41	29 48		
14	29	32.9		17.2	36	06.7 ¹³⁴	+17 58.4 ¹⁰⁷	20	50	13	38	5 50 38	17 15 52		
15	44	33.0		16.3	50	39.1 ¹³⁴	47.5 ¹⁰⁹	30	42	06	34	6 08 33	16 59 57		
16	59	33.2		15.4	65	11.6 ¹³⁵	36.6 ¹⁰⁹	35	37	18 03	32	19 30	49 61		
17	74	33.4	+10	14.6	79	44.1 ¹³⁵	+17 25.6 ¹¹⁰	40	17 31	17 59	18 30	6 31 27	16 39 63		
18	89	33.6	+10	13.7	94	16.6 ¹³⁵	+17 14.5 ¹¹¹	45	17 25	17 55	18 29	6 44 24	16 26 67		
19	104	33.8		12.8	108	49.2 ¹³⁶	+17 03.4 ¹¹¹	50	17	50	28	7 01 19	10 73		
20	119	33.9		12.0	123	21.8 ¹³⁶	+16 52.1 ¹¹³	52	14	48	28	09 17	16 03 75		
21	134	34.1		11.1	137	54.5 ¹³⁷	40.8 ¹¹³	54	10	46	27	18 14	15 55 77		
22	149	34.3		10.2	152	27.2 ¹³⁷	29.4 ¹¹⁴	56	06	44	27	28 11	45 81		
23	164	34.5		09.3	166	59.9 ¹³⁷	17.9 ¹¹⁵	58	17 01	41	27	39 8	35 84		
24	179	34.6	+10	08.5	181	32.7 ¹³⁸	+16 06.4 ¹¹⁵	60 S	16 56	17 39	18 27	7 52 4	15 23 88		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 1 ^h 42 ^m 8		Mag: -3.9 PMG: 11 ^h 04 ^m		Mag: -0.1 PMG: 5 ^h 49 ^m		Mag: -2.9 PMG: 2 ^h 13 ^m		Mag: +0.3 PMG: 23 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	334	13.5	194	01.9	+16	29.4	272	42.9	+19	25.8
1	349	16.0	209	01.3		28.5	287	43.9		26.1
2	4	18.5	224	00.7		27.6	302	44.9		26.4
3	19	20.9	239	00.1		26.8	317	45.9		26.8
4	34	23.4	253	59.4		25.9	332	46.9		27.1
5	49	25.9	268	58.8	+16	25.0	347	47.9	+19	27.4
6	64	28.3	283	58.2	+16	24.1	2	48.9	+19	27.7
7	79	30.8	298	57.6		23.3	17	50.0		28.0
8	94	33.2	313	57.0		22.4	32	51.0		28.3
9	109	35.7	328	56.4		21.5	47	52.0		28.6
10	124	38.2	343	55.8		20.7	62	53.0		28.9
11	139	40.6	358	55.1	+16	19.8	77	54.0	+19	29.2
12	154	43.1	13	54.5	+16	18.9	92	55.0	+19	29.5
13	169	45.6	28	53.9		18.0	107	56.0		29.8
14	184	48.0	43	53.3		17.1	122	57.0		30.1
15	199	50.5	58	52.7		16.3	137	58.0		30.4
16	214	53.0	73	52.1		15.4	152	59.0		30.7
17	229	55.4	88	51.5	+16	14.5	168	00.1	+19	31.0
18	244	57.9	103	50.9	+16	13.6	183	01.1	+19	31.3
19	260	00.4	118	50.3		12.8	198	02.1		31.6
20	275	02.8	133	49.7		11.9	213	03.1		31.9
21	290	05.3	148	49.0		11.0	228	04.1		32.2
22	305	07.7	163	48.4		10.1	243	05.1		32.5
23	320	10.2	178	47.8		09.2	258	06.1		32.8
24	335	12.7	193	47.2	+16	08.3	273	07.2	+19	33.0
Dif	—		-6		-9		+10		+3	

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UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15°8 PMG: 12 ^h 01 ^m 5			Edad: 29 ^d 3 PHE { SD: 15°0 PMG: 12 ^h 16 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	179	34.6	+10	08.5	181	32.7	+16	06.4	60 N	2	54	3	56	4	43	4	09
1	194	34.8		07.6	196	05.6 ¹³⁹	+15	54.7 ¹¹⁷	58	3	09	4	06	49	19	84	
2	209	35.0		06.7	210	38.4 ¹³⁸		43.0 ¹¹⁷	56	22		14	54	27	81	42	
3	224	35.2		05.8	225	11.3 ¹³⁹		31.3 ¹¹⁷	54	33		21	4	59	35	77	
4	239	35.4		05.0	239	44.3 ¹⁴⁰		19.4 ¹¹⁹	52	42		27	5	03	42	75	
5	254	35.5	+10	04.1	254	17.3 ¹⁴⁰	+15	07.5 ¹¹⁹	50	3	51	4	33	5	07	4	48
6	269	35.7	+10	03.2	268	50.3 ¹⁴⁰	+14	55.5 ¹²⁰	45	4	08	4	45	5	16	5	01
7	284	35.9		02.3	283	23.3 ¹⁴⁰		43.4 ¹²¹	40	21		4	55	23	11	64	09
8	299	36.1		01.4	297	56.4 ¹⁴¹		31.3 ¹²¹	35	32		5	03	29	21	60	19
9	314	36.3	+10	00.6	312	29.6 ¹⁴²		19.1 ¹²²	30	41		10		34	29	57	18
10	329	36.4	+9	59.7	327	02.7 ¹⁴¹	+14	06.8 ¹²³	20	4	54	21		43	42	52	45
11	344	36.6	+9	58.8	341	35.9 ¹⁴²	+13	54.5 ¹²³	10 N	5	05	5	30	5	51	5	54
12	359	36.8	+9	57.9	356	09.2 ¹⁴³	+13	42.1 ¹²⁴	0	5	13	5	37	5	58	6	05
13	14	37.0		57.1	10	42.4 ¹⁴²		29.6 ¹²⁵	10 S	19		44		6	05	16	40
14	29	37.2		56.2	25	15.7 ¹⁴³		17.1 ¹²⁵	20	25		51		13	28	36	18
15	44	37.3		55.3	39	49.1 ¹⁴⁴	+13	04.5 ¹²⁶	30	29		5	57	21	41	31	17
16	59	37.5		54.4	54	22.4 ¹⁴³	+12	51.8 ¹²⁷	35	31		6	00	26	49	28	50
17	74	37.7	+9	53.5	68	55.8 ¹⁴⁴	+12	39.1 ¹²⁷	40	5	32	6	04	6	31	6	58
18	89	37.9	+9	52.7	83	29.2 ¹⁴⁴	+12	26.3 ¹²⁸	45	5	34	6	08	6	38	7	08
19	104	38.1		51.8	98	02.7 ¹⁴⁵		13.5 ¹²⁸	50	35		12		45	20	16	23
20	119	38.2		50.9	112	36.2 ¹⁴⁵	+12	00.6 ¹²⁹	52	35		14		48	26	14	18
21	134	38.4		50.0	127	09.7 ¹⁴⁵	+11	47.6 ¹³⁰	54	35		16		52	32	12	12
22	149	38.6		49.1	141	43.2 ¹⁴⁵		34.6 ¹³⁰	56	35		18		6	56	39	9
23	164	38.8		48.3	156	16.8 ¹⁴⁶		21.5 ¹³¹	58	35		21		7	01	47	6
24	179	39.0	+9	47.4	170	50.4 ¹⁴⁶	+11	08.4 ¹³¹	60 S	5	35	6	23	7	06	7	56

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 1 ^h 38 ^m 9		Mag: -3.9 PMG: 11 ^h 05 ^m		Mag: -0.1 PMG: 5 ^h 47 ^m		Mag: -2.9 PMG: 2 ^h 08 ^m		Mag: +0.3 PMG: 23 ^h 10 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	335	12.7	193	47.2	+16	08.3	273	07.2	+19	33.0	327	50.3	+1	29.3	11	23.7	-15	44.7
1	350	15.1	208	46.6		07.4	288	08.2		33.3	342	53.0		29.2	26	26.4		44.8
2	5	17.6	223	46.0		06.6	303	09.2		33.6	357	55.7		29.1	41	29.0		44.9
3	20	20.1	238	45.4		05.7	318	10.2		33.9	12	58.3		29.0	56	31.7		44.9
4	35	22.5	253	44.8		04.8	333	11.2		34.2	28	01.0		28.9	71	34.3		45.0
5	50	25.0	268	44.2	+16	03.9	348	12.2	+19	34.5	43	03.7	+1	28.8	86	36.9	-15	45.0
6	65	27.5	283	43.6	+16	03.0	3	13.2	+19	34.8	58	06.4	+1	28.7	101	39.6	-15	45.1
7	80	29.9	298	43.0		02.1	18	14.3		35.1	73	09.0		28.6	116	42.2		45.1
8	95	32.4	313	42.4		01.2	33	15.3		35.4	88	11.7		28.5	131	44.9		45.2
9	110	34.9	328	41.8	+16	00.3	48	16.3		35.7	103	14.4		28.4	146	47.5		45.3
10	125	37.3	343	41.2	+15	59.4	63	17.3		36.0	118	17.0		28.3	161	50.1		45.3
11	140	39.8	358	40.6	+15	58.5	78	18.3	+19	36.3	133	19.7	+1	28.2	176	52.8	-15	45.4
12	155	42.2	13	40.0	+15	57.7	93	19.4	+19	36.6	148	22.4	+1	28.1	191	55.4	-15	45.4
13	170	44.7	28	39.4		56.8	108	20.4		36.9	163	25.0		28.0	206	58.1		45.5
14	185	47.2	43	38.8		55.9	123	21.4		37.2	178	27.7		27.9	222	00.7		45.6
15	200	49.6	58	38.2		55.0	138	22.4		37.5	193	30.4		27.8	237	03.3		45.6
16	215	52.1	73	37.6		54.1	153	23.4		37.8	208	33.1		27.7	252	06.0		45.7
17	230	54.6	88	37.0	+15	53.2	168	24.5	+19	38.1	223	35.7	+1	27.6	267	08.6	-15	45.7
18	245	57.0	103	36.4	+15	52.3	183	25.5	+19	38.4	238	38.4	+1	27.5	282	11.3	-15	45.8
19	260	59.5	118	35.8		51.4	198	26.5		38.6	253	41.1		27.4	297	13.9		45.9
20	276	02.0	133	35.2		50.5	213	27.5		38.9	268	43.7		27.3	312	16.5		45.9
21	291	04.4	148	34.6		49.6	228	28.5		39.2	283	46.4		27.2	327	19.2		46.0
22	306	06.9	163	34.0		48.7	243	29.6		39.5	298	49.1		27.1	342	21.8		46.0
23	321	09.3	178	33.4		47.8	258	30.6		39.8	313	51.8		27.0	357	24.5		46.1
24	336	11.8	193	32.8	+15	46.9	273	31.6	+19	40.1	328	54.4	+1	26.9	12	27.1	-15	46.2
Dif	—		-6		-9		+10		+3		+27		-1		+26		-	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 3			Edad: 30 ^d 3 PHE { SD: 15 ^h 1 PMG: 12 ^h 59 ^m 4 ^h : 55 ^s 5 12 ^h : 55 ^s 7 20 ^h : 55 ^s 8 R°: 43 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	179	39.0	+9 47.4	170	50.4	+11 08.4		60 N	19 16	20 02	21 02	5 37 87	19 57 1	
1	194	39.2	46.5	185	24.0 ¹⁴⁶	+10 55.2 ¹³²		58	10	19 53	20 48	43 83	53 5	
2	209	39.3	45.6	199	57.6 ¹⁴⁶	41.9 ¹³³		56	05	45	36	48 80	50 7	
3	224	39.5	44.7	214	31.3 ¹⁴⁷	28.7 ¹³²		54	19 00	38	25	52 78	47 10	
4	239	39.7	43.9	229	05.0 ¹⁴⁷	15.3 ¹³⁴		52	18 56	32	16	5 57 75	45 12	
5	254	39.9	+9 43.0	243	38.7 ¹⁴⁷	+10 01.9 ¹³⁴		50	18 53	19 27	20 08	6 00 73	19 42 14	
6	269	40.1	+9 42.1	258	12.4 ¹⁴⁷	+9 48.5 ¹³⁴		45	18 45	19 15	19 52	6 08 68	19 37 19	
7	284	40.3	41.2	272	46.2 ¹⁴⁸	35.0 ¹³⁵		40	38	19 06	39	15 64	33 22	
8	299	40.4	40.3	287	19.9 ¹⁴⁷	21.4 ¹³⁶		35	32	18 58	29	21 60	29 26	
9	314	40.6	39.4	301	53.7 ¹⁴⁸	+9 07.8 ¹³⁶		30	27	52	21	26 57	26 29	
10	329	40.8	38.6	316	27.5 ¹⁴⁸	+8 54.2 ¹³⁶		20	19	41	19 07	34 52	20 34	
11	344	41.0	+9 37.7	331	01.4 ¹⁴⁹	+8 40.5 ¹³⁷		10 N	18 11	18 33	18 58	6 42 47	19 15 38	
12	359	41.2	+9 36.8	345	35.2 ¹⁴⁸	+8 26.8 ¹³⁷		0	18 05	18 26	18 50	6 49 43	19 10 43	
13	14	41.4	35.9	0	09.1 ¹⁴⁹	+8 13.0 ¹³⁸		10 S	17 58	19	44	6 56 39	19 05 47	
14	29	41.5	35.0	14	42.9 ¹⁴⁸	+7 59.2 ¹³⁸		20	51	13	39	7 04 34	18 59 52	
15	44	41.7	34.1	29	16.8 ¹⁴⁹	45.3 ¹³⁹		30	43	07	35	12 29	53 57	
16	59	41.9	33.3	43	50.7 ¹⁴⁹	31.4 ¹³⁹		35	38	04	33	17 26	50 60	
17	74	42.1	+9 32.4	58	24.6 ¹⁴⁹	+7 17.5 ¹³⁹		40	17 33	18 01	18 32	7 22 23	18 46 63	
18	89	42.3	+9 31.5	72	58.5 ¹⁴⁹	+7 03.5 ¹⁴⁰		45	17 27	17 57	18 31	7 29 19	18 41 68	
19	104	42.5	30.6	87	32.5 ¹⁵⁰	+6 49.5 ¹⁴⁰		50	20	53	31	36 15	35 73	
20	119	42.7	29.7	102	06.4 ¹⁴⁹	35.5 ¹⁴⁰		52	17	51	31	40 12	32 76	
21	134	42.8	28.8	116	40.4 ¹⁵⁰	21.4 ¹⁴¹		54	14	50	31	44 10	30 77	
22	149	43.0	27.9	131	14.3 ¹⁴⁹	+6 07.2 ¹⁴²		56	10	48	31	48 7	26 81	
23	164	43.2	27.0	145	48.3 ¹⁵⁰	+5 53.1 ¹⁴¹		58	05	45	31	53 4	23 83	
24	179	43.4	+9 26.2	160	22.2 ¹⁴⁹	+5 38.9 ¹⁴²		60 S	17 01	17 43	18 31	7 58 1	18 19 87	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 35 ^m 0		Mag: -3.9 PMG: 11 ^h 06 ^m			Mag: -0.1 PMG: 5 ^h 45 ^m			Mag: -2.9 PMG: 2 ^h 04 ^m			Mag: +0.3 PMG: 23 ^h 06 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♄	Dec	
h	°	'	°	°	'	°	'	°	'	°	'	°	'	°
0	336	11.8	193 32.8	+15 46.9	273 31.6	+19 40.1	328 54.4	+1 26.9	12 27.1	-15 46.2				
1	351	14.3	208 32.2	46.0	288 32.6	40.4	343 57.1	26.8	27 29.7	46.2				
2	6	16.7	223 31.6	45.1	303 33.7	40.7	358 59.8	26.7	42 32.4	46.3				
3	21	19.2	238 31.0	44.1	318 34.7	41.0	14 02.5	26.6	57 35.0	46.3				
4	36	21.7	253 30.4	43.2	333 35.7	41.3	29 05.1	26.5	72 37.7	46.4				
5	51	24.1	268 29.8	+15 42.3	348 36.7	+19 41.6	44 07.8	+1 26.4	87 40.3	-15 46.5				
6	66	26.6	283 29.2	+15 41.4	3 37.8	+19 41.8	59 10.5	+1 26.3	102 42.9	-15 46.5				
7	81	29.1	298 28.6	40.5	18 38.8	42.1	74 13.2	26.2	117 45.6	46.6				
8	96	31.5	313 28.0	39.6	33 39.8	42.4	89 15.8	26.1	132 48.2	46.6				
9	111	34.0	328 27.4	38.7	48 40.8	42.7	104 18.5	26.0	147 50.9	46.7				
10	126	36.5	343 26.8	37.8	63 41.9	43.0	119 21.2	25.9	162 53.5	46.8				
11	141	38.9	358 26.3	+15 36.9	78 42.9	+19 43.3	134 23.9	+1 25.8	177 56.1	-15 46.8				
12	156	41.4	13 25.7	+15 36.0	93 43.9	+19 43.6	149 26.5	+1 25.7	192 58.8	-15 46.9				
13	171	43.8	28 25.1	35.0	108 45.0	43.9	164 29.2	25.6	208 01.4	46.9				
14	186	46.3	43 24.5	34.1	123 46.0	44.2	179 31.9	25.5	223 04.1	47.0				
15	201	48.8	58 23.9	33.2	138 47.0	44.4	194 34.6	25.4	238 06.7	47.0				
16	216	51.2	73 23.3	32.3	153 48.0	44.7	209 37.3	25.3	253 09.3	47.1				
17	231	53.7	88 22.7	+15 31.4	168 49.1	+19 45.0	224 39.9	+1 25.2	268 12.0	-15 47.2				
18	246	56.2	103 22.1	+15 30.5	183 50.1	+19 45.3	239 42.6	+1 25.1	283 14.6	-15 47.2				
19	261	58.6	118 21.5	29.5	198 51.1	45.6	254 45.3	25.0	298 17.2	47.3				
20	277	01.1	133 20.9	28.6	213 52.2	45.9	269 48.0	24.9	313 19.9	47.3				
21	292	03.6	148 20.4	27.7	228 53.2	46.2	284 50.6	24.8	328 22.5	47.4				
22	307	06.0	163 19.8	26.8	243 54.2	46.4	299 53.3	24.7	343 25.2	47.5				
23	322	08.5	178 19.2	25.9	258 55.3	46.7	314 56.0	24.6	358 27.8	47.5				
24	337	10.9	193 18.6	+15 24.9	273 56.3	+19 47.0	329 58.7	+1 24.5	13 30.4	-15 47.6				
Dif	—	—	-6	-9	+10	+3	+27	-1	+26	-1				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15/8 PMG: 12 ^h 01 ^m 0			Edad: 1 ^d 7 PHE { SD: 15/2 PMG: 13 ^h 42 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	43.4	+9 26.2	160	22.2	+5 38.9	60 N	3 01	4 02	4 48		7 04	88	19 58	1
1	194	43.6	25.3	174	56.2 ¹⁵⁰	24.6 ¹⁴³	58	15	10	53		06	84	58	4
2	209	43.8	24.4	189	30.2 ¹⁵⁰	+5 10.4 ¹⁴²	56	27	18	4 58		08	81	57	7
3	224	44.0	23.5	204	04.2 ¹⁵⁰	+4 56.1 ¹⁴³	54	38	25	5 03		10	78	57	10
4	239	44.2	22.6	218	38.2 ¹⁵⁰	41.8 ¹⁴³	52	47	31	07		12	75	57	12
5	254	44.3	+9 21.7	233	12.1 ¹⁴⁹	+4 27.4 ¹⁴⁴	50	3 54	4 36	5 10		7 13	73	19 56	15
6	269	44.5	+9 20.8	247	46.1 ¹⁵⁰	+4 13.0 ¹⁴⁴	45	4 11	4 48	5 18		7 16	69	19 56	19
7	284	44.7	19.9	262	20.1 ¹⁵⁰	+3 58.6 ¹⁴⁴	40	23	4 57	25		19	64	55	23
8	299	44.9	19.1	276	54.1 ¹⁵⁰	44.2 ¹⁴⁴	35	34	5 04	30		21	61	55	26
9	314	45.1	18.2	291	28.1 ¹⁵⁰	29.7 ¹⁴⁵	30	42	11	35		23	58	55	29
10	329	45.3	17.3	306	02.0 ¹⁴⁹	15.3 ¹⁴⁴	20	4 55	21	44		26	53	54	34
11	344	45.5	+9 16.4	320	36.0 ¹⁵⁰	+3 00.8 ¹⁴⁵	10 N	5 05	5 30	5 51		7 29	48	19 53	39
12	359	45.7	+9 15.5	335	10.0 ¹⁵⁰	+2 46.2 ¹⁴⁶	0	5 12	5 37	5 58		7 32	43	19 53	43
13	14	45.8	14.6	349	43.9 ¹⁴⁹	31.7 ¹⁴⁵	10 S	18	43	6 04		35	39	52	48
14	29	46.0	13.7	4	17.9 ¹⁵⁰	17.1 ¹⁴⁶	20	23	49	11		38	34	51	53
15	44	46.2	12.8	18	51.8 ¹⁴⁹	+2 02.5 ¹⁴⁶	30	27	55	19		41	29	50	59
16	59	46.4	11.9	33	25.7 ¹⁴⁹	+1 47.9 ¹⁴⁶	35	28	5 58	23		43	26	50	61
17	74	46.6	+9 11.0	47	59.6 ¹⁴⁹	+1 33.3 ¹⁴⁶	40	5 30	6 01	6 28		7 45	23	19 49	65
18	89	46.8	+9 10.1	62	33.5 ¹⁴⁹	+1 18.7 ¹⁴⁶	45	5 30	6 04	6 34		7 48	19	19 49	69
19	104	47.0	09.3	77	07.4 ¹⁴⁹	+1 04.0 ¹⁴⁷	50	31	08	41		51	14	48	74
20	119	47.2	08.4	91	41.3 ¹⁴⁹	+0 49.3 ¹⁴⁷	52	31	10	44		52	12	48	76
21	134	47.4	07.5	106	15.2 ¹⁴⁹	34.6 ¹⁴⁷	54	31	12	47		54	9	47	79
22	149	47.5	06.6	120	49.0 ¹⁴⁸	19.9 ¹⁴⁷	56	31	14	51		55	8	47	82
23	164	47.7	05.7	135	22.8 ¹⁴⁸	+0 05.2 ¹⁴⁷	58	30	16	6 55		57	5	46	85
24	179	47.9	+9 04.8	149	56.6 ¹⁴⁸	-0 09.5 ¹⁴⁷	60 S	5 30	6 18	7 00		7 59	1	19 46	88
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 1 ^h 31 ^m 0			Mag: -3.9 PMG: 11 ^h 07 ^m			Mag: -0.1 PMG: 5 ^h 44 ^m			Mag: -2.9 PMG: 2 ^h 00 ^m			Mag: +0.3 PMG: 23 ^h 02 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	337	10.9	193 18.6	+15 24.9	273 56.3	+19 47.0	329 58.7	+1 24.5	13 30.4	-15 47.6			13 30.4	-15 47.6	
1	352	13.4	208 18.0	24.0	288 57.3	47.3	345 01.4	24.4	28 33.1	47.6			28 33.1	47.6	
2	7	15.9	223 17.4	23.1	303 58.4	47.6	0 04.0	24.3	43 35.7	47.7			43 35.7	47.7	
3	22	18.3	238 16.8	22.2	318 59.4	47.9	15 06.7	24.2	58 38.4	47.7			58 38.4	47.7	
4	37	20.8	253 16.3	21.2	334 00.4	48.1	30 09.4	24.1	73 41.0	47.8			73 41.0	47.8	
5	52	23.3	268 15.7	+15 20.3	349 01.5	+19 48.4	45 12.1	+1 24.0	88 43.6	-15 47.9			88 43.6	-15 47.9	
6	67	25.7	283 15.1	+15 19.4	4 02.5	+19 48.7	60 14.8	+1 23.9	103 46.3	-15 47.9			103 46.3	-15 47.9	
7	82	28.2	298 14.5	18.5	19 03.5	49.0	75 17.4	23.8	118 48.9	48.0			118 48.9	48.0	
8	97	30.7	313 13.9	17.5	34 04.6	49.3	90 20.1	23.7	133 51.5	48.0			133 51.5	48.0	
9	112	33.1	328 13.3	16.6	49 05.6	49.6	105 22.8	23.6	148 54.2	48.1			148 54.2	48.1	
10	127	35.6	343 12.8	15.7	64 06.7	49.8	120 25.5	23.5	163 56.8	48.2			163 56.8	48.2	
11	142	38.1	358 12.2	+15 14.8	79 07.7	+19 50.1	135 28.2	+1 23.4	178 59.5	-15 48.2			178 59.5	-15 48.2	
12	157	40.5	13 11.6	+15 13.8	94 08.7	+19 50.4	150 30.9	+1 23.3	194 02.1	-15 48.3			194 02.1	-15 48.3	
13	172	43.0	28 11.0	12.9	109 09.8	50.7	165 33.5	23.2	209 04.7	48.3			209 04.7	48.3	
14	187	45.4	43 10.4	12.0	124 10.8	51.0	180 36.2	23.1	224 07.4	48.4			224 07.4	48.4	
15	202	47.9	58 09.8	11.0	139 11.8	51.3	195 38.9	23.0	239 10.0	48.5			239 10.0	48.5	
16	217	50.4	73 09.3	10.1	154 12.9	51.5	210 41.6	22.9	254 12.7	48.5			254 12.7	48.5	
17	232	52.8	88 08.7	+15 09.2	169 13.9	+19 51.8	225 44.3	+1 22.8	269 15.3	-15 48.6			269 15.3	-15 48.6	
18	247	55.3	103 08.1	+15 08.2	184 15.0	+19 52.1	240 47.0	+1 22.7	284 17.9	-15 48.6			284 17.9	-15 48.6	
19	262	57.8	118 07.5	07.3	199 16.0	52.4	255 49.6	22.6	299 20.6	48.7			299 20.6	48.7	
20	278	00.2	133 07.0	06.3	214 17.0	52.7	270 52.3	22.5	314 23.2	48.7			314 23.2	48.7	
21	293	02.7	148 06.4	05.4	229 18.1	52.9	285 55.0	22.4	329 25.8	48.8			329 25.8	48.8	
22	308	05.2	163 05.8	04.5	244 19.1	53.2	300 57.7	22.3	344 28.5	48.9			344 28.5	48.9	
23	323	07.6	178 05.2	03.5	259 20.2	53.5	316 00.4	22.2	359 31.1	48.9			359 31.1	48.9	
24	338	10.1	193 04.6	+15 02.6	274 21.2	+19 53.8	331 03.1	+1 22.1	14 33.8	-15 49.0			14 33.8	-15 49.0	
Dif	—		-6	-9	+10	+3	+27	-1	+26	-1		+26	-1	-1	-1

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 00 ^m 7			Edad: 2 ^d 7 PHE { 4 ^h : 56 ^h /5 12 ^h : 56 ^h /6 20 ^h : 56 ^h /8 R°: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	179	47.9	+9	04.8	149	56.6	-0 09.5	60 N	19 10	19 55	20 54	8 32 90	19 59 2					
1	194	48.1		03.9	164	30.4 ¹⁴⁸	24.2 ¹⁴⁷	58	04	47	41	30 87	20 02 5					
2	209	48.3		03.0	179	04.2 ¹⁴⁸	39.0 ¹⁴⁸	56	19 00	39	29	29 83	04 8					
3	224	48.5		02.1	193	37.9 ¹⁴⁷	-0 53.7 ¹⁴⁷	54	18 56	33	20	28 80	07 10					
4	239	48.7		01.2	208	11.6 ¹⁴⁷	-1 08.4 ¹⁴⁷	52	52	27	11	27 78	09 13					
5	254	48.9	+9	00.3	222	45.3 ¹⁴⁷	-1 23.2 ¹⁴⁸	50	18 48	19 22	20 04	8 26 76	20 11 15					
6	269	49.1	+8	59.4	237	19.0 ¹⁴⁷	-1 38.0 ¹⁴⁸	45	18 41	19 11	19 48	8 25 70	20 15 20					
7	284	49.3		58.5	251	52.7 ¹⁴⁷	-1 52.7 ¹⁴⁷	40	35	19 03	36	23 66	18 24					
8	299	49.4		57.6	266	26.3 ¹⁴⁶	-2 07.5 ¹⁴⁸	35	30	18 56	26	22 62	21 28					
9	314	49.6		56.7	280	59.9 ¹⁴⁶	22.3 ¹⁴⁸	30	25	49	18	21 59	24 31					
10	329	49.8		55.8	295	33.4 ¹⁴⁵	37.0 ¹⁴⁷	20	17	39	19 06	19 53	28 36					
11	344	50.0	+8	54.9	310	07.0 ¹⁴⁶	-2 51.8 ¹⁴⁸	10 N	18 10	18 32	18 56	8 17 49	20 32 41					
12	359	50.2	+8	54.0	324	40.5 ¹⁴⁵	-3 06.6 ¹⁴⁸	0	18 04	18 25	18 49	8 15 45	20 36 45					
13	14	50.4		53.1	339	13.9 ¹⁴⁴	21.3 ¹⁴⁷	10 S	17 58	19	44	14 40	40 50					
14	29	50.6		52.3	353	47.3 ¹⁴⁴	36.1 ¹⁴⁸	20	51	13	39	12 35	44 55					
15	44	50.8		51.4	8	20.7 ¹⁴⁴	-3 50.8 ¹⁴⁷	30	44	08	36	10 30	49 60					
16	59	51.0		50.5	22	54.1 ¹⁴⁴	-4 05.6 ¹⁴⁸	35	40	05	35	09 27	51 64					
17	74	51.2	+8	49.6	37	27.4 ¹⁴³	-4 20.3 ¹⁴⁷	40	17 35	18 02	18 34	8 08 23	20 54 67					
18	89	51.4	+8	48.7	52	00.7 ¹⁴³	-4 35.1 ¹⁴⁸	45	17 30	17 59	18 33	8 07 19	20 58 71					
19	104	51.6		47.8	66	33.9 ¹⁴²	-4 49.8 ¹⁴⁷	50	23	56	33	05 15	21 02 77					
20	119	51.8		46.9	81	07.1 ¹⁴²	-5 04.5 ¹⁴⁷	52	20	54	34	04 13	04 79					
21	134	51.9		46.0	95	40.3 ¹⁴²	19.2 ¹⁴⁷	54	17	53	34	03 11	06 82					
22	149	52.1		45.1	110	13.4 ¹⁴¹	33.9 ¹⁴⁷	56	14	51	34	03 7	09 84					
23	164	52.3		44.2	124	46.5 ¹⁴¹	-5 48.6 ¹⁴⁷	58	10	49	35	02 4	11 88					
24	179	52.5	+8	43.3	139	19.5 ¹⁴⁰	-6 03.2 ¹⁴⁶	60 S	17 05	17 48	18 36	8 00 2	21 14 92					
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 27 ^m 1		Mag: -3.9 PMG: 11 ^h 08 ^m			Mag: -0.1 PMG: 5 ^h 42 ^m			Mag: -2.9 PMG: 1 ^h 55 ^m			Mag: +0.3 PMG: 22 ^h 58 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	338	10.1	193	04.6	+15	02.6	274	21.2	+19	53.8	331	03.1	+1	22.1	14	33.8	-15	49.0
1	353	12.5	208	04.1		01.7	289	22.3		54.1	346	05.7		21.9	29	36.4		49.0
2	8	15.0	223	03.5	+15	00.7	304	23.3		54.3	1	08.4		21.8	44	39.0		49.1
3	23	17.5	238	02.9	+14	59.8	319	24.3		54.6	16	11.1		21.7	59	41.7		49.1
4	38	19.9	253	02.3		58.8	334	25.4		54.9	31	13.8		21.6	74	44.3		49.2
5	53	22.4	268	01.8	+14	57.9	349	26.4	+19	55.2	46	16.5	+1	21.5	89	46.9	-15	49.3
6	68	24.9	283	01.2	+14	56.9	4	27.5	+19	55.4	61	19.2	+1	21.4	104	49.6	-15	49.3
7	83	27.3	298	00.6		56.0	19	28.5		55.7	76	21.9		21.3	119	52.2		49.4
8	98	29.8	313	00.0		55.0	34	29.6		56.0	91	24.6		21.2	134	54.8		49.4
9	113	32.3	327	59.5		54.1	49	30.6		56.3	106	27.2		21.1	149	57.5		49.5
10	128	34.7	342	58.9		53.2	64	31.7		56.5	121	29.9		21.0	165	00.1		49.6
11	143	37.2	357	58.3	+14	52.2	79	32.7	+19	56.8	136	32.6	+1	20.9	180	02.8	-15	49.6
12	158	39.7	12	57.8	+14	51.3	94	33.8	+19	57.1	151	35.3	+1	20.8	195	05.4	-15	49.7
13	173	42.1	27	57.2		50.3	109	34.8		57.4	166	38.0		20.7	210	08.0		49.7
14	188	44.6	42	56.6		49.4	124	35.9		57.7	181	40.7		20.6	225	10.7		49.8
15	203	47.0	57	56.0		48.4	139	36.9		57.9	196	43.4		20.5	240	13.3		49.8
16	218	49.5	72	55.5		47.5	154	38.0		58.2	211	46.1		20.4	255	15.9		49.9
17	233	52.0	87	54.9	+14	46.5	169	39.0	+19	58.5	226	48.7	+1	20.3	270	18.6	-15	50.0
18	248	54.4	102	54.3	+14	45.6	184	40.1	+19	58.8	241	51.4	+1	20.2	285	21.2	-15	50.0
19	263	56.9	117	53.8		44.6	199	41.1		59.0	256	54.1		20.1	300	23.8		50.1
20	278	59.4	132	53.2		43.6	214	42.2		59.3	271	56.8		19.9	315	26.5		50.1
21	294	01.8	147	52.6		42.7	229	43.2		59.6	286	59.5		19.8	330	29.1		50.2
22	309	04.3	162	52.1		41.7	244	44.3	+19	59.8	302	02.2		19.7	345	31.8		50.2
23	324	06.8	177	51.5		40.8	259	45.3	+20	00.1	317	04.9		19.6	0	34.4		50.3
24	339	09.2	192	50.9	+14	39.8	274	46.4	+20	00.4	332	07.6	+1	19.5	15	37.0	-15	50.4
Dif	—		-6		-9		+10		+3		+27		-1		+26		-1	

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 00 ^m 3			Edad: 3 ^d 7 PHE { 4 ^h : 57 ^h 0 12 ^h : 57 ^h 2 20 ^h : 57 ^h 3 R°: 48 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	179	52.5	+8 43.3	139	19.5	-6 03.2	60 N	3 08	4 07	4 52		10 02 94	20 01 2		
1	194	52.7		153	52.5 ¹⁴⁰	17.9 ¹⁴⁷	58	21	15	4 58		9 57 90	07 7		
2	209	52.9		168	25.4 ¹³⁹	32.5 ¹⁴⁶	56	32	22	5 02		52 87	12 11		
3	224	53.1		182	58.3 ¹³⁹	-6 47.1 ¹⁴⁶	54	42	29	06		48 84	17 14		
4	239	53.3		197	31.2 ¹³⁹	-7 01.7 ¹⁴⁶	52	51	34	10		45 80	22 16		
5	254	53.5	+8 38.8	212	03.9 ¹³⁷	-7 16.3 ¹⁴⁶	50	3 58	4 40	5 13		9 42 78	20 26 18		
6	269	53.7	+8 37.9	226	36.7 ¹³⁸	-7 30.8 ¹⁴⁵	45	4 14	4 50	5 21		9 35 72	20 35 23		
7	284	53.9		241	09.3 ¹³⁶	45.3 ¹⁴⁵	40	26	4 59	27		29 68	42 28		
8	299	54.1		255	42.0 ¹³⁷	-7 59.8 ¹⁴⁵	35	35	5 06	32		24 65	49 31		
9	314	54.3		270	14.5 ¹³⁵	-8 14.3 ¹⁴⁵	30	43	12	36		20 61	20 55 34		
10	329	54.5		284	47.0 ¹³⁵	28.7 ¹⁴⁴	20	4 56	22	44		12 56	21 04 40		
11	344	54.7	+8 33.4	299	19.5 ¹³⁵	-8 43.1 ¹⁴⁴	10 N	5 05	5 30	5 51		9 06 51	21 13 44		
12	359	54.9	+8 32.5	313	51.9 ¹³⁴	-8 57.5 ¹⁴⁴	0	5 12	5 36	5 57		9 00 46	21 21 49		
13	14	55.1		328	24.2 ¹³³	-9 11.9 ¹⁴⁴	10 S	17	42	6 03		8 54 42	30 52		
14	29	55.3		342	56.5 ¹³³	26.2 ¹⁴³	20	22	47	09		47 38	39 57		
15	44	55.4		357	28.7 ¹³²	40.5 ¹⁴³	30	25	53	17		40 32	49 62		
16	59	55.6		12	00.8 ¹³¹	-9 54.8 ¹⁴³	35	26	55	21		36 29	21 55 65		
17	74	55.8	+8 27.9	26	32.9 ¹³¹	-10 09.0 ¹⁴²	40	5 27	5 58	6 25		8 31 26	22 01 70		
18	89	56.0	+8 27.0	41	04.9 ¹³⁰	-10 23.2 ¹⁴²	45	5 27	6 01	6 30		8 26 22	22 09 74		
19	104	56.2		55	36.8 ¹²⁹	37.3 ¹⁴¹	50	27	04	37		20 16	19 79		
20	119	56.4		70	08.7 ¹²⁹	-10 51.4 ¹⁴¹	52	27	06	40		17 14	23 82		
21	134	56.6		84	40.5 ¹²⁸	-11 05.5 ¹⁴¹	54	26	07	43		14 12	28 85		
22	149	56.8		99	12.3 ¹²⁸	19.5 ¹⁴⁰	56	26	09	46		10 9	33 88		
23	164	57.0		113	43.9 ¹²⁶	33.5 ¹⁴⁰	58	25	10	50		06 6	39 92		
24	179	57.2	+8 21.6	128	15.5 ¹²⁶	-11 47.5 ¹⁴⁰	60 S	5 24	6 12	6 54		8 02 2	22 46 97		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 1 ^h 23 ^m 2			Mag: -3.9 PMG: 11 ^h 09 ^m			Mag: -0.1 PMG: 5 ^h 41 ^m			Mag: -2.9 PMG: 1 ^h 51 ^m			Mag: +0.3 PMG: 22 ^h 54 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	339	09.2		192	50.9	+14 39.8	274	46.4	+20 00.4	332	07.6	+1 19.5	15	37.0	-15 50.4
1	354	11.7		207	50.4	38.9	289	47.4	00.7	347	10.3	19.4	30	39.7	50.4
2	9	14.2		222	49.8	37.9	304	48.5	00.9	2	13.0	19.3	45	42.3	50.5
3	24	16.6		237	49.2	36.9	319	49.5	01.2	17	15.6	19.2	60	44.9	50.5
4	39	19.1		252	48.7	36.0	334	50.6	01.5	32	18.3	19.1	75	47.6	50.6
5	54	21.5		267	48.1	+14 35.0	349	51.6	+20 01.8	47	21.0	+1 19.0	90	50.2	-15 50.6
6	69	24.0		282	47.5	+14 34.1	4	52.7	+20 02.0	62	23.7	+1 18.9	105	52.8	-15 50.7
7	84	26.5		297	47.0	33.1	19	53.8	02.3	77	26.4	18.8	120	55.5	50.8
8	99	28.9		312	46.4	32.1	34	54.8	02.6	92	29.1	18.7	135	58.1	50.8
9	114	31.4		327	45.8	31.2	49	55.9	02.8	107	31.8	18.6	151	00.7	50.9
10	129	33.9		342	45.3	30.2	64	56.9	03.1	122	34.5	18.5	166	03.4	50.9
11	144	36.3		357	44.7	+14 29.2	79	58.0	+20 03.4	137	37.2	+1 18.3	181	06.0	-15 51.0
12	159	38.8		12	44.1	+14 28.3	94	59.0	+20 03.6	152	39.9	+1 18.2	196	08.7	-15 51.0
13	174	41.3		27	43.6	27.3	110	00.1	03.9	167	42.6	18.1	211	11.3	51.1
14	189	43.7		42	43.0	26.3	125	01.2	04.2	182	45.3	18.0	226	13.9	51.2
15	204	46.2		57	42.5	25.4	140	02.2	04.5	197	48.0	17.9	241	16.6	51.2
16	219	48.6		72	41.9	24.4	155	03.3	04.7	212	50.7	17.8	256	19.2	51.3
17	234	51.1		87	41.3	+14 23.4	170	04.3	+20 05.0	227	53.4	+1 17.7	271	21.8	-15 51.3
18	249	53.6		102	40.8	+14 22.5	185	05.4	+20 05.3	242	56.0	+1 17.6	286	24.5	-15 51.4
19	264	56.0		117	40.2	21.5	200	06.5	05.5	257	58.7	17.5	301	27.1	51.4
20	279	58.5		132	39.7	20.5	215	07.5	05.8	273	01.4	17.4	316	29.7	51.5
21	295	01.0		147	39.1	19.6	230	08.6	06.1	288	04.1	17.3	331	32.4	51.6
22	310	03.4		162	38.6	18.6	245	09.7	06.3	303	06.8	17.2	346	35.0	51.6
23	325	05.9		177	38.0	17.6	260	10.7	06.6	318	09.5	17.1	1	37.6	51.7
24	340	08.4		192	37.4	+14 16.6	275	11.8	+20 06.9	333	12.2	+1 16.9	16	40.3	-15 51.7
Dif	—			-6	-10		+11	+3		+27	-1		+26	-1	

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 00 ^m 0		Edad: 4 ^d 7 PHE { 4 ^h : 57'5 12 ^h : 57'7 20 ^h : 57'9 R°: 51 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	57.2	+8	21.6	128	15.5	-11 47.5	60 N	19 04	19 49	20 47	11 36 101	20 03 6	
1	194	57.4		20.7	142	47.0 ¹²⁵	-12 01.4 ¹³⁹	58	18 59	41	34	27 95	14 10	
2	209	57.6		19.8	157	18.5 ¹²⁵	15.2 ¹³⁸	56	55	34	23	19 91	23 14	
3	224	57.8		18.9	171	49.8 ¹²³	29.0 ¹³⁸	54	51	28	14	12 87	31 18	
4	239	58.0		18.0	186	21.1 ¹²³	42.8 ¹³⁸	52	47	23	20 06	05 84	38 21	
5	254	58.2	+8	17.1	200	52.3 ¹²²	-12 56.5 ¹³⁷	50	18 44	19 18	19 59	11 00 81	20 44 24	
6	269	58.4	+8	16.2	215	23.5 ¹²²	-13 10.1 ¹³⁶	45	18 37	19 08	19 44	10 47 76	20 58 29	
7	284	58.6		15.3	229	54.5 ¹²⁰	23.7 ¹³⁶	40	32	18 59	32	37 71	21 10 33	
8	299	58.8		14.4	244	25.5 ¹²⁰	37.2 ¹³⁵	35	27	53	23	29 67	20 36	
9	314	59.0		13.5	258	56.4 ¹¹⁹	-13 50.7 ¹³⁵	30	23	47	16	21 64	29 39	
10	329	59.2		12.5	273	27.2 ¹¹⁸	-14 04.2 ¹³⁵	20	15	38	19 04	10 08 59	44 44	
11	344	59.4	+8	11.6	287	57.9 ¹¹⁷	-14 17.5 ¹³³	10 N	18 09	18 30	18 55	9 57 54	21 57 49	
12	359	59.6	+8	10.7	302	28.5 ¹¹⁶	-14 30.8 ¹³³	0	18 03	18 24	18 48	9 46 51	22 10 52	
13	14	59.8		09.8	316	59.1 ¹¹⁶	44.1 ¹³³	10 S	17 58	19	43	36 46	22 57	
14	30	00.0		08.9	331	29.5 ¹¹⁴	-14 57.3 ¹³²	20	52	14	40	25 42	36 60	
15	45	00.2		08.0	345	59.9 ¹¹⁴	-15 10.4 ¹³¹	30	45	09	37	12 37	22 51 66	
16	60	00.4		07.1	0	30.2 ¹¹³	23.4 ¹³⁰	35	41	07	36	9 05 34	23 00 69	
17	75	00.6	+8	06.2	15	00.4 ¹¹²	-15 36.4 ¹³⁰	40	17 37	18 04	18 36	8 57 30	23 11 72	
18	90	00.8	+8	05.3	29	30.5 ¹¹¹	-15 49.3 ¹²⁹	45	17 32	18 02	18 36	8 48 26	23 23 76	
19	105	01.0		04.4	44	00.5 ¹¹⁰	-16 02.1 ¹²⁸	50	26	17 59	36	36 21	38 82	
20	120	01.2		03.5	58	30.4 ¹⁰⁹	14.9 ¹²⁸	52	24	58	37	31 19	45 84	
21	135	01.4		02.5	73	00.2 ¹⁰⁸	27.6 ¹²⁷	54	21	56	37	26 15	23 53 87	
22	150	01.6		01.6	87	29.9 ¹⁰⁷	40.2 ¹²⁶	56	17	55	38	19 13	** ** *	
23	165	01.8	+8	00.7	101	59.6 ¹⁰⁷	-16 52.8 ¹²⁶	58	14	53	39	12 9	** ** *	
24	180	02.0	+7	59.8	116	29.1 ¹⁰⁵	-17 05.2 ¹²⁴	60 S	17 10	17 52	18 40	8 04 4	** ** *	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 1 ^h 19 ^m 2		Mag: -3.9 PMG: 11 ^h 10 ^m		Mag: -0.1 PMG: 5 ^h 39 ^m		Mag: -2.9 PMG: 1 ^h 47 ^m		Mag: +0.3 PMG: 22 ^h 49 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	340	08.4	192	37.4	275	11.8	333	12.2	+1	16.9				
1	355	10.8	207	36.9	290	12.8	348	14.9		16.8				
2	10	13.3	222	36.3	305	13.9	3	17.6		16.7				
3	25	15.8	237	35.8	320	15.0	18	20.3		16.6				
4	40	18.2	252	35.2	335	16.0	33	23.0		16.5				
5	55	20.7	267	34.7	350	17.1	48	25.7	+1	16.4				
6	70	23.1	282	34.1	5	18.2	63	28.4	+1	16.3				
7	85	25.6	297	33.5	20	19.2	78	31.1		16.2				
8	100	28.1	312	33.0	35	20.3	93	33.8		16.1				
9	115	30.5	327	32.4	50	21.4	108	36.5		16.0				
10	130	33.0	342	31.9	65	22.4	123	39.2		15.9				
11	145	35.5	357	31.3	80	23.5	138	41.9	+1	15.7				
12	160	37.9	12	30.8	95	24.6	153	44.6	+1	15.6				
13	175	40.4	27	30.2	110	25.6	168	47.3		15.5				
14	190	42.9	42	29.7	125	26.7	183	50.0		15.4				
15	205	45.3	57	29.1	140	27.8	198	52.7		15.3				
16	220	47.8	72	28.6	155	28.9	213	55.4		15.2				
17	235	50.2	87	28.0	170	29.9	228	58.1	+1	15.1				
18	250	52.7	102	27.5	185	31.0	244	00.8	+1	15.0				
19	265	55.2	117	26.9	200	32.1	259	03.5		14.9				
20	280	57.6	132	26.4	215	33.1	274	06.2		14.8				
21	296	00.1	147	25.8	230	34.2	289	08.9		14.6				
22	311	02.6	162	25.3	245	35.3	304	11.6		14.5				
23	326	05.0	177	24.7	260	36.4	319	14.3		14.4				
24	341	07.5	192	24.2	275	37.4	334	17.0	+1	14.3				
Dif	—		-6	-10	+11	+3	+27	-1		+26	-1			

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 59 ^m 7			Edad: 5 ^d 7 PHE { 4 ^h : 58'1 12 ^h : 58'2 20 ^h : 58'4 R°: 56 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	02.0	+7	59.8	116	29.1	-17	05.2	60 N	3	14	4	12	4	57	13	17
1	195	02.2		58.9	130	58.5 ¹⁰⁴		17.6 ¹²⁴	58		27	20	5	02	13	02	
2	210	02.4		58.0	145	27.9 ¹⁰⁴		29.9 ¹²³	56		37	27		06	12	50	
3	225	02.6		57.1	159	57.1 ¹⁰²		42.2 ¹²³	54		47	33		10	39	88	
4	240	02.8		56.2	174	26.3 ¹⁰²	-17	54.3 ¹²¹	52	3	55	38	13		29	85	
5	255	03.0	+7	55.3	188	55.3 ¹⁰⁰	-18	06.3 ¹²⁰	50	4	02	4	43	5	16	12	21
6	270	03.2	+7	54.4	203	24.2 ⁹⁹	-18	18.3 ¹²⁰	45	4	16	4	53	5	23	12	03
7	285	03.4		53.4	217	53.1 ⁹⁹		30.2 ¹¹⁹	40	28	5	01		29	11	48	
8	300	03.6		52.5	232	21.8 ⁹⁷		42.0 ¹¹⁸	35	37		07		33	36	70	
9	315	03.8		51.6	246	50.4 ⁹⁶	-18	53.7 ¹¹⁷	30	44	13		37		25	67	
10	330	04.0		50.7	261	19.0 ⁹⁶	-19	05.3 ¹¹⁶	20	4	56	22		45	11	07	
11	345	04.2	+7	49.8	275	47.4 ⁹⁴	-19	16.8 ¹¹⁵	10 N	5	05	5	30	5	51	10	51
12	0	04.4	+7	48.9	290	15.7 ⁹³	-19	28.2 ¹¹⁴	0	5	11	5	36	5	56	10	37
13	15	04.6		48.0	304	43.9 ⁹²		39.5 ¹¹³	10 S	16		41		6	02	22	51
14	30	04.8		47.0	319	12.0 ⁹¹	-19	50.7 ¹¹²	20	20	46		08			10	07
15	45	05.0		46.1	333	40.0 ⁹⁰	-20	01.8 ¹¹¹	30	22	50		14			9	49
16	60	05.2		45.2	348	07.9 ⁸⁹		12.8 ¹¹⁰	35	23	53		18			39	40
17	75	05.4	+7	44.3	2	35.7 ⁸⁸	-20	23.7 ¹⁰⁹	40	5	24	5	55	6	22	9	27
18	90	05.6	+7	43.4	17	03.4 ⁸⁷	-20	34.5 ¹⁰⁸	45	5	23	5	57	6	27	9	14
19	105	05.8		42.5	31	31.0 ⁸⁶		45.2 ¹⁰⁷	50	23	6	00	33			8	57
20	120	06.0		41.6	45	58.5 ⁸⁵	-20	55.7 ¹⁰⁵	52	22		01	35			50	24
21	135	06.2		40.6	60	25.8 ⁸³	-21	06.2 ¹⁰⁵	54	22		02	38			41	22
22	150	06.4		39.7	74	53.1 ⁸³		16.6 ¹⁰⁴	56	21		04	41			32	18
23	165	06.6		38.8	89	20.2 ⁸¹		26.8 ¹⁰²	58	20		05	45			21	14
24	180	06.8	+7	37.9	103	47.3 ⁸¹	-21	36.9 ¹⁰¹	60 S	5	19	6	07	6	48	8	08

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 1 ^h 15 ^m 3		Mag: -3.9 PMG: 11 ^h 11 ^m			Mag: -0.1 PMG: 5 ^h 37 ^m			Mag: -2.9 PMG: 1 ^h 43 ^m			Mag: +0.4 PMG: 22 ^h 45 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	341	07.5	192	24.2	+13	53.1	275	37.4	+20	13.2	334	17.0	+1	14.3				
1	356	10.0	207	23.6		52.1	290	38.5		13.5	349	19.7		14.2				
2	11	12.4	222	23.1		51.1	305	39.6		13.7	4	22.4		14.1				
3	26	14.9	237	22.5		50.1	320	40.7		14.0	19	25.1		14.0				
4	41	17.4	252	22.0		49.1	335	41.7		14.2	34	27.8		13.9				
5	56	19.8	267	21.4	+13	48.1	350	42.8	+20	14.5	49	30.5	+1	13.8				
6	71	22.3	282	20.9	+13	47.1	5	43.9	+20	14.8	64	33.2	+1	13.7				
7	86	24.7	297	20.4		46.1	20	45.0		15.0	79	35.9		13.5				
8	101	27.2	312	19.8		45.1	35	46.0		15.3	94	38.6		13.4				
9	116	29.7	327	19.3		44.1	50	47.1		15.5	109	41.3		13.3				
10	131	32.1	342	18.7		43.1	65	48.2		15.8	124	44.0		13.2				
11	146	34.6	357	18.2	+13	42.1	80	49.3	+20	16.1	139	46.7	+1	13.1				
12	161	37.1	12	17.6	+13	41.1	95	50.4	+20	16.3	154	49.4	+1	13.0				
13	176	39.5	27	17.1		40.1	110	51.4		16.6	169	52.1		12.9				
14	191	42.0	42	16.6		39.1	125	52.5		16.8	184	54.8		12.8				
15	206	44.5	57	16.0		38.1	140	53.6		17.1	199	57.5		12.6				
16	221	46.9	72	15.5		37.1	155	54.7		17.3	215	00.2		12.5				
17	236	49.4	87	14.9	+13	36.1	170	55.8	+20	17.6	230	03.0	+1	12.4				
18	251	51.9	102	14.4	+13	35.1	185	56.8	+20	17.9	245	05.7	+1	12.3				
19	266	54.3	117	13.8		34.1	200	57.9		18.1	260	08.4		12.2				
20	281	56.8	132	13.3		33.1	215	59.0		18.4	275	11.1		12.1				
21	296	59.2	147	12.8		32.1	231	00.1		18.6	290	13.8		12.0				
22	312	01.7	162	12.2		31.1	246	01.2		18.9	305	16.5		11.9				
23	327	04.2	177	11.7		30.1	261	02.3		19.1	320	19.2		11.8				
24	342	06.6	192	11.2	+13	29.1	276	03.3	+20	19.4	335	21.9	+1	11.6				
Dif	—		-5		-10		+11		+3		+27		-1		+26		-1	

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 9		Edad: 6 ^d 7	PHE {	4 ^h : 58 ^h /6				Civil		Náutico		Hora		R°	
	PMG: 11 ^h 59 ^m 4				12 ^h : 58 ^h /8											
	hG ☉	Dec			hG ☾	Dif			Dec	Dif	20 ^h : 58 ^h /9		R°: 60 ^m			
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	180	06.8	+7	37.9	103	47.3	-21	36.9	60 N	18 58	19 42	20 39	15 01 101	20 19 25		
1	195	07.0		37.0	118	14.2	79	46.9	58	53	35	27	14 40 92	41 33		
2	210	07.2		36.1	132	41.0	78	-21	56.8	56	49	28	17	22 88		
3	225	07.4		35.2	147	07.7	77	-22	06.6	54	46	23	08	14 07 85		
4	240	07.6		34.2	161	34.3	76	16.2	98	52	43	18	20 01	13 54 82		
5	255	07.8	+7	33.3	176	00.8	75	-22	25.7	50	18 40	19 13	19 54	13 43 79		
6	270	08.0	+7	32.4	190	27.2	74	-22	35.1	45	18 34	19 04	19 40	13 20 75		
7	285	08.2		31.5	204	53.5	73	44.4	94	40	29	18 56	29	13 01 72		
8	300	08.5		30.6	219	19.7	72	-22	53.5	35	24	50	20	12 46 69		
9	315	08.7		29.6	233	45.7	70	-23	02.5	30	20	45	13	32 68		
10	330	08.9		28.7	248	11.7	70	11.3	90	20	14	36	19 02	12 09 65		
11	345	09.1	+7	27.8	262	37.5	68	-23	20.1	88	18 08	18 29	18 54	11 50 61		
12	0	09.3	+7	26.9	277	03.3	68	-23	28.7	0	18 03	18 23	18 48	11 31 60		
13	15	09.5		26.0	291	28.9	66	37.1	86	10 S	17 57	19	43	11 13 57		
14	30	09.7		25.1	305	54.5	66	45.4	84	20	52	14	40	10 54 54		
15	45	09.9		24.1	320	19.9	64	-23	53.6	30	46	10	38	32 50		
16	60	10.1		23.2	334	45.2	63	-24	01.7	35	43	08	37	19 48		
17	75	10.3	+7	22.3	349	10.4	62	-24	09.6	40	17 39	18 06	18 37	10 04 46		
18	90	10.5	+7	21.4	3	35.5	61	-24	17.3	45	17 34	18 04	18 38	9 46 43		
19	105	10.7		20.5	18	00.5	60	24.9	77	50	29	02	39	25 38		
20	120	10.9		19.5	32	25.5	60	32.4	76	52	27	01	40	14 36		
21	135	11.1		18.6	46	50.3	58	39.7	73	54	24	18 00	41	9 03 33		
22	150	11.3		17.7	61	15.0	57	46.8	71	56	21	17 59	42	8 50 29		
23	165	11.5		16.8	75	39.6	56	-24	53.8	58	18	58	43	35 24		
24	180	11.7	+7	15.9	90	04.1	55	-25	00.6	68	17 14	17 56	18 45	8 17 17		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: -0.2		Mag: -2.9		Mag: +0.4	
	1 ^h 11 ^m 4		PMG: 11 ^h 12 ^m		PMG: 5 ^h 35 ^m		PMG: 1 ^h 38 ^m		PMG: 22 ^h 41 ^m	
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	
h	°	'	°	'	°	'	°	'	°	'
0	342	06.6	192 11.2	+13 29.1	276 03.3	+20 19.4	335 21.9	+1 11.6	18 46.6	-15 54.4
1	357	09.1	207 10.6	28.1	291 04.4	19.6	350 24.6	11.5	33 49.3	54.5
2	12	11.6	222 10.1	27.1	306 05.5	19.9	5 27.3	11.4	48 51.9	54.5
3	27	14.0	237 09.5	26.1	321 06.6	20.2	20 30.0	11.3	63 54.5	54.6
4	42	16.5	252 09.0	25.1	336 07.7	20.4	35 32.7	11.2	78 57.2	54.6
5	57	19.0	267 08.5	+13 24.0	351 08.8	+20 20.7	50 35.4	+1 11.1	93 59.8	-15 54.7
6	72	21.4	282 07.9	+13 23.0	6 09.9	+20 20.9	65 38.1	+1 11.0	109 02.4	-15 54.7
7	87	23.9	297 07.4	22.0	21 10.9	21.2	80 40.8	10.8	124 05.1	54.8
8	102	26.3	312 06.9	21.0	36 12.0	21.4	95 43.6	10.7	139 07.7	54.9
9	117	28.8	327 06.3	20.0	51 13.1	21.7	110 46.3	10.6	154 10.3	54.9
10	132	31.3	342 05.8	19.0	66 14.2	21.9	125 49.0	10.5	169 12.9	55.0
11	147	33.7	357 05.3	+13 18.0	81 15.3	+20 22.2	140 51.7	+1 10.4	184 15.6	-15 55.0
12	162	36.2	12 04.7	+13 17.0	96 16.4	+20 22.4	155 54.4	+1 10.3	199 18.2	-15 55.1
13	177	38.7	27 04.2	15.9	111 17.5	22.7	170 57.1	10.2	214 20.8	55.1
14	192	41.1	42 03.7	14.9	126 18.6	22.9	185 59.8	10.1	229 23.5	55.2
15	207	43.6	57 03.1	13.9	141 19.7	23.2	201 02.5	09.9	244 26.1	55.2
16	222	46.1	72 02.6	12.9	156 20.8	23.4	216 05.2	09.8	259 28.7	55.3
17	237	48.5	87 02.1	+13 11.9	171 21.9	+20 23.7	231 07.9	+1 09.7	274 31.4	-15 55.3
18	252	51.0	102 01.5	+13 10.9	186 22.9	+20 23.9	246 10.6	+1 09.6	289 34.0	-15 55.4
19	267	53.5	117 01.0	09.8	201 24.0	24.2	261 13.4	09.5	304 36.6	55.5
20	282	55.9	132 00.5	08.8	216 25.1	24.4	276 16.1	09.4	319 39.2	55.5
21	297	58.4	146 59.9	07.8	231 26.2	24.7	291 18.8	09.3	334 41.9	55.6
22	313	00.8	161 59.4	06.8	246 27.3	24.9	306 21.5	09.1	349 44.5	55.6
23	328	03.3	176 58.9	05.8	261 28.4	25.2	321 24.2	09.0	4 47.1	55.7
24	343	05.8	191 58.4	+13 04.7	276 29.5	+20 25.4	336 26.9	+1 08.9	19 49.8	-15 55.7
Dif	—	—	-5	-10	+11	+3	+27	-1	+26	-1

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 59 ^m 1			Edad: 7 ^d 7 PHE { SD: 16'1 PMG: 18 ^h 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	
0	180	11.7	+7	15.9	90	04.1	-25	00.6	67	60 N	3	20	4	17	16	42
1	195	11.9			104	28.5	54	07.3	67	58	32	25	5	06	16	12
2	210	12.1			118	52.8	53	13.9	66	56	42	31	10	15	50	
3	225	12.4			133	17.1	53	20.2	63	54	51	36	13	32	70	
4	240	12.6			147	41.2	51	26.4	62	52	3	59	41	16	70	
5	255	12.8	+7	11.3	162	05.2	50	-25	32.5	61	50	4	05	4	46	
6	270	13.0	+7	10.3	176	29.2	50	-25	38.4	59	45	4	19	4	55	
7	285	13.2			190	53.0	48	44.1	57	40	30	5	03	30	14	
8	300	13.4			205	16.8	48	49.6	55	35	39	09	35	13	55	
9	315	13.6			219	40.5	47	-25	55.0	54	30	46	14	39	40	
10	330	13.8			234	04.1	46	-26	00.2	52	20	4	57	23	45	
11	345	14.0	+7	05.7	248	27.6	45	-26	05.3	51	10 N	5	05	5	29	
12	0	14.2	+7	04.8	262	51.1	45	-26	10.2	49	0	5	11	5	35	
13	15	14.4			277	14.4	43	14.9	47	45	10 S	15	40	6	01	
14	30	14.6			291	37.7	43	19.4	45	20	18	44	06	11	48	
15	45	14.8			306	00.9	42	23.7	43	30	20	48	12	22	59	
16	60	15.0			320	24.0	41	27.9	42	35	21	50	15	11	07	
17	75	15.3	+7	00.2	334	47.1	41	-26	31.9	40	40	5	21	5	52	
18	90	15.5	+6	59.3	349	10.0	39	-26	35.7	38	45	5	20	5	54	
19	105	15.7			3	32.9	39	39.4	37	50	19	56	28	10	03	
20	120	15.9			17	55.8	39	42.9	35	52	18	57	31	9	50	
21	135	16.1			32	18.6	38	46.1	32	54	17	58	33	36	50	
22	150	16.3			46	41.3	37	49.2	31	56	16	5	59	36	9	
23	165	16.5			61	03.9	36	52.1	29	58	14	6	00	39	8	
24	180	16.7	+6	53.7	75	26.5	36	-26	54.9	28	60 S	5	13	6	01	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 07 ^m 4		Mag: -3.9 PMG: 11 ^h 13 ^m			Mag: -0.2 PMG: 5 ^h 34 ^m			Mag: -2.9 PMG: 1 ^h 34 ^m			Mag: +0.4 PMG: 22 ^h 37 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	343	05.8	191	58.4	+13	276	29.5	+20	336	26.9	+1	19	49.8	-15		
1	358	08.2	206	57.8		291	30.6		351	29.6		34	52.4			
2	13	10.7	221	57.3		306	31.7		6	32.3		49	55.0			
3	28	13.2	236	56.8		321	32.8		21	35.1		64	57.7			
4	43	15.6	251	56.2	+13	336	33.9		36	37.8		80	00.3			
5	58	18.1	266	55.7	+12	351	35.0	+20	51	40.5	+1	95	02.9	-15		
6	73	20.6	281	55.2	+12	6	36.1	+20	66	43.2	+1	110	05.5	-15		
7	88	23.0	296	54.7		21	37.2		81	45.9		125	08.2			
8	103	25.5	311	54.1		36	38.3		96	48.6		140	10.8			
9	118	28.0	326	53.6		51	39.4		111	51.3		155	13.4			
10	133	30.4	341	53.1		66	40.5		126	54.0		170	16.1			
11	148	32.9	356	52.6	+12	81	41.6	+20	141	56.8	+1	185	18.7	-15		
12	163	35.3	11	52.0	+12	96	42.7	+20	156	59.5	+1	200	21.3	-15		
13	178	37.8	26	51.5		111	43.8		172	02.2		215	23.9			
14	193	40.3	41	51.0		126	44.9		187	04.9		230	26.6			
15	208	42.7	56	50.5		141	46.0		202	07.6		245	29.2			
16	223	45.2	71	49.9		156	47.1		217	10.3		260	31.8			
17	238	47.7	86	49.4	+12	171	48.2	+20	232	13.0	+1	275	34.4	-15		
18	253	50.1	101	48.9	+12	186	49.3	+20	247	15.8	+1	290	37.1	-15		
19	268	52.6	116	48.4		201	50.4		262	18.5		305	39.7			
20	283	55.1	131	47.9		216	51.5		277	21.2		320	42.3			
21	298	57.5	146	47.3		231	52.6		292	23.9		335	45.0			
22	314	00.0	161	46.8		246	53.7		307	26.6		350	47.6			
23	329	02.5	176	46.3		261	54.9		322	29.3		5	50.2			
24	344	04.9	191	45.8	+12	276	56.0	+20	337	32.0	+1	20	52.8	-15		
Dif	—		-5	-10		+11	+2		+27	-1		+26	-1			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 15:9 PMG: 11 ^h 58 ^m 7			Edad: 8 ^d 7 SD: 16:2 PMG: 19 ^h 48 ^m	PHE { 4 ^h : 59/6 12 ^h : 59/7 20 ^h : 59/8 R°: 64 ^m										
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m
0	180	16.7	+6	53.7	75	26.5	-26	54.9	60 N	18 52	19 36	20 31	17 58	39	21 40 93
1	195	16.9		52.8	89	49.1	36	57.4	58	48	29	20	26	45	22 12 87
2	210	17.1		51.9	104	11.6	35	-26 59.8	56	44	23	11	17 02	49	36 83
3	225	17.3		50.9	118	34.0	34	-27 01.9	54	41	18	20 03	16 42	51	22 55 81
4	240	17.6		50.0	132	56.4	34	03.9	52	38	13	19 55	26 53		23 12 78
5	255	17.8	+6	49.1	147	18.7	33	-27 05.7	50	18 36	19 09	19 49	16 12	54	23 26 77
6	270	18.0	+6	48.1	161	41.0	33	-27 07.3	45	18 30	19 00	19 36	15 43	56	23 55 74
7	285	18.2		47.2	176	03.2	32	08.8	40	25	18 53	26	20	58	** ** *
8	300	18.4		46.3	190	25.4	32	10.0	35	21	47	17	15 01	60	** ** *
9	315	18.6		45.4	204	47.6	32	11.0	30	18	42	10	14 45	60	** ** *
10	330	18.8		44.4	219	09.7	31	11.9	20	12	34	19 00	14 18	62	0 16 63
11	345	19.0	+6	43.5	233	31.8	31	-27 12.5	10 N	18 07	18 28	18 53	13 55	62	0 39 63
12	0	19.2	+6	42.6	247	53.9	31	-27 13.0	0	18 02	18 23	18 47	13 33	64	1 00 63
13	15	19.4		41.7	262	16.0	31	13.2	10 S	17 57	18	43	13 11	65	22 63
14	30	19.7		40.7	276	38.0	30	13.3	20	53	15	40	12 48	65	1 45 63
15	45	19.9		39.8	291	00.0	30	13.2	30	47	11	39	21	66	2 11 63
16	60	20.1		38.9	305	21.9	29	12.9	35	44	09	39	12 05	67	27 63
17	75	20.3	+6	37.9	319	43.9	30	-27 12.3	40	17 41	18 08	18 39	11 47	67	2 45 63
18	90	20.5	+6	37.0	334	05.8	29	-27 11.6	45	17 37	18 06	18 40	11 24	69	3 08 62
19	105	20.7		36.1	348	27.8	30	10.7	50	32	04	42	10 56	70	36 62
20	120	20.9		35.2	2	49.7	29	09.6	52	30	04	43	42	70	3 50 61
21	135	21.1		34.2	17	11.6	29	08.4	54	28	03	44	26	71	4 06 61
22	150	21.3		33.3	31	33.5	29	06.9	56	25	02	45	10 07	72	24 61
23	165	21.5		32.4	45	55.4	29	05.2	58	22	02	47	9 44	73	4 48 59
24	180	21.8	+6	31.4	60	17.3	29	-27 03.3	60 S	17 19	18 01	18 49	9 13	76	5 18 58

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: -0.2		Mag: -2.9		Mag: +0.4	
	1 ^h 03 ^m 5		PMG: 11 ^h 13 ^m		PMG: 5 ^h 32 ^m		PMG: 1 ^h 30 ^m		PMG: 22 ^h 33 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	344	04.9	191	45.8	+12	40.0	276	56.0	+20	31.4
1	359	07.4	206	45.3		39.0	291	57.1		31.6
2	14	09.8	221	44.7		38.0	306	58.2		31.9
3	29	12.3	236	44.2		36.9	321	59.3		32.1
4	44	14.8	251	43.7		35.9	337	00.4		32.3
5	59	17.2	266	43.2	+12	34.8	352	01.5	+20	32.6
6	74	19.7	281	42.7	+12	33.8	7	02.6	+20	32.8
7	89	22.2	296	42.1		32.8	22	03.7		33.1
8	104	24.6	311	41.6		31.7	37	04.8		33.3
9	119	27.1	326	41.1		30.7	52	05.9		33.6
10	134	29.6	341	40.6		29.6	67	07.1		33.8
11	149	32.0	356	40.1	+12	28.6	82	08.2	+20	34.0
12	164	34.5	11	39.6	+12	27.6	97	09.3	+20	34.3
13	179	37.0	26	39.0		26.5	112	10.4		34.5
14	194	39.4	41	38.5		25.5	127	11.5		34.8
15	209	41.9	56	38.0		24.4	142	12.6		35.0
16	224	44.3	71	37.5		23.4	157	13.7		35.2
17	239	46.8	86	37.0	+12	22.3	172	14.9	+20	35.5
18	254	49.3	101	36.5	+12	21.3	187	16.0	+20	35.7
19	269	51.7	116	36.0		20.2	202	17.1		36.0
20	284	54.2	131	35.5		19.2	217	18.2		36.2
21	299	56.7	146	34.9		18.1	232	19.3		36.4
22	314	59.1	161	34.4		17.1	247	20.4		36.7
23	330	01.6	176	33.9		16.0	262	21.6		36.9
24	345	04.1	191	33.4	+12	15.0	277	22.7	+20	37.2
Dif	—		-5	-10		+11	+2		+27	-1

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 58 ^m 4			Edad: 9 ^d 7 SD: 16'3 PMG: 20 ^h 52 ^m	PHE { 4 ^h : 59'9 12 ^h : 60'0 20 ^h : 60'1 Rº: 61 ^m	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº	
	hG ☉	Dec	hG ☾													
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	21.8	+6 31.4	60	17.3	-27	03.3	60 N	3 27	4 23	5 06	18 37	17	23 13	110	
1	195	22.0		74	39.2	-27	01.2	58	38	29	10	18 11	25	39	102	
2	210	22.2		89	01.2	-26	59.0	56	47	35	14	17 51	30	23 59	97	
3	225	22.4		103	23.1		56.5	54	3 55	40	17	33	34	**	**	**
4	240	22.6		117	45.0		53.9	52	4 02	45	20	19	37	**	**	**
5	255	22.8	+6 26.8	132	07.0	-26	51.0	50	4 09	4 49	5 22	17 06	39	**	**	**
6	270	23.0	+6 25.9	146	29.0	-26	48.0	45	4 22	4 58	5 28	16 39	45	**	**	**
7	285	23.2		160	50.9		44.7	40	32	5 05	32	18 48		0 17	72	
8	300	23.5		175	13.0		41.3	35	40	11	36	16 01	50	36	70	
9	315	23.7		189	35.0		37.7	30	47	15	40	15 45	53	0 52	69	
10	330	23.9		203	57.1		33.9	20	4 57	23	45	15 20	56	1 19	66	
11	345	24.1	+6 21.2	218	19.1	-26	29.9	10 N	5 05	5 29	5 51	14 57	59	1 42	65	
12	0	24.3	+6 20.3	232	41.3	-26	25.7	0	5 10	5 34	5 55	14 37	61	2 03	63	
13	15	24.5		247	03.4		21.3	10 S	14	39	6 00	14 16	64	25	61	
14	30	24.7		261	25.6		16.7	20	17	42	04	13 53	68	2 48	59	
15	45	24.9		275	47.8		11.9	30	18	46	10	27	71	3 14	57	
16	60	25.2		290	10.1		07.0	35	18	47	12	13 12	73	30	55	
17	75	25.4	+6 15.6	304	32.4	-26	01.8	40	5 17	5 49	6 16	12 54	75	3 48	53	
18	90	25.6	+6 14.7	318	54.8	-25	56.5	45	5 16	5 50	6 20	12 33	78	4 10	50	
19	105	25.8		333	17.2		51.0	50	14	52	24	12 06	82	38	46	
20	120	26.0		347	39.7		45.3	52	13	52	26	11 52	85	4 51	45	
21	135	26.2		2	02.2		39.4	54	12	53	28	37	88	5 07	42	
22	150	26.4		16	24.7		33.3	56	11	54	31	11 19	91	25	39	
23	165	26.6		30	47.4		27.1	58	09	54	34	10 57	96	5 47	34	
24	180	26.9	+6 09.1	45	10.0	-25	20.7	60 S	5 07	5 55	6 37	10 29	103	6 16	27	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 0 ^h 59 ^m 6		Mag: -3.9 PMG: 11 ^h 14 ^m			Mag: -0.2 PMG: 5 ^h 30 ^m			Mag: -2.9 PMG: 1 ^h 25 ^m			Mag: +0.4 PMG: 22 ^h 28 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	345	04.1	191	33.4	+12	15.0	277	22.7	+20	37.2	338	37.3	+1	03.3
1	0	06.5	206	32.9		13.9	292	23.8		37.4	353	40.0		03.2
2	15	09.0	221	32.4		12.9	307	24.9		37.6	8	42.7		03.1
3	30	11.5	236	31.9		11.8	322	26.0		37.9	23	45.5		03.0
4	45	13.9	251	31.4		10.8	337	27.2		38.1	38	48.2		02.9
5	60	16.4	266	30.9	+12	09.7	352	28.3	+20	38.3	53	50.9	+1	02.8
6	75	18.8	281	30.3	+12	08.7	7	29.4	+20	38.6	68	53.6	+1	02.6
7	90	21.3	296	29.8		07.6	22	30.5		38.8	83	56.3		02.5
8	105	23.8	311	29.3		06.5	37	31.6		39.1	98	59.1		02.4
9	120	26.2	326	28.8		05.5	52	32.8		39.3	114	01.8		02.3
10	135	28.7	341	28.3		04.4	67	33.9		39.5	129	04.5		02.2
11	150	31.2	356	27.8	+12	03.4	82	35.0	+20	39.8	144	07.2	+1	02.0
12	165	33.6	11	27.3	+12	02.3	97	36.1	+20	40.0	159	10.0	+1	01.9
13	180	36.1	26	26.8		01.3	112	37.3		40.2	174	12.7		01.8
14	195	38.6	41	26.3	+12	00.2	127	38.4		40.5	189	15.4		01.7
15	210	41.0	56	25.8	+11	59.1	142	39.5		40.7	204	18.1		01.6
16	225	43.5	71	25.3		58.1	157	40.7		40.9	219	20.9		01.4
17	240	45.9	86	24.8	+11	57.0	172	41.8	+20	41.2	234	23.6	+1	01.3
18	255	48.4	101	24.3	+11	56.0	187	42.9	+20	41.4	249	26.3	+1	01.2
19	270	50.9	116	23.8		54.9	202	44.0		41.6	264	29.0		01.1
20	285	53.3	131	23.3		53.8	217	45.2		41.9	279	31.8		01.0
21	300	55.8	146	22.8		52.8	232	46.3		42.1	294	34.5		00.9
22	315	58.3	161	22.3		51.7	247	47.4		42.3	309	37.2		00.7
23	331	00.7	176	21.8		50.6	262	48.6		42.6	324	39.9		00.6
24	346	03.2	191	21.2	+11	49.6	277	49.7	+20	42.8	339	42.7	+1	00.5
Dif	—		-5 -11			+11 +2			+27 -1			+26 -1		

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15'9 PMG: 11 ^h 58 ^m 0		Edad: 10 ^d 7 PHE { SD: 16'4 PMG: 21 ^h 53 ^m 4 ^h : 60'1 12 ^h : 60'2 20 ^h : 60'2 R°: 57 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	26.9	+6	09.1	45	10.0	-25	20.7	60 N	18 46	19 29	20 24	18 54	8	*** ** *			
1	195	27.1		08.1	59	32.8		14.0	58	42	23	14	36	14	*** ** *			
2	210	27.3		07.2	73	55.6		07.3	56	39	17	20 05	21	18	*** ** *			
3	225	27.5		06.3	88	18.5	-25	00.3	54	36	13	19 57	18 07	23	0 16 92			
4	240	27.7		05.3	102	41.4	-24	53.1	52	34	08	50	17 56	26	30 89			
5	255	27.9	+6	04.4	117	04.4	-24	45.8	50	18 31	19 04	19 44	17 45	29	0 43 86			
6	270	28.1	+6	03.5	131	27.5	-24	38.3	45	18 26	18 56	19 32	17 24	34	1 09 81			
7	285	28.4		02.5	145	50.6		30.7	40	22	50	22	17 06	39	29 77			
8	300	28.6		01.6	160	13.8		22.8	35	19	44	14	16 51	42	1 46 74			
9	315	28.8	+6	00.7	174	37.1		14.8	30	15	40	19 08	38	45	2 01 71			
10	330	29.0	+5	59.7	189	00.5	-24	06.7	20	10	32	18 58	16 16	50	25 68			
11	345	29.2	+5	58.8	203	23.9	-23	58.3	10 N	18 06	18 27	18 51	15 56	55	2 47 63			
12	0	29.4	+5	57.8	217	47.5	-23	49.8	0	18 01	18 22	18 46	15 38	59	3 06 61			
13	15	29.6		56.9	232	11.1		41.1	10 S	17 57	18	43	20	62	26 57			
14	30	29.9		56.0	246	34.7		32.3	20	53	15	41	15 01	66	3 47 53			
15	45	30.1		55.0	260	58.5		23.3	30	48	12	40	14 38	71	4 11 49			
16	60	30.3		54.1	275	22.4		14.1	35	46	11	40	25	74	25 46			
17	75	30.5	+5	53.2	289	46.3	-23	04.8	40	17 43	18 10	18 41	14 09	78	4 41 43			
18	90	30.7	+5	52.2	304	10.3	-22	55.4	45	17 39	18 08	18 42	13 51	82	5 00 40			
19	105	30.9		51.3	318	34.4		45.7	50	35	07	45	28	88	24 34			
20	120	31.2		50.4	332	58.6		36.0	52	33	07	46	17	91	36 31			
21	135	31.4		49.4	347	22.9		26.0	54	31	06	47	13 05	94	5 49 28			
22	150	31.6		48.5	1	47.3		16.0	56	29	06	49	12 50	98	6 04 24			
23	165	31.8		47.5	16	11.8	-22	05.7	58	26	06	51	33	104	21 19			
24	180	32.0	+5	46.6	30	36.3	-21	55.4	60 S	17 24	18 05	18 54	12 12	111	6 43 12			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 55 ^m 6		Mag: -3.9 PMG: 11 ^h 15 ^m			Mag: -0.2 PMG: 5 ^h 28 ^m			Mag: -2.9 PMG: 1 ^h 21 ^m			Mag: +0.4 PMG: 22 ^h 24 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	346	03.2	191	21.2	+11	49.6	277	49.7	+20	42.8	339	42.7	+1	00.5	22	58.9	-15	59.6
1	1	05.7	206	20.7		48.5	292	50.8		43.0	354	45.4		00.4	38	01.5		59.6
2	16	08.1	221	20.2		47.4	307	51.9		43.3	9	48.1		00.3	53	04.1		59.7
3	31	10.6	236	19.7		46.4	322	53.1		43.5	24	50.8	+1	00.1	68	06.7		59.7
4	46	13.1	251	19.2		45.3	337	54.2		43.7	39	53.6	+1	00.0	83	09.4		59.8
5	61	15.5	266	18.7	+11	44.2	352	55.3	+20	44.0	54	56.3	+0	59.9	98	12.0	-15	59.8
6	76	18.0	281	18.2	+11	43.2	7	56.5	+20	44.2	69	59.0	+0	59.8	113	14.6	-15	59.9
7	91	20.4	296	17.7		42.1	22	57.6		44.4	85	01.7		59.7	128	17.2	-15	59.9
8	106	22.9	311	17.2		41.0	37	58.7		44.7	100	04.5		59.5	143	19.8	-16	00.0
9	121	25.4	326	16.7		40.0	52	59.9		44.9	115	07.2		59.4	158	22.5	-16	00.0
10	136	27.8	341	16.2		38.9	68	01.0		45.1	130	09.9		59.3	173	25.1	-16	00.1
11	151	30.3	356	15.7	+11	37.8	83	02.2	+20	45.4	145	12.6	+0	59.2	188	27.7	-16	00.1
12	166	32.8	11	15.2	+11	36.8	98	03.3	+20	45.6	160	15.4	+0	59.1	203	30.3	-16	00.2
13	181	35.2	26	14.8		35.7	113	04.4		45.8	175	18.1		58.9	218	33.0		00.2
14	196	37.7	41	14.3		34.6	128	05.6		46.1	190	20.8		58.8	233	35.6		00.3
15	211	40.2	56	13.8		33.5	143	06.7		46.3	205	23.5		58.7	248	38.2		00.3
16	226	42.6	71	13.3		32.5	158	07.8		46.5	220	26.3		58.6	263	40.8		00.4
17	241	45.1	86	12.8	+11	31.4	173	09.0	+20	46.7	235	29.0	+0	58.5	278	43.4	-16	00.5
18	256	47.6	101	12.3	+11	30.3	188	10.1	+20	47.0	250	31.7	+0	58.3	293	46.1	-16	00.5
19	271	50.0	116	11.8		29.2	203	11.3		47.2	265	34.5		58.2	308	48.7		00.6
20	286	52.5	131	11.3		28.2	218	12.4		47.4	280	37.2		58.1	323	51.3		00.6
21	301	54.9	146	10.8		27.1	233	13.6		47.7	295	39.9		58.0	338	53.9		00.7
22	316	57.4	161	10.3		26.0	248	14.7		47.9	310	42.6		57.9	353	56.6		00.7
23	331	59.9	176	09.8		24.9	263	15.8		48.1	325	45.4		57.7	8	59.2		00.8
24	347	02.3	191	09.3	+11	23.9	278	17.0	+20	48.3	340	48.1	+0	57.6	24	01.8	-16	00.8
Dif	—		-5		-11		+11		+2		+27		-1		+26		-	

UT	SOL			O LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9			Edad: 11 ^d 7	PHE { 4 ^h : 60 ^h 1 12 ^h : 60 ^h 1 20 ^h : 60 ^h 0												
	PMG: 11 ^h 57 ^m 7					SD: 16 ^h 4				PMG: 22 ^h 50 ^m			Rº: 53 ^m				
	hG ☉		Dec	hG ☾		Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	°	'	°	h	m	h	m	m	h	m	m
0	180	32.0	+5 46.6	30	36.3	–21 55.4	–21 55.4	106	60 N	3 33	4 28	5 11	19 02	4	1 03	111	
1	195	32.2	45.7	45	01.0	57	44.8	106	58	43	34	15	18 50	8	21	104	
2	210	32.4	44.7	59	25.7	57	34.2	106	56	3 52	39	18	39 13		36	99	
3	225	32.7	43.8	73	50.6	59	23.4	108	54	4 00	44	20	30 16		48	95	
4	240	32.9	42.8	88	15.5	59	12.4	110	52	06	48	23	22 19		1 59	92	
5	255	33.1	+5 41.9	102	40.6	61	–21 01.4	110	50	4 12	4 52	5 25	18 14	22	2 09	89	
6	270	33.3	+5 41.0	117	05.7	61	–20 50.1	113	45	4 25	5 00	5 30	17 58	27	2 30	82	
7	285	33.5	40.0	131	30.9	62	38.8	113	40	34	07	34	45 31		2 46	78	
8	300	33.7	39.1	145	56.2	63	27.3	115	35	42	12	38	33 36		3 00	74	
9	315	34.0	38.1	160	21.7	65	15.7	116	30	48	17	41	23 39		12	71	
10	330	34.2	37.2	174	47.2	65	–20 04.0	117	20	4 58	24	46	17 06	45	33	65	
11	345	34.4	+5 36.3	189	12.8	66	–19 52.1	119	10 N	5 05	5 29	5 50	16 51	49	3 50	61	
12	0	34.6	+5 35.3	203	38.5	67	–19 40.1	120	0	5 10	5 34	5 54	16 37	54	4 07	56	
13	15	34.8	34.4	218	04.3	68	28.0	121	10 S	13	37	5 58	22 59		23	52	
14	30	35.0	33.4	232	30.2	69	15.8	122	20	15	40	6 03	16 07	64	4 40	47	
15	45	35.3	32.5	246	56.2	70	–19 03.4	124	30	15	43	07	15 49	70	5 00	42	
16	60	35.5	31.6	261	22.3	71	–18 50.9	125	35	15	44	10	39 73		11	39	
17	75	35.7	+5 30.6	275	48.6	73	–18 38.4	125	40	5 14	5 45	6 13	15 27	77	5 24	35	
18	90	35.9	+5 29.7	290	14.9	73	–18 25.7	127	45	5 13	5 47	6 16	15 13	82	5 40	30	
19	105	36.1	28.7	304	41.3	74	–18 12.9	128	50	10	48	20	14 56	87	5 58	25	
20	120	36.3	27.8	319	07.8	75	–17 59.9	130	52	09	48	22	48 90		6 07	22	
21	135	36.6	26.9	333	34.4	76	46.9	130	54	07	48	23	39 93		17	19	
22	150	36.8	25.9	348	01.1	77	33.8	131	56	06	49	26	28 98		28	15	
23	165	37.0	25.0	2	27.8	77	20.6	132	58	04	49	28	17 102		40	12	
24	180	37.2	+5 24.0	16	54.7	79	–17 07.2	134	60 S	5 01	5 49	6 31	14 03	107	6 55	6	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 0 ^h 51 ^m 7		Mag: –3.9 PMG: 11 ^h 16 ^m			Mag: –0.2 PMG: 5 ^h 26 ^m			Mag: –2.9 PMG: 1 ^h 17 ^m			Mag: +0.4 PMG: 22 ^h 20 ^m			
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	347	02.3	191 09.3	+11 23.9	278 17.0	+20 48.3	340 48.1	+0 57.6	24 01.8	–16 00.8					
1	2 04.8	206 08.8	22.8	293 18.1	48.6	355 50.8	57.5	39 04.4	00.9						
2	17 07.3	221 08.3	21.7	308 19.3	48.8	10 53.6	57.4	54 07.0	00.9						
3	32 09.7	236 07.8	20.6	323 20.4	49.0	25 56.3	57.2	69 09.7	01.0						
4	47 12.2	251 07.3	19.5	338 21.6	49.3	40 59.0	57.1	84 12.3	01.0						
5	62 14.7	266 06.8	+11 18.5	353 22.7	+20 49.5	56 01.8	+0 57.0	99 14.9	–16 01.1						
6	77 17.1	281 06.3	+11 17.4	8 23.8	+20 49.7	71 04.5	+0 56.9	114 17.5	–16 01.1						
7	92 19.6	296 05.9	16.3	23 25.0	49.9	86 07.2	56.8	129 20.1	01.2						
8	107 22.1	311 05.4	15.2	38 26.1	50.2	101 09.9	56.6	144 22.8	01.2						
9	122 24.5	326 04.9	14.1	53 27.3	50.4	116 12.7	56.5	159 25.4	01.3						
10	137 27.0	341 04.4	13.0	68 28.4	50.6	131 15.4	56.4	174 28.0	01.3						
11	152 29.4	356 03.9	+11 12.0	83 29.6	+20 50.8	146 18.1	+0 56.3	189 30.6	–16 01.4						
12	167 31.9	11 03.4	+11 10.9	98 30.7	+20 51.1	161 20.9	+0 56.2	204 33.2	–16 01.4						
13	182 34.4	26 02.9	09.8	113 31.9	51.3	176 23.6	56.0	219 35.9	01.5						
14	197 36.8	41 02.4	08.7	128 33.0	51.5	191 26.3	55.9	234 38.5	01.5						
15	212 39.3	56 01.9	07.6	143 34.2	51.7	206 29.1	55.8	249 41.1	01.6						
16	227 41.8	71 01.4	06.5	158 35.3	52.0	221 31.8	55.7	264 43.7	01.6						
17	242 44.2	86 01.0	+11 05.4	173 36.5	+20 52.2	236 34.5	+0 55.5	279 46.3	–16 01.7						
18	257 46.7	101 00.5	+11 04.3	188 37.6	+20 52.4	251 37.3	+0 55.4	294 49.0	–16 01.7						
19	272 49.2	116 00.0	03.3	203 38.8	52.6	266 40.0	55.3	309 51.6	01.8						
20	287 51.6	130 59.5	02.2	218 40.0	52.9	281 42.7	55.2	324 54.2	01.8						
21	302 54.1	145 59.0	+11 01.1	233 41.1	53.1	296 45.5	55.1	339 56.8	01.9						
22	317 56.5	160 58.5	+11 00.0	248 42.3	53.3	311 48.2	54.9	354 59.4	01.9						
23	332 59.0	175 58.0	+10 58.9	263 43.4	53.5	326 50.9	54.8	10 02.1	02.0						
24	348 01.5	190 57.5	+10 57.8	278 44.6	+20 53.7	341 53.7	+0 54.7	25 04.7	–16 02.0						
Dif	—		–5	–11	+11	+2	+27	–1	+26	–1					

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 3			Edad: 12 ^d 7 PHE SD: 16'3 PMG: 23 ^h 43 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m	
0	180	37.2	+5	24.0	16	54.7	-17	07.2	60 N	18 40	19 23	20 17	19 06	2	2 54 105	
1	195	37.4		23.1	31	21.7	80	-16 53.8 ¹³⁴	58	37	17	20 07	18 58	6	3 05 100	
2	210	37.7		22.2	45	48.8	81	40.3 ¹³⁵	56	34	12	19 59	52	9	15 96	
3	225	37.9		21.2	60	16.0	82	26.6 ¹³⁷	54	31	07	51	46	12	23 93	
4	240	38.1		20.3	74	43.3	83	-16 12.9 ¹³⁷	52	29	03	45	41	15	31 89	
5	255	38.3	+5	19.3	89	10.6	83	-15 59.1 ¹³⁸	50	18 27	19 00	19 39	18 36	17	3 38 86	
6	270	38.5	+5	18.4	103	38.1	85	-15 45.2 ¹³⁹	45	18 23	18 52	19 28	18 25	23	3 52 80	
7	285	38.7		17.4	118	05.7	86	31.2 ¹⁴⁰	40	19	46	19	16	28	4 04 75	
8	300	39.0		16.5	132	33.3	86	17.2 ¹⁴⁰	35	16	41	11	09	31	14 71	
9	315	39.2		15.6	147	01.1	88	-15 03.0 ¹⁴²	30	13	37	19 05	18 02	35	23 68	
10	330	39.4		14.6	161	28.9	88	-14 48.8 ¹⁴²	20	08	30	18 56	17 51	40	38 62	
11	345	39.6	+5	13.7	175	56.9	90	-14 34.5 ¹⁴³	10 N	18 04	18 25	18 50	17 40	46	4 51 57	
12	0	39.8	+5	12.7	190	24.9	90	-14 20.1 ¹⁴⁴	0	18 01	18 21	18 45	17 31	50	5 03 52	
13	15	40.1		11.8	204	53.0	91	-14 05.6 ¹⁴⁵	10 S	17 57	18	43	21	55	15 47	
14	30	40.3		10.8	219	21.2	92	-13 51.1 ¹⁴⁵	20	53	15	41	17 11	60	27 43	
15	45	40.5		09.9	233	49.5	93	36.4 ¹⁴⁷	30	49	13	41	16 59	66	42 36	
16	60	40.7		08.9	248	17.9	94	21.8 ¹⁴⁶	35	47	12	42	52	70	50 33	
17	75	40.9	+5	08.0	262	46.4	95	-13 07.0 ¹⁴⁸	40	17 44	18 11	18 43	16 44	74	5 59 30	
18	90	41.1	+5	07.1	277	14.9	95	-12 52.2 ¹⁴⁸	45	17 41	18 11	18 45	16 35	78	6 10 25	
19	105	41.4		06.1	291	43.6	97	37.3 ¹⁴⁹	50	38	10	48	23	85	23 20	
20	120	41.6		05.2	306	12.3	97	22.4 ¹⁴⁹	52	36	10	49	18	87	29 17	
21	135	41.8		04.2	320	41.1	98	-12 07.3 ¹⁵¹	54	35	10	51	12	91	36 14	
22	150	42.0		03.3	335	10.0	99	-11 52.3 ¹⁵⁰	56	33	10	53	16 06	94	43 11	
23	165	42.2		02.3	349	39.0	100	37.2 ¹⁵¹	58	31	10	55	15 59	97	6 52 7	
24	180	42.5	+5	01.4	4	08.1	101	-11 22.0 ¹⁵²	60 S	17 28	18 10	18 58	15 50	102	7 01 3	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 0 ^h 47 ^m 8		Mag: -3.9 PMG: 11 ^h 17 ^m		Mag: -0.2 PMG: 5 ^h 25 ^m		Mag: -2.9 PMG: 1 ^h 12 ^m		Mag: +0.4 PMG: 22 ^h 16 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	348	01.5	190	57.5	+10	57.8	278	44.6	+20	53.7	341	53.7	+0	54.7	25	04.7	-16	02.0
1	3	03.9	205	57.1		56.7	293	45.7		54.0	356	56.4		54.6	40	07.3		02.1
2	18	06.4	220	56.6		55.6	308	46.9		54.2	11	59.1		54.4	55	09.9		02.1
3	33	08.9	235	56.1		54.5	323	48.0		54.4	27	01.9		54.3	70	12.5		02.2
4	48	11.3	250	55.6		53.4	338	49.2		54.6	42	04.6		54.2	85	15.2		02.2
5	63	13.8	265	55.1	+10	52.3	353	50.4	+20	54.9	57	07.3	+0	54.1	100	17.8	-16	02.3
6	78	16.3	280	54.6	+10	51.2	8	51.5	+20	55.1	72	10.1	+0	53.9	115	20.4	-16	02.3
7	93	18.7	295	54.2		50.2	23	52.7		55.3	87	12.8		53.8	130	23.0		02.4
8	108	21.2	310	53.7		49.1	38	53.8		55.5	102	15.5		53.7	145	25.6		02.4
9	123	23.7	325	53.2		48.0	53	55.0		55.7	117	18.3		53.6	160	28.3		02.5
10	138	26.1	340	52.7		46.9	68	56.2		56.0	132	21.0		53.5	175	30.9		02.5
11	153	28.6	355	52.2	+10	45.8	83	57.3	+20	56.2	147	23.7	+0	53.3	190	33.5	-16	02.6
12	168	31.0	10	51.7	+10	44.7	98	58.5	+20	56.4	162	26.5	+0	53.2	205	36.1	-16	02.6
13	183	33.5	25	51.3		43.6	113	59.6		56.6	177	29.2		53.1	220	38.7		02.7
14	198	36.0	40	50.8		42.5	129	00.8		56.8	192	32.0		53.0	235	41.3		02.7
15	213	38.4	55	50.3		41.4	144	02.0		57.1	207	34.7		52.8	250	44.0		02.8
16	228	40.9	70	49.8		40.3	159	03.1		57.3	222	37.4		52.7	265	46.6		02.8
17	243	43.4	85	49.3	+10	39.2	174	04.3	+20	57.5	237	40.2	+0	52.6	280	49.2	-16	02.9
18	258	45.8	100	48.9	+10	38.1	189	05.5	+20	57.7	252	42.9	+0	52.5	295	51.8	-16	02.9
19	273	48.3	115	48.4		37.0	204	06.6		57.9	267	45.6		52.3	310	54.4		03.0
20	288	50.8	130	47.9		35.9	219	07.8		58.2	282	48.4		52.2	325	57.0		03.0
21	303	53.2	145	47.4		34.8	234	09.0		58.4	297	51.1		52.1	340	59.7		03.1
22	318	55.7	160	46.9		33.7	249	10.1		58.6	312	53.8		52.0	356	02.3		03.1
23	333	58.1	175	46.5		32.6	264	11.3		58.8	327	56.6		51.9	11	04.9		03.2
24	349	00.6	190	46.0	+10	31.5	279	12.5	+20	59.0	342	59.3	+0	51.7	26	07.5	-16	03.2
Dif	—		-5	-11		+12	+2			+27	-1			+26		-1		

UT	SOL		LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/9 PMG: 11 ^h 57 ^m 0		Edad: 13 ^d 7 SD: 16/2 PMG: *** **m	PHE { 4 ^h : 59/5 12 ^h : 59/4 20 ^h : 59/2 R°: ***m	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
	hG ☉	Dec													hG ☾	Dif
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	42.5	+5	01.4	4	08.1	-11	22.0	60 N	3	39	4	33	5	16	
1	195	42.7	+5	00.4	18	37.2 ¹⁰¹	-11	06.8 ¹⁵²	58	48	38	19	04	5	45	
2	210	42.9	+4	59.5	33	06.5 ¹⁰³	-10	51.5 ¹⁵³	56	3	57	43	22	19	01	
3	225	43.1		58.5	47	35.8 ¹⁰³		36.1 ¹⁵⁴	54	4	04	48	24	18	58	
4	240	43.3		57.6	62	05.2 ¹⁰⁴		20.8 ¹⁵³	52	10	52	26	56	13	5	
5	255	43.6	+4	56.7	76	34.6 ¹⁰⁴	-10	05.3 ¹⁵⁵	50	4	16	4	55	5	28	
6	270	43.8	+4	55.7	91	04.2 ¹⁰⁶	-9	49.9 ¹⁵⁴	45	4	27	5	03	5	33	
7	285	44.0		54.8	105	33.8 ¹⁰⁶		34.4 ¹⁵⁵	40	36	09	36	44	25	19	
8	300	44.2		53.8	120	03.5 ¹⁰⁷		18.8 ¹⁵⁶	35	44	14	39	40	29	25	
9	315	44.4		52.9	134	33.2 ¹⁰⁷	-9	03.2 ¹⁵⁶	30	49	18	42	37	32	31	
10	330	44.7		51.9	149	03.1 ¹⁰⁹	-8	47.6 ¹⁵⁶	20	4	58	24	46	31	38	
11	345	44.9	+4	51.0	163	33.0 ¹⁰⁹	-8	32.0 ¹⁵⁶	10 N	5	05	5	29	5	50	
12	0	45.1	+4	50.0	178	03.0 ¹¹⁰	-8	16.3 ¹⁵⁷	0	5	09	5	33	5	54	
13	15	45.3		49.1	192	33.0 ¹¹⁰	-8	00.5 ¹⁵⁸	10 S	12	36	5	57	16	53	
14	30	45.5		48.1	207	03.1 ¹¹¹	-7	44.8 ¹⁵⁷	20	13	39	6	01	11	58	
15	45	45.8		47.2	221	33.3 ¹¹²		29.0 ¹⁵⁸	30	13	41	05	05	64	18	
16	60	46.0		46.2	236	03.6 ¹¹³	-7	13.2 ¹⁵⁸	35	12	42	07	18	02	67	
17	75	46.2	+4	45.3	250	33.9 ¹¹³	-6	57.4 ¹⁵⁸	40	5	11	5	42	6	09	
18	90	46.4	+4	44.3	265	04.2 ¹¹³	-6	41.5 ¹⁵⁹	45	5	09	5	43	6	12	
19	105	46.6		43.4	279	34.7 ¹¹⁵		25.7 ¹⁵⁸	50	06	43	15	48	81	43	
20	120	46.9		42.4	294	05.2 ¹¹⁵	-6	09.8 ¹⁵⁹	52	04	43	17	45	84	46	
21	135	47.1		41.5	308	35.8 ¹¹⁶	-5	53.8 ¹⁶⁰	54	02	43	19	43	86	50	
22	150	47.3		40.5	323	06.4 ¹¹⁶		37.9 ¹⁵⁹	56	5	00	43	20	40	89	
23	165	47.5		39.6	337	37.1 ¹¹⁷		22.0 ¹⁵⁹	58	4	58	43	22	36	93	
24	180	47.7	+4	38.6	352	07.8 ¹¹⁷	-5	06.0 ¹⁶⁰	60 S	4	55	5	43	6	25	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 43 ^m 8		Mag: -3.9 PMG: 11 ^h 17 ^m			Mag: -0.3 PMG: 5 ^h 23 ^m			Mag: -2.9 PMG: 1 ^h 08 ^m			Mag: +0.4 PMG: 22 ^h 12 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	349	00.6	190	46.0	+10	31.5	279	12.5	+20	59.0	342	59.3	+0	51.7		
1	4	03.1	205	45.5		30.3	294	13.6		59.2	358	02.1		51.6		
2	19	05.5	220	45.0		29.2	309	14.8		59.5	13	04.8		51.5		
3	34	08.0	235	44.6		28.1	324	16.0		59.7	28	07.5		51.4		
4	49	10.5	250	44.1		27.0	339	17.1	+20	59.9	43	10.3		51.2		
5	64	12.9	265	43.6	+10	25.9	354	18.3	+21	00.1	58	13.0	+0	51.1		
6	79	15.4	280	43.1	+10	24.8	9	19.5	+21	00.3	73	15.7	+0	51.0		
7	94	17.9	295	42.7		23.7	24	20.7		00.5	88	18.5		50.9		
8	109	20.3	310	42.2		22.6	39	21.8		00.8	103	21.2		50.7		
9	124	22.8	325	41.7		21.5	54	23.0		01.0	118	24.0		50.6		
10	139	25.3	340	41.2		20.4	69	24.2		01.2	133	26.7		50.5		
11	154	27.7	355	40.8	+10	19.3	84	25.4	+21	01.4	148	29.4	+0	50.4		
12	169	30.2	10	40.3	+10	18.2	99	26.5	+21	01.6	163	32.2	+0	50.2		
13	184	32.6	25	39.8		17.1	114	27.7		01.8	178	34.9		50.1		
14	199	35.1	40	39.3		15.9	129	28.9		02.1	193	37.7		50.0		
15	214	37.6	55	38.9		14.8	144	30.1		02.3	208	40.4		49.9		
16	229	40.0	70	38.4		13.7	159	31.2		02.5	223	43.1		49.7		
17	244	42.5	85	37.9	+10	12.6	174	32.4	+21	02.7	238	45.9	+0	49.6		
18	259	45.0	100	37.4	+10	11.5	189	33.6	+21	02.9	253	48.6	+0	49.5		
19	274	47.4	115	37.0		10.4	204	34.8		03.1	268	51.4		49.4		
20	289	49.9	130	36.5		09.3	219	36.0		03.3	283	54.1		49.2		
21	304	52.4	145	36.0		08.2	234	37.1		03.5	298	56.8		49.1		
22	319	54.8	160	35.6		07.0	249	38.3		03.8	313	59.6		49.0		
23	334	57.3	175	35.1		05.9	264	39.5		04.0	329	02.3		48.9		
24	349	59.8	190	34.6	+10	04.8	279	40.7	+21	04.2	344	05.1	+0	48.7		
Dif	—		-5		-11		+12		+2		+27		-1		+26	
															0	

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 56 ^m 6		Edad: 14 ^d 7 PHE { 4 ^h : 58/9 12 ^h : 58/7 20 ^h : 58/5 PMG: 0 ^h 33 ^m R°: 47 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	180	47.7	+4	38.6	352	07.8	-5 06.0	60 N	18 34	19 16	20 09	19 09 2	6 19 95					
1	195	48.0		37.7	6	38.6 ¹¹⁸	-4 50.1 ¹⁵⁹	58	31	11	20 00	09 5	21 91					
2	210	48.2		36.7	21	09.5 ¹¹⁹	34.1 ¹⁶⁰	56	28	06	19 53	09 8	23 88					
3	225	48.4		35.8	35	40.4 ¹¹⁹	18.1 ¹⁶⁰	54	26	19 02	46	09 11	24 85					
4	240	48.6		34.8	50	11.3 ¹¹⁹	-4 02.1 ¹⁶⁰	52	24	18 59	40	09 13	26 82					
5	255	48.8	+4	33.9	64	42.3 ¹²⁰	-3 46.1 ¹⁶⁰	50	18 23	18 55	19 35	19 09 15	6 27 80					
6	270	49.1	+4	32.9	79	13.4 ¹²¹	-3 30.1 ¹⁶⁰	45	18 19	18 48	19 24	19 09 20	6 30 74					
7	285	49.3		32.0	93	44.5 ¹²¹	-3 14.1 ¹⁶⁰	40	16	43	15	09 24	32 70					
8	300	49.5		31.0	108	15.7 ¹²²	-2 58.1 ¹⁶⁰	35	13	38	08	09 28	34 66					
9	315	49.7		30.1	122	46.9 ¹²²	42.1 ¹⁶⁰	30	10	35	19 03	09 31	36 63					
10	330	49.9		29.1	137	18.1 ¹²²	26.1 ¹⁶⁰	20	06	29	18 54	09 36	39 57					
11	345	50.2	+4	28.2	151	49.4 ¹²³	-2 10.1 ¹⁶⁰	10 N	18 03	18 24	18 49	19 09 41	6 41 52					
12	0	50.4	+4	27.2	166	20.7 ¹²³	-1 54.1 ¹⁶⁰	0	18 00	18 21	18 45	19 09 46	6 44 47					
13	15	50.6		26.3	180	52.1 ¹²⁴	38.2 ¹⁵⁹	10 S	17 57	18	42	09 51	46 43					
14	30	50.8		25.3	195	23.5 ¹²⁴	22.2 ¹⁶⁰	20	54	16	41	09 56	49 37					
15	45	51.0		24.4	209	55.0 ¹²⁵	-1 06.2 ¹⁶⁰	30	50	14	42	09 62	52 31					
16	60	51.3		23.4	224	26.5 ¹²⁵	-0 50.3 ¹⁵⁹	35	48	14	43	09 65	53 28					
17	75	51.5	+4	22.5	238	58.1 ¹²⁶	-0 34.3 ¹⁶⁰	40	17 46	18 13	18 45	19 09 69	6 55 25					
18	90	51.7	+4	21.5	253	29.6 ¹²⁵	-0 18.4 ¹⁵⁹	45	17 44	18 13	18 47	19 09 73	6 57 20					
19	105	51.9		20.6	268	01.2 ¹²⁶	-0 02.5 ¹⁵⁹	50	41	13	51	09 79	7 00 15					
20	120	52.2		19.6	282	32.9 ¹²⁷	+0 13.4 ¹⁵⁹	52	40	13	52	09 81	01 13					
21	135	52.4		18.7	297	04.6 ¹²⁷	29.2 ¹⁵⁸	54	38	13	54	09 84	02 10					
22	150	52.6		17.7	311	36.3 ¹²⁷	+0 45.1 ¹⁵⁹	56	37	14	18 57	09 87	03 8					
23	165	52.8		16.8	326	08.0 ¹²⁷	+1 00.9 ¹⁵⁸	58	35	14	19 00	09 91	05 4					
24	180	53.0	+4	15.8	340	39.8 ¹²⁸	+1 16.7 ¹⁵⁸	60 S	17 33	18 14	19 03	19 09 94	7 06 2					
UT	ARIES		VENUS			MARTE			JÚPITER		SATURNO							
	PMG: 0 ^h 39 ^m 9		Mag: -3.9 PMG: 11 ^h 18 ^m			Mag: -0.3 PMG: 5 ^h 21 ^m			Mag: -2.9 PMG: 1 ^h 03 ^m		Mag: +0.4 PMG: 22 ^h 07 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	349	59.8	190	34.6	+10	04.8	279	40.7	+21	04.2	344	05.1	+0	48.7	27	10.3	-16	04.4
1	5	02.2	205	34.1		03.7	294	41.9		04.4	359	07.8		48.6	42	12.9		04.5
2	20	04.7	220	33.7		02.6	309	43.0		04.6	14	10.5		48.5	57	15.5		04.5
3	35	07.1	235	33.2		01.5	324	44.2		04.8	29	13.3		48.4	72	18.1		04.6
4	50	09.6	250	32.7	+10	00.3	339	45.4		05.0	44	16.0		48.2	87	20.8		04.6
5	65	12.1	265	32.3	+9	59.2	354	46.6	+21	05.2	59	18.8	+0	48.1	102	23.4	-16	04.7
6	80	14.5	280	31.8	+9	58.1	9	47.8	+21	05.5	74	21.5	+0	48.0	117	26.0	-16	04.7
7	95	17.0	295	31.3		57.0	24	49.0		05.7	89	24.2		47.9	132	28.6		04.8
8	110	19.5	310	30.9		55.9	39	50.2		05.9	104	27.0		47.7	147	31.2		04.8
9	125	21.9	325	30.4		54.7	54	51.3		06.1	119	29.7		47.6	162	33.8		04.8
10	140	24.4	340	29.9		53.6	69	52.5		06.3	134	32.5		47.5	177	36.4		04.9
11	155	26.9	355	29.5	+9	52.5	84	53.7	+21	06.5	149	35.2	+0	47.4	192	39.0	-16	04.9
12	170	29.3	10	29.0	+9	51.4	99	54.9	+21	06.7	164	38.0	+0	47.2	207	41.7	-16	05.0
13	185	31.8	25	28.5		50.3	114	56.1		06.9	179	40.7		47.1	222	44.3		05.0
14	200	34.2	40	28.1		49.1	129	57.3		07.1	194	43.4		47.0	237	46.9		05.1
15	215	36.7	55	27.6		48.0	144	58.5		07.3	209	46.2		46.9	252	49.5		05.1
16	230	39.2	70	27.1		46.9	159	59.7		07.6	224	48.9		46.7	267	52.1		05.2
17	245	41.6	85	26.7	+9	45.8	175	00.9	+21	07.8	239	51.7	+0	46.6	282	54.7	-16	05.2
18	260	44.1	100	26.2	+9	44.6	190	02.0	+21	08.0	254	54.4	+0	46.5	297	57.3	-16	05.3
19	275	46.6	115	25.7		43.5	205	03.2		08.2	269	57.2		46.3	313	00.0		05.3
20	290	49.0	130	25.3		42.4	220	04.4		08.4	284	59.9		46.2	328	02.6		05.4
21	305	51.5	145	24.8		41.3	235	05.6		08.6	300	02.7		46.1	343	05.2		05.4
22	320	54.0	160	24.3		40.1	250	06.8		08.8	315	05.4		46.0	358	07.8		05.5
23	335	56.4	175	23.9		39.0	265	08.0		09.0	330	08.1		45.8	13	10.4		05.5
24	350	58.9	190	23.4	+9	37.9	280	09.2	+21	09.2	345	10.9	+0	45.7	28	13.0	-16	05.6
Dif	—		-5 -11				+12 +2				+27 -1				+26 0			

UT	SOL			LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 56 ^m 3			Edad: 15 ^d 7 PHE { 4 ^h : 58'2 12 ^h : 57'9 20 ^h : 57'7 PMG: 1 ^h 20 ^m R°: 46 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	53.0	+4	15.8	340	39.8	+1	16.7	158	60 N	3	45	4	38	5	21	19	11
1	195	53.3		14.9	355	11.6	128	32.5	158	58	3	53		43		23	14	5
2	210	53.5		13.9	9	43.4	128	+1	48.3	56	4	01		48		25	17	8
3	225	53.7		13.0	24	15.3	129	+2	04.0	54		08		52		28	20	11
4	240	53.9		12.0	38	47.2	129		19.7	52		14		55		29	22	14
5	255	54.2	+4	11.1	53	19.1	129	+2	35.4	50	4	19	4	58	5	31	19	24
6	270	54.4	+4	10.1	67	51.0	129	+2	51.0	45	4	30	5	05	5	35	19	29
7	285	54.6		09.2	82	23.0	130	+3	06.6	40		38		11		38	33	25
8	300	54.8		08.2	96	54.9	129		22.2	35		45		15		41	37	28
9	315	55.0		07.3	111	26.9	130		37.8	30		51		19		43	40	31
10	330	55.3		06.3	125	59.0	131	+3	53.3	20	4	59		25		47	45	37
11	345	55.5	+4	05.3	140	31.0	130	+4	08.7	10 N	5	04		5	29	5	50	19
12	0	55.7	+4	04.4	155	03.0	130	+4	24.2	0	5	08		5	32	5	53	19
13	15	55.9		03.4	169	35.1	131		39.6	10 S		11		35		56	20	00
14	30	56.1		02.5	184	07.2	131	+4	54.9	20		11		37	5	59	05	55
15	45	56.4		01.5	198	39.3	131	+5	10.3	30		11		38	6	02	11	60
16	60	56.6	+4	00.6	213	11.4	131		25.5	35		09		39		04	14	64
17	75	56.8	+3	59.6	227	43.5	131	+5	40.8	40	5	08	5	39	6	06	20	18
18	90	57.0	+3	58.7	242	15.6	131	+5	55.9	45	5	05	5	39	6	08	20	22
19	105	57.3		57.7	256	47.8	132	+6	11.1	50		02		39	11		28	77
20	120	57.5		56.8	271	19.9	131		26.2	52	5	00		39	12		30	80
21	135	57.7		55.8	285	52.1	132		41.2	54	4	58		39	14		33	83
22	150	57.9		54.8	300	24.2	131	+6	56.2	56		55		38	15		36	86
23	165	58.1		53.9	314	56.4	132	+7	11.2	58		52		38	17		40	89
24	180	58.4	+3	52.9	329	28.6	132	+7	26.1	60 S	4	49		5	37	6	19	20
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 0 ^h 36 ^m 0		Mag: -3.9 PMG: 11 ^h 19 ^m			Mag: -0.3 PMG: 5 ^h 19 ^m			Mag: -2.9 PMG: 0 ^h 59 ^m			Mag: +0.4 PMG: 22 ^h 03 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	350	58.9	190	23.4	+9	37.9	280	09.2	+21	09.2	345	10.9	+0	45.7	28	13.0	-16	05.6
1	6	01.4	205	23.0		36.7	295	10.4		09.4	0	13.6		45.6	43	15.6		05.6
2	21	03.8	220	22.5		35.6	310	11.6		09.6	15	16.4		45.5	58	18.2		05.7
3	36	06.3	235	22.0		34.5	325	12.8		09.8	30	19.1		45.3	73	20.9		05.7
4	51	08.7	250	21.6		33.4	340	14.0		10.1	45	21.9		45.2	88	23.5		05.8
5	66	11.2	265	21.1	+9	32.2	355	15.2	+21	10.3	60	24.6	+0	45.1	103	26.1	-16	05.8
6	81	13.7	280	20.6	+9	31.1	10	16.4	+21	10.5	75	27.4	+0	45.0	118	28.7	-16	05.9
7	96	16.1	295	20.2		30.0	25	17.6		10.7	90	30.1		44.8	133	31.3		05.9
8	111	18.6	310	19.7		28.8	40	18.8		10.9	105	32.8		44.7	148	33.9		06.0
9	126	21.1	325	19.3		27.7	55	20.0		11.1	120	35.6		44.6	163	36.5		06.0
10	141	23.5	340	18.8		26.6	70	21.2		11.3	135	38.3		44.5	178	39.1		06.0
11	156	26.0	355	18.3	+9	25.4	85	22.4	+21	11.5	150	41.1	+0	44.3	193	41.7	-16	06.1
12	171	28.5	10	17.9	+9	24.3	100	23.6	+21	11.7	165	43.8	+0	44.2	208	44.4	-16	06.1
13	186	30.9	25	17.4		23.2	115	24.8		11.9	180	46.6		44.1	223	47.0		06.2
14	201	33.4	40	17.0		22.0	130	26.0		12.1	195	49.3		43.9	238	49.6		06.2
15	216	35.8	55	16.5		20.9	145	27.2		12.3	210	52.1		43.8	253	52.2		06.3
16	231	38.3	70	16.0		19.8	160	28.4		12.5	225	54.8		43.7	268	54.8		06.3
17	246	40.8	85	15.6	+9	18.6	175	29.6	+21	12.7	240	57.6	+0	43.6	283	57.4	-16	06.4
18	261	43.2	100	15.1	+9	17.5	190	30.8	+21	12.9	256	00.3	+0	43.4	299	00.0	-16	06.4
19	276	45.7	115	14.7		16.4	205	32.0		13.1	271	03.1		43.3	314	02.6		06.5
20	291	48.2	130	14.2		15.2	220	33.2		13.3	286	05.8		43.2	329	05.2		06.5
21	306	50.6	145	13.8		14.1	235	34.4		13.5	301	08.6		43.1	344	07.8		06.6
22	321	53.1	160	13.3		13.0	250	35.7		13.7	316	11.3		42.9	359	10.5		06.6
23	336	55.6	175	12.8		11.8	265	36.9		13.9	331	14.0		42.8	14	13.1		06.7
24	351	58.0	190	12.4	+9	10.7	280	38.1	+21	14.1	346	16.8	+0	42.7	29	15.7	-16	06.7
Dif	—		-5		-11		+12		+2		+27		-1		+26			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 55 ^m 9			Edad: 16 ^d 7 PHE { 4 ^h : 57.4 12 ^h : 57.1 20 ^h : 56.9 SD: 15°7 PMG: 2 ^h 06 ^m R°: 46 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	
0	180	58.4	+3 52.9	329	28.6	+7 26.1	60 N	18 28	19 10	20 02	19 12 3	9 28 93		
1	195	58.6	52.0	344	00.8 ¹³²	40.9 ¹⁴⁸	58	25	05	19 54	19 7	22 89		
2	210	58.8	51.0	358	32.9 ¹³¹	+7 55.7 ¹⁴⁸	56	23	19 01	47	25 10	17 85		
3	225	59.0	50.1	13	05.1 ¹³²	+8 10.4 ¹⁴⁷	54	21	18 57	40	31 13	13 81		
4	240	59.3	49.1	27	37.3 ¹³²	25.1 ¹⁴⁷	52	20	54	35	36 15	09 79		
5	255	59.5	+3 48.2	42	09.5 ¹³²	+8 39.7 ¹⁴⁶	50	18 18	18 51	19 30	19 40 18	9 05 76		
6	270	59.7	+3 47.2	56	41.7 ¹³²	+8 54.3 ¹⁴⁶	45	18 15	18 44	19 20	19 50 23	8 57 71		
7	285	59.9	46.2	71	13.8 ¹³¹	+9 08.8 ¹⁴⁵	40	12	39	12	19 58 27	50 68		
8	301	00.2	45.3	85	46.0 ¹³²	23.2 ¹⁴⁴	35	10	35	05	20 05 30	45 63		
9	316	00.4	44.3	100	18.2 ¹³²	37.6 ¹⁴⁴	30	08	32	19 00	11 34	40 60		
10	331	00.6	43.4	114	50.4 ¹³²	+9 51.9 ¹⁴³	20	05	27	18 52	22 38	31 55		
11	346	00.8	+3 42.4	129	22.5 ¹³¹	+10 06.2 ¹⁴³	10 N	18 02	18 23	18 47	20 32 42	8 24 50		
12	1	01.0	+3 41.5	143	54.7 ¹³²	+10 20.4 ¹⁴²	0	17 59	18 20	18 44	20 41 47	8 17 46		
13	16	01.3	40.5	158	26.8 ¹³¹	34.5 ¹⁴¹	10 S	57	18	42	20 50 51	10 42		
14	31	01.5	39.6	172	59.0 ¹³²	+10 48.6 ¹⁴¹	20	54	16	42	21 00 55	8 03 37		
15	46	01.7	38.6	187	31.1 ¹³¹	+11 02.6 ¹⁴⁰	30	51	15	43	11 60	7 54 33		
16	61	01.9	37.6	202	03.2 ¹³¹	16.5 ¹³⁹	35	50	15	44	18 63	50 29		
17	76	02.2	+3 36.7	216	35.3 ¹³¹	+11 30.3 ¹³⁸	40	17 48	18 15	18 47	21 25 67	7 44 26		
18	91	02.4	+3 35.7	231	07.4 ¹³¹	+11 44.1 ¹³⁸	45	17 46	18 15	18 49	21 34 71	7 38 22		
19	106	02.6	34.8	245	39.5 ¹³¹	+11 57.9 ¹³⁸	50	44	16	54	45 76	30 17		
20	121	02.8	33.8	260	11.6 ¹³¹	+12 11.5 ¹³⁶	52	43	16	56	50 79	27 14		
21	136	03.1	32.8	274	43.7 ¹³¹	25.1 ¹³⁶	54	42	17	18 58	21 56 81	23 12		
22	151	03.3	31.9	289	15.7 ¹³⁰	38.6 ¹³⁵	56	40	17	19 01	22 02 84	19 9		
23	166	03.5	30.9	303	47.7 ¹³⁰	+12 52.0 ¹³⁴	58	39	18	04	09 88	14 6		
24	181	03.7	+3 30.0	318	19.8 ¹³¹	+13 05.4 ¹³⁴	60 S	17 38	18 19	19 08	22 16 94	7 09 2		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 32 ^m 0		Mag: -3.9 PMG: 11 ^h 20 ^m		Mag: -0.3 PMG: 5 ^h 17 ^m		Mag: -2.9 PMG: 0 ^h 55 ^m		Mag: +0.4 PMG: 21 ^h 59 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	351	58.0	190	12.4	+9 10.7	280	38.1	+21 14.1	346	16.8	+0 42.7	29 15.7	-16 06.7	
1	7	00.5	205	11.9	09.5	295	39.3	14.3	1	19.5	42.5	44 18.3	06.8	
2	22	03.0	220	11.5	08.4	310	40.5	14.5	16	22.3	42.4	59 20.9	06.8	
3	37	05.4	235	11.0	07.3	325	41.7	14.7	31	25.0	42.3	74 23.5	06.8	
4	52	07.9	250	10.6	06.1	340	42.9	15.0	46	27.8	42.2	89 26.1	06.9	
5	67	10.3	265	10.1	+9 05.0	355	44.1	+21 15.2	61	30.5	+0 42.0	104 28.7	-16 06.9	
6	82	12.8	280	09.7	+9 03.8	10	45.3	+21 15.4	76	33.3	+0 41.9	119 31.3	-16 07.0	
7	97	15.3	295	09.2	02.7	25	46.6	15.6	91	36.0	41.8	134 33.9	07.0	
8	112	17.7	310	08.7	01.6	40	47.8	15.8	106	38.8	41.6	149 36.6	07.1	
9	127	20.2	325	08.3	+9 00.4	55	49.0	16.0	121	41.5	41.5	164 39.2	07.1	
10	142	22.7	340	07.8	+8 59.3	70	50.2	16.2	136	44.3	41.4	179 41.8	07.2	
11	157	25.1	355	07.4	+8 58.1	85	51.4	+21 16.4	151	47.0	+0 41.3	194 44.4	-16 07.2	
12	172	27.6	10	06.9	+8 57.0	100	52.6	+21 16.6	166	49.8	+0 41.1	209 47.0	-16 07.3	
13	187	30.1	25	06.5	55.8	115	53.8	16.8	181	52.5	41.0	224 49.6	07.3	
14	202	32.5	40	06.0	54.7	130	55.1	17.0	196	55.3	40.9	239 52.2	07.4	
15	217	35.0	55	05.6	53.5	145	56.3	17.2	211	58.0	40.7	254 54.8	07.4	
16	232	37.4	70	05.1	52.4	160	57.5	17.4	227	00.8	40.6	269 57.4	07.4	
17	247	39.9	85	04.7	+8 51.3	175	58.7	+21 17.6	242	03.5	+0 40.5	285 00.0	-16 07.5	
18	262	42.4	100	04.2	+8 50.1	190	59.9	+21 17.8	257	06.3	+0 40.4	300 02.6	-16 07.5	
19	277	44.8	115	03.8	49.0	206	01.2	18.0	272	09.0	40.2	315 05.2	07.6	
20	292	47.3	130	03.3	47.8	221	02.4	18.2	287	11.8	40.1	330 07.9	07.6	
21	307	49.8	145	02.9	46.7	236	03.6	18.4	302	14.5	40.0	345 10.5	07.7	
22	322	52.2	160	02.4	45.5	251	04.8	18.5	317	17.3	39.8	0 13.1	07.7	
23	337	54.7	175	02.0	44.4	266	06.1	18.7	332	20.0	39.7	15 15.7	07.8	
24	352	57.2	190	01.5	+8 43.2	281	07.3	+21 18.9	347	22.8	+0 39.6	30 18.3	-16 07.8	
Dif	—		-5	-11		+12	+2		+27	-1		+26	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 6			Edad: 17 ^d 7 PHE { 4 ^h : 56'6 12 ^h : 56'3 20 ^h : 56'1 PMG: 2 ^h 52 ^m R°: 47 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	181	03.7	+3 30.0	318	19.8	+13 05.4		60 N	3	50	4	43	5	25	19	15	
1	196	03.9		332	51.8 ¹³⁰		18.6 ¹³²	58	3	59		47		27	26	10	
2	211	04.2		347	23.7 ¹²⁹		31.8 ¹³²	56	4	06		52		29	35	14	
3	226	04.4		1	55.7 ¹³⁰		45.0 ¹³²	54		12		55		31	44	16	
4	241	04.6		16	27.6 ¹²⁹	+13 58.0 ¹³⁰		52		18	4	59	33		51	20	
5	256	04.8	+3 25.2	30	59.6 ¹³⁰	+14 11.0 ¹³⁰		50	4	23	5	02	5	34	19	58	
6	271	05.1	+3 24.2	45	31.5 ¹²⁹	+14 23.9 ¹²⁹		45	4	33	5	08	5	37	20	13	
7	286	05.3		60	03.4 ¹²⁹		36.7 ¹²⁸	40		41		13	40		25	30	
8	301	05.5		74	35.2 ¹²⁸	+14 49.4 ¹²⁷		35		47		17	42		35	34	
9	316	05.7		89	07.1 ¹²⁹	+15 02.0 ¹²⁶		30		52		20	44		20	45	
10	331	06.0		103	38.9 ¹²⁸		14.6 ¹²⁶	20	4	59		25	47		21	00	
11	346	06.2	+3 19.4	118	10.7 ¹²⁸	+15 27.1 ¹²⁵		10 N	5	04	5	29	5	50	21	14	
12	1	06.4	+3 18.5	132	42.4 ¹²⁷	+15 39.5 ¹²⁴		0	5	08	5	32	5	52	21	28	
13	16	06.6		147	14.2 ¹²⁸	+15 51.8 ¹²³		10 S		09		34	55		41	51	
14	31	06.8		161	45.9 ¹²⁷	+16 04.0 ¹²²		20		10		35	5	57	21	55	
15	46	07.1		176	17.6 ¹²⁷		16.1 ¹²¹	30		08		36	6	00	22	11	
16	61	07.3		190	49.3 ¹²⁷		28.1 ¹²⁰	35		07		36	01		21	62	
17	76	07.5	+3 13.7	205	20.9 ¹²⁶	+16 40.1 ¹²⁰		40	5	04	5	36	6	03	22	32	
18	91	07.7	+3 12.7	219	52.5 ¹²⁶	+16 51.9 ¹¹⁸		45	5	01	5	35	6	05	22	45	
19	106	08.0		234	24.1 ¹²⁶	+17 03.7 ¹¹⁸		50	4	57		35	07		23	01	
20	121	08.2		248	55.7 ¹²⁶		15.4 ¹¹⁷	52		55		34	08		09	76	
21	136	08.4		263	27.2 ¹²⁵		27.0 ¹¹⁶	54		53		34	09		17	79	
22	151	08.6		277	58.7 ¹²⁵		38.5 ¹¹⁵	56		50		33	10		26	83	
23	166	08.9		292	30.2 ¹²⁵	+17 49.9 ¹¹⁴		58		46		32	11		37	88	
24	181	09.1	+3 06.9	307	01.6 ¹²⁴	+18 01.2 ¹¹³		60 S	4	43	5	31	6	13	23	50	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 0 ^h 28 ^m 1		Mag: -3.9 PMG: 11 ^h 20 ^m			Mag: -0.3 PMG: 5 ^h 15 ^m			Mag: -2.9 PMG: 0 ^h 50 ^m			Mag: +0.4 PMG: 21 ^h 55 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	
0	352	57.2	190	01.5	+8 43.2	281	07.3	+21 18.9	347	22.8	+0 39.6	30	18.3	-16 07.8			
1	7	59.6	205	01.1		296	08.5		2	25.5		39.5	45	20.9		07.9	
2	23	02.1	220	00.6		311	09.7		17	28.3		39.3	60	23.5		07.9	
3	38	04.6	235	00.2		326	11.0		32	31.0		39.2	75	26.1		08.0	
4	53	07.0	249	59.7		341	12.2		47	33.8		39.1	90	28.7		08.0	
5	68	09.5	264	59.3	+8 37.5	356	13.4	+21 19.9	62	36.5	+0 38.9		105	31.3	-16 08.0		
6	83	11.9	279	58.8	+8 36.3	11	14.6	+21 20.1	77	39.3	+0 38.8		120	33.9	-16 08.1		
7	98	14.4	294	58.4		26	15.9		92	42.0		38.7	135	36.5		08.1	
8	113	16.9	309	57.9		41	17.1		107	44.8		38.6	150	39.1		08.2	
9	128	19.3	324	57.5		56	18.3		122	47.5		38.4	165	41.7		08.2	
10	143	21.8	339	57.0		71	19.6		137	50.3		38.3	180	44.3		08.3	
11	158	24.3	354	56.6	+8 30.5	86	20.8	+21 21.1	152	53.1	+0 38.2		195	47.0	-16 08.3		
12	173	26.7	9	56.1	+8 29.4	101	22.0	+21 21.3	167	55.8	+0 38.0		210	49.6	-16 08.4		
13	188	29.2	24	55.7		116	23.2		182	58.6		37.9	225	52.2		08.4	
14	203	31.7	39	55.3		131	24.5		198	01.3		37.8	240	54.8		08.5	
15	218	34.1	54	54.8		146	25.7		213	04.1		37.7	255	57.4		08.5	
16	233	36.6	69	54.4		161	26.9		228	06.8		37.5	271	00.0		08.5	
17	248	39.1	84	53.9	+8 23.6	176	28.2	+21 22.3	243	09.6	+0 37.4		286	02.6	-16 08.6		
18	263	41.5	99	53.5	+8 22.5	191	29.4	+21 22.5	258	12.3	+0 37.3		301	05.2	-16 08.6		
19	278	44.0	114	53.0		206	30.6		273	15.1		37.1	316	07.8		08.7	
20	293	46.4	129	52.6		221	31.9		288	17.8		37.0	331	10.4		08.7	
21	308	48.9	144	52.1		236	33.1		303	20.6		36.9	346	13.0		08.8	
22	323	51.4	159	51.7		251	34.4		318	23.3		36.8	1	15.6		08.8	
23	338	53.8	174	51.3		266	35.6		333	26.1		36.6	16	18.2		08.9	
24	353	56.3	189	50.8	+8 15.5	281	36.8	+21 23.6	348	28.8	+0 36.5		31	20.8	-16 08.9		
Dif	—		-4 -12			+12 +2			+28 -1			+26 0					

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 55 ^m 2		Edad: 18 ^d 7 PHE { SD: 15°2 PMG: 3 ^h 39 ^m						Civil		Náutico	Hora R°		Hora R°				
	hG ☉	Dec	hG ☾	Dif	Dec	Dif												
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m					
0	181	09.1	+3	06.9	307	01.6	+18	01.2	60 N	18 21	19 04	19 55	19 20 9	12 34 91				
1	196	09.3		06.0	321	33.0 ¹²⁴		12.4 ¹¹²	58	20	18 59	48	36 15	19 86				
2	211	09.5		05.0	336	04.4 ¹²⁴		23.5 ¹¹¹	56	18	55	41	19 49 19	12 06 81				
3	226	09.8		04.1	350	35.7 ¹²³		34.5 ¹¹⁰	54	16	52	35	20 00 23	11 55 78				
4	241	10.0		03.1	5	07.1 ¹²⁴		45.4 ¹⁰⁹	52	15	49	30	11 25	45 75				
5	256	10.2	+3	02.1	19	38.3 ¹²²	+18	56.3 ¹⁰⁹	50	18 14	18 46	19 25	20 20 28	11 37 72				
6	271	10.4	+3	01.2	34	09.6 ¹²³	+19	07.0 ¹⁰⁷	45	18 11	18 41	19 15	20 39 32	11 18 68				
7	286	10.6	+3	00.2	48	40.8 ¹²²		17.6 ¹⁰⁶	40	09	36	08	20 55 36	11 04 64				
8	301	10.9	+2	59.3	63	12.0 ¹²²		28.1 ¹⁰⁵	35	07	32	19 02	21 09 38	10 51 62				
9	316	11.1		58.3	77	43.1 ¹²¹		38.5 ¹⁰⁴	30	06	29	18 57	21 40	40 59				
10	331	11.3		57.3	92	14.3 ¹²²		48.9 ¹⁰⁴	20	03	25	51	41 43	21 56				
11	346	11.5	+2	56.4	106	45.3 ¹²⁰	+19	59.1 ¹⁰²	10 N	18 01	18 22	18 46	21 59 46	10 05 52				
12	1	11.8	+2	55.4	121	16.4 ¹²¹	+20	09.2 ¹⁰¹	0	17 58	18 19	18 43	22 15 49	9 50 49				
13	16	12.0		54.5	135	47.4 ¹²⁰		19.2 ¹⁰⁰	10 S	57	18	42	32 52	35 46				
14	31	12.2		53.5	150	18.4 ¹²⁰		29.1 ⁹⁹	20	55	17	42	22 50 55	19 42				
15	46	12.4		52.5	164	49.3 ¹¹⁹		38.9 ⁹⁸	30	52	16	44	23 11 58	9 01 38				
16	61	12.7		51.6	179	20.2 ¹¹⁹		48.6 ⁹⁷	35	51	17	46	23 61	8 50 36				
17	76	12.9	+2	50.6	193	51.1 ¹¹⁹	+20	58.2 ⁹⁶	40	17 50	18 17	18 48	23 37 63	8 38 33				
18	91	13.1	+2	49.6	208	22.0 ¹¹⁹	+21	07.7 ⁹⁵	45	17 49	18 18	18 52	23 54 66	8 24 29				
19	106	13.3		48.7	222	52.8 ¹¹⁸		17.1 ⁹⁴	50	47	19	57	*** ** *	8 07 24				
20	121	13.6		47.7	237	23.5 ¹¹⁷		26.4 ⁹³	52	46	20	18 59	** ** *	7 59 22				
21	136	13.8		46.8	251	54.3 ¹¹⁸		35.5 ⁹¹	54	45	20	19 02	** ** *	50 19				
22	151	14.0		45.8	266	25.0 ¹¹⁷		44.6 ⁹¹	56	44	21	05	** ** *	40 16				
23	166	14.2		44.8	280	55.6 ¹¹⁶	+21	53.5 ⁸⁹	58	43	22	08	** ** *	28 12				
24	181	14.4	+2	43.9	295	26.3 ¹¹⁷	+22	02.3 ⁸⁸	60 S	17 42	18 24	19 13	** ** *	7 15 6				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 0 ^h 24 ^m 2		Mag: -3.9 PMG: 11 ^h 21 ^m			Mag: -0.3 PMG: 5 ^h 13 ^m			Mag: -2.9 PMG: 0 ^h 46 ^m			Mag: +0.4 PMG: 21 ^h 51 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	353	56.3	189	50.8	+8	15.5	281	36.8	+21	23.6	348	28.8	+0	36.5	31	20.8	-16	08.9
1	8	58.8	204	50.4		14.3	296	38.1		23.8	3	31.6		36.4	46	23.4		08.9
2	24	01.2	219	49.9		13.2	311	39.3		24.0	18	34.4		36.2	61	26.0		09.0
3	39	03.7	234	49.5		12.0	326	40.6		24.2	33	37.1		36.1	76	28.6		09.0
4	54	06.2	249	49.0		10.9	341	41.8		24.4	48	39.9		36.0	91	31.2		09.1
5	69	08.6	264	48.6	+8	09.7	356	43.0	+21	24.6	63	42.6	+0	35.8	106	33.8	-16	09.1
6	84	11.1	279	48.2	+8	08.5	11	44.3	+21	24.8	78	45.4	+0	35.7	121	36.4	-16	09.2
7	99	13.5	294	47.7		07.4	26	45.5		25.0	93	48.1		35.6	136	39.0		09.2
8	114	16.0	309	47.3		06.2	41	46.8		25.2	108	50.9		35.5	151	41.7		09.3
9	129	18.5	324	46.8		05.1	56	48.0		25.4	123	53.6		35.3	166	44.3		09.3
10	144	20.9	339	46.4		03.9	71	49.3		25.6	138	56.4		35.2	181	46.9		09.3
11	159	23.4	354	46.0	+8	02.7	86	50.5	+21	25.7	153	59.1	+0	35.1	196	49.5	-16	09.4
12	174	25.9	9	45.5	+8	01.6	101	51.7	+21	25.9	169	01.9	+0	34.9	211	52.1	-16	09.4
13	189	28.3	24	45.1	+8	00.4	116	53.0		26.1	184	04.7		34.8	226	54.7		09.5
14	204	30.8	39	44.6	+7	59.2	131	54.2		26.3	199	07.4		34.7	241	57.3		09.5
15	219	33.3	54	44.2		58.1	146	55.5		26.5	214	10.2		34.5	256	59.9		09.6
16	234	35.7	69	43.8		56.9	161	56.7		26.7	229	12.9		34.4	272	02.5		09.6
17	249	38.2	84	43.3	+7	55.7	176	58.0	+21	26.9	244	15.7	+0	34.3	287	05.1	-16	09.7
18	264	40.7	99	42.9	+7	54.6	191	59.2	+21	27.1	259	18.4	+0	34.2	302	07.7	-16	09.7
19	279	43.1	114	42.4		53.4	207	00.5		27.3	274	21.2		34.0	317	10.3		09.7
20	294	45.6	129	42.0		52.2	222	01.7		27.5	289	23.9		33.9	332	12.9		09.8
21	309	48.0	144	41.6		51.1	237	03.0		27.6	304	26.7		33.8	347	15.5		09.8
22	324	50.5	159	41.1		49.9	252	04.2		27.8	319	29.5		33.6	2	18.1		09.9
23	339	53.0	174	40.7		48.7	267	05.5		28.0	334	32.2		33.5	17	20.7		09.9
24	354	55.4	189	40.3	+7	47.6	282	06.8	+21	28.2	349	35.0	+0	33.4	32	23.3	-16	10.0
Dif	—		-4		-12		+12		+2		+28		-1		+26		0	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 15°9			Edad: 20 ^d 7 PHE { 4 ^h : 54:7 12 ^h : 54:6 20 ^h : 54:5	SD: 14°9				Civil		Náutico		Hora R°		Hora R°	
	PMG: 11 ^h 54 ^m 5				PMG: 5 ^h 17 ^m R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	m	
0	181	19.8	+2 20.7	283	31.1	+24 59.8	59	60 N	18 15	18 57	19 48	19 48 37	15 31 69			
1	196	20.0		298	00.9 ¹⁰⁸	+25 05.7	59	58	14	53	41	20 16 40	15 04 65			
2	211	20.3	18.8	312	30.7 ¹⁰⁸	11.5	58	56	13	50	35	37 43	14 42 63			
3	226	20.5	17.8	327	00.4 ¹⁰⁷	17.1	56	54	11	47	29	20 55 44	25 61			
4	241	20.7	16.9	341	30.1 ¹⁰⁷	22.7	56	52	10	44	25	21 10 45	14 10 60			
5	256	20.9	+2 15.9	355	59.8 ¹⁰⁷	+25 28.1	54	50	18 09	18 42	19 20	21 23 46	13 57 59			
6	271	21.2	+2 14.9	10	29.4 ¹⁰⁶	+25 33.4	53	45	18 07	18 37	19 11	21 50 47	13 30 58			
7	286	21.4	14.0	24	59.1 ¹⁰⁷	38.5	51	40	06	33	19 05	22 12 48	13 09 56			
8	301	21.6	13.0	39	28.7 ¹⁰⁶	43.6	51	35	04	30	18 59	30 48	12 52 55			
9	316	21.8	12.0	53	58.3 ¹⁰⁶	48.5	49	30	03	27	55	22 45 49	37 54			
10	331	22.1	11.1	68	27.8 ¹⁰⁵	53.2	47	20	18 01	23	49	23 11 50	12 11 53			
11	346	22.3	+2 10.1	82	57.3 ¹⁰⁵	+25 57.9	47	10 N	17 59	18 20	18 45	23 34 50	11 49 52			
12	1	22.5	+2 09.1	97	26.8 ¹⁰⁵	+26 02.4	45	0	17 58	18 18	18 42	23 55 51	11 29 51			
13	16	22.7	08.2	111	56.3 ¹⁰⁵	06.8	44	10 S	56	17	42	** ** *	11 08 50			
14	31	22.9	07.2	126	25.8 ¹⁰⁵	11.1	43	20	55	17	43	** ** *	10 46 49			
15	46	23.2	06.2	140	55.2 ¹⁰⁴	15.2	41	30	54	17	45	0 09 56	21 47			
16	61	23.4	05.3	155	24.6 ¹⁰⁴	19.2	40	35	53	18	47	24 57	10 06 46			
17	76	23.6	+2 04.3	169	54.0 ¹⁰⁴	+26 23.1	39	40	17 52	18 19	18 50	0 40 59	9 49 45			
18	91	23.8	+2 03.3	184	23.4 ¹⁰⁴	+26 26.9	38	45	17 51	18 20	18 54	1 00 61	9 28 43			
19	106	24.1	02.4	198	52.7 ¹⁰³	30.5	36	50	50	22	19 00	26 63	9 03 40			
20	121	24.3	01.4	213	22.1 ¹⁰⁴	34.0	35	52	49	23	02	38 65	8 50 39			
21	136	24.5	+2 00.4	227	51.4 ¹⁰³	37.4	34	54	49	24	05	1 52 67	36 37			
22	151	24.7	+1 59.5	242	20.7 ¹⁰³	40.6	32	56	48	25	09	2 08 70	8 19 35			
23	166	25.0	58.5	256	50.0 ¹⁰³	43.7	31	58	48	27	13	28 73	7 59 32			
24	181	25.2	+1 57.5	271	19.3 ¹⁰³	+26 46.7	30	60 S	17 47	18 28	19 17	2 53 79	7 34 26			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 0 ^h 16 ^m 3		Mag: -3.9 PMG: 11 ^h 22 ^m		Mag: -0.4 PMG: 5 ^h 09 ^m		Mag: -2.9 PMG: 0 ^h 37 ^m		Mag: +0.4 PMG: 21 ^h 43 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	355	54.6	189	29.8	+7 19.4	282	37.1	+21 32.7	350	41.2	+0 30.2	33	25.7	-16 11.0	
1	10	57.0	204	29.4	18.2	297	38.3	32.9	5	43.9	30.1	48	28.3	11.0	
2	25	59.5	219	29.0	17.0	312	39.6	33.1	20	46.7	30.0	63	30.9	11.1	
3	41	02.0	234	28.5	15.9	327	40.9	33.2	35	49.4	29.8	78	33.5	11.1	
4	56	04.4	249	28.1	14.7	342	42.1	33.4	50	52.2	29.7	93	36.1	11.2	
5	71	06.9	264	27.7	+7 13.5	357	43.4	+21 33.6	65	55.0	+0 29.6	108	38.7	-16 11.2	
6	86	09.4	279	27.2	+7 12.3	12	44.7	+21 33.8	80	57.7	+0 29.4	123	41.3	-16 11.3	
7	101	11.8	294	26.8	11.1	27	46.0	34.0	96	00.5	29.3	138	43.9	11.3	
8	116	14.3	309	26.4	10.0	42	47.2	34.2	111	03.2	29.2	153	46.5	11.3	
9	131	16.8	324	26.0	08.8	57	48.5	34.3	126	06.0	29.0	168	49.1	11.4	
10	146	19.2	339	25.5	07.6	72	49.8	34.5	141	08.8	28.9	183	51.7	11.4	
11	161	21.7	354	25.1	+7 06.4	87	51.1	+21 34.7	156	11.5	+0 28.8	198	54.3	-16 11.5	
12	176	24.1	9	24.7	+7 05.2	102	52.3	+21 34.9	171	14.3	+0 28.7	213	56.9	-16 11.5	
13	191	26.6	24	24.2	04.0	117	53.6	35.1	186	17.0	28.5	228	59.5	11.6	
14	206	29.1	39	23.8	02.9	132	54.9	35.2	201	19.8	28.4	244	02.1	11.6	
15	221	31.5	54	23.4	01.7	147	56.2	35.4	216	22.6	28.3	259	04.7	11.6	
16	236	34.0	69	23.0	+7 00.5	162	57.5	35.6	231	25.3	28.1	274	07.3	11.7	
17	251	36.5	84	22.5	+6 59.3	177	58.7	+21 35.8	246	28.1	+0 28.0	289	09.9	-16 11.7	
18	266	38.9	99	22.1	+6 58.1	193	00.0	+21 36.0	261	30.8	+0 27.9	304	12.5	-16 11.8	
19	281	41.4	114	21.7	56.9	208	01.3	36.2	276	33.6	27.7	319	15.1	11.8	
20	296	43.9	129	21.2	55.8	223	02.6	36.3	291	36.4	27.6	334	17.7	11.9	
21	311	46.3	144	20.8	54.6	238	03.9	36.5	306	39.1	27.5	349	20.3	11.9	
22	326	48.8	159	20.4	53.4	253	05.2	36.7	321	41.9	27.3	4	22.9	11.9	
23	341	51.3	174	20.0	52.2	268	06.4	36.9	336	44.6	27.2	19	25.5	12.0	
24	356	53.7	189	19.5	+6 51.0	283	07.7	+21 37.1	351	47.4	+0 27.1	34	28.1	-16 12.0	
Dif	—		-4	-12		+13	+2		+28		-1		+26		0

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 54 ^m 1			Edad: 21 ^d 7 PHE { SD: 14'8 PMG: 6 ^h 07 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora
h	°	'	°	°	'	°	°	h	m	h	m	h	m	m
0	181	25.2	+1 57.5	271	19.3	+26 46.7	60 N	4 01	4 53	5 35	20 25	62	16 40	44
1	196	25.4		285	48.5 ¹⁰²	49.5 ²⁸	58	08	4 56	36	20 56	60	16 09	46
2	211	25.6		300	17.8 ¹⁰³	52.3 ²⁸	56	15	5 00	37	21 20	58	15 45	48
3	226	25.9		314	47.0 ¹⁰²	54.9 ²⁶	54	20	03	38	39 57		26 48	
4	241	26.1		329	16.2 ¹⁰²	57.3 ²⁴	52	25	05	39	21 55	57	15 10	49
5	256	26.3	+1 52.7	343	45.4 ¹⁰²	+26 59.6 ²³	50	4 29	5 08	5 40	22 09	56	14 56	49
6	271	26.5	+1 51.7	358	14.6 ¹⁰²	+27 01.8 ²²	45	4 38	5 13	5 42	22 37	56	14 28	49
7	286	26.7		12	43.8 ¹⁰²	03.9 ²¹	40	45	16	44	23 00	54	14 05	50
8	301	27.0		27	13.0 ¹⁰²	05.8 ¹⁹	35	50	20	45	18 54		13 47	50
9	316	27.2		41	42.2 ¹⁰²	07.6 ¹⁸	30	4 54	22	46	23 34	53	31 51	
10	331	27.4		56	11.3 ¹⁰¹	09.3 ¹⁷	20	5 00	26	48	** ** *	**	13 04	51
11	346	27.6	+1 46.9	70	40.5 ¹⁰²	+27 10.8 ¹⁵	10 N	5 04	5 29	5 50	** ** *	**	12 41	51
12	1	27.9	+1 45.9	85	09.6 ¹⁰¹	+27 12.3 ¹⁵	0	5 06	5 30	5 51	** ** *	**	12 20	51
13	16	28.1		99	38.8 ¹⁰²	13.5 ¹²	10 S	07	31	52	0 16	52	11 58	51
14	31	28.3		114	07.9 ¹⁰¹	14.7 ¹²	20	06	31	53	0 39	52	35 51	
15	46	28.5		128	37.1 ¹⁰²	15.7 ¹⁰	30	03	31	55	1 05	53	11 08	51
16	61	28.8		143	06.2 ¹⁰¹	16.6 ⁹	35	5 01	30	55	21 53		10 52	52
17	76	29.0	+1 41.1	157	35.4 ¹⁰²	+27 17.3 ⁷	40	4 58	5 29	5 56	1 39	53	10 34	51
18	91	29.2	+1 40.1	172	04.5 ¹⁰¹	+27 17.9 ⁶	45	4 54	5 28	5 57	2 01	54	10 11	52
19	106	29.4		39.1	186 33.6 ¹⁰¹	18.4 ⁵	50	48	26	58	29 55		9 43	51
20	121	29.6		38.2	201 02.8 ¹⁰²	18.8 ⁴	52	45	25	58	43 55		29 51	
21	136	29.9		37.2	215 31.9 ¹⁰¹	19.0 ²	54	42	24	59	2 59	55	9 13	51
22	151	30.1		36.2	230 01.1 ¹⁰²	19.1 ¹	56	39	22	5 59	3 18	55	8 54	51
23	166	30.3		35.3	244 30.2 ¹⁰¹	19.0 ¹	58	35	21	6 00	3 41	56	31 50	
24	181	30.5	+1 34.3	258	59.4 ¹⁰²	+27 18.9 ¹	60 S	4 30	5 19	6 00	4 12	57	8 00	49

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 0 ^h 12 ^m 4		Mag: -3.9 PMG: 11 ^h 23 ^m		Mag: -0.4 PMG: 5 ^h 07 ^m		Mag: -2.9 PMG: 0 ^h 33 ^m		Mag: +0.4 PMG: 21 ^h 38 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	356	53.7	189	19.5	+6 51.0	283	07.7	+21 37.1	351	47.4	+0 27.1	34	28.1	-16 12.0
1	11	56.2	204	19.1	49.8	298	09.0	37.2	6	50.2	26.9	49	30.6	12.1
2	26	58.6	219	18.7	48.6	313	10.3	37.4	21	52.9	26.8	64	33.2	12.1
3	42	01.1	234	18.3	47.4	328	11.6	37.6	36	55.7	26.7	79	35.8	12.1
4	57	03.6	249	17.8	46.3	343	12.9	37.8	51	58.5	26.5	94	38.4	12.2
5	72	06.0	264	17.4	+6 45.1	358	14.2	+21 38.0	67	01.2	+0 26.4	109	41.0	-16 12.2
6	87	08.5	279	17.0	+6 43.9	13	15.5	+21 38.1	82	04.0	+0 26.3	124	43.6	-16 12.3
7	102	11.0	294	16.6	42.7	28	16.8	38.3	97	06.7	26.1	139	46.2	12.3
8	117	13.4	309	16.1	41.5	43	18.0	38.5	112	09.5	26.0	154	48.8	12.4
9	132	15.9	324	15.7	40.3	58	19.3	38.7	127	12.3	25.9	169	51.4	12.4
10	147	18.4	339	15.3	39.1	73	20.6	38.8	142	15.0	25.8	184	54.0	12.4
11	162	20.8	354	14.9	+6 37.9	88	21.9	+21 39.0	157	17.8	+0 25.6	199	56.6	-16 12.5
12	177	23.3	9	14.4	+6 36.7	103	23.2	+21 39.2	172	20.5	+0 25.5	214	59.2	-16 12.5
13	192	25.8	24	14.0	35.5	118	24.5	39.4	187	23.3	25.4	230	01.8	12.6
14	207	28.2	39	13.6	34.4	133	25.8	39.6	202	26.1	25.2	245	04.4	12.6
15	222	30.7	54	13.2	33.2	148	27.1	39.7	217	28.8	25.1	260	07.0	12.6
16	237	33.1	69	12.7	32.0	163	28.4	39.9	232	31.6	25.0	275	09.6	12.7
17	252	35.6	84	12.3	+6 30.8	178	29.7	+21 40.1	247	34.4	+0 24.8	290	12.2	-16 12.7
18	267	38.1	99	11.9	+6 29.6	193	31.0	+21 40.3	262	37.1	+0 24.7	305	14.8	-16 12.8
19	282	40.5	114	11.5	28.4	208	32.3	40.4	277	39.9	24.6	320	17.4	12.8
20	297	43.0	129	11.1	27.2	223	33.6	40.6	292	42.7	24.4	335	20.0	12.8
21	312	45.5	144	10.6	26.0	238	34.9	40.8	307	45.4	24.3	350	22.5	12.9
22	327	47.9	159	10.2	24.8	253	36.2	41.0	322	48.2	24.2	5	25.1	12.9
23	342	50.4	174	09.8	23.6	268	37.5	41.1	337	50.9	24.0	20	27.7	13.0
24	357	52.9	189	09.4	+6 22.4	283	38.8	+21 41.3	352	53.7	+0 23.9	35	30.3	-16 13.0
Dif	—		-4	-12		+13	+2		+28	-1		+26		0

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15°9			Edad: 22 ^d 7 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2					Civil			R°		R°	
	PMG: 11 ^h 53 ^m 8			PMG: 6 ^h 58 ^m	R°: 51 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	181	30.5	+1 34.3	258	59.4	+27 18.9	3	60 N	18 09	18 51	19 42	21 27	81	17 24	23
1	196	30.8	33.3	273	28.6 ¹⁰²	18.6	5	58	08	48	35	21 56	75	16 55	29
2	211	31.0	32.4	287	57.8 ¹⁰²	18.1	5	56	07	44	29	22 18	71	33	32
3	226	31.2	31.4	302	26.9 ¹⁰¹	17.6	5	54	06	42	24	36	69	16 14	35
4	241	31.4	30.4	316	56.1 ¹⁰²	16.9	7	52	06	39	20	22 52	66	15 59	36
5	256	31.7	+1 29.5	331	25.3 ¹⁰²	+27 16.0	9	50	18 05	18 37	19 16	23 05	65	15 45	38
6	271	31.9	+1 28.5	345	54.5 ¹⁰²	+27 15.1	9	45	18 04	18 33	19 07	23 33	61	15 17	41
7	286	32.1	27.5	0	23.8 ¹⁰³	14.0	11	40	02	29	19 01	23 54	59	14 55	43
8	301	32.3	26.5	14	53.0 ¹⁰²	12.8	12	35	01	27	18 56	** ** *	**	37	45
9	316	32.5	25.6	29	22.3 ¹⁰³	11.4	14	30	18 01	24	52	** ** *	**	14 22	45
10	331	32.8	24.6	43	51.5 ¹⁰²	09.9	15	20	17 59	21	47	0 01	52	13 55	47
11	346	33.0	+1 23.6	58	20.8 ¹⁰³	+27 08.3	16	10 N	17 58	18 19	18 43	0 24	52	13 32	49
12	1	33.2	+1 22.7	72	50.1 ¹⁰³	+27 06.6	17	0	17 57	18 18	18 42	0 46	51	13 11	50
13	16	33.4	21.7	87	19.4 ¹⁰³	04.7	19	10 S	56	17	42	1 08	50	12 49	52
14	31	33.7	20.7	101	48.8 ¹⁰⁴	02.7	20	20	55	17	43	31	49	12 26	53
15	46	33.9	19.8	116	18.1 ¹⁰³	+27 00.6	21	30	55	18	46	1 58	48	11 59	55
16	61	34.1	18.8	130	47.5 ¹⁰⁴	+26 58.3	23	35	54	19	49	2 14	47	44	55
17	76	34.3	+1 17.8	145	16.9 ¹⁰⁴	+26 55.9	24	40	17 54	18 21	18 52	2 32	47	11 25	57
18	91	34.5	+1 16.8	159	46.3 ¹⁰⁴	+26 53.4	25	45	17 53	18 23	18 57	2 55	45	11 03	58
19	106	34.8	15.9	174	15.7 ¹⁰⁴	50.7	27	50	53	25	19 03	3 24	43	10 34	61
20	121	35.0	14.9	188	45.2 ¹⁰⁵	48.0	27	52	53	26	06	38	42	20	62
21	136	35.2	13.9	203	14.7 ¹⁰⁵	45.1	29	54	52	28	09	3 54	41	10 04	63
22	151	35.4	13.0	217	44.2 ¹⁰⁵	42.0	31	56	52	29	13	4 13	39	9 45	65
23	166	35.7	12.0	232	13.7 ¹⁰⁵	38.9	31	58	52	31	17	4 37	37	9 21	68
24	181	35.9	+1 11.0	246	43.3 ¹⁰⁶	+26 35.6	33	60 S	17 51	18 33	19 22	5 09	32	8 49	73
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 08 ^m 5			Mag: -3.9 PMG: 11 ^h 24 ^m			Mag: -0.4 PMG: 5 ^h 05 ^m			Mag: -2.9 PMG: 0 ^h 28 ^m			Mag: +0.4 PMG: 21 ^h 34 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'
0	357	52.9	189 09.4	+6 22.4	283 38.8	+21 41.3	352 53.7	+0 23.9	35 30.3	-16 13.0					
1	12	55.3	204 08.9	21.2	298 40.1	41.5	7 56.5	23.8	50 32.9	13.1					
2	27	57.8	219 08.5	20.0	313 41.4	41.7	22 59.2	23.6	65 35.5	13.1					
3	43	00.2	234 08.1	18.8	328 42.7	41.8	38 02.0	23.5	80 38.1	13.1					
4	58	02.7	249 07.7	17.6	343 44.0	42.0	53 04.8	23.4	95 40.7	13.2					
5	73	05.2	264 07.3	+6 16.4	358 45.3	+21 42.2	68 07.5	+0 23.2	110 43.3	-16 13.2					
6	88	07.6	279 06.8	+6 15.2	13 46.6	+21 42.4	83 10.3	+0 23.1	125 45.9	-16 13.3					
7	103	10.1	294 06.4	14.1	28 47.9	42.5	98 13.0	23.0	140 48.5	13.3					
8	118	12.6	309 06.0	12.9	43 49.3	42.7	113 15.8	22.8	155 51.1	13.3					
9	133	15.0	324 05.6	11.7	58 50.6	42.9	128 18.6	22.7	170 53.7	13.4					
10	148	17.5	339 05.2	10.5	73 51.9	43.1	143 21.3	22.6	185 56.3	13.4					
11	163	20.0	354 04.7	+6 09.3	88 53.2	+21 43.2	158 24.1	+0 22.4	200 58.8	-16 13.5					
12	178	22.4	9 04.3	+6 08.1	103 54.5	+21 43.4	173 26.9	+0 22.3	216 01.4	-16 13.5					
13	193	24.9	24 03.9	06.9	118 55.8	43.6	188 29.6	22.2	231 04.0	13.5					
14	208	27.4	39 03.5	05.7	133 57.1	43.8	203 32.4	22.0	246 06.6	13.6					
15	223	29.8	54 03.1	04.5	148 58.4	43.9	218 35.2	21.9	261 09.2	13.6					
16	238	32.3	69 02.7	03.3	163 59.7	44.1	233 37.9	21.8	276 11.8	13.7					
17	253	34.7	84 02.2	+6 02.1	179 01.1	+21 44.3	248 40.7	+0 21.6	291 14.4	-16 13.7					
18	268	37.2	99 01.8	+6 00.9	194 02.4	+21 44.4	263 43.5	+0 21.5	306 17.0	-16 13.7					
19	283	39.7	114 01.4	+5 59.7	209 03.7	44.6	278 46.2	21.4	321 19.6	13.8					
20	298	42.1	129 01.0	58.5	224 05.0	44.8	293 49.0	21.2	336 22.2	13.8					
21	313	44.6	144 00.6	57.3	239 06.3	45.0	308 51.8	21.1	351 24.8	13.9					
22	328	47.1	159 00.1	56.1	254 07.6	45.1	323 54.5	21.0	6 27.4	13.9					
23	343	49.5	173 59.7	54.9	269 09.0	45.3	338 57.3	20.8	21 29.9	13.9					
24	358	52.0	188 59.3	+5 53.7	284 10.3	+21 45.5	354 00.0	+0 20.7	36 32.5	-16 14.0					
Dif	—		-4	-12	+13	+2	+28	-1	+26	0					

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna			
	SD: 15'9 PMG: 11 ^h 53 ^m 1			Edad: 24 ^d 7 PHE { SD: 14'8 PMG: 8 ^h 38 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m	h m m	m		
0	181	41.2	+0	47.7	234	42.3	+24	39.6	60 N	18 03	18 45	19 35	***	***	***	17 58	6	
1	196	41.4		46.8	249	12.7 ¹¹⁴		33.3 ⁶³	58	03	42	29	***	***	***	41	11	
2	211	41.7		45.8	263	43.2 ¹¹⁵		26.8 ⁶⁵	56	02	39	23	***	***	***	26	15	
3	226	41.9		44.8	278	13.7 ¹¹⁵		20.3 ⁶⁵	54	01	37	19	***	***	***	14	17	
4	241	42.1		43.8	292	44.2 ¹¹⁵		13.6 ⁶⁷	52	01	35	15	***	***	***	17 02	21	
5	256	42.3	+0	42.9	307	14.8 ¹¹⁶	+24	06.8 ⁶⁸	50	18 01	18 33	19 11	0	10	69	16 52	23	
6	271	42.5	+0	41.9	321	45.4 ¹¹⁶	+23	59.9 ⁶⁹	45	18 00	18 29	19 03	0	34	65	16 32	27	
7	286	42.8		40.9	336	16.1 ¹¹⁷		52.9 ⁷⁰	40	17 59	26	18 58	0	53	62	15	30	
8	301	43.0		40.0	350	46.8 ¹¹⁷		45.8 ⁷¹	35	58	24	53	1	09	60	16 00	34	
9	316	43.2		39.0	5	17.6 ¹¹⁸		38.5 ⁷³	30	58	22	50	23	58		15 48	36	
10	331	43.4		38.0	19	48.4 ¹¹⁸		31.2 ⁷³	20	57	19	45	1	47	54	26	40	
11	346	43.6	+0	37.0	34	19.2 ¹¹⁸	+23	23.7 ⁷⁵	10 N	17 57	18 18	18 42	2	07	51	15 07	44	
12	1	43.9	+0	36.1	48	50.1 ¹¹⁹	+23	16.1 ⁷⁶	0	17 56	18 17	18 41	2	26	48	14 50	47	
13	16	44.1		35.1	63	21.0 ¹¹⁹		08.5 ⁷⁶	10 S	56	17	41	2	45	45	32	50	
14	31	44.3		34.1	77	52.0 ¹²⁰	+23	00.7 ⁷⁸	20	56	18	43	3	06	42	14 13	54	
15	46	44.5		33.1	92	23.0 ¹²⁰	+22	52.8 ⁷⁹	30	56	20	47	29	38		13 51	58	
16	61	44.7		32.2	106	54.1 ¹²¹		44.8 ⁸⁰	35	56	21	50	43	36		38	60	
17	76	45.0	+0	31.2	121	25.2 ¹²¹	+22	36.7 ⁸¹	40	17 56	18 23	18 54	3	58	34	13 23	63	
18	91	45.2	+0	30.2	135	56.3 ¹²¹	+22	28.4 ⁸³	45	17 56	18 25	18 59	4	17	30	13 05	67	
19	106	45.4		29.3	150	27.5 ¹²²		20.1 ⁸³	50	56	28	19 06	40	26		12 43	71	
20	121	45.6		28.3	164	58.8 ¹²³		11.7 ⁸⁴	52	56	30	09	4	51	24	32	74	
21	136	45.9		27.3	179	30.1 ¹²³	+22	03.2 ⁸⁵	54	56	31	13	5	04	21	20	76	
22	151	46.1		26.3	194	01.4 ¹²³	+21	54.5 ⁸⁷	56	56	33	17	19	17		12 06	80	
23	166	46.3		25.4	208	32.8 ¹²⁴		45.8 ⁸⁷	58	56	35	22	36	13		11 49	85	
24	181	46.5	+0	24.4	223	04.2 ¹²⁴	+21	36.9 ⁸⁹	60 S	17 56	18 38	19 28	5	56	8	11 29	90	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 0 ^h 00 ^m 6			Mag: -3.9 PMG: 11 ^h 25 ^m			Mag: -0.4 PMG: 5 ^h 01 ^m			Mag: -2.9 PMG: 0 ^h 20 ^m			Mag: +0.4 PMG: 21 ^h 26 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	359	51.1	188	49.4	+5	24.7	284	42.2	+21	49.5	355	06.4	+0	17.5	37	34.7	-16	14.9
1	14	53.6	203	49.0		23.5	299	43.5		49.7	10	09.2		17.4	52	37.3		15.0
2	29	56.1	218	48.5		22.3	314	44.9		49.9	25	12.0		17.3	67	39.8		15.0
3	44	58.5	233	48.1		21.1	329	46.2		50.0	40	14.7		17.1	82	42.4		15.0
4	60	01.0	248	47.7		19.9	344	47.5		50.2	55	17.5		17.0	97	45.0		15.1
5	75	03.5	263	47.3	+5	18.7	359	48.9	+21	50.4	70	20.3	+0	16.9	112	47.6	-16	15.1
6	90	05.9	278	46.9	+5	17.4	14	50.2	+21	50.5	85	23.0	+0	16.7	127	50.2	-16	15.1
7	105	08.4	293	46.5		16.2	29	51.6		50.7	100	25.8		16.6	142	52.8		15.2
8	120	10.8	308	46.1		15.0	44	52.9		50.9	115	28.6		16.5	157	55.4		15.2
9	135	13.3	323	45.7		13.8	59	54.3		51.0	130	31.3		16.3	172	57.9		15.3
10	150	15.8	338	45.3		12.6	74	55.6		51.2	145	34.1		16.2	188	00.5		15.3
11	165	18.2	353	44.8	+5	11.4	89	57.0	+21	51.4	160	36.9	+0	16.1	203	03.1	-16	15.3
12	180	20.7	8	44.4	+5	10.2	104	58.3	+21	51.5	175	39.6	+0	15.9	218	05.7	-16	15.4
13	195	23.2	23	44.0		09.0	119	59.6		51.7	190	42.4		15.8	233	08.3		15.4
14	210	25.6	38	43.6		07.7	135	01.0		51.9	205	45.2		15.6	248	10.9		15.5
15	225	28.1	53	43.2		06.5	150	02.3		52.0	220	47.9		15.5	263	13.5		15.5
16	240	30.6	68	42.8		05.3	165	03.7		52.2	235	50.7		15.4	278	16.0		15.5
17	255	33.0	83	42.4	+5	04.1	180	05.0	+21	52.4	250	53.5	+0	15.2	293	18.6	-16	15.6
18	270	35.5	98	42.0	+5	02.9	195	06.4	+21	52.5	265	56.2	+0	15.1	308	21.2	-16	15.6
19	285	38.0	113	41.6		01.7	210	07.8		52.7	280	59.0		15.0	323	23.8		15.6
20	300	40.4	128	41.2	+5	00.5	225	09.1		52.9	296	01.8		14.8	338	26.4		15.7
21	315	42.9	143	40.7	+4	59.2	240	10.5		53.0	311	04.6		14.7	353	29.0		15.7
22	330	45.3	158	40.3		58.0	255	11.8		53.2	326	07.3		14.6	8	31.6		15.8
23	345	47.8	173	39.9		56.8	270	13.2		53.4	341	10.1		14.4	23	34.1		15.8
24	0	50.3	188	39.5	+4	55.6	285	14.5	+21	53.5	356	12.9	+0	14.3	38	36.7	-16	15.8
Dif	—			-4 -12			+13 +2			+28 -1			+26 0					

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 52 ^m 7			Edad: 25 ^d 7 PHE { 4 ^h : 54'7 12 ^h : 54'8 20 ^h : 55'0 PMG: 9 ^h 26 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	181	46.5	+0	223	04.2	+21	36.9	60 N	4 12	5 02	5 44	0 16	91	18 04	3
1	196	46.7		237	35.6 ¹²⁴		28.0 ⁸⁹	58	18	05	45	33	85	17 52	7
2	211	47.0		252	07.1 ¹²⁵		18.9 ⁹¹	56	23	08	45	47	81	41	10
3	226	47.2		266	38.7 ¹²⁶		09.8 ⁹¹	54	28	10	45	0 59	78	31	14
4	241	47.4		281	10.3 ¹²⁶	+21	00.6 ⁹²	52	32	12	46	1 10	75	23	16
5	256	47.6	+0	295	41.9 ¹²⁶	+20	51.2 ⁹⁴	50	4 36	5 14	5 46	1 19	73	17 15	19
6	271	47.8	+0	310	13.6 ¹²⁷	+20	41.8 ⁹⁴	45	4 43	5 18	5 47	1 39	68	16 59	23
7	286	48.1		324	45.3 ¹²⁷		32.2 ⁹⁶	40	49	20	47	1 55	64	45	27
8	301	48.3		339	17.1 ¹²⁸		22.6 ⁹⁶	35	53	23	48	2 09	60	34	30
9	316	48.5		353	48.9 ¹²⁸		12.9 ⁹⁷	30	4 56	24	48	21	58	24	33
10	331	48.7		8	20.8 ¹²⁹	+20	03.0 ⁹⁹	20	5 01	27	49	41	53	16 06	38
11	346	48.9	+0	22	52.7 ¹²⁹	+19	53.1 ⁹⁹	10 N	5 04	5 28	5 49	2 58	50	15 51	42
12	1	49.2	+0	37	24.6 ¹²⁹	+19	43.1 ¹⁰⁰	0	5 05	5 29	5 49	3 14	46	15 37	45
13	16	49.4		51	56.6 ¹³⁰		33.0 ¹⁰¹	10 S	04	29	50	30	43	22	49
14	31	49.6		66	28.7 ¹³¹		22.8 ¹⁰²	20	5 02	28	50	3 48	38	15 07	53
15	46	49.8		81	00.7 ¹³⁰		12.5 ¹⁰³	30	4 58	26	50	4 07	35	14 49	57
16	61	50.0		95	32.8 ¹³¹	+19	02.1 ¹⁰⁴	35	55	24	50	19	31	38	61
17	76	50.3	+0	110	05.0 ¹³²	+18	51.6 ¹⁰⁵	40	4 51	5 23	5 50	4 32	28	14 26	64
18	91	50.5	+0	124	37.2 ¹³²	+18	41.1 ¹⁰⁵	45	4 46	5 20	5 49	4 47	25	14 12	67
19	106	50.7		139	09.4 ¹³²		30.4 ¹⁰⁷	50	39	17	49	5 06	20	13 54	73
20	121	50.9		153	41.7 ¹³³		19.7 ¹⁰⁷	52	36	15	49	15	18	46	75
21	136	51.1		168	14.0 ¹³³	+18	08.9 ¹⁰⁸	54	32	14	49	25	15	36	78
22	151	51.4		182	46.4 ¹³⁴	+17	58.0 ¹⁰⁹	56	28	12	49	36	12	26	81
23	166	51.6		197	18.8 ¹³⁴		47.0 ¹¹⁰	58	23	09	49	5 49	8	13 14	85
24	181	51.8	+0	211	51.2 ¹³⁴	+17	35.9 ¹¹¹	60 S	4 17	5 07	5 48	6 04	4	12 59	90
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 52 ^m 7		Mag: -3.9 PMG: 11 ^h 26 ^m			Mag: -0.4 PMG: 4 ^h 59 ^m			Mag: -2.9 PMG: 0 ^h 15 ^m			Mag: +0.5 PMG: 21 ^h 22 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	0	50.3	188	39.5	+4	55.6	285	14.5	+21	53.5	356	12.9	+0	14.3	
1	15	52.7	203	39.1		54.4	300	15.9		53.7	11	15.6		14.2	
2	30	55.2	218	38.7		53.2	315	17.2		53.8	26	18.4		14.0	
3	45	57.7	233	38.3		51.9	330	18.6		54.0	41	21.2		13.9	
4	61	00.1	248	37.9		50.7	345	20.0		54.2	56	23.9		13.8	
5	76	02.6	263	37.5	+4	49.5	0	21.3	+21	54.3	71	26.7	+0	13.6	
6	91	05.1	278	37.1	+4	48.3	15	22.7	+21	54.5	86	29.5	+0	13.5	
7	106	07.5	293	36.7		47.1	30	24.0		54.7	101	32.2		13.4	
8	121	10.0	308	36.3		45.9	45	25.4		54.8	116	35.0		13.2	
9	136	12.5	323	35.8		44.6	60	26.8		55.0	131	37.8		13.1	
10	151	14.9	338	35.4		43.4	75	28.1		55.1	146	40.5		13.0	
11	166	17.4	353	35.0	+4	42.2	90	29.5	+21	55.3	161	43.3	+0	12.8	
12	181	19.8	8	34.6	+4	41.0	105	30.9	+21	55.5	176	46.1	+0	12.7	
13	196	22.3	23	34.2		39.8	120	32.2		55.6	191	48.8		12.6	
14	211	24.8	38	33.8		38.5	135	33.6		55.8	206	51.6		12.4	
15	226	27.2	53	33.4		37.3	150	35.0		56.0	221	54.4		12.3	
16	241	29.7	68	33.0		36.1	165	36.3		56.1	236	57.2		12.2	
17	256	32.2	83	32.6	+4	34.9	180	37.7	+21	56.3	251	59.9	+0	12.0	
18	271	34.6	98	32.2	+4	33.7	195	39.1	+21	56.4	267	02.7	+0	11.9	
19	286	37.1	113	31.8		32.4	210	40.4		56.6	282	05.5		11.8	
20	301	39.6	128	31.4		31.2	225	41.8		56.8	297	08.2		11.6	
21	316	42.0	143	31.0		30.0	240	43.2		56.9	312	11.0		11.5	
22	331	44.5	158	30.6		28.8	255	44.6		57.1	327	13.8		11.4	
23	346	46.9	173	30.2		27.6	270	45.9		57.2	342	16.5		11.2	
24	1	49.4	188	29.8	+4	26.3	285	47.3	+21	57.4	357	19.3	+0	11.1	
Dif	—		-4	-12			+14	+2			+28	-1		+26	

UT	SOL		● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 15°9		Edad: 26 ^d 7 PHE	SD: 15°0		R°: 44 ^m			Civil		Náutico	Hora	R°	Hora	R°			
	PMG: 11 ^h 52 ^m 4	PMG: 10 ^h 11 ^m		Civil	Náutico													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif												
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m				
0	181	51.8	+0	01.0	211	51.2	+17 35.9	60 N	17 57	18 39	19 28	1 47	89	18 07 2				
1	196	52.0	+0	00.1	226	23.7 ¹³⁵	24.7 ¹¹²	58	57	36	23	1 58	85	17 59 5				
2	211	52.2	-0	00.9	240	56.2 ¹³⁵	13.4 ¹¹³	56	57	34	18	2 08	81	51 9				
3	226	52.4		01.9	255	28.8 ¹³⁶	+17 02.1 ¹¹³	54	56	32	13	17 78		45 11				
4	241	52.7		02.8	270	01.4 ¹³⁶	+16 50.7 ¹¹⁴	52	56	30	10	25 75		39 13				
5	256	52.9	-0	03.8	284	34.0 ¹³⁶	+16 39.2 ¹¹⁵	50	17 56	18 28	19 06	2 32	73	17 34 15				
6	271	53.1	-0	04.8	299	06.7 ¹³⁷	+16 27.6 ¹¹⁶	45	17 56	18 25	18 59	2 47	68	17 22 20				
7	286	53.3		05.8	313	39.4 ¹³⁷	16.0 ¹¹⁶	40	56	23	54	2 59	64	12 25				
8	301	53.5		06.7	328	12.1 ¹³⁷	+16 04.2 ¹¹⁸	35	56	21	50	3 09	61	17 04 27				
9	316	53.8		07.7	342	44.9 ¹³⁸	+15 52.4 ¹¹⁸	30	56	19	47	19 57		16 57 30				
10	331	54.0		08.7	357	17.7 ¹³⁸	40.5 ¹¹⁹	20	55	17	43	34 53		44 35				
11	346	54.2	-0	09.7	11	50.6 ¹³⁹	+15 28.6 ¹¹⁹	10 N	17 55	18 16	18 41	3 48	48	16 33 39				
12	1	54.4	-0	10.6	26	23.4 ¹³⁸	+15 16.5 ¹²¹	0	17 56	18 16	18 40	4 00	45	16 22 44				
13	16	54.6		11.6	40	56.3 ¹³⁹	+15 04.4 ¹²¹	10 S	56	17	41	13 41		11 48				
14	31	54.9		12.6	55	29.3 ¹⁴⁰	+14 52.2 ¹²²	20	56	18	44	26 37		16 00 52				
15	46	55.1		13.6	70	02.3 ¹⁴⁰	39.9 ¹²³	30	57	21	49	42 31		15 46 58				
16	61	55.3		14.5	84	35.3 ¹⁴⁰	27.6 ¹²³	35	57	22	52	4 50	29	39 60				
17	76	55.5	-0	15.5	99	08.3 ¹⁴⁰	+14 15.2 ¹²⁴	40	17 58	18 25	18 56	5 00	26	15 30 64				
18	91	55.7	-0	16.5	113	41.4 ¹⁴¹	+14 02.7 ¹²⁵	45	17 58	18 27	19 02	5 12	22	15 19 69				
19	106	55.9		17.5	128	14.5 ¹⁴¹	+13 50.2 ¹²⁵	50	59	31	09	26 17		07 73				
20	121	56.2		18.4	142	47.6 ¹⁴¹	37.6 ¹²⁶	52	59	33	13	33 14		15 01 76				
21	136	56.4		19.4	157	20.7 ¹⁴¹	24.9 ¹²⁷	54	17 59	35	17	40 12		14 54 79				
22	151	56.6		20.4	171	53.9 ¹⁴²	+13 12.1 ¹²⁸	56	18 00	37	21	48 9		47 81				
23	166	56.8		21.3	186	27.1 ¹⁴²	+12 59.3 ¹²⁸	58	00	40	27	5 57 6		39 85				
24	181	57.0	-0	22.3	201	00.4 ¹⁴³	+12 46.4 ¹²⁹	60 S	18 01	18 43	19 33	6 08 2		14 29 89				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 48 ^m 8		Mag: -3.9 PMG: 11 ^h 26 ^m		Mag: -0.5 PMG: 4 ^h 56 ^m		Mag: -2.9 PMG: 0 ^h 11 ^m		Mag: +0.5 PMG: 21 ^h 18 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	1	49.4	188	29.8	+4	26.3	285	47.3	+21	57.4	357	19.3	+0	11.1	39	38.7	-16	16.7
1	16	51.9	203	29.3		25.1	300	48.7		57.6	12	22.1		11.0	54	41.3		16.8
2	31	54.3	218	28.9		23.9	315	50.1		57.7	27	24.8		10.8	69	43.9		16.8
3	46	56.8	233	28.5		22.7	330	51.4		57.9	42	27.6		10.7	84	46.4		16.8
4	61	59.3	248	28.1		21.4	345	52.8		58.0	57	30.4		10.6	99	49.0		16.9
5	77	01.7	263	27.7	+4	20.2	0	54.2	+21	58.2	72	33.2	+0	10.4	114	51.6	-16	16.9
6	92	04.2	278	27.3	+4	19.0	15	55.6	+21	58.4	87	35.9	+0	10.3	129	54.2	-16	16.9
7	107	06.7	293	26.9		17.8	30	56.9		58.5	102	38.7		10.2	144	56.8		17.0
8	122	09.1	308	26.5		16.5	45	58.3		58.7	117	41.5		10.0	159	59.3		17.0
9	137	11.6	323	26.1		15.3	60	59.7		58.8	132	44.2		09.9	175	01.9		17.0
10	152	14.1	338	25.7		14.1	76	01.1		59.0	147	47.0		09.8	190	04.5		17.1
11	167	16.5	353	25.3	+4	12.9	91	02.5	+21	59.1	162	49.8	+0	09.6	205	07.1	-16	17.1
12	182	19.0	8	24.9	+4	11.6	106	03.9	+21	59.3	177	52.5	+0	09.5	220	09.7	-16	17.1
13	197	21.4	23	24.5		10.4	121	05.2		59.5	192	55.3		09.4	235	12.2		17.2
14	212	23.9	38	24.1		09.2	136	06.6		59.6	207	58.1		09.2	250	14.8		17.2
15	227	26.4	53	23.7		08.0	151	08.0		59.8	223	00.9		09.1	265	17.4		17.3
16	242	28.8	68	23.3		06.7	166	09.4	+21	59.9	238	03.6		09.0	280	20.0		17.3
17	257	31.3	83	22.9	+4	05.5	181	10.8	+22	00.1	253	06.4	+0	08.8	295	22.6	-16	17.3
18	272	33.8	98	22.5	+4	04.3	196	12.2	+22	00.2	268	09.2	+0	08.7	310	25.1	-16	17.4
19	287	36.2	113	22.1		03.1	211	13.6		00.4	283	11.9		08.6	325	27.7		17.4
20	302	38.7	128	21.7		01.8	226	15.0		00.6	298	14.7		08.4	340	30.3		17.4
21	317	41.2	143	21.3	+4	00.6	241	16.4		00.7	313	17.5		08.3	355	32.9		17.5
22	332	43.6	158	20.9	+3	59.4	256	17.7		00.9	328	20.2		08.2	10	35.5		17.5
23	347	46.1	173	20.5		58.2	271	19.1		01.0	343	23.0		08.0	25	38.0		17.5
24	2	48.5	188	20.1	+3	56.9	286	20.5	+22	01.2	358	25.8	+0	07.9	40	40.6	-16	17.6
Dif	—		-4	-12		+14	+2		+28	-1		+26		0				

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 52 ^m 0			Edad: 27 ^d 7 PHE { 4 ^h : 55'6 12 ^h : 55'8 20 ^h : 56'0 R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	181	57.0	-0	201	00.4	+12	46.4	4	17	5	07	5	49	3	16
1	196	57.3		215	33.6 ¹⁴²		33.5 ¹²⁹	23	10			49		23	85
2	211	57.5		230	06.9 ¹⁴³		20.5 ¹³⁰	28	12			49		29	82
3	226	57.7		244	40.2 ¹⁴³	+12	07.4 ¹³¹	32	14			49		35	79
4	241	57.9		259	13.5 ¹⁴³	+11	54.2 ¹³²	36	15			49		40	76
5	256	58.1	-0	273	46.9 ¹⁴⁴	+11	41.0 ¹³²	4	39	5	17	5	49	3	45
6	271	58.3	-0	288	20.3 ¹⁴⁴	+11	27.8 ¹³²	4	46	5	20	5	49	3	55
7	286	58.6		302	53.6 ¹⁴³		14.5 ¹³³	51	22			49		4	03
8	301	58.8		317	27.1 ¹⁴⁵	+11	01.1 ¹³⁴	55	24			49		10	61
9	316	59.0		332	00.5 ¹⁴⁴	+10	47.7 ¹³⁴	4	58	25		49		16	58
10	331	59.2		346	34.0 ¹⁴⁵		34.2 ¹³⁵	5	02	27		49		27	52
11	346	59.4	-0	1	07.4 ¹⁴⁴	+10	20.6 ¹³⁶	5	04	5	28	5	49	4	36
12	1	59.6	-0	15	40.9 ¹⁴⁵	+10	07.0 ¹³⁶	5	04	5	28	5	49	4	45
13	16	59.9		30	14.4 ¹⁴⁵	+9	53.4 ¹³⁶	03	27			48		4	54
14	32	00.1		44	47.9 ¹⁴⁵		39.6 ¹³⁸	5	00	26		48		5	03
15	47	00.3		59	21.5 ¹⁴⁶		25.9 ¹³⁷	4	55	23		47		13	30
16	62	00.5		73	55.0 ¹⁴⁵	+9	12.1 ¹³⁸	52	21			47		19	27
17	77	00.7	-0	88	28.6 ¹⁴⁶	+8	58.2 ¹³⁹	4	48	5	19	5	46	5	26
18	92	00.9	-0	103	02.2 ¹⁴⁶	+8	44.3 ¹³⁹	4	42	5	16	5	46	5	34
19	107	01.2		117	35.7 ¹⁴⁵		30.3 ¹⁴⁰	34	12			45		43	15
20	122	01.4		132	09.3 ¹⁴⁶		16.3 ¹⁴⁰	31	11			44		47	13
21	137	01.6		146	43.0 ¹⁴⁷	+8	02.3 ¹⁴⁰	27	09			44		52	10
22	152	01.8		161	16.6 ¹⁴⁶	+7	48.2 ¹⁴¹	22	06			43		5	57
23	167	02.0		175	50.2 ¹⁴⁶		34.0 ¹⁴²	17	04			43		6	03
24	182	02.2	-0	190	23.8 ¹⁴⁶	+7	19.8 ¹⁴²	4	10	5	01	5	42	6	10

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 23 ^h 44 ^m 9		Mag: -3.9 PMG: 11 ^h 27 ^m		Mag: -0.5 PMG: 4 ^h 54 ^m		Mag: -2.9 PMG: 0 ^h 06 ^m		Mag: +0.5 PMG: 21 ^h 14 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	2	48.5	188	20.1	+3	56.9	286	20.5	+22	01.2	358	25.8	+0	07.9	40	40.6	-16	17.6	
1	17	51.0	203	19.7		55.7	301	21.9		01.3	13	28.6		07.8	55	43.2		17.6	
2	32	53.5	218	19.3		54.5	316	23.3		01.5	28	31.3		07.6	70	45.8		17.6	
3	47	55.9	233	18.9		53.2	331	24.7		01.7	43	34.1		07.5	85	48.3		17.7	
4	62	58.4	248	18.5		52.0	346	26.1		01.8	58	36.9		07.4	100	50.9		17.7	
5	78	00.9	263	18.1	+3	50.8	1	27.5	+22	02.0	73	39.6	+0	07.2	115	53.5	-16	17.7	
6	93	03.3	278	17.7	+3	49.6	16	28.9	+22	02.1	88	42.4	+0	07.1	130	56.1	-16	17.8	
7	108	05.8	293	17.3		48.3	31	30.3		02.3	103	45.2		07.0	145	58.7		17.8	
8	123	08.3	308	16.9		47.1	46	31.7		02.4	118	47.9		06.8	161	01.2		17.9	
9	138	10.7	323	16.5		45.9	61	33.1		02.6	133	50.7		06.7	176	03.8		17.9	
10	153	13.2	338	16.1		44.6	76	34.5		02.7	148	53.5		06.5	191	06.4		17.9	
11	168	15.7	353	15.7	+3	43.4	91	35.9	+22	02.9	163	56.3	+0	06.4	206	09.0	-16	18.0	
12	183	18.1	8	15.3	+3	42.2	106	37.3	+22	03.1	178	59.0	+0	06.3	221	11.5	-16	18.0	
13	198	20.6	23	14.9		41.0	121	38.7		03.2	194	01.8		06.1	236	14.1		18.0	
14	213	23.0	38	14.5		39.7	136	40.1		03.4	209	04.6		06.0	251	16.7		18.1	
15	228	25.5	53	14.1		38.5	151	41.5		03.5	224	07.3		05.9	266	19.3		18.1	
16	243	28.0	68	13.7		37.3	166	42.9		03.7	239	10.1		05.7	281	21.8		18.1	
17	258	30.4	83	13.3	+3	36.0	181	44.4	+22	03.8	254	12.9	+0	05.6	296	24.4	-16	18.2	
18	273	32.9	98	12.9	+3	34.8	196	45.8	+22	04.0	269	15.7	+0	05.5	311	27.0	-16	18.2	
19	288	35.4	113	12.5		33.6	211	47.2		04.1	284	18.4		05.3	326	29.6		18.2	
20	303	37.8	128	12.1		32.3	226	48.6		04.3	299	21.2		05.2	341	32.1		18.3	
21	318	40.3	143	11.7		31.1	241	50.0		04.4	314	24.0		05.1	356	34.7		18.3	
22	333	42.8	158	11.3		29.9	256	51.4		04.6	329	26.7		04.9	11	37.3		18.3	
23	348	45.2	173	10.9		28.6	271	52.8		04.7	344	29.5		04.8	26	39.9		18.4	
24	3	47.7	188	10.5	+3	27.4	286	54.2	+22	04.9	359	32.3	+0	04.7	41	42.4	-16	18.4	
Dif	—		-4	-12			+14	+2			+28	-1			+26				

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 51 ^m 7			Edad: 28 ^d 7 PHE { 4 ^h : 56'2 12 ^h : 56'3 20 ^h : 56'5 R°: 44 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	182	02.2	-0 45.7	190	23.8	+7 19.8		60 N	17 51	18 32	19 22	4 44 89	18 10 1		
1	197	02.5	46.7	204	57.5 ¹⁴⁷	+7 05.6 ¹⁴²		58	51	30	17	48 85	08 4		
2	212	02.7	47.6	219	31.1 ¹⁴⁶	+6 51.3 ¹⁴³		56	51	28	12	51 82	07 7		
3	227	02.9	48.6	234	04.8 ¹⁴⁷	37.0 ¹⁴³		54	51	27	08	54 79	06 9		
4	242	03.1	49.6	248	38.4 ¹⁴⁶	22.6 ¹⁴⁴		52	52	25	05	56 77	05 11		
5	257	03.3	-0 50.6	263	12.1 ¹⁴⁷	+6 08.2 ¹⁴⁴		50	17 52	18 24	19 02	4 58 75	18 04 14		
6	272	03.5	-0 51.5	277	45.7 ¹⁴⁶	+5 53.8 ¹⁴⁴		45	17 52	18 21	18 56	5 03 70	18 01 19		
7	287	03.8	52.5	292	19.4 ¹⁴⁷	39.3 ¹⁴⁵		40	52	19	51	07 65	17 59 23		
8	302	04.0	53.5	306	53.0 ¹⁴⁶	24.8 ¹⁴⁵		35	53	18	47	11 61	58 26		
9	317	04.2	54.5	321	26.7 ¹⁴⁷	+5 10.3 ¹⁴⁵		30	53	17	45	14 58	56 30		
10	332	04.4	55.4	336	00.3 ¹⁴⁶	+4 55.7 ¹⁴⁶		20	54	16	41	19 53	54 34		
11	347	04.6	-0 56.4	350	34.0 ¹⁴⁷	+4 41.1 ¹⁴⁶		10 N	17 54	18 15	18 40	5 24 48	17 51 40		
12	2	04.8	-0 57.4	5	07.6 ¹⁴⁶	+4 26.5 ¹⁴⁶		0	17 55	18 16	18 40	5 28 44	17 49 44		
13	17	05.0	58.4	19	41.3 ¹⁴⁷	+4 11.8 ¹⁴⁷		10 S	56	17	41	33 39	47 48		
14	32	05.3	-0 59.3	34	14.9 ¹⁴⁶	+3 57.1 ¹⁴⁷		20	57	19	44	38 34	45 53		
15	47	05.5	-1 00.3	48	48.5 ¹⁴⁶	42.3 ¹⁴⁸		30	58	22	50	43 29	42 59		
16	62	05.7	01.3	63	22.1 ¹⁴⁶	27.6 ¹⁴⁷		35	59	24	54	46 26	40 62		
17	77	05.9	-1 02.2	77	55.8 ¹⁴⁷	+3 12.8 ¹⁴⁸		40	17 59	18 27	18 58	5 49 23	17 39 65		
18	92	06.1	-1 03.2	92	29.4 ¹⁴⁶	+2 58.0 ¹⁴⁸		45	18 01	18 30	19 04	5 53 19	17 36 70		
19	107	06.3	04.2	107	02.9 ¹⁴⁵	43.1 ¹⁴⁹		50	02	34	13	5 58 14	34 75		
20	122	06.6	05.2	121	36.5 ¹⁴⁶	28.3 ¹⁴⁸		52	02	36	16	6 00 12	33 77		
21	137	06.8	06.1	136	10.1 ¹⁴⁶	+2 13.4 ¹⁴⁹		54	03	39	21	02 10	31 80		
22	152	07.0	07.1	150	43.6 ¹⁴⁵	+1 58.5 ¹⁴⁹		56	04	41	26	05 7	30 83		
23	167	07.2	08.1	165	17.2 ¹⁴⁶	43.6 ¹⁴⁹		58	05	44	32	08 4	28 86		
24	182	07.4	-1 09.1	179	50.7 ¹⁴⁵	+1 28.6 ¹⁵⁰		60 S	18 06	18 47	19 38	6 11 1	17 27 89		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 40 ^m 9		Mag: -3.9 PMG: 11 ^h 28 ^m			Mag: -0.5 PMG: 4 ^h 52 ^m			Mag: -2.9 PMG: 0 ^h 02 ^m			Mag: +0.5 PMG: 21 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	'	°	'	
0	3	47.7	188	10.5	+3 27.4	286	54.2	+22 04.9	359	32.3	+0 04.7	41	42.4	-16 18.4	
1	18	50.1	203	10.1	26.2	301	55.6	05.0	14	35.1	04.5	56	45.0	18.4	
2	33	52.6	218	09.7	24.9	316	57.1	05.2	29	37.8	04.4	71	47.6	18.5	
3	48	55.1	233	09.3	23.7	331	58.5	05.4	44	40.6	04.3	86	50.2	18.5	
4	63	57.5	248	08.9	22.5	346	59.9	05.5	59	43.4	04.1	101	52.7	18.5	
5	79	00.0	263	08.5	+3 21.2	2	01.3	+22 05.7	74	46.1	+0 04.0	116	55.3	-16 18.6	
6	94	02.5	278	08.1	+3 20.0	17	02.7	+22 05.8	89	48.9	+0 03.9	131	57.9	-16 18.6	
7	109	04.9	293	07.7	18.8	32	04.1	06.0	104	51.7	03.7	147	00.5	18.6	
8	124	07.4	308	07.3	17.5	47	05.6	06.1	119	54.4	03.6	162	03.0	18.7	
9	139	09.9	323	06.9	16.3	62	07.0	06.3	134	57.2	03.5	177	05.6	18.7	
10	154	12.3	338	06.5	15.1	77	08.4	06.4	150	00.0	03.3	192	08.2	18.7	
11	169	14.8	353	06.1	+3 13.8	92	09.8	+22 06.6	165	02.8	+0 03.2	207	10.7	-16 18.8	
12	184	17.3	8	05.7	+3 12.6	107	11.3	+22 06.7	180	05.5	+0 03.1	222	13.3	-16 18.8	
13	199	19.7	23	05.3	11.4	122	12.7	06.9	195	08.3	02.9	237	15.9	18.8	
14	214	22.2	38	04.9	10.1	137	14.1	07.0	210	11.1	02.8	252	18.5	18.9	
15	229	24.6	53	04.5	08.9	152	15.5	07.2	225	13.8	02.7	267	21.0	18.9	
16	244	27.1	68	04.1	07.7	167	17.0	07.3	240	16.6	02.5	282	23.6	18.9	
17	259	29.6	83	03.7	+3 06.4	182	18.4	+22 07.5	255	19.4	+0 02.4	297	26.2	-16 19.0	
18	274	32.0	98	03.3	+3 05.2	197	19.8	+22 07.6	270	22.2	+0 02.3	312	28.8	-16 19.0	
19	289	34.5	113	02.9	03.9	212	21.2	07.8	285	24.9	02.1	327	31.3	19.0	
20	304	37.0	128	02.5	02.7	227	22.7	07.9	300	27.7	02.0	342	33.9	19.1	
21	319	39.4	143	02.1	01.5	242	24.1	08.1	315	30.5	01.9	357	36.5	19.1	
22	334	41.9	158	01.7	+3 00.2	257	25.5	08.2	330	33.2	01.7	12	39.0	19.1	
23	349	44.4	173	01.3	+2 59.0	272	27.0	08.4	345	36.0	01.6	27	41.6	19.2	
24	4	46.8	188	00.9	+2 57.8	287	28.4	+22 08.5	0	38.8	+0 01.5	42	44.2	-16 19.2	
Dif	—		-4	-12		+14	+2		-8972	-1		+26		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 3			Edad: 0 ^d 1 SD: 15'4 PMG: 12 ^h 23 ^m	PHE { 4 ^h : 56'7 12 ^h : 56'9 20 ^h : 57'1 R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	182	07.4	-1 09.1	179	50.7	+1 28.6	150	60 N	4 22	5 12	5 53	6 13	91	18 11	1
1	197	07.6	10.0	194	24.2 ¹⁴⁵	+1 13.6 ¹⁵⁰	150	58	27	14	53	13	87	12	5
2	212	07.8	11.0	208	57.7 ¹⁴⁵	+0 58.7 ¹⁴⁹	149	56	32	16	53	13	84	14	7
3	227	08.1	12.0	223	31.2 ¹⁴⁵	43.6 ¹⁵¹	151	54	36	17	53	13	81	15	10
4	242	08.3	13.0	238	04.6 ¹⁴⁴	28.6 ¹⁵⁰	150	52	39	19	52	13	78	16	13
5	257	08.5	-1 13.9	252	38.0 ¹⁴⁴	+0 13.6 ¹⁵⁰	150	50	4 42	5 20	5 52	6 13	76	18 18	14
6	272	08.7	-1 14.9	267	11.4 ¹⁴⁴	-0 01.4 ¹⁵⁰	150	45	4 48	5 22	5 52	6 13	70	18 20	20
7	287	08.9	15.9	281	44.8 ¹⁴⁴	16.5 ¹⁵¹	151	40	53	24	51	12	67	22	24
8	302	09.1	16.9	296	18.2 ¹⁴⁴	31.6 ¹⁵¹	151	35	56	26	51	12	63	24	27
9	317	09.3	17.8	310	51.5 ¹⁴³	-0 46.6 ¹⁵⁰	150	30	4 59	27	50	12	60	26	30
10	332	09.5	18.8	325	24.8 ¹⁴³	-1 01.7 ¹⁵¹	151	20	5 02	28	50	12	54	28	36
11	347	09.8	-1 19.8	339	58.1 ¹⁴³	-1 16.8 ¹⁵¹	151	10 N	5 04	5 28	5 49	6 12	49	18 31	41
12	2	10.0	-1 20.8	354	31.3 ¹⁴²	-1 31.9 ¹⁵¹	151	0	5 03	5 27	5 48	6 12	45	18 33	46
13	17	10.2	21.7	9	04.6 ¹⁴³	-1 47.0 ¹⁵¹	151	10 S	5 02	26	47	12	40	35	50
14	32	10.4	22.7	23	37.8 ¹⁴²	-2 02.1 ¹⁵¹	151	20	4 58	24	46	12	35	38	55
15	47	10.6	23.7	38	10.9 ¹⁴¹	17.3 ¹⁵²	152	30	53	21	45	12	30	41	60
16	62	10.8	24.6	52	44.0 ¹⁴¹	32.4 ¹⁵¹	151	35	49	19	44	12	27	42	64
17	77	11.0	-1 25.6	67	17.1 ¹⁴¹	-2 47.5 ¹⁵¹	151	40	4 44	5 16	5 43	6 12	23	18 44	68
18	92	11.3	-1 26.6	81	50.2 ¹⁴¹	-3 02.6 ¹⁵¹	151	45	4 38	5 12	5 42	6 12	19	18 46	72
19	107	11.5	27.6	96	23.2 ¹⁴⁰	17.7 ¹⁵¹	151	50	30	08	40	12	14	49	77
20	122	11.7	28.5	110	56.2 ¹⁴⁰	32.8 ¹⁵¹	151	52	26	06	40	12	12	50	80
21	137	11.9	29.5	125	29.2 ¹⁴⁰	-3 47.9 ¹⁵¹	151	54	21	04	39	12	10	51	83
22	152	12.1	30.5	140	02.1 ¹³⁹	-4 03.0 ¹⁵¹	151	56	16	5 01	38	12	7	53	85
23	167	12.3	31.5	154	34.9 ¹³⁸	18.1 ¹⁵¹	151	58	10	4 58	37	12	4	54	89
24	182	12.5	-1 32.4	169	07.8 ¹³⁹	-4 33.2 ¹⁵¹	151	60 S	4 04	4 54	5 36	6 12	1	18 56	93
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 37 ^m 0		Mag: -3.9 PMG: 11 ^h 28 ^m			Mag: -0.5 PMG: 4 ^h 50 ^m			Mag: -2.9 PMG: 23 ^h 53 ^m			Mag: +0.5 PMG: 21 ^h 05 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	4	46.8	188	00.9	+2 57.8	287	28.4	+22 08.5	0	38.8	+0 01.5	42	44.2	-16 19.2	
1	19	49.3	203	00.5	56.5	302	29.8	08.7	15	41.6	01.3	57	46.8	19.2	
2	34	51.8	218	00.1	55.3	317	31.3	08.8	30	44.3	01.2	72	49.3	19.3	
3	49	54.2	232	59.7	54.0	332	32.7	09.0	45	47.1	01.1	87	51.9	19.3	
4	64	56.7	247	59.3	52.8	347	34.2	09.1	60	49.9	00.9	102	54.5	19.3	
5	79	59.1	262	58.9	+2 51.6	2	35.6	+22 09.3	75	52.6	+0 00.8	117	57.0	-16 19.4	
6	95	01.6	277	58.5	+2 50.3	17	37.0	+22 09.4	90	55.4	+0 00.7	132	59.6	-16 19.4	
7	110	04.1	292	58.1	49.1	32	38.5	09.6	105	58.2	00.5	148	02.2	19.4	
8	125	06.5	307	57.7	47.9	47	39.9	09.7	121	01.0	00.4	163	04.7	19.5	
9	140	09.0	322	57.3	46.6	62	41.3	09.9	136	03.7	00.3	178	07.3	19.5	
10	155	11.5	337	56.9	45.4	77	42.8	10.0	151	06.5	+0 00.1	193	09.9	19.5	
11	170	13.9	352	56.5	+2 44.1	92	44.2	+22 10.2	166	09.3	+0 00.0	208	12.5	-16 19.6	
12	185	16.4	7	56.2	+2 42.9	107	45.7	+22 10.3	181	12.0	-0 00.1	223	15.0	-16 19.6	
13	200	18.9	22	55.8	41.7	122	47.1	10.4	196	14.8	00.3	238	17.6	19.6	
14	215	21.3	37	55.4	40.4	137	48.6	10.6	211	17.6	00.4	253	20.2	19.7	
15	230	23.8	52	55.0	39.2	152	50.0	10.7	226	20.4	00.5	268	22.7	19.7	
16	245	26.2	67	54.6	37.9	167	51.5	10.9	241	23.1	00.7	283	25.3	19.7	
17	260	28.7	82	54.2	+2 36.7	182	52.9	+22 11.0	256	25.9	-0 00.8	298	27.9	-16 19.8	
18	275	31.2	97	53.8	+2 35.5	197	54.4	+22 11.2	271	28.7	-0 00.9	313	30.4	-16 19.8	
19	290	33.6	112	53.4	34.2	212	55.8	11.3	286	31.4	01.1	328	33.0	19.8	
20	305	36.1	127	53.0	33.0	227	57.3	11.5	301	34.2	01.2	343	35.6	19.9	
21	320	38.6	142	52.6	31.7	242	58.7	11.6	316	37.0	01.3	358	38.1	19.9	
22	335	41.0	157	52.2	30.5	258	00.2	11.8	331	39.8	01.5	373	40.7	19.9	
23	350	43.5	172	51.8	29.3	273	01.6	11.9	346	42.5	01.6	388	43.3	20.0	
24	5	46.0	187	51.4	+2 28.0	288	03.1	+22 12.1	1	45.3	-0 01.7	403	45.8	-16 20.0	
Dif	—		-4	-12		+14	+1		+28		-1		+26		0

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16°0			Edad: 1 ^d 1	PHE {	R°: 47 ^m			Hora R°		Hora R°					
	PMG: 11 ^h 51 ^m 0															
	hG ☉	Dec		hG ☾ Dif	Dec	Dif			Civil	Náutico		R°		R°		
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	182	12.5	-1 32.4	169	07.8	-4 33.2	60 N	17 45	18 26	19 15	7 44 95		18 12 2			
1	197	12.7	33.4	183	40.5 ¹³⁷	-4 48.3 ¹⁵¹	58	45	24	11	40 91		17 6			
2	212	13.0	34.4	198	13.3 ¹³⁸	-5 03.4 ¹⁵¹	56	46	23	07	37 87		21 9			
3	227	13.2	35.4	212	46.0 ¹³⁷	18.4 ¹⁵⁰	54	47	22	03	34 84		25 1			
4	242	13.4	36.3	227	18.6 ¹³⁶	33.5 ¹⁵¹	52	47	21	19 00	31 82		29 15			
5	257	13.6	-1 37.3	241	51.2 ¹³⁶	-5 48.5 ¹⁵⁰	50	17 47	18 20	18 57	7 29 79		18 32 18			
6	272	13.8	-1 38.3	256	23.8 ¹³⁶	-6 03.5 ¹⁵⁰	45	17 48	18 18	18 52	7 23 74		18 40 22			
7	287	14.0	39.3	270	56.3 ¹³⁵	18.5 ¹⁵⁰	40	49	16	48	19 69		46 27			
8	302	14.2	40.2	285	28.8 ¹³⁵	33.5 ¹⁵⁰	35	50	15	44	15 65		51 31			
9	317	14.4	41.2	300	01.2 ¹³⁴	-6 48.5 ¹⁵⁰	30	51	14	42	12 62		18 56 34			
10	332	14.7	42.2	314	33.5 ¹³³	-7 03.4 ¹⁴⁹	20	52	14	39	06 56		19 04 39			
11	347	14.9	-1 43.1	329	05.8 ¹³³	-7 18.3 ¹⁴⁹	10 N	17 53	18 14	18 38	7 01 52		19 12 43			
12	2	15.1	-1 44.1	343	38.1 ¹³³	-7 33.2 ¹⁴⁹	0	17 54	18 15	18 39	6 57 46		19 19 48			
13	17	15.3	45.1	358	10.3 ¹³²	-7 48.1 ¹⁴⁹	10 S	56	17	41	52 42		25 53			
14	32	15.5	46.1	12	42.4 ¹³¹	-8 02.9 ¹⁴⁸	20	57	19	45	47 38		33 57			
15	47	15.7	47.0	27	14.5 ¹³¹	17.8 ¹⁴⁹	30	17 59	23	51	42 32		41 63			
16	62	15.9	48.0	41	46.5 ¹³⁰	32.5 ¹⁴⁷	35	18 00	25	18 55	39 28		46 66			
17	77	16.1	-1 49.0	56	18.5 ¹³⁰	-8 47.3 ¹⁴⁸	40	18 01	18 29	19 00	6 35 25		19 52 70			
18	92	16.3	-1 50.0	70	50.4 ¹²⁹	-9 02.0 ¹⁴⁷	45	18 03	18 32	19 07	6 31 21		19 58 75			
19	107	16.6	50.9	85	22.2 ¹²⁸	16.7 ¹⁴⁷	50	05	37	16	26 16		20 06 80			
20	122	16.8	51.9	99	54.0 ¹²⁸	31.4 ¹⁴⁷	52	06	40	20	24 14		10 82			
21	137	17.0	52.9	114	25.7 ¹²⁷	-9 46.0 ¹⁴⁶	54	07	42	25	22 11		14 85			
22	152	17.2	53.9	128	57.4 ¹²⁷	-10 00.6 ¹⁴⁶	56	08	45	30	19 9		18 89			
23	167	17.4	54.8	143	29.0 ¹²⁶	15.2 ¹⁴⁶	58	09	49	36	16 6		23 93			
24	182	17.6	-1 55.8	158	00.5 ¹²⁵	-10 29.7 ¹⁴⁵	60 S	18 10	18 52	19 44	6 13 2		20 29 97			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 23 ^h 33 ^m 1		Mag: -3.9 PMG: 11 ^h 29 ^m		Mag: -0.5 PMG: 4 ^h 47 ^m		Mag: -2.9 PMG: 23 ^h 49 ^m		Mag: +0.5 PMG: 21 ^h 01 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	5	46.0	187	51.4	288	03.1	+22	12.1	1	45.3	-0	01.7	43	45.8	-16	20.0
1	20	48.4	202	51.0	303	04.5		12.2	16	48.1		01.9	58	48.4		20.0
2	35	50.9	217	50.6	318	06.0		12.4	31	50.8		02.0	73	51.0		20.0
3	50	53.4	232	50.2	333	07.4		12.5	46	53.6		02.1	88	53.5		20.1
4	65	55.8	247	49.8	348	08.9		12.6	61	56.4		02.3	103	56.1		20.1
5	80	58.3	262	49.4	3	10.4	+22	12.8	76	59.2	-0	02.4	118	58.7	-16	20.1
6	96	00.7	277	49.0	18	11.8	+22	12.9	92	01.9	-0	02.5	134	01.3	-16	20.2
7	111	03.2	292	48.6	33	13.3		13.1	107	04.7		02.7	149	03.8		20.2
8	126	05.7	307	48.3	48	14.7		13.2	122	07.5		02.8	164	06.4		20.2
9	141	08.1	322	47.9	63	16.2		13.4	137	10.2		02.9	179	09.0		20.3
10	156	10.6	337	47.5	78	17.7		13.5	152	13.0		03.1	194	11.5		20.3
11	171	13.1	352	47.1	93	19.1	+22	13.7	167	15.8	-0	03.2	209	14.1	-16	20.3
12	186	15.5	7	46.7	+2	13.1		13.8	182	18.6	-0	03.3	224	16.6	-16	20.4
13	201	18.0	22	46.3		11.9	+22	13.9	197	21.3		03.5	239	19.2		20.4
14	216	20.5	37	45.9		10.6		14.1	212	24.1		03.6	254	21.8		20.4
15	231	22.9	52	45.5		09.4		14.2	227	26.9		03.7	269	24.3		20.5
16	246	25.4	67	45.1		08.1		14.4	242	29.6		03.9	284	26.9		20.5
17	261	27.8	82	44.7	+2	06.9	+22	14.5	257	32.4	-0	04.0	299	29.5	-16	20.5
18	276	30.3	97	44.3	+2	05.6	+22	14.7	272	35.2	-0	04.1	314	32.0	-16	20.5
19	291	32.8	112	43.9		04.4		14.8	287	38.0		04.3	329	34.6		20.6
20	306	35.2	127	43.5		03.2		15.0	302	40.7		04.4	344	37.2		20.6
21	321	37.7	142	43.1		01.9		15.1	317	43.5		04.5	359	39.7		20.6
22	336	40.2	157	42.7	+2	00.7		15.2	332	46.3		04.7	14	42.3		20.7
23	351	42.6	172	42.3	+1	59.4		15.4	347	49.0		04.8	29	44.9		20.7
24	6	45.1	187	41.9	+1	58.2	+22	15.5	2	51.8	-0	04.9	44	47.4	-16	20.7
Dif	—		-4	-12	+15	+1			+28	-1			+26			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:0 PMG: 11 ^h 50 ^m 7			Edad: 2 ^d 1 PHE { 4 ^h : 57:7 12 ^h : 57:9 20 ^h : 58:0 Rº: 51 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº			
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	182	17.6	-1	55.8	158	00.5	-10	29.7	60 N	4 27	5 17	5 58	9 19	100	18 14	3		
1	197	17.8		56.8	172	31.9 ¹²⁴		44.2 ¹⁴⁵	58	32	18	57	11	96	23	8		
2	212	18.0		57.7	187	03.3 ¹²⁴	-10	58.6 ¹⁴⁴	56	36	20	57	9 04	91	30	13		
3	227	18.2		58.7	201	34.6 ¹²³	-11	13.0 ¹⁴⁴	54	40	21	56	8 58	88	38	16		
4	242	18.4	-1	59.7	216	05.9 ¹²³		27.3 ¹⁴³	52	43	22	56	53	84	44	19		
5	257	18.7	-2	00.7	230	37.0 ¹²¹	-11	41.6 ¹⁴³	50	4 45	5 23	5 55	8 48	81	18 50	21		
6	272	18.9	-2	01.6	245	08.1 ¹²¹	-11	55.9 ¹⁴³	45	4 51	5 25	5 54	8 37	76	19 02	27		
7	287	19.1		02.6	259	39.1 ¹²⁰	-12	10.1 ¹⁴²	40	55	26	53	28	71	13	31		
8	302	19.3		03.6	274	10.1 ¹²⁰		24.2 ¹⁴¹	35	4 58	27	52	20	68	22	35		
9	317	19.5		04.6	288	41.0 ¹¹⁹		38.3 ¹⁴¹	30	5 00	28	52	14	64	30	37		
10	332	19.7		05.5	303	11.8 ¹¹⁸	-12	52.4 ¹⁴¹	20	03	28	50	8 02	59	43	43		
11	347	19.9	-2	06.5	317	42.5 ¹¹⁷	-13	06.4 ¹⁴⁰	10 N	5 03	5 28	5 49	7 53	54	19 55	48		
12	2	20.1	-2	07.5	332	13.1 ¹¹⁶	-13	20.3 ¹³⁹	0	5 03	5 27	5 47	7 43	50	20 07	51		
13	17	20.3		08.4	346	43.7 ¹¹⁶		34.2 ¹³⁹	10 S	5 01	25	46	34	46	18	56		
14	32	20.5		09.4	1	14.2 ¹¹⁵	-13	48.0 ¹³⁸	20	4 57	22	44	25	40	30	61		
15	47	20.7		10.4	15	44.6 ¹¹⁴	-14	01.7 ¹³⁷	30	50	18	42	14	35	44	66		
16	62	21.0		11.4	30	14.9 ¹¹³		15.4 ¹³⁷	35	46	16	41	07	33	20 52	69		
17	77	21.2	-2	12.3	44	45.1 ¹¹²	-14	29.1 ¹³⁷	40	4 41	5 13	5 40	7 00	29	21 02	72		
18	92	21.4	-2	13.3	59	15.3 ¹¹²	-14	42.6 ¹³⁵	45	4 34	5 09	5 38	6 52	25	21 13	77		
19	107	21.6		14.3	73	45.3 ¹¹⁰	-14	56.1 ¹³⁵	50	25	04	36	42	20	26	83		
20	122	21.8		15.3	88	15.3 ¹¹⁰	-15	09.6 ¹³⁵	52	21	5 01	35	38	17	32	86		
21	137	22.0		16.2	102	45.2 ¹⁰⁹		22.9 ¹³³	54	16	4 58	34	33	14	39	89		
22	152	22.2		17.2	117	15.0 ¹⁰⁸		36.2 ¹³³	56	10	55	33	28	11	47	92		
23	167	22.4		18.2	131	44.7 ¹⁰⁷	-15	49.4 ¹³²	58	4 04	52	31	22	7	21 56	97		
24	182	22.6	-2	19.1	146	14.4 ¹⁰⁷	-16	02.5 ¹³¹	60 S	3 57	4 48	5 30	6 15	3	22 06	102		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 29 ^m 1		Mag: -3.9 PMG: 11 ^h 30 ^m			Mag: -0.5 PMG: 4 ^h 45 ^m			Mag: -2.9 PMG: 23 ^h 44 ^m			Mag: +0.5 PMG: 20 ^h 57 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°				
0	6	45.1	187	41.9	+1	58.2	288	38.2	+22	15.5	2	51.8	-0	04.9	44	47.4	-16	20.7
1	21	47.6	202	41.6		56.9	303	39.7		15.7	17	54.6		05.1	59	50.0		20.8
2	36	50.0	217	41.2		55.7	318	41.2		15.8	32	57.4		05.2	74	52.6		20.8
3	51	52.5	232	40.8		54.4	333	42.7		16.0	48	00.1		05.3	89	55.1		20.8
4	66	55.0	247	40.4		53.2	348	44.2		16.1	63	02.9		05.5	104	57.7		20.9
5	81	57.4	262	40.0	+1	52.0	3	45.6	+22	16.2	78	05.7	-0	05.6	120	00.2	-16	20.9
6	96	59.9	277	39.6	+1	50.7	18	47.1	+22	16.4	93	08.4	-0	05.7	135	02.8	-16	20.9
7	112	02.3	292	39.2		49.5	33	48.6		16.5	108	11.2		05.9	150	05.4		20.9
8	127	04.8	307	38.8		48.2	48	50.1		16.7	123	14.0		06.0	165	07.9		21.0
9	142	07.3	322	38.4		47.0	63	51.6		16.8	138	16.8		06.1	180	10.5		21.0
10	157	09.7	337	38.0		45.7	78	53.0		17.0	153	19.5		06.3	195	13.1		21.0
11	172	12.2	352	37.6	+1	44.5	93	54.5	+22	17.1	168	22.3	-0	06.4	210	15.6	-16	21.1
12	187	14.7		37.2	+1	43.2	108	56.0	+22	17.2	183	25.1	-0	06.5	225	18.2	-16	21.1
13	202	17.1		36.8		42.0	123	57.5		17.4	198	27.8		06.7	240	20.8		21.1
14	217	19.6		36.4		40.7	138	59.0		17.5	213	30.6		06.8	255	23.3		21.2
15	232	22.1		36.1		39.5	154	00.5		17.7	228	33.4		06.9	270	25.9		21.2
16	247	24.5		35.7		38.2	169	02.0		17.8	243	36.2		07.1	285	28.4		21.2
17	262	27.0		35.3	+1	37.0	184	03.5	+22	17.9	258	38.9	-0	07.2	300	31.0	-16	21.2
18	277	29.4		34.9	+1	35.7	199	05.0	+22	18.1	273	41.7	-0	07.3	315	33.6	-16	21.3
19	292	31.9		34.5		34.5	214	06.4		18.2	288	44.5		07.5	330	36.1		21.3
20	307	34.4		34.1		33.3	229	07.9		18.4	303	47.2		07.6	345	38.7		21.3
21	322	36.8		33.7		32.0	244	09.4		18.5	318	50.0		07.7	0	41.2		21.4
22	337	39.3		33.3		30.8	259	10.9		18.6	333	52.8		07.9	15	43.8		21.4
23	352	41.8		32.9		29.5	274	12.4		18.8	348	55.6		08.0	30	46.4		21.4
24	7	44.2	187	32.5	+1	28.3	289	13.9	+22	18.9	3	58.3	-0	08.1	45	48.9	-16	21.4
Dif	—		-4		-12	+15		+1	+28		-1		+26		0			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/0 PMG: 11 ^h 50 ^m 3			Edad: 3 ^d 1 PHE { SD: 15/8 PMG: 14 ^h 46 ^m 4 ^h : 58/2 12 ^h : 58/3 20 ^h : 58/4 R°: 54 ^m														
	hG ☉	Dec		hG ☾	Dif				Dec		Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m
0	182	22.6	-2 19.1	146	14.4	-16 02.5		60 N	17 39	18 20	19 09	10 59 106	18 17	8				
1	197	22.8	20.1	160	43.9 ¹⁰⁵	15.6 ¹³¹		58	40	19	05	47 98	31	15				
2	212	23.0	21.1	175	13.4 ¹⁰⁵	28.6 ¹³⁰		56	41	18	19 01	35 94	43	19				
3	227	23.2	22.1	189	42.7 ¹⁰³	41.5 ¹²⁹		54	42	17	18 58	26 89	18 54	23				
4	242	23.5	23.0	204	12.0 ¹⁰³	-16 54.3 ¹²⁸		52	42	16	55	17 86	19 03	26				
5	257	23.7	-2 24.0	218	41.2 ¹⁰²	-17 07.0 ¹²⁷		50	17 43	18 15	18 53	10 09 83	19 11	29				
6	272	23.9	-2 25.0	233	10.3 ¹⁰¹	-17 19.7 ¹²⁷		45	17 45	18 14	18 48	9 53 77	19 29	35				
7	287	24.1	26.0	247	39.3 ¹⁰⁰	32.3 ¹²⁶		40	46	13	44	39 74	44	38				
8	302	24.3	26.9	262	08.2 ⁹⁹	44.7 ¹²⁴		35	47	12	42	28 70	19 57	41				
9	317	24.5	27.9	276	37.0 ⁹⁸	-17 57.1 ¹²⁴		30	48	12	40	18 67	20 07	45				
10	332	24.7	28.9	291	05.7 ⁹⁷	-18 09.4 ¹²³		20	50	12	38	9 01 62	26	49				
11	347	24.9	-2 29.8	305	34.3 ⁹⁶	-18 21.6 ¹²²		10 N	17 52	18 13	18 37	8 47 57	20 43	52				
12	2	25.1	-2 30.8	320	02.8 ⁹⁵	-18 33.8 ¹²²		0	17 54	18 14	18 38	8 33 54	20 58	56				
13	17	25.3	31.8	334	31.3 ⁹⁵	45.8 ¹²⁰		10 S	55	16	41	20 50	21 14	59				
14	32	25.5	32.8	348	59.6 ⁹³	-18 57.7 ¹¹⁹		20	17 58	20	45	8 05 46	31	63				
15	47	25.7	33.7	3	27.8 ⁹²	-19 09.5 ¹¹⁸		30	18 00	24	52	7 49 41	21 50	67				
16	62	25.9	34.7	17	56.0 ⁹²	21.2 ¹¹⁷		35	02	27	18 57	40 38	22 01	70				
17	77	26.1	-2 35.7	32	24.0 ⁹⁰	-19 32.9 ¹¹⁷		40	18 03	18 31	19 03	7 29 35	22 14	73				
18	92	26.4	-2 36.6	46	51.9 ⁸⁹	-19 44.4 ¹¹⁵		45	18 05	18 35	19 10	7 17 30	22 30	77				
19	107	26.6	37.6	61	19.8 ⁸⁹	-19 55.8 ¹¹⁴		50	08	40	19	7 02 25	49	82				
20	122	26.8	38.6	75	47.5 ⁸⁷	-20 07.1 ¹¹³		52	09	43	24	6 55 22	22 58	85				
21	137	27.0	39.6	90	15.2 ⁸⁷	18.3 ¹¹²		54	10	46	29	47 20	23 08	88				
22	152	27.2	40.5	104	42.7 ⁸⁵	29.4 ¹¹¹		56	12	49	35	39 15	19	93				
23	167	27.4	41.5	119	10.2 ⁸⁵	40.3 ¹⁰⁹		58	13	53	41	29 11	33	97				
24	182	27.6	-2 42.5	133	37.5 ⁸³	-20 51.2 ¹⁰⁹		60 S	18 15	18 57	19 49	6 18 6	23 48	105				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 25 ^m 2		Mag: -3.9 PMG: 11 ^h 30 ^m			Mag: -0.6 PMG: 4 ^h 43 ^m			Mag: -2.9 PMG: 23 ^h 40 ^m			Mag: +0.5 PMG: 20 ^h 53 ^m						
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	'	°	'	°	'	°	°	'	°			
0	7	44.2		187	32.5	+1 28.3	289	13.9	+22 18.9	3	58.3	-0 08.1	45	48.9	-16 21.4			
1	22	46.7		202	32.1	27.0	304	15.4	19.1	19	01.1	08.3	60	51.5	21.5			
2	37	49.2		217	31.7	25.8	319	16.9	19.2	34	03.9	08.4	75	54.0	21.5			
3	52	51.6		232	31.4	24.5	334	18.4	19.3	49	06.6	08.5	90	56.6	21.5			
4	67	54.1		247	31.0	23.3	349	19.9	19.5	64	09.4	08.7	105	59.2	21.6			
5	82	56.6		262	30.6	+1 22.0	4	21.4	+22 19.6	79	12.2	-0 08.8	121	01.7	-16 21.6			
6	97	59.0		277	30.2	+1 20.8	19	22.9	+22 19.8	94	15.0	-0 08.9	136	04.3	-16 21.6			
7	113	01.5		292	29.8	19.5	34	24.4	19.9	109	17.7	09.1	151	06.8	21.6			
8	128	03.9		307	29.4	18.3	49	25.9	20.0	124	20.5	09.2	166	09.4	21.7			
9	143	06.4		322	29.0	17.0	64	27.4	20.2	139	23.3	09.3	181	12.0	21.7			
10	158	08.9		337	28.6	15.8	79	28.9	20.3	154	26.0	09.5	196	14.5	21.7			
11	173	11.3		352	28.2	+1 14.5	94	30.5	+22 20.5	169	28.8	-0 09.6	211	17.1	-16 21.8			
12	188	13.8		7	27.8	+1 13.3	109	32.0	+22 20.6	184	31.6	-0 09.7	226	19.6	-16 21.8			
13	203	16.3		22	27.4	12.0	124	33.5	20.7	199	34.3	09.9	241	22.2	21.8			
14	218	18.7		37	27.0	10.8	139	35.0	20.9	214	37.1	10.0	256	24.8	21.9			
15	233	21.2		52	26.6	09.5	154	36.5	21.0	229	39.9	10.1	271	27.3	21.9			
16	248	23.7		67	26.3	08.3	169	38.0	21.2	244	42.7	10.3	286	29.9	21.9			
17	263	26.1		82	25.9	+1 07.0	184	39.5	+22 21.3	259	45.4	-0 10.4	301	32.4	-16 21.9			
18	278	28.6		97	25.5	+1 05.8	199	41.0	+22 21.4	274	48.2	-0 10.5	316	35.0	-16 22.0			
19	293	31.1		112	25.1	04.5	214	42.5	21.6	289	51.0	10.6	331	37.6	22.0			
20	308	33.5		127	24.7	03.3	229	44.1	21.7	304	53.7	10.8	346	40.1	22.0			
21	323	36.0		142	24.3	02.0	244	45.6	21.8	319	56.5	10.9	1	42.7	22.0			
22	338	38.4		157	23.9	+1 00.8	259	47.1	22.0	334	59.3	11.0	16	45.2	22.1			
23	353	40.9		172	23.5	+0 59.5	274	48.6	22.1	350	02.1	11.2	31	47.8	22.1			
24	8	43.4		187	23.1	+0 58.3	289	50.1	+22 22.3	5	04.8	-0 11.3	46	50.3	-16 22.1			
Dif	—		-4		-12		+15		+1		+28		-1		+26		0	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0			Edad: 4 ^d 1	PHE {	4 ^h : 58'5		12 ^h : 58'7	20 ^h : 58'8		R°: 59 ^m						
	PMG: 11 ^h 50 ^m 0																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	27.6	-2	42.5	133	37.5	-20	51.2	60 N	4	32	5	21	6	03	12	45
1	197	27.8		43.4	148	04.8	83	-21	01.9	58	37		23		02	25	96
2	212	28.0		44.4	162	31.9	81		12.6	56	40		24		01	12	09
3	227	28.2		45.4	176	59.0	81		23.1	54	43		25	6	00	11	55
4	242	28.4		46.4	191	25.9	79		33.5	52	46		25	5	59	43	84
5	257	28.6	-2	47.3	205	52.8	79	-21	43.8	50	4	48	5	5	58	11	32
6	272	28.8	-2	48.3	220	19.5	77	-21	53.9	45	4	53	5	5	57	11	10
7	287	29.0		49.3	234	46.2	77	-22	03.9	40		57		55	10	53	72
8	302	29.2		50.2	249	12.7	75		13.8	35	4	59	29	54		38	70
9	317	29.4		51.2	263	39.2	75		23.6	30	5	01	29	53		25	68
10	332	29.6		52.2	278	05.6	74		33.2	20		03	29	51	10	03	64
11	347	29.8	-2	53.1	292	31.8	72	-22	42.7	10 N	5	03	5	5	49	9	44
12	2	30.0	-2	54.1	306	58.0	72	-22	52.1	0	5	02	5	5	47	9	27
13	17	30.2		55.1	321	24.1	71	-23	01.4	10 S	4	59	24	45		9	10
14	32	30.5		56.1	335	50.0	69		10.5	20		55	20	42		8	51
15	47	30.7		57.0	350	15.9	69		19.4	30		48	16	40		30	48
16	62	30.9		58.0	4	41.7	68		28.3	35		43	13	38		18	45
17	77	31.1	-2	59.0	19	07.4	67	-23	37.0	40	4	37	5	5	36	8	04
18	92	31.3	-2	59.9	33	33.0	66	-23	45.5	45	4	30	5	5	34	7	47
19	107	31.5	-3	00.9	47	58.5	65	-23	53.9	50		20	4	59	32		27
20	122	31.7		01.9	62	23.9	64	-24	02.2	52		16		56	30		17
21	137	31.9		02.9	76	49.2	63		10.3	54		11		53	29		7
22	152	32.1		03.8	91	14.4	62		18.3	56	4	05		50	27		6
23	167	32.3		04.8	105	39.6	62		26.1	58	3	58		46	26		40
24	182	32.5	-3	05.8	120	04.6	60	-24	33.8	60 S	3	50	4	5	24	6	24

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 23 ^h 21 ^m 3		Mag: -3.9 PMG: 11 ^h 31 ^m		Mag: -0.6 PMG: 4 ^h 40 ^m		Mag: -2.9 PMG: 23 ^h 35 ^m		Mag: +0.5 PMG: 20 ^h 49 ^m										
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	8	43.4	187	23.1	+0	58.3	289	50.1	+22	22.3	5	04.8	-0	11.3	46	50.3	-16	22.1	
1	23	45.8	202	22.7		57.0	304	51.7		22.4	20	07.6		11.4	61	52.9		22.2	
2	38	48.3	217	22.3		55.8	319	53.2		22.5	35	10.4		11.6	76	55.5		22.2	
3	53	50.8	232	22.0		54.5	334	54.7		22.7	50	13.1		11.7	91	58.0		22.2	
4	68	53.2	247	21.6		53.3	349	56.2		22.8	65	15.9		11.8	107	00.6		22.2	
5	83	55.7	262	21.2	+0	52.0	4	57.7	+22	22.9	80	18.7	-0	12.0	122	03.1	-16	22.3	
6	98	58.2	277	20.8	+0	50.8	19	59.3	+22	23.1	95	21.4	-0	12.1	137	05.7	-16	22.3	
7	114	00.6	292	20.4		49.5	35	00.8		23.2	110	24.2		12.2	152	08.2		22.3	
8	129	03.1	307	20.0		48.3	50	02.3		23.4	125	27.0		12.4	167	10.8		22.4	
9	144	05.5	322	19.6		47.0	65	03.9		23.5	140	29.8		12.5	182	13.3		22.4	
10	159	08.0	337	19.2		45.8	80	05.4		23.6	155	32.5		12.6	197	15.9		22.4	
11	174	10.5	352	18.8	+0	44.5	95	06.9	+22	23.8	170	35.3	-0	12.8	212	18.5	-16	22.4	
12	189	12.9	7	18.4	+0	43.3	110	08.4	+22	23.9	185	38.1	-0	12.9	227	21.0	-16	22.5	
13	204	15.4	22	18.0		42.0	125	10.0		24.0	200	40.8		13.0	242	23.6		22.5	
14	219	17.9	37	17.7		40.8	140	11.5		24.2	215	43.6		13.2	257	26.1		22.5	
15	234	20.3	52	17.3		39.5	155	13.0		24.3	230	46.4		13.3	272	28.7		22.5	
16	249	22.8	67	16.9		38.3	170	14.6		24.4	245	49.2		13.4	287	31.2		22.6	
17	264	25.3	82	16.5	+0	37.0	185	16.1	+22	24.6	260	51.9	-0	13.5	302	33.8	-16	22.6	
18	279	27.7	97	16.1	+0	35.8	200	17.6	+22	24.7	275	54.7	-0	13.7	317	36.3	-16	22.6	
19	294	30.2	112	15.7		34.5	215	19.2		24.8	290	57.5		13.8	332	38.9		22.7	
20	309	32.7	127	15.3		33.3	230	20.7		25.0	306	00.2		13.9	347	41.4		22.7	
21	324	35.1	142	14.9		32.0	245	22.3		25.1	321	03.0		14.1	2	44.0		22.7	
22	339	37.6	157	14.5		30.8	260	23.8		25.3	336	05.8		14.2	17	46.6		22.7	
23	354	40.0	172	14.1		29.5	275	25.3		25.4	351	08.5		14.3	32	49.1		22.8	
24	9	42.5	187	13.7	+0	28.3	290	26.9	+22	25.5	6	11.3	-0	14.5	47	51.7	-16	22.8	
Dif	—		-4	-13			+15	+1			+28	-1			+26				

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna			Puesta de Luna		
	SD: 16'0			Edad: 5 ^d 1	PHE {	4 ^h : 58'9 12 ^h : 58'9 20 ^h : 59'0											
	PMG: 11 ^h 49 ^m 7	SD: 16'0	PMG: 16 ^h 39 ^m						R°: 62 ^m								
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico		Hora	R°		Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m	m
0	182	32.5	-3 05.8	120	04.6	-24 33.8	75	60 N	17 33	18 14	19 03	14 29	86	18 43	43		
1	197	32.7	06.7	134	29.6	60 41.3	75	58	34	13	18 59	14 01	80	19 12	48		
2	212	32.9	07.7	148	54.4	58 48.6	73	56	35	12	56	13 40	77	34	51		
3	227	33.1	08.7	163	19.2	58 -24 55.9	73	54	37	12	53	22 75	19 52	53			
4	242	33.3	09.6	177	43.9	57 -25 02.9	70	52	38	11	50	13 07	73	20 07	54		
5	257	33.5	-3 10.6	192	08.5	56 -25 09.8	69	50	17 39	18 11	18 48	12 53	73	20 21	55		
6	272	33.7	-3 11.6	206	33.1	56 -25 16.5	67	45	17 41	18 10	18 44	12 27	70	20 48	57		
7	287	33.9	12.6	220	57.5	54 23.1	66	40	43	10	41	12 05	69	21 10	58		
8	302	34.1	13.5	235	21.9	54 29.5	64	35	44	09	39	11 48	67	28	59		
9	317	34.3	14.5	249	46.2	53 35.8	63	30	46	09	37	33 66	21 43	60			
10	332	34.5	15.5	264	10.4	52 41.9	61	20	48	10	36	11 07	64	22 10	60		
11	347	34.7	-3 16.4	278	34.5	51 -25 47.8	59	10 N	17 51	18 12	18 36	10 45	63	22 33	61		
12	2	34.9	-3 17.4	292	58.6	51 -25 53.6	58	0	17 53	18 14	18 38	10 25	61	22 54	62		
13	17	35.1	18.4	307	22.6	50 -25 59.2	56	10 S	55	16	41	10 05	59	23 15	63		
14	32	35.3	19.3	321	46.5	49 -26 04.6	54	20	17 58	20	46	9 43	58	23 38	63		
15	47	35.5	20.3	336	10.3	48 09.9	53	30	18 01	25	53	18 56	***	***	***		
16	62	35.7	21.3	350	34.1	48 15.0	51	35	03	29	18 58	9 03	55	***	***	***	
17	77	35.9	-3 22.2	4	57.8	47 -26 19.9	49	40	18 05	18 33	19 05	8 47	52	***	***	***	
18	92	36.1	-3 23.2	19	21.5	47 -26 24.6	47	45	18 08	18 37	19 13	8 26	51	***	***	***	
19	107	36.3	24.2	33	45.0	45 29.2	46	50	11	44	23	8 01	48	0 11	77		
20	122	36.5	25.2	48	08.6	46 33.6	44	52	12	47	28	7 49	46	23	79		
21	137	36.7	26.1	62	32.0	44 37.8	42	54	14	50	33	35	44	36	82		
22	152	36.9	27.1	76	55.4	44 41.9	41	56	16	54	39	19	41	0 52	85		
23	167	37.1	28.1	91	18.8	44 45.7	38	58	18	18 58	47	7 00	37	1 10	90		
24	182	37.3	-3 29.0	105	42.0	42 -26 49.4	37	60 S	18 20	19 02	19 55	6 37	30	1 33	97		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG		Mag: -3.9		Mag: -0.6		Mag: -2.9		Mag: +0.5	
	23 ^h 17 ^m 3	PMG: 11 ^h 31 ^m	PMG: 4 ^h 38 ^m	PMG: 23 ^h 31 ^m	PMG: 20 ^h 45 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	°	'	°	'	°	'	°	'	
0	9	42.5	187 13.7	+0 28.3	290 26.9	+22 25.5	6 11.3	-0 14.5	47 51.7	-16 22.8
1	24	45.0	202 13.4	27.0	305 28.4	25.7	21 14.1	14.6	62 54.2	22.8
2	39	47.4	217 13.0	25.7	320 30.0	25.8	36 16.8	14.7	77 56.8	22.8
3	54	49.9	232 12.6	24.5	335 31.5	25.9	51 19.6	14.9	92 59.3	22.9
4	69	52.4	247 12.2	23.2	350 33.1	26.1	66 22.4	15.0	108 01.9	22.9
5	84	54.8	262 11.8	+0 22.0	5 34.6	+22 26.2	81 25.2	-0 15.1	123 04.4	-16 22.9
6	99	57.3	277 11.4	+0 20.7	20 36.1	+22 26.3	96 27.9	-0 15.3	138 07.0	-16 22.9
7	114	59.8	292 11.0	19.5	35 37.7	26.5	111 30.7	15.4	153 09.5	23.0
8	130	02.2	307 10.6	18.2	50 39.2	26.6	126 33.5	15.5	168 12.1	23.0
9	145	04.7	322 10.2	17.0	65 40.8	26.7	141 36.2	15.7	183 14.6	23.0
10	160	07.2	337 09.8	15.7	80 42.3	26.9	156 39.0	15.8	198 17.2	23.1
11	175	09.6	352 09.4	+0 14.5	95 43.9	+22 27.0	171 41.8	-0 15.9	213 19.7	-16 23.1
12	190	12.1	7 09.1	+0 13.2	110 45.5	+22 27.1	186 44.5	-0 16.0	228 22.3	-16 23.1
13	205	14.5	22 08.7	12.0	125 47.0	27.3	201 47.3	16.2	243 24.8	23.1
14	220	17.0	37 08.3	10.7	140 48.6	27.4	216 50.1	16.3	258 27.4	23.2
15	235	19.5	52 07.9	09.5	155 50.1	27.5	231 52.8	16.4	273 29.9	23.2
16	250	21.9	67 07.5	08.2	170 51.7	27.7	246 55.6	16.6	288 32.5	23.2
17	265	24.4	82 07.1	+0 07.0	185 53.2	+22 27.8	261 58.4	-0 16.7	303 35.0	-16 23.2
18	280	26.9	97 06.7	+0 05.7	200 54.8	+22 27.9	277 01.2	-0 16.8	318 37.6	-16 23.3
19	295	29.3	112 06.3	04.4	215 56.4	28.1	292 03.9	17.0	333 40.2	23.3
20	310	31.8	127 05.9	03.2	230 57.9	28.2	307 06.7	17.1	348 42.7	23.3
21	325	34.3	142 05.5	01.9	245 59.5	28.3	322 09.5	17.2	3 45.3	23.3
22	340	36.7	157 05.1	+0 00.7	261 01.0	28.5	337 12.2	17.4	18 47.8	23.4
23	355	39.2	172 04.8	-0 00.6	276 02.6	28.6	352 15.0	17.5	33 50.4	23.4
24	10	41.7	187 04.4	-0 01.8	291 04.2	+22 28.7	7 17.8	-0 17.6	48 52.9	-16 23.4
Dif	—	—	-4	-13	+16	+1	+28	-1	+26	

UT	SOL			 LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 11 ^h 49 ^m 4			Edad: 6 ^d 1 PHE { 4 ^h : 59/1 12 ^h : 59/2 20 ^h : 59/2 R°: 62 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	37.3	-3	29.0	105	42.0	-26	49.4	60 N	4	37	5	26	6	08	15	55
1	197	37.5		30.0	120	05.3	43	52.9	58	41	27		06	15	21	53	20
2	212	37.7		31.0	134	28.5	42	56.3	56	44	28		05	14	57	54	25
3	227	37.9		31.9	148	51.6	41	-26	59.4	54	47	28	04	37	56	20	45
4	242	38.1		32.9	163	14.7	41	-27	02.4	52	49	29	02	20	57	21	01
5	257	38.3	-3	33.9	177	37.7	40	-27	05.2	50	4	52	5	29	6	01	21
6	272	38.5	-3	34.8	192	00.8	41	-27	07.8	45	4	56	5	30	5	59	21
7	287	38.7		35.8	206	23.7	39	10.2	40	4	59	30	57	13	14	60	22
8	302	38.9		36.8	220	46.7	40	12.4	35	5	01	30	55	12	55	60	27
9	317	39.1		37.7	235	09.5	38	14.5	30	30	02	30	54	39	61	22	43
10	332	39.3		38.7	249	32.4	39	16.3	20	04	29	51	51	12	11	62	23
11	347	39.5	-3	39.7	263	55.2	38	-27	18.0	10 N	5	03	5	49	11	48	62
12	2	39.7	-3	40.6	278	18.0	38	-27	19.5	0	5	01	5	46	11	26	62
13	17	39.9		41.6	292	40.8	38	20.8	10 S	4	58	22	44	11	04	63	***
14	32	40.1		42.6	307	03.6	38	22.0	20	53	19	41	41	10	41	63	***
15	47	40.3		43.5	321	26.3	37	22.9	9	30	45	13	37	10	14	63	0
16	62	40.5		44.5	335	49.0	37	23.6	7	35	40	10	35	9	58	63	20
17	77	40.7	-3	45.5	350	11.7	37	-27	24.2	40	4	34	5	33	9	39	64
18	92	40.9	-3	46.4	4	34.4	37	-27	24.6	45	4	26	5	30	9	17	64
19	107	41.1		47.4	18	57.0	36	24.8	2	50	16	4	55	27	8	49	63
20	122	41.3		48.4	33	19.7	37	24.8	0	52	11	52	26	35	63	42	66
21	137	41.5		49.3	47	42.4	37	24.6	2	54	4	05	48	24	19	63	1
22	152	41.7		50.3	62	05.0	36	24.2	4	56	3	59	45	22	8	00	63
23	167	41.9		51.3	76	27.6	36	23.6	6	58	52	40	20	7	37	63	2
24	182	42.1	-3	52.2	90	50.3	37	-27	22.9	60 S	3	43	4	35	7	07	62

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 13 ^m 4		Mag: -3.9 PMG: 11 ^h 32 ^m		Mag: -0.6 PMG: 4 ^h 35 ^m		Mag: -2.9 PMG: 23 ^h 26 ^m		Mag: +0.5 PMG: 20 ^h 41 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	10	41.7	187	04.4	-0	01.8	291	04.2	+22	28.7	7	17.8	-0	17.6	48	52.9	-16	23.4
1	25	44.1	202	04.0		03.1	306	05.7		28.9	22	20.5		17.7	63	55.5		23.4
2	40	46.6	217	03.6		04.3	321	07.3		29.0	37	23.3		17.9	78	58.0		23.5
3	55	49.0	232	03.2		05.6	336	08.9		29.1	52	26.1		18.0	94	00.5		23.5
4	70	51.5	247	02.8		06.8	351	10.4		29.3	67	28.8		18.1	109	03.1		23.5
5	85	54.0	262	02.4	-0	08.1	6	12.0	+22	29.4	82	31.6	-0	18.3	124	05.6	-16	23.5
6	100	56.4	277	02.0	-0	09.3	21	13.6	+22	29.5	97	34.4	-0	18.4	139	08.2	-16	23.6
7	115	58.9	292	01.6		10.6	36	15.2		29.7	112	37.1		18.5	154	10.7		23.6
8	131	01.4	307	01.2		11.8	51	16.7		29.8	127	39.9		18.7	169	13.3		23.6
9	146	03.8	322	00.8		13.1	66	18.3		29.9	142	42.7		18.8	184	15.8		23.6
10	161	06.3	337	00.4		14.4	81	19.9		30.0	157	45.5		18.9	199	18.4		23.7
11	176	08.8	352	00.1	-0	15.6	96	21.4	+22	30.2	172	48.2	-0	19.0	214	20.9	-16	23.7
12	191	11.2	6	59.7	-0	16.9	111	23.0	+22	30.3	187	51.0	-0	19.2	229	23.5	-16	23.7
13	206	13.7	21	59.3		18.1	126	24.6		30.4	202	53.8		19.3	244	26.0		23.7
14	221	16.2	36	58.9		19.4	141	26.2		30.6	217	56.5		19.4	259	28.6		23.8
15	236	18.6	51	58.5		20.6	156	27.8		30.7	232	59.3		19.6	274	31.1		23.8
16	251	21.1	66	58.1		21.9	171	29.3		30.8	248	02.1		19.7	289	33.7		23.8
17	266	23.5	81	57.7	-0	23.1	186	30.9	+22	31.0	263	04.8	-0	19.8	304	36.2	-16	23.8
18	281	26.0	96	57.3	-0	24.4	201	32.5	+22	31.1	278	07.6	-0	20.0	319	38.8	-16	23.9
19	296	28.5	111	56.9		25.6	216	34.1		31.2	293	10.4		20.1	334	41.3		23.9
20	311	30.9	126	56.5		26.9	231	35.7		31.4	308	13.1		20.2	349	43.9		23.9
21	326	33.4	141	56.1		28.2	246	37.3		31.5	323	15.9		20.3	4	46.4		23.9
22	341	35.9	156	55.8		29.4	261	38.8		31.6	338	18.7		20.5	19	49.0		24.0
23	356	38.3	171	55.4		30.7	276	40.4		31.7	353	21.4		20.6	34	51.5		24.0
24	11	40.8	186	55.0	-0	31.9	291	42.0	+22	31.9	8	24.2	-0	20.7	49	54.0	-16	24.0
Dif	—		-4		-13		+16		+1		+28		-1		+25			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 49 ^m 0			Edad: 7 ^d 1 PHE SD: 16'1 PMG: 18 ^h 43 ^m R°: 60 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	m	h m	m	
0	182	42.1	-3	52.2	90	50.3	-27	22.9	60 N	17 27	18 08	18 56	16 43 21	20 48 105
1	197	42.3		53.2	105	12.9	36	21.9	58	29	08	53	16 14 29	21 17 97
2	212	42.5		54.2	119	35.6	37	20.8	56	30	07	50	15 51 34	40 91
3	227	42.7		55.1	133	58.2	36	19.5	54	32	07	48	33 38	21 58 87
4	242	42.9		56.1	148	20.9	37	17.9	52	33	07	46	17 41	22 13 85
5	257	43.1	-3	57.1	162	43.6	37	-27	50	17 34	18 06	18 44	15 04 42	22 27 82
6	272	43.3	-3	58.0	177	06.3	37	-27	45	17 37	18 06	18 40	14 36 46	22 54 77
7	287	43.5	-3	59.0	191	29.0	37	12.3	40	39	06	38	14 14 49	23 16 74
8	302	43.7	-4	00.0	205	51.7	37	10.0	35	41	07	36	13 55 52	34 71
9	317	43.8	-4	00.9	220	14.4	37	07.6	30	43	07	35	40 53	23 49 69
10	332	44.0		01.9	234	37.2	38	04.9	20	46	08	34	13 13 56	*** ** *
11	347	44.2	-4	02.9	249	00.0	38	-27	10 N	17 49	18 10	18 35	12 50 59	*** ** *
12	2	44.4	-4	03.8	263	22.8	38	-26	0	17 52	18 13	18 37	12 28 61	*** ** *
13	17	44.6		04.8	277	45.7	39	55.9	10 S	55	16	41	12 07 63	0 18 60
14	32	44.8		05.8	292	08.5	38	52.5	20	17 59	21	46	11 44 65	0 41 59
15	47	45.0		06.7	306	31.5	40	49.0	30	18 02	27	18 55	17 68	1 08 58
16	62	45.2		07.7	320	54.4	39	45.2	35	05	30	19 00	11 01 70	24 56
17	77	45.4	-4	08.7	335	17.4	40	-26	40	18 07	18 35	19 07	10 43 71	1 43 55
18	92	45.6	-4	09.6	349	40.4	40	-26	45	18 10	18 40	19 15	10 21 73	2 05 53
19	107	45.8		10.6	4	03.5	41	32.9	50	14	47	26	9 52 77	34 50
20	122	46.0		11.6	18	26.6	41	28.4	52	16	50	31	38 79	2 48 48
21	137	46.2		12.5	32	49.8	42	23.8	54	18	54	37	22 82	3 04 47
22	152	46.4		13.5	47	13.0	42	18.9	56	20	18 58	44	9 03 84	23 44
23	167	46.6		14.5	61	36.3	43	13.9	58	22	19 02	19 52	8 40 88	3 47 40
24	182	46.8	-4	15.4	75	59.6	43	-26	60 S	18 25	19 08	20 01	8 09 95	4 18 33

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 23 ^h 09 ^m 5		Mag: -3.9 PMG: 11 ^h 33 ^m		Mag: -0.6 PMG: 4 ^h 33 ^m		Mag: -2.9 PMG: 23 ^h 22 ^m		Mag: +0.5 PMG: 20 ^h 37 ^m	
	hG ♈	hG ♀	Dec		hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	11	40.8	186	55.0	-0	31.9	291	42.0	+22	31.9
1	26	43.3	201	54.6		33.2	306	43.6		32.0
2	41	45.7	216	54.2		34.4	321	45.2		32.1
3	56	48.2	231	53.8		35.7	336	46.8		32.3
4	71	50.6	246	53.4		36.9	351	48.4		32.4
5	86	53.1	261	53.0	-0	38.2	6	50.0	+22	32.5
6	101	55.6	276	52.6	-0	39.4	21	51.6	+22	32.7
7	116	58.0	291	52.2		40.7	36	53.2		32.8
8	132	00.5	306	51.8		42.0	51	54.8		32.9
9	147	03.0	321	51.4		43.2	66	56.4		33.0
10	162	05.4	336	51.1		44.5	81	58.0		33.2
11	177	07.9	351	50.7	-0	45.7	96	59.6	+22	33.3
12	192	10.4	6	50.3	-0	47.0	112	01.2	+22	33.4
13	207	12.8	21	49.9		48.2	127	02.8		33.6
14	222	15.3	36	49.5		49.5	142	04.4		33.7
15	237	17.8	51	49.1		50.7	157	06.0		33.8
16	252	20.2	66	48.7		52.0	172	07.6		33.9
17	267	22.7	81	48.3	-0	53.2	187	09.2	+22	34.1
18	282	25.1	96	47.9	-0	54.5	202	10.8	+22	34.2
19	297	27.6	111	47.5		55.8	217	12.4		34.3
20	312	30.1	126	47.1		57.0	232	14.0		34.5
21	327	32.5	141	46.7		58.3	247	15.6		34.6
22	342	35.0	156	46.4	-0	59.5	262	17.2		34.7
23	357	37.5	171	46.0	-1	00.8	277	18.8		34.8
24	12	39.9	186	45.6	-1	02.0	292	20.4	+22	35.0
Dif	—		-4		-13		+16		+1	
							+28		-1	
									+25	
									0	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16°0 PMG: 11 ^h 48 ^m 4			Edad: 9 ^d 1 SD: 16°2 PMG: 20 ^h 40 ^m	PHE { 4 ^h : 59°4 12 ^h : 59°3 20 ^h : 59°3 R°: 53 ^m									
	hG ☉	Dec				hG ☾			Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	182	51.4	-4	38.5	61	39.0	-23 13.6	60 N	17 21	18 02	18 50	17 13	4	*** ** *
1	197	51.6		39.5	76	04.1	61 -23 04.3	58	23	02	48	16 59	9	*** ** *
2	212	51.8		40.5	90	29.3	62 -22 54.9	56	25	02	45	46	14	*** ** *
3	227	51.9		41.4	104	54.6	63 45.4	54	27	02	43	35	18	*** ** *
4	242	52.1		42.4	119	20.0	64 35.7	52	29	02	41	26	20	*** ** *
5	257	52.3	-4	43.3	133	45.5	65 -22 25.8	50	17 30	18 02	18 40	16 17	23	*** ** *
6	272	52.5	-4	44.3	148	11.0	65 -22 15.8	45	17 33	18 03	18 37	15 59	28	0 11 80
7	287	52.7		45.3	162	36.6	66 -22 05.7	40	36	03	34	43	33	30 75
8	302	52.9		46.2	177	02.4	68 -21 55.4	35	39	04	33	31	36	45 72
9	317	53.1		47.2	191	28.2	68 45.0	30	41	05	32	19	40	0 58 69
10	332	53.3		48.2	205	54.1	69 34.5	20	45	07	32	15 00	45	1 20 64
11	347	53.5	-4	49.1	220	20.1	70 -21 23.8	10 N	17 48	18 09	18 34	14 43	50	1 39 60
12	2	53.6	-4	50.1	234	46.2	71 -21 13.0	0	17 52	18 12	18 37	14 27	54	1 57 56
13	17	53.8		51.0	249	12.4	72 -21 02.1	10 S	55	16	41	14 11	58	2 15 52
14	32	54.0		52.0	263	38.6	72 -20 51.1	20	17 59	21	47	13 54	63	34 48
15	47	54.2		53.0	278	05.0	74 39.9	30	18 04	28	18 56	34	68	2 55 43
16	62	54.4		53.9	292	31.4	74 28.6	35	06	32	19 02	23	71	3 08 40
17	77	54.6	-4	54.9	306	58.0	76 -20 17.2	40	18 09	18 37	19 09	13 09	75	3 22 37
18	92	54.8	-4	55.8	321	24.6	76 -20 05.6	45	18 13	18 43	19 18	12 53	80	3 40 32
19	107	55.0		56.8	335	51.4	78 -19 53.9	50	17	50	30	34	85	4 00 27
20	122	55.1		57.8	350	18.2	78 42.2	52	19	54	35	24	89	10 24
21	137	55.3		58.7	4	45.1	79 30.3	54	21	18 58	42	14	92	21 21
22	152	55.5	-4	59.7	19	12.1	80 18.2	56	24	19 02	49	12 02	96	34 17
23	167	55.7	-5	00.6	33	39.2	81 -19 06.1	58	27	07	19 57	11 48	101	4 49 12
24	182	55.9	-5	01.6	48	06.4	82 -18 53.9	60 S	18 30	19 13	20 07	11 32	106	5 06 7

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 23 ^h 01 ^m 6		Mag: -3.9 PMG: 11 ^h 34 ^m		Mag: -0.7 PMG: 4 ^h 28 ^m		Mag: -2.9 PMG: 23 ^h 13 ^m		Mag: +0.5 PMG: 20 ^h 29 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	13	39.1	186	36.1	-1	32.2	292	59.4	+22	38.0	10	37.0	-0	26.9	51	56.1	-16	25.1
1	28	41.5	201	35.7		33.4	308	01.1		38.1	25	39.7		27.0	66	58.6		25.1
2	43	44.0	216	35.4		34.7	323	02.7		38.3	40	42.5		27.2	82	01.2		25.2
3	58	46.5	231	35.0		35.9	338	04.4		38.4	55	45.2		27.3	97	03.7		25.2
4	73	48.9	246	34.6		37.2	353	06.0		38.5	70	48.0		27.4	112	06.2		25.2
5	88	51.4	261	34.2	-1	38.4	8	07.6	+22	38.7	85	50.8	-0	27.5	127	08.8	-16	25.2
6	103	53.9	276	33.8	-1	39.7	23	09.3	+22	38.8	100	53.5	-0	27.7	142	11.3	-16	25.2
7	118	56.3	291	33.4		40.9	38	10.9		38.9	115	56.3		27.8	157	13.8		25.3
8	133	58.8	306	33.0		42.2	53	12.6		39.0	130	59.1		27.9	172	16.4		25.3
9	149	01.2	321	32.6		43.4	68	14.2		39.2	146	01.8		28.1	187	18.9		25.3
10	164	03.7	336	32.2		44.7	83	15.9		39.3	161	04.6		28.2	202	21.4		25.3
11	179	06.2	351	31.8	-1	46.0	98	17.5	+22	39.4	176	07.3	-0	28.3	217	24.0	-16	25.4
12	194	08.6	6	31.4	-1	47.2	113	19.2	+22	39.5	191	10.1	-0	28.4	232	26.5	-16	25.4
13	209	11.1	21	31.0		48.5	128	20.8		39.7	206	12.9		28.6	247	29.1		25.4
14	224	13.6	36	30.6		49.7	143	22.5		39.8	221	15.6		28.7	262	31.6		25.4
15	239	16.0	51	30.2		51.0	158	24.1		39.9	236	18.4		28.8	277	34.1		25.4
16	254	18.5	66	29.8		52.2	173	25.8		40.0	251	21.2		28.9	292	36.7		25.5
17	269	21.0	81	29.4	-1	53.5	188	27.4	+22	40.2	266	23.9	-0	29.1	307	39.2	-16	25.5
18	284	23.4	96	29.0	-1	54.7	203	29.1	+22	40.3	281	26.7	-0	29.2	322	41.7	-16	25.5
19	299	25.9	111	28.6		56.0	218	30.7		40.4	296	29.5		29.3	337	44.3		25.5
20	314	28.4	126	28.3		57.2	233	32.4		40.5	311	32.2		29.4	352	46.8		25.5
21	329	30.8	141	27.9		58.5	248	34.1		40.7	326	35.0		29.6	7	49.3		25.6
22	344	33.3	156	27.5	-1	59.8	263	35.7		40.8	341	37.7		29.7	22	51.9		25.6
23	359	35.7	171	27.1	-2	01.0	278	37.4		40.9	356	40.5		29.8	37	54.4		25.6
24	14	38.2	186	26.7	-2	02.3	293	39.0	+22	41.0	11	43.3	-0	30.0	52	56.9	-16	25.6
Dif	—		-4		-13		+16		+1		+28		-1		+25		0	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 48 ^m 1			Edad: 10 ^d 1 PHE { 4 ^h : 59:3 12 ^h : 59:2 20 ^h : 59:1 Rº: 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	55.9	-5 01.6	48	06.4	-18	53.9	60 N	4 47	5 36	6 17	17 17	3	0 22	105		
1	197	56.1	02.6	62	33.7 83		41.5 124	58	50	36	15	08	6	36	99		
2	212	56.3	03.5	77	01.0 83		29.1 124	56	52	36	13	17 00	10	47	95		
3	227	56.5	04.5	91	28.5 85		16.5 126	54	55	36	11	16 53	13	0 57	92		
4	242	56.6	05.4	105	56.0 85	-18	03.9 126	52	56	35	09	46	16	1 06	88		
5	257	56.8	-5 06.4	120	23.7 87	-17	51.1 128	50	4 58	5 35	6 08	16 40	18	1 14	86		
6	272	57.0	-5 07.4	134	51.4 87	-17	38.2 129	45	5 01	5 35	6 04	16 27	24	1 31	80		
7	287	57.2	08.3	149	19.2 88		25.3 129	40	03	34	6 01	16 29		45	75		
8	302	57.4	09.3	163	47.1 89	-17	12.2 131	35	04	33	5 59	16 07	32	1 57	70		
9	317	57.6	10.2	178	15.1 90	-16	59.1 131	30	05	32	56	15 59	35	2 07	67		
10	332	57.7	11.2	192	43.2 91		45.8 133	20	04	30	52	45	41	24	62		
11	347	57.9	-5 12.1	207	11.4 92	-16	32.5 133	10 N	5 03	5 27	5 48	15 33	45	2 39	57		
12	2	58.1	-5 13.1	221	39.6 92	-16	19.0 135	0	5 00	5 24	5 45	15 21	50	2 53	52		
13	17	58.3	14.1	236	08.0 94	-16	05.5 135	10 S	4 56	20	41	15 09	55	3 07	48		
14	32	58.5	15.0	250	36.4 94	-15	51.9 136	20	49	15	37	14 57	60	22	43		
15	47	58.7	16.0	265	04.9 95		38.2 137	30	40	08	32	42	66	38	38		
16	62	58.9	16.9	279	33.5 96		24.4 138	35	34	5 04	30	34	69	48	34		
17	77	59.0	-5 17.9	294	02.2 97	-15	10.6 138	40	4 27	4 59	5 27	14 24	74	3 59	30		
18	92	59.2	-5 18.8	308	30.9 97	-14	56.6 140	45	4 18	4 53	5 23	14 13	78	4 12	26		
19	107	59.4	19.8	322	59.8 99		42.6 140	50	06	46	18	13 59	84	27	21		
20	122	59.6	20.8	337	28.7 99		28.5 141	52	4 00	42	16	53	86	34	18		
21	137	59.8	21.7	351	57.7 100		14.3 142	54	3 54	38	14	46	89	42	15		
22	153	00.0	22.7	6	26.8 101	-14	00.1 142	56	47	34	12	38	93	4 51	12		
23	168	00.1	23.6	20	56.0 102	-13	45.8 143	58	39	29	09	29	97	5 01	8		
24	183	00.3	-5 24.6	35	25.2 102	-13	31.4 144	60 S	3 29	4 23	5 06	13 18	102	5 13	3		

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 57 ^m 7		Mag: -3.9 PMG: 11 ^h 35 ^m			Mag: -0.7 PMG: 4 ^h 25 ^m			Mag: -2.9 PMG: 23 ^h 09 ^m			Mag: +0.5 PMG: 20 ^h 25 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°	'
0	14	38.2	186	26.7	-2 02.3	293	39.0	+22 41.0	11	43.3	-0 30.0	52	56.9	-16 25.6	
1	29	40.7	201	26.3	03.5	308	40.7	41.1	26	46.0	30.1	67	59.5	25.6	
2	44	43.1	216	25.9	04.8	323	42.4	41.3	41	48.8	30.2	83	02.0	25.7	
3	59	45.6	231	25.5	06.0	338	44.0	41.4	56	51.5	30.3	98	04.6	25.7	
4	74	48.1	246	25.1	07.3	353	45.7	41.5	71	54.3	30.5	113	07.1	25.7	
5	89	50.5	261	24.7	-2 08.5	8	47.4	+22 41.6	86	57.1	-0 30.6	128	09.6	-16 25.7	
6	104	53.0	276	24.3	-2 09.8	23	49.0	+22 41.8	101	59.8	-0 30.7	143	12.2	-16 25.7	
7	119	55.5	291	23.9	11.0	38	50.7	41.9	117	02.6	30.8	158	14.7	25.8	
8	134	57.9	306	23.5	12.3	53	52.4	42.0	132	05.4	31.0	173	17.2	25.8	
9	150	00.4	321	23.1	13.5	68	54.0	42.1	147	08.1	31.1	188	19.8	25.8	
10	165	02.9	336	22.7	14.8	83	55.7	42.3	162	10.9	31.2	203	22.3	25.8	
11	180	05.3	351	22.3	-2 16.1	98	57.4	+22 42.4	177	13.6	-0 31.3	218	24.8	-16 25.8	
12	195	07.8	6	21.9	-2 17.3	113	59.1	+22 42.5	192	16.4	-0 31.5	233	27.4	-16 25.9	
13	210	10.2	21	21.5	18.6	129	00.7	42.6	207	19.2	31.6	248	29.9	25.9	
14	225	12.7	36	21.1	19.8	144	02.4	42.8	222	21.9	31.7	263	32.4	25.9	
15	240	15.2	51	20.7	21.1	159	04.1	42.9	237	24.7	31.8	278	35.0	25.9	
16	255	17.6	66	20.3	22.3	174	05.8	43.0	252	27.4	32.0	293	37.5	25.9	
17	270	20.1	81	19.9	-2 23.6	189	07.4	+22 43.1	267	30.2	-0 32.1	308	40.0	-16 26.0	
18	285	22.6	96	19.5	-2 24.8	204	09.1	+22 43.2	282	33.0	-0 32.2	323	42.5	-16 26.0	
19	300	25.0	111	19.1	26.1	219	10.8	43.4	297	35.7	32.3	338	45.1	26.0	
20	315	27.5	126	18.7	27.3	234	12.5	43.5	312	38.5	32.5	353	47.6	26.0	
21	330	30.0	141	18.4	28.6	249	14.2	43.6	327	41.2	32.6	8	50.1	26.0	
22	345	32.4	156	18.0	29.8	264	15.9	43.7	342	44.0	32.7	23	52.7	26.1	
23	0	34.9	171	17.6	31.1	279	17.5	43.9	357	46.8	32.8	38	55.2	26.1	
24	15	37.3	186	17.2	-2 32.3	294	19.2	+22 44.0	12	49.5	-0 33.0	53	57.7	-16 26.1	
Dif	—		-4 -13			+17 +1			+28 -1			+25 0			

UT	SOL			LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 47 ^m 8			Edad: 11 ^d 1 PHE { 4 ^h : 59'0 12 ^h : 58'9 20 ^h : 58'8 R°: 47 ^m						Civil		Náutico	Hora	R°	Hora	R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif											
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m		
0	183	00.3	-5	24.6	35	25.2	-13	31.4	60 N	17 15	17 56	18 44	17 20	1	2 07	100		
1	198	00.5		25.5	49	54.5 ¹⁰³		16.9 ¹⁴⁵	58	17	57	42	14	5	15	96		
2	213	00.7		26.5	64	23.9 ¹⁰⁴	-13	02.4 ¹⁴⁵	56	20	57	40	10	8	22	92		
3	228	00.9		27.5	78	53.4 ¹⁰⁵	-12	47.8 ¹⁴⁶	54	22	57	38	06	10	29	88		
4	243	01.0		28.4	93	22.9 ¹⁰⁵		33.2 ¹⁴⁶	52	24	58	37	17	02	13	86		
5	258	01.2	-5	29.4	107	52.6 ¹⁰⁷	-12	18.4 ¹⁴⁸	50	17 26	17 58	18 35	16 58	16	2 40	82		
6	273	01.4	-5	30.3	122	22.3 ¹⁰⁷	-12	03.7 ¹⁴⁷	45	17 30	17 59	18 33	16 51	21	2 51	76		
7	288	01.6		31.3	136	52.0 ¹⁰⁷	-11	48.8 ¹⁴⁹	40	33	18 00	31	45	25	3 00	72		
8	303	01.8		32.2	151	21.9 ¹⁰⁹		33.9 ¹⁴⁹	35	36	01	30	39	29	07	69		
9	318	02.0		33.2	165	51.8 ¹⁰⁹		19.0 ¹⁴⁹	30	38	02	30	34	32	14	65		
10	333	02.1		34.2	180	21.8 ¹¹⁰	-11	04.0 ¹⁵⁰	20	43	05	31	26	38	26	59		
11	348	02.3	-5	35.1	194	51.8 ¹¹⁰	-10	49.0 ¹⁵⁰	10 N	17 47	18 08	18 33	16 18	43	3 36	54		
12	3	02.5	-5	36.1	209	21.9 ¹¹¹	-10	33.9 ¹⁵¹	0	17 51	18 12	18 36	16 11	48	3 45	49		
13	18	02.7		37.0	223	52.1 ¹¹²		18.7 ¹⁵²	10 S	17 55	16	41	16 04	53	3 55	44		
14	33	02.9		38.0	238	22.3 ¹¹²	-10	03.5 ¹⁵²	20	18 00	22	48	15 57	58	4 05	39		
15	48	03.0		38.9	252	52.6 ¹¹³	-9	48.3 ¹⁵²	30	05	29	18 57	48	64	16	33		
16	63	03.2		39.9	267	23.0 ¹¹⁴		33.0 ¹⁵³	35	08	33	19 04	43	67	22	30		
17	78	03.4	-5	40.8	281	53.5 ¹¹⁵	-9	17.7 ¹⁵³	40	18 11	18 39	19 11	15 38	71	4 29	27		
18	93	03.6	-5	41.8	296	23.9 ¹¹⁴	-9	02.3 ¹⁵⁴	45	18 15	18 45	19 21	15 31	76	4 38	22		
19	108	03.8		42.7	310	54.5 ¹¹⁶	-8	46.9 ¹⁵⁴	50	20	53	33	23	81	48	17		
20	123	03.9		43.7	325	25.1 ¹¹⁶		31.4 ¹⁵⁵	52	23	18 57	39	19	84	52	15		
21	138	04.1		44.7	339	55.8 ¹¹⁷		16.0 ¹⁵⁴	54	25	19 02	46	15	87	4 57	12		
22	153	04.3		45.6	354	26.5 ¹¹⁷	-8	00.4 ¹⁵⁶	56	28	06	19 54	11	90	5 03	9		
23	168	04.5		46.6	8	57.3 ¹¹⁸	-7	44.9 ¹⁵⁵	58	31	12	20 03	06	93	09	6		
24	183	04.6	-5	47.5	23	28.2 ¹¹⁹	-7	29.3 ¹⁵⁶	60 S	18 34	19 18	20 13	15 00	97	5 16	2		
UT	ARIES		VENUS			MARTE			JÚPITER				SATURNO					
	PMG: 22 ^h 53 ^m 7		Mag: -4.0 PMG: 11 ^h 35 ^m			Mag: -0.7 PMG: 4 ^h 22 ^m			Mag: -2.9 PMG: 23 ^h 04 ^m				Mag: +0.5 PMG: 20 ^h 21 ^m					
	hG ♂		hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♎		Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	15	37.3	186	17.2	-2	32.3	294	19.2	+22	44.0	12	49.5	-0	33.0	53	57.7	-16	26.1
1	30	39.8	201	16.8		33.6	309	20.9		44.1	27	52.3		33.1	69	00.3		26.1
2	45	42.3	216	16.4		34.9	324	22.6		44.2	42	55.0		33.2	84	02.8		26.1
3	60	44.7	231	16.0		36.1	339	24.3		44.4	57	57.8		33.3	99	05.3		26.2
4	75	47.2	246	15.6		37.4	354	26.0		44.5	73	00.6		33.5	114	07.9		26.2
5	90	49.7	261	15.2	-2	38.6	9	27.7	+22	44.6	88	03.3	-0	33.6	129	10.4	-16	26.2
6	105	52.1	276	14.8	-2	39.9	24	29.4	+22	44.7	103	06.1	-0	33.7	144	12.9	-16	26.2
7	120	54.6	291	14.4		41.1	39	31.1		44.8	118	08.8		33.8	159	15.4		26.2
8	135	57.1	306	14.0		42.4	54	32.8		45.0	133	11.6		34.0	174	18.0		26.3
9	150	59.5	321	13.6		43.6	69	34.5		45.1	148	14.4		34.1	189	20.5		26.3
10	166	02.0	336	13.2		44.9	84	36.2		45.2	163	17.1		34.2	204	23.0		26.3
11	181	04.5	351	12.8	-2	46.1	99	37.9	+22	45.3	178	19.9	-0	34.3	219	25.6	-16	26.3
12	196	06.9	6	12.4	-2	47.4	114	39.6	+22	45.5	193	22.6	-0	34.5	234	28.1	-16	26.3
13	211	09.4	21	12.0		48.6	129	41.3		45.6	208	25.4		34.6	249	30.6		26.3
14	226	11.8	36	11.6		49.9	144	43.0		45.7	223	28.2		34.7	264	33.1		26.4
15	241	14.3	51	11.2		51.1	159	44.7		45.8	238	30.9		34.8	279	35.7		26.4
16	256	16.8	66	10.8		52.4	174	46.4		45.9	253	33.7		35.0	294	38.2		26.4
17	271	19.2	81	10.4	-2	53.6	189	48.1	+22	46.1	268	36.4	-0	35.1	309	40.7	-16	26.4
18	286	21.7	96	10.0	-2	54.9	204	49.8	+22	46.2	283	39.2	-0	35.2	324	43.3	-16	26.4
19	301	24.2	111	09.6		56.1	219	51.5		46.3	298	41.9		35.3	339	45.8		26.5
20	316	26.6	126	09.2		57.4	234	53.2		46.4	313	44.7		35.5	354	48.3		26.5
21	331	29.1	141	08.8		58.6	249	54.9		46.5	328	47.5		35.6	9	50.8		26.5
22	346	31.6	156	08.4	-2	59.9	264	56.6		46.7	343	50.2		35.7	24	53.4		26.5
23	1	34.0	171	08.0	-3	01.1	279	58.3		46.8	358	53.0		35.8	39	55.9		26.5
24	16	36.5	186	07.6	-3	02.4	295	00.0	+22	46.9	13	55.7	-0	36.0	54	58.4	-16	26.5
Dif	—		-4		-13	+17		+1	+28		-1		+25		0			

UT	SOL			LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 47 ^m 6			Edad: 12 ^d 1 PHE { 4 ^h : 58'7 12 ^h : 58'5 20 ^h : 58'4 Rº: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	04.6	-5	47.5	23	28.2	-7	29.3	60 N	4 52	5 40	6 22	17 21	1	3	47
1	198	04.8		48.5	37	59.1 ¹¹⁹	-7	13.7 ¹⁵⁶	58	54	40	19	19	4	51	92
2	213	05.0		49.4	52	30.0 ¹¹⁹	-6	58.1 ¹⁵⁶	56	56	40	17	18	7	54	88
3	228	05.2		50.4	67	01.0 ¹²⁰		42.4 ¹⁵⁷	54	4 58	39	15	16	10	3	57
4	243	05.4		51.3	81	32.1 ¹²¹		26.7 ¹⁵⁷	52	5 00	39	12	15	13	4	00
5	258	05.5	-5	52.3	96	03.2 ¹²¹	-6	11.0 ¹⁵⁷	50	5 01	5 38	6 11	17 14	15	4	02
6	273	05.7	-5	53.2	110	34.3 ¹²¹	-5	55.3 ¹⁵⁷	45	5 03	5 37	6 07	17 12	20	4	07
7	288	05.9		54.2	125	05.5 ¹²²		39.5 ¹⁵⁸	40	05	36	03	10	24	12	70
8	303	06.1		55.1	139	36.8 ¹²³		23.7 ¹⁵⁸	35	05	35	6 00	08	28	16	66
9	318	06.2		56.1	154	08.0 ¹²²	-5	08.0 ¹⁵⁷	30	06	33	5 57	06	31	19	63
10	333	06.4		57.0	168	39.4 ¹²⁴	-4	52.2 ¹⁵⁸	20	05	31	53	04	36	25	57
11	348	06.6	-5	58.0	183	10.8 ¹²⁴	-4	36.3 ¹⁵⁹	10 N	5 03	5 27	5 48	17 01	42	4	30
12	3	06.8	-5	58.9	197	42.2 ¹²⁴	-4	20.5 ¹⁵⁸	0	4 59	5 23	5 44	16 59	47	4	34
13	18	06.9	-5	59.9	212	13.6 ¹²⁴	-4	04.6 ¹⁵⁹	10 S	54	19	40	57	51	39	42
14	33	07.1	-6	00.9	226	45.1 ¹²⁵	-3	48.8 ¹⁵⁸	20	47	13	35	55	56	44	37
15	48	07.3		01.8	241	16.7 ¹²⁶		32.9 ¹⁵⁹	30	38	06	30	52	62	49	32
16	63	07.5		02.8	255	48.3 ¹²⁶		17.1 ¹⁵⁸	35	31	5 01	27	50	66	52	28
17	78	07.6	-6	03.7	270	19.9 ¹²⁶	-3	01.2 ¹⁵⁹	40	4 23	4 56	5 23	16 49	69	4	56
18	93	07.8	-6	04.7	284	51.5 ¹²⁶	-2	45.3 ¹⁵⁹	45	4 14	4 49	5 19	16 47	73	5	00
19	108	08.0		05.6	299	23.2 ¹²⁷		29.4 ¹⁵⁹	50	4 01	41	14	44	79	05	15
20	123	08.2		06.6	313	54.9 ¹²⁷	-2	13.5 ¹⁵⁹	52	3 55	37	12	43	82	07	13
21	138	08.3		07.5	328	26.7 ¹²⁸	-1	57.6 ¹⁵⁹	54	49	33	09	42	84	09	11
22	153	08.5		08.5	342	58.4 ¹²⁷		41.7 ¹⁵⁹	56	41	28	06	41	87	12	7
23	168	08.7		09.4	357	30.2 ¹²⁸		25.9 ¹⁵⁸	58	32	23	03	39	91	15	4
24	183	08.9	-6	10.4	12	02.1 ¹²⁹	-1	10.0 ¹⁵⁹	60 S	3 22	4 16	5 00	16 37	95	5	18
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 49 ^m 8		Mag: -4.0 PMG: 11 ^h 36 ^m			Mag: -0.7 PMG: 4 ^h 20 ^m			Mag: -2.9 PMG: 23 ^h 00 ^m			Mag: +0.5 PMG: 20 ^h 17 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	16	36.5	186	07.6	-3	02.4	295	00.0	+22	46.9	13	55.7	-0	36.0	54	58.4
1	31	39.0	201	07.2		03.6	310	01.8		47.0	28	58.5		36.1	70	01.0
2	46	41.4	216	06.8		04.9	325	03.5		47.1	44	01.2		36.2	85	03.5
3	61	43.9	231	06.4		06.2	340	05.2		47.3	59	04.0		36.3	100	06.0
4	76	46.3	246	06.0		07.4	355	06.9		47.4	74	06.8		36.5	115	08.5
5	91	48.8	261	05.6	-3	08.7	10	08.6	+22	47.5	89	09.5	-0	36.6	130	11.1
6	106	51.3	276	05.2	-3	09.9	25	10.4	+22	47.6	104	12.3	-0	36.7	145	13.6
7	121	53.7	291	04.8		11.2	40	12.1		47.8	119	15.0		36.8	160	16.1
8	136	56.2	306	04.4		12.4	55	13.8		47.9	134	17.8		36.9	175	18.6
9	151	58.7	321	04.0		13.7	70	15.5		48.0	149	20.5		37.1	190	21.2
10	167	01.1	336	03.6		14.9	85	17.2		48.1	164	23.3		37.2	205	23.7
11	182	03.6	351	03.2	-3	16.2	100	19.0	+22	48.2	179	26.1	-0	37.3	220	26.2
12	197	06.1	6	02.8	-3	17.4	115	20.7	+22	48.4	194	28.8	-0	37.4	235	28.7
13	212	08.5	21	02.4		18.7	130	22.4		48.5	209	31.6		37.6	250	31.3
14	227	11.0	36	02.0		19.9	145	24.2		48.6	224	34.3		37.7	265	33.8
15	242	13.4	51	01.6		21.2	160	25.9		48.7	239	37.1		37.8	280	36.3
16	257	15.9	66	01.2		22.4	175	27.6		48.8	254	39.8		37.9	295	38.8
17	272	18.4	81	00.8	-3	23.7	190	29.3	+22	49.0	269	42.6	-0	38.1	310	41.4
18	287	20.8	96	00.4	-3	24.9	205	31.1	+22	49.1	284	45.3	-0	38.2	325	43.9
19	302	23.3	111	00.0		26.2	220	32.8		49.2	299	48.1		38.3	340	46.4
20	317	25.8	125	59.6		27.4	235	34.5		49.3	314	50.9		38.4	355	48.9
21	332	28.2	140	59.2		28.7	250	36.3		49.4	329	53.6		38.5	10	51.5
22	347	30.7	155	58.8		29.9	265	38.0		49.6	344	56.4		38.7	25	54.0
23	2	33.2	170	58.3		31.2	280	39.8		49.7	359	59.1		38.8	40	56.5
24	17	35.6	185	57.9	-3	32.4	295	41.5	+22	49.8	15	01.9	-0	38.9	55	59.0
Dif	—		-4	-13		+17	+1			+28	-1			+25		

UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 47 ^m 3			Edad: 13 ^d 1 PHE { 4 ^h : 58'2 12 ^h : 58'0 20 ^h : 57'8 R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	h m m
0	183	08.9	-6	10.4	12	02.1	-1	10.0	60 N	17 09	17 51	18 39	17 22 1	5 23 93		
1	198	09.0		11.3	26	33.9 ¹²⁸	-0	54.1 ¹⁵⁹	58	12	51	36	23 5	23 90		
2	213	09.2		12.3	41	05.8 ¹²⁹		38.2 ¹⁵⁹	56	15	52	35	25 8	22 87		
3	228	09.4		13.2	55	37.8 ¹³⁰		22.4 ¹⁵⁸	54	17	53	33	26 11	22 84		
4	243	09.6		14.2	70	09.7 ¹²⁹	-0	06.5 ¹⁵⁹	52	19	53	32	28 13	22 81		
5	258	09.7	-6	15.1	84	41.7 ¹³⁰	+0	09.3 ¹⁵⁸	50	17 22	17 54	18 31	17 29 15	5 22 79		
6	273	09.9	-6	16.1	99	13.7 ¹³⁰	+0	25.1 ¹⁵⁸	45	17 26	17 55	18 29	17 32 20	5 22 73		
7	288	10.1		17.0	113	45.7 ¹³⁰		40.9 ¹⁵⁸	40	30	57	28	34 24	22 69		
8	303	10.3		18.0	128	17.7 ¹³⁰	+0	56.7 ¹⁵⁸	35	33	17 58	28	36 27	22 65		
9	318	10.4		18.9	142	49.7 ¹³⁰	+1	12.5 ¹⁵⁸	30	36	18 00	28	37 31	22 61		
10	333	10.6		19.9	157	21.8 ¹³¹		28.3 ¹⁵⁸	20	41	03	29	40 37	22 55		
11	348	10.8	-6	20.8	171	53.9 ¹³¹	+1	44.0 ¹⁵⁷	10 N	17 46	18 07	18 32	17 43 41	5 22 50		
12	3	10.9	-6	21.8	186	26.0 ¹³¹	+1	59.7 ¹⁵⁷	0	17 51	18 11	18 36	17 46 45	5 21 46		
13	18	11.1		22.7	200	58.1 ¹³¹	+2	15.4 ¹⁵⁷	10 S	17 55	16	41	48 51	21 41		
14	33	11.3		23.7	215	30.2 ¹³¹		31.1 ¹⁵⁷	20	18 00	22	48	51 55	21 36		
15	48	11.5		24.6	230	02.4 ¹³²	+2	46.8 ¹⁵⁷	30	06	30	18 59	54 61	21 30		
16	63	11.6		25.5	244	34.5 ¹³¹	+3	02.4 ¹⁵⁶	35	10	35	19 05	56 64	20 28		
17	78	11.8	-6	26.5	259	06.7 ¹³²	+3	18.0 ¹⁵⁶	40	18 13	18 41	19 14	17 58 68	5 20 24		
18	93	12.0	-6	27.4	273	38.8 ¹³¹	+3	33.6 ¹⁵⁶	45	18 18	18 48	19 24	18 00 73	5 20 20		
19	108	12.1		28.4	288	11.0 ¹³²	+3	49.1 ¹⁵⁵	50	24	18 57	37	03 78	20 15		
20	123	12.3		29.3	302	43.2 ¹³²	+4	04.6 ¹⁵⁵	52	26	19 01	43	05 80	20 12		
21	138	12.5		30.3	317	15.4 ¹³²		20.1 ¹⁵⁵	54	29	06	51	06 84	20 10		
22	153	12.6		31.2	331	47.6 ¹³²		35.5 ¹⁵⁴	56	32	11	19 59	08 86	19 8		
23	168	12.8		32.2	346	19.8 ¹³²	+4	50.9 ¹⁵⁴	58	35	17	20 08	10 90	19 5		
24	183	13.0	-6	33.1	0	52.0 ¹³²	+5	06.3 ¹⁵⁴	60 S	18 39	19 23	20 19	18 12 94	5 19 1		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 45 ^m 9		Mag: -4.0 PMG: 11 ^h 36 ^m			Mag: -0.7 PMG: 4 ^h 17 ^m			Mag: -2.9 PMG: 22 ^h 56 ^m			Mag: +0.5 PMG: 20 ^h 13 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	17	35.6	185	57.9	-3	32.4	295	41.5	+22	49.8	15	01.9	-0	38.9	55	59.0
1	32	38.1	200	57.5		33.7	310	43.2		49.9	30	04.6		39.0	71	01.5
2	47	40.6	215	57.1		34.9	325	45.0		50.0	45	07.4		39.2	86	04.1
3	62	43.0	230	56.7		36.2	340	46.7		50.2	60	10.1		39.3	101	06.6
4	77	45.5	245	56.3		37.4	355	48.5		50.3	75	12.9		39.4	116	09.1
5	92	47.9	260	55.9	-3	38.6	10	50.2	+22	50.4	90	15.6	-0	39.5	131	11.6
6	107	50.4	275	55.5	-3	39.9	25	52.0	+22	50.5	105	18.4	-0	39.6	146	14.2
7	122	52.9	290	55.1		41.1	40	53.7		50.6	120	21.2		39.8	161	16.7
8	137	55.3	305	54.7		42.4	55	55.5		50.7	135	23.9		39.9	176	19.2
9	152	57.8	320	54.3		43.6	70	57.2		50.9	150	26.7		40.0	191	21.7
10	168	00.3	335	53.9		44.9	85	59.0		51.0	165	29.4		40.1	206	24.2
11	183	02.7	350	53.5	-3	46.1	101	00.7	+22	51.1	180	32.2	-0	40.3	221	26.8
12	198	05.2	5	53.1	-3	47.4	116	02.5	+22	51.2	195	34.9	-0	40.4	236	29.3
13	213	07.7	20	52.7		48.6	131	04.2		51.3	210	37.7		40.5	251	31.8
14	228	10.1	35	52.3		49.9	146	06.0		51.5	225	40.4		40.6	266	34.3
15	243	12.6	50	51.9		51.1	161	07.7		51.6	240	43.2		40.7	281	36.8
16	258	15.0	65	51.5		52.4	176	09.5		51.7	255	45.9		40.9	296	39.4
17	273	17.5	80	51.1	-3	53.6	191	11.3	+22	51.8	270	48.7	-0	41.0	311	41.9
18	288	20.0	95	50.7	-3	54.9	206	13.0	+22	51.9	285	51.4	-0	41.1	326	44.4
19	303	22.4	110	50.3		56.1	221	14.8		52.1	300	54.2		41.2	341	46.9
20	318	24.9	125	49.8		57.4	236	16.5		52.2	315	56.9		41.3	356	49.4
21	333	27.4	140	49.4		58.6	251	18.3		52.3	330	59.7		41.5	11	52.0
22	348	29.8	155	49.0	-3	59.9	266	20.1		52.4	346	02.5		41.6	26	54.5
23	3	32.3	170	48.6	-4	01.1	281	21.8		52.5	1	05.2		41.7	41	57.0
24	18	34.8	185	48.2	-4	02.4	296	23.6	+22	52.6	16	08.0	-0	41.8	56	59.5
Dif	—		-4		-12		+18		+1		+28		-1		+25	
															0	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:0 PMG: 11 ^h 47 ^m 0			Edad: 14 ^d 1 PHE { 4 ^h : 57/6 12 ^h : 57/4 20 ^h : 57/2 R°: ***	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾												
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	183	13.0	-6 33.1	0	52.0	+5 06.3	60 N	4 57	5 45	6 27	17 23	2	6 56	94	
1	198	13.2	34.1	15	24.2 ¹³²	21.7 ¹⁵⁴	58	4 59	44	24	28	6	53	89	
2	213	13.3	35.0	29	56.4 ¹³²	37.0 ¹⁵³	56	5 00	44	21	33	9	49	86	
3	228	13.5	36.0	44	28.6 ¹³²	+5 52.2 ¹⁵²	54	02	43	18	37	12	46	83	
4	243	13.7	36.9	59	00.9 ¹³³	+6 07.4 ¹⁵²	52	03	42	16	41	14	43	80	
5	258	13.8	-6 37.9	73	33.1 ¹³²	+6 22.6 ¹⁵²	50	5 04	5 41	6 14	17 44	17	6 41	77	
6	273	14.0	-6 38.8	88	05.3 ¹³²	+6 37.8 ¹⁵²	45	5 06	5 40	6 09	17 52	21	6 35	73	
7	288	14.2	39.8	102	37.5 ¹³²	+6 52.9 ¹⁵¹	40	07	38	05	17 58	26	31	68	
8	303	14.3	40.7	117	09.7 ¹³²	+7 07.9 ¹⁵⁰	35	07	36	6 02	18 03	30	27	64	
9	318	14.5	41.6	131	41.9 ¹³²	22.9 ¹⁵⁰	30	07	35	5 59	08 33		23	61	
10	333	14.7	42.6	146	14.1 ¹³²	37.9 ¹⁵⁰	20	05	31	53	17 37		17	56	
11	348	14.8	-6 43.5	160	46.3 ¹³²	+7 52.8 ¹⁴⁹	10 N	5 03	5 27	5 48	18 24	42	6 12	51	
12	3	15.0	-6 44.5	175	18.4 ¹³¹	+8 07.6 ¹⁴⁸	0	4 59	5 23	5 44	18 31	47	6 07	46	
13	18	15.2	45.4	189	50.6 ¹³²	22.4 ¹⁴⁸	10 S	53	18	39	39 50		6 02	42	
14	33	15.3	46.4	204	22.8 ¹³²	37.2 ¹⁴⁸	20	46	12	34	46 56		5 57	37	
15	48	15.5	47.3	218	54.9 ¹³¹	+8 51.9 ¹⁴⁷	30	35	5 04	28	18 55	61	51	32	
16	63	15.7	48.3	233	27.0 ¹³¹	+9 06.5 ¹⁴⁶	35	28	4 59	24	19 00	64	48	29	
17	78	15.8	-6 49.2	247	59.2 ¹³²	+9 21.1 ¹⁴⁶	40	4 20	4 53	5 20	19 06	68	5 44	25	
18	93	16.0	-6 50.1	262	31.3 ¹³¹	+9 35.6 ¹⁴⁵	45	4 10	4 46	5 16	19 13	72	5 40	21	
19	108	16.2	51.1	277	03.4 ¹³¹	+9 50.1 ¹⁴⁵	50	3 57	37	10	21 78		35	16	
20	123	16.3	52.0	291	35.5 ¹³¹	+10 04.5 ¹⁴⁴	52	50	33	07	25 80		32	14	
21	138	16.5	53.0	306	07.5 ¹³⁰	18.9 ¹⁴⁴	54	43	28	04	30 82		30	11	
22	153	16.7	53.9	320	39.6 ¹³¹	33.1 ¹⁴²	56	35	23	5 01	34 86		27	8	
23	168	16.8	54.9	335	11.6 ¹³⁰	+10 47.4 ¹⁴³	58	25	17	4 58	40 89		24	5	
24	183	17.0	-6 55.8	349	43.6 ¹³⁰	+11 01.5 ¹⁴¹	60 S	3 14	4 10	4 54	19 46	94	5 20	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 42 ^m 0		Mag: -4.0 PMG: 11 ^h 37 ^m		Mag: -0.8 PMG: 4 ^h 14 ^m		Mag: -2.9 PMG: 22 ^h 51 ^m		Mag: +0.6 PMG: 20 ^h 09 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	18	34.8	185	48.2	-4	02.4	296	23.6	+22	52.6	16	08.0	-0	41.8	56	59.5	-16	27.3
1	33	37.2	200	47.8		03.6	311	25.4		52.8	31	10.7		41.9	72	02.0		27.4
2	48	39.7	215	47.4		04.8	326	27.1		52.9	46	13.5		42.1	87	04.6		27.4
3	63	42.2	230	47.0		06.1	341	28.9		53.0	61	16.2		42.2	102	07.1		27.4
4	78	44.6	245	46.6		07.3	356	30.7		53.1	76	19.0		42.3	117	09.6		27.4
5	93	47.1	260	46.2	-4	08.6	11	32.4	+22	53.2	91	21.7	-0	42.4	132	12.1	-16	27.4
6	108	49.5	275	45.8	-4	09.8	26	34.2	+22	53.4	106	24.5	-0	42.6	147	14.6	-16	27.4
7	123	52.0	290	45.4		11.1	41	36.0		53.5	121	27.2		42.7	162	17.2		27.4
8	138	54.5	305	45.0		12.3	56	37.8		53.6	136	30.0		42.8	177	19.7		27.5
9	153	56.9	320	44.6		13.6	71	39.6		53.7	151	32.7		42.9	192	22.2		27.5
10	168	59.4	335	44.1		14.8	86	41.3		53.8	166	35.5		43.0	207	24.7		27.5
11	184	01.9	350	43.7	-4	16.1	101	43.1	+22	53.9	181	38.2	-0	43.2	222	27.2	-16	27.5
12	199	04.3	5	43.3	-4	17.3	116	44.9	+22	54.1	196	41.0	-0	43.3	237	29.7	-16	27.5
13	214	06.8	20	42.9		18.5	131	46.7		54.2	211	43.7		43.4	252	32.3		27.5
14	229	09.3	35	42.5		19.8	146	48.5		54.3	226	46.5		43.5	267	34.8		27.5
15	244	11.7	50	42.1		21.0	161	50.2		54.4	241	49.2		43.6	282	37.3		27.6
16	259	14.2	65	41.7		22.3	176	52.0		54.5	256	52.0		43.8	297	39.8		27.6
17	274	16.6	80	41.3	-4	23.5	191	53.8	+22	54.6	271	54.7	-0	43.9	312	42.3	-16	27.6
18	289	19.1	95	40.9	-4	24.8	206	55.6	+22	54.8	286	57.5	-0	44.0	327	44.8	-16	27.6
19	304	21.6	110	40.5		26.0	221	57.4		54.9	302	00.2		44.1	342	47.4		27.6
20	319	24.0	125	40.1		27.3	236	59.2		55.0	317	03.0		44.2	357	49.9		27.6
21	334	26.5	140	39.6		28.5	252	01.0		55.1	332	05.7		44.3	12	52.4		27.6
22	349	29.0	155	39.2		29.7	267	02.8		55.2	347	08.5		44.5	27	54.9		27.7
23	4	31.4	170	38.8		31.0	282	04.6		55.4	2	11.2		44.6	42	57.4		27.7
24	19	33.9	185	38.4	-4	32.2	297	06.4	+22	55.5	17	14.0	-0	44.7	57	59.9	-16	27.7
Dif	—		-4		-12		+18		+1		+28		-1		+25			

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 46 ^m 7		Edad: 15 ^d 1 PHE { 4 ^h : 57'0 12 ^h : 56'7 20 ^h : 56'5 PMG: 0 ^h 42 ^m R°: 47 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	17.0	-6 55.8	349	43.6	+11 01.5	60 N	17 03	17 45	18 33	17 25 3	8 30 94		
1	198	17.1	56.7	4	15.6 ¹³⁰	15.6 ¹⁴¹	58	06	46	31	34 8	22 90		
2	213	17.3	57.7	18	47.6 ¹³⁰	29.7 ¹⁴¹	56	10	47	30	42 11	15 86		
3	228	17.5	58.6	33	19.6 ¹³⁰	43.6 ¹³⁹	54	12	48	29	49 14	09 82		
4	243	17.6	-6 59.6	47	51.5 ¹²⁹	+11 57.5 ¹³⁹	52	15	49	28	17 55 18	8 03 80		
5	258	17.8	-7 00.5	62	23.4 ¹²⁹	+12 11.4 ¹³⁹	50	17 17	17 50	18 27	18 01 20	7 58 77		
6	273	18.0	-7 01.5	76	55.3 ¹²⁹	+12 25.1 ¹³⁷	45	17 22	17 52	18 26	18 13 25	7 48 71		
7	288	18.1	02.4	91	27.2 ¹²⁹	38.8 ¹³⁷	40	27	54	25	24 29	39 67		
8	303	18.3	03.3	105	59.1 ¹²⁹	+12 52.4 ¹³⁶	35	30	56	25	33 32	31 64		
9	318	18.5	04.3	120	30.9 ¹²⁸	+13 06.0 ¹³⁶	30	34	17 58	26	41 35	24 61		
10	333	18.6	05.2	135	02.7 ¹²⁸	19.5 ¹³⁵	20	40	18 02	27	18 54 40	13 56		
11	348	18.8	-7 06.2	149	34.5 ¹²⁸	+13 32.9 ¹³⁴	10 N	17 45	18 06	18 31	19 06 44	7 03 51		
12	3	18.9	-7 07.1	164	06.2 ¹²⁷	+13 46.2 ¹³³	0	17 50	18 11	18 35	19 18 48	6 53 48		
13	18	19.1	08.1	178	38.0 ¹²⁸	+13 59.4 ¹³²	10 S	17 55	16	41	29 52	44 43		
14	33	19.3	09.0	193	09.7 ¹²⁷	+14 12.6 ¹³²	20	18 01	23	18 49	42 56	34 39		
15	48	19.4	09.9	207	41.3 ¹²⁶	25.7 ¹³¹	30	07	32	19 00	19 56 61	23 34		
16	63	19.6	10.9	222	13.0 ¹²⁷	38.7 ¹³⁰	35	11	37	07	20 04 64	17 30		
17	78	19.7	-7 11.8	236	44.6 ¹²⁶	+14 51.6 ¹²⁹	40	18 15	18 43	19 16	20 14 67	6 09 27		
18	93	19.9	-7 12.8	251	16.2 ¹²⁶	+15 04.5 ¹²⁹	45	18 21	18 51	19 27	20 25 71	6 01 23		
19	108	20.1	13.7	265	47.7 ¹²⁵	17.2 ¹²⁷	50	27	19 00	41	39 76	5 51 18		
20	123	20.2	14.6	280	19.2 ¹²⁵	29.9 ¹²⁷	52	30	05	47	45 79	46 16		
21	138	20.4	15.6	294	50.7 ¹²⁵	42.5 ¹²⁶	54	33	10	19 55	20 52 82	41 13		
22	153	20.5	16.5	309	22.2 ¹²⁵	+15 55.0 ¹²⁵	56	36	15	20 04	21 00 86	35 10		
23	168	20.7	17.5	323	53.6 ¹²⁴	+16 07.4 ¹²⁴	58	40	21	14	09 90	29 6		
24	183	20.9	-7 18.4	338	25.0 ¹²⁴	+16 19.7 ¹²³	60 S	18 44	19 29	20 26	21 20 94	5 21 3		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 22 ^h 38 ^m 0		Mag: -4.0 PMG: 11 ^h 38 ^m		Mag: -0.8 PMG: 4 ^h 11 ^m		Mag: -2.9 PMG: 22 ^h 47 ^m		Mag: +0.6 PMG: 20 ^h 05 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	19	33.9	185 38.4	-4 32.2	297 06.4	+22 55.5	17	14.0	-0 44.7	57 59.9	-16 27.7			
1	34	36.4	200 38.0	33.5	312 08.1	55.6	32	16.7	44.8	73 02.4	27.7			
2	49	38.8	215 37.6	34.7	327 09.9	55.7	47	19.5	44.9	88 05.0	27.7			
3	64	41.3	230 37.2	36.0	342 11.7	55.8	62	22.2	45.1	103 07.5	27.7			
4	79	43.8	245 36.8	37.2	357 13.5	55.9	77	25.0	45.2	118 10.0	27.7			
5	94	46.2	260 36.4	-4 38.4	12 15.3	+22 56.1	92	27.7	-0 45.3	133 12.5	-16 27.8			
6	109	48.7	275 35.9	-4 39.7	27 17.1	+22 56.2	107	30.5	-0 45.4	148 15.0	-16 27.8			
7	124	51.1	290 35.5	40.9	42 19.0	56.3	122	33.2	45.5	163 17.5	27.8			
8	139	53.6	305 35.1	42.2	57 20.8	56.4	137	36.0	45.7	178 20.0	27.8			
9	154	56.1	320 34.7	43.4	72 22.6	56.5	152	38.7	45.8	193 22.6	27.8			
10	169	58.5	335 34.3	44.7	87 24.4	56.6	167	41.4	45.9	208 25.1	27.8			
11	185	01.0	350 33.9	-4 45.9	102 26.2	+22 56.8	182	44.2	-0 46.0	223 27.6	-16 27.8			
12	200	03.5	5 33.5	-4 47.1	117 28.0	+22 56.9	197	46.9	-0 46.1	238 30.1	-16 27.9			
13	215	05.9	20 33.1	48.4	132 29.8	57.0	212	49.7	46.2	253 32.6	27.9			
14	230	08.4	35 32.6	49.6	147 31.6	57.1	227	52.4	46.4	268 35.1	27.9			
15	245	10.9	50 32.2	50.9	162 33.4	57.2	242	55.2	46.5	283 37.6	27.9			
16	260	13.3	65 31.8	52.1	177 35.2	57.3	257	57.9	46.6	298 40.2	27.9			
17	275	15.8	80 31.4	-4 53.3	192 37.0	+22 57.5	273	00.7	-0 46.7	313 42.7	-16 27.9			
18	290	18.2	95 31.0	-4 54.6	207 38.9	+22 57.6	288	03.4	-0 46.8	328 45.2	-16 27.9			
19	305	20.7	110 30.6	55.8	222 40.7	57.7	303	06.2	47.0	343 47.7	27.9			
20	320	23.2	125 30.2	57.1	237 42.5	57.8	318	08.9	47.1	358 50.2	28.0			
21	335	25.6	140 29.7	58.3	252 44.3	57.9	333	11.7	47.2	13 52.7	28.0			
22	350	28.1	155 29.3	-4 59.5	267 46.1	58.0	348	14.4	47.3	28 55.2	28.0			
23	5	30.6	170 28.9	-5 00.8	282 48.0	58.1	3	17.2	47.4	43 57.7	28.0			
24	20	33.0	185 28.5	-5 02.0	297 49.8	+22 58.3	18	19.9	-0 47.5	59 00.2	-16 28.0			
Dif	—		-4	-12	+18	+1	+27		-1	+25		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 5			Edad: 16 ^d 1 PHE { 4 ^h : 56'3 12 ^h : 56'1 20 ^h : 55'9 SD: 15'4 PMG: 1 ^h 29 ^m R°: 48 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	20.9	-7	18.4	338	25.0	+16	19.7	5 02	5 50	6 32	17 28	7	10 04	95	
1	198	21.0		19.3	352	56.4 ¹²⁴		32.0 ¹²³	03	49	28	42	12	9 52	89	
2	213	21.2		20.3	7	27.7 ¹²³		44.1 ¹²¹	04	47	25	17 53	17	41	84	
3	228	21.3		21.2	21	59.0 ¹²³	+16	56.2 ¹²¹	05	46	22	18 03	20	31	81	
4	243	21.5		22.1	36	30.3 ¹²³	+17	08.2 ¹²⁰	06	45	19	13	22	23	78	
5	258	21.7	-7	23.1	51	01.5 ¹²²	+17	20.1 ¹¹⁹	5 07	5 44	6 17	18 21	25	9 15	76	
6	273	21.8	-7	24.0	65	32.7 ¹²²	+17	31.9 ¹¹⁸	5 08	5 42	6 12	18 38	30	8 59	70	
7	288	22.0		25.0	80	03.9 ¹²²		43.6 ¹¹⁷	09	40	07	18 53	33	46	66	
8	303	22.1		25.9	94	35.0 ¹²¹	+17	55.2 ¹¹⁶	09	38	03	19 05	36	35	63	
9	318	22.3		26.8	109	06.1 ¹²¹	+18	06.7 ¹¹⁵	08	36	6 00	16	38	25	61	
10	333	22.4		27.8	123	37.1 ¹²⁰		18.1 ¹¹⁴	06	32	5 54	34	43	8 09	55	
11	348	22.6	-7	28.7	138	08.1 ¹²⁰	+18	29.4 ¹¹³	5 03	5 27	5 48	19 50	46	7 54	52	
12	3	22.8	-7	29.6	152	39.1 ¹²⁰	+18	40.6 ¹¹²	4 58	5 22	5 43	20 06	49	7 41	48	
13	18	22.9		30.6	167	10.1 ¹²⁰	+18	51.7 ¹¹¹	52	17	38	21	52	27	45	
14	33	23.1		31.5	181	41.0 ¹¹⁹	+19	02.7 ¹¹⁰	44	10	32	38	55	7 13	41	
15	48	23.2		32.5	196	11.8 ¹¹⁸		13.6 ¹⁰⁹	33	5 01	25	20 57	60	6 57	36	
16	63	23.4		33.4	210	42.7 ¹¹⁹		24.5 ¹⁰⁹	25	4 56	22	21 08	62	47	34	
17	78	23.5	-7	34.3	225	13.5 ¹¹⁸	+19	35.2 ¹⁰⁷	4 17	4 50	5 17	21 21	65	6 36	31	
18	93	23.7	-7	35.3	239	44.2 ¹¹⁷	+19	45.8 ¹⁰⁶	4 06	4 42	5 12	21 36	69	6 24	27	
19	108	23.8		36.2	254	14.9 ¹¹⁷	+19	56.3 ¹⁰⁵	3 52	32	06	21 55	74	09	22	
20	123	24.0		37.1	268	45.6 ¹¹⁷	+20	06.7 ¹⁰⁴	45	28	03	22 04	76	6 02	19	
21	138	24.2		38.1	283	16.3 ¹¹⁷		17.0 ¹⁰³	37	23	5 00	14	79	5 54	17	
22	153	24.3		39.0	297	46.9 ¹¹⁶		27.2 ¹⁰²	29	17	4 56	26	82	45	14	
23	168	24.5		39.9	312	17.4 ¹¹⁵		37.2 ¹⁰⁰	18	11	52	39	87	35	10	
24	183	24.6	-7	40.9	326	48.0 ¹¹⁶	+20	47.2 ¹⁰⁰	3 07	4 03	4 48	22 54	94	5 24	4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 34 ^m 1		Mag: -4.0 PMG: 11 ^h 38 ^m		Mag: -0.8 PMG: 4 ^h 08 ^m		Mag: -2.9 PMG: 22 ^h 43 ^m		Mag: +0.6 PMG: 20 ^h 01 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	20	33.0	185	28.5	-5	02.0	297	49.8	+22	58.3	18	19.9	-0	47.5	59	00.2	-16	28.0
1	35	35.5	200	28.1		03.3	312	51.6		58.4	33	22.6		47.7	74	02.8		28.0
2	50	38.0	215	27.7		04.5	327	53.4		58.5	48	25.4		47.8	89	05.3		28.0
3	65	40.4	230	27.3		05.7	342	55.3		58.6	63	28.1		47.9	104	07.8		28.0
4	80	42.9	245	26.8		07.0	357	57.1		58.7	78	30.9		48.0	119	10.3		28.1
5	95	45.4	260	26.4	-5	08.2	12	58.9	+22	58.8	93	33.6	-0	48.1	134	12.8	-16	28.1
6	110	47.8	275	26.0	-5	09.5	28	00.8	+22	59.0	108	36.4	-0	48.2	149	15.3	-16	28.1
7	125	50.3	290	25.6		10.7	43	02.6		59.1	123	39.1		48.4	164	17.8		28.1
8	140	52.7	305	25.2		11.9	58	04.4		59.2	138	41.9		48.5	179	20.3		28.1
9	155	55.2	320	24.8		13.2	73	06.3		59.3	153	44.6		48.6	194	22.8		28.1
10	170	57.7	335	24.3		14.4	88	08.1		59.4	168	47.4		48.7	209	25.3		28.1
11	186	00.1	350	23.9	-5	15.7	103	09.9	+22	59.5	183	50.1	-0	48.8	224	27.9	-16	28.1
12	201	02.6	5	23.5	-5	16.9	118	11.8	+22	59.7	198	52.8	-0	48.9	239	30.4	-16	28.2
13	216	05.1	20	23.1		18.1	133	13.6		59.8	213	55.6		49.1	254	32.9		28.2
14	231	07.5	35	22.7		19.4	148	15.4	+22	59.9	228	58.3		49.2	269	35.4		28.2
15	246	10.0	50	22.2		20.6	163	17.3	+23	00.0	244	01.1		49.3	284	37.9		28.2
16	261	12.5	65	21.8		21.8	178	19.1	+23	00.1	259	03.8		49.4	299	40.4		28.2
17	276	14.9	80	21.4	-5	23.1	193	21.0	+23	00.2	274	06.6	-0	49.5	314	42.9	-16	28.2
18	291	17.4	95	21.0	-5	24.3	208	22.8	+23	00.3	289	09.3	-0	49.6	329	45.4	-16	28.2
19	306	19.9	110	20.6		25.5	223	24.7		00.5	304	12.0		49.8	344	47.9		28.2
20	321	22.3	125	20.2		26.8	238	26.5		00.6	319	14.8		49.9	359	50.4		28.3
21	336	24.8	140	19.7		28.0	253	28.4		00.7	334	17.5		50.0	14	52.9		28.3
22	351	27.2	155	19.3		29.3	268	30.2		00.8	349	20.3		50.1	29	55.4		28.3
23	6	29.7	170	18.9		30.5	283	32.1		00.9	4	23.0		50.2	44	58.0		28.3
24	21	32.2	185	18.5	-5	31.7	298	33.9	+23	01.0	19	25.8	-0	50.3	60	00.5	-16	28.3
Dif	—		-4		-12		+18		+1		+27		-1		+25			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:0 PMG: 11 ^h 46 ^m 2			Edad: 17 ^d 1 PHE { 4 ^h : 55:7 12 ^h : 55:5 20 ^h : 55:3 SD: 15:2 PMG: 2 ^h 17 ^m R°: 50 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m
0	183	24.6	-7 40.9	326	48.0	+20 47.2	99	60 N	16 57	17 39	18 27	17 35 13	11 39 91	
1	198	24.8		41.8	341 18.4 ¹¹⁴	+20 57.1	99	58	17 01	41	26	17 54 20	21 84	
2	213	24.9		42.7	355 48.9 ¹¹⁵	+21 06.8	97	56	05	42	25	18 10 24	11 05 80	
3	228	25.1		43.7	10 19.3 ¹¹⁴	16.5	97	54	08	43	24	23 28	10 52 77	
4	243	25.2		44.6	24 49.7 ¹¹⁴	26.0	95	52	11	44	23	35 30	41 73	
5	258	25.4	-7 45.6	39	20.0 ¹¹³	+21 35.5	95	50	17 13	17 46	18 23	18 46 32	10 31 71	
6	273	25.5	-7 46.5	53	50.3 ¹¹³	+21 44.8	93	45	17 19	17 48	18 22	19 08 36	10 09 67	
7	288	25.7		47.4	68 20.6 ¹¹³	+21 54.0	92	40	24	51	22	26 39	9 52 64	
8	303	25.8		48.4	82 50.8 ¹¹²	+22 03.1	91	35	28	53	23	41 41	38 61	
9	318	26.0		49.3	97 21.0 ¹¹²	12.0	89	30	32	17 56	23	19 54 43	26 59	
10	333	26.1		50.2	111 51.2 ¹¹²	20.9	89	20	38	18 00	26	20 17 46	9 04 56	
11	348	26.3	-7 51.2	126	21.3 ¹¹¹	+22 29.6	87	10 N	17 44	18 05	18 30	20 36 49	8 46 53	
12	3	26.4	-7 52.1	140	51.3 ¹¹⁰	+22 38.3	87	0	17 50	18 10	18 35	20 55 51	8 29 50	
13	18	26.6		53.0	155 21.4 ¹¹¹	46.8	85	10 S	17 55	16	41	21 13 53	8 12 47	
14	33	26.7		54.0	169 51.4 ¹¹⁰	+22 55.2	84	20	18 01	24	18 50	33 56	7 54 44	
15	48	26.9		54.9	184 21.4 ¹¹⁰	+23 03.4	82	30	09	33	19 02	21 57 58	33 41	
16	63	27.0		55.8	198 51.3 ¹⁰⁹	11.6	82	35	13	39	09	22 10 60	21 39	
17	78	27.2	-7 56.7	213	21.2 ¹⁰⁹	+23 19.6	80	40	18 18	18 45	19 18	22 26 62	7 07 36	
18	93	27.3	-7 57.7	227	51.0 ¹⁰⁸	+23 27.6	80	45	18 23	18 53	19 30	22 45 64	6 51 33	
19	108	27.5		58.6	242 20.9 ¹⁰⁹	35.4	78	50	30	19 04	45	23 09 68	31 28	
20	123	27.6	-7 59.5	256	50.7 ¹⁰⁸	43.0	76	52	33	08	19 52	20 70	21 26	
21	138	27.8	-8 00.5	271	20.4 ¹⁰⁷	50.6	76	54	36	14	20 00	33 73	6 11 23	
22	153	27.9		01.4	285 50.1 ¹⁰⁷	+23 58.0	74	56	40	20	09	23 48 76	5 59 19	
23	168	28.1		02.3	300 19.8 ¹⁰⁷	+24 05.4	74	58	45	26	20	** ** *	45 15	
24	183	28.2	-8 03.3	314	49.5 ¹⁰⁷	+24 12.5	71	60 S	18 49	19 34	20 32	** ** *	5 28 9	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 22 ^h 30 ^m 2		Mag: -4.0 PMG: 11 ^h 39 ^m			Mag: -0.8 PMG: 4 ^h 05 ^m			Mag: -2.9 PMG: 22 ^h 38 ^m			Mag: +0.6 PMG: 19 ^h 57 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	21	32.2	185	18.5	-5	31.7	298	33.9	+23	01.0	19	25.8	-0	50.3
1	36	34.6	200	18.1		33.0	313	35.8		01.2	34	28.5		50.5
2	51	37.1	215	17.6		34.2	328	37.6		01.3	49	31.2		50.6
3	66	39.6	230	17.2		35.4	343	39.5		01.4	64	34.0		50.7
4	81	42.0	245	16.8		36.7	358	41.3		01.5	79	36.7		50.8
5	96	44.5	260	16.4	-5	37.9	13	43.2	+23	01.6	94	39.5	-0	50.9
6	111	47.0	275	15.9	-5	39.1	28	45.1	+23	01.7	109	42.2	-0	51.0
7	126	49.4	290	15.5		40.4	43	46.9		01.8	124	44.9		51.1
8	141	51.9	305	15.1		41.6	58	48.8		02.0	139	47.7		51.3
9	156	54.4	320	14.7		42.8	73	50.6		02.1	154	50.4		51.4
10	171	56.8	335	14.3		44.1	88	52.5		02.2	169	53.2		51.5
11	186	59.3	350	13.8	-5	45.3	103	54.4	+23	02.3	184	55.9	-0	51.6
12	202	01.7	5	13.4	-5	46.5	118	56.2	+23	02.4	199	58.7	-0	51.7
13	217	04.2	20	13.0		47.8	133	58.1		02.5	215	01.4		51.8
14	232	06.7	35	12.6		49.0	149	00.0		02.6	230	04.1		52.0
15	247	09.1	50	12.1		50.2	164	01.9		02.8	245	06.9		52.1
16	262	11.6	65	11.7		51.5	179	03.7		02.9	260	09.6		52.2
17	277	14.1	80	11.3	-5	52.7	194	05.6	+23	03.0	275	12.4	-0	52.3
18	292	16.5	95	10.9	-5	53.9	209	07.5	+23	03.1	290	15.1	-0	52.4
19	307	19.0	110	10.4		55.2	224	09.3		03.2	305	17.8		52.5
20	322	21.5	125	10.0		56.4	239	11.2		03.3	320	20.6		52.6
21	337	23.9	140	09.6		57.6	254	13.1		03.4	335	23.3		52.8
22	352	26.4	155	09.2	-5	58.9	269	15.0		03.6	350	26.0		52.9
23	7	28.8	170	08.7	-6	00.1	284	16.9		03.7	5	28.8		53.0
24	22	31.3	185	08.3	-6	01.3	299	18.7	+23	03.8	20	31.5	-0	53.1
Dif	—		-4		-12		+19		+1		+27		-1	
													+25	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 46 ^m 0			Edad: 18 ^d 1 PHE { 4 ^h : 55'1 12 ^h : 54'9 20 ^h : 54'8 R°: 51 ^m															
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m		
0	183	28.2	-8	03.3	314	49.5	+24	12.5	71	60 N	5 06	5 54	6 37	17 48	28	13 10	79		
1	198	28.4		04.2	329	19.1		19.6	71	58	07	53	33	18 14	33	12 45	73		
2	213	28.5		05.1	343	48.7		26.6	70	56	08	51	29		34 37		25 70		
3	228	28.7		06.1	358	18.3		33.4	68	54	09	50	26	18 51	39	12 09	67		
4	243	28.8		07.0	12	47.8		40.1	67	52	10	49	23	19 05	41	11 54	66		
5	258	29.0	-8	07.9	27	17.3	+24	46.6	65	50	5 10	5 47	6 20	19 18	42	11 42	64		
6	273	29.1	-8	08.8	41	46.8	+24	53.1	65	45	5 11	5 45	6 14	19 44	44	11 16	62		
7	288	29.3		09.8	56	16.2	+24	59.4	63	40	11	42	09	20 05	46	10 56	60		
8	303	29.4		10.7	70	45.6	+25	05.6	62	35	10	39	05		22 47		39 58		
9	318	29.6		11.6	85	15.0		11.7	61	30	09	37	6 01	20 37	48		25 56		
10	333	29.7		12.6	99	44.4		17.6	59	20	07	32	5 54	21 03	49	10 00	55		
11	348	29.8	-8	13.5	114	13.7	+25	23.4	58	10 N	5 03	5 27	5 48	21 25	50	9 39	53		
12	3	30.0	-8	14.4	128	43.0	+25	29.1	57	0	4 58	5 22	5 43	21 46	51	9 19	51		
13	18	30.1		15.3	143	12.3		34.6	55	10 S	51	16	37	22 06	53	8 59	50		
14	33	30.3		16.3	157	41.5		40.1	55	20	42	5 08	31		29 53		38 48		
15	48	30.4		17.2	172	10.7		45.4	53	30	30	4 59	23	22 55	54		14 46		
16	63	30.6		18.1	186	40.0		50.5	51	35	23	53	19	23 10	56	8 00	44		
17	78	30.7	-8	19.1	201	09.1	+25	55.6	51	40	4 13	4 46	5 14	23 28	56	7 43	43		
18	93	30.9	-8	20.0	215	38.3	+26	00.5	49	45	4 02	4 38	5 08	23 49	58	7 24	40		
19	108	31.0		20.9	230	07.4		05.2	47	50	3 47	28	5 02	** ** *	**	6 59	37		
20	123	31.1		21.8	244	36.6		09.9	47	52	40	23	4 58	** ** *	**	47 35			
21	138	31.3		22.8	259	05.6		14.4	45	54	32	18	55	** ** *	**	34 33			
22	153	31.4		23.7	273	34.7		18.8	44	56	22	12	51	** ** *	**	18 30			
23	168	31.6		24.6	288	03.8		23.0	42	58	3 12	4 05	47	0 06	80	6 00	25		
24	183	31.7	-8	25.5	302	32.8	+26	27.1	41	60 S	2 59	3 57	4 42	0 28	88	5 37	19		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG 22 ^h 26 ^m 2		Mag: -4.0 PMG: 11 ^h 40 ^m			Mag: -0.8 PMG: 4 ^h 02 ^m			Mag: -2.9 PMG: 22 ^h 34 ^m			Mag: +0.6 PMG: 19 ^h 53 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	22	31.3	185	08.3	-6	01.3	299	18.7	+23	03.8	20	31.5	-0	53.1	61	00.6	-16	28.6	
1	37	33.8	200	07.9		02.5	314	20.6		03.9	35	34.3		53.2	76	03.1		28.6	
2	52	36.2	215	07.5		03.8	329	22.5		04.0	50	37.0		53.3	91	05.6		28.6	
3	67	38.7	230	07.0		05.0	344	24.4		04.1	65	39.7		53.4	106	08.1		28.6	
4	82	41.2	245	06.6		06.2	359	26.3		04.2	80	42.5		53.5	121	10.6		28.6	
5	97	43.6	260	06.2	-6	07.5	14	28.2	+23	04.4	95	45.2	-0	53.7	136	13.1	-16	28.6	
6	112	46.1	275	05.8	-6	08.7	29	30.1	+23	04.5	110	48.0	-0	53.8	151	15.6	-16	28.6	
7	127	48.6	290	05.3		09.9	44	32.0		04.6	125	50.7		53.9	166	18.1		28.6	
8	142	51.0	305	04.9		11.2	59	33.9		04.7	140	53.4		54.0	181	20.6		28.6	
9	157	53.5	320	04.5		12.4	74	35.7		04.8	155	56.2		54.1	196	23.1		28.6	
10	172	56.0	335	04.1		13.6	89	37.6		04.9	170	58.9		54.2	211	25.6		28.6	
11	187	58.4	350	03.6	-6	14.8	104	39.5	+23	05.0	186	01.6	-0	54.3	226	28.1	-16	28.7	
12	203	00.9	5	03.2	-6	16.1	119	41.4	+23	05.2	201	04.4	-0	54.5	241	30.6	-16	28.7	
13	218	03.3	20	02.8		17.3	134	43.3		05.3	216	07.1		54.6	256	33.1		28.7	
14	233	05.8	35	02.3		18.5	149	45.2		05.4	231	09.8		54.7	271	35.6		28.7	
15	248	08.3	50	01.9		19.8	164	47.1		05.5	246	12.6		54.8	286	38.1		28.7	
16	263	10.7	65	01.5		21.0	179	49.0		05.6	261	15.3		54.9	301	40.6		28.7	
17	278	13.2	80	01.1	-6	22.2	194	50.9	+23	05.7	276	18.1	-0	55.0	316	43.1	-16	28.7	
18	293	15.7	95	00.6	-6	23.4	209	52.8	+23	05.8	291	20.8	-0	55.1	331	45.6	-16	28.7	
19	308	18.1	110	00.2		24.7	224	54.8		06.0	306	23.5		55.2	346	48.1		28.7	
20	323	20.6	124	59.8		25.9	239	56.7		06.1	321	26.3		55.3	1	50.6		28.7	
21	338	23.1	139	59.3		27.1	254	58.6		06.2	336	29.0		55.5	16	53.1		28.7	
22	353	25.5	154	58.9		28.3	270	00.5		06.3	351	31.7		55.6	31	55.6		28.8	
23	8	28.0	169	58.5		29.6	285	02.4		06.4	6	34.5		55.7	46	58.1		28.8	
24	23	30.5	184	58.0	-6	30.8	300	04.3	+23	06.5	21	37.2	-0	55.8	62	00.6	-16	28.8	
Dif	—		-4 -12			+19 +1			+27 -1			-1			+25				

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°0			Edad: 19 ^d 1 PHE { 4 ^h : 54/7 12 ^h : 54/6 20 ^h : 54/5											
	PMG: 11 ^h 45 ^m 8			SD: 14/9					PMG: 3 ^h 58 ^m			R°: 52 ^m			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	183	31.7	-8 25.5	302	32.8	+26 27.1	40	60 N	16 51	17 33	18 21	18 16	52	14 29	56
1	198	31.9	26.5	317	01.9	101	31.1	58	16 56	35	21	18 47	52	13 58	55
2	213	32.0	27.4	331	30.9	100	35.0	56	17 00	37	20	19 11	52	35	54
3	228	32.1	28.3	345	59.9	100	38.7	54	03	39	20	30	52	16	54
4	243	32.3	29.2	0	28.9	100	42.3	52	06	40	19	19 46	52	13 00	54
5	258	32.4	-8 30.2	14	57.8	99	+26 45.7	50	17 09	17 42	18 19	20 00	52	12 46	54
6	273	32.6	-8 31.1	29	26.8	100	+26 49.0	45	17 15	17 45	18 19	20 28	52	12 18	53
7	288	32.7	32.0	43	55.7	99	52.2	40	21	48	19	20 51	52	11 56	53
8	303	32.8	32.9	58	24.7	100	55.3	35	25	51	20	21 09	52	37	53
9	318	33.0	33.9	72	53.6	99	+26 58.2	30	29	53	21	25	52	11 21	53
10	333	33.1	34.8	87	22.5	99	+27 01.0	20	37	17 59	24	21 52	52	10 55	52
11	348	33.3	-8 35.7	101	51.4	99	+27 03.6	10 N	17 43	18 04	18 29	22 15	52	10 32	52
12	3	33.4	-8 36.6	116	20.3	99	+27 06.1	0	17 49	18 10	18 34	22 37	51	10 10	52
13	18	33.5	37.6	130	49.2	99	08.5	10 S	17 55	17	41	22 59	51	9 49	51
14	33	33.7	38.5	145	18.1	99	10.8	20	18 02	24	18 51	23 22	51	26	51
15	48	33.8	39.4	159	47.0	99	12.9	30	10	34	19 03	23 49	51	9 00	50
16	63	34.0	40.3	174	15.9	99	14.8	35	14	40	11	***	***	8 44	49
17	78	34.1	-8 41.2	188	44.8	99	+27 16.7	40	18 20	18 48	19 21	***	***	8 26	49
18	93	34.2	-8 42.2	203	13.7	99	+27 18.4	45	18 26	18 56	19 33	***	***	8 04	48
19	108	34.4	43.1	217	42.6	99	20.0	50	33	19 07	48	0 17	59	7 36	47
20	123	34.5	44.0	232	11.5	99	21.4	52	37	12	19 56	30	60	22	47
21	138	34.6	44.9	246	40.4	99	22.7	54	40	18	20 05	0 46	61	7 07	45
22	153	34.8	45.9	261	09.3	99	23.9	56	44	24	14	1 04	63	6 48	44
23	168	34.9	46.8	275	38.2	99	24.9	58	49	31	26	2 06	65	6 25	43
24	183	35.1	-8 47.7	290	07.1	99	+27 25.8	60 S	18 54	19 40	20 39	1 56	69	5 56	38

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 22 ^h 22 ^m 3		Mag: -4.0 PMG: 11 ^h 40 ^m		Mag: -0.9 PMG: 3 ^h 59 ^m		Mag: -2.9 PMG: 22 ^h 29 ^m		Mag: +0.6 PMG: 19 ^h 49 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	23	30.5	184 58.0	-6 30.8	300 04.3	+23 06.5	21	37.2	-0 55.8	62	00.6	
1	38	32.9	199 57.6	32.0	315 06.2	06.6	36	39.9	55.9	77	03.1	
2	53	35.4	214 57.2	33.2	330 08.1	06.8	51	42.7	56.0	92	05.6	
3	68	37.8	229 56.7	34.5	345 10.1	06.9	66	45.4	56.1	107	08.1	
4	83	40.3	244 56.3	35.7	0 12.0	07.0	81	48.1	56.2	122	10.6	
5	98	42.8	259 55.9	-6 36.9	15 13.9	+23 07.1	96	50.9	-0 56.4	137	13.1	
6	113	45.2	274 55.5	-6 38.1	30 15.8	+23 07.2	111	53.6	-0 56.5	152	15.6	
7	128	47.7	289 55.0	39.4	45 17.7	07.3	126	56.3	56.6	167	18.1	
8	143	50.2	304 54.6	40.6	60 19.7	07.4	141	59.1	56.7	182	20.6	
9	158	52.6	319 54.2	41.8	75 21.6	07.5	157	01.8	56.8	197	23.1	
10	173	55.1	334 53.7	43.0	90 23.5	07.7	172	04.5	56.9	212	25.6	
11	188	57.6	349 53.3	-6 44.3	105 25.4	+23 07.8	187	07.3	-0 57.0	227	28.1	
12	204	00.0	4 52.9	-6 45.5	120 27.4	+23 07.9	202	10.0	-0 57.1	242	30.6	
13	219	02.5	19 52.4	46.7	135 29.3	08.0	217	12.7	57.2	257	33.1	
14	234	05.0	34 52.0	47.9	150 31.2	08.1	232	15.5	57.4	272	35.6	
15	249	07.4	49 51.5	49.1	165 33.2	08.2	247	18.2	57.5	287	38.1	
16	264	09.9	64 51.1	50.4	180 35.1	08.3	262	20.9	57.6	302	40.6	
17	279	12.3	79 50.7	-6 51.6	195 37.0	+23 08.5	277	23.7	-0 57.7	317	43.1	
18	294	14.8	94 50.2	-6 52.8	210 39.0	+23 08.6	292	26.4	-0 57.8	332	45.6	
19	309	17.3	109 49.8	54.0	225 40.9	08.7	307	29.1	57.9	347	48.1	
20	324	19.7	124 49.4	55.3	240 42.8	08.8	322	31.9	58.0	2	50.5	
21	339	22.2	139 48.9	56.5	255 44.8	08.9	337	34.6	58.1	17	53.0	
22	354	24.7	154 48.5	57.7	270 46.7	09.0	352	37.3	58.2	32	55.5	
23	9	27.1	169 48.1	-6 58.9	285 48.7	09.1	7	40.1	58.3	47	58.0	
24	24	29.6	184 47.6	-7 00.1	300 50.6	+23 09.2	22	42.8	-0 58.5	63	00.5	
Dif	—		-4	-12	+19	+1	+27		-1	+25		0

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 45 ^m 6			Edad: 20 ^d 1 PHE { 4 ^h : 54'4 12 ^h : 54'3 20 ^h : 54'3 SD: 14'8 PMG: 4 ^h 50 ^m R°: 51 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	35.1	-8	47.7	290	07.1	+27	25.8	60 N	5 11	5 59	6 42	19 08	75	15 25
1	198	35.2		48.6	304	36.0	99	26.6	58	12	57	37	19 39	70	14 53
2	213	35.3		49.5	319	04.9	99	27.2	56	12	55	33	20 03	66	29 38
3	228	35.5		50.5	333	33.8	99	27.7	54	13	54	29	22 64		14 10
4	243	35.6		51.4	348	02.7	99	28.1	52	13	52	26	38 63	13 54	41
5	258	35.7	-8	52.3	2	31.7	100	+27	50	5 13	5 51	6 23	20 52	62	13 40
6	273	35.9	-8	53.2	17	00.6	99	+27	45	5 13	5 47	6 17	21 20	60	13 11
7	288	36.0		54.1	31	29.6	100	28.4	40	13	44	11	21 43	57	12 49
8	303	36.1		55.1	45	58.6	100	28.2	35	12	41	07	22 01	56	30 47
9	318	36.3		56.0	60	27.6	100	27.9	30	10	38	6 02	17 55		12 14
10	333	36.4		56.9	74	56.6	100	27.5	20	07	33	5 55	22 44	53	11 47
11	348	36.5	-8	57.8	89	25.6	100	+27	10 N	5 03	5 27	5 49	23 07	51	11 24
12	3	36.7	-8	58.7	103	54.6	100	+27	0	4 57	5 21	5 42	23 28	50	11 02
13	18	36.8	-8	59.6	118	23.7	101	25.4	10 S	50	15	36	23 50	48	10 40
14	33	36.9	-9	00.6	132	52.7	100	24.4	20	40	5 07	29	** ** *	**	10 17
15	48	37.1		01.5	147	21.8	101	23.3	30	28	4 57	21	** ** *	**	9 50
16	63	37.2		02.4	161	51.0	102	22.1	35	20	50	16	0 06	49	33 55
17	78	37.3	-9	03.3	176	20.1	101	+27	40	4 10	4 43	5 11	0 24	50	9 15
18	93	37.5	-9	04.2	190	49.2	101	+27	45	3 58	4 34	5 05	0 47	49	8 52
19	108	37.6		05.1	205	18.4	102	17.6	50	42	24	4 57	1 16	48	23 57
20	123	37.7		06.1	219	47.6	102	15.9	52	35	18	54	30	48	8 09
21	138	37.9		07.0	234	16.8	102	14.0	54	26	13	50	1 47	47	7 52
22	153	38.0		07.9	248	46.1	103	12.0	56	16	4 06	46	2 07	45	32 60
23	168	38.1		08.8	263	15.4	103	09.8	58	3 05	3 59	41	2 31	44	7 08
24	183	38.2	-9	09.7	277	44.7	103	+27	60 S	2 51	3 51	4 36	3 05	41	6 34

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 18 ^m 4		Mag: -4.0 PMG: 11 ^h 41 ^m		Mag: -0.9 PMG: 3 ^h 56 ^m		Mag: -2.9 PMG: 22 ^h 25 ^m		Mag: +0.6 PMG: 19 ^h 45 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	24	29.6	184	47.6	-7	00.1	300	50.6	+23	09.2	22	42.8	-0	58.5	63	00.5	-16	29.0
1	39	32.1	199	47.2		01.4	315	52.6		09.4	37	45.5		58.6	78	03.0		29.0
2	54	34.5	214	46.7		02.6	330	54.5		09.5	52	48.3		58.7	93	05.5		29.0
3	69	37.0	229	46.3		03.8	345	56.4		09.6	67	51.0		58.8	108	08.0		29.0
4	84	39.4	244	45.9		05.0	0	58.4		09.7	82	53.7		58.9	123	10.5		29.0
5	99	41.9	259	45.4	-7	06.2	16	00.3	+23	09.8	97	56.4	-0	59.0	138	13.0	-16	29.0
6	114	44.4	274	45.0	-7	07.4	31	02.3	+23	09.9	112	59.2	-0	59.1	153	15.5	-16	29.0
7	129	46.8	289	44.6		08.7	46	04.3		10.0	128	01.9		59.2	168	18.0		29.0
8	144	49.3	304	44.1		09.9	61	06.2		10.2	143	04.6		59.3	183	20.5		29.0
9	159	51.8	319	43.7		11.1	76	08.2		10.3	158	07.4		59.4	198	23.0		29.0
10	174	54.2	334	43.2		12.3	91	10.1		10.4	173	10.1		59.5	213	25.5		29.0
11	189	56.7	349	42.8	-7	13.5	106	12.1	+23	10.5	188	12.8	-0	59.7	228	28.0	-16	29.0
12	204	59.2	4	42.4	-7	14.7	121	14.0	+23	10.6	203	15.5	-0	59.8	243	30.5	-16	29.1
13	220	01.6	19	41.9		16.0	136	16.0		10.7	218	18.3	-0	59.9	258	32.9		29.1
14	235	04.1	34	41.5		17.2	151	18.0		10.8	233	21.0	-1	00.0	273	35.4		29.1
15	250	06.6	49	41.0		18.4	166	19.9		10.9	248	23.7	-1	00.1	288	37.9		29.1
16	265	09.0	64	40.6		19.6	181	21.9		11.1	263	26.5		00.2	303	40.4		29.1
17	280	11.5	79	40.1	-7	20.8	196	23.9	+23	11.2	278	29.2	-1	00.3	318	42.9	-16	29.1
18	295	13.9	94	39.7	-7	22.0	211	25.8	+23	11.3	293	31.9	-1	00.4	333	45.4	-16	29.1
19	310	16.4	109	39.3		23.3	226	27.8		11.4	308	34.6		00.5	348	47.9		29.1
20	325	18.9	124	38.8		24.5	241	29.8		11.5	323	37.4		00.6	3	50.4		29.1
21	340	21.3	139	38.4		25.7	256	31.7		11.6	338	40.1		00.7	18	52.9		29.1
22	355	23.8	154	37.9		26.9	271	33.7		11.7	353	42.8		00.8	33	55.4		29.1
23	10	26.3	169	37.5		28.1	286	35.7		11.8	8	45.5		01.0	48	57.9		29.1
24	25	28.7	184	37.0	-7	29.3	301	37.7	+23	12.0	23	48.3	-1	01.1	64	00.4	-16	29.1
Dif	—		-4	-12			+20	+1			+27	-1		+25				

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/0 PMG: 11 ^h 45 ^m 3			Edad: 21 ^d 1 PHE { SD: 14/8 PMG: 5 ^h 41 ^m 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2 R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	38.2	-9	09.7	277	44.7	+27	07.5	60 N	16 46	17 28	18 16	20 23	87	15 54	14
1	198	38.4		10.6	292	14.0 ¹⁰³		05.1 ²⁴	58	50	30	16	20 49	80	28	21
2	213	38.5		11.6	306	43.4 ¹⁰⁴	+27	02.6 ²⁵	56	55	32	15	21 09	76	15 07	25
3	228	38.6		12.5	321	12.8 ¹⁰⁴	+26	59.9 ²⁷	54	16 58	34	15	26 73	14 50	28	
4	243	38.8		13.4	335	42.2 ¹⁰⁴		57.2 ²⁷	52	17 02	36	15	41 70	35	30	
5	258	38.9	-9	14.3	350	11.6 ¹⁰⁴	+26	54.2 ³⁰	50	17 05	17 38	18 15	21 54	67	14 22	33
6	273	39.0	-9	15.2	4	41.1 ¹⁰⁵	+26	51.2 ³⁰	45	17 12	17 42	18 16	22 20	63	13 56	36
7	288	39.2		16.1	19	10.6 ¹⁰⁵		48.0 ³²	40	18	45	16	40 61		34 39	
8	303	39.3		17.0	33	40.2 ¹⁰⁶		44.7 ³³	35	23	48	18	22 57	59	17 41	
9	318	39.4		18.0	48	09.8 ¹⁰⁶		41.3 ³⁴	30	27	51	19	23 12	57	13 02	42
10	333	39.5		18.9	62	39.4 ¹⁰⁶		37.7 ³⁶	20	35	17 57	23	37 53		12 36	45
11	348	39.7	-9	19.8	77	09.0 ¹⁰⁶	+26	34.1 ³⁶	10 N	17 42	18 03	18 28	23 58	51	12 14	47
12	3	39.8	-9	20.7	91	38.7 ¹⁰⁷	+26	30.3 ³⁸	0	17 49	18 10	18 34	** ** *	**	11 53	49
13	18	39.9		21.6	106	08.4 ¹⁰⁷		26.3 ⁴⁰	10 S	17 55	17	42	** ** *	**	32	51
14	33	40.0		22.5	120	38.2 ¹⁰⁸		22.3 ⁴⁰	20	18 03	25	18 51	0 13	47	11 09	54
15	48	40.2		23.4	135	08.0 ¹⁰⁸		18.1 ⁴²	30	11	36	19 05	40 45		10 43	56
16	63	40.3		24.3	149	37.8 ¹⁰⁸		13.8 ⁴³	35	16	42	13	0 55	44	28	57
17	78	40.4	-9	25.3	164	07.7 ¹⁰⁹	+26	09.4 ⁴⁴	40	18 22	18 50	19 23	1 14	42	10 10	59
18	93	40.5	-9	26.2	178	37.6 ¹⁰⁹	+26	04.8 ⁴⁶	45	18 28	18 59	19 36	1 36	40	9 48	62
19	108	40.7		27.1	193	07.6 ¹¹⁰	+26	00.2 ⁴⁶	50	36	19 11	19 52	2 04	37	20	65
20	123	40.8		28.0	207	37.6 ¹¹⁰	+25	55.4 ⁴⁸	52	40	16	20 00	18 35		9 07	67
21	138	40.9		28.9	222	07.6 ¹¹⁰		50.5 ⁴⁹	54	44	22	09	34 33		8 51	69
22	153	41.0		29.8	236	37.7 ¹¹¹		45.4 ⁵¹	56	49	29	20	2 52	31	32	72
23	168	41.2		30.7	251	07.8 ¹¹¹		40.3 ⁵¹	58	54	37	32	3 15	27	8 09	77
24	183	41.3	-9	31.6	265	38.0 ¹¹²	+25	35.0 ⁵³	60 S	18 59	19 45	20 46	3 46	19	7 39	84

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 14 ^m 4		Mag: -4.0 PMG: 11 ^h 42 ^m		Mag: -0.9 PMG: 3 ^h 53 ^m		Mag: -2.9 PMG: 22 ^h 21 ^m		Mag: +0.6 PMG: 19 ^h 41 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	25	28.7	184	37.0	-7	29.3	301	37.7	+23	12.0	23	48.3	-1	01.1	64	00.4	-16	29.1
1	40	31.2	199	36.6		30.5	316	39.6		12.1	38	51.0		01.2	79	02.8		29.1
2	55	33.7	214	36.2		31.8	331	41.6		12.2	53	53.7		01.3	94	05.3		29.1
3	70	36.1	229	35.7		33.0	346	43.6		12.3	68	56.5		01.4	109	07.8		29.1
4	85	38.6	244	35.3		34.2	1	45.6		12.4	83	59.2		01.5	124	10.3		29.1
5	100	41.1	259	34.8	-7	35.4	16	47.6	+23	12.5	99	01.9	-1	01.6	139	12.8	-16	29.2
6	115	43.5	274	34.4	-7	36.6	31	49.5	+23	12.6	114	04.6	-1	01.7	154	15.3	-16	29.2
7	130	46.0	289	33.9		37.8	46	51.5		12.7	129	07.4		01.8	169	17.8		29.2
8	145	48.4	304	33.5		39.0	61	53.5		12.9	144	10.1		01.9	184	20.3		29.2
9	160	50.9	319	33.0		40.2	76	55.5		13.0	159	12.8		02.0	199	22.8		29.2
10	175	53.4	334	32.6		41.4	91	57.5		13.1	174	15.5		02.1	214	25.3		29.2
11	190	55.8	349	32.1	-7	42.7	106	59.5	+23	13.2	189	18.3	-1	02.2	229	27.7	-16	29.2
12	205	58.3	4	31.7	-7	43.9	122	01.5	+23	13.3	204	21.0	-1	02.3	244	30.2	-16	29.2
13	221	00.8	19	31.3		45.1	137	03.5		13.4	219	23.7		02.5	259	32.7		29.2
14	236	03.2	34	30.8		46.3	152	05.5		13.5	234	26.4		02.6	274	35.2		29.2
15	251	05.7	49	30.4		47.5	167	07.5		13.6	249	29.2		02.7	289	37.7		29.2
16	266	08.2	64	29.9		48.7	182	09.5		13.8	264	31.9		02.8	304	40.2		29.2
17	281	10.6	79	29.5	-7	49.9	197	11.5	+23	13.9	279	34.6	-1	02.9	319	42.7	-16	29.2
18	296	13.1	94	29.0	-7	51.1	212	13.5	+23	14.0	294	37.3	-1	03.0	334	45.2	-16	29.2
19	311	15.6	109	28.6		52.3	227	15.5		14.1	309	40.0		03.1	349	47.6		29.2
20	326	18.0	124	28.1		53.5	242	17.5		14.2	324	42.8		03.2	4	50.1		29.2
21	341	20.5	139	27.7		54.7	257	19.5		14.3	339	45.5		03.3	19	52.6		29.2
22	356	22.9	154	27.2		55.9	272	21.5		14.4	354	48.2		03.4	34	55.1		29.2
23	11	25.4	169	26.8		57.2	287	23.5		14.5	9	50.9		03.5	49	57.6		29.2
24	26	27.9	184	26.3	-7	58.4	302	25.5	+23	14.7	24	53.7	-1	03.6	65	00.1	-16	29.3
Dif	—		-4		-12		+20		+1		+27		-1		+25		0	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'1		Edad: 23 ^d 1 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7						Civil			R°		R°	
	PMG: 11 ^h 45 ^m 0		SD: 14'8 PMG: 7 ^h 18 ^m R°: 46 ^m						Náutico			Hora		Hora	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	h m m
0	183	44.2	-9 53.4	253	55.3	+22 54.2	60 N	16 40	17 22	18 11	23 20 89	16 15 4			
1	198	44.3		268	26.6 ¹²³	46.1 ⁸¹	58	45	25	11	33 85	16 01 8			
2	213	44.4	55.2	282	57.9 ¹²³	37.9 ⁸²	56	50	28	11	45 81	15 49 11			
3	228	44.5	56.1	297	29.3 ¹²⁴	29.6 ⁸³	54	54	30	11	23 55 78	38 14			
4	243	44.6	57.0	312	00.8 ¹²⁵	21.2 ⁸⁴	52	16 58	32	11	** ** *	28 17			
5	258	44.8	-9 57.9	326	32.3 ¹²⁵	+22 12.7 ⁸⁵	50	17 01	17 34	18 11	** ** *	15 19 20			
6	273	44.9	-9 58.8	341	03.8 ¹²⁵	+22 04.2 ⁸⁵	45	17 09	17 38	18 12	** ** *	15 01 24			
7	288	45.0	-9 59.7	355	35.4 ¹²⁶	+21 55.5 ⁸⁷	40	15	42	14	** ** *	14 46 28			
8	303	45.1	-10 00.6	10	07.0 ¹²⁶	46.7 ⁸⁸	35	20	46	15	** ** *	33 31			
9	318	45.2	01.5	24	38.7 ¹²⁷	37.8 ⁸⁹	30	25	49	17	0 09 57	22 33			
10	333	45.3	02.4	39	10.4 ¹²⁷	28.8 ⁹⁰	20	34	17 56	22	30 54	14 02 38			
11	348	45.4	-10 03.3	53	42.2 ¹²⁸	+21 19.7 ⁹¹	10 N	17 41	18 02	18 27	0 49 50	13 45 42			
12	3	45.6	-10 04.2	68	14.0 ¹²⁸	+21 10.5 ⁹²	0	17 48	18 09	18 34	1 07 46	13 29 46			
13	18	45.7	05.1	82	45.9 ¹²⁹	+21 01.2 ⁹³	10 S	17 56	17	42	24 44	13 13 49			
14	33	45.8	06.0	97	17.8 ¹²⁹	+20 51.8 ⁹⁴	20	18 03	26	18 52	1 43 40	12 56 53			
15	48	45.9	06.9	111	49.8 ¹³⁰	42.4 ⁹⁴	30	13	37	19 06	2 04 36	36 58			
16	63	46.0	07.8	126	21.7 ¹²⁹	32.8 ⁹⁶	35	18	44	15	17 33	25 60			
17	78	46.1	-10 08.7	140	53.8 ¹³¹	+20 23.1 ⁹⁷	40	18 24	18 52	19 26	2 31 30	12 11 63			
18	93	46.2	-10 09.6	155	25.9 ¹³¹	+20 13.3 ⁹⁸	45	18 31	19 02	19 39	2 48 27	11 55 67			
19	108	46.4	10.5	169	58.0 ¹³¹	+20 03.5 ⁹⁸	50	40	14	19 56	3 09 22	35 72			
20	123	46.5	11.4	184	30.2 ¹³²	+19 53.5 ¹⁰⁰	52	44	20	20 05	19 20	26 74			
21	138	46.6	12.3	199	02.4 ¹³²	43.5 ¹⁰⁰	54	48	26	14	30 17	15 77			
22	153	46.7	13.2	213	34.7 ¹³³	33.4 ¹⁰¹	56	53	33	25	43 14	11 03 81			
23	168	46.8	14.1	228	07.0 ¹³³	23.1 ¹⁰³	58	18 58	42	38	3 58 9	10 49 85			
24	183	46.9	-10 15.0	242	39.3 ¹³³	+19 12.8 ¹⁰³	60 S	19 05	19 51	20 54	4 15 5	10 32 90			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 06 ^m 6		Mag: -4.0 PMG: 11 ^h 43 ^m		Mag: -1.0 PMG: 3 ^h 47 ^m		Mag: -2.9 PMG: 22 ^h 12 ^m		Mag: +0.6 PMG: 19 ^h 33 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	27	27.0	184 15.4	-8 27.2	303 14.1	+23 17.3	25 58.9	-1 06.1	65 59.7	-16 29.4
1	42	29.5	199 14.9	28.4	318 16.2	17.5	41 01.6	06.2	81 02.2	29.4
2	57	31.9	214 14.5	29.6	333 18.2	17.6	56 04.4	06.3	96 04.7	29.4
3	72	34.4	229 14.0	30.8	348 20.3	17.7	71 07.1	06.4	111 07.2	29.4
4	87	36.9	244 13.6	32.0	3 22.3	17.8	86 09.8	06.5	126 09.6	29.4
5	102	39.3	259 13.1	-8 33.2	18 24.3	+23 17.9	101 12.5	-1 06.6	141 12.1	-16 29.4
6	117	41.8	274 12.6	-8 34.4	33 26.4	+23 18.0	116 15.2	-1 06.7	156 14.6	-16 29.4
7	132	44.3	289 12.2	35.6	48 28.4	18.1	131 17.9	06.8	171 17.1	29.4
8	147	46.7	304 11.7	36.8	63 30.5	18.2	146 20.7	06.9	186 19.6	29.4
9	162	49.2	319 11.3	38.0	78 32.6	18.4	161 23.4	07.0	201 22.0	29.4
10	177	51.7	334 10.8	39.2	93 34.6	18.5	176 26.1	07.1	216 24.5	29.4
11	192	54.1	349 10.3	-8 40.4	108 36.7	+23 18.6	191 28.8	-1 07.2	231 27.0	-16 29.4
12	207	56.6	4 09.9	-8 41.6	123 38.7	+23 18.7	206 31.5	-1 07.3	246 29.5	-16 29.4
13	222	59.0	19 09.4	42.8	138 40.8	18.8	221 34.2	07.4	261 32.0	29.4
14	238	01.5	34 09.0	44.0	153 42.9	18.9	236 37.0	07.6	276 34.4	29.4
15	253	04.0	49 08.5	45.2	168 44.9	19.0	251 39.7	07.7	291 36.9	29.4
16	268	06.4	64 08.0	46.4	183 47.0	19.1	266 42.4	07.8	306 39.4	29.4
17	283	08.9	79 07.6	-8 47.6	198 49.0	+23 19.2	281 45.1	-1 07.9	321 41.9	-16 29.4
18	298	11.4	94 07.1	-8 48.8	213 51.1	+23 19.4	296 47.8	-1 08.0	336 44.4	-16 29.4
19	313	13.8	109 06.6	49.9	228 53.2	19.5	311 50.5	08.1	351 46.8	29.4
20	328	16.3	124 06.2	51.1	243 55.3	19.6	326 53.2	08.2	6 49.3	29.4
21	343	18.8	139 05.7	52.3	258 57.3	19.7	341 56.0	08.3	21 51.8	29.4
22	358	21.2	154 05.2	53.5	273 59.4	19.8	356 58.7	08.4	36 54.3	29.4
23	13	23.7	169 04.8	54.7	289 01.5	19.9	12 01.4	08.5	51 56.8	29.4
24	28	26.1	184 04.3	-8 55.9	304 03.5	+23 20.0	27 04.1	-1 08.6	66 59.2	-16 29.4
Dif	—		-5	-12	+21	+1	+27	-1	+25	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 24 ^d 1	PHE {	R°: 45 ^m		Náutico	Civil		Hora	R°	Hora	R°		
	PMG: 11 ^h 44 ^m 8					R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m	
0	183	46.9	-10	15.0	242	39.3	+19	12.8	60 N	5	20	6	09	6	52	** ** *
1	198	47.0		15.9	257	11.7 ¹³⁴	+19	02.4 ¹⁰⁴	58	20	06		46	** ** *	16	19
2	213	47.1		16.8	271	44.1 ¹³⁴	+18	51.9 ¹⁰⁵	56	20	03		41	** ** *	09	6
3	228	47.2		17.7	286	16.6 ¹³⁵		41.3 ¹⁰⁶	54	20	6	01	37	** ** *	16	00
4	243	47.3		18.6	300	49.1 ¹³⁵		30.7 ¹⁰⁶	52	20	5	59	33	0	04	75
5	258	47.5	-10	19.5	315	21.6 ¹³⁵	+18	19.9 ¹⁰⁸	50	5	19	5	57	6	30	15
6	273	47.6	-10	20.4	329	54.2 ¹³⁶	+18	09.1 ¹⁰⁸	45	5	18	5	52	6	22	0
7	288	47.7		21.3	344	26.8 ¹³⁶	+17	58.2 ¹⁰⁹	40	17	48		16	44	63	14
8	303	47.8		22.2	358	59.5 ¹³⁷		47.1 ¹¹¹	35	15	44		10	0	56	60
9	318	47.9		23.1	13	32.2 ¹³⁷		36.0 ¹¹¹	30	13	41	6	05	1	06	57
10	333	48.0		24.0	28	04.9 ¹³⁷		24.9 ¹¹¹	20	08	34	5	56	24	52	40
11	348	48.1	-10	24.9	42	37.7 ¹³⁸	+17	13.6 ¹¹³	10 N	5	03	5	27	5	49	14
12	3	48.2	-10	25.8	57	10.5 ¹³⁸	+17	02.3 ¹¹³	0	4	56	5	20	5	41	1
13	18	48.3		26.7	71	43.4 ¹³⁹	+16	50.8 ¹¹⁵	10 S	48	13		34	2	08	40
14	33	48.4		27.6	86	16.3 ¹³⁹		39.3 ¹¹⁵	20	37	5	04	26	23	37	13
15	48	48.5		28.5	100	49.2 ¹³⁹		27.8 ¹¹⁵	30	23	4	52	17	40	32	34
16	63	48.6		29.4	115	22.1 ¹³⁹		16.1 ¹¹⁷	35	14	45		11	2	50	29
17	78	48.7	-10	30.3	129	55.1 ¹⁴⁰	+16	04.4 ¹¹⁷	40	4	03	4	37	5	05	3
18	93	48.8	-10	31.2	144	28.1 ¹⁴⁰	+15	52.5 ¹¹⁹	45	3	50	4	27	4	58	3
19	108	48.9		32.0	159	01.2 ¹⁴¹		40.6 ¹¹⁹	50	33	15		49	3	18	12
20	123	49.1		32.9	173	34.2 ¹⁴⁰		28.7 ¹¹⁹	52	24	09		45	39	15	40
21	138	49.2		33.8	188	07.3 ¹⁴¹		16.6 ¹²¹	54	15	4	03	41	47	13	32
22	153	49.3		34.7	202	40.5 ¹⁴²	+15	04.5 ¹²¹	56	3	04	3	55	3	57	10
23	168	49.4		35.6	217	13.6 ¹⁴¹	+14	52.3 ¹²²	58	2	51	4	7	4	07	7
24	183	49.5	-10	36.5	231	46.8 ¹⁴²	+14	40.0 ¹²³	60 S	2	35	3	38	4	20	2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 22 ^h 02 ^m 6		Mag: -4.0 PMG: 11 ^h 44 ^m		Mag: -1.0 PMG: 3 ^h 43 ^m		Mag: -2.9 PMG: 22 ^h 08 ^m		Mag: +0.6 PMG: 19 ^h 29 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'		
0	28	26.1	184	04.3	-8	55.9	304	03.5	27	04.1		
1	43	28.6	199	03.8		57.1	319	05.6	-1	08.6		
2	58	31.1	214	03.4		58.3	334	07.7		08.7		
3	73	33.5	229	02.9	-8	59.5	349	09.8		08.8		
4	88	36.0	244	02.4	-9	00.7	4	11.9		08.9		
5	103	38.5	259	02.0	-9	01.9	19	13.9		09.0		
6	118	40.9	274	01.5	-9	03.0	19	13.9	+23	20.6		
7	133	43.4	289	01.0		04.2	34	16.0	+23	20.7		
8	148	45.9	304	00.6		05.4	49	18.1		20.8		
9	163	48.3	319	00.1		06.6	64	20.2		20.9		
10	178	50.8	333	59.6		07.8	79	22.3		21.0		
11	193	53.3	348	59.2	-9	09.0	94	24.4		21.2		
12	208	55.7		3	58.7	-9	10.2	109	26.5	+23	21.3	
13	223	58.2		18	58.2		11.4	124	28.6	+23	21.4	
14	239	00.6		33	57.8		12.5	139	30.7		21.5	
15	254	03.1		48	57.3		13.7	154	32.8		21.6	
16	269	05.6		63	56.8		14.9	169	34.9		21.7	
17	284	08.0		78	56.3	-9	16.1	184	37.0		21.8	
18	299	10.5		93	55.9	-9	17.3	199	39.1	+23	21.9	
19	314	13.0		108	55.4		18.5	214	41.2	+23	22.0	
20	329	15.4		123	54.9		19.7	229	43.3		22.2	
21	344	17.9		138	54.5		20.8	244	45.4		22.3	
22	359	20.4		153	54.0		22.0	259	47.5		22.4	
23	14	22.8		168	53.5		23.2	274	49.6		22.5	
24	29	25.3		183	53.0	-9	24.4	289	51.7		22.6	
Dif	—		-5		-12		+21	+1	+27	-1		+25

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 6			Edad: 25 ^d 1 PHE { 4 ^h : 55 ^h 4 12 ^h : 55 ^h 6 20 ^h : 55 ^h 8 Rº: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	183	49.5	-10	36.5	231	46.8	+14	40.0	60 N	16 34	17 17	18 05	0 49	88	16 21	1		
1	198	49.6		37.4	246	20.1 ¹⁴³		27.7 ¹²³	58	40	20	06	0 58	84	15	4		
2	213	49.7		38.3	260	53.3 ¹⁴²		15.3 ¹²⁴	56	45	23	06	1 06	81	09	7		
3	228	49.8		39.2	275	26.6 ¹⁴³	+14	02.8 ¹²⁵	54	49	26	07	13	78	16	04	10	
4	243	49.9		40.1	289	59.9 ¹⁴³	+13	50.2 ¹²⁶	52	53	28	07	19	76	15	59	13	
5	258	50.0	-10	41.0	304	33.2 ¹⁴³	+13	37.6 ¹²⁶	50	16 57	17 30	18 08	1 25	73	15	55	15	
6	273	50.1	-10	41.9	319	06.6 ¹⁴⁴	+13	24.9 ¹²⁷	45	17 05	17 35	18 09	1 37	68	15	46	19	
7	288	50.2		42.7	333	39.9 ¹⁴³	+13	12.2 ¹²⁷	40	12	40	11	47	64	39	23		
8	303	50.3		43.6	348	13.3 ¹⁴⁴	+12	59.3 ¹²⁹	35	18	44	13	1 56	60	32	27		
9	318	50.4		44.5	2	46.7 ¹⁴⁴		46.4 ¹²⁹	30	23	47	15	2 03	58	26	30		
10	333	50.5		45.4	17	20.2 ¹⁴⁵		33.5 ¹²⁹	20	32	17 55	20	16	53	16	35		
11	348	50.6	-10	46.3	31	53.6 ¹⁴⁴	+12	20.5 ¹³⁰	10 N	17 40	18 02	18 26	2 28	47	15	07	40	
12	3	50.7	-10	47.2	46	27.1 ¹⁴⁵	+12	07.4 ¹³¹	0	17 48	18 09	18 33	2 38	44	14	59	43	
13	18	50.8		48.1	61	00.6 ¹⁴⁵	+11	54.2 ¹³²	10 S	17 56	17	42	2 48	40	51	47		
14	33	50.9		49.0	75	34.1 ¹⁴⁵		41.0 ¹³²	20	18 04	27	18 53	3 00	35	41	53		
15	48	51.0		49.9	90	07.6 ¹⁴⁵		27.7 ¹³³	30	14	39	19 08	12	30	31	58		
16	63	51.1		50.7	104	41.2 ¹⁴⁶		14.4 ¹³³	35	20	46	17	19	28	25	61		
17	78	51.2	-10	51.6	119	14.8 ¹⁴⁶	+11	01.0 ¹³⁴	40	18 26	18 54	19 28	3 28	24	14	18	64	
18	93	51.3	-10	52.5	133	48.3 ¹⁴⁵	+10	47.5 ¹³⁵	45	18 34	19 05	19 42	3 37	20	14	10	68	
19	108	51.4		53.4	148	21.9 ¹⁴⁶		34.0 ¹³⁵	50	43	18	20 01	49	15	14	00	73	
20	123	51.5		54.3	162	55.5 ¹⁴⁶		20.4 ¹³⁶	52	47	24	09	3 54	13	13	55	76	
21	138	51.6		55.2	177	29.1 ¹⁴⁶	+10	06.8 ¹³⁶	54	52	31	19	4 00	11	50	79		
22	153	51.7		56.1	192	02.7 ¹⁴⁶	+9	53.1 ¹³⁷	56	18 57	38	31	07	7	45	81		
23	168	51.8		56.9	206	36.4 ¹⁴⁷		39.4 ¹³⁷	58	19 03	47	20 45	14	5	38	85		
24	183	51.9	-10	57.8	221	10.0 ¹⁴⁶	+9	25.6 ¹³⁸	60 S	19 10	19 57	21 02	4 22	1	13	31	89	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 21 ^h 58 ^m 7		Mag: -4.0 PMG: 11 ^h 45 ^m				Mag: -1.0 PMG: 3 ^h 40 ^m				Mag: -2.9 PMG: 22 ^h 03 ^m				Mag: +0.6 PMG: 19 ^h 25 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	29	25.3	183	53.0	-9	24.4	304	53.8	+23	22.7	28	09.1	-1	11.0	67	58.7	-16	29.4
1	44	27.8	198	52.6		25.6	319	55.9		22.8	43	11.8		11.1	83	01.1		29.4
2	59	30.2	213	52.1		26.7	334	58.0		22.9	58	14.5		11.1	98	03.6		29.4
3	74	32.7	228	51.6		27.9	350	00.1		23.1	73	17.3		11.2	113	06.1		29.4
4	89	35.1	243	51.1		29.1	5	02.2		23.2	88	20.0		11.3	128	08.6		29.4
5	104	37.6	258	50.7	-9	30.3	20	04.4	+23	23.3	103	22.7	-1	11.4	143	11.0	-16	29.4
6	119	40.1	273	50.2	-9	31.5	35	06.5	+23	23.4	118	25.4	-1	11.5	158	13.5	-16	29.4
7	134	42.5	288	49.7		32.7	50	08.6		23.5	133	28.1		11.6	173	16.0		29.4
8	149	45.0	303	49.2		33.8	65	10.7		23.6	148	30.8		11.7	188	18.4		29.5
9	164	47.5	318	48.7		35.0	80	12.9		23.7	163	33.5		11.8	203	20.9		29.5
10	179	49.9	333	48.3		36.2	95	15.0		23.8	178	36.2		11.9	218	23.4		29.5
11	194	52.4	348	47.8	-9	37.4	110	17.1	+23	23.9	193	38.9	-1	12.0	233	25.9	-16	29.5
12	209	54.9	3	47.3	-9	38.5	125	19.2	+23	24.1	208	41.6	-1	12.1	248	28.3	-16	29.5
13	224	57.3	18	46.8		39.7	140	21.4		24.2	223	44.3		12.2	263	30.8		29.5
14	239	59.8	33	46.4		40.9	155	23.5		24.3	238	47.0		12.3	278	33.3		29.5
15	255	02.2	48	45.9		42.1	170	25.6		24.4	253	49.7		12.4	293	35.7		29.5
16	270	04.7	63	45.4		43.3	185	27.8		24.5	268	52.4		12.5	308	38.2		29.4
17	285	07.2	78	44.9	-9	44.4	200	29.9	+23	24.6	283	55.1	-1	12.6	323	40.7	-16	29.4
18	300	09.6	93	44.4	-9	45.6	215	32.0	+23	24.7	298	57.8	-1	12.7	338	43.2	-16	29.4
19	315	12.1	108	44.0		46.8	230	34.2		24.8	314	00.5		12.8	353	45.6		29.4
20	330	14.6	123	43.5		48.0	245	36.3		25.0	329	03.2		12.9	8	48.1		29.4
21	345	17.0	138	43.0		49.1	260	38.4		25.1	344	05.9		13.0	23	50.6		29.4
22	0	19.5	153	42.5		50.3	275	40.6		25.2	359	08.6		13.1	38	53.0		29.4
23	15	22.0	168	42.0		51.5	290	42.7		25.3	14	11.4		13.2	53	55.5		29.4
24	30	24.4	183	41.6	-9	52.7	305	44.9	+23	25.4	29	14.1	-1	13.3	68	58.0	-16	29.4
Dif	—		-5		-12		+21		+1		+27		-1		+25			

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			Edad: 26 ^d 1 PHE { 4 ^h : 56'0 12 ^h : 56'2 20 ^h : 56'5 SD: 15'2 PMG: 9 ^h 32 ^m R°: 44 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	183	51.9	-10	57.8	221	10.0	+9	25.6	60 N	5	25	6	13	6	57	2	17
1	198	52.0		58.7	235	43.7 ¹⁴⁷	+9	11.7 ¹³⁹	58	24	10		51		22	86	
2	213	52.1	-10	59.6	250	17.3 ¹⁴⁶	+8	57.8 ¹³⁹	56	24	07		46		27	82	
3	228	52.2	-11	00.5	264	51.0 ¹⁴⁷		43.8 ¹⁴⁰	54	23	05		41		31	79	
4	243	52.2		01.4	279	24.6 ¹⁴⁶		29.8 ¹⁴⁰	52	23	02		37		35	76	
5	258	52.3	-11	02.3	293	58.3 ¹⁴⁷	+8	15.8 ¹⁴⁰	50	5	22	6	00	6	33	2	38
6	273	52.4	-11	03.1	308	32.0 ¹⁴⁷	+8	01.7 ¹⁴¹	45	5	21	5	55	6	25	2	45
7	288	52.5		04.0	323	05.7 ¹⁴⁷	+7	47.5 ¹⁴²	40	19	50		18		51	65	
8	303	52.6		04.9	337	39.3 ¹⁴⁶		33.3 ¹⁴²	35	16	46		12		2	56	
9	318	52.7		05.8	352	13.0 ¹⁴⁷		19.1 ¹⁴²	30	14	42		6	06	3	01	
10	333	52.8		06.7	6	46.7 ¹⁴⁷	+7	04.8 ¹⁴³	20	09	35		5	57	09	52	
11	348	52.9	-11	07.6	21	20.4 ¹⁴⁷	+6	50.4 ¹⁴⁴	10 N	5	03	5	28	5	49	3	15
12	3	53.0	-11	08.4	35	54.0 ¹⁴⁶	+6	36.0 ¹⁴⁴	0	4	56	5	20	5	41	3	22
13	18	53.1		09.3	50	27.7 ¹⁴⁷		21.6 ¹⁴⁴	10 S	47	12		33		28	39	
14	33	53.2		10.2	65	01.4 ¹⁴⁷	+6	07.1 ¹⁴⁵	20	36	5	02	25		35	34	
15	48	53.3		11.1	79	35.0 ¹⁴⁶	+5	52.6 ¹⁴⁵	30	21	4	50	15		42	30	
16	63	53.4		12.0	94	08.7 ¹⁴⁷		38.0 ¹⁴⁶	35	11	43		09		47	26	
17	78	53.5	-11	12.8	108	42.3 ¹⁴⁶	+5	23.4 ¹⁴⁶	40	4	00	4	34	5	02	3	52
18	93	53.6	-11	13.7	123	16.0 ¹⁴⁷	+5	08.8 ¹⁴⁶	45	3	46	4	24	4	55	3	57
19	108	53.6		14.6	137	49.6 ¹⁴⁶	+4	54.1 ¹⁴⁷	50	28	11		45		4	04	
20	123	53.7		15.5	152	23.2 ¹⁴⁶		39.4 ¹⁴⁷	52	19	4	05	41		07	12	
21	138	53.8		16.4	166	56.8 ¹⁴⁶		24.7 ¹⁴⁷	54	3	09	3	58	36		11	
22	153	53.9		17.2	181	30.4 ¹⁴⁶	+4	09.9 ¹⁴⁸	56	2	57		50	31		14	
23	168	54.0		18.1	196	04.0 ¹⁴⁶	+3	55.1 ¹⁴⁸	58	43	41		25		19	4	
24	183	54.1	-11	19.0	210	37.5 ¹⁴⁵	+3	40.2 ¹⁴⁹	60 S	2	27	3	31	4	18	4	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 54 ^m 8		Mag: -4.0 PMG: 11 ^h 46 ^m		Mag: -1.0 PMG: 3 ^h 36 ^m		Mag: -2.9 PMG: 21 ^h 59 ^m		Mag: +0.6 PMG: 19 ^h 21 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	30	24.4	183	41.6	-9	52.7	305	44.9	+23	25.4
1	45	26.9	198	41.1		53.8	320	47.0		25.5
2	60	29.4	213	40.6		55.0	335	49.2		25.6
3	75	31.8	228	40.1		56.2	350	51.3		25.7
4	90	34.3	243	39.6		57.3	5	53.5		25.8
5	105	36.7	258	39.1	-9	58.5	20	55.6	+23	26.0
6	120	39.2	273	38.6	-9	59.7	35	57.8	+23	26.1
7	135	41.7	288	38.2	-10	00.9	50	59.9		26.2
8	150	44.1	303	37.7		02.0	66	02.1		26.3
9	165	46.6	318	37.2		03.2	81	04.3		26.4
10	180	49.1	333	36.7		04.4	96	06.4		26.5
11	195	51.5	348	36.2	-10	05.5	111	08.6	+23	26.6
12	210	54.0	3	35.7	-10	06.7	126	10.7	+23	26.7
13	225	56.5	18	35.2		07.9	141	12.9		26.9
14	240	58.9	33	34.8		09.0	156	15.1		27.0
15	256	01.4	48	34.3		10.2	171	17.2		27.1
16	271	03.8	63	33.8		11.4	186	19.4		27.2
17	286	06.3	78	33.3	-10	12.5	201	21.6	+23	27.3
18	301	08.8	93	32.8	-10	13.7	216	23.8	+23	27.4
19	316	11.2	108	32.3		14.9	231	25.9		27.5
20	331	13.7	123	31.8		16.0	246	28.1		27.6
21	346	16.2	138	31.3		17.2	261	30.3		27.7
22	1	18.6	153	30.8		18.4	276	32.5		27.9
23	16	21.1	168	30.4		19.5	291	34.6		28.0
24	31	23.6	183	29.9	-10	20.7	306	36.8	+23	28.1
Dif	—		-5		-12		+22		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 3			Edad: 27 ^d 1 PHE { SD: 15 ^h 4 PMG: 10 ^h 16 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	183	54.1	-11	19.0	210	37.5	+3	40.2	60 N	16 29	17 12	18 00	3 46 91	16 22	1			
1	198	54.2		19.9	225	11.1 ¹⁴⁶		25.3 ¹⁴⁹	58	35	15	01	48 87	23	4			
2	213	54.3		20.8	239	44.6 ¹⁴⁵	+3	10.4 ¹⁴⁹	56	40	18	02	49 84	23	7			
3	228	54.4		21.6	254	18.1 ¹⁴⁵	+2	55.5 ¹⁴⁹	54	45	21	02	50 81	23	10			
4	243	54.4		22.5	268	51.6 ¹⁴⁵		40.5 ¹⁵⁰	52	49	24	03	51 79	23	13			
5	258	54.5	-11	23.4	283	25.1 ¹⁴⁵	+2	25.5 ¹⁵⁰	50	16 53	17 26	18 04	3 52 76	16 24	14			
6	273	54.6	-11	24.3	297	58.5 ¹⁴⁴	+2	10.5 ¹⁵⁰	45	17 02	17 32	18 06	3 54 71	16 24	19			
7	288	54.7		25.1	312	31.9 ¹⁴⁴	+1	55.4 ¹⁵¹	40	09	37	08	56 67	24	24			
8	303	54.8		26.0	327	05.3 ¹⁴⁴		40.4 ¹⁵⁰	35	16	41	11	58 62	25	27			
9	318	54.9		26.9	341	38.7 ¹⁴⁴		25.3 ¹⁵¹	30	21	45	13	3 59 59	25	30			
10	333	55.0		27.8	356	12.1 ¹⁴⁴	+1	10.1 ¹⁵²	20	31	17 53	19	4 01 54	25	36			
11	348	55.1	-11	28.6	10	45.4 ¹⁴³	+0	55.0 ¹⁵¹	10 N	17 39	18 01	18 26	4 03 49	16 26	40			
12	3	55.1	-11	29.5	25	18.7 ¹⁴³	+0	39.8 ¹⁵²	0	17 48	18 09	18 33	4 05 45	16 26	45			
13	18	55.2		30.4	39	51.9 ¹⁴²		24.6 ¹⁵²	10 S	17 56	18	43	07 40	27	49			
14	33	55.3		31.3	54	25.2 ¹⁴³	+0	09.4 ¹⁵²	20	18 05	28	18 54	09 35	27	55			
15	48	55.4		32.1	68	58.4 ¹⁴²	-0	05.8 ¹⁵²	30	15	40	19 10	12 29	27	61			
16	63	55.5		33.0	83	31.6 ¹⁴²		21.0 ¹⁵²	35	22	48	19	13 26	27	64			
17	78	55.6	-11	33.9	98	04.7 ¹⁴¹	-0	36.3 ¹⁵³	40	18 28	18 57	19 31	4 14 23	16 28	67			
18	93	55.6	-11	34.8	112	37.8 ¹⁴¹	-0	51.6 ¹⁵³	45	18 37	19 08	19 46	4 16 19	16 28	72			
19	108	55.7		35.6	127	10.9 ¹⁴¹	-1	06.8 ¹⁵²	50	46	21	20 05	18 14	28	77			
20	123	55.8		36.5	141	43.9 ¹⁴⁰		22.1 ¹⁵³	52	51	28	14	19 12	28	80			
21	138	55.9		37.4	156	16.9 ¹⁴⁰		37.4 ¹⁵³	54	18 56	35	25	20 10	28	83			
22	153	56.0		38.2	170	49.9 ¹⁴⁰	-1	52.8 ¹⁵⁴	56	19 02	43	37	21 7	29	85			
23	168	56.1		39.1	185	22.8 ¹³⁹	-2	08.1 ¹⁵³	58	08	19 52	20 52	23 4	29	88			
24	183	56.1	-11	40.0	199	55.6 ¹³⁸	-2	23.4 ¹⁵³	60 S	19 15	20 03	21 10	4 24 1	16 29	92			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 50 ^m 8		Mag: -4.0 PMG: 11 ^h 46 ^m			Mag: -1.0 PMG: 3 ^h 33 ^m			Mag: -2.9 PMG: 21 ^h 55 ^m			Mag: +0.6 PMG: 19 ^h 17 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°			
0	31	23.6	183	29.9	-10	20.7	306	36.8	+23	28.1	30	18.8	-1	15.6	69	57.2	-16	29.4
1	46	26.0	198	29.4		21.9	321	39.0		28.2	45	21.5		15.6	84	59.7		29.4
2	61	28.5	213	28.9		23.0	336	41.2		28.3	60	24.2		15.7	100	02.1		29.4
3	76	31.0	228	28.4		24.2	351	43.4		28.4	75	26.9		15.8	115	04.6		29.4
4	91	33.4	243	27.9		25.4	6	45.6		28.5	90	29.6		15.9	130	07.1		29.4
5	106	35.9	258	27.4	-10	26.5	21	47.7	+23	28.6	105	32.3	-1	16.0	145	09.5	-16	29.4
6	121	38.3	273	26.9	-10	27.7	36	49.9	+23	28.8	120	35.0	-1	16.1	160	12.0	-16	29.4
7	136	40.8	288	26.4		28.8	51	52.1		28.9	135	37.7		16.2	175	14.5		29.4
8	151	43.3	303	25.9		30.0	66	54.3		29.0	150	40.4		16.3	190	16.9		29.4
9	166	45.7	318	25.4		31.2	81	56.5		29.1	165	43.1		16.4	205	19.4		29.4
10	181	48.2	333	24.9		32.3	96	58.7		29.2	180	45.8		16.5	220	21.9		29.4
11	196	50.7	348	24.4	-10	33.5	112	00.9	+23	29.3	195	48.5	-1	16.6	235	24.3	-16	29.4
12	211	53.1	3	23.9	-10	34.6	127	03.1	+23	29.4	210	51.2	-1	16.7	250	26.8	-16	29.4
13	226	55.6	18	23.4		35.8	142	05.3		29.5	225	53.9		16.8	265	29.2		29.4
14	241	58.1	33	22.9		37.0	157	07.5		29.6	240	56.6		16.8	280	31.7		29.4
15	257	00.5	48	22.5		38.1	172	09.7		29.8	255	59.3		16.9	295	34.2		29.4
16	272	03.0	63	22.0		39.3	187	11.9		29.9	271	02.0		17.0	310	36.6		29.4
17	287	05.4	78	21.5	-10	40.4	202	14.1	+23	30.0	286	04.7	-1	17.1	325	39.1	-16	29.4
18	302	07.9	93	21.0	-10	41.6	217	16.3	+23	30.1	301	07.4	-1	17.2	340	41.6	-16	29.4
19	317	10.4	108	20.5		42.7	232	18.5		30.2	316	10.0		17.3	355	44.0		29.4
20	332	12.8	123	20.0		43.9	247	20.8		30.3	331	12.7		17.4	10	46.5		29.4
21	347	15.3	138	19.5		45.1	262	23.0		30.4	346	15.4		17.5	25	48.9		29.4
22	2	17.8	153	19.0		46.2	277	25.2		30.5	1	18.1		17.6	40	51.4		29.4
23	17	20.2	168	18.5		47.4	292	27.4		30.7	16	20.8		17.7	55	53.9		29.4
24	32	22.7	183	18.0	-10	48.5	307	29.6	+23	30.8	31	23.5	-1	17.8	70	56.3	-16	29.3
Dif	—		-5			-12	+22			+1	+27			-1	+25			

UT	SOL				● LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 2				Edad: 28 ^d 1 PHE { 4 ^h : 57'4 12 ^h : 57'7 20 ^h : 57'9 Rº: 47 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	56.1	-11	40.0	199	55.6	-2	23.4	60 N	5	29	6	18	7	02	5	17	
1	198	56.2		40.9	214	28.5 ¹³⁹		38.7 ¹⁵³	58	29	14	6	55	15	91	27	5	
2	213	56.3		41.7	229	01.3 ¹³⁸	-2	54.1 ¹⁵⁴	56	28	11	50	13	87	30	8		
3	228	56.4		42.6	243	34.0 ¹³⁷	-3	09.4 ¹⁵³	54	27	08	45	11	84	33	1		
4	243	56.5		43.5	258	06.7 ¹³⁷		24.8 ¹⁵⁴	52	26	06	40	10	81	36	14		
5	258	56.6	-11	44.3	272	39.4 ¹³⁷	-3	40.1 ¹⁵³	50	5	25	6	03	5	08	79	16	
6	273	56.6	-11	45.2	287	12.0 ¹³⁶	-3	55.5 ¹⁵⁴	45	5	23	5	57	5	05	74	22	
7	288	56.7		46.1	301	44.5 ¹³⁵	-4	10.8 ¹⁵³	40	21	52	20	03	69	48	26		
8	303	56.8		46.9	316	17.0 ¹³⁵		26.1 ¹⁵³	35	18	48	14	5	00	66	52	29	
9	318	56.9		47.8	330	49.5 ¹³⁵		41.5 ¹⁵⁴	30	15	43	6	08	4	58	62	33	
10	333	56.9		48.7	345	21.9 ¹³⁴	-4	56.8 ¹⁵³	20	10	36	5	58	55	56	17	38	
11	348	57.0	-11	49.5	359	54.2 ¹³³	-5	12.1 ¹⁵³	10 N	5	03	5	28	4	52	51	44	
12	3	57.1	-11	50.4	14	26.5 ¹³³	-5	27.4 ¹⁵³	0	4	55	5	20	4	50	46	48	
13	18	57.2		51.3	28	58.7 ¹³²		42.8 ¹⁵⁴	10 S	46	11	32	47	42	16	53		
14	33	57.3		52.2	43	30.9 ¹³²	-5	58.0 ¹⁵²	20	34	5	01	23	44	37	22	57	
15	48	57.3		53.0	58	03.0 ¹³¹	-6	13.3 ¹⁵³	30	19	4	48	13	41	31	28	63	
16	63	57.4		53.9	72	35.1 ¹³¹		28.6 ¹⁵³	35	4	09	40	07	39	28	31	67	
17	78	57.5	-11	54.7	87	07.1 ¹³⁰	-6	43.9 ¹⁵³	40	3	57	4	31	5	00	4	71	
18	93	57.6	-11	55.6	101	39.0 ¹²⁹	-6	59.1 ¹⁵²	45	3	42	4	20	4	51	4	75	
19	108	57.6		56.5	116	10.9 ¹²⁹	-7	14.3 ¹⁵²	50	23	07	41	32	16	45	81		
20	123	57.7		57.3	130	42.7 ¹²⁸		29.5 ¹⁵²	52	14	4	00	37	31	13	48	83	
21	138	57.8		58.2	145	14.4 ¹²⁷		44.7 ¹⁵²	54	3	03	3	53	30	10	51	86	
22	153	57.9		59.1	159	46.1 ¹²⁷	-7	59.9 ¹⁵²	56	2	51	45	26	28	8	54	89	
23	168	57.9	-11	59.9	174	17.7 ¹²⁶	-8	15.0 ¹⁵¹	58	36	35	20	27	4	17	57	93	
24	183	58.0	-12	00.8	188	49.2 ¹²⁵	-8	30.1 ¹⁵¹	60 S	2	18	3	24	4	25	1	98	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 21 ^h 46 ^m 9		Mag: -4.0 PMG: 11 ^h 47 ^m				Mag: -1.1 PMG: 3 ^h 30 ^m				Mag: -2.9 PMG: 21 ^h 51 ^m				Mag: +0.6 PMG: 19 ^h 13 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	32	22.7	183	18.0	-10	48.5	307	29.6	+23	30.8	31	23.5	-1	17.8	70	56.3	-16	29.3
1	47	25.2	198	17.5		49.7	322	31.8		30.9	46	26.2		17.8	85	58.8		29.3
2	62	27.6	213	17.0		50.8	337	34.1		31.0	61	28.9		17.9	101	01.2		29.3
3	77	30.1	228	16.5		52.0	352	36.3		31.1	76	31.6		18.0	116	03.7		29.3
4	92	32.6	243	16.0		53.1	7	38.5		31.2	91	34.3		18.1	131	06.2		29.3
5	107	35.0	258	15.5	-10	54.3	22	40.7	+23	31.3	106	37.0	-1	18.2	146	08.6	-16	29.3
6	122	37.5	273	15.0	-10	55.4	37	43.0	+23	31.4	121	39.7	-1	18.3	161	11.1	-16	29.3
7	137	39.9	288	14.4		56.6	52	45.2		31.5	136	42.3		18.4	176	13.6		29.3
8	152	42.4	303	13.9		57.7	67	47.4		31.7	151	45.0		18.5	191	16.0		29.3
9	167	44.9	318	13.4	-10	58.9	82	49.6		31.8	166	47.7		18.6	206	18.5		29.3
10	182	47.3	333	12.9	-11	00.0	97	51.9		31.9	181	50.4		18.7	221	20.9		29.3
11	197	49.8	348	12.4	-11	01.2	112	54.1	+23	32.0	196	53.1	-1	18.7	236	23.4	-16	29.3
12	212	52.3	3	11.9	-11	02.3	127	56.4	+23	32.1	211	55.8	-1	18.8	251	25.8	-16	29.3
13	227	54.7	18	11.4		03.5	142	58.6		32.2	226	58.5		18.9	266	28.3		29.3
14	242	57.2	33	10.9		04.6	158	00.8		32.3	242	01.2		19.0	281	30.8		29.3
15	257	59.7	48	10.4		05.8	173	03.1		32.4	257	03.9		19.1	296	33.2		29.3
16	273	02.1	63	09.9		06.9	188	05.3		32.6	272	06.5		19.2	311	35.7		29.3
17	288	04.6	78	09.4	-11	08.1	203	07.6	+23	32.7	287	09.2	-1	19.3	326	38.1	-16	29.3
18	303	07.1	93	08.9	-11	09.2	218	09.8	+23	32.8	302	11.9	-1	19.4	341	40.6	-16	29.3
19	318	09.5	108	08.4		10.4	233	12.0		32.9	317	14.6		19.5	356	43.1		29.3
20	333	12.0	123	07.9		11.5	248	14.3		33.0	332	17.3		19.5	11	45.5		29.3
21	348	14.4	138	07.4		12.6	263	16.5		33.1	347	20.0		19.6	26	48.0		29.3
22	3	16.9	153	06.9		13.8	278	18.8		33.2	2	22.7		19.7	41	50.4		29.3
23	18	19.4	168	06.3		14.9	293	21.1		33.3	17	25.4		19.8	56	52.9		29.3
24	33	21.8	183	05.8	-11	16.1	308	23.3	+23	33.5	32	28.0	-1	19.9	71	55.3	-16	29.2
Dif	—		-5		-11		+22		+1		+27		-1		+25			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1			Edad: 29 ^d 1 PHE { 4 ^h : 58 ^h 1 12 ^h : 58 ^h 3 20 ^h : 58 ^h 5 R°: 51 ^m											
	PMG: 11 ^h 44 ^m 1			SD: 15 ^h 8 PMG: 11 ^h 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	58.0	-12 00.8	188	49.2	-8 30.1		60 N	16 23	17 07	17 55	6 52	101	16 25	2
1	198	58.1	01.7	203	20.7 ¹²⁵	-8 45.2 ¹⁵¹		58	30	10	56	46	96	32	7
2	213	58.2	02.5	217	52.1 ¹²⁴	-9 00.2 ¹⁵⁰		56	35	14	57	40	92	38	12
3	228	58.2	03.4	232	23.4 ¹²³	15.3 ¹⁵¹		54	41	17	58	35	89	44	15
4	243	58.3	04.3	246	54.7 ¹²³	30.3 ¹⁵⁰		52	45	20	17 59	31	85	50	17
5	258	58.4	-12 05.1	261	25.8 ¹²¹	-9 45.2 ¹⁴⁹		50	16 50	17 23	18 01	6 27	83	16 54	20
6	273	58.5	-12 06.0	275	57.0 ¹²²	-10 00.1 ¹⁴⁹		45	16 59	17 29	18 03	6 19	76	17 05	25
7	288	58.5	06.8	290	28.0 ¹²⁰	15.0 ¹⁴⁹		40	17 07	34	06	12	72	14	30
8	303	58.6	07.7	304	58.9 ¹¹⁹	29.9 ¹⁴⁹		35	13	39	09	06	68	21	34
9	318	58.7	08.6	319	29.8 ¹¹⁹	44.7 ¹⁴⁸		30	19	44	12	6 00	65	28	37
10	333	58.8	09.4	334	00.6 ¹¹⁸	-10 59.5 ¹⁴⁸		20	30	17 52	18	5 51	59	39	43
11	348	58.8	-12 10.3	348	31.3 ¹¹⁷	-11 14.2 ¹⁴⁷		10 N	17 39	18 00	18 25	5 43	55	17 50	47
12	3 58.9	-12 11.1	3 01.9 ¹¹⁶	-11 28.9 ¹⁴⁷	0	17 47	18 09	18 33	5 36	50	17 59	52			
13	18 59.0	12.0	17 32.5 ¹¹⁶	43.6 ¹⁴⁷	10 S	17 56	18	43	29	45	18 09	56			
14	33 59.0	12.9	32 03.0 ¹¹⁵	-11 58.2 ¹⁴⁶	20	18 06	29	18 55	21	40	19	61			
15	48 59.1	13.7	46 33.3 ¹¹³	-12 12.7 ¹⁴⁵	30	17	42	19 11	12	35	31	66			
16	63 59.2	14.6	61 03.6 ¹¹³	27.2 ¹⁴⁵	35	23	50	21	07	32	38	69			
17	78 59.2	-12 15.4	75 33.9 ¹¹³	-12 41.7 ¹⁴⁵	40	18 31	18 59	19 34	5 02	28	18 46	73			
18	93 59.3	-12 16.3	90 04.0 ¹¹¹	-12 56.1 ¹⁴⁴	45	18 39	19 11	19 49	4 55	24	18 55	78			
19	108 59.4	17.2	104 34.0 ¹¹⁰	-13 10.4 ¹⁴³	50	50	25	20 09	48	18	19 06	84			
20	123 59.4	18.0	119 04.0 ¹¹⁰	24.7 ¹⁴³	52	18 55	32	19	44	16	11	87			
21	138 59.5	18.9	133 33.8 ¹⁰⁸	38.9 ¹⁴²	54	19 00	39	30	40	13	17	90			
22	153 59.6	19.7	148 03.6 ¹⁰⁸	-13 53.1 ¹⁴²	56	06	48	43	36	10	23	94			
23	168 59.7	20.6	162 33.3 ¹⁰⁷	-14 07.2 ¹⁴¹	58	13	19 58	20 59	31	7	30	99			
24	183 59.7	-12 21.4	177 02.8 ¹⁰⁵	-14 21.2 ¹⁴⁰	60 S	19 20	20 09	21 18	4 26	2	19 39	103			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 21 ^h 43 ^m 0		Mag: -4.0 PMG: 11 ^h 48 ^m		Mag: -1.1 PMG: 3 ^h 26 ^m		Mag: -2.9 PMG: 21 ^h 46 ^m		Mag: +0.6 PMG: 19 ^h 09 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	°	'	°	'	°	'	°	'				
0	33 21.8	183 05.8	-11 16.1	308 23.3	+23 33.5	32 28.0	-1 19.9	71 55.3	-16 29.2						
1	48 24.3	198 05.3	17.2	323 25.6	33.6	47 30.7	20.0	86 57.8	29.2						
2	63 26.8	213 04.8	18.4	338 27.8	33.7	62 33.4	20.1	102 00.3	29.2						
3	78 29.2	228 04.3	19.5	353 30.1	33.8	77 36.1	20.2	117 02.7	29.2						
4	93 31.7	243 03.8	20.6	8 32.3	33.9	92 38.8	20.2	132 05.2	29.2						
5	108 34.2	258 03.3	-11 21.8	23 34.6	+23 34.0	107 41.5	-1 20.3	147 07.6	-16 29.2						
6	123 36.6	273 02.8	-11 22.9	38 36.9	+23 34.1	122 44.1	-1 20.4	162 10.1	-16 29.2						
7	138 39.1	288 02.3	24.1	53 39.1	34.2	137 46.8	20.5	177 12.5	29.2						
8	153 41.5	303 01.7	25.2	68 41.4	34.3	152 49.5	20.6	192 15.0	29.2						
9	168 44.0	318 01.2	26.3	83 43.7	34.5	167 52.2	20.7	207 17.5	29.2						
10	183 46.5	333 00.7	27.5	98 45.9	34.6	182 54.9	20.8	222 19.9	29.2						
11	198 48.9	348 00.2	-11 28.6	113 48.2	+23 34.7	197 57.6	-1 20.9	237 22.4	-16 29.2						
12	213 51.4	2 59.7	-11 29.8	128 50.5	+23 34.8	213 00.2	-1 20.9	252 24.8	-16 29.2						
13	228 53.9	17 59.2	30.9	143 52.8	34.9	228 02.9	21.0	267 27.3	29.2						
14	243 56.3	32 58.7	32.0	158 55.0	35.0	243 05.6	21.1	282 29.7	29.2						
15	258 58.8	47 58.1	33.2	173 57.3	35.1	258 08.3	21.2	297 32.2	29.2						
16	274 01.3	62 57.6	34.3	188 59.6	35.2	273 11.0	21.3	312 34.6	29.2						
17	289 03.7	77 57.1	-11 35.4	204 01.9	+23 35.4	288 13.7	-1 21.4	327 37.1	-16 29.2						
18	304 06.2	92 56.6	-11 36.6	219 04.2	+23 35.5	303 16.3	-1 21.5	342 39.5	-16 29.2						
19	319 08.7	107 56.1	37.7	234 06.4	35.6	318 19.0	21.5	357 42.0	29.1						
20	334 11.1	122 55.6	38.8	249 08.7	35.7	333 21.7	21.6	12 44.5	29.1						
21	349 13.6	137 55.0	40.0	264 11.0	35.8	348 24.4	21.7	27 46.9	29.1						
22	4 16.0	152 54.5	41.1	279 13.3	35.9	3 27.1	21.8	42 49.4	29.1						
23	19 18.5	167 54.0	42.2	294 15.6	36.0	18 29.7	21.9	57 51.8	29.1						
24	34 21.0	182 53.5	-11 43.4	309 17.9	+23 36.1	33 32.4	-1 22.0	72 54.3	-16 29.1						
Dif	—	-5	-11	+23	+1	+27	-1	+25	0						

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 44 ^m 0			Edad: 0 ^d 5 PHE { SD: 16'0 PMG: 12 ^h 38 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	59.7	-12	21.4	177	02.8	-14	21.2	60 N	5 34	6 23	7 07	8 33	107	16 27	6
1	198	59.8		22.3	191	32.3		35.2	58	33	19	7 00	22	100	39	12
2	213	59.9		23.1	206	01.7	-14	49.1	56	32	15	6 54	12	96	50	16
3	228	59.9		24.0	220	31.0	-15	02.9	54	31	12	49	8 04	92	16 59	20
4	244	00.0		24.9	235	00.2		16.7	52	29	09	44	7 56	89	17 07	24
5	259	00.0	-12	25.7	249	29.4	-15	30.4	50	5 28	6 06	6 40	7 50	85	17 14	27
6	274	00.1	-12	26.6	263	58.4	-15	44.0	45	5 26	6 00	6 30	7 35	80	17 30	32
7	289	00.2		27.4	278	27.3	-15	57.6	40	23	5 54	22	24	75	44	36
8	304	00.2		28.3	292	56.1	-16	11.0	35	20	49	15	14	71	17 55	40
9	319	00.3		29.1	307	24.8		24.4	30	17	45	6 09	7 05	68	18 05	42
10	334	00.4		30.0	321	53.5		37.7	20	10	36	5 59	6 50	63	22	47
11	349	00.4	-12	30.8	336	22.0	-16	51.0	10 N	5 03	5 28	5 49	6 38	57	18 37	52
12	4	00.5	-12	31.7	350	50.4	-17	04.1	0	4 55	5 19	5 41	6 26	53	18 51	55
13	19	00.6		32.5	5	18.7		17.1	10 S	45	5 10	32	14	49	19 05	59
14	34	00.6		33.4	19	46.9		30.1	20	33	4 59	22	6 01	45	20	64
15	49	00.7		34.2	34	15.0		43.0	30	16	46	11	5 47	40	37	69
16	64	00.7		35.1	48	43.1	-17	55.8	35	4 06	38	5 04	39	36	47	72
17	79	00.8	-12	35.9	63	11.0	-18	08.5	40	3 54	4 28	4 57	5 30	33	19 59	76
18	94	00.9	-12	36.8	77	38.8	-18	21.0	45	3 38	4 17	4 48	5 19	28	20 13	80
19	109	00.9		37.6	92	06.5		33.5	50	18	4 02	38	6 09	23	30	85
20	124	01.0		38.5	106	34.1		45.9	52	3 09	3 56	33	5 00	20	38	88
21	139	01.1		39.3	121	01.6	-18	58.2	54	2 57	48	27	4 53	18	47	92
22	154	01.1		40.2	135	29.0	-19	10.4	56	44	39	21	46	14	20 57	96
23	169	01.2		41.0	149	56.2		22.5	58	28	29	15	38	9	21 09	101
24	184	01.2	-12	41.9	164	23.4	-19	34.5	60 S	2 09	3 18	4 07	4 28	5	21 22	108

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 39 ^m 0		Mag: -4.0 PMG: 11 ^h 49 ^m		Mag: -1.1 PMG: 3 ^h 22 ^m		Mag: -2.9 PMG: 21 ^h 42 ^m		Mag: +0.6 PMG: 19 ^h 05 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	34	21.0	182	53.5	-11	43.4	309	17.9	+23	36.1
1	49	23.4	197	53.0		44.5	324	20.2		36.3
2	64	25.9	212	52.4		45.6	339	22.5		36.4
3	79	28.4	227	51.9		46.8	354	24.8		36.5
4	94	30.8	242	51.4		47.9	9	27.1		36.6
5	109	33.3	257	50.9	-11	49.0	24	29.4	+23	36.7
6	124	35.8	272	50.4	-11	50.1	39	31.7	+23	36.8
7	139	38.2	287	49.8		51.3	54	34.0		36.9
8	154	40.7	302	49.3		52.4	69	36.3		37.0
9	169	43.1	317	48.8		53.5	84	38.6		37.2
10	184	45.6	332	48.3		54.7	99	40.9		37.3
11	199	48.1	347	47.7	-11	55.8	114	43.2	+23	37.4
12	214	50.5	2	47.2	-11	56.9	129	45.5	+23	37.5
13	229	53.0	17	46.7		58.0	144	47.8		37.6
14	244	55.5	32	46.2	-11	59.2	159	50.1		37.7
15	259	57.9	47	45.6	-12	00.3	174	52.4		37.8
16	275	00.4	62	45.1		01.4	189	54.8		37.9
17	290	02.9	77	44.6	-12	02.5	204	57.1	+23	38.1
18	305	05.3	92	44.1	-12	03.7	219	59.4	+23	38.2
19	320	07.8	107	43.5		04.8	235	01.7		38.3
20	335	10.3	122	43.0		05.9	250	04.0		38.4
21	350	12.7	137	42.5		07.0	265	06.4		38.5
22	5	15.2	152	41.9		08.1	280	08.7		38.6
23	20	17.6	167	41.4		09.3	295	11.0		38.7
24	35	20.1	182	40.9	-12	10.4	310	13.4	+23	38.8
Dif	—		-5		-11		+23		+1	
									</	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16'1 PMG: 11 ^h 43 ^m 9			Edad: 1 ^d 5 PHE { SD: 16'1 PMG: 13 ^h 33 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m			
0	184	01.2	-12	41.9	164	23.4	-19	34.5	60 N	16 18	17 02	17 50	10 20 109	16 33 14				
1	199	01.3		42.7	178	50.5	81	46.4	58	25	06	52	10 02 102	16 51 22				
2	214	01.4		43.6	193	17.5	80	-19 58.1	56	31	10	53	9 48 95	17 06 27				
3	229	01.4		44.4	207	44.3	78	-20 09.8	54	36	13	55	36 91	19 31				
4	244	01.5		45.3	222	11.1	78	21.3	52	41	16	56	25 87	31 34				
5	259	01.5	-12	46.1	236	37.8	77	-20 32.7	50	16 46	17 19	17 57	9 15 85	17 41 37				
6	274	01.6	-12	47.0	251	04.3	75	-20 44.0	45	16 56	17 26	18 00	8 55 79	18 02 42				
7	289	01.6		47.8	265	30.7	74	-20 55.2	40	17 04	32	03	39 75	20 45				
8	304	01.7		48.6	279	57.1	74	-21 06.3	35	11	37	07	25 72	35 48				
9	319	01.8		49.5	294	23.3	72	17.2	30	17	42	10	8 13 70	18 47 51				
10	334	01.8		50.3	308	49.5	72	28.0	20	28	17 51	17	7 53 65	19 09 54				
11	349	01.9	-12	51.2	323	15.5	70	-21 38.7	10 N	17 38	18 00	18 24	7 35 62	19 29 57				
12	4	01.9	-12	52.0	337	41.4	69	-21 49.3	0	17 47	18 08	18 33	7 19 58	19 46 61				
13	19	02.0		52.9	352	07.2	68	-21 59.7	10 S	17 57	18	43	7 03 55	20 04 63				
14	34	02.0		53.7	6	32.9	67	-22 10.0	20	18 07	30	18 56	6 46 51	24 66				
15	49	02.1		54.6	20	58.6	67	20.2	30	18	43	19 13	27 46	46 70				
16	64	02.1		55.4	35	24.1	65	30.2	35	25	18 52	24	15 44	20 59 72				
17	79	02.2	-12	56.2	49	49.5	64	-22 40.1	40	18 33	19 02	19 36	6 03 40	21 15 74				
18	94	02.3	-12	57.1	64	14.8	63	-22 49.8	45	18 42	19 14	19 52	5 47 37	21 33 77				
19	109	02.3		57.9	78	40.0	62	-22 59.4	50	53	29	20 13	29 31	21 55 82				
20	124	02.4		58.8	93	05.1	61	-23 08.9	52	18 58	36	24	20 29	22 06 85				
21	139	02.4	-12	59.6	107	30.1	60	18.2	54	19 04	44	35	11 25	19 87				
22	154	02.5	-13	00.4	121	55.0	59	27.4	56	10	19 53	20 49	5 00 21	33 91				
23	169	02.5		01.3	136	19.9	59	36.4	58	17	20 03	21 06	4 47 17	22 50 96				
24	184	02.6	-13	02.1	150	44.6	57	-23 45.3	60 S	19 25	20 15	21 27	4 33 10	23 10 105				
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 21 ^h 35 ^m 1			Mag: -4.0 PMG: 11 ^h 50 ^m			Mag: -1.1 PMG: 3 ^h 19 ^m			Mag: -2.9 PMG: 21 ^h 38 ^m			Mag: +0.6 PMG: 19 ^h 01 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♊	Dec	hG ♋	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	35	20.1	182	40.9	-12	10.4	310	13.4	+23	38.8	34	36.7	-1	24.0	73	53.1		
1	50	22.6	197	40.4		11.5	325	15.7		39.0	49	39.3		24.1	88	55.5		
2	65	25.0	212	39.8		12.6	340	18.0		39.1	64	42.0		24.1	103	58.0		
3	80	27.5	227	39.3		13.7	355	20.4		39.2	79	44.7		24.2	119	00.4		
4	95	30.0	242	38.8		14.9	10	22.7		39.3	94	47.4		24.3	134	02.9		
5	110	32.4	257	38.2	-12	16.0	25	25.0	+23	39.4	109	50.0	-1	24.4	149	05.3		
6	125	34.9	272	37.7	-12	17.1	40	27.4	+23	39.5	124	52.7	-1	24.5	164	07.8		
7	140	37.4	287	37.2		18.2	55	29.7		39.6	139	55.4		24.6	179	10.2		
8	155	39.8	302	36.6		19.3	70	32.1		39.7	154	58.1		24.6	194	12.7		
9	170	42.3	317	36.1		20.4	85	34.4		39.9	170	00.7		24.7	209	15.1		
10	185	44.8	332	35.6		21.6	100	36.7		40.0	185	03.4		24.8	224	17.6		
11	200	47.2	347	35.0	-12	22.7	115	39.1	+23	40.1	200	06.1	-1	24.9	239	20.0		
12	215	49.7	2	34.5	-12	23.8	130	41.4	+23	40.2	215	08.7	-1	25.0	254	22.5		
13	230	52.1	17	34.0		24.9	145	43.8		40.3	230	11.4		25.0	269	24.9		
14	245	54.6	32	33.4		26.0	160	46.1		40.4	245	14.1		25.1	284	27.3		
15	260	57.1	47	32.9		27.1	175	48.5		40.5	260	16.8		25.2	299	29.8		
16	275	59.5	62	32.4		28.2	190	50.9		40.6	275	19.4		25.3	314	32.2		
17	291	02.0	77	31.8	-12	29.3	205	53.2	+23	40.8	290	22.1	-1	25.4	329	34.7		
18	306	04.5	92	31.3	-12	30.5	220	55.6	+23	40.9	305	24.8	-1	25.4	344	37.1		
19	321	06.9	107	30.7		31.6	235	57.9		41.0	320	27.4		25.5	359	39.6		
20	336	09.4	122	30.2		32.7	251	00.3		41.1	335	30.1		25.6	14	42.0		
21	351	11.9	137	29.7		33.8	266	02.7		41.2	350	32.8		25.7	29	44.5		
22	6	14.3	152	29.1		34.9	281	05.0		41.3	5	35.4		25.8	44	46.9		
23	21	16.8	167	28.6		36.0	296	07.4		41.4	20	38.1		25.8	59	49.4		
24	36	19.3	182	28.1	-12	37.1	311	09.8	+23	41.5	35	40.8	-1	25.9	74	51.8		
Dif	—			-5			-11			+23			+1			+27		

UT	SOL			● LUNA						Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 2 ^d 5 PHE { SD: 16'2 PMG: 14 ^h 32 ^m 4 ^h : 59'4 12 ^h : 59'5 20 ^h : 59'5 R°: 62 ^m																		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil	Hora		R°	Hora	R°						
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m			
0	184	02.6	-13	02.1	150	44.6	-23	45.3	60 N	5 38	6 27	7 12	12 09	97	16 47	33						
1	199	02.6		03.0	165	09.2	56	-23	54.0	58	37	23	7 05	11 44	89	17 13	40					
2	214	02.7		03.8	179	33.7	55	-24	02.6	56	35	19	6 58		23 85	33 45						
3	229	02.7		04.6	193	58.2	55		11.0	54	34	16	53	11 07	82	17 50	48					
4	244	02.8		05.5	208	22.5	53		19.3	52	33	12	47	10 52	80	18 05	49					
5	259	02.8	-13	06.3	222	46.8	53	-24	27.4	50	5 31	6 09	6 43	10 40	78	18 18	51					
6	274	02.9	-13	07.2	237	10.9	51	-24	35.3	45	5 28	6 02	6 33	10 14	75	18 44	54					
7	289	02.9		08.0	251	35.0	51		43.1	40	25	5 57	24	9 54	72	19 05	56					
8	304	03.0		08.8	265	59.0	50		50.8	35	21	51	17		37 70	23 57						
9	319	03.0		09.7	280	22.9	49	-24	58.2	30	18	46	11	9 23	68	19 38	58					
10	334	03.1		10.5	294	46.7	48	-25	05.5	20	11	37	6 00	8 58	66	20 03	61					
11	349	03.1	-13	11.3	309	10.5	48	-25	12.7	10 N	5 03	5 28	5 50	8 37	64	20 26	61					
12	4	03.2	-13	12.2	323	34.1	46	-25	19.6	0	4 55	5 19	5 40	8 17	62	20 47	62					
13	19	03.2		13.0	337	57.7	46		26.4	10 S	44	5 09	31	7 58	60	21 07	64					
14	34	03.3		13.8	352	21.2	45		33.1	20	31	4 58	21		37 57	30 65						
15	49	03.3		14.7	6	44.6	44		39.5	30	14	44	09	7 13	55	21 56	66					
16	64	03.4		15.5	21	08.0	44		45.8	35	4 04	35	5 02	6 59	53	22 11	67					
17	79	03.4	-13	16.3	35	31.3	43	-25	51.9	40	3 51	4 25	4 54	6 43	51	22 29	68					
18	94	03.4	-13	17.2	49	54.5	42	-25	57.9	45	3 35	4 13	4 45	6 24	48	22 50	70					
19	109	03.5		18.0	64	17.6	41	-26	03.6	50	14	3 58	34	6 00	44	23 17	72					
20	124	03.5		18.8	78	40.7	41		09.2	52	3 03	51	29	5 49	41	31 72						
21	139	03.6		19.7	93	03.7	40		14.6	54	2 52	43	23	36 39		23 46	73					
22	154	03.6		20.5	107	26.6	39		19.8	52			17	21 36		*** **	***					
23	169	03.7		21.3	121	49.5	39		24.9	51	58	21	24	09	5 04	30	*** **	***				
24	184	03.7	-13	22.2	136	12.3	38	-26	29.7	48	60 S	2 00	3 11	4 01	4 43	22	*** **	***				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO							
	PMG: 21 ^h 31 ^m 2		Mag: -4.0 PMG: 11 ^h 51 ^m				Mag: -1.2 PMG: 3 ^h 15 ^m				Mag: -2.9 PMG: 21 ^h 33 ^m				Mag: +0.6 PMG: 18 ^h 57 ^m							
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	36	19.3	182	28.1	-12	37.1	311	09.8	+23	41.5	35	40.8	-1	25.9	74	51.8	-16	28.8				
1	51	21.7	197	27.5		38.2	326	12.1		41.7	50	43.4		26.0	89	54.2		28.7				
2	66	24.2	212	27.0		39.3	341	14.5		41.8	65	46.1		26.1	104	56.7		28.7				
3	81	26.6	227	26.4		40.4	356	16.9		41.9	80	48.8		26.2	119	59.1		28.7				
4	96	29.1	242	25.9		41.5	11	19.2		42.0	95	51.4		26.2	135	01.6		28.7				
5	111	31.6	257	25.3	-12	42.6	26	21.6	+23	42.1	110	54.1	-1	26.3	150	04.0	-16	28.7				
6	126	34.0	272	24.8	-12	43.7	41	24.0	+23	42.2	125	56.8	-1	26.4	165	06.5	-16	28.7				
7	141	36.5	287	24.3		44.8	56	26.4		42.3	140	59.4		26.5	180	08.9		28.7				
8	156	39.0	302	23.7		46.0	71	28.8		42.4	156	02.1		26.5	195	11.3		28.7				
9	171	41.4	317	23.2		47.1	86	31.1		42.6	171	04.8		26.6	210	13.8		28.7				
10	186	43.9	332	22.6		48.2	101	33.5		42.7	186	07.4		26.7	225	16.2		28.7				
11	201	46.4	347	22.1	-12	49.3	116	35.9	+23	42.8	201	10.1	-1	26.8	240	18.7	-16	28.7				
12	216	48.8	2	21.5	-12	50.4	131	38.3	+23	42.9	216	12.8	-1	26.9	255	21.1	-16	28.6				
13	231	51.3	17	21.0		51.5	146	40.7		43.0	231	15.4		26.9	270	23.6		28.6				
14	246	53.8	32	20.4		52.6	161	43.1		43.1	246	18.1		27.0	285	26.0		28.6				
15	261	56.2	47	19.9		53.7	176	45.5		43.2	261	20.8		27.1	300	28.4		28.6				
16	276	58.7	62	19.4		54.8	191	47.9		43.3	276	23.4		27.2	315	30.9		28.6				
17	292	01.1	77	18.8	-12	55.9	206	50.3	+23	43.5	291	26.1	-1	27.2	330	33.3	-16	28.6				
18	307	03.6	92	18.3	-12	57.0	221	52.6	+23	43.6	306	28.7	-1	27.3	345	35.8	-16	28.6				
19	322	06.1	107	17.7		58.1	236	55.0		43.7	321	31.4		27.4	0	38.2		28.6				
20	337	08.5	122	17.2	-12	59.2	251	57.4		43.8	336	34.1		27.5	15	40.6		28.6				
21	352	11.0	137	16.6	-13	00.2	266	59.9		43.9	351	36.7		27.6	30	43.1		28.6				
22	7	13.5	152	16.1		01.3	282	02.3		44.0	6	39.4		27.6	45	45.5		28.5				
23	22	15.9	167	15.5		02.4	297	04.7		44.1	21	42.1		27.7	60	48.0		28.5				
24	37	18.4	182	15.0	-13	03.5	312	07.1	+23	44.3	36	44.7	-1	27.8	75	50.4	-16	28.5				
Dif	—		-5				+24				+27				-1				+24			

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 7				Edad: 3 ^d 5 PHE { 4 ^h : 59'5 12 ^h : 59'5 20 ^h : 59'5 PMG: 15 ^h 34 ^m R°: 63 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m	
0	184	03.7	-13	22.2	136	12.3	-26	29.7	60 N	16 12	16 57	17 46	13 46 61	17 20 71			
1	199	03.8		23.0	150	35.1		34.4	58	20	17 01	47	13 13 62	17 53 70			
2	214	03.8		23.8	164	57.8		38.9	56	26	05	49	12 48 63	18 18 69			
3	229	03.8		24.7	179	20.5		43.2	54	32	09	51	29 63	38 68			
4	244	03.9		25.5	193	43.1		47.4	52	37	13	52	12 12 63	18 54 68			
5	259	03.9	-13	26.3	208	05.7	-26	51.3	50	16 42	17 16	17 54	11 58 63	19 09 67			
6	274	04.0	-13	27.1	222	28.2	-26	55.1	45	16 53	17 23	17 58	11 29 63	19 38 67			
7	289	04.0		28.0	236	50.7	-26	58.6	40	17 01	29	18 01	11 06 64	20 01 66			
8	304	04.1		28.8	251	13.1	-27	02.0	34	09	35	05	10 47 64	20 65			
9	319	04.1		29.6	265	35.5		05.2	32	16	40	08	31 64	20 36 65			
10	334	04.1		30.5	279	57.9		08.2	30	27	50	16	10 04 64	21 04 64			
11	349	04.2	-13	31.3	294	20.2	-27	11.0	10 N	17 37	17 59	18 24	9 41 63	21 27 64			
12	4	04.2	-13	32.1	308	42.5	-27	13.6	0	17 47	18 08	18 33	9 19 63	21 49 63			
13	19	04.3		32.9	323	04.8		16.1	10 S	17 57	19	44	8 58 62	22 11 62			
14	34	04.3		33.8	337	27.0		18.3	20	18 08	30	18 57	34 63	22 35 61			
15	49	04.3		34.6	351	49.2		20.3	20	20	45	19 15	8 08 62	23 02 60			
16	64	04.4		35.4	6	11.4		22.2	19	27	18 54	26	7 52 62	18 60			
17	79	04.4	-13	36.2	20	33.6	-27	23.9	17	40	18 35	19 04	19 39	7 34 61	23 37 59		
18	94	04.4	-13	37.1	34	55.8	-27	25.3	14	45	18 45	19 17	19 56	7 12 60	*** ** *		
19	109	04.5		37.9	49	17.9		26.6	13	50	18 56	32	20 18	6 44 59	*** ** *		
20	124	04.5		38.7	63	40.1		27.7	11	52	19 02	40	28	30 59	*** ** *		
21	139	04.6		39.5	78	02.2		28.6	9	54	08	48	41	6 15 58	*** ** *		
22	154	04.6		40.3	92	24.3		29.3	7	56	15	19 58	20 56	5 57 56	0 04 75		
23	169	04.6		41.2	106	46.5		29.8	5	58	22	20 09	21 13	34 55	26 77		
24	184	04.7	-13	42.0	121	08.6	-27	30.1	3	60 S	19 31	20 22	21 36	5 05 52	0 55 80		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 21 ^h 27 ^m 2		Mag: -4.0 PMG: 11 ^h 51 ^m		Mag: -1.2 PMG: 3 ^h 11 ^m		Mag: -2.8 PMG: 21 ^h 29 ^m		Mag: +0.6 PMG: 18 ^h 54 ^m								
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄								
h	°	'	°	'	°	'	°	'	°	'							
0	37	18.4	182	15.0	312	07.1	+23	44.3	36	44.7							
1	52	20.9	197	14.4	327	09.5		44.4	51	47.4							
2	67	23.3	212	13.9	342	11.9		44.5	66	50.0							
3	82	25.8	227	13.3	357	14.3		44.6	81	52.7							
4	97	28.2	242	12.8	12	16.7		44.7	96	55.4							
5	112	30.7	257	12.2	27	19.1	+23	44.8	111	58.0							
6	127	33.2	272	11.7	42	21.5	+23	44.9	127	00.7							
7	142	35.6	287	11.1	57	24.0		45.0	142	03.3							
8	157	38.1	302	10.5	72	26.4		45.2	157	06.0							
9	172	40.6	317	10.0	87	28.8		45.3	172	08.7							
10	187	43.0	332	09.4	102	31.2		45.4	187	11.3							
11	202	45.5	347	08.9	117	33.6	+23	45.5	202	14.0							
12	217	48.0	2	08.3	132	36.1	+23	45.6	217	16.6							
13	232	50.4	17	07.8	147	38.5		45.7	232	19.3							
14	247	52.9	32	07.2	162	40.9		45.8	247	22.0							
15	262	55.4	47	06.7	177	43.4		46.0	262	24.6							
16	277	57.8	62	06.1	192	45.8		46.1	277	27.3							
17	293	00.3	77	05.5	207	48.2	+23	46.2	292	29.9							
18	308	02.7	92	05.0	222	50.7	+23	46.3	307	32.6							
19	323	05.2	107	04.4	237	53.1		46.4	322	35.2							
20	338	07.7	122	03.9	252	55.5		46.5	337	37.9							
21	353	10.1	137	03.3	267	58.0		46.6	352	40.6							
22	8	12.6	152	02.7	275	283	00.4	46.7	7	43.2							
23	23	15.1	167	02.2	28.6	298	02.9	46.9	22	45.9							
24	38	17.5	182	01.6	-13	29.6	+23	47.0	37	48.5							
Dif	—		-6		-11		+24		+27								
							+1		-1								
									+24								
									0								

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'1 PMG: 11 ^h 43 ^m 7			Edad: 4 ^d 5 SD: 16'2 PMG: 16 ^h 37 ^m	PHE { 4 ^h : 59'5 12 ^h : 59'5 20 ^h : 59'4 Rº: 61 ^m													
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº	Hora	Rº	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	h	m
0	184	04.7	-13	42.0	121	08.6	-27	30.1	60 N	5 43	6 32	7 17	14 47	27	18 31	101		
1	199	04.7		42.8	135	30.7 31		30.2 1	58	41	27	09	14 15	35	19 03	93		
2	214	04.7		43.6	149	52.8 31		30.1 3	56	39	23	7 03	13 51	40	27	87		
3	229	04.8		44.5	164	15.0 32		29.8 5	54	38	19	6 57	32	43	19 46	84		
4	244	04.8		45.3	178	37.1 31		29.3 5	52	36	16	51	15	46	20 02	82		
5	259	04.8	-13	46.1	192	59.3 32	-27	28.7 6	50	5 34	6 12	6 46	13 01	47	20 16	79		
6	274	04.9	-13	46.9	207	21.5 32	-27	27.8 9	45	5 30	6 05	6 36	12 32	51	20 45	75		
7	289	04.9		47.7	221	43.7 32		26.8 10	40	27	5 59	27	12 10	53	21 07	72		
8	304	04.9		48.6	236	05.9 32		25.5 13	35	23	53	19	11 51	55	25	71		
9	319	05.0		49.4	250	28.2 33		24.1 14	30	19	48	12	35	56	21 41	69		
10	334	05.0		50.2	264	50.5 33		22.5 16	20	12	38	6 00	11 08	58	22 08	65		
11	349	05.0	-13	51.0	279	12.8 33	-27	20.7 18	10 N	5 04	5 29	5 50	10 44	60	22 31	63		
12	4	05.1	-13	51.8	293	35.1 33	-27	18.7 20	0	4 54	5 19	5 40	10 22	62	22 52	61		
13	19	05.1		52.6	307	57.5 34		16.5 22	10 S	43	5 09	30	10 00	64	23 13	58		
14	34	05.1		53.5	322	19.9 34		14.1 24	20	30	4 57	20	9 37	65	23 36	55		
15	49	05.2		54.3	336	42.3 34		11.5 26	30	12	42	07	9 10	67	***	***	***	
16	64	05.2		55.1	351	04.8 35		08.7 28	35	4 01	33	5 00	8 54	68	***	***	***	
17	79	05.2	-13	55.9	5	27.3 35	-27	05.8 29	40	3 48	4 23	4 52	8 35	70	***	***	***	
18	94	05.3	-13	56.7	19	49.9 36	-27	02.6 32	45	3 31	4 10	4 42	8 12	72	0 00	57		
19	109	05.3		57.5	34	12.5 36	-26	59.3 33	50	3 09	3 54	30	7 43	74	29	55		
20	124	05.3		58.4	48	35.2 37		55.8 35	52	2 58	47	25	29	76	43	54		
21	139	05.4	-13	59.2	62	57.9 37		52.1 37	54	46	38	19	7 13	77	0 59	53		
22	154	05.4	-14	00.0	77	20.7 38		48.2 39	56	31	29	12	6 53	80	1 19	51		
23	169	05.4	-14	00.8	91	43.5 38		44.1 41	58	2 13	18	4 04	6 29	83	1 43	48		
24	184	05.4	-14	01.6	106	06.4 39	-26	39.9 42	60 S	1 50	3 05	3 56	5 57	88	2 15	43		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 23 ^m 3		Mag: -4.0 PMG: 11 ^h 52 ^m		Mag: -1.2 PMG: 3 ^h 07 ^m		Mag: -2.8 PMG: 21 ^h 25 ^m		Mag: +0.7 PMG: 18 ^h 50 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	38	17.5	182	01.6	-13	29.6	313	05.3	+23	47.0	37	48.5	-1	29.6	76	48.9	-16	28.3
1	53	20.0	197	01.1		30.7	328	07.8		47.1	52	51.2		29.7	91	51.4		28.3
2	68	22.5	212	00.5		31.8	343	10.2		47.2	67	53.8		29.7	106	53.8		28.2
3	83	24.9	226	59.9		32.9	358	12.7		47.3	82	56.5		29.8	121	56.2		28.2
4	98	27.4	241	59.4		34.0	373	15.1		47.4	97	59.1		29.9	136	58.7		28.2
5	113	29.9	256	58.8	-13	35.0	388	17.6	+23	47.5	113	01.8	-1	29.9	152	01.1	-16	28.2
6	128	32.3	271	58.2	-13	36.1	403	20.0	+23	47.7	128	04.4	-1	30.0	167	03.5	-16	28.2
7	143	34.8	286	57.7		37.2	418	22.5		47.8	143	07.1		30.1	182	06.0		28.2
8	158	37.2	301	57.1		38.3	433	24.9		47.9	158	09.7		30.2	197	08.4		28.2
9	173	39.7	316	56.5		39.3	448	27.4		48.0	173	12.4		30.2	212	10.8		28.2
10	188	42.2	331	56.0		40.4	463	29.9		48.1	188	15.1		30.3	227	13.3		28.1
11	203	44.6	346	55.4	-13	41.5	478	32.3	+23	48.2	203	17.7	-1	30.4	242	15.7	-16	28.1
12	218	47.1	1	54.8	-13	42.6	493	34.8	+23	48.3	218	20.4	-1	30.4	257	18.1	-16	28.1
13	233	49.6	16	54.3		43.6	508	37.3		48.4	233	23.0		30.5	272	20.6		28.1
14	248	52.0	31	53.7		44.7	523	39.7		48.6	248	25.7		30.6	287	23.0		28.1
15	263	54.5	46	53.1		45.8	538	42.2		48.7	263	28.3		30.7	302	25.4		28.1
16	278	57.0	61	52.6		46.9	553	44.7		48.8	278	31.0		30.7	317	27.9		28.1
17	293	59.4	76	52.0	-13	47.9	568	47.1	+23	48.9	293	33.6	-1	30.8	332	30.3	-16	28.1
18	309	01.9	91	51.4	-13	49.0	583	49.6	+23	49.0	308	36.3	-1	30.9	347	32.7	-16	28.0
19	324	04.4	106	50.9		50.1	598	52.1		49.1	323	38.9		30.9	2	35.2		28.0
20	339	06.8	121	50.3		51.1	613	54.6		49.2	338	41.6		31.0	17	37.6		28.0
21	354	09.3	136	49.7		52.2	628	57.0		49.4	353	44.2		31.1	32	40.0		28.0
22	9	11.7	151	49.2		53.3	643	59.5		49.5	8	46.9		31.2	47	42.5		28.0
23	24	14.2	166	48.6		54.3	658	02.0		49.6	23	49.5		31.2	62	44.9		28.0
24	39	16.7	181	48.0	-13	55.4	673	04.5	+23	49.7	38	52.2	-1	31.3	77	47.3	-16	28.0
Dif	—		-6		-11		+25		+1		+27		-1		+24		0	

UT	SOL				 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 6				Edad: 5 ^d 5 PHE { 4 ^h : 59'4 12 ^h : 59'3 20 ^h : 59'3 SD: 16'2 PMG: 17 ^h 38 ^m R°: 58 ^m														
	hG ☉		Dec		hG ☾		Dif						Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m		
0	184	05.4	-14	01.6	106	06.4	-26	39.9	60 N	16 07	16 52	17 41	15 14	11	20 12	109			
1	199	05.5		02.4	120	29.3	39	35.5	58	15	16 57	43	14 50	18	36	100			
2	214	05.5		03.2	134	52.4	41	30.9	56	22	17 01	45	31	23	20 54	95			
3	229	05.5		04.0	149	15.4	40	26.1	54	28	05	47	15	27	21 10	91			
4	244	05.6		04.9	163	38.6	42	21.1	52	34	09	49	14 01	30	24	87			
5	259	05.6	-14	05.7	178	01.8	42	-26	50	16 39	17 13	17 51	13 48	34	21 35	85			
6	274	05.6	-14	06.5	192	25.1	43	-26	45	16 50	17 20	17 55	13 23	39	22 00	79			
7	289	05.6		07.3	206	48.4	43	-26	40	16 59	27	17 59	13 03	42	19	75			
8	304	05.7		08.1	221	11.9	45	-25	35	17 07	33	18 03	12 46	45	36	71			
9	319	05.7		08.9	235	35.4	45	53.6	30	14	39	07	31	48	22 50	68			
10	334	05.7		09.7	249	58.9	45	47.6	20	26	49	15	12 06	52	23 13	64			
11	349	05.7	-14	10.5	264	22.6	47	-25	10 N	17 37	17 58	18 23	11 44	56	23 34	60			
12	4	05.8	-14	11.3	278	46.3	47	-25	0	17 47	18 08	18 33	11 24	59	23 53	56			
13	19	05.8		12.1	293	10.1	48	28.6	10 S	17 57	19	45	11 04	61	** ** *	** ** *			
14	34	05.8		12.9	307	34.1	50	21.9	20	18 09	31	18 58	10 42	65	** ** *	** ** *			
15	49	05.8		13.7	321	58.0	49	15.0	30	21	47	19 17	17	69	0 02	52			
16	64	05.8		14.6	336	22.1	51	08.0	70	29	18 56	28	10 02	71	18	50			
17	79	05.9	-14	15.4	350	46.3	52	-25	40	18 38	19 07	19 42	9 45	74	0 36	47			
18	94	05.9	-14	16.2	5	10.5	52	-24	45	18 48	19 20	19 59	9 24	77	0 57	44			
19	109	05.9		17.0	19	34.8	53	46.0	50	19 00	36	20 22	8 57	83	1 24	40			
20	124	05.9		17.8	33	59.3	55	38.4	52	06	44	33	45	85	37	38			
21	139	06.0		18.6	48	23.8	55	30.6	54	12	19 53	20 47	30	88	1 52	35			
22	154	06.0		19.4	62	48.4	56	22.6	56	19	20 03	21 02	8 13	92	2 10	31			
23	169	06.0		20.2	77	13.1	57	14.5	58	27	14	21	7 52	97	31	26			
24	184	06.0	-14	21.0	91	37.9	58	-24	60 S	19 36	20 28	21 46	7 25	106	2 58	18			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 21 ^h 19 ^m 4		Mag: -4.0 PMG: 11 ^h 53 ^m			Mag: -1.2 PMG: 3 ^h 03 ^m			Mag: -2.8 PMG: 21 ^h 21 ^m			Mag: +0.7 PMG: 18 ^h 46 ^m							
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	39	16.7	181	48.0	-13	55.4	314	04.5	+23	49.7	38	52.2	-1	31.3	77	47.3			
1	54	19.1	196	47.4		56.5	329	07.0		49.8	53	54.8		31.4	92	49.8			
2	69	21.6	211	46.9		57.5	344	09.5		49.9	68	57.5		31.4	107	52.2			
3	84	24.1	226	46.3		58.6	359	12.0		50.0	84	00.1		31.5	122	54.6			
4	99	26.5	241	45.7	-13	59.7	14	14.5		50.1	99	02.7		31.6	137	57.0			
5	114	29.0	256	45.1	-14	00.7	29	16.9	+23	50.3	114	05.4	-1	31.6	152	59.5			
6	129	31.5	271	44.6	-14	01.8	44	19.4	+23	50.4	129	08.0	-1	31.7	168	01.9			
7	144	33.9	286	44.0		02.9	59	21.9		50.5	144	10.7		31.8	183	04.3			
8	159	36.4	301	43.4		03.9	74	24.4		50.6	159	13.3		31.9	198	06.8			
9	174	38.9	316	42.8		05.0	89	26.9		50.7	174	16.0		31.9	213	09.2			
10	189	41.3	331	42.3		06.0	104	29.4		50.8	189	18.6		32.0	228	11.6			
11	204	43.8	346	41.7	-14	07.1	119	31.9	+23	50.9	204	21.3	-1	32.1	243	14.1			
12	219	46.2	1	41.1	-14	08.2	134	34.4	+23	51.1	219	23.9	-1	32.1	258	16.5			
13	234	48.7	16	40.5		09.2	149	36.9		51.2	234	26.6		32.2	273	18.9			
14	249	51.2	31	39.9		10.3	164	39.5		51.3	249	29.2		32.3	288	21.3			
15	264	53.6	46	39.4		11.3	179	42.0		51.4	264	31.9		32.3	303	23.8			
16	279	56.1	61	38.8		12.4	194	44.5		51.5	279	34.5		32.4	318	26.2			
17	294	58.6	76	38.2	-14	13.5	209	47.0	+23	51.6	294	37.1	-1	32.5	333	28.6			
18	310	01.0	91	37.6	-14	14.5	224	49.5	+23	51.7	309	39.8	-1	32.5	348	31.1			
19	325	03.5	106	37.0		15.6	239	52.0		51.9	324	42.4		32.6	3	33.5			
20	340	06.0	121	36.5		16.6	254	54.5		52.0	339	45.1		32.7	18	35.9			
21	355	08.4	136	35.9		17.7	269	57.1		52.1	354	47.7		32.7	33	38.3			
22	10	10.9	151	35.3		18.7	284	59.6		52.2	9	50.4		32.8	48	40.8			
23	25	13.4	166	34.7		19.8	300	02.1		52.3	24	53.0		32.9	63	43.2			
24	40	15.8	181	34.1	-14	20.8	315	04.6	+23	52.4	39	55.6	-1	32.9	78	45.6			
Dif	—		-6			-11	+25			+1	+26			-1			+24		0

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 6 ^d 5 SD: 16:1 PMG: 18 ^h 36 ^m	PHE { 4 ^h : 59/2 12 ^h : 59/1 20 ^h : 59/0 Rº: 53 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	Rº	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	184	06.0	-14	21.0	91	37.9	-24	06.2	60 N	5 47	6 37	7 22	15 25	5	22 01	104
1	199	06.0		21.8	106	02.8	59	-23 57.8	84 58	45	32	14	15 08	11	16	99
2	214	06.1		22.6	120	27.8	60	49.2	86 56	43	27	07	14 54	15	29	95
3	229	06.1		23.4	134	52.9	61	40.5	87 54	41	23	7 00	42 19		41	90
4	244	06.1		24.2	149	18.0	61	31.6	89 52	39	19	6 55	31 22		22 51	87
5	259	06.1	-14	25.0	163	43.3	63	-23 22.6	90 50	5 37	6 16	6 49	14 22	24	23 00	84
6	274	06.1	-14	25.8	178	08.7	64	-23 13.5	91 45	5 33	6 08	6 38	14 02	30	23 19	78
7	289	06.2		26.6	192	34.2	65	-23 04.2	93 40	29	6 01	29	13 45	34	34	74
8	304	06.2		27.4	206	59.7	65	-22 54.8	94 35	25	5 55	21	31 38		47	70
9	319	06.2		28.2	221	25.4	67	45.2	96 30	21	49	14	13 19	41	23 58	67
10	334	06.2		29.0	235	51.2	68	35.5	97 20	13	39	6 01	12 58	46	** ** *	**
11	349	06.2	-14	29.8	250	17.0	68	-22 25.6	99 10 N	5 04	5 29	5 50	12 40	50	** ** *	**
12	4	06.2	-14	30.6	264	43.0	70	-22 15.7	101 0	4 54	5 19	5 40	12 23	54	** ** *	**
13	19	06.3		31.4	279	09.1	71	-22 05.6	103 10 S	43	5 08	30	12 05	59	0 11	53
14	34	06.3		32.2	293	35.3	72	-21 55.3	103 20	28	4 55	18	11 47	63	31	49
15	49	06.3		33.0	308	01.5	72	45.0	103 30	4 10	40	5 05	26 67		0 54	45
16	64	06.3		33.8	322	27.9	74	34.5	105 35	3 59	31	4 58	11 13	71	1 08	41
17	79	06.3	-14	34.6	336	54.4	75	-21 23.8	107 40	3 45	4 20	4 49	10 59	74	1 23	38
18	94	06.3	-14	35.4	351	21.0	76	-21 13.1	107 45	3 27	4 07	4 39	10 41	79	1 41	35
19	109	06.3		36.2	5	47.7	77	-21 02.2	109 50	3 05	3 50	27	20 84		2 04	29
20	124	06.4		37.0	20	14.4	77	-20 51.3	109 52	2 53	43	21	10 10	87	15	26
21	139	06.4		37.8	34	41.3	79	40.2	111 54	40	34	14	9 58	91	27	23
22	154	06.4		38.6	49	08.3	80	28.9	113 56	24	24	4 07	45 95		41	19
23	169	06.4		39.4	63	35.4	81	17.6	113 58	2 05	3 12	3 59	29 100		2 57	14
24	184	06.4	-14	40.1	78	02.6	82	-20 06.2	114 60 S	1 40	2 58	3 50	9 11	106	3 16	8

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 15 ^m 5		Mag: -4.0 PMG: 11 ^h 54 ^m			Mag: -1.2 PMG: 2 ^h 59 ^m			Mag: -2.8 PMG: 21 ^h 17 ^m			Mag: +0.7 PMG: 18 ^h 42 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	40	15.8	181	34.1	-14	20.8	315	04.6	+23	52.4	39	55.6	-1	32.9	78	45.6	-16	27.6
1	55	18.3	196	33.5		21.9	330	07.2		52.5	54	58.3		33.0	93	48.1		27.6
2	70	20.7	211	33.0		22.9	345	09.7		52.7	70	00.9		33.1	108	50.5		27.6
3	85	23.2	226	32.4		24.0	0	12.2		52.8	85	03.6		33.1	123	52.9		27.6
4	100	25.7	241	31.8		25.0	15	14.7		52.9	100	06.2		33.2	138	55.3		27.6
5	115	28.1	256	31.2	-14	26.1	30	17.3	+23	53.0	115	08.8	-1	33.3	153	57.8	-16	27.6
6	130	30.6	271	30.6	-14	27.1	45	19.8	+23	53.1	130	11.5	-1	33.3	169	00.2	-16	27.6
7	145	33.1	286	30.0		28.2	60	22.3		53.2	145	14.1		33.4	184	02.6		27.5
8	160	35.5	301	29.4		29.2	75	24.9		53.3	160	16.8		33.5	199	05.0		27.5
9	175	38.0	316	28.9		30.3	90	27.4		53.4	175	19.4		33.5	214	07.5		27.5
10	190	40.5	331	28.3		31.3	105	30.0		53.6	190	22.0		33.6	229	09.9		27.5
11	205	42.9	346	27.7	-14	32.4	120	32.5	+23	53.7	205	24.7	-1	33.7	244	12.3	-16	27.5
12	220	45.4	1	27.1	-14	33.4	135	35.0	+23	53.8	220	27.3	-1	33.7	259	14.7	-16	27.5
13	235	47.8	16	26.5		34.5	150	37.6		53.9	235	30.0		33.8	274	17.2		27.5
14	250	50.3	31	25.9		35.5	165	40.1		54.0	250	32.6		33.9	289	19.6		27.4
15	265	52.8	46	25.3		36.5	180	42.7		54.1	265	35.2		33.9	304	22.0		27.4
16	280	55.2	61	24.7		37.6	195	45.2		54.2	280	37.9		34.0	319	24.4		27.4
17	295	57.7	76	24.1	-14	38.6	210	47.8	+23	54.4	295	40.5	-1	34.1	334	26.9	-16	27.4
18	311	00.2	91	23.5	-14	39.7	225	50.3	+23	54.5	310	43.1	-1	34.1	349	29.3	-16	27.4
19	326	02.6	106	23.0		40.7	240	52.9		54.6	325	45.8		34.2	4	31.7		27.4
20	341	05.1	121	22.4		41.7	255	55.5		54.7	340	48.4		34.3	19	34.1		27.3
21	356	07.6	136	21.8		42.8	270	58.0		54.8	355	51.1		34.3	34	36.6		27.3
22	11	10.0	151	21.2		43.8	286	00.6		54.9	10	53.7		34.4	49	39.0		27.3
23	26	12.5	166	20.6		44.9	301	03.1		55.0	25	56.3		34.5	64	41.4		27.3
24	41	15.0	181	20.0	-14	45.9	316	05.7	+23	55.2	40	59.0	-1	34.5	79	43.8	-16	27.3
Dif	—		-6			-10	+25		+1		+26		-1		+24		0	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 43 ^m 6			Edad: 7 ^d 5 PHE { SD: 16'1 PMG: 19 ^h 29 ^m 4 ^h : 58'9 12 ^h : 58'8 20 ^h : 58'7 R°: 50 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m
0	184	06.4	-14	40.1	78	02.6	-20	06.2	60 N	16 02	16 47	17 37	15 30 2	23 45 99	
1	199	06.4		40.9	92	29.9	83	-19 54.6	58	10	52	39	19 6	23 55 95	
2	214	06.4		41.7	106	57.3	84	42.9	56	17	16 57	41	09 11	** ** *	
3	229	06.4		42.5	121	24.8	85	31.2	54	24	17 02	44	15 01 13	** ** *	
4	244	06.4		43.3	135	52.3	85	19.3	52	30	06	46	14 53 17	** ** *	
5	259	06.5	-14	44.1	150	20.0	87	-19 07.3	50	16 35	17 09	17 48	14 46 19	** ** *	
6	274	06.5	-14	44.9	164	47.8	88	-18 55.2	45	16 47	17 18	17 52	14 32 24	** ** *	
7	289	06.5		45.7	179	15.7	89	43.0	40	16 57	25	17 57	19 29	** ** *	
8	304	06.5		46.5	193	43.7	90	30.7	35	17 05	31	18 01	09 32	** ** *	
9	319	06.5		47.3	208	11.8	91	18.3	30	12	37	05	14 00 35	** ** *	
10	334	06.5		48.1	222	39.9	91	-18 05.8	20	25	48	14	13 44 41	0 17 61	
11	349	06.5	-14	48.8	237	08.2	93	-17 53.2	10 N	17 36	17 58	18 23	13 30 46	0 34 56	
12	4	06.5	-14	49.6	251	36.6	94	-17 40.6	0	17 47	18 08	18 33	13 17 50	0 49 52	
13	19	06.5		50.4	266	05.0	94	27.8	10 S	17 58	20	18 45	13 04 54	1 04 48	
14	34	06.5		51.2	280	33.6	96	14.9	20	18 09	33	19 00	12 50 59	20 44	
15	49	06.5		52.0	295	02.2	96	-17 02.0	30	23	48	18	33 66	39 38	
16	64	06.6		52.8	309	31.0	98	-16 48.9	35	31	18 58	30	24 68	1 49 35	
17	79	06.6	-14	53.6	323	59.8	98	-16 35.8	40	18 40	19 09	19 45	12 13 72	2 01 32	
18	94	06.6	-14	54.4	338	28.7	99	-16 22.6	45	18 50	19 23	20 03	12 00 77	2 16 27	
19	109	06.6		55.1	352	57.7	100	-16 09.3	50	19 03	40	27	11 44 83	33 21	
20	124	06.6		55.9	7	26.8	101	-15 55.9	52	09	48	38	37 86	41 19	
21	139	06.6		56.7	21	56.0	102	42.5	54	16	19 57	20 52	29 88	2 50 16	
22	154	06.6		57.5	36	25.3	103	29.0	56	23	20 08	21 09	20 92	3 00 12	
23	169	06.6		58.3	50	54.7	104	15.4	58	32	20	29	11 09 96	11 9	
24	184	06.6	-14	59.1	65	24.1	104	-15 01.7	60 S	19 41	20 34	21 57	10 57 101	3 24 4	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 21 ^h 11 ^m 5		Mag: -4.0 PMG: 11 ^h 55 ^m		Mag: -1.3 PMG: 2 ^h 55 ^m		Mag: -2.8 PMG: 21 ^h 12 ^m		Mag: +0.7 PMG: 18 ^h 38 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	41	15.0	181	20.0	-14	45.9	316	05.7	+23	55.2	40	59.0	-1	34.5	79	43.8	-16	27.3
1	56	17.4	196	19.4		46.9	331	08.3		55.3	56	01.6		34.6	94	46.3		27.3
2	71	19.9	211	18.8		48.0	346	10.8		55.4	71	04.2		34.6	109	48.7		27.3
3	86	22.3	226	18.2		49.0	1	13.4		55.5	86	06.9		34.7	124	51.1		27.2
4	101	24.8	241	17.6		50.0	16	16.0		55.6	101	09.5		34.8	139	53.5		27.2
5	116	27.3	256	17.0	-14	51.1	31	18.5	+23	55.7	116	12.1	-1	34.8	154	55.9	-16	27.2
6	131	29.7	271	16.4	-14	52.1	46	21.1	+23	55.8	131	14.8	-1	34.9	169	58.4	-16	27.2
7	146	32.2	286	15.8		53.1	61	23.7		56.0	146	17.4		35.0	185	00.8		27.2
8	161	34.7	301	15.2		54.2	76	26.3		56.1	161	20.0		35.0	200	03.2		27.2
9	176	37.1	316	14.6		55.2	91	28.9		56.2	176	22.7		35.1	215	05.6		27.1
10	191	39.6	331	14.0		56.2	106	31.4		56.3	191	25.3		35.2	230	08.1		27.1
11	206	42.1	346	13.4	-14	57.3	121	34.0	+23	56.4	206	27.9	-1	35.2	245	10.5	-16	27.1
12	221	44.5	1	12.8	-14	58.3	136	36.6	+23	56.5	221	30.6	-1	35.3	260	12.9	-16	27.1
13	236	47.0	16	12.2	-14	59.3	151	39.2		56.6	236	33.2		35.3	275	15.3		27.1
14	251	49.5	31	11.6	-15	00.3	166	41.8		56.8	251	35.8		35.4	290	17.7		27.1
15	266	51.9	46	11.0		01.4	181	44.4		56.9	266	38.4		35.5	305	20.2		27.0
16	281	54.4	61	10.4		02.4	196	47.0		57.0	281	41.1		35.5	320	22.6		27.0
17	296	56.8	76	09.8	-15	03.4	211	49.5	+23	57.1	296	43.7	-1	35.6	335	25.0	-16	27.0
18	311	59.3	91	09.2	-15	04.5	226	52.1	+23	57.2	311	46.3	-1	35.7	350	27.4	-16	27.0
19	327	01.8	106	08.6		05.5	241	54.7		57.3	326	49.0		35.7	5	29.8		27.0
20	342	04.2	121	08.0		06.5	256	57.3		57.4	341	51.6		35.8	20	32.3		27.0
21	357	06.7	136	07.4		07.5	271	59.9		57.6	356	54.2		35.8	35	34.7		26.9
22	12	09.2	151	06.8		08.5	287	02.5		57.7	11	56.9		35.9	50	37.1		26.9
23	27	11.6	166	06.2		09.6	302	05.1		57.8	26	59.5		36.0	65	39.5		26.9
24	42	14.1	181	05.5	-15	10.6	317	07.7	+23	57.9	42	02.1	-1	36.0	80	41.9	-16	26.9
Dif	—		-6		-10		+26		+1		+26		-1		+24			

ALMANAQUE NÁUTICO PERSEIS

UT	SOL		LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		Edad: 9 ^d 5 PHE { 4 ^h : 58 ^h 2 12 ^h : 58 ^h 0 20 ^h : 57 ^h 9											
	PMG: 11 ^h 43 ^m 6		SD: 15 ^h 9 PMG: 21 ^h 05 ^m R°: 46 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m	
0	184	06.6	-15	17.7	53	34.4	-9 14.9	60 N	15 57	16 42	17 32	15 33 1	1 24 95	
1	199	06.6		18.5	68	05.6 ¹²²	-8 59.9 ¹⁵⁰	58	16 05	48	35	30 4	30 90	
2	214	06.6		19.3	82	37.0 ¹²⁴	44.8 ¹⁵¹	56	13	53	38	28 7	34 88	
3	229	06.6		20.0	97	08.4 ¹²⁴	29.7 ¹⁵¹	54	20	16 58	40	25 10	38 85	
4	244	06.6		20.8	111	39.8 ¹²⁴	-8 14.5 ¹⁵²	52	26	17 02	42	23 12	42 82	
5	259	06.6	-15	21.6	126	11.3 ¹²⁵	-7 59.3 ¹⁵²	50	16 32	17 06	17 45	15 21 15	1 46 79	
6	274	06.5	-15	22.4	140	42.9 ¹²⁶	-7 44.1 ¹⁵²	45	16 44	17 15	17 50	15 17 19	1 53 73	
7	289	06.5		23.1	155	14.5 ¹²⁶	28.8 ¹⁵³	40	16 54	23	55	13 24	1 59 69	
8	304	06.5		23.9	169	46.2 ¹²⁷	-7 13.5 ¹⁵³	35	17 03	29	17 59	10 27	2 04 65	
9	319	06.5		24.7	184	17.9 ¹²⁷	-6 58.2 ¹⁵³	30	11	36	18 04	07 31	09 62	
10	334	06.5		25.4	198	49.7 ¹²⁸	42.9 ¹⁵³	20	24	47	13	15 03 36	17 56	
11	349	06.5	-15	26.2	213	21.5 ¹²⁸	-6 27.6 ¹⁵³	10 N	17 36	17 58	18 23	14 58 41	2 24 51	
12	4	06.5	-15	27.0	227	53.3 ¹²⁸	-6 12.2 ¹⁵⁴	0	17 47	18 08	18 33	14 54 46	2 30 46	
13	19	06.5		27.7	242	25.2 ¹²⁹	-5 56.8 ¹⁵⁴	10 S	17 58	20	18 46	50 51	36 42	
14	34	06.5		28.5	256	57.2 ¹³⁰	41.4 ¹⁵⁴	20	18 10	34	19 01	46 55	43 37	
15	49	06.5		29.3	271	29.2 ¹³⁰	25.9 ¹⁵⁵	30	25	18 50	20	41 61	50 31	
16	64	06.5		30.0	286	01.2 ¹³⁰	-5 10.5 ¹⁵⁴	35	33	19 00	33	39 64	55 28	
17	79	06.5	-15	30.8	300	33.3 ¹³¹	-4 55.0 ¹⁵⁵	40	18 42	19 12	19 48	14 35 68	2 59 25	
18	94	06.4	-15	31.6	315	05.4 ¹³¹	-4 39.5 ¹⁵⁵	45	18 53	19 26	20 06	14 32 72	3 05 20	
19	109	06.4		32.3	329	37.6 ¹³²	24.0 ¹⁵⁵	50	19 07	44	31	27 78	12 15	
20	124	06.4		33.1	344	09.8 ¹³²	-4 08.5 ¹⁵⁵	52	13	19 52	44	25 80	15 13	
21	139	06.4		33.9	358	42.0 ¹³²	-3 53.0 ¹⁵⁵	54	20	20 02	20 58	23 83	18 10	
22	154	06.4		34.6	13	14.3 ¹³³	37.4 ¹⁵⁶	56	28	13	21 16	20 86	22 7	
23	169	06.4		35.4	27	46.6 ¹³³	21.9 ¹⁵⁵	58	37	26	21 38	18 89	26 4	
24	184	06.4	-15	36.1	42	18.9 ¹³³	-3 06.4 ¹⁵⁵	60 S	19 47	20 41	22 08	14 14 94	3 30 1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 21 ^h 03 ^m 7		Mag: -4.0 PMG: 11 ^h 57 ^m		Mag: -1.3 PMG: 2 ^h 47 ^m		Mag: -2.8 PMG: 21 ^h 04 ^m		Mag: +0.7 PMG: 18 ^h 30 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	43	13.2	180	50.8	-15	34.9	318	10.7	+24	00.6
1	58	15.7	195	50.2		35.9	333	13.4		00.7
2	73	18.2	210	49.6		36.9	348	16.0		00.9
3	88	20.6	225	49.0		37.9	3	18.7		01.0
4	103	23.1	240	48.3		38.9	18	21.3		01.1
5	118	25.6	255	47.7	-15	39.9	33	24.0	+24	01.2
6	133	28.0	270	47.1	-15	40.9	48	26.6	+24	01.3
7	148	30.5	285	46.5		41.9	63	29.3		01.4
8	163	32.9	300	45.9		42.9	78	31.9		01.5
9	178	35.4	315	45.2		43.9	93	34.6		01.7
10	193	37.9	330	44.6		44.9	108	37.3		01.8
11	208	40.3	345	44.0	-15	45.9	123	39.9	+24	01.9
12	223	42.8	0	43.4	-15	46.9	138	42.6	+24	02.0
13	238	45.3	15	42.7		47.9	153	45.3		02.1
14	253	47.7	30	42.1		48.9	168	47.9		02.2
15	268	50.2	45	41.5		49.9	183	50.6		02.3
16	283	52.7	60	40.9		50.9	198	53.3		02.5
17	298	55.1	75	40.2	-15	51.9	213	55.9	+24	02.6
18	313	57.6	90	39.6	-15	52.9	228	58.6	+24	02.7
19	329	00.0	105	39.0		53.9	244	01.3		02.8
20	344	02.5	120	38.3		54.8	259	04.0		02.9
21	359	05.0	135	37.7		55.8	274	06.6		03.0
22	14	07.4	150	37.1		56.8	289	09.3		03.1
23	29	09.9	165	36.5		57.8	304	12.0		03.2
24	44	12.4	180	35.8	-15	58.8	319	14.7	+24	03.4
Dif	—		-6		-10		+27		+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1			Edad: 10 ^d 5	PHE { 4 ^h : 57 ^m 8 12 ^h : 57 ^m 6 20 ^h : 57 ^m 5											
	PMG: 11 ^h 43 ^m 6					SD: 15 ^h 7		PMG: 21 ^h 51 ^m			Rº: 45 ^m					
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	Rº	Hora	Rº	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	06.4	-15 36.1	42	18.9	-3 06.4		60 N	5 56	6 46	7 32	15 34	1	2 59	92	
1	199	06.4	36.9	56	51.2 ¹³³	-2 50.8 ¹⁵⁶		58	53	40	23	34	4	3 00	89	
2	214	06.3	37.7	71	23.6 ¹³⁴	35.2 ¹⁵⁶		56	50	35	15	35	7	02	85	
3	229	06.3	38.4	85	56.1 ¹³⁵	19.7 ¹⁵⁵		54	48	30	08	35	10	03	82	
4	244	06.3	39.2	100	28.5 ¹³⁴	-2 04.1 ¹⁵⁶		52	46	26	7 02	35	13	04	79	
5	259	06.3	-15 39.9	115	01.0 ¹³⁵	-1 48.6 ¹⁵⁵		50	5 43	6 22	6 56	15 36	14	3 05	77	
6	274	06.3	-15 40.7	129	33.5 ¹³⁵	-1 33.0 ¹⁵⁶		45	5 38	6 13	6 44	15 36	20	3 06	72	
7	289	06.3	41.5	144	06.0 ¹³⁵	17.4 ¹⁵⁶		40	33	6 05	33	37	23	08	68	
8	304	06.3	42.2	158	38.6 ¹³⁶	-1 01.9 ¹⁵⁵		35	28	5 58	25	37	27	09	64	
9	319	06.2	43.0	173	11.1 ¹³⁵	-0 46.3 ¹⁵⁶		30	24	52	17	38	30	11	60	
10	334	06.2	43.7	187	43.7 ¹³⁶	30.8 ¹⁵⁵		20	14	41	6 03	39	35	13	55	
11	349	06.2	-15 44.5	202	16.3 ¹³⁶	-0 15.2 ¹⁵⁶		10 N	5 04	5 30	5 51	15 39	41	3 15	49	
12	4	06.2	-15 45.3	216	49.0 ¹³⁷	+0 00.3 ¹⁵⁵		0	4 54	5 19	5 40	15 40	45	3 16	45	
13	19	06.2	46.0	231	21.6 ¹³⁶	15.8 ¹⁵⁵		10 S	41	5 07	29	41	49	18	40	
14	34	06.2	46.8	245	54.3 ¹³⁷	31.3 ¹⁵⁵		20	26	4 53	16	41	55	20	35	
15	49	06.1	47.5	260	26.9 ¹³⁶	+0 46.8 ¹⁵⁵		30	4 06	37	5 02	42	60	21	31	
16	64	06.1	48.3	274	59.6 ¹³⁷	+1 02.3 ¹⁵⁵		35	3 54	27	4 54	43	63	23	26	
17	79	06.1	-15 49.0	289	32.3 ¹³⁷	+1 17.8 ¹⁵⁵		40	3 39	4 15	4 44	15 43	68	3 24	23	
18	94	06.1	-15 49.8	304	05.1 ¹³⁸	+1 33.3 ¹⁵⁵		45	3 20	4 01	4 33	15 44	72	3 25	19	
19	109	06.1	50.5	318	37.8 ¹³⁷	+1 48.7 ¹⁵⁴		50	2 55	3 43	20	45	77	27	14	
20	124	06.0	51.3	333	10.5 ¹³⁷	+2 04.1 ¹⁵⁴		52	43	34	13	45	80	28	12	
21	139	06.0	52.0	347	43.3 ¹³⁸	19.5 ¹⁵⁴		54	28	25	4 06	46	82	28	10	
22	154	06.0	52.8	2	16.0 ¹³⁷	34.9 ¹⁵⁴		56	2 11	13	3 59	46	85	29	7	
23	169	06.0	53.5	16	48.8 ¹³⁸	+2 50.3 ¹⁵⁴		58	1 49	3 01	50	47	88	30	4	
24	184	06.0	-15 54.3	31	21.5 ¹³⁷	+3 05.6 ¹⁵³		60 S	1 18	2 45	3 39	15 48	91	3 31	1	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 20 ^h 59 ^m 7		Mag: -4.0 PMG: 11 ^h 58 ^m		Mag: -1.3 PMG: 2 ^h 43 ^m		Mag: -2.8 PMG: 21 ^h 00 ^m		Mag: +0.7 PMG: 18 ^h 27 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	44	12.4	180	35.8	-15 58.8	319	14.7	+24 03.4	44	07.9	-1 38.8	82	37.8	-16 26.0
1	59	14.8	195	35.2	-15 59.8	334	17.4	03.5	59	10.5	38.8	97	40.3	26.0
2	74	17.3	210	34.6	-16 00.8	349	20.1	03.6	74	13.1	38.9	112	42.7	26.0
3	89	19.8	225	33.9	01.8	4	22.8	03.7	89	15.8	38.9	127	45.1	26.0
4	104	22.2	240	33.3	02.7	19	25.4	03.8	104	18.4	39.0	142	47.5	25.9
5	119	24.7	255	32.7	-16 03.7	34	28.1	+24 03.9	119	21.0	-1 39.1	157	49.9	-16 25.9
6	134	27.2	270	32.0	-16 04.7	49	30.8	+24 04.0	134	23.6	-1 39.1	172	52.3	-16 25.9
7	149	29.6	285	31.4	05.7	64	33.5	04.2	149	26.2	39.2	187	54.7	25.9
8	164	32.1	300	30.8	06.7	79	36.2	04.3	164	28.8	39.2	202	57.1	25.9
9	179	34.5	315	30.1	07.7	94	38.9	04.4	179	31.4	39.3	217	59.5	25.8
10	194	37.0	330	29.5	08.6	109	41.6	04.5	194	34.0	39.3	233	01.9	25.8
11	209	39.5	345	28.8	-16 09.6	124	44.3	+24 04.6	209	36.7	-1 39.4	248	04.3	-16 25.8
12	224	41.9	0	28.2	-16 10.6	139	47.0	+24 04.7	224	39.3	-1 39.4	263	06.8	-16 25.8
13	239	44.4	15	27.6	11.6	154	49.7	04.8	239	41.9	39.5	278	09.2	25.8
14	254	46.9	30	26.9	12.6	169	52.4	05.0	254	44.5	39.5	293	11.6	25.7
15	269	49.3	45	26.3	13.5	184	55.2	05.1	269	47.1	39.6	308	14.0	25.7
16	284	51.8	60	25.7	14.5	199	57.9	05.2	284	49.7	39.6	323	16.4	25.7
17	299	54.3	75	25.0	-16 15.5	215	00.6	+24 05.3	299	52.3	-1 39.7	338	18.8	-16 25.7
18	314	56.7	90	24.4	-16 16.5	230	03.3	+24 05.4	314	54.9	-1 39.7	353	21.2	-16 25.7
19	329	59.2	105	23.7	17.4	245	06.0	05.5	329	57.5	39.8	8	23.6	25.6
20	345	01.6	120	23.1	18.4	260	08.7	05.6	345	00.1	39.8	23	26.0	25.6
21	0	04.1	135	22.4	19.4	275	11.4	05.8	0	02.7	39.9	38	28.4	25.6
22	15	06.6	150	21.8	20.4	290	14.2	05.9	15	05.4	39.9	53	30.8	25.6
23	30	09.0	165	21.2	21.3	305	16.9	06.0	30	08.0	40.0	68	33.2	25.6
24	45	11.5	180	20.5	-16 22.3	320	19.6	+24 06.1	45	10.6	-1 40.1	83	35.6	-16 25.5

Dif	—	-6	-10	+27	+1	+26	-1	+24

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 6			Edad: 11 ^d 5 PHE { SD: 15:6 PMG: 22 ^h 36 ^m 4 ^h : 57:3 12 ^h : 57:1 20 ^h : 57:0 R°: 45 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	184	06.0	-15	54.3	31	21.5	+3	05.6	60 N	15 52	16 38	17 28	15 35 1	4 31 92
1	199	05.9		55.0	45	54.3 ¹³⁸		21.0 ¹⁵⁴	58	16 01	44	31	38 5	29 88
2	214	05.9		55.8	60	27.1 ¹³⁸		36.3 ¹⁵³	56	09	50	34	42 8	27 85
3	229	05.9		56.5	74	59.9 ¹³⁸	+3	51.5 ¹⁵²	54	16	55	37	45 11	25 82
4	244	05.9		57.3	89	32.6 ¹³⁷	+4	06.8 ¹⁵³	52	23	16 59	39	48 13	23 79
5	259	05.8	-15	58.0	104	05.4 ¹³⁸	+4	22.0 ¹⁵²	50	16 29	17 03	17 42	15 50 16	4 22 76
6	274	05.8	-15	58.8	118	38.2 ¹³⁸	+4	37.2 ¹⁵²	45	16 42	17 13	17 48	15 56 20	4 18 72
7	289	05.8	-15	59.5	133	10.9 ¹³⁷	+4	52.3 ¹⁵¹	40	16 52	21	53	16 00 25	16 67
8	304	05.8	-16	00.3	147	43.7 ¹³⁸	+5	07.5 ¹⁵²	35	17 01	28	17 58	04 28	13 64
9	319	05.7		01.0	162	16.5 ¹³⁸		22.6 ¹⁵¹	30	09	34	18 03	08 31	11 60
10	334	05.7		01.8	176	49.2 ¹³⁷		37.6 ¹⁵⁰	20	23	46	12	14 36	08 54
11	349	05.7	-16	02.5	191	22.0 ¹³⁸	+5	52.6 ¹⁵⁰	10 N	17 35	17 57	18 23	16 20 41	4 04 50
12	4	05.7	-16	03.3	205	54.7 ¹³⁷	+6	07.6 ¹⁵⁰	0	17 47	18 09	18 34	16 25 45	4 01 45
13	19	05.6		04.0	220	27.5 ¹³⁸		22.6 ¹⁵⁰	10 S	17 59	21	18 46	30 50	3 58 41
14	34	05.6		04.8	235	00.2 ¹³⁷		37.5 ¹⁴⁹	20	18 12	35	19 02	36 54	55 36
15	49	05.6		05.5	249	32.9 ¹³⁷	+6	52.4 ¹⁴⁹	30	26	18 52	22	42 61	52 30
16	64	05.6		06.3	264	05.6 ¹³⁷	+7	07.2 ¹⁴⁸	35	35	19 02	35	46 64	49 28
17	79	05.5	-16	07.0	278	38.3 ¹³⁷	+7	22.0 ¹⁴⁸	40	18 45	19 14	19 50	16 51 67	3 47 24
18	94	05.5	-16	07.7	293	11.0 ¹³⁷	+7	36.7 ¹⁴⁷	45	18 56	19 29	20 10	16 56 71	3 44 20
19	109	05.5		08.5	307	43.7 ¹³⁷	+7	51.5 ¹⁴⁸	50	19 10	47	36	17 02 76	41 15
20	124	05.5		09.2	322	16.3 ¹³⁶	+8	06.1 ¹⁴⁶	52	17	19 56	20 49	05 79	40 12
21	139	05.4		10.0	336	48.9 ¹³⁶		20.7 ¹⁴⁶	54	24	20 07	21 04	08 82	38 10
22	154	05.4		10.7	351	21.6 ¹³⁷		35.3 ¹⁴⁶	56	32	18	23	11 85	36 8
23	169	05.4		11.4	5	54.2 ¹³⁶	+8	49.8 ¹⁴⁵	58	42	32	21 47	15 88	34 5
24	184	05.3	-16	12.2	20	26.7 ¹³⁵	+9	04.3 ¹⁴⁵	60 S	19 52	20 48	22 21	17 19 93	3 32 1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 55 ^m 8		Mag: -4.0 PMG: 11 ^h 59 ^m		Mag: -1.4 PMG: 2 ^h 38 ^m		Mag: -2.8 PMG: 20 ^h 56 ^m		Mag: +0.7 PMG: 18 ^h 23 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	45	11.5	180	20.5	-16	22.3	320	19.6	+24	06.1	45	10.6	-1	40.1	83	35.6	-16	25.5
1	60	14.0	195	19.9		23.3	335	22.3		06.2	60	13.2		40.1	98	38.1		25.5
2	75	16.4	210	19.2		24.2	350	25.1		06.3	75	15.8		40.2	113	40.5		25.5
3	90	18.9	225	18.6		25.2	5	27.8		06.4	90	18.4		40.2	128	42.9		25.5
4	105	21.4	240	17.9		26.2	20	30.5		06.5	105	21.0		40.3	143	45.3		25.5
5	120	23.8	255	17.3	-16	27.1	35	33.3	+24	06.7	120	23.6	-1	40.3	158	47.7	-16	25.4
6	135	26.3	270	16.6	-16	28.1	50	36.0	+24	06.8	135	26.2	-1	40.4	173	50.1	-16	25.4
7	150	28.8	285	16.0		29.1	65	38.7		06.9	150	28.8		40.4	188	52.5		25.4
8	165	31.2	300	15.4		30.0	80	41.5		07.0	165	31.4		40.5	203	54.9		25.4
9	180	33.7	315	14.7		31.0	95	44.2		07.1	180	34.0		40.5	218	57.3		25.3
10	195	36.1	330	14.1		32.0	110	46.9		07.2	195	36.6		40.6	233	59.7		25.3
11	210	38.6	345	13.4	-16	32.9	125	49.7	+24	07.3	210	39.2	-1	40.6	249	02.1	-16	25.3
12	225	41.1	0	12.8	-16	33.9	140	52.4	+24	07.5	225	41.8	-1	40.7	264	04.5	-16	25.3
13	240	43.5	15	12.1		34.8	155	55.2		07.6	240	44.4		40.7	279	06.9		25.3
14	255	46.0	30	11.5		35.8	170	57.9		07.7	255	47.0		40.8	294	09.3		25.2
15	270	48.5	45	10.8		36.8	186	00.7		07.8	270	49.6		40.8	309	11.7		25.2
16	285	50.9	60	10.2		37.7	201	03.4		07.9	285	52.2		40.9	324	14.1		25.2
17	300	53.4	75	09.5	-16	38.7	216	06.2	+24	08.0	300	54.8	-1	40.9	339	16.5	-16	25.2
18	315	55.9	90	08.8	-16	39.6	231	08.9	+24	08.1	315	57.4	-1	40.9	354	18.9	-16	25.2
19	330	58.3	105	08.2		40.6	246	11.7		08.2	331	00.0		41.0	9	21.3		25.1
20	346	00.8	120	07.5		41.5	261	14.4		08.4	346	02.6		41.0	24	23.7		25.1
21	1	03.3	135	06.9		42.5	276	17.2		08.5	1	05.2		41.1	39	26.1		25.1
22	16	05.7	150	06.2		43.5	291	20.0		08.6	16	07.8		41.1	54	28.5		25.1
23	31	08.2	165	05.6		44.4	306	22.7		08.7	31	10.4		41.2	69	30.9		25.0
24	46	10.6	180	04.9	-16	45.4	321	25.5	+24	08.8	46	13.0	-1	41.2	84	33.3	-16	25.0
Dif	—		-6		-10		+27		+1		+26		0		+24			

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				Edad: 12 ^d 5 PHE { 4 ^h : 56'8 12 ^h : 56'6 20 ^h : 56'5 Rº: 48 ^m													
	hG ☉		Dec		hG ☾ Dif		Dec Dif			Náutico	Civil		Hora	Rº	Hora	Rº		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	184	05.3	-16	12.2	20	26.7	+9	04.3	60 N	6	00	6	51	7	37	15	36	
1	199	05.3		12.9	34	59.3 ¹³⁶		18.7 ¹⁴⁴	58	5	57	44	28		43	7	5	
2	214	05.3		13.7	49	31.8 ¹³⁵		33.1 ¹⁴⁴	56		54	39	20		50	10	52	
3	229	05.2		14.4	64	04.4 ¹³⁶	+9	47.4 ¹⁴³	54		51	34	12		15	56	13	
4	244	05.2		15.1	78	36.9 ¹³⁵	+10	01.6 ¹⁴²	52		49	29	7	05	16	01	16	
5	259	05.2	-16	15.9	93	09.3 ¹³⁴	+10	15.9 ¹⁴³	50	5	46	6	25	6	59	16	06	
6	274	05.1	-16	16.6	107	41.8 ¹³⁵	+10	30.0 ¹⁴¹	45	5	40	6	15	6	46	16	16	
7	289	05.1		17.4	122	14.2 ¹³⁴		44.1 ¹⁴¹	40		35	07	36		25	27	23	
8	304	05.1		18.1	136	46.6 ¹³⁴	+10	58.1 ¹⁴⁰	35		30	6	00	27	32	31	17	
9	319	05.0		18.8	151	19.0 ¹³⁴	+11	12.1 ¹⁴⁰	30		25	5	53	18	39	33	11	
10	334	05.0		19.6	165	51.4 ¹³⁴		26.0 ¹³⁹	20		15	41	6	04	16	50	39	
11	349	05.0	-16	20.3	180	23.7 ¹³³	+11	39.9 ¹³⁹	10 N	5	05	5	30	5	52	17	01	
12	4	04.9	-16	21.0	194	56.0 ¹³³	+11	53.7 ¹³⁸	0	4	54	5	19	5	40	17	10	
13	19	04.9		21.8	209	28.2 ¹³²	+12	07.4 ¹³⁷	10 S		41	5	06	28		20	51	
14	34	04.9		22.5	224	00.5 ¹³³		21.1 ¹³⁷	20		25	4	52	16		30	56	
15	49	04.8		23.2	238	32.7 ¹³²		34.7 ¹³⁶	30	4	05	35	5	01	43	60	22	
16	64	04.8		24.0	253	04.9 ¹³²	+12	48.2 ¹³⁵	35	3	52	25	4	52	50	63	17	
17	79	04.8	-16	24.7	267	37.0 ¹³¹	+13	01.7 ¹³⁵	40	3	36	4	13	4	42	17	58	
18	94	04.7	-16	25.4	282	09.1 ¹³¹	+13	15.1 ¹³⁴	45	3	17	3	58	4	31	18	07	
19	109	04.7		26.2	296	41.2 ¹³¹		28.4 ¹³³	50	2	51	39	17		18	77		
20	124	04.7		26.9	311	13.2 ¹³⁰		41.6 ¹³²	52		38	30	10		24	79		
21	139	04.6		27.6	325	45.2 ¹³⁰	+13	54.8 ¹³²	54		23	20	4	03	30	81		
22	154	04.6		28.4	340	17.2 ¹³⁰	+14	07.9 ¹³¹	56	2	04	3	08	3	54	36	85	
23	169	04.5		29.1	354	49.2 ¹³⁰		21.0 ¹³¹	58	1	40	2	55	45	43	90		
24	184	04.5	-16	29.8	9	21.1 ¹²⁹	+14	33.9 ¹²⁹	60 S	1	06	2	39	3	34	18	52	
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 51 ^m 9		Mag: -3.9 PMG: 12 ^h 00 ^m				Mag: -1.4 PMG: 2 ^h 34 ^m				Mag: -2.8 PMG: 20 ^h 52 ^m				Mag: +0.7 PMG: 18 ^h 19 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	46	10.6	180	04.9	-16	45.4	321	25.5	+24	08.8	46	13.0	-1	41.2	84	33.3	-16	25.0
1	61	13.1	195	04.3		46.3	336	28.3		08.9	61	15.6		41.3	99	35.7		25.0
2	76	15.6	210	03.6		47.3	351	31.0		09.0	76	18.2		41.3	114	38.2		25.0
3	91	18.0	225	02.9		48.2	6	33.8		09.1	91	20.8		41.4	129	40.6		25.0
4	106	20.5	240	02.3		49.2	21	36.6		09.3	106	23.4		41.4	144	43.0		24.9
5	121	23.0	255	01.6	-16	50.1	36	39.3	+24	09.4	121	26.0	-1	41.5	159	45.4	-16	24.9
6	136	25.4	270	01.0	-16	51.1	51	42.1	+24	09.5	136	28.6	-1	41.5	174	47.8	-16	24.9
7	151	27.9	285	00.3		52.0	66	44.9		09.6	151	31.2		41.6	189	50.2		24.9
8	166	30.4	299	59.7		53.0	81	47.7		09.7	166	33.8		41.6	204	52.6		24.8
9	181	32.8	314	59.0		53.9	96	50.5		09.8	181	36.4		41.7	219	55.0		24.8
10	196	35.3	329	58.3		54.8	111	53.2		09.9	196	39.0		41.7	234	57.4		24.8
11	211	37.7	344	57.7	-16	55.8	126	56.0	+24	10.1	211	41.6	-1	41.8	249	59.8	-16	24.8
12	226	40.2	359	57.0	-16	56.7	141	58.8	+24	10.2	226	44.2	-1	41.8	265	02.2	-16	24.7
13	241	42.7	14	56.3		57.7	157	01.6		10.3	241	46.8		41.8	280	04.6		24.7
14	256	45.1	29	55.7		58.6	172	04.4		10.4	256	49.4		41.9	295	07.0		24.7
15	271	47.6	44	55.0	-16	59.6	187	07.2		10.5	271	52.0		41.9	310	09.4		24.7
16	286	50.1	59	54.4	-17	00.5	202	10.0		10.6	286	54.6		42.0	325	11.8		24.7
17	301	52.5	74	53.7	-17	01.4	217	12.8	+24	10.7	301	57.2	-1	42.0	340	14.2	-16	24.6
18	316	55.0	89	53.0	-17	02.4	232	15.5	+24	10.8	316	59.8	-1	42.1	355	16.6	-16	24.6
19	331	57.5	104	52.4		03.3	247	18.3		11.0	332	02.4		42.1	10	19.0		24.6
20	346	59.9	119	51.7		04.3	262	21.1		11.1	347	05.0		42.2	25	21.4		24.6
21	2	02.4	134	51.0		05.2	277	23.9		11.2	2	07.6		42.2	40	23.8		24.5
22	17	04.9	149	50.4		06.1	292	26.7		11.3	17	10.2		42.3	55	26.2		24.5
23	32	07.3	164	49.7		07.1	307	29.5		11.4	32	12.8		42.3	70	28.6		24.5
24	47	09.8	179	49.0	-17	08.0	322	32.4	+24	11.5	47	15.3	-1	42.3	85	31.0	-16	24.5
Dif	—		-7		-9		+28		+1		+26		0		+24			

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:1 PMG: 11 ^h 43 ^m 7			Edad: 13 ^d 5 PHE { SD: 15:4 PMG: *** **m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	Rº	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	184	04.5	-16	29.8	9	21.1	+14 33.9	60 N	15 47	16 34	17 24	15 38 5	7 36 95	
1	199	04.5		30.5	23	52.9 ¹²⁸	46.8 ¹²⁹	58	15 56	40	28	15 50 10	26 89	
2	214	04.4		31.3	38	24.7 ¹²⁸	+14 59.6 ¹²⁸	56	16 05	46	31	16 00 14	17 85	
3	229	04.4		32.0	52	56.5 ¹²⁸	+15 12.4 ¹²⁸	54	13	51	34	09 17	09 81	
4	244	04.3		32.7	67	28.3 ¹²⁸	25.0 ¹²⁶	52	20	16 56	37	17 20	7 01 79	
5	259	04.3	-16	33.4	82	00.0 ¹²⁷	+15 37.6 ¹²⁶	50	16 26	17 00	17 39	16 24 22	6 55 76	
6	274	04.3	-16	34.2	96	31.7 ¹²⁷	+15 50.1 ¹²⁵	45	16 39	17 10	17 45	16 39 28	6 41 71	
7	289	04.2		34.9	111	03.3 ¹²⁶	+16 02.5 ¹²⁴	40	16 50	19	51	16 52 31	30 66	
8	304	04.2		35.6	125	34.9 ¹²⁶	14.8 ¹²³	35	17 00	26	17 56	17 03 34	20 63	
9	319	04.1		36.3	140	06.5 ¹²⁶	27.0 ¹²²	30	08	33	18 01	12 37	6 11 61	
10	334	04.1		37.1	154	38.0 ¹²⁵	39.2 ¹²²	20	22	45	12	29 41	5 57 56	
11	349	04.1	-16	37.8	169	09.4 ¹²⁴	+16 51.3 ¹²¹	10 N	17 35	17 57	18 22	17 43 46	5 44 52	
12	4	04.0	-16	38.5	183	40.9 ¹²⁵	+17 03.3 ¹²⁰	0	17 47	18 09	18 34	17 57 49	5 33 47	
13	19	04.0		39.2	198	12.3 ¹²⁴	15.1 ¹¹⁸	10 S	17 59	21	18 47	18 11 52	21 44	
14	34	03.9		40.0	212	43.6 ¹²³	27.0 ¹¹⁹	20	18 13	36	19 03	26 56	5 08 40	
15	49	03.9		40.7	227	14.9 ¹²³	38.7 ¹¹⁷	30	28	18 53	24	43 60	4 54 35	
16	64	03.8		41.4	241	46.2 ¹²³	+17 50.3 ¹¹⁶	35	37	19 04	37	18 53 63	46 32	
17	79	03.8	-16	42.1	256	17.4 ¹²²	+18 01.8 ¹¹⁵	40	18 47	19 17	19 53	19 04 67	4 37 29	
18	94	03.7	-16	42.8	270	48.6 ¹²²	+18 13.3 ¹¹⁵	45	18 59	19 32	20 13	19 18 70	4 26 25	
19	109	03.7		43.6	285	19.7 ¹²¹	24.6 ¹¹³	50	19 14	19 51	40	35 75	13 20	
20	124	03.7		44.3	299	50.8 ¹²¹	35.9 ¹¹³	52	20	20 01	20 54	43 77	07 17	
21	139	03.6		45.0	314	21.8 ¹²⁰	47.0 ¹¹¹	54	28	11	21 10	19 51 81	4 00 15	
22	154	03.6		45.7	328	52.8 ¹²⁰	+18 58.1 ¹¹¹	56	37	23	30	20 01 85	3 53 11	
23	169	03.5		46.4	343	23.7 ¹¹⁹	+19 09.1 ¹¹⁰	58	46	37	21 56	13 89	44 8	
24	184	03.5	-16	47.2	357	54.7 ¹²⁰	+19 19.9 ¹⁰⁸	60 S	19 58	20 55	22 36	20 26 95	3 35 3	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 20 ^h 47 ^m 9		Mag: -3.9 PMG: 12 ^h 01 ^m		Mag: -1.4 PMG: 2 ^h 29 ^m		Mag: -2.8 PMG: 20 ^h 47 ^m		Mag: +0.7 PMG: 18 ^h 15 ^m					
	hG ♈		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	47	09.8	179	49.0	-17	08.0	322	32.4	-1	42.3				
1	62	12.2	194	48.3		08.9	337	35.2		42.4				
2	77	14.7	209	47.7		09.9	352	38.0		42.4				
3	92	17.2	224	47.0		10.8	7	40.8		42.5				
4	107	19.6	239	46.3		11.7	22	43.6		42.5				
5	122	22.1	254	45.7	-17	12.7	37	46.4	+24	42.6				
6	137	24.6	269	45.0	-17	13.6	52	49.2	+24	42.6				
7	152	27.0	284	44.3		14.5	67	52.0		42.7				
8	167	29.5	299	43.6		15.4	82	54.9		42.7				
9	182	32.0	314	43.0		16.4	97	57.7		42.7				
10	197	34.4	329	42.3		17.3	113	00.5		42.8				
11	212	36.9	344	41.6	-17	18.2	128	03.3	+24	42.8				
12	227	39.3	359	41.0	-17	19.1	143	06.1	+24	42.9				
13	242	41.8	14	40.3		20.1	158	09.0		42.9				
14	257	44.3	29	39.6		21.0	173	11.8		43.0				
15	272	46.7	44	38.9		21.9	188	14.6		43.0				
16	287	49.2	59	38.2		22.8	203	17.5		43.0				
17	302	51.7	74	37.6	-17	23.8	218	20.3	+24	43.1				
18	317	54.1	89	36.9	-17	24.7	233	23.1	+24	43.1				
19	332	56.6	104	36.2		25.6	248	26.0		43.2				
20	347	59.1	119	35.5		26.5	263	28.8		43.2				
21	3	01.5	134	34.9		27.4	278	31.6		43.2				
22	18	04.0	149	34.2		28.3	293	34.5		43.3				
23	33	06.5	164	33.5		29.3	308	37.3		43.3				
24	48	08.9	179	32.8	-17	30.2	323	40.2	+24	43.4				
Dif	—		-7		-9		+28		+1					
							+26		0					
									+24					
									0					

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 8			Edad: 14 ^d 5 SD: 15'2 PMG: 0 ^h 09 ^m	PHE { 4 ^h : 55'8 12 ^h : 55'6 20 ^h : 55'4 R°: 49 ^m											
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	184	03.5	-16	47.2	357	54.7	+19	19.9	6 05	6 55	7 43	15 43	10	9 11	94	
1	199	03.4		47.9	12	25.5 ¹¹⁸		30.7 ¹⁰⁸	6 01	49	33	16 00	16	8 55	87	
2	214	03.4		48.6	26	56.3 ¹¹⁸		41.4 ¹⁰⁷	5 58	43	24	14 20		42	82	
3	229	03.3		49.3	41	27.1 ¹¹⁸	+19	51.9 ¹⁰⁵	55	37	16	26 24		30	79	
4	244	03.3		50.0	55	57.8 ¹¹⁷	+20	02.4 ¹⁰⁵	52	32	09	37 26		20	76	
5	259	03.2	-16	50.7	70	28.5 ¹¹⁷	+20	12.8 ¹⁰⁴	5 49	6 28	7 03	16 46	29	8 11	74	
6	274	03.2	-16	51.4	84	59.1 ¹¹⁶	+20	23.0 ¹⁰²	5 43	6 18	6 49	17 07	33	7 52	69	
7	289	03.1		52.2	99	29.7 ¹¹⁶		33.2 ¹⁰²	37	09	38	23 37		36	66	
8	304	03.1		52.9	114	00.3 ¹¹⁶		43.2 ¹⁰⁰	32	6 02	28	37 39		23	63	
9	319	03.0		53.6	128	30.8 ¹¹⁵	+20	53.2 ¹⁰⁰	30	26	5 55	20	17 49	42	7 12	60
10	334	03.0		54.3	143	01.2 ¹¹⁴	+21	03.0 ⁹⁸	20	16	42	6 05	18 10	45	6 53	56
11	349	02.9	-16	55.0	157	31.6 ¹¹⁴	+21	12.7 ⁹⁷	10 N	5 05	5 31	5 52	18 29	47	6 36	53
12	4	02.9	-16	55.7	172	02.0 ¹¹⁴	+21	22.3 ⁹⁶	0	4 54	5 19	5 40	18 46	50	6 20	50
13	19	02.8		56.4	186	32.3 ¹¹³		31.8 ⁹⁵	10 S	40	5 06	28	19 03	53	6 05	46
14	34	02.8		57.1	201	02.6 ¹¹³		41.2 ⁹⁴	20	24	4 51	5 15	22 56		5 48	43
15	49	02.7		57.8	215	32.8 ¹¹²		50.5 ⁹³	30	4 03	34	4 59	43 60		29	39
16	64	02.7		58.6	230	03.0 ¹¹²	+21	59.7 ⁹²	35	3 50	23	50	19 56	61	18	37
17	79	02.6	-16	59.3	244	33.1 ¹¹¹	+22	08.8 ⁹¹	40	3 34	4 10	4 40	20 11	64	5 06	33
18	94	02.5	-17	00.0	259	03.2 ¹¹¹	+22	17.7 ⁸⁹	45	3 14	3 55	4 28	20 28	67	4 51	30
19	109	02.5	-17	00.7	273	33.3 ¹¹¹		26.6 ⁸⁹	50	2 47	36	13	20 50	71	33	25
20	124	02.4		01.4	288	03.3 ¹¹⁰		35.3 ⁸⁷	52	33	26	4 06	21 00	74	24	23
21	139	02.4		02.1	302	33.3 ¹¹⁰		43.9 ⁸⁶	54	2 17	16	3 59	12 77		15	20
22	154	02.3		02.8	317	03.2 ¹⁰⁹	+22	52.4 ⁸⁵	56	1 57	3 04	50	26 80		4 04	17
23	169	02.3		03.5	331	33.1 ¹⁰⁹	+23	00.8 ⁸⁴	58	1 31	2 49	40	21 42	84	3 52	12
24	184	02.2	-17	04.2	346	02.9 ¹⁰⁸	+23	09.0 ⁸²	60 S	0 51	2 32	3 29	22 01	92	3 38	7
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 20 ^h 44 ^m 0		Mag: -3.9 PMG: 12 ^h 02 ^m			Mag: -1.4 PMG: 2 ^h 25 ^m			Mag: -2.8 PMG: 20 ^h 43 ^m			Mag: +0.7 PMG: 18 ^h 11 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	48	08.9	179	32.8	-17	30.2	323	40.2	+24	14.2	48	17.5	-1	43.4	86	28.5
1	63	11.4	194	32.1		31.1	338	43.0		14.3	63	20.1		43.4	101	30.8
2	78	13.8	209	31.4		32.0	353	45.9		14.4	78	22.6		43.5	116	33.2
3	93	16.3	224	30.8		32.9	8	48.7		14.5	93	25.2		43.5	131	35.6
4	108	18.8	239	30.1		33.8	23	51.6		14.7	108	27.8		43.5	146	38.0
5	123	21.2	254	29.4	-17	34.7	38	54.4	+24	14.8	123	30.4	-1	43.6	161	40.4
6	138	23.7	269	28.7	-17	35.6	53	57.3	+24	14.9	138	33.0	-1	43.6	176	42.8
7	153	26.2	284	28.0		36.6	69	00.1		15.0	153	35.6		43.7	191	45.2
8	168	28.6	299	27.3		37.5	84	03.0		15.1	168	38.1		43.7	206	47.6
9	183	31.1	314	26.7		38.4	99	05.9		15.2	183	40.7		43.7	221	50.0
10	198	33.6	329	26.0		39.3	114	08.7		15.3	198	43.3		43.8	236	52.4
11	213	36.0	344	25.3	-17	40.2	129	11.6	+24	15.4	213	45.9	-1	43.8	251	54.8
12	228	38.5	359	24.6	-17	41.1	144	14.5	+24	15.5	228	48.5	-1	43.9	266	57.2
13	243	41.0	14	23.9		42.0	159	17.3		15.7	243	51.1		43.9	281	59.6
14	258	43.4	29	23.2		42.9	174	20.2		15.8	258	53.6		43.9	297	02.0
15	273	45.9	44	22.5		43.8	189	23.1		15.9	273	56.2		44.0	312	04.3
16	288	48.3	59	21.8		44.7	204	25.9		16.0	288	58.8		44.0	327	06.7
17	303	50.8	74	21.1	-17	45.6	219	28.8	+24	16.1	304	01.4	-1	44.1	342	09.1
18	318	53.3	89	20.5	-17	46.5	234	31.7	+24	16.2	319	04.0	-1	44.1	357	11.5
19	333	55.7	104	19.8		47.4	249	34.6		16.3	334	06.5		44.1	12	13.9
20	348	58.2	119	19.1		48.3	264	37.4		16.4	349	09.1		44.2	27	16.3
21	4	00.7	134	18.4		49.2	279	40.3		16.5	4	11.7		44.2	42	18.7
22	19	03.1	149	17.7		50.1	294	43.2		16.7	19	14.3		44.2	57	21.1
23	34	05.6	164	17.0		51.0	309	46.1		16.8	34	16.8		44.3	72	23.5
24	49	08.1	179	16.3	-17	51.9	324	49.0	+24	16.9	49	19.4	-1	44.3	87	25.9
Dif	—		-7		-9		+29		+1		+26		0		+24	

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 11 ^h 43 ^m 9			Edad: 15 ^d 5 PHE { SD: 15:1 PMG: 0 ^h 58 ^m R°: 51 ^m 4 ^h : 55/3 12 ^h : 55/1 20 ^h : 55/0											
	hG ☉	Dec		hG ☾	Dif						Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	184	02.2	-17	04.2	346	02.9	+23	09.0	60 N	15 42	16 29	17 20	15 53	21	10 45 86
1	199	02.2		04.9	0	32.7 ¹⁰⁸		17.1 81	58	15 52	36	24	16 16	27	22 80
2	214	02.1		05.6	15	02.5 ¹⁰⁸		25.2 81	56	16 01	42	27	34	31	10 04 76
3	229	02.0		06.3	29	32.2 ¹⁰⁷		33.1 79	54	09	48	31	16 50	34	9 49 72
4	244	02.0		07.0	44	01.9 ¹⁰⁷		40.8 77	52	16	53	34	17 03	36	36 70
5	259	01.9	-17	07.7	58	31.5 ¹⁰⁶	+23	48.5 77	50	16 23	16 58	17 37	17 15	38	9 25 68
6	274	01.9	-17	08.4	73	01.1 ¹⁰⁶	+23	56.0 75	45	16 37	17 08	17 43	17 40	41	9 01 64
7	289	01.8		09.1	87	30.7 ¹⁰⁶	+24	03.4 74	40	48	17	49	18 00	43	8 42 62
8	304	01.8		09.8	102	00.2 ¹⁰⁵		10.7 73	35	16 58	25	17 55	16	45	26 60
9	319	01.7		10.5	116	29.7 ¹⁰⁵		17.9 72	30	17 07	32	18 00	31	46	8 12 58
10	334	01.6		11.2	130	59.1 ¹⁰⁴		24.9 70	20	22	45	11	18 55	48	7 49 55
11	349	01.6	-17	11.9	145	28.6 ¹⁰⁵	+24	31.9 70	10 N	17 35	17 57	18 22	19 16	50	7 29 53
12	4	01.5	-17	12.6	159	57.9 ¹⁰³	+24	38.6 67	0	17 47	18 09	18 34	19 36	52	7 10 51
13	19	01.4		13.3	174	27.3 ¹⁰⁴		45.3 67	10 S	18 00	22	18 48	19 56	53	6 51 49
14	34	01.4		14.0	188	56.6 ¹⁰³		51.9 66	20	14	37	19 05	20 18	54	31 47
15	49	01.3		14.7	203	25.9 ¹⁰³	+24	58.3 64	30	29	18 55	26	43	56	6 08 44
16	64	01.3		15.4	217	55.1 ¹⁰²	+25	04.6 63	35	39	19 06	40	20 57	58	5 55 42
17	79	01.2	-17	16.1	232	24.3 ¹⁰²	+25	10.7 61	40	18 49	19 19	19 56	21 15	59	5 39 40
18	94	01.1	-17	16.8	246	53.5 ¹⁰²	+25	16.7 60	45	19 02	19 35	20 17	21 35	61	5 21 37
19	109	01.1		17.5	261	22.7 ¹⁰²		22.6 59	50	17	19 55	45	22 01	64	4 58 33
20	124	01.0		18.2	275	51.8 ¹⁰¹		28.4 58	52	24	20 05	20 59	14	65	47 31
21	139	00.9		18.9	290	20.9 ¹⁰¹		34.0 56	54	32	16	21 16	29	67	35 28
22	154	00.9		19.6	304	49.9 ¹⁰⁰		39.6 56	56	41	28	21 38	22 46	69	21 25
23	169	00.8		20.3	319	19.0 ¹⁰¹		44.9 53	58	19 51	20 43	22 06	23 06	73	4 04 21
24	184	00.8	-17	21.0	333	48.0 ¹⁰⁰	+25	50.2 53	60 S	20 03	21 01	22 54	23 33	79	3 45 13

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 20 ^h 40 ^m 1		Mag: -3.9 PMG: 12 ^h 03 ^m		Mag: -1.4 PMG: 2 ^h 20 ^m		Mag: -2.8 PMG: 20 ^h 39 ^m		Mag: +0.7 PMG: 18 ^h 07 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	49	08.1	179	16.3	-17	51.9	324	49.0	+24	16.9	49	19.4	-1	44.3	87	25.9	-16	23.3
1	64	10.5	194	15.6		52.8	339	51.9		17.0	64	22.0		44.4	102	28.3		23.2
2	79	13.0	209	14.9		53.7	354	54.7		17.1	79	24.6		44.4	117	30.6		23.2
3	94	15.5	224	14.2		54.6	9	57.6		17.2	94	27.2		44.4	132	33.0		23.2
4	109	17.9	239	13.5		55.5	25	00.5		17.3	109	29.7		44.5	147	35.4		23.2
5	124	20.4	254	12.8	-17	56.4	40	03.4	+24	17.4	124	32.3	-1	44.5	162	37.8	-16	23.1
6	139	22.8	269	12.1	-17	57.2	55	06.3	+24	17.5	139	34.9	-1	44.5	177	40.2	-16	23.1
7	154	25.3	284	11.4		58.1	70	09.2		17.6	154	37.5		44.6	192	42.6		23.1
8	169	27.8	299	10.7		59.0	85	12.1		17.8	169	40.0		44.6	207	45.0		23.1
9	184	30.2	314	10.0	-17	59.9	100	15.0		17.9	184	42.6		44.7	222	47.4		23.0
10	199	32.7	329	09.3	-18	00.8	115	17.9		18.0	199	45.2		44.7	237	49.8		23.0
11	214	35.2	344	08.6	-18	01.7	130	20.8	+24	18.1	214	47.8	-1	44.7	252	52.1	-16	23.0
12	229	37.6	359	07.9	-18	02.6	145	23.7	+24	18.2	229	50.3	-1	44.8	267	54.5	-16	23.0
13	244	40.1	14	07.2		03.5	160	26.6		18.3	244	52.9		44.8	282	56.9		22.9
14	259	42.6	29	06.5		04.3	175	29.5		18.4	259	55.5		44.8	297	59.3		22.9
15	274	45.0	44	05.8		05.2	190	32.4		18.5	274	58.1		44.9	313	01.7		22.9
16	289	47.5	59	05.1		06.1	205	35.4		18.6	290	00.6		44.9	328	04.1		22.9
17	304	49.9	74	04.4	-18	07.0	220	38.3	+24	18.7	305	03.2	-1	44.9	343	06.5	-16	22.8
18	319	52.4	89	03.7	-18	07.9	235	41.2	+24	18.9	320	05.8	-1	45.0	358	08.9	-16	22.8
19	334	54.9	104	03.0		08.7	250	44.1		19.0	335	08.3		45.0	13	11.2		22.8
20	349	57.3	119	02.3		09.6	265	47.0		19.1	350	10.9		45.0	28	13.6		22.7
21	4	59.8	134	01.6		10.5	280	49.9		19.2	5	13.5		45.1	43	16.0		22.7
22	20	02.3	149	00.9		11.4	295	52.9		19.3	20	16.1		45.1	58	18.4		22.7
23	35	04.7	164	00.2		12.3	310	55.8		19.4	35	18.6		45.2	73	20.8		22.7
24	50	07.2	178	59.5	-18	13.1	325	58.7	+24	19.5	50	21.2	-1	45.2	88	23.2	-16	22.6
Dif	—		-7		-9		+29		+1		+26		0		+24		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 0			Edad: 16 ^d 5 PHE { 4 ^h : 54'8 12 ^h : 54'7 20 ^h : 54'6 SD: 15'0 PMG: 1 ^h 49 ^m R°: 51 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°					
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m			
0	184	00.8	-17	21.0	333	48.0	+25	50.2	51	60 N	6 09	7 00	7 48	16 14	41	12 11	67			
1	199	00.7		21.7	348	17.0	+25	55.3	51	58	05	6 53	37	16 43	44	11 42	64			
2	214	00.6		22.4	2	45.9	+26	00.3	50	56	6 01	47	28	17 05	46	20	61			
3	229	00.6		23.1	17	14.9		05.1	48	54	5 58	41	20	24 47		11 01	61			
4	244	00.5		23.7	31	43.8		09.9	48	52	55	36	13	39 48		10 46	59			
5	259	00.4	-17	24.4	46	12.7	+26	14.5	46	50	5 52	6 31	7 06	17 53	48	10 33	58			
6	274	00.4	-17	25.1	60	41.5	+26	18.9	44	45	5 45	6 21	6 52	18 21	49	10 05	57			
7	289	00.3		25.8	75	10.4		23.2	43	40	39	12	40	18 43	50	9 44	56			
8	304	00.2		26.5	89	39.2		27.4	42	35	33	6 04	30	19 01	50	26	55			
9	319	00.1		27.2	104	08.0		31.5	41	30	28	5 57	22	17 50		9 10	55			
10	334	00.1		27.9	118	36.8		35.4	39	20	17	43	6 06	19 43	51	8 44	54			
11	349	00.0	-17	28.6	133	05.6	+26	39.2	38	10 N	5 06	5 31	5 53	20 06	52	8 22	53			
12	3	59.9	-17	29.3	147	34.4	+26	42.8	36	0	4 54	5 19	5 40	20 28	52	8 01	52			
13	18	59.9		29.9	162	03.1		46.3	35	10 S	40	5 06	28	20 49	52	7 40	51			
14	33	59.8		30.6	176	31.9		49.7	34	20	23	4 51	5 14	21 12	53	7 18	50			
15	48	59.7		31.3	191	00.6		53.0	33	30	4 01	32	4 58	39 53		6 52	48			
16	63	59.7		32.0	205	29.3		56.1	31	35	3 48	21	49	21 55	53	37	47			
17	78	59.6	-17	32.7	219	58.0	+26	59.0	29	40	3 31	4 08	4 38	22 14	53	6 19	47			
18	93	59.5	-17	33.4	234	26.8	+27	01.9	29	45	3 10	3 52	4 26	22 36	53	5 58	45			
19	108	59.4		34.0	248	55.4		04.6	27	50	2 42	32	10	23 05	53	31	43			
20	123	59.4		34.7	263	24.1		07.1	25	52	28	23	4 03	19 53		18	42			
21	138	59.3		35.4	277	52.8		09.6	25	54	2 11	3 11	3 55	36 53		5 03	40			
22	153	59.2		36.1	292	21.5		11.9	23	56	1 50	2 59	46	23 55	53	4 46	38			
23	168	59.1		36.8	306	50.2		14.0	21	58	1 21	44	36	** ** *		4 25	35			
24	183	59.1	-17	37.5	321	18.9	+27	16.0	20	60 S	0 33	2 26	3 24	** ** *		3 58	29			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG 20 ^h 36 ^m 1			Mag: -3.9 PMG: 12 ^h 05 ^m			Mag: -1.5 PMG: 2 ^h 16 ^m			Mag: -2.8 PMG: 20 ^h 35 ^m			Mag: +0.7 PMG: 18 ^h 04 ^m							
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	50	07.2	178	59.5	-18	13.1			325	58.7	+24	19.5	50	21.2	-1	45.2	88	23.2	-16	22.6
1	65	09.7	193	58.8		14.0			341	01.6		19.6	65	23.8		45.2	103	25.6		22.6
2	80	12.1	208	58.1		14.9			356	04.6		19.7	80	26.3		45.3	118	27.9		22.6
3	95	14.6	223	57.4		15.8			11	07.5		19.8	95	28.9		45.3	133	30.3		22.6
4	110	17.1	238	56.6		16.6			26	10.4		20.0	110	31.5		45.3	148	32.7		22.5
5	125	19.5	253	55.9	-18	17.5			41	13.4	+24	20.1	125	34.0	-1	45.4	163	35.1	-16	22.5
6	140	22.0	268	55.2	-18	18.4			56	16.3	+24	20.2	140	36.6	-1	45.4	178	37.5	-16	22.5
7	155	24.4	283	54.5		19.2			71	19.2		20.3	155	39.2		45.4	193	39.9		22.4
8	170	26.9	298	53.8		20.1			86	22.2		20.4	170	41.7		45.5	208	42.2		22.4
9	185	29.4	313	53.1		21.0			101	25.1		20.5	185	44.3		45.5	223	44.6		22.4
10	200	31.8	328	52.4		21.8			116	28.1		20.6	200	46.9		45.5	238	47.0		22.4
11	215	34.3	343	51.7	-18	22.7			131	31.0	+24	20.7	215	49.4	-1	45.6	253	49.4	-16	22.3
12	230	36.8	358	51.0	-18	23.6			146	33.9	+24	20.8	230	52.0	-1	45.6	268	51.8	-16	22.3
13	245	39.2	13	50.2		24.4			161	36.9		20.9	245	54.6		45.6	283	54.2		22.3
14	260	41.7	28	49.5		25.3			176	39.8		21.0	260	57.1		45.7	298	56.6		22.2
15	275	44.2	43	48.8		26.2			191	42.8		21.2	275	59.7		45.7	313	58.9		22.2
16	290	46.6	58	48.1		27.0			206	45.7		21.3	291	02.3		45.7	329	01.3		22.2
17	305	49.1	73	47.4	-18	27.9			221	48.7	+24	21.4	306	04.8	-1	45.8	344	03.7	-16	22.2
18	320	51.6	88	46.7	-18	28.7			236	51.7	+24	21.5	321	07.4	-1	45.8	359	06.1	-16	22.1
19	335	54.0	103	45.9		29.6			251	54.6		21.6	336	10.0		45.8	14	08.5		22.1
20	350	56.5	118	45.2		30.5			266	57.6		21.7	351	12.5		45.8	29	10.9		22.1
21	5	58.9	133	44.5		31.3			282	00.5		21.8	6	15.1		45.9	44	13.2		22.0
22	21	01.4	148	43.8		32.2			297	03.5		21.9	21	17.7		45.9	59	15.6		22.0
23	36	03.9	163	43.1		33.0			312	06.5		22.0	36	20.2		45.9	74	18.0		22.0
24	51	06.3	178	42.4	-18	33.9			327	09.4	+24	22.1	51	22.8	-1	46.0	89	20.4	-16	22.0
Dif	—			-7 -9			+29 +1			+26 0			+24 0							

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 17 ^d 5 PHE { 4 ^h : 54:5 12 ^h : 54:4 20 ^h : 54:3						Civil			Náutico		Hora R°	
	PMG: 11 ^h 44 ^m 1			PMG: 2 ^h 40 ^m R°: 52 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	183	59.1	-17 37.5	321	18.9	+27 16.0		60 N	15 37	16 25	17 17	16 55	67	13 18	39	
1	198	59.0	38.1	335	47.5	96 17.9	19	58	48	33	21	17 27	64	12 46	42	
2	213	58.9	38.8	350	16.2	97 19.7	18	56	15 57	39	24	17 51	62	21 45		
3	228	58.8	39.5	4	44.9	97 21.3	16	54	16 06	45	28	18 11	60	12 02	46	
4	243	58.8	40.2	19	13.6	97 22.7	14	52	13	50	31	27 59		11 45	47	
5	258	58.7	-17 40.8	33	42.3	97 +27 24.1	14	50	16 20	16 55	17 34	18 41	59	11 31	47	
6	273	58.6	-17 41.5	48	11.0	97 +27 25.3	12	45	16 34	17 06	17 41	19 10	57	11 02	49	
7	288	58.5	42.2	62	39.7	97 26.3	10	40	46	15	48	33 55		10 40	49	
8	303	58.5	42.9	77	08.4	97 27.3	10	35	16 57	23	54	19 51	55	21 50		
9	318	58.4	43.6	91	37.1	97 28.1	8	30	17 05	31	17 59	20 07	54	10 05	50	
10	333	58.3	44.2	106	05.8	97 28.7	6	20	21	44	18 11	34 53		9 38	51	
11	348	58.2	-17 44.9	120	34.5	97 +27 29.2	5	10 N	17 35	17 57	18 22	20 58	52	9 15	51	
12	3	58.2	-17 45.6	135	03.3	98 +27 29.6	4	0	17 48	18 09	18 35	21 20	50	8 53	51	
13	18	58.1	46.3	149	32.0	97 29.9	3	10 S	18 01	23	18 49	21 41	50	31 52		
14	33	58.0	46.9	164	00.8	98 30.0	1	20	15	38	19 06	22 05	48	8 08	52	
15	48	57.9	47.6	178	29.6	98 30.0	0	30	31	18 57	28	32 47		7 40	53	
16	63	57.8	48.3	192	58.4	98 29.8	2	35	41	19 08	42	22 48	46	24 53		
17	78	57.8	-17 48.9	207	27.2	98 +27 29.5	3	40	18 52	19 22	19 59	23 07	45	7 06	53	
18	93	57.7	-17 49.6	221	56.1	99 +27 29.1	4	45	19 05	19 38	20 21	23 29	44	6 43	53	
19	108	57.6	50.3	236	24.9	98 28.5	6	50	20	19 59	20 50	23 58	41	14 54		
20	123	57.5	51.0	250	53.8	99 27.8	7	52	28	20 09	21 05	** ** *		6 00	54	
21	138	57.4	51.6	265	22.7	99 27.0	8	54	36	20	23	** ** *		5 43	54	
22	153	57.3	52.3	279	51.7	100 26.1	9	56	45	34	21 45	** ** *		24 54		
23	168	57.3	53.0	294	20.6	99 25.0	11	58	19 56	20 49	22 17	0 19	53	5 00	54	
24	183	57.2	-17 53.6	308	49.6	100 +27 23.7	13	60 S	20 08	21 08	23 24	0 52	53	4 27	54	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 32 ^m 2		Mag: -3.9 PMG: 12 ^h 06 ^m		Mag: -1.5 PMG: 2 ^h 11 ^m		Mag: -2.8 PMG: 20 ^h 31 ^m		Mag: +0.7 PMG: 18 ^h 00 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	51	06.3	178 42.4	-18 33.9	327 09.4	+24 22.1	51 22.8	-1 46.0	89 20.4	-16 22.0
1	66	08.8	193 41.6	34.7	342 12.4	22.2	66 25.3	46.0	104 22.8	21.9
2	81	11.3	208 40.9	35.6	357 15.4	22.3	81 27.9	46.0	119 25.1	21.9
3	96	13.7	223 40.2	36.4	12 18.3	22.5	96 30.5	46.1	134 27.5	21.9
4	111	16.2	238 39.5	37.3	27 21.3	22.6	111 33.0	46.1	149 29.9	21.8
5	126	18.7	253 38.7	-18 38.1	42 24.3	+24 22.7	126 35.6	-1 46.1	164 32.3	-16 21.8
6	141	21.1	268 38.0	-18 39.0	57 27.2	+24 22.8	141 38.2	-1 46.2	179 34.7	-16 21.8
7	156	23.6	283 37.3	39.8	72 30.2	22.9	156 40.7	46.2	194 37.0	21.8
8	171	26.1	298 36.6	40.7	87 33.2	23.0	171 43.3	46.2	209 39.4	21.7
9	186	28.5	313 35.8	41.5	102 36.2	23.1	186 45.8	46.2	224 41.8	21.7
10	201	31.0	328 35.1	42.4	117 39.2	23.2	201 48.4	46.3	239 44.2	21.7
11	216	33.4	343 34.4	-18 43.2	132 42.1	+24 23.3	216 51.0	-1 46.3	254 46.6	-16 21.6
12	231	35.9	358 33.7	-18 44.1	147 45.1	+24 23.4	231 53.5	-1 46.3	269 48.9	-16 21.6
13	246	38.4	13 32.9	44.9	162 48.1	23.5	246 56.1	46.4	284 51.3	21.6
14	261	40.8	28 32.2	45.8	177 51.1	23.6	261 58.6	46.4	299 53.7	21.6
15	276	43.3	43 31.5	46.6	192 54.1	23.7	277 01.2	46.4	314 56.1	21.5
16	291	45.8	58 30.8	47.4	207 57.1	23.8	292 03.7	46.4	329 58.5	21.5
17	306	48.2	73 30.0	-18 48.3	223 00.1	+24 24.0	307 06.3	-1 46.5	345 00.8	-16 21.5
18	321	50.7	88 29.3	-18 49.1	238 03.1	+24 24.1	322 08.9	-1 46.5	0 03.2	-16 21.4
19	336	53.2	103 28.6	50.0	253 06.1	24.2	337 11.4	46.5	15 05.6	21.4
20	351	55.6	118 27.8	50.8	268 09.1	24.3	352 14.0	46.6	30 08.0	21.4
21	6	58.1	133 27.1	51.6	283 12.1	24.4	7 16.5	46.6	45 10.4	21.3
22	22	00.6	148 26.4	52.5	298 15.1	24.5	22 19.1	46.6	60 12.7	21.3
23	37	03.0	163 25.6	53.3	313 18.1	24.6	37 21.6	46.6	75 15.1	21.3
24	52	05.5	178 24.9	-18 54.1	328 21.1	+24 24.7	52 24.2	-1 46.7	90 17.5	-16 21.3
Dif	—		-7	-8	+30	+1	+26	0	+24	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 3			Edad: 18 ^d 5 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2 PMG: 3 ^h 32 ^m R°: 50 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	183	57.2	-17	53.6	308	49.6	+27	23.7	60 N	6	13	7	04	7	53	18	02
1	198	57.1		54.3	323	18.6 ¹⁰⁰		22.4 ¹³	58	09	6	57		42	31	76	28
2	213	57.0		55.0	337	47.6 ¹⁰⁰		20.9 ¹⁵	56	05		50	32	18	53	72	13
3	228	56.9		55.6	352	16.7 ¹⁰¹		19.3 ¹⁶	54	6	01	44	24	19	11	69	12
4	243	56.8		56.3	6	45.8 ¹⁰¹		17.5 ¹⁸	52	5	58	39	16	26	68	32	35
5	258	56.8	-17	57.0	21	14.9 ¹⁰¹	+27	15.6 ¹⁹	50	5	55	6	34	7	09	19	40
6	273	56.7	-17	57.6	35	44.0 ¹⁰¹	+27	13.6 ²⁰	45	5	48	6	23	6	55	20	07
7	288	56.6		58.3	50	13.2 ¹⁰²		11.4 ²²	40	41		14	43	28	60	29	41
8	303	56.5		58.9	64	42.4 ¹⁰²		09.2 ²²	35	35	6	06	32	20	46	58	11
9	318	56.4	-17	59.6	79	11.7 ¹⁰³		06.8 ²⁴	30	29	5	58	23	21	01	56	10
10	333	56.3	-18	00.3	93	40.9 ¹⁰²		04.2 ²⁶	20	18		44	6	08	27	54	29
11	348	56.2	-18	00.9	108	10.3 ¹⁰⁴	+27	01.5 ²⁷	10 N	5	06	5	32	5	54	21	50
12	3	56.2	-18	01.6	122	39.6 ¹⁰³	+26	58.7 ²⁸	0	4	54	5	19	5	41	22	10
13	18	56.1		02.3	137	09.0 ¹⁰⁴		55.8 ²⁹	10 S	39	5	05	28	31	47	23	51
14	33	56.0		02.9	151	38.4 ¹⁰⁴		52.8 ³⁰	20	22	4	50	5	13	22	53	9
15	48	55.9		03.6	166	07.9 ¹⁰⁵		49.6 ³²	30	4	00	31	4	57	23	19	42
16	63	55.8		04.2	180	37.4 ¹⁰⁵		46.3 ³³	35	3	46	20	47	34	40	8	17
17	78	55.7	-18	04.9	195	06.9 ¹⁰⁵	+26	42.9 ³⁴	40	3	29	4	06	4	36	23	52
18	93	55.6	-18	05.6	209	36.5 ¹⁰⁶	+26	39.3 ³⁶	45	3	07	3	50	4	23	**	**
19	108	55.5		06.2	224	06.2 ¹⁰⁷		35.6 ³⁷	50	2	38	29	07	**	**	7	08
20	123	55.4		06.9	238	35.8 ¹⁰⁶		31.8 ³⁸	52	23		19	4	00	0	12	40
21	138	55.3		07.5	253	05.5 ¹⁰⁷		27.9 ³⁹	54	2	05	3	07	3	52	29	38
22	153	55.3		08.2	267	35.3 ¹⁰⁸		23.8 ⁴¹	56	1	42	2	54	42	0	48	36
23	168	55.2		08.8	282	05.1 ¹⁰⁸		19.6 ⁴²	58	1	11	38	32	1	12	33	5
24	183	55.1	-18	09.5	296	34.9 ¹⁰⁸	+26	15.3 ⁴³	60 S	0	04	2	19	3	19	1	45

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 20 ^h 28 ^m 3		Mag: -3.9 PMG: 12 ^h 07 ^m		Mag: -1.5 PMG: 2 ^h 06 ^m		Mag: -2.8 PMG: 20 ^h 27 ^m		Mag: +0.7 PMG: 17 ^h 56 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	52	05.5	178	24.9	-18	54.1	328	21.1	+24	24.7
1	67	07.9	193	24.2		55.0	343	24.1		24.8
2	82	10.4	208	23.4		55.8	358	27.1		24.9
3	97	12.9	223	22.7		56.6	13	30.1		25.0
4	112	15.3	238	22.0		57.5	28	33.1		25.1
5	127	17.8	253	21.2	-18	58.3	43	36.1	+24	25.2
6	142	20.3	268	20.5	-18	59.1	58	39.1	+24	25.3
7	157	22.7	283	19.8	-18	59.9	73	42.1		25.4
8	172	25.2	298	19.0	-19	00.8	88	45.2		25.5
9	187	27.7	313	18.3		01.6	103	48.2		25.7
10	202	30.1	328	17.6		02.4	118	51.2		25.8
11	217	32.6	343	16.8	-19	03.2	133	54.2	+24	25.9
12	232	35.1	358	16.1	-19	04.1	148	57.2	+24	26.0
13	247	37.5	13	15.3		04.9	164	00.3		26.1
14	262	40.0	28	14.6		05.7	179	03.3		26.2
15	277	42.4	43	13.9		06.5	194	06.3		26.3
16	292	44.9	58	13.1		07.3	209	09.4		26.4
17	307	47.4	73	12.4	-19	08.2	224	12.4	+24	26.5
18	322	49.8	88	11.6	-19	09.0	239	15.4	+24	26.6
19	337	52.3	103	10.9		09.8	254	18.5		26.7
20	352	54.8	118	10.1		10.6	269	21.5		26.8
21	7	57.2	133	09.4		11.4	284	24.5		26.9
22	22	59.7	148	08.7		12.2	299	27.6		27.0
23	38	02.2	163	07.9		13.0	314	30.6		27.1
24	53	04.6	178	07.2	-19	13.9	329	33.7	+24	27.2
Dif	—		-7		-8		+30		+1	
							+26		0	
									+24	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 19 ^d 5 PHE { 4 ^h : 54:2 12 ^h : 54:2 20 ^h : 54:2											
	PMG: 11 ^h 44 ^m 4			SD: 14:7					PMG: 4 ^h 22 ^m R°: 49 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	183	55.1	-18 09.5	296	34.9	+26 15.3		60 N	15 33	16 22	17 13	19 25 89	14 16 10		
1	198	55.0	10.1	311	04.8 ¹⁰⁹	10.9	44	58	44	29	17	19 47 83	13 54 15		
2	213	54.9	10.8	325	34.8 ¹¹⁰	06.4	45	56	15 54	36	22	20 05 78	35 20		
3	228	54.8	11.4	340	04.7 ¹⁰⁹	+26 01.7	47	54	16 03	42	25	20 75	20 25		
4	243	54.7	12.1	354	34.8 ¹¹¹	+25 56.9	48	52	10	48	29	34 71	13 07 25		
5	258	54.6	-18 12.8	9	04.9 ¹¹¹	+25 52.0	49	50	16 17	16 53	17 32	20 45 70	12 55 27		
6	273	54.5	-18 13.4	23	35.0 ¹¹¹	+25 47.0	50	45	16 32	17 04	17 39	21 09 65	12 30 32		
7	288	54.4	14.1	38	05.2 ¹¹²	41.8	52	40	45	14	46	28 61	12 10 35		
8	303	54.3	14.7	52	35.4 ¹¹²	36.6	52	35	16 55	22	53	44 59	11 54 37		
9	318	54.2	15.4	67	05.7 ¹¹³	31.2	54	30	17 04	30	17 59	21 57 57	40 39		
10	333	54.1	16.0	81	36.0 ¹¹³	25.7	55	20	20	44	18 10	22 21 53	11 15 43		
11	348	54.0	-18 16.7	96	06.3 ¹¹³	+25 20.1	56	10 N	17 35	17 57	18 22	22 41 49	10 54 45		
12	3	53.9	-18 17.3	110	36.8 ¹¹⁵	+25 14.4	57	0	17 48	18 10	18 35	22 59 47	10 34 48		
13	18	53.8	17.9	125	07.2 ¹¹⁴	08.5	59	10 S	18 01	24	18 50	23 18 44	10 14 51		
14	33	53.7	18.6	139	37.8 ¹¹⁶	+25 02.6	59	20	16	40	19 07	23 38 41	9 53 53		
15	48	53.6	19.2	154	08.4 ¹¹⁶	+24 56.5	61	30	33	18 59	30	*** ** *	28 57		
16	63	53.5	19.9	168	39.0 ¹¹⁶	50.3	62	35	43	19 11	19 44	*** ** *	9 14 58		
17	78	53.4	-18 20.5	183	09.7 ¹¹⁷	+24 44.0	63	40	18 54	19 24	20 02	*** ** *	8 56 61		
18	93	53.3	-18 21.2	197	40.4 ¹¹⁷	+24 37.6	64	45	19 07	19 41	20 24	0 13 35	8 36 64		
19	108	53.2	21.8	212	11.2 ¹¹⁸	31.1	65	50	24	20 03	20 54	39 32	8 10 68		
20	123	53.1	22.5	226	42.0 ¹¹⁸	24.5	66	52	31	13	21 10	0 52 30	7 57 70		
21	138	53.0	23.1	241	12.9 ¹¹⁹	17.7	68	54	40	25	29	1 07 27	43 73		
22	153	52.9	23.8	255	43.9 ¹²⁰	10.9	68	56	19 50	39	21 53	24 24	26 76		
23	168	52.8	24.4	270	14.9 ¹²⁰	+24 03.9	70	58	20 01	20 55	22 29	1 45 19	7 05 81		
24	183	52.7	-18 25.0	284	45.9 ¹²⁰	+23 56.9	70	60 S	20 14	21 15	** ** *	2 12 12	6 39 88		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 20 ^h 24 ^m 3		Mag: -3.9 PMG: 12 ^h 08 ^m		Mag: -1.5 PMG: 2 ^h 01 ^m		Mag: -2.8 PMG: 20 ^h 23 ^m		Mag: +0.7 PMG: 17 ^h 52 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	53	04.6	178	07.2	-19	13.9	329	33.7	+24	27.2	53	25.4	-1	47.3	91	14.5	-16	20.5
1	68	07.1	193	06.4		14.7	344	36.7		27.3	68	28.0		47.3	106	16.9		20.5
2	83	09.5	208	05.7		15.5	359	39.7		27.4	83	30.5		47.3	121	19.3		20.5
3	98	12.0	223	04.9		16.3	14	42.8		27.5	98	33.1		47.4	136	21.6		20.4
4	113	14.5	238	04.2		17.1	29	45.8		27.6	113	35.6		47.4	151	24.0		20.4
5	128	16.9	253	03.4	-19	17.9	44	48.9	+24	27.8	128	38.1	-1	47.4	166	26.4	-16	20.4
6	143	19.4	268	02.7	-19	18.7	59	51.9	+24	27.9	143	40.7	-1	47.4	181	28.7	-16	20.3
7	158	21.9	283	01.9		19.5	74	55.0		28.0	158	43.2		47.5	196	31.1		20.3
8	173	24.3	298	01.2		20.3	89	58.1		28.1	173	45.8		47.5	211	33.5		20.3
9	188	26.8	313	00.4		21.1	105	01.1		28.2	188	48.3		47.5	226	35.9		20.2
10	203	29.3	327	59.7		21.9	120	04.2		28.3	203	50.9		47.5	241	38.2		20.2
11	218	31.7	342	58.9	-19	22.7	135	07.2	+24	28.4	218	53.4	-1	47.6	256	40.6	-16	20.2
12	233	34.2	357	58.2	-19	23.5	150	10.3	+24	28.5	233	56.0	-1	47.6	271	43.0	-16	20.1
13	248	36.7	12	57.4		24.3	165	13.4		28.6	248	58.5		47.6	286	45.3		20.1
14	263	39.1	27	56.7		25.1	180	16.4		28.7	264	01.0		47.6	301	47.7		20.1
15	278	41.6	42	55.9		25.9	195	19.5		28.8	279	03.6		47.6	316	50.1		20.0
16	293	44.0	57	55.2		26.7	210	22.6		28.9	294	06.1		47.7	331	52.5		20.0
17	308	46.5	72	54.4	-19	27.5	225	25.6	+24	29.0	309	08.7	-1	47.7	346	54.8	-16	20.0
18	323	49.0	87	53.7	-19	28.3	240	28.7	+24	29.1	324	11.2	-1	47.7	1	57.2	-16	19.9
19	338	51.4	102	52.9		29.1	255	31.8		29.2	339	13.8		47.7	16	59.6		19.9
20	353	53.9	117	52.1		29.9	270	34.8		29.3	354	16.3		47.8	32	01.9		19.9
21	8	56.4	132	51.4		30.7	285	37.9		29.4	9	18.8		47.8	47	04.3		19.8
22	23	58.8	147	50.6		31.5	300	41.0		29.5	24	21.4		47.8	62	06.7		19.8
23	39	01.3	162	49.9		32.3	315	44.1		29.6	39	23.9		47.8	77	09.1		19.8
24	54	03.8	177	49.1	-19	33.1	330	47.2	+24	29.7	54	26.5	-1	47.8	92	11.4	-16	19.8
Dif	—		-8		-8		+31		+1		+25		0		+24			

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna														
	SD: 16'2 PMG: 11 ^h 44 ^m 6			Edad: 20 ^d 5 PHE { SD: 14'8 PMG: 5 ^h 11 ^m																							
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°												
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m											
0	183	52.7	-18	25.0	284	45.9	+23	56.9	72	60 N	6 17	7 09	7 58	20 54	88	14 26	4										
1	198	52.6		25.7	299	17.0		49.7	72	58	12	7 01	46	21 10	83	14 09	9										
2	213	52.5		26.3	313	48.2		42.4	73	56	08	6 54	36	23 80		13 55	13										
3	228	52.4		27.0	328	19.4		35.0	74	54	05	48	28	35 76		43	16										
4	243	52.3		27.6	342	50.7		27.5	75	52	6 01	42	20	45 74		32	19										
5	258	52.2	-18	28.2	357	22.0	+23	19.9	76	50	5 58	6 37	7 13	21 55	71	13 22	21										
6	273	52.1	-18	28.9	11	53.4	+23	12.2	77	45	5 50	6 26	6 57	22 14	66	13 02	26										
7	288	52.0		29.5	26	24.8	+23	04.4	78	40	43	16	45	29 63		12 45	30										
8	303	51.9		30.1	40	56.3	+22	56.5	79	35	37	07	34	43 59		31	32										
9	318	51.8		30.8	55	27.8		48.5	80	30	31	6 00	25	22 54	57	12 19	35										
10	333	51.7		31.4	69	59.4		40.4	81	20	19	5 46	6 09	23 14	52	11 58	39										
11	348	51.6	-18	32.1	84	31.1	+22	32.2	82	10 N	5 07	5 32	5 54	23 30	49	11 39	43										
12	3	51.5	-18	32.7	99	02.8	+22	23.9	83	0	4 54	5 19	5 41	23 46	45	11 22	46										
13	18	51.4		33.3	113	34.5		15.5	84	10 S	39	5 05	27	** ** *	**	11 05	49										
14	33	51.3		34.0	128	06.3	+22	07.0	85	20	4 21	4 49	5 13	** ** *	**	10 46	53										
15	48	51.2		34.6	142	38.2	+21	58.4	86	30	3 59	30	4 56	0 01	37	25	56										
16	63	51.1		35.2	157	10.1		49.7	87	35	44	18	46	14 35		10 12	59										
17	78	51.0	-18	35.9	171	42.0	+21	40.9	88	40	3 27	4 04	4 35	0 30	32	9 57	62										
18	93	50.9	-18	36.5	186	14.1	+21	32.0	89	45	3 04	3 47	4 21	0 48	29	9 40	66										
19	108	50.8		37.1	200	46.1		23.0	90	50	2 34	26	4 05	1 11	24	18	70										
20	123	50.6		37.7	215	18.2		13.9	91	52	2 18	15	3 57	22	21	9 07	73										
21	138	50.5		38.4	229	50.4	+21	04.7	92	54	1 59	3 03	48	34 19		8 56	75										
22	153	50.4		39.0	244	22.6	+20	55.5	92	56	35	2 49	39	1 48	16	42	79										
23	168	50.3		39.6	258	54.9		46.1	94	58	1 00	33	27	2 04	12	26	84										
24	183	50.2	-18	40.3	273	27.2	+20	36.7	94	60 S	** ** *	2 13	3 15	2 24	6	8 07	89										
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO														
	PMG: 20 ^h 20 ^m 4			Mag: -3.9 PMG: 12 ^h 09 ^m			Mag: -1.6 PMG: 1 ^h 56 ^m			Mag: -2.7 PMG: 20 ^h 19 ^m			Mag: +0.7 PMG: 17 ^h 48 ^m														
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec													
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'											
0	54	03.8		177	49.1	-19	33.1		330	47.2	+24	29.7	54	26.5	-1	47.8											
1	69	06.2		192	48.4		33.9		345	50.2		29.8	69	29.0		47.9											
2	84	08.7		207	47.6		34.6		0	53.3		29.9	84	31.5		47.9											
3	99	11.2		222	46.8		35.4		15	56.4		30.0	99	34.1		47.9											
4	114	13.6		237	46.1		36.2		30	59.5		30.1	114	36.6		47.9											
5	129	16.1		252	45.3	-19	37.0		46	02.6	+24	30.2	129	39.1	-1	47.9											
6	144	18.5		267	44.6	-19	37.8		61	05.7	+24	30.3	144	41.7	-1	48.0											
7	159	21.0		282	43.8		38.6		76	08.8		30.4	159	44.2		48.0											
8	174	23.5		297	43.0		39.3		91	11.9		30.5	174	46.8		48.0											
9	189	25.9		312	42.3		40.1		106	15.0		30.6	189	49.3		48.0											
10	204	28.4		327	41.5		40.9		121	18.1		30.7	204	51.8		48.0											
11	219	30.9		342	40.7	-19	41.7		136	21.2	+24	30.8	219	54.4	-1	48.1											
12	234	33.3		357	40.0	-19	42.5		151	24.3	+24	30.9	234	56.9	-1	48.1											
13	249	35.8		12	39.2		43.2		166	27.4		31.0	249	59.4		48.1											
14	264	38.3		27	38.4		44.0		181	30.5		31.1	265	02.0		48.1											
15	279	40.7		42	37.7		44.8		196	33.6		31.2	280	04.5		48.1											
16	294	43.2		57	36.9		45.6		211	36.7		31.3	295	07.0		48.1											
17	309	45.7		72	36.1	-19	46.3		226	39.8	+24	31.4	310	09.6	-1	48.2											
18	324	48.1		87	35.4	-19	47.1		241	42.9	+24	31.5	325	12.1	-1	48.2											
19	339	50.6		102	34.6		47.9		256	46.0		31.6	340	14.6		48.2											
20	354	53.0		117	33.8		48.7		271	49.1		31.7	355	17.2		48.2											
21	9	55.5		132	33.1		49.4		286	52.2		31.8	10	19.7		48.2											
22	24	58.0		147	32.3		50.2		301	55.3		31.9	25	22.2		48.3											
23	40	00.4		162	31.5		51.0		316	58.5		32.0	40	24.8		48.3											
24	55	02.9		177	30.8	-19	51.7		332	01.6	+24	32.1	55	27.3	-1	48.3											
Dif	—			-8			-8			+31			+1			+25			0			+24			0		

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16°2			Edad: 21 ^d 5 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7											
	PMG: 11 ^h 44 ^m 7			SD: 14'8											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	m	h m m	m
0	183	50.2	-18 40.3	273	27.2	+20 36.7		60 N	15 29	16 18	17 10	22 22 88	14 30 2		
1	198	50.1		40.9	287 59.6 ¹³⁴	27.1 ⁹⁶		58	40	26	14	33 83	18 7		
2	213	50.0		41.5	302 32.0 ¹³⁴	17.5 ⁹⁶		56	50	33	19	43 79	14 08 10		
3	228	49.9		42.1	317 04.4 ¹³⁴	+20 07.8 ⁹⁷		54	15 59	39	23	51 77	13 59 12		
4	243	49.8		42.8	331 37.0 ¹³⁶	+19 57.9 ⁹⁹		52	16 08	45	26	22 59 74	51 15		
5	258	49.7	-18 43.4		346 09.5 ¹³⁵	+19 48.0 ⁹⁹		50	16 15	16 50	17 30	23 06 71	13 43 18		
6	273	49.5	-18 44.0		0 42.1 ¹³⁶	+19 38.0 ¹⁰⁰		45	16 30	17 02	17 38	23 20 67	13 28 21		
7	288	49.4		44.6	15 14.8 ¹³⁷	28.0 ¹⁰⁰		40	43	12	45	32 62	15 25		
8	303	49.3		45.3	29 47.5 ¹³⁷	17.8 ¹⁰²		35	16 54	21	51	42 59	13 03 29		
9	318	49.2		45.9	44 20.2 ¹³⁷	+19 07.6 ¹⁰²		30	17 03	29	17 58	23 51 56	12 54 31		
10	333	49.1		46.5	58 53.0 ¹³⁸	+18 57.2 ¹⁰⁴		20	20	43	18 10	** ** *	37 36		
11	348	49.0	-18 47.1		73 25.9 ¹³⁹	+18 46.8 ¹⁰⁴		10 N	17 35	17 57	18 22	** ** *	12 22 40		
12	3	48.9	-18 47.7		87 58.7 ¹³⁸	+18 36.3 ¹⁰⁵		0	17 48	18 10	18 36	** ** *	12 08 44		
13	18	48.7		48.4	102 31.7 ¹⁴⁰	25.7 ¹⁰⁶		10 S	18 02	25	18 51	0 02 41	11 54 47		
14	33	48.6		49.0	117 04.6 ¹³⁹	15.1 ¹⁰⁶		20	17	18 41	19 09	19 37	39 51		
15	48	48.5		49.6	131 37.7 ¹⁴¹	+18 04.3 ¹⁰⁸		30	34	19 01	32	38 33	21 57		
16	63	48.4		50.2	146 10.7 ¹⁴⁰	+17 53.5 ¹⁰⁸		35	45	13	19 47	0 49 30	11 11 59		
17	78	48.3	-18 50.8		160 43.8 ¹⁴¹	+17 42.6 ¹⁰⁹		40	18 56	19 27	20 05	1 02 27	10 59 63		
18	93	48.2	-18 51.5		175 16.9 ¹⁴¹	+17 31.6 ¹¹⁰		45	19 10	19 44	20 28	1 17 23	10 46 66		
19	108	48.0		52.1	189 50.1 ¹⁴²	20.5 ¹¹¹		50	27	20 06	20 59	35 19	28 72		
20	123	47.9		52.7	204 23.3 ¹⁴²	+17 09.4 ¹¹¹		52	35	17	21 15	43 17	20 74		
21	138	47.8		53.3	218 56.6 ¹⁴³	+16 58.1 ¹¹³		54	44	30	21 35	1 53 14	11 77		
22	153	47.7		53.9	233 29.9 ¹⁴³	46.8 ¹¹³		56	19 54	20 44	22 02	2 04 11	10 01 80		
23	168	47.6		54.5	248 03.2 ¹⁴³	35.5 ¹¹³		58	20 06	21 01	22 42	16 7	9 50 83		
24	183	47.5	-18 55.2		262 36.6 ¹⁴⁴	+16 24.0 ¹¹⁵		60 S	20 19	21 23	** ** *	2 30 3	9 36 88		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 16 ^m 5		Mag: -3.9 PMG: 12 ^h 11 ^m			Mag: -1.6 PMG: 1 ^h 52 ^m			Mag: -2.7 PMG: 20 ^h 15 ^m			Mag: +0.7 PMG: 17 ^h 45 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	55	02.9	177 30.8	-19 51.7		332 01.6	+24 32.1		55	27.3	-1 48.3	93 08.2	-16 19.0		
1	70	05.4	192 30.0		52.5	347 04.7	32.2		70	29.8	48.3	108 10.6	18.9		
2	85	07.8	207 29.2		53.3	2 07.8	32.3		85	32.4	48.3	123 13.0	18.9		
3	100	10.3	222 28.4		54.0	17 10.9	32.4		100	34.9	48.3	138 15.3	18.9		
4	115	12.8	237 27.7		54.8	32 14.1	32.5		115	37.4	48.4	153 17.7	18.8		
5	130	15.2	252 26.9	-19 55.5		47 17.2	+24 32.6		130	40.0	-1 48.4	168 20.1	-16 18.8		
6	145	17.7	267 26.1	-19 56.3		62 20.3	+24 32.7		145	42.5	-1 48.4	183 22.4	-16 18.8		
7	160	20.1	282 25.3		57.1	77 23.5	32.8		160	45.0	48.4	198 24.8	18.7		
8	175	22.6	297 24.6		57.8	92 26.6	32.9		175	47.6	48.4	213 27.2	18.7		
9	190	25.1	312 23.8		58.6	107 29.7	33.0		190	50.1	48.4	228 29.5	18.7		
10	205	27.5	327 23.0	-19 59.3		122 32.9	33.1		205	52.6	48.5	243 31.9	18.6		
11	220	30.0	342 22.2	-20 00.1		137 36.0	+24 33.2		220	55.1	-1 48.5	258 34.3	-16 18.6		
12	235	32.5	357 21.5	-20 00.9		152 39.1	+24 33.3		235	57.7	-1 48.5	273 36.6	-16 18.5		
13	250	34.9	12 20.7		01.6	167 42.3	33.4		251	00.2	48.5	288 39.0	18.5		
14	265	37.4	27 19.9		02.4	182 45.4	33.5		266	02.7	48.5	303 41.4	18.5		
15	280	39.9	42 19.1		03.1	197 48.5	33.6		281	05.2	48.5	318 43.7	18.4		
16	295	42.3	57 18.3		03.9	212 51.7	33.7		296	07.8	48.5	333 46.1	18.4		
17	310	44.8	72 17.6	-20 04.6		227 54.8	+24 33.8		311	10.3	-1 48.6	348 48.4	-16 18.4		
18	325	47.3	87 16.8	-20 05.4		242 58.0	+24 33.9		326	12.8	-1 48.6	3 50.8	-16 18.3		
19	340	49.7	102 16.0		06.1	258 01.1	34.0		341	15.4	48.6	18 53.2	18.3		
20	355	52.2	117 15.2		06.9	273 04.3	34.1		356	17.9	48.6	33 55.5	18.3		
21	10	54.6	132 14.4		07.6	288 07.4	34.2		11	20.4	48.6	48 57.9	18.2		
22	25	57.1	147 13.7		08.4	303 10.6	34.3		26	22.9	48.6	64 00.3	18.2		
23	40	59.6	162 12.9		09.1	318 13.7	34.4		41	25.5	48.7	79 02.6	18.2		
24	56	02.0	177 12.1	-20 09.8		333 16.9	+24 34.5		56	28.0	-1 48.7	94 05.0	-16 18.1		
Dif	—		-8	-8		+31	+1		+25	0		+24	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 9			Edad: 22 ^d 5 PHE { 4 ^h : 54'9 12 ^h : 55'0 20 ^h : 55'2 SD: 14'9 320 50.4 ¹⁴⁵ PMG: 6 ^h 41 ^m R°: 43 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	
0	183	47.5	-18	55.2	262	36.6	+16	24.0	60 N	6 21	7 13	8 03	23 50	86	14 32 2	
1	198	47.3		55.8	277	10.0 ¹⁴⁴		12.5 ¹¹⁵	58	16	7 05	7 51	23 56	84	25 4	
2	213	47.2		56.4	291	43.4 ¹⁴⁴	+16	00.9 ¹¹⁶	56	12	6 58	40	** ** *	**	18 7	
3	228	47.1		57.0	306	16.9 ¹⁴⁵	+15	49.2 ¹¹⁷	54	08	51	31	** ** *	**	11 1	
4	243	47.0		57.6	320	50.4 ¹⁴⁵		37.4 ¹¹⁸	52	04	45	23	** ** *	**	06 12	
5	258	46.9	-18	58.2	335	24.0 ¹⁴⁶	+15	25.6 ¹¹⁸	50	6 00	6 40	7 16	** ** *	**	14 01 14	
6	273	46.7	-18	58.8	349	57.5 ¹⁴⁵	+15	13.7 ¹¹⁹	45	5 52	6 28	7 00	** ** *	**	13 49 20	
7	288	46.6	-18	59.4	4	31.1 ¹⁴⁶	+15	01.8 ¹¹⁹	40	45	18	6 47	** ** *	**	40 23	
8	303	46.5	-19	00.0	19	04.8 ¹⁴⁷	+14	49.7 ¹²¹	35	39	09	36	** ** *	**	32 27	
9	318	46.4	-19	00.7	33	38.4 ¹⁴⁶		37.6 ¹²¹	30	32	6 01	27	** ** *	**	25 30	
10	333	46.2		01.3	48	12.1 ¹⁴⁷		25.5 ¹²¹	20	20	5 47	6 10	0 06	51	13 34	
11	348	46.1	-19	01.9	62	45.9 ¹⁴⁸	+14	13.2 ¹²³	10 N	5 07	5 33	5 55	0 19	47	13 02 39	
12	3	46.0	-19	02.5	77	19.6 ¹⁴⁷	+14	00.9 ¹²³	0	4 54	5 19	5 41	0 31	43	12 52 43	
13	18	45.9		03.1	91	53.4 ¹⁴⁸	+13	48.5 ¹²⁴	10 S	39	5 05	27	43	39	41 47	
14	33	45.7		03.7	106	27.2 ¹⁴⁸		36.1 ¹²⁴	20	4 21	4 49	5 12	0 56	35	30 52	
15	48	45.6		04.3	121	01.0 ¹⁴⁸		23.6 ¹²⁵	30	3 57	29	4 55	1 11	30	18 56	
16	63	45.5		04.9	135	34.9 ¹⁴⁹	+13	11.0 ¹²⁶	35	43	17	45	19	28	10 60	
17	78	45.4	-19	05.5	150	08.8 ¹⁴⁹	+12	58.4 ¹²⁶	40	3 24	4 02	4 33	1 29	24	12 02 63	
18	93	45.2	-19	06.1	164	42.7 ¹⁴⁹	+12	45.7 ¹²⁷	45	3 01	3 45	4 19	1 40	21	11 52 67	
19	108	45.1		06.7	179	16.6 ¹⁴⁹		32.9 ¹²⁸	50	2 30	23	4 02	1 54	16	40 72	
20	123	45.0		07.3	193	50.5 ¹⁴⁹		20.1 ¹²⁸	52	2 14	3 12	3 54	2 00	14	34 74	
21	138	44.9		07.9	208	24.5 ¹⁵⁰	+12	07.2 ¹²⁹	54	1 54	2 59	45	07	11	28 77	
22	153	44.7		08.5	222	58.5 ¹⁵⁰	+11	54.3 ¹²⁹	56	1 27	45	35	15	8	21 80	
23	168	44.6		09.1	237	32.5 ¹⁵⁰		41.3 ¹³⁰	58	0 47	28	23	23	6	13 83	
24	183	44.5	-19	09.7	252	06.5 ¹⁵⁰	+11	28.2 ¹³¹	60 S	** ** *	2 06	3 10	2 33	2	11 04 87	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 12 ^m 5			Mag: -3.9 PMG: 12 ^h 12 ^m			Mag: -1.6 PMG: 1 ^h 47 ^m			Mag: -2.7 PMG: 20 ^h 11 ^m			Mag: +0.7 PMG: 17 ^h 41 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	56	02.0	177	12.1	-20	09.8	333	16.9	+24	34.5	56	28.0	-1	48.7	94	05.0
1	71	04.5	192	11.3		10.6	348	20.0		34.6	71	30.5		48.7	109	07.3
2	86	07.0	207	10.5		11.3	3	23.2		34.7	86	33.0		48.7	124	09.7
3	101	09.4	222	09.7		12.1	18	26.4		34.8	101	35.5		48.7	139	12.1
4	116	11.9	237	08.9		12.8	33	29.5		34.9	116	38.1		48.7	154	14.4
5	131	14.4	252	08.2	-20	13.5	48	32.7	+24	35.0	131	40.6	-1	48.7	169	16.8
6	146	16.8	267	07.4	-20	14.3	63	35.8	+24	35.1	146	43.1	-1	48.7	184	19.1
7	161	19.3	282	06.6		15.0	78	39.0		35.2	161	45.6		48.8	199	21.5
8	176	21.8	297	05.8		15.8	93	42.2		35.3	176	48.2		48.8	214	23.9
9	191	24.2	312	05.0		16.5	108	45.4		35.4	191	50.7		48.8	229	26.2
10	206	26.7	327	04.2		17.2	123	48.5		35.5	206	53.2		48.8	244	28.6
11	221	29.1	342	03.4	-20	18.0	138	51.7	+24	35.6	221	55.7	-1	48.8	259	30.9
12	236	31.6	357	02.6	-20	18.7	153	54.9	+24	35.7	236	58.2	-1	48.8	274	33.3
13	251	34.1	12	01.9		19.4	168	58.0		35.8	252	00.8		48.8	289	35.7
14	266	36.5	27	01.1		20.1	184	01.2		35.9	267	03.3		48.8	304	38.0
15	281	39.0	42	00.3		20.9	199	04.4		35.9	282	05.8		48.9	319	40.4
16	296	41.5	56	59.5		21.6	214	07.6		36.0	297	08.3		48.9	334	42.7
17	311	43.9	71	58.7	-20	22.3	229	10.8	+24	36.1	312	10.8	-1	48.9	349	45.1
18	326	46.4	86	57.9	-20	23.1	244	13.9	+24	36.2	327	13.4	-1	48.9	4	47.5
19	341	48.9	101	57.1		23.8	259	17.1		36.3	342	15.9		48.9	19	49.8
20	356	51.3	116	56.3		24.5	274	20.3		36.4	357	18.4		48.9	34	52.2
21	11	53.8	131	55.5		25.2	289	23.5		36.5	12	20.9		48.9	49	54.5
22	26	56.2	146	54.7		25.9	304	26.7		36.6	27	23.4		48.9	64	56.9
23	41	58.7	161	53.9		26.7	319	29.9		36.7	42	25.9		48.9	79	59.3
24	57	01.2	176	53.1	-20	27.4	334	33.1	+24	36.8	57	28.5	-1	49.0	95	01.6
Dif	—		-8	-7			+32	+1			+25	0			+24	0

UT	SOL		 LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 45 ^m 1		Edad: 23 ^d 5 PHE { 4 ^h : 55/4 12 ^h : 55/7 20 ^h : 55/9 Rº: 43 ^m																
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	Rº	Hora	Rº					
h	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m						
0	183	44.5	-19 09.7	252	06.5	+11 28.2	60 N	15 24	16 14	17 07	** ** *		14 34	0					
1	198	44.4	10.3	266	40.5 ¹⁵⁰	15.1 ¹³¹	58	37	23	12	** ** *		29	4					
2	213	44.2	10.9	281	14.6 ¹⁵¹	+11 01.9 ¹³²	56	47	30	16	0 02 80		25	7					
3	228	44.1	11.5	295	48.6 ¹⁵⁰	+10 48.6 ¹³³	54	15 57	37	20	08 77		22	9					
4	243	44.0	12.1	310	22.7 ¹⁵¹	35.3 ¹³³	52	16 05	43	24	13 74		18	12					
5	258	43.8	-19 12.7	324	56.8 ¹⁵¹	+10 22.0 ¹³³	50	16 12	16 48	17 28	0 17 72		14 15	14					
6	273	43.7	-19 13.3	339	30.9 ¹⁵¹	+10 08.6 ¹³⁴	45	16 28	17 00	17 36	0 27 67		14 09	18					
7	288	43.6	13.9	354	05.0 ¹⁵¹	+9 55.1 ¹³⁵	40	42	11	44	34 64		14 03	23					
8	303	43.4	14.5	8	39.1 ¹⁵¹	41.6 ¹³⁵	35	16 53	20	51	41 60		13 59	25					
9	318	43.3	15.1	23	13.2 ¹⁵¹	28.0 ¹³⁶	30	17 03	28	17 57	47 57		55	28					
10	333	43.2	15.7	37	47.3 ¹⁵¹	14.4 ¹³⁶	20	20	43	18 10	0 57 51		47	34					
11	348	43.1	-19 16.3	52	21.5 ¹⁵²	+9 00.7 ¹³⁷	10 N	17 35	17 57	18 22	1 06 47		13 41	38					
12	3	42.9	-19 16.9	66	55.6 ¹⁵¹	+8 47.0 ¹³⁷	0	17 49	18 11	18 36	1 14 43		13 35	42					
13	18	42.8	17.5	81	29.7 ¹⁵¹	33.2 ¹³⁸	10 S	18 03	25	18 52	22 39		28	47					
14	33	42.7	18.1	96	03.9 ¹⁵²	19.4 ¹³⁸	20	18	18 42	19 10	31 34		22	51					
15	48	42.5	18.6	110	38.0 ¹⁵¹	+8 05.5 ¹³⁹	30	36	19 02	34	41 29		14	57					
16	63	42.4	19.2	125	12.2 ¹⁵²	+7 51.6 ¹³⁹	35	47	15	19 49	47 26		10	60					
17	78	42.3	-19 19.8	139	46.3 ¹⁵¹	+7 37.6 ¹⁴⁰	40	18 59	19 29	20 08	1 53 23		13 05	63					
18	93	42.1	-19 20.4	154	20.5 ¹⁵²	+7 23.6 ¹⁴⁰	45	19 13	19 47	20 31	2 01 18		12 59	68					
19	108	42.0	21.0	168	54.6 ¹⁵¹	+7 09.5 ¹⁴¹	50	30	20 10	21 04	10 14		52	72					
20	123	41.8	21.6	183	28.8 ¹⁵²	+6 55.4 ¹⁴¹	52	39	21	21	14 12		48	75					
21	138	41.7	22.2	198	02.9 ¹⁵¹	41.3 ¹⁴¹	54	48	34	21 42	18 10		45	77					
22	153	41.6	22.8	212	37.0 ¹⁵¹	27.1 ¹⁴²	56	19 58	20 49	22 10	23 7		41	80					
23	168	41.4	23.3	227	11.2 ¹⁵²	+6 12.9 ¹⁴²	58	20 10	21 07	22 58	29 4		36	84					
24	183	41.3	-19 23.9	241	45.3 ¹⁵¹	+5 58.6 ¹⁴³	60 S	20 24	21 30	** ** *	2 35 1		12 31	87					
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO									
	PMG: 20 ^h 08 ^m 6		Mag: -3.9 PMG: 12 ^h 13 ^m		Mag: -1.6 PMG: 1 ^h 41 ^m		Mag: -2.7 PMG: 20 ^h 07 ^m			Mag: +0.7 PMG: 17 ^h 37 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'							
0	57	01.2	176	53.1	-20	27.4	334	33.1	+24	36.8	57	28.5	-1	49.0	95	01.6	-16	17.3	
1	72	03.6	191	52.3		28.1	349	36.3		36.9	72	31.0		49.0	110	04.0		17.2	
2	87	06.1	206	51.5		28.8	4	39.4		37.0	87	33.5		49.0	125	06.3		17.2	
3	102	08.6	221	50.7		29.5	19	42.6		37.1	102	36.0		49.0	140	08.7		17.2	
4	117	11.0	236	49.9		30.3	34	45.8		37.2	117	38.5		49.0	155	11.0		17.1	
5	132	13.5	251	49.1	-20	31.0	49	49.0	+24	37.3	132	41.0	-1	49.0	170	13.4	-16	17.1	
6	147	16.0	266	48.3	-20	31.7	64	52.2	+24	37.4	147	43.5	-1	49.0	185	15.8	-16	17.1	
7	162	18.4	281	47.5		32.4	79	55.4		37.5	162	46.1		49.0	200	18.1		17.0	
8	177	20.9	296	46.7		33.1	94	58.6		37.5	177	48.6		49.0	215	20.5		17.0	
9	192	23.4	311	45.9		33.8	110	01.8		37.6	192	51.1		49.0	230	22.8		16.9	
10	207	25.8	326	45.1		34.5	125	05.0		37.7	207	53.6		49.1	245	25.2		16.9	
11	222	28.3	341	44.3	-20	35.2	140	08.3	+24	37.8	222	56.1	-1	49.1	260	27.5	-16	16.9	
12	237	30.7	356	43.5	-20	35.9	155	11.5	+24	37.9	237	58.6	-1	49.1	275	29.9	-16	16.8	
13	252	33.2	11	42.7		36.7	170	14.7		38.0	253	01.1		49.1	290	32.2		16.8	
14	267	35.7	26	41.9		37.4	185	17.9		38.1	268	03.6		49.1	305	34.6		16.8	
15	282	38.1	41	41.1		38.1	200	21.1		38.2	283	06.2		49.1	320	37.0		16.7	
16	297	40.6	56	40.3		38.8	215	24.3		38.3	298	08.7		49.1	335	39.3		16.7	
17	312	43.1	71	39.5	-20	39.5	230	27.5	+24	38.4	313	11.2	-1	49.1	350	41.7	-16	16.6	
18	327	45.5	86	38.7	-20	40.2	245	30.7	+24	38.5	328	13.7	-1	49.1	5	44.0	-16	16.6	
19	342	48.0	101	37.9		40.9	260	34.0		38.6	343	16.2		49.1	20	46.4		16.6	
20	357	50.5	116	37.1		41.6	275	37.2		38.7	358	18.7		49.1	35	48.7		16.5	
21	12	52.9	131	36.3		42.3	290	40.4		38.7	13	21.2		49.1	50	51.1		16.5	
22	27	55.4	146	35.5		43.0	305	43.6		38.8	28	23.7		49.1	65	53.4		16.5	
23	42	57.9	161	34.7		43.7	320	46.9		38.9	43	26.2		49.2	80	55.8		16.4	
24	58	00.3	176	33.9	-20	44.4	335	50.1	+24	39.0	58	28.7	-1	49.2	95	58.1	-16	16.4	
Dif	—		-8		-7		+32		+1		+25		0		+24				

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 45 ^m 4			Edad: 24 ^d 5 PHE { 4 ^h : 56/2 12 ^h : 56/4 20 ^h : 56/7 SD: 15/3 PMG: 8 ^h 07 ^m R°: 43 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	41.3	-19	23.9	241	45.3	+5	58.6	60 N	6	25	7	17	8	08	1	16	
1	198	41.2		24.5	256	19.4 ¹⁵¹		44.3 ¹⁴³	58		20	09	7	55	20	84		
2	213	41.0		25.1	270	53.5 ¹⁵¹		29.9 ¹⁴⁴	56	15	7	01	44	22	82	32	6	
3	228	40.9		25.7	285	27.5 ¹⁵⁰		15.5 ¹⁴⁴	54	11	6	55	35	25	79	31	9	
4	243	40.8		26.3	300	01.6 ¹⁵¹	+5	01.0 ¹⁴⁵	52		07	49	27	27	76	30	12	
5	258	40.6	-19	26.9	314	35.7 ¹⁵¹	+4	46.6 ¹⁴⁴	50	6	03	6	43	7	19	1	29	
6	273	40.5	-19	27.4	329	09.7 ¹⁵⁰	+4	32.1 ¹⁴⁵	45	5	55	6	31	7	03	1	34	
7	288	40.3		28.0	343	43.7 ¹⁵⁰		17.5 ¹⁴⁶	40	47		20	6	49	38	64		
8	303	40.2		28.6	358	17.8 ¹⁵¹	+4	02.9 ¹⁴⁶	35	40		11	38	41	61	24	26	
9	318	40.1		29.2	12	51.7 ¹⁴⁹	+3	48.3 ¹⁴⁶	30	34	6	03	28	44	57	23	29	
10	333	39.9		29.8	27	25.7 ¹⁵⁰		33.6 ¹⁴⁷	20	21	5	48	6	11	48	53		
11	348	39.8	-19	30.3	41	59.7 ¹⁵⁰	+3	18.9 ¹⁴⁷	10 N	5	08	5	34	5	56	1	53	
12	3	39.6	-19	30.9	56	33.6 ¹⁴⁹	+3	04.2 ¹⁴⁷	0	4	54	5	20	5	42	1	57	
13	18	39.5		31.5	71	07.5 ¹⁴⁹	+2	49.5 ¹⁴⁷	10 S	39	5	05	27	2	01	39	15	
14	33	39.4		32.1	85	41.4 ¹⁴⁹		34.7 ¹⁴⁸	20	4	20	4	48	5	12	05	34	
15	48	39.2		32.6	100	15.2 ¹⁴⁸		19.9 ¹⁴⁸	30	3	56	28	4	54	10	29		
16	63	39.1		33.2	114	49.1 ¹⁴⁹	+2	05.0 ¹⁴⁹	35	41		15	44	13	25			
17	78	38.9	-19	33.8	129	22.9 ¹⁴⁸	+1	50.2 ¹⁴⁸	40	3	22	4	01	4	32			
18	93	38.8	-19	34.4	143	56.6 ¹⁴⁷	+1	35.3 ¹⁴⁹	45	2	59	3	43	4	17			
19	108	38.6		34.9	158	30.4 ¹⁴⁸		20.3 ¹⁵⁰	50	26		20	4	00	24	13		
20	123	38.5		35.5	173	04.1 ¹⁴⁷	+1	05.4 ¹⁴⁹	52	2	09	3	09	3	51			
21	138	38.3		36.1	187	37.8 ¹⁴⁷	+0	50.4 ¹⁵⁰	54	1	48	2	56	4	2			
22	153	38.2		36.7	202	11.4 ¹⁴⁶		35.4 ¹⁵⁰	56	1	19		41	32	30	7		
23	168	38.1		37.2	216	45.0 ¹⁴⁶		20.4 ¹⁵⁰	58	0	32		23	20	33	4		
24	183	37.9	-19	37.8	231	18.6 ¹⁴⁶	+0	05.4 ¹⁵⁰	60 S	**	**	2	00	3	06			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 20 ^h 04 ^m 7		Mag: -3.9 PMG: 12 ^h 14 ^m				Mag: -1.6 PMG: 1 ^h 36 ^m				Mag: -2.7 PMG: 20 ^h 03 ^m				Mag: +0.7 PMG: 17 ^h 33 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	58	00.3	176	33.9	-20	44.4	335	50.1	+24	39.0	58	28.7	-1	49.2	95	58.1	-16	16.4
1	73	02.8	191	33.0		45.1	350	53.3		39.1	73	31.3		49.2	111	00.5		16.4
2	88	05.2	206	32.2		45.7	5	56.5		39.2	88	33.8		49.2	126	02.9		16.3
3	103	07.7	221	31.4		46.4	20	59.8		39.3	103	36.3		49.2	141	05.2		16.3
4	118	10.2	236	30.6		47.1	36	03.0		39.4	118	38.8		49.2	156	07.6		16.2
5	133	12.6	251	29.8	-20	47.8	51	06.2	+24	39.5	133	41.3	-1	49.2	171	09.9	-16	16.2
6	148	15.1	266	29.0	-20	48.5	66	09.5	+24	39.6	148	43.8	-1	49.2	186	12.3	-16	16.2
7	163	17.6	281	28.2		49.2	81	12.7		39.6	163	46.3		49.2	201	14.6		16.1
8	178	20.0	296	27.4		49.9	96	15.9		39.7	178	48.8		49.2	216	17.0		16.1
9	193	22.5	311	26.6		50.6	111	19.2		39.8	193	51.3		49.2	231	19.3		16.0
10	208	25.0	326	25.7		51.3	126	22.4		39.9	208	53.8		49.2	246	21.7		16.0
11	223	27.4	341	24.9	-20	51.9	141	25.7	+24	40.0	223	56.3	-1	49.2	261	24.0	-16	16.0
12	238	29.9	356	24.1	-20	52.6	156	28.9	+24	40.1	238	58.8	-1	49.2	276	26.4	-16	15.9
13	253	32.3	11	23.3		53.3	171	32.1		40.2	254	01.3		49.2	291	28.7		15.9
14	268	34.8	26	22.5		54.0	186	35.4		40.3	269	03.8		49.2	306	31.1		15.9
15	283	37.3	41	21.7		54.7	201	38.6		40.4	284	06.3		49.2	321	33.4		15.8
16	298	39.7	56	20.9		55.3	216	41.9		40.4	299	08.8		49.3	336	35.8		15.8
17	313	42.2	71	20.0	-20	56.0	231	45.1	+24	40.5	314	11.3	-1	49.3	351	38.1	-16	15.7
18	328	44.7	86	19.2	-20	56.7	246	48.4	+24	40.6	329	13.8	-1	49.3	6	40.5	-16	15.7
19	343	47.1	101	18.4		57.4	261	51.6		40.7	344	16.3		49.3	21	42.8		15.7
20	358	49.6	116	17.6		58.1	276	54.9		40.8	359	18.8		49.3	36	45.2		15.6
21	13	52.1	131	16.8		58.7	291	58.1		40.9	14	21.3		49.3	51	47.5		15.6
22	28	54.5	146	15.9	-20	59.4	307	01.4		41.0	29	23.8		49.3	66	49.9		15.5
23	43	57.0	161	15.1	-21	00.1	322	04.7		41.1	44	26.3		49.3	81	52.2		15.5
24	58	59.5	176	14.3	-21	00.7	337	07.9	+24	41.2	59	28.8	-1	49.3	96	54.6	-16	15.5
Dif	—		-8		-7		+32		+1		+25		0		+24			

UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 25 ^d 5 PHE { 4 ^h : 57:0 12 ^h : 57:3 20 ^h : 57:5					Civil			Hora		Hora	
	PMG: 11 ^h 45 ^m 6			SD: 15:5							R°				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	37.9	-19 37.8	231	18.6	+0 05.4	60 N	15 20	16 11	17 04	2 45 92	14 35 1			
1	198	37.8	38.4	245	52.1 ¹⁴⁵	-0 09.7 ¹⁵¹	58	33	20	09	44 89	37 4			
2	213	37.6	38.9	260	25.6 ¹⁴⁵	24.8 ¹⁵¹	56	44	27	14	44 85	38 8			
3	228	37.5	39.5	274	59.1 ¹⁴⁵	39.9 ¹⁵¹	54	15 54	34	18	44 82	40 10			
4	243	37.3	40.1	289	32.5 ¹⁴⁴	-0 55.0 ¹⁵¹	52	16 02	41	22	43 80	42 12			
5	258	37.2	-19 40.6	304	05.8 ¹⁴³	-1 10.1 ¹⁵¹	50	16 10	16 46	17 26	2 43 77	14 43 15			
6	273	37.0	-19 41.2	318	39.2 ¹⁴⁴	-1 25.2 ¹⁵¹	45	16 27	16 59	17 35	2 43 71	14 46 20			
7	288	36.9	41.8	333	12.5 ¹⁴³	40.4 ¹⁵²	40	40	17 10	43	42 67	48 25			
8	303	36.7	42.3	347	45.7 ¹⁴²	-1 55.6 ¹⁵²	35	16 52	19	50	42 63	50 28			
9	318	36.6	42.9	2	18.9 ¹⁴²	-2 10.8 ¹⁵²	30	17 02	27	17 57	41 61	52 31			
10	333	36.4	43.5	16	52.0 ¹⁴¹	25.9 ¹⁵¹	20	19	43	18 10	41 54	55 37			
11	348	36.3	-19 44.0	31	25.1 ¹⁴¹	-2 41.1 ¹⁵²	10 N	17 35	17 57	18 23	2 40 50	14 58 42			
12	3	36.1	-19 44.6	45	58.1 ¹⁴⁰	-2 56.4 ¹⁵³	0	17 49	18 11	18 37	2 40 45	15 01 46			
13	18	36.0	45.2	60	31.1 ¹⁴⁰	-3 11.6 ¹⁵²	10 S	18 04	26	18 53	40 40	04 51			
14	33	35.8	45.7	75	04.0 ¹³⁹	26.8 ¹⁵²	20	20	18 43	19 12	39 36	07 55			
15	48	35.7	46.3	89	36.9 ¹³⁹	42.0 ¹⁵²	30	38	19 04	36	39 30	10 61			
16	63	35.5	46.9	104	09.7 ¹³⁸	-3 57.3 ¹⁵³	35	18 49	17	19 52	38 27	12 65			
17	78	35.4	-19 47.4	118	42.5 ¹³⁸	-4 12.5 ¹⁵²	40	19 01	19 32	20 11	2 38 24	15 14 69			
18	93	35.2	-19 48.0	133	15.2 ¹³⁷	-4 27.7 ¹⁵²	45	19 16	19 50	20 35	2 38 19	15 16 74			
19	108	35.1	48.5	147	47.8 ¹³⁶	43.0 ¹⁵³	50	34	20 14	21 08	37 15	19 79			
20	123	34.9	49.1	162	20.4 ¹³⁶	-4 58.2 ¹⁵²	52	42	25	26	37 13	21 81			
21	138	34.8	49.7	176	52.9 ¹³⁵	-5 13.4 ¹⁵²	54	19 52	39	21 49	37 10	22 84			
22	153	34.6	50.2	191	25.4 ¹³⁵	28.7 ¹⁵³	56	20 02	20 54	22 20	37 7	24 87			
23	168	34.5	50.8	205	57.7 ¹³³	43.9 ¹⁵²	58	15	21 13	23 22	37 4	26 90			
24	183	34.3	-19 51.3	220	30.1 ¹³⁴	-5 59.1 ¹⁵²	60 S	20 29	21 37	** **	2 36 1	15 28 94			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 20 ^h 00 ^m 7		Mag: -3.9 PMG: 12 ^h 16 ^m			Mag: -1.7 PMG: 1 ^h 31 ^m			Mag: -2.7 PMG: 19 ^h 59 ^m			Mag: +0.7 PMG: 17 ^h 30 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'		
0	58	59.5	176 14.3	-21 00.7	337 07.9	+24 41.2	59 28.8	-1 49.3	96 54.6	-16 15.5					
1	74	01.9	191 13.5	01.4	352 11.2	41.2	74 31.3	49.3	111 56.9	15.4					
2	89	04.4	206 12.7	02.1	7 14.4	41.3	89 33.8	49.3	126 59.3	15.4					
3	104	06.8	221 11.8	02.7	22 17.7	41.4	104 36.3	49.3	142 01.6	15.4					
4	119	09.3	236 11.0	03.4	37 21.0	41.5	119 38.8	49.3	157 04.0	15.3					
5	134	11.8	251 10.2	-21 04.1	52 24.2	+24 41.6	134 41.3	-1 49.3	172 06.3	-16 15.3					
6	149	14.2	266 09.4	-21 04.7	67 27.5	+24 41.7	149 43.8	-1 49.3	187 08.7	-16 15.2					
7	164	16.7	281 08.5	05.4	82 30.8	41.8	164 46.3	49.3	202 11.0	15.2					
8	179	19.2	296 07.7	06.1	97 34.0	41.8	179 48.8	49.3	217 13.4	15.2					
9	194	21.6	311 06.9	06.7	112 37.3	41.9	194 51.3	49.3	232 15.7	15.1					
10	209	24.1	326 06.1	07.4	127 40.6	42.0	209 53.8	49.3	247 18.1	15.1					
11	224	26.6	341 05.2	-21 08.0	142 43.8	+24 42.1	224 56.3	-1 49.3	262 20.4	-16 15.0					
12	239	29.0	356 04.4	-21 08.7	157 47.1	+24 42.2	239 58.8	-1 49.3	277 22.8	-16 15.0					
13	254	31.5	11 03.6	09.4	172 50.4	42.3	255 01.3	49.3	292 25.1	15.0					
14	269	33.9	26 02.8	10.0	187 53.7	42.4	270 03.8	49.3	307 27.5	14.9					
15	284	36.4	41 01.9	10.7	202 57.0	42.4	285 06.3	49.3	322 29.8	14.9					
16	299	38.9	56 01.1	11.3	218 00.2	42.5	300 08.8	49.3	337 32.2	14.8					
17	314	41.3	71 00.3	-21 12.0	233 03.5	+24 42.6	315 11.3	-1 49.3	352 34.5	-16 14.8					
18	329	43.8	85 59.4	-21 12.6	248 06.8	+24 42.7	330 13.8	-1 49.3	7 36.9	-16 14.8					
19	344	46.3	100 58.6	13.3	263 10.1	42.8	345 16.3	49.3	22 39.2	14.7					
20	359	48.7	115 57.8	13.9	278 13.4	42.9	0 18.8	49.3	37 41.6	14.7					
21	14	51.2	130 57.0	14.6	293 16.7	42.9	15 21.3	49.3	52 43.9	14.6					
22	29	53.7	145 56.1	15.2	308 19.9	43.0	30 23.8	49.3	67 46.2	14.6					
23	44	56.1	160 55.3	15.9	323 23.2	43.1	45 26.3	49.3	82 48.6	14.6					
24	59	58.6	175 54.5	-21 16.5	338 26.5	+24 43.2	60 28.8	-1 49.3	97 50.9	-16 14.5					
Dif	—		-8		-7	+33	+1	+25	0		+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 8			Edad: 26 ^d 5 PHE { SD: 15:7 PMG: 9 ^h 36 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	h	m	h	m	h	m	h	m
0	183	34.3	-19	51.3	220	30.1	-5	59.1	60 N	6 28	7 21	8 12	4 17	98	14 36 2
1	198	34.2		51.9	235	02.3 ¹³²	-6	14.3 ¹⁵²	58	23	13	8 00	13 93	41 6	
2	213	34.0		52.4	249	34.5 ¹³²		29.5 ¹⁵²	56	18	7 05	7 48	09 90	46 10	
3	228	33.9		53.0	264	06.6 ¹³¹		44.7 ¹⁵²	54	14	6 58	39	06 86	50 13	
4	243	33.7		53.5	278	38.6 ¹³⁰	-6	59.9 ¹⁵²	52	10	52	30	03 83	54 16	
5	258	33.5	-19	54.1	293	10.6 ¹³⁰	-7	15.1 ¹⁵²	50	6 06	6 46	7 22	4 00 81	14 58 18	
6	273	33.4	-19	54.6	307	42.5 ¹²⁹	-7	30.2 ¹⁵¹	45	5 57	6 33	7 05	3 54 75	15 06 23	
7	288	33.2		55.2	322	14.3 ¹²⁸	-7	45.4 ¹⁵²	40	49	22	6 52	49 71	13 27	
8	303	33.1		55.7	336	46.0 ¹²⁷	-8	00.5 ¹⁵¹	35	42	13	40	45 67	18 32	
9	318	32.9		56.3	351	17.7 ¹²⁷		15.6 ¹⁵¹	30	35	6 04	30	42 63	23 35	
10	333	32.8		56.8	5	49.3 ¹²⁶		30.7 ¹⁵¹	20	22	5 49	6 12	35 58	32 41	
11	348	32.6	-19	57.4	20	20.8 ¹²⁵	-8	45.8 ¹⁵¹	10 N	5 09	5 35	5 57	3 30 53	15 40 45	
12	3	32.4	-19	57.9	34	52.2 ¹²⁴	-9	00.8 ¹⁵⁰	0	4 55	5 20	5 42	3 25 48	15 47 50	
13	18	32.3		58.5	49	23.5 ¹²³		15.8 ¹⁵⁰	10 S	39	5 05	28	20 43	15 55 54	
14	33	32.1		59.0	63	54.7 ¹²²		30.8 ¹⁵⁰	20	4 20	4 48	5 12	15 38	16 02 60	
15	48	32.0	-19	59.6	78	25.9 ¹²²	-9	45.8 ¹⁵⁰	30	3 55	27	4 53	09 33	11 66	
16	63	31.8	-20	00.1	92	57.0 ¹²¹	-10	00.7 ¹⁴⁹	35	40	4 14	43	05 30	17 68	
17	78	31.6	-20	00.7	107	27.9 ¹¹⁹	-10	15.6 ¹⁴⁹	40	3 21	3 59	4 30	3 02 25	16 23 72	
18	93	31.5	-20	01.2	121	58.8 ¹¹⁹	-10	30.5 ¹⁴⁹	45	2 56	3 41	4 15	2 57 22	16 30 77	
19	108	31.3		01.8	136	29.6 ¹¹⁸	-10	45.4 ¹⁴⁹	50	23	17	3 57	52 17	38 83	
20	123	31.2		02.3	151	00.4 ¹¹⁸	-11	00.2 ¹⁴⁸	52	2 05	3 06	49	50 14	42 85	
21	138	31.0		02.9	165	31.0 ¹¹⁶		14.9 ¹⁴⁷	54	1 42	2 52	39	47 12	46 89	
22	153	30.8		03.4	180	01.5 ¹¹⁵		29.7 ¹⁴⁸	56	1 11	37	28	44 9	51 92	
23	168	30.7		03.9	194	31.9 ¹¹⁴		44.4 ¹⁴⁷	58	0 08	2 18	16	41 5	16 56 96	
24	183	30.5	-20	04.5	209	02.2 ¹¹³	-11	59.0 ¹⁴⁶	60 S	** **	1 54	3 01	2 37 2	17 02 101	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 56 ^m 8		Mag: -3.9 PMG: 12 ^h 17 ^m			Mag: -1.7 PMG: 1 ^h 26 ^m			Mag: -2.7 PMG: 19 ^h 55 ^m			Mag: +0.7 PMG: 17 ^h 26 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	59	58.6	175	54.5	-21	16.5	338	26.5	+24	43.2	60	28.8	-1	49.3	97	50.9	-16	14.5
1	75	01.1	190	53.6		17.2	353	29.8		43.3	75	31.3		49.3	112	53.3		14.5
2	90	03.5	205	52.8		17.8	8	33.1		43.4	90	33.7		49.3	127	55.6		14.4
3	105	06.0	220	52.0		18.5	23	36.4		43.4	105	36.2		49.3	142	58.0		14.4
4	120	08.4	235	51.1		19.1	38	39.7		43.5	120	38.7		49.3	158	00.3		14.4
5	135	10.9	250	50.3	-21	19.7	53	43.0	+24	43.6	135	41.2	-1	49.3	173	02.7	-16	14.3
6	150	13.4	265	49.5	-21	20.4	68	46.3	+24	43.7	150	43.7	-1	49.3	188	05.0	-16	14.3
7	165	15.8	280	48.6		21.0	83	49.6		43.8	165	46.2		49.3	203	07.4		14.2
8	180	18.3	295	47.8		21.6	98	52.9		43.9	180	48.7		49.3	218	09.7		14.2
9	195	20.8	310	46.9		22.3	113	56.2		43.9	195	51.2		49.3	233	12.0		14.2
10	210	23.2	325	46.1		22.9	128	59.5		44.0	210	53.7		49.3	248	14.4		14.1
11	225	25.7	340	45.3	-21	23.6	144	02.8	+24	44.1	225	56.2	-1	49.3	263	16.7	-16	14.1
12	240	28.2	355	44.4	-21	24.2	159	06.1	+24	44.2	240	58.6	-1	49.3	278	19.1	-16	14.0
13	255	30.6	10	43.6		24.8	174	09.4		44.3	256	01.1		49.3	293	21.4		14.0
14	270	33.1	25	42.8		25.4	189	12.7		44.3	271	03.6		49.3	308	23.8		14.0
15	285	35.6	40	41.9		26.1	204	16.0		44.4	286	06.1		49.3	323	26.1		13.9
16	300	38.0	55	41.1		26.7	219	19.4		44.5	301	08.6		49.3	338	28.5		13.9
17	315	40.5	70	40.2	-21	27.3	234	22.7	+24	44.6	316	11.1	-1	49.3	353	30.8	-16	13.8
18	330	42.9	85	39.4	-21	28.0	249	26.0	+24	44.7	331	13.6	-1	49.3	8	33.1	-16	13.8
19	345	45.4	100	38.6		28.6	264	29.3		44.7	346	16.1		49.3	23	35.5		13.8
20	0	47.9	115	37.7		29.2	279	32.6		44.8	1	18.5		49.3	38	37.8		13.7
21	15	50.3	130	36.9		29.8	294	35.9		44.9	16	21.0		49.3	53	40.2		13.7
22	30	52.8	145	36.0		30.5	309	39.3		45.0	31	23.5		49.3	68	42.5		13.6
23	45	55.3	160	35.2		31.1	324	42.6		45.1	46	26.0		49.3	83	44.9		13.6
24	60	57.7	175	34.3	-21	31.7	339	45.9	+24	45.1	61	28.5	-1	49.3	98	47.2	-16	13.5
Dif	—		-8	-6		-6	+33	+1			+25	0			+23	0		

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna																					
	SD: 16/2 PMG: 11 ^h 46 ^m 1				Edad: 27 ^d 5 PHE SD: 15/9 PMG: 10 ^h 25 ^m						R ^o : 53 ^m																									
	hG ☉	Dec			hG ☾	Dif					Dif			Civil	Náutico	Hora	R ^o	Hora	R ^o																	
h	°	'	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m	h m m	h m m																		
0	183	30.5	-20	04.5	209	02.2	-11	59.0	60 N	15 17	16 08	17 01	5 55 105	14 38 4																						
1	198	30.4		05.0	223	32.5 ¹¹³	-12	13.6 ¹⁴⁶	58	30	17	07	46 100	47 10																						
2	213	30.2		05.6	238	02.6 ¹¹¹		28.2 ¹⁴⁶	56	41	25	12	39 95	14 56 14																						
3	228	30.0		06.1	252	32.6 ¹¹⁰		42.7 ¹⁴⁵	54	15 51	32	16	32 92	15 03 18																						
4	243	29.9		06.6	267	02.6 ¹¹⁰	-12	57.2 ¹⁴⁵	52	16 00	39	20	26 88	10 21																						
5	258	29.7	-20	07.2	281	32.4 ¹⁰⁸	-13	11.6 ¹⁴⁴	50	16 08	16 45	17 24	5 21 85	15 16 24																						
6	273	29.5	-20	07.7	296	02.1 ¹⁰⁷	-13	25.9 ¹⁴³	45	16 25	16 57	17 34	5 09 80	15 29 29																						
7	288	29.4		08.2	310	31.8 ¹⁰⁷		40.2 ¹⁴³	40	39	17 08	42	5 00 75	40 34																						
8	303	29.2		08.8	325	01.3 ¹⁰⁵	-13	54.5 ¹⁴³	35	16 51	18	49	4 52 71	50 37																						
9	318	29.0		09.3	339	30.7 ¹⁰⁴	-14	08.7 ¹⁴²	30	17 01	27	17 56	45 67	15 58 41																						
10	333	28.9		09.8	354	00.0 ¹⁰³		22.8 ¹⁴¹	20	19	43	18 10	33 62	16 13 45																						
11	348	28.7	-20	10.4	8	29.2 ¹⁰²	-14	36.9 ¹⁴¹	10 N	17 35	17 57	18 23	4 23 56	16 25 51																						
12	3	28.5	-20	10.9	22	58.3 ¹⁰¹	-14	50.9 ¹⁴⁰	0	17 50	18 12	18 37	4 13 52	16 37 55																						
13	18	28.4		11.4	37	27.3 ¹⁰⁰	-15	04.9 ¹⁴⁰	10 S	18 05	27	18 54	4 03 48	16 49 59																						
14	33	28.2		12.0	51	56.1 ⁹⁸		18.8 ¹³⁹	20	21	18 45	19 13	3 53 43	17 02 64																						
15	48	28.0		12.5	66	24.9 ⁹⁸		32.6 ¹³⁸	30	40	19 06	38	42 37	17 69																						
16	63	27.9		13.0	80	53.5 ⁹⁶	-15	46.3 ¹³⁷	35	18 51	19	19 54	35 34	25 73																						
17	78	27.7	-20	13.6	95	22.0 ⁹⁵	-16	00.0 ¹³⁷	40	19 03	19 34	20 13	3 27 31	17 35 76																						
18	93	27.5	-20	14.1	109	50.5 ⁹⁵	-16	13.6 ¹³⁶	45	19 18	19 53	20 38	3 19 26	17 47 80																						
19	108	27.4		14.6	124	18.8 ⁹³		27.1 ¹³⁵	50	37	20 17	21 13	09 20	18 01 87																						
20	123	27.2		15.2	138	46.9 ⁹¹		40.6 ¹³⁵	52	45	29	32	3 04 18	07 90																						
21	138	27.0		15.7	153	15.0 ⁹¹	-16	53.9 ¹³³	54	19 55	43	21 55	2 59 15	15 93																						
22	153	26.8		16.2	167	43.0 ⁹⁰	-17	07.2 ¹³³	56	20 07	20 59	22 29	53 12	23 97																						
23	168	26.7		16.7	182	10.8 ⁸⁸		20.4 ¹³²	58	19	21 19	** **	46 8	32 102																						
24	183	26.5	-20	17.3	196	38.5 ⁸⁷	-17	33.5 ¹³¹	60 S	20 35	21 45	** **	2 39 4	18 43 108																						
UT	ARIES				VENUS				MARTE				JÚPITER				SATURNO																			
	PMG: 19 ^h 52 ^m 9				Mag: -3.9 PMG: 12 ^h 18 ^m				Mag: -1.7 PMG: 1 ^h 21 ^m				Mag: -2.7 PMG: 19 ^h 51 ^m				Mag: +0.7 PMG: 17 ^h 22 ^m																			
	hG ♈	hG ♀			Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec																			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'																		
0	60	57.7	175	34.3	-21	31.7	339	45.9	+24	45.1	61	28.5	-1	49.3	98	47.2	-16	13.5																		
1	76	00.2	190	33.5		32.3	354	49.2		45.2	76	31.0		49.3	113	49.5		13.5																		
2	91	02.7	205	32.6		32.9	9	52.5		45.3	91	33.5		49.3	128	51.9		13.5																		
3	106	05.1	220	31.8		33.5	24	55.9		45.4	106	35.9		49.3	143	54.2		13.4																		
4	121	07.6	235	31.0		34.2	39	59.2		45.5	121	38.4		49.3	158	56.6		13.4																		
5	136	10.0	250	30.1	-21	34.8	55	02.5	+24	45.5	136	40.9	-1	49.3	173	58.9	-16	13.3																		
6	151	12.5	265	29.3	-21	35.4	70	05.9	+24	45.6	151	43.4	-1	49.3	189	01.2	-16	13.3																		
7	166	15.0	280	28.4		36.0	85	09.2		45.7	166	45.9		49.3	204	03.6		13.3																		
8	181	17.4	295	27.6		36.6	100	12.5		45.8	181	48.3		49.2	219	05.9		13.2																		
9	196	19.9	310	26.7		37.2	115	15.8		45.9	196	50.8		49.2	234	08.3		13.2																		
10	211	22.4	325	25.9		37.8	130	19.2		45.9	211	53.3		49.2	249	10.6		13.1																		
11	226	24.8	340	25.0	-21	38.4	145	22.5	+24	46.0	226	55.8	-1	49.2	264	13.0	-16	13.1																		
12	241	27.3	355	24.2	-21	39.0	160	25.9	+24	46.1	241	58.3	-1	49.2	279	15.3	-16	13.0																		
13	256	29.8	10	23.3		39.7	175	29.2		46.2	257	00.8		49.2	294	17.6		13.0																		
14	271	32.2	25	22.5		40.3	190	32.5		46.2	272	03.2		49.2	309	20.0		13.0																		
15	286	34.7	40	21.6		40.9	205	35.9		46.3	287	05.7		49.2	324	22.3		12.9																		
16	301	37.2	55	20.8		41.5	220	39.2		46.4	302	08.2		49.2	339	24.7		12.9																		
17	316	39.6	70	19.9	-21	42.1	235	42.5	+24	46.5	317	10.7	-1	49.2	354	27.0	-16	12.8																		
18	331	42.1	85	19.1	-21	42.7	250	45.9	+24	46.5	332	13.1	-1	49.2	9	29.3	-16	12.8																		
19	346	44.5	100	18.2		43.3	265	49.2		46.6	347	15.6		49.2	24	31.7		12.8																		
20	1	47.0	115	17.4		43.9	280	52.6		46.7	2	18.1		49.2	39	34.0		12.7																		
21	16	49.5	130	16.5		44.5	295	55.9		46.8	17	20.6		49.2	54	36.3		12.7																		
22	31	51.9	145	15.7		45.1	310	59.3		46.8	32	23.1		49.2	69	38.7		12.6																		
23	46	54.4	160	14.8		45.7	326	02.6		46.9	47	25.5		49.2	84	41.0		12.6																		
24	61	56.9	175	13.9	-21	46.2	341	06.0	+24	47.0	62	28.0	-1	49.2	99	43.4	-16	12.5																		
Dif	—				-8				-6				+33				+1				+25				0				+23				0			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 46 ^m 4			Edad: 28 ^d 5 PHE { 4 ^h : 59/4 12 ^h : 59/6 20 ^h : 59/8 R°: 59 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	183	26.5	-20	17.3	196	38.5	-17	33.5	60 N	6 32	7 26	8 17	7 40	112	14 42	9
1	198	26.3		17.8	211	06.1 86		46.5 130	58	27	16	8 04	26 104	14 57	16	
2	213	26.2		18.3	225	33.6 85	-17	59.5 130	56	22	08	7 52	14 99	15 10	22	
3	228	26.0		18.8	240	00.9 83	-18	12.3 128	54	17	7 01	42	7 04	94	21	26
4	243	25.8		19.4	254	28.2 83		25.0 127	52	13	6 55	33	6 54	91	31	29
5	258	25.6	-20	19.9	268	55.3 81	-18	37.7 127	50	6 09	6 49	7 25	6 46	88	15 40	32
6	273	25.5	-20	20.4	283	22.3 80	-18	50.2 125	45	5 59	6 36	7 08	6 29	82	15 58	38
7	288	25.3		20.9	297	49.1 78	-19	02.7 125	40	51	24	6 54	15 77	16 14	42	
8	303	25.1		21.4	312	15.9 78		15.0 123	35	44	15	42	6 03	74	27	45
9	318	25.0		22.0	326	42.5 76		27.3 123	30	37	6 06	32	5 52	71	39	48
10	333	24.8		22.5	341	09.0 75		39.4 121	20	23	5 50	6 14	35 65	16 58	53	
11	348	24.6	-20	23.0	355	35.4 74	-19	51.4 120	10 N	5 10	5 35	5 58	5 19	62	17 16	56
12	3	24.4	-20	23.5	10	01.6 72	-20	03.3 119	0	4 55	5 21	5 43	5 05	58	17 32	60
13	18	24.3		24.0	24	27.8 72		15.1 118	10 S	39	5 05	28	4 51	53	17 48	63
14	33	24.1		24.6	38	53.8 70		26.8 117	20	4 19	4 48	5 11	36 49	18 06	67	
15	48	23.9		25.1	53	19.7 69		38.4 116	30	3 54	26	4 53	19 44	26	71	
16	63	23.7		25.6	67	45.4 67	-20	49.8 114	35	38	4 13	42	4 09	41	38	74
17	78	23.6	-20	26.1	82	11.1 67	-21	01.2 114	40	3 19	3 58	4 29	3 58	38	18 51	78
18	93	23.4	-20	26.6	96	36.6 65	-21	12.4 112	45	2 54	3 39	4 14	3 45	33	19 07	82
19	108	23.2		27.1	111	02.0 64		23.4 110	50	19	15	3 55	29 28	28	86	
20	123	23.0		27.6	125	27.3 63		34.4 110	52	2 00	3 03	46	22 25	37	90	
21	138	22.8		28.1	139	52.5 62		45.2 108	54	1 37	2 49	37	14 21	19 48	93	
22	153	22.7		28.7	154	17.5 60	-21	55.9 107	56	1 03	33	25	3 05	17	20 00	97
23	168	22.5		29.2	168	42.4 59	-22	06.5 106	58	** **	2 13	3 12	2 54	13	14	103
24	183	22.3	-20	29.7	183	07.2 58	-22	16.9 104	60 S	** **	1 47	2 57	2 43	7	20 31	111

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 49 ^m 0		Mag: -3.9 PMG: 12 ^h 20 ^m		Mag: -1.7 PMG: 1 ^h 15 ^m		Mag: -2.7 PMG: 19 ^h 47 ^m		Mag: +0.7 PMG: 17 ^h 18 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	61	56.9	175	13.9	341	06.0	62	28.0	99	43.4
1	76	59.3	190	13.1	356	09.3	77	30.5	114	45.7
2	92	01.8	205	12.2	11	12.7	92	33.0	129	48.0
3	107	04.3	220	11.4	26	16.0	107	35.4	144	50.4
4	122	06.7	235	10.5	41	19.4	122	37.9	159	52.7
5	137	09.2	250	09.7	56	22.7	137	40.4	174	55.1
6	152	11.7	265	08.8	71	26.1	152	42.9	189	57.4
7	167	14.1	280	07.9	86	29.5	167	45.3	204	59.7
8	182	16.6	295	07.1	101	32.8	182	47.8	220	02.1
9	197	19.0	310	06.2	116	36.2	197	50.3	235	04.4
10	212	21.5	325	05.4	131	39.5	212	52.8	250	06.7
11	227	24.0	340	04.5	146	42.9	227	55.2	265	09.1
12	242	26.4	355	03.6	161	46.3	242	57.7	280	11.4
13	257	28.9	10	02.8	176	49.6	258	00.2	295	13.7
14	272	31.4	25	01.9	191	53.0	273	02.7	310	16.1
15	287	33.8	40	01.1	206	56.4	288	05.1	325	18.4
16	302	36.3	55	00.2	221	59.7	303	07.6	340	20.8
17	317	38.8	69	59.3	237	03.1	318	10.1	355	23.1
18	332	41.2	84	58.5	252	06.5	333	12.5	10	25.4
19	347	43.7	99	57.6	267	09.9	348	15.0	25	27.8
20	2	46.2	114	56.7	282	13.2	3	17.5	40	30.1
21	17	48.6	129	55.9	297	16.6	18	19.9	55	32.4
22	32	51.1	144	55.0	312	20.0	33	22.4	70	34.8
23	47	53.5	159	54.1	327	23.4	48	24.9	85	37.1
24	62	56.0	174	53.3	342	26.7	63	27.4	100	39.4
Dif	—		-9		+34		+25		+23	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16'2			Edad: 29 ^d 5	PHE {	4 ^h : 60'0 12 ^h : 60'1 20 ^h : 60'2			Final del crepúsculo			Salida de Luna		Puesta de Luna	
	PMG: 11 ^h 46 ^m 7								SD: 16'3			PMG: 12 ^h 17 ^m			R°: 63 ^m
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	183	22.3	-20 29.7	183	07.2	-22 16.9		60 N	15 13	16 05	16 59	9 32 108	14 51 24		
1	198	22.1		197	31.9	57 27.2	103	58	27	14	17 04	9 10 100	15 13 33		
2	213	21.9	30.7	211	56.4	55 37.3	101	56	39	23	10	8 53 94	32 37		
3	228	21.8	31.2	226	20.9	55 47.3	100	54	49	30	14	38 90	15 47 41		
4	243	21.6	31.7	240	45.2	53 -22 57.1	98	52	15 58	37	19	25 87	16 00 44		
5	258	21.4	-20 32.2	255	09.4	52 -23 06.8	97	50	16 06	16 43	17 23	8 14 84	16 12 46		
6	273	21.2	-20 32.7	269	33.5	51 -23 16.4	96	45	16 24	16 56	17 32	7 51 80	16 36 51		
7	288	21.0	33.2	283	57.5	50 25.8	94	40	38	17 08	41	32 77	16 56 53		
8	303	20.9	33.7	298	21.3	48 35.1	93	35	16 50	17	48	17 73	17 12 56		
9	318	20.7	34.2	312	45.1	48 44.2	91	30	17 01	26	17 56	7 03 72	27 57		
10	333	20.5	34.7	327	08.7	46 -23 53.1	89	20	19	43	18 10	6 40 68	17 51 60		
11	348	20.3	-20 35.2	341	32.2	45 -24 01.9	88	10 N	17 35	17 58	18 23	6 21 65	18 12 62		
12	3	20.1	-20 35.7	355	55.7	45 -24 10.5	86	0	17 50	18 12	18 38	6 03 62	18 32 64		
13	18	19.9	36.2	10	19.0	43 19.0	85	10 S	18 06	28	18 55	5 44 60	18 51 66		
14	33	19.8	36.7	24	42.2	42 27.3	83	20	22	18 46	19 15	25 57	19 13 68		
15	48	19.6	37.2	39	05.3	41 35.4	81	30	41	19 08	40	5 03 53	37 71		
16	63	19.4	37.7	53	28.3	40 43.4	80	35	18 52	21	19 56	4 50 51	19 52 72		
17	78	19.2	-20 38.2	67	51.2	39 -24 51.2	78	40	19 05	19 37	20 16	4 36 47	20 09 73		
18	93	19.0	-20 38.7	82	14.0	38 -24 58.8	76	45	19 21	19 56	20 42	4 18 44	20 29 76		
19	108	18.8	39.2	96	36.6	36 -25 06.3	75	50	40	20 21	21 18	3 57 39	20 54 80		
20	123	18.7	39.7	110	59.3	37 13.6	73	52	49	33	21 37	47 36	21 07 81		
21	138	18.5	40.2	125	21.8	35 20.7	71	54	19 59	20 47	22 02	35 34	21 83		
22	153	18.3	40.7	139	44.2	34 27.6	69	56	20 11	21 04	22 39	22 30	37 86		
23	168	18.1	41.2	154	06.5	33 34.3	67	58	24	25	** **	3 07 24	21 57 90		
24	183	17.9	-20 41.7	168	28.7	32 -25 40.9	66	60 S	20 40	21 52	** **	2 50 16	22 22 97		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 19 ^h 45 ^m 0		Mag: -3.9 PMG: 12 ^h 21 ^m			Mag: -1.7 PMG: 1 ^h 10 ^m			Mag: -2.7 PMG: 19 ^h 43 ^m			Mag: +0.8 PMG: 17 ^h 15 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	62	56.0	174	53.3	-22 00.2	342	26.7	+24 48.7	63	27.4	-1 48.9	100	39.4	-16 11.5	
1	77	58.5	189	52.4	00.7	357	30.1	48.8	78	29.8	48.9	115	41.8	11.5	
2	93	00.9	204	51.5	01.3	12	33.5	48.9	93	32.3	48.9	130	44.1	11.4	
3	108	03.4	219	50.7	01.9	27	36.9	48.9	108	34.8	48.9	145	46.4	11.4	
4	123	05.9	234	49.8	02.4	42	40.3	49.0	123	37.2	48.9	160	48.8	11.3	
5	138	08.3	249	48.9	-22 03.0	57	43.6	+24 49.1	138	39.7	-1 48.9	175	51.1	-16 11.3	
6	153	10.8	264	48.1	-22 03.5	72	47.0	+24 49.2	153	42.2	-1 48.9	190	53.4	-16 11.2	
7	168	13.3	279	47.2	04.1	87	50.4	49.2	168	44.6	48.9	205	55.8	11.2	
8	183	15.7	294	46.3	04.7	102	53.8	49.3	183	47.1	48.8	220	58.1	11.2	
9	198	18.2	309	45.5	05.2	117	57.2	49.4	198	49.6	48.8	236	00.4	11.1	
10	213	20.6	324	44.6	05.8	133	00.6	49.4	213	52.0	48.8	251	02.8	11.1	
11	228	23.1	339	43.7	-22 06.3	148	04.0	+24 49.5	228	54.5	-1 48.8	266	05.1	-16 11.0	
12	243	25.6	354	42.9	-22 06.9	163	07.3	+24 49.6	243	56.9	-1 48.8	281	07.4	-16 11.0	
13	258	28.0	9	42.0	07.4	178	10.7	49.6	258	59.4	48.8	296	09.8	10.9	
14	273	30.5	24	41.1	08.0	193	14.1	49.7	274	01.9	48.8	311	12.1	10.9	
15	288	33.0	39	40.2	08.5	208	17.5	49.8	289	04.3	48.8	326	14.4	10.8	
16	303	35.4	54	39.4	09.1	223	20.9	49.8	304	06.8	48.7	341	16.8	10.8	
17	318	37.9	69	38.5	-22 09.6	238	24.3	+24 49.9	319	09.3	-1 48.7	356	19.1	-16 10.8	
18	333	40.4	84	37.6	-22 10.2	253	27.7	+24 50.0	334	11.7	-1 48.7	11	21.4	-16 10.7	
19	348	42.8	99	36.7	10.7	268	31.1	50.0	349	14.2	48.7	26	23.8	10.7	
20	3	45.3	114	35.9	11.3	283	34.5	50.1	4	16.7	48.7	41	26.1	10.6	
21	18	47.8	129	35.0	11.8	298	37.9	50.2	19	19.1	48.7	56	28.4	10.6	
22	33	50.2	144	34.1	12.4	313	41.3	50.2	34	21.6	48.7	71	30.8	10.5	
23	48	52.7	159	33.2	12.9	328	44.7	50.3	49	24.0	48.7	86	33.1	10.5	
24	63	55.1	174	32.4	-22 13.4	343	48.1	+24 50.4	64	26.5	-1 48.6	101	35.4	-16 10.4	
Dif	—		-9	-6		+34	+1		+25	0		+23			

UT	SOL			● LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 47 ^m 0			Edad: 1 ^d 0 PHE { SD: 16:4 PMG: 13 ^h 20 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	183	17.9	-20	41.7	168	28.7	-25	40.9	60 N	6	36	7	30	8	22	11	20	81
1	198	17.7		42.2	182	50.9	32	47.3	58	30		20	8	08	10	50	77	
2	213	17.5		42.7	197	12.9	30	53.5	56	25	12	7	56		27	75	16	
3	228	17.3		43.2	211	34.9	30	-25 59.5	54	20	7	04	46	10	08	74	28	
4	243	17.2		43.7	225	56.8	29	-26 05.3	52	15	6	58	36	9	52	73	44	
5	258	17.0	-20	44.2	240	18.6	28	-26 11.0	50	6	11	6	51	7	28	9	38	
6	273	16.8	-20	44.7	254	40.4	28	-26 16.4	45	6	02	6	38	7	11	9	11	
7	288	16.6		45.2	269	02.1	27	21.7	40	5	53	26	6	56	8	49	69	
8	303	16.4		45.6	283	23.7	26	26.8	35	45	16	44		30	69	18	08	
9	318	16.2		46.1	297	45.2	25	31.7	30	38	6	07	33	8	15	68	24	
10	333	16.0		46.6	312	06.7	25	36.3	20	24	5	51	6	15	7	48	68	
11	348	15.8	-20	47.1	326	28.1	24	-26 40.8	10 N	5	10	5	36	5	26	66	19	
12	3	15.6	-20	47.6	340	49.5	24	-26 45.1	0	4	55	5	21	5	05	65	19	
13	18	15.4		48.1	355	10.8	23	49.2	10 S		39	5	05	28	6	44	64	
14	33	15.3		48.6	9	32.0	22	53.1	20	4	19	4	47	5	11	6	22	
15	48	15.1		49.0	23	53.2	22	-26 56.8	30	3	53	26	4	52	5	56	61	
16	63	14.9		49.5	38	14.4	22	-27 00.3	35	37	4	12	41	41	60	21	04	
17	78	14.7	-20	50.0	52	35.5	21	-27 03.6	40	3	17	3	56	4	28	5	23	
18	93	14.5	-20	50.5	66	56.5	20	-27 06.7	45	2	51	3	37	4	12	5	02	
19	108	14.3		51.0	81	17.5	20	09.6	50	2	16	12	3	53	4	36	55	
20	123	14.1		51.5	95	38.5	20	12.3	52	1	56	3	00	44	23	54	28	
21	138	13.9		51.9	109	59.5	20	14.7	54	1	31	2	46	34	4	09	51	
22	153	13.7		52.4	124	20.4	19	17.0	56	0	54	29	23	3	52	49	23	
23	168	13.5		52.9	138	41.3	19	19.1	58	** **	2	08	3	09	31	46	27	
24	183	13.3	-20	53.4	153	02.2	19	-27 21.0	60 S	** **	1	41	2	54	3	06	39	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 41 ^m 1		Mag: -3.9 PMG: 12 ^h 23 ^m		Mag: -1.7 PMG: 1 ^h 05 ^m		Mag: -2.7 PMG: 19 ^h 39 ^m		Mag: +0.8 PMG: 17 ^h 11 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	63	55.1	174	32.4	-22	13.4	343	48.1	+24	50.4
1	78	57.6	189	31.5		14.0	358	51.5		50.4
2	94	00.1	204	30.6		14.5	13	54.9		50.5
3	109	02.5	219	29.7		15.1	28	58.3		50.6
4	124	05.0	234	28.9		15.6	44	01.7		50.6
5	139	07.5	249	28.0	-22	16.1	59	05.1	+24	50.7
6	154	09.9	264	27.1	-22	16.7	74	08.5	+24	50.7
7	169	12.4	279	26.2		17.2	89	12.0		50.8
8	184	14.9	294	25.3		17.7	104	15.4		50.9
9	199	17.3	309	24.5		18.2	119	18.8		50.9
10	214	19.8	324	23.6		18.8	134	22.2		51.0
11	229	22.3	339	22.7	-22	19.3	149	25.6	+24	51.1
12	244	24.7	354	21.8	-22	19.8	164	29.0	+24	51.1
13	259	27.2	9	20.9		20.4	179	32.4		51.2
14	274	29.6	24	20.0		20.9	194	35.9		51.3
15	289	32.1	39	19.2		21.4	209	39.3		51.3
16	304	34.6	54	18.3		21.9	224	42.7		51.4
17	319	37.0	69	17.4	-22	22.4	239	46.1	+24	51.4
18	334	39.5	84	16.5	-22	23.0	254	49.5	+24	51.5
19	349	42.0	99	15.6		23.5	269	53.0		51.6
20	4	44.4	114	14.7		24.0	284	56.4		51.6
21	19	46.9	129	13.9		24.5	299	59.8		51.7
22	34	49.4	144	13.0		25.0	315	03.2		51.7
23	49	51.8	159	12.1		25.5	330	06.6		51.8
24	64	54.3	174	11.2	-22	26.1	345	10.1	+24	51.9
Dif	—		-9		-5		+34		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 47 ^m 3			Edad: 2 ^d 0 PHE { 4 ^h : 60/4 12 ^h : 60/4 20 ^h : 60/4 R°: 64 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m	m	h m	m			
0	183	13.3	-20	53.4	153	02.2	-27	21.0	60 N	15 10	16 03	16 56	12 41	38	16 12	96		
1	198	13.1		53.8	167	23.0	18	22.6	58	24	12	17 02	12 07	45	16 45	90		
2	213	12.9		54.3	181	43.8	18	24.1	56	36	21	08	11 42	49	17 10	85		
3	228	12.7		54.8	196	04.7	19	25.3	54	47	28	13	22	52	30	83		
4	243	12.5		55.3	210	25.5	18	26.4	52	15 56	35	17	11 05	54	17 47	80		
5	258	12.3	-20	55.7	224	46.3	18	-27 27.2	50	16 05	16 41	17 22	10 51	55	18 01	79		
6	273	12.2	-20	56.2	239	07.1	18	-27 27.8	45	16 22	16 55	17 31	10 21	58	18 31	75		
7	288	12.0		56.7	253	27.9	18	28.3	40	37	17 07	40	9 58	59	18 53	74		
8	303	11.8		57.2	267	48.7	18	28.5	35	16 49	17	48	39	61	19 12	72		
9	318	11.6		57.6	282	09.5	18	28.5	30	17 00	26	17 55	9 23	61	29	69		
10	333	11.4		58.1	296	30.3	18	28.3	20	19	43	18 10	8 56	62	19 56	67		
11	348	11.2	-20	58.6	310	51.1	18	-27 27.9	10 N	17 35	17 58	18 24	8 32	64	20 19	66		
12	3	11.0	-20	59.0	325	11.9	18	-27 27.3	0	17 51	18 13	18 39	8 10	65	20 41	64		
13	18	10.8	-20	59.5	339	32.8	19	26.5	10 S	18 07	29	18 56	7 48	66	21 03	61		
14	33	10.6	-21	00.0	353	53.7	19	25.5	20	23	18 47	19 16	7 24	67	26	60		
15	48	10.4	-21	00.5	8	14.6	19	24.2	30	43	19 10	42	6 57	68	21 53	57		
16	63	10.2		00.9	22	35.5	19	22.8	35	18 54	23	19 58	41	68	22 09	55		
17	78	10.0	-21	01.4	36	56.4	19	-27 21.2	40	19 08	19 39	20 19	6 22	69	22 27	53		
18	93	09.8	-21	01.8	51	17.4	20	-27 19.3	45	19 23	19 59	20 45	5 59	71	22 49	51		
19	108	09.6		02.3	65	38.5	21	17.3	50	43	20 24	21 22	31	71	23 17	47		
20	123	09.4		02.8	79	59.5	20	15.0	52	19 52	37	21 42	17	72	31	45		
21	138	09.2		03.2	94	20.6	21	12.6	54	20 03	20 52	22 09	5 00	73	23 47	42		
22	153	09.0		03.7	108	41.8	22	09.9	56	14	21 09	22 51	4 41	74	** ** *	**		
23	168	08.8		04.2	123	03.0	22	07.1	58	28	31	** ** *	4 17	75	** ** *	**		
24	183	08.6	-21	04.6	137	24.3	23	-27 04.0	60 S	20 44	21 59	** ** *	3 45	78	** ** *	**		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 37 ^m 2		Mag: -3.9 PMG: 12 ^h 24 ^m			Mag: -1.8 PMG: 0 ^h 59 ^m			Mag: -2.7 PMG: 19 ^h 35 ^m			Mag: +0.8 PMG: 17 ^h 07 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	64	54.3	174	11.2	-22	26.1	345	10.1	+24	51.9	65	25.5	-1	48.3	102	31.3	-16	09.3
1	79	56.8	189	10.3		26.6	0	13.5		51.9	80	27.9		48.2	117	33.6		09.3
2	94	59.2	204	09.4		27.1	15	16.9		52.0	95	30.4		48.2	132	36.0		09.3
3	110	01.7	219	08.5		27.6	30	20.4		52.1	110	32.8		48.2	147	38.3		09.2
4	125	04.1	234	07.6		28.1	45	23.8		52.1	125	35.3		48.2	162	40.6		09.2
5	140	06.6	249	06.8	-22	28.6	60	27.2	+24	52.2	140	37.7	-1	48.2	177	42.9	-16	09.1
6	155	09.1	264	05.9	-22	29.1	75	30.6	+24	52.2	155	40.2	-1	48.1	192	45.3	-16	09.1
7	170	11.5	279	05.0		29.6	90	34.1		52.3	170	42.6		48.1	207	47.6		09.0
8	185	14.0	294	04.1		30.1	105	37.5		52.3	185	45.1		48.1	222	49.9		09.0
9	200	16.5	309	03.2		30.6	120	40.9		52.4	200	47.5		48.1	237	52.3		08.9
10	215	18.9	324	02.3		31.1	135	44.4		52.5	215	50.0		48.1	252	54.6		08.9
11	230	21.4	339	01.4	-22	31.6	150	47.8	+24	52.5	230	52.4	-1	48.1	267	56.9	-16	08.8
12	245	23.9	354	00.5	-22	32.1	165	51.3	+24	52.6	245	54.9	-1	48.0	282	59.2	-16	08.8
13	260	26.3	8	59.6		32.6	180	54.7		52.6	260	57.3		48.0	298	01.6		08.7
14	275	28.8	23	58.7		33.1	195	58.1		52.7	275	59.8		48.0	313	03.9		08.7
15	290	31.3	38	57.8		33.6	211	01.6		52.8	291	02.2		48.0	328	06.2		08.6
16	305	33.7	53	57.0		34.1	226	05.0		52.8	306	04.6		48.0	343	08.5		08.6
17	320	36.2	68	56.1	-22	34.6	241	08.5	+24	52.9	321	07.1	-1	47.9	358	10.9	-16	08.6
18	335	38.6	83	55.2	-22	35.1	256	11.9	+24	52.9	336	09.5	-1	47.9	13	13.2	-16	08.5
19	350	41.1	98	54.3		35.6	271	15.3		53.0	351	12.0		47.9	28	15.5		08.5
20	5	43.6	113	53.4		36.1	286	18.8		53.0	6	14.4		47.9	43	17.8		08.4
21	20	46.0	128	52.5		36.6	301	22.2		53.1	21	16.9		47.9	58	20.1		08.4
22	35	48.5	143	51.6		37.0	316	25.7		53.1	36	19.3		47.8	73	22.5		08.3
23	50	51.0	158	50.7		37.5	331	29.1		53.2	51	21.8		47.8	88	24.8		08.3
24	65	53.4	173	49.8	-22	38.0	346	32.6	+24	53.3	66	24.2	-1	47.8	103	27.1	-16	08.2
Dif	—		-9		-5		+34		+1		+24		0		+23			

UT	SOL				LUNA				Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 16'2 PMG: 11 ^h 47 ^m 6				Edad: 3 ^d 0 PHE { 4 ^h : 60'3 12 ^h : 60'2 20 ^h : 60'1 Rº: 60 ^m																			
	hG ☉		Dec		hG ☾		Dif			Dec			Dif		Náutico		Civil		Hora Rº		Hora Rº			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m			
0	183	08.6	-21	04.6	137	24.3	-27	04.0	32	58	60 N	6	39	7	33	8	26	13	19	15	17	48	111	
1	198	08.4		05.1	151	45.6	23	-27	00.8	32	58		33		24	12		12	52	24	18	15	102	
2	213	08.2		05.5	166	06.9	23	-26	57.3	35	56		28		15	8	00		31	29		35	97	
3	228	07.9		06.0	180	28.3	24		53.7	36	54		23		07	7	49	12	14	33	18	53	92	
4	243	07.7		06.5	194	49.8	25		49.8	39	52		18	7	00	40		11	59	36	19	07	89	
5	258	07.5	-21	06.9	209	11.4	26	-26	45.8	40	50		6	14	6	54	7	31	11	46	38	19	20	86
6	273	07.3	-21	07.4	223	33.0	26	-26	41.6	42	45		6	04	6	40	7	13	11	19	43	19	46	80
7	288	07.1		07.8	237	54.7	27		37.2	44	40		5	55		29	6	58	10	57	48	20	07	76
8	303	06.9		08.3	252	16.4	27		32.5	47	35		47		18	46			40	50		24	73	
9	318	06.7		08.7	266	38.3	29		27.7	48	30		40	6	09	35		10	24	53	20	38	71	
10	333	06.5		09.2	281	00.2	29		22.8	49	20		25	5	52	16		9	58	56	21	03	67	
11	348	06.3	-21	09.7	295	22.2	30	-26	17.6	52	10 N	5	11	5	37	6	00	9	36	59	21	25	63	
12	3	06.1	-21	10.1	309	44.2	30	-26	12.2	54	0	4	56	5	22	5	44	9	15	61	21	45	59	
13	18	05.9		10.6	324	06.4	32		06.7	55	10 S	39	5	06		28		8	54	64	22	04	56	
14	33	05.7		11.0	338	28.6	32	-26	00.9	58	20	4	19	4	47	5	11		31	67		26	52	
15	48	05.5		11.5	352	51.0	34	-25	55.0	59	30	3	53		25	4	52	8	05	71	22	50	48	
16	63	05.3		11.9	7	13.4	34		48.9	61	35	36	4	11		40		7	49	73	23	04	45	
17	78	05.1	-21	12.4	21	35.9	35	-25	42.6	63	40	3	16	3	55	4	27	7	31	76	23	20	42	
18	93	04.9	-21	12.8	35	58.5	36	-25	36.2	64	45	2	49	3	36	4	11	7	10	78	23	40	38	
19	108	04.7		13.3	50	21.2	37		29.5	67	50	2	12	3	10	3	52	6	42	83	**	**	**	
20	123	04.4		13.7	64	44.0	38		22.7	68	52	1	52	2	57	42			29	85	**	**	**	
21	138	04.2		14.2	79	06.9	39		15.8	69	54	1	25		43	32		6	13	88	**	**	**	
22	153	04.0		14.6	93	29.9	40		08.6	72	56	0	44		25	20		5	55	92	0	06	38	
23	168	03.8		15.0	107	53.0	41	-25	01.3	73	58	**	**	2	04	3	06		32	97	28	34		
24	183	03.6	-21	15.5	122	16.2	42	-24	53.8	75	60 S	**	**	1	35	2	50	5	03	105	0	58	25	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO					
	PMG: 19 ^h 33 ^m 2		Mag: -3.9 PMG: 12 ^h 25 ^m				Mag: -1.8 PMG: 0 ^h 54 ^m				Mag: -2.7 PMG: 19 ^h 31 ^m				Mag: +0.8 PMG: 17 ^h 04 ^m					
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	65	53.4	173	49.8	-22	38.0		346	32.6	+24	53.3		66	24.2	-1	47.8	103	27.1	-16	08.2
1	80	55.9	188	48.9		38.5		1	36.0		53.3		81	26.7		47.8	118	29.4		08.2
2	95	58.4	203	48.0		39.0		16	39.5		53.4		96	29.1		47.7	133	31.8		08.1
3	111	00.8	218	47.1		39.5		31	42.9		53.4		111	31.5		47.7	148	34.1		08.1
4	126	03.3	233	46.2		39.9		46	46.4		53.5		126	34.0		47.7	163	36.4		08.0
5	141	05.8	248	45.3	-22	40.4		61	49.8	+24	53.5		141	36.4	-1	47.7	178	38.7	-16	08.0
6	156	08.2	263	44.4	-22	40.9		76	53.3	+24	53.6		156	38.9	-1	47.7	193	41.1	-16	07.9
7	171	10.7	278	43.5		41.4		91	56.7		53.6		171	41.3		47.6	208	43.4		07.9
8	186	13.1	293	42.6		41.9		107	00.2		53.7		186	43.8		47.6	223	45.7		07.8
9	201	15.6	308	41.7		42.3		122	03.6		53.7		201	46.2		47.6	238	48.0		07.8
10	216	18.1	323	40.8		42.8		137	07.1		53.8		216	48.6		47.6	253	50.3		07.7
11	231	20.5	338	39.9	-22	43.3		152	10.5	+24	53.9		231	51.1	-1	47.5	268	52.7	-16	07.7
12	246	23.0	353	39.0	-22	43.7		167	14.0	+24	53.9		246	53.5	-1	47.5	283	55.0	-16	07.7
13	261	25.5	8	38.1		44.2		182	17.5		54.0		261	56.0		47.5	298	57.3		07.6
14	276	27.9	23	37.2		44.7		197	20.9		54.0		276	58.4		47.5	313	59.6		07.6
15	291	30.4	38	36.3		45.2		212	24.4		54.1		292	00.8		47.5	329	02.0		07.5
16	306	32.9	53	35.4		45.6		227	27.8		54.1		307	03.3		47.4	344	04.3		07.5
17	321	35.3	68	34.5	-22	46.1		242	31.3	+24	54.2		322	05.7	-1	47.4	359	06.6	-16	07.4
18	336	37.8	83	33.6	-22	46.6		257	34.8	+24	54.2		337	08.2	-1	47.4	14	08.9	-16	07.4
19	351	40.3	98	32.7		47.0		272	38.2		54.3		352	10.6		47.4	29	11.2		07.3
20	6	42.7	113	31.8		47.5		287	41.7		54.3		7	13.0		47.3	44	13.6		07.3
21	21	45.2	128	30.9		47.9		302	45.1		54.4		22	15.5		47.3	59	15.9		07.2
22	36	47.6	143	30.0		48.4		317	48.6		54.4		37	17.9		47.3	74	18.2		07.2
23	51	50.1	158	29.1		48.9		332	52.1		54.5		52	20.4		47.3	89	20.5		07.1
24	66	52.6	173	28.2	-22	49.3		347	55.5	+24	54.5		67	22.8	-1	47.2	104	22.8	-16	07.1
Dif	—		-9		-5		+35		+1		+24		0		+23		0			

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 47 ^m 9			Edad: 4 ^d 0 PHE { 4 ^h : 60/0 12 ^h : 59/8 20 ^h : 59/6 R°: 56 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	183	03.6	-21	15.5	122	16.2	-24	53.8	60 N	15 07	16 00	16 54	13 34 7	19 39 108
1	198	03.4		15.9	136	39.5 43		46.1 77	58	21	10	17 01	16 12	19 57 101
2	213	03.2		16.4	151	02.9 44		38.3 78	56	34	19	06	13 00 18	20 12 96
3	228	03.0		16.8	165	26.4 45		30.4 79	54	45	27	11	12 47 21	25 92
4	243	02.8		17.3	179	50.0 46		22.2 82	52	15 54	34	16	35 25	36 89
5	258	02.6	-21	17.7	194	13.7 47	-24	13.9 83	50	16 03	16 40	17 21	12 24 28	20 46 86
6	273	02.3	-21	18.1	208	37.6 49	-24	05.4 85	45	16 21	16 54	17 31	12 02 33	21 06 80
7	288	02.1		18.6	223	01.5 49	-23	56.8 86	40	36	17 06	39	11 45 37	23 75
8	303	01.9		19.0	237	25.6 51		48.1 87	35	16 49	16	48	30 40	37 72
9	318	01.7		19.5	251	49.8 52		39.1 90	30	17 00	26	17 55	11 17 43	21 49 69
10	333	01.5		19.9	266	14.1 53		30.1 90	20	19	43	18 10	10 54 49	22 10 63
11	348	01.3	-21	20.3	280	38.5 54	-23	20.9 92	10 N	17 36	17 58	18 24	10 35 53	22 28 58
12	3	01.1	-21	20.8	295	03.0 55	-23	11.5 94	0	17 52	18 14	18 40	10 16 57	22 44 54
13	18	00.9		21.2	309	27.7 57	-23	02.0 95	10 S	18 08	30	18 57	9 58 61	23 00 51
14	33	00.6		21.6	323	52.4 57	-22	52.3 97	20	25	18 49	19 17	38 65	18 45
15	48	00.4		22.1	338	17.3 59		42.5 98	30	45	19 11	19 44	16 69	38 40
16	63	00.2		22.5	352	42.3 60		32.6 99	35	18 56	25	20 01	9 02 73	23 49 38
17	78	00.0	-21	22.9	7	07.4 61	-22	22.5 101	40	19 10	19 42	20 21	8 47 76	** ** **
18	92	59.8	-21	23.4	21	32.6 62	-22	12.3 102	45	19 26	20 02	20 48	8 28 81	** ** **
19	107	59.6		23.8	35	58.0 64	-22	02.0 103	50	46	28	21 26	8 05 86	0 04 33
20	122	59.4		24.2	50	23.4 64	-21	51.5 105	52	19 55	41	21 48	7 54 89	16 30
21	137	59.1		24.7	64	49.0 66		40.9 106	54	20 06	20 56	22 16	41 93	29 27
22	152	58.9		25.1	79	14.7 67		30.2 107	56	18	21 14	23 04	27 96	0 44 23
23	167	58.7		25.5	93	40.5 68		19.4 108	58	32	21 36	** ** *	7 09 102	1 02 18
24	182	58.5	-21	26.0	108	06.5 70	-21	08.4 110	60 S	20 49	22 07	** ** *	6 48 109	1 23 11
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 19 ^h 29 ^m 3		Mag: -3.9 PMG: 12 ^h 27 ^m		Mag: -1.8 PMG: 0 ^h 48 ^m		Mag: -2.7 PMG: 19 ^h 27 ^m		Mag: +0.8 PMG: 17 ^h 00 ^m					
	hG ♂		hG ♀		hG ♂		hG ♃		hG ♄					
h	°	'	°	'	°	'	°	'	°	'				
0	66	52.6	173	28.2	-22	49.3	347	55.5	+24	54.5				
1	81	55.0	188	27.3		49.8	2	59.0		54.6				
2	96	57.5	203	26.4		50.2	18	02.5		54.6				
3	112	00.0	218	25.5		50.7	33	05.9		54.7				
4	127	02.4	233	24.5		51.1	48	09.4		54.7				
5	142	04.9	248	23.6	-22	51.6	63	12.9	+24	54.8				
6	157	07.4	263	22.7	-22	52.0	78	16.4	+24	54.8				
7	172	09.8	278	21.8		52.5	93	19.8		54.9				
8	187	12.3	293	20.9		52.9	108	23.3		54.9				
9	202	14.8	308	20.0		53.4	123	26.8		55.0				
10	217	17.2	323	19.1		53.8	138	30.2		55.0				
11	232	19.7	338	18.2	-22	54.3	153	33.7	+24	55.1				
12	247	22.1	353	17.3	-22	54.7	168	37.2	+24	55.1				
13	262	24.6	8	16.4		55.1	183	40.7		55.2				
14	277	27.1	23	15.5		55.6	198	44.1		55.2				
15	292	29.5	38	14.5		56.0	213	47.6		55.2				
16	307	32.0	53	13.6		56.5	228	51.1		55.3				
17	322	34.5	68	12.7	-22	56.9	243	54.6	+24	55.3				
18	337	36.9	83	11.8	-22	57.3	258	58.1	+24	55.4				
19	352	39.4	98	10.9		57.8	274	01.5		55.4				
20	7	41.9	113	10.0		58.2	289	05.0		55.5				
21	22	44.3	128	09.1		58.6	304	08.5		55.5				
22	37	46.8	143	08.2		59.1	319	12.0		55.6				
23	52	49.2	158	07.2		59.5	334	15.5		55.6				
24	67	51.7	173	06.3	-22	59.9	349	18.9	+24	55.7				
Dif	—		-9		-4		+35		0					

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 48 ^m 3			Edad: 5 ^d 0 SD: 16:2 PMG: 17 ^h 26 ^m	PHE { 4 ^h : 59/5 12 ^h : 59/3 20 ^h : 59/1 Rº: 51 ^m										
	hG ☉	Dec	Dif			Náutico		Civil	Hora		Rº	Hora	Rº		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	182	58.5	-21	26.0	108	06.5	-21 08.4	60 N	6 42	7 37	8 31	13 41	3	21 27	101
1	197	58.3		26.4	122	32.6	71 -20 57.3	58	36	27	16	28	8	38	97
2	212	58.1		26.8	136	58.7	71 46.1	56	31	18	8 03	18	11	48	92
3	227	57.8		27.2	151	25.0	73 34.8	54	25	10	7 52	08	15	21	57
4	242	57.6		27.7	165	51.5	75 23.3	52	21	7 03	43	13 00	17	22	05
5	257	57.4	-21	28.1	180	18.0	75 -20 11.8	50	6 16	6 57	7 34	12 52	20	22	12
6	272	57.2	-21	28.5	194	44.6	76 -20 00.1	45	6 06	6 42	7 15	12 35	26	22	26
7	287	57.0		28.9	209	11.4	78 -19 48.3	40	5 57	30	7 00	22	30	38	73
8	302	56.7		29.3	223	38.3	79 36.4	35	49	20	6 48	10	35	49	68
9	317	56.5		29.8	238	05.3	80 24.4	30	41	6 11	36	12 00	38	22	58
10	332	56.3		30.2	252	32.4	81 12.3	20	26	5 54	17	11 43	43	23	13
11	347	56.1	-21	30.6	266	59.7	83 -19 00.1	10 N	5 12	5 38	6 00	11 28	47	23	26
12	2	55.9	-21	31.0	281	27.0	83 -18 47.8	0	4 57	5 22	5 45	11 13	52	23	38
13	17	55.6		31.4	295	54.5	85 35.4	10 S	39	5 06	29	10 59	56	23	51
14	32	55.4		31.9	310	22.1	86 22.9	20	4 19	4 47	5 11	43	61	**	*
15	47	55.2		32.3	324	49.8	87 -18 10.3	30	3 52	25	4 51	25	67	**	*
16	62	55.0		32.7	339	17.6	88 -17 57.6	35	35	4 11	40	15	70	**	*
17	77	54.8	-21	33.1	353	45.5	89 -17 44.8	40	3 14	3 54	4 26	10 03	74	0	02
18	92	54.5	-21	33.5	8	13.5	90 -17 32.0	45	2 48	3 34	4 10	9 49	78	0	18
19	107	54.3		33.9	22	41.7	92 19.0	50	2 10	3 08	3 50	31	85	37	24
20	122	54.1		34.4	37	09.9	92 -17 06.0	52	1 48	2 55	41	23	87	46	21
21	137	53.9		34.8	51	38.3	94 -16 52.8	54	1 20	40	30	14	90	0	56
22	152	53.7		35.2	66	06.8	95 39.6	56	0 32	2 22	18	9	03	94	1
23	167	53.4		35.6	80	35.3	95 26.3	58	**	*	1 59	3 03	8	51	99
24	182	53.2	-21	36.0	95	04.0	97 -16 13.0	60 S	**	*	1 29	2 47	8	37	104

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 19 ^h 25 ^m 4		Mag: -3.9 PMG: 12 ^h 28 ^m		Mag: -1.8 PMG: 0 ^h 43 ^m		Mag: -2.7 PMG: 19 ^h 23 ^m		Mag: +0.8 PMG: 16 ^h 56 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	67	51.7	173	06.3	349	18.9	68	21.2	105	18.5
1	82	54.2	188	05.4	4	22.4	83	23.6	120	20.8
2	97	56.6	203	04.5	19	25.9	98	26.0	135	23.1
3	112	59.1	218	03.6	34	29.4	113	28.5	150	25.4
4	128	01.6	233	02.7	49	32.9	128	30.9	165	27.7
5	143	04.0	248	01.8	64	36.4	143	33.3	180	30.0
6	158	06.5	263	00.8	79	39.8	158	35.7	195	32.4
7	173	09.0	277	59.9	94	43.3	173	38.2	210	34.7
8	188	11.4	292	59.0	109	46.8	188	40.6	225	37.0
9	203	13.9	307	58.1	124	50.3	203	43.0	240	39.3
10	218	16.4	322	57.2	139	53.8	218	45.4	255	41.6
11	233	18.8	337	56.3	154	57.3	233	47.9	270	43.9
12	248	21.3	352	55.3	170	00.8	248	50.3	285	46.2
13	263	23.7	7	54.4	185	04.3	263	52.7	300	48.6
14	278	26.2	22	53.5	200	07.8	278	55.1	315	50.9
15	293	28.7	37	52.6	215	11.3	293	57.6	330	53.2
16	308	31.1	52	51.7	230	14.7	309	00.0	345	55.5
17	323	33.6	67	50.7	245	18.2	324	02.4	0	57.8
18	338	36.1	82	49.8	260	21.7	339	04.8	16	00.1
19	353	38.5	97	48.9	275	25.2	354	07.3	31	02.4
20	8	41.0	112	48.0	290	28.7	9	09.7	46	04.8
21	23	43.5	127	47.1	305	32.2	24	12.1	61	07.1
22	38	45.9	142	46.1	320	35.7	39	14.5	76	09.4
23	53	48.4	157	45.2	335	39.2	54	16.9	91	11.7
24	68	50.9	172	44.3	350	42.7	69	19.4	106	14.0
Dif	—		-9	-4	+35	0	+24		+23	+

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 48 ^m 6			Edad: 6 ^d 0 PHE { SD: 16:1 PMG: 18 ^h 17 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	182	53.2	-21	36.0	95	04.0	-16	13.0	60 N	15 04	15 58	16 53	13 44	1	23 08	95
1	197	53.0		36.4	109	32.8 98	-15	59.5 135	58	19	16 08	16 59	36	5	15	91
2	212	52.8		36.8	124	01.7 99		46.0 135	56	32	17	17 05	29	9	20	88
3	227	52.5		37.2	138	30.7 100		32.4 136	54	43	25	10	23	11	26	8
4	242	52.3		37.6	152	59.8 101		18.7 137	52	15 53	32	15	17	15	30	82
5	257	52.1	-21	38.0	167	29.0 102	-15	05.0 137	50	16 02	16 39	17 20	13 12	17	23 34	80
6	272	51.9	-21	38.5	181	58.3 103	-14	51.2 138	45	16 20	16 53	17 30	13 01	22	23 43	74
7	287	51.6		38.9	196	27.7 104		37.3 139	40	36	17 06	39	12 52	26	51	69
8	302	51.4		39.3	210	57.2 105		23.4 139	35	16 48	16	47	45	29	23 57	65
9	317	51.2		39.7	225	26.8 106	-14	09.4 140	30	17 00	26	17 55	38	32	**	**
10	332	51.0		40.1	239	56.5 107	-13	55.3 141	20	19	43	18 10	26	38	**	**
11	347	50.7	-21	40.5	254	26.3 108	-13	41.2 141	10 N	17 36	17 59	18 25	12 15	43	**	**
12	2	50.5	-21	40.9	268	56.1 108	-13	27.0 142	0	17 52	18 15	18 40	12 05	48	**	**
13	17	50.3		41.3	283	26.1 110	-13	12.7 143	10 S	18 08	31	18 58	11 55	53	**	**
14	32	50.0		41.7	297	56.2 111	-12	58.4 143	20	26	18 50	19 19	44	58	0	03
15	47	49.8		42.1	312	26.3 111		44.1 143	30	46	19 13	19 46	32	63	18	35
16	62	49.6		42.5	326	56.6 113		29.7 144	35	18 58	27	20 03	25	67	27	31
17	77	49.4	-21	42.9	341	26.9 113	-12	15.2 145	40	19 12	19 44	20 24	11 17	70	0	36
18	92	49.1	-21	43.3	355	57.3 114	-12	00.7 145	45	19 28	20 04	20 51	11 07	75	0	47
19	107	48.9		43.7	10	27.8 115	-11	46.1 146	50	49	31	21 31	10 56	80	1	01
20	122	48.7		44.1	24	58.4 116		31.5 146	52	19 58	20 44	21 53	50	83	07	16
21	137	48.4		44.5	39	29.1 117		16.9 146	54	20 09	21 00	22 23	44	86	14	13
22	152	48.2		44.9	53	59.8 117	-11	02.2 147	56	22	18	23 20	37	90	21	10
23	167	48.0		45.3	68	30.6 118	-10	47.5 147	58	36	21 42	**	30	93	30	6
24	182	47.8	-21	45.6	83	01.6 120	-10	32.7 148	60 S	20 54	22 14	**	10 21	98	1	40
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG		Mag: -3.9			Mag: -1.8			Mag: -2.6			Mag: +0.8				
	19 ^h 21 ^m 4		PMG: 12 ^h 30 ^m			PMG: 0 ^h 37 ^m			PMG: 19 ^h 20 ^m			PMG: 16 ^h 52 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♎	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	68	50.9	172	44.3	-23	09.8	350	42.7	+24	56.7	69	19.4	-1	45.9	106	14.0
1	83	53.3	187	43.4		10.2	5	46.2		56.7	84	21.8		45.9	121	16.3
2	98	55.8	202	42.4		10.6	20	49.7		56.7	99	24.2		45.8	136	18.6
3	113	58.2	217	41.5		11.0	35	53.2		56.8	114	26.6		45.8	151	20.9
4	129	00.7	232	40.6		11.4	50	56.7		56.8	129	29.0		45.8	166	23.3
5	144	03.2	247	39.7	-23	11.8	66	00.2	+24	56.8	144	31.5	-1	45.7	181	25.6
6	159	05.6	262	38.7	-23	12.2	81	03.7	+24	56.9	159	33.9	-1	45.7	196	27.9
7	174	08.1	277	37.8		12.6	96	07.2		56.9	174	36.3		45.7	211	30.2
8	189	10.6	292	36.9		13.0	111	10.7		57.0	189	38.7		45.6	226	32.5
9	204	13.0	307	36.0		13.4	126	14.2		57.0	204	41.1		45.6	241	34.8
10	219	15.5	322	35.0		13.8	141	17.7		57.0	219	43.5		45.6	256	37.1
11	234	18.0	337	34.1	-23	14.2	156	21.2	+24	57.1	234	46.0	-1	45.5	271	39.4
12	249	20.4	352	33.2	-23	14.5	171	24.7	+24	57.1	249	48.4	-1	45.5	286	41.7
13	264	22.9	7	32.3		14.9	186	28.2		57.1	264	50.8		45.5	301	44.1
14	279	25.4	22	31.3		15.3	201	31.7		57.2	279	53.2		45.4	316	46.4
15	294	27.8	37	30.4		15.7	216	35.2		57.2	294	55.6		45.4	331	48.7
16	309	30.3	52	29.5		16.1	231	38.7		57.2	309	58.0		45.4	346	51.0
17	324	32.7	67	28.6	-23	16.4	246	42.2	+24	57.3	325	00.5	-1	45.3	1	53.3
18	339	35.2	82	27.6	-23	16.8	261	45.7	+24	57.3	340	02.9	-1	45.3	16	55.6
19	354	37.7	97	26.7		17.2	276	49.3		57.3	355	05.3		45.3	31	57.9
20	9	40.1	112	25.8		17.6	291	52.8		57.4	10	07.7		45.2	47	00.2
21	24	42.6	127	24.8		18.0	306	56.3		57.4	25	10.1		45.2	62	02.5
22	39	45.1	142	23.9		18.3	321	59.8		57.4	40	12.5		45.2	77	04.8
23	54	47.5	157	23.0		18.7	337	03.3		57.5	55	14.9		45.1	92	07.2
24	69	50.0	172	22.1	-23	19.1	352	06.8	+24	57.5	70	17.4	-1	45.1	107	09.5
Dif	—		-9		-4		+35		0		+24		0		+23	
															+1	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 49 ^m 0			Edad: 7 ^d 0 PHE { 4 ^h : 58'3 12 ^h : 58'1 20 ^h : 57'9 R°: 45 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	m		
0	182	47.8	-21	83	01.6	-10	32.7	60 N	6 46	7 41	8 35	13 45	1	***	***	***		
1	197	47.5		97	32.5 ¹¹⁹		17.9 ¹⁴⁸	58	39	30	20	41	4	***	***	***		
2	212	47.3		112	03.6 ¹²¹	-10	03.0 ¹⁴⁹	56	33	21	8 07	38	7	***	***	***		
3	227	47.1		126	34.7 ¹²¹	-9	48.1 ¹⁴⁹	54	28	13	7 55	34	10	***	***	***		
4	242	46.8		141	05.9 ¹²²		33.2 ¹⁴⁹	52	23	7 06	45	32	12	***	***	***		
5	257	46.6	-21	155	37.2 ¹²³	-9	18.2 ¹⁵⁰	50	6 18	6 59	7 37	13 29	15	***	***	***		
6	272	46.4	-21	170	08.6 ¹²⁴	-9	03.3 ¹⁴⁹	45	6 08	6 45	7 18	13 23	20	***	***	***		
7	287	46.1		184	40.0 ¹²⁴	-8	48.2 ¹⁵¹	40	5 59	32	7 02	18 24		***	***	***		
8	302	45.9		199	11.5 ¹²⁵		33.2 ¹⁵⁰	35	50	22	6 49	14 27		***	***	***		
9	317	45.7		213	43.1 ¹²⁶		18.1 ¹⁵¹	30	43	6 12	38	10 31	0 03	62				
10	332	45.4		228	14.7 ¹²⁶	-8	03.0 ¹⁵¹	20	28	5 55	19	13 04	36	12	56			
11	347	45.2	-21	242	46.4 ¹²⁷	-7	47.9 ¹⁵¹	10 N	5 13	5 39	6 01	12 58	41	0 21	51			
12	2	45.0	-21	257	18.1 ¹²⁷	-7	32.7 ¹⁵²	0	4 57	5 23	5 45	12 53	45	0 28	47			
13	17	44.7		271	49.9 ¹²⁸		17.5 ¹⁵²	10 S	40	5 06	29	48 50		36	42			
14	32	44.5		286	21.8 ¹²⁹	-7	02.3 ¹⁵²	20	4 19	4 47	5 12	42 55		44	37			
15	47	44.3		300	53.7 ¹²⁹	-6	47.1 ¹⁵²	30	3 52	24	4 51	35 61		53	32			
16	62	44.0		315	25.7 ¹³⁰		31.9 ¹⁵²	35	35	4 10	39	32 64	0 58	29				
17	77	43.8	-21	329	57.8 ¹³¹	-6	16.6 ¹⁵³	40	3 13	3 54	4 25	12 27	68	1 04	25			
18	92	43.6	-21	344	29.9 ¹³¹	-6	01.4 ¹⁵²	45	2 46	3 33	4 09	12 22	72	1 11	21			
19	107	43.3		359	02.0 ¹³¹	-5	46.1 ¹⁵³	50	2 07	3 06	3 49	16 78		19	16			
20	122	43.1		13	34.2 ¹³²		30.8 ¹⁵³	52	1 45	2 53	39	13 80		23	13			
21	137	42.9		28	06.5 ¹³³		15.5 ¹⁵³	54	1 15	37	28	10 83		27	11			
22	152	42.6		42	38.8 ¹³³	-5	00.1 ¹⁵⁴	56	0 17	2 19	15	07 86		31	8			
23	167	42.4		57	11.2 ¹³⁴	-4	44.8 ¹⁵³	58	*** **	1 55	3 01	12 03	89	36	5			
24	182	42.2	-21	71	43.6 ¹³⁴	-4	29.5 ¹⁵³	60 S	*** **	1 23	2 44	11 59	93	1 42	1			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 17 ^m 5		Mag: -3.9 PMG: 12 ^h 31 ^m			Mag: -1.8 PMG: 0 ^h 31 ^m			Mag: -2.6 PMG: 19 ^h 16 ^m			Mag: +0.8 PMG: 16 ^h 49 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'		
0	69	50.0	172	22.1	-23	19.1	352	06.8	+24	57.5	70	17.4	-1	45.1	107	09.5	-16	03.5
1	84	52.5	187	21.1		19.4	7	10.3		57.5	85	19.8		45.1	122	11.8		03.4
2	99	54.9	202	20.2		19.8	22	13.8		57.6	100	22.2		45.0	137	14.1		03.4
3	114	57.4	217	19.3		20.2	37	17.3		57.6	115	24.6		45.0	152	16.4		03.3
4	129	59.8	232	18.3		20.5	52	20.8		57.6	130	27.0		44.9	167	18.7		03.2
5	145	02.3	247	17.4	-23	20.9	67	24.3	+24	57.7	145	29.4	-1	44.9	182	21.0	-16	03.2
6	160	04.8	262	16.5	-23	21.3	82	27.9	+24	57.7	160	31.8	-1	44.9	197	23.3	-16	03.1
7	175	07.2	277	15.5		21.6	97	31.4		57.7	175	34.2		44.8	212	25.6		03.1
8	190	09.7	292	14.6		22.0	112	34.9		57.8	190	36.7		44.8	227	27.9		03.0
9	205	12.2	307	13.7		22.3	127	38.4		57.8	205	39.1		44.8	242	30.2		03.0
10	220	14.6	322	12.7		22.7	142	41.9		57.8	220	41.5		44.7	257	32.5		02.9
11	235	17.1	337	11.8	-23	23.1	157	45.4	+24	57.9	235	43.9	-1	44.7	272	34.9	-16	02.9
12	250	19.6	352	10.9	-23	23.4	172	48.9	+24	57.9	250	46.3	-1	44.7	287	37.2	-16	02.8
13	265	22.0	7	09.9		23.8	187	52.5		57.9	265	48.7		44.6	302	39.5		02.8
14	280	24.5	22	09.0		24.1	202	56.0		58.0	280	51.1		44.6	317	41.8		02.7
15	295	27.0	37	08.1		24.5	217	59.5		58.0	295	53.5		44.5	332	44.1		02.7
16	310	29.4	52	07.1		24.8	233	03.0		58.0	310	55.9		44.5	347	46.4		02.6
17	325	31.9	67	06.2	-23	25.2	248	06.5	+24	58.0	325	58.3	-1	44.5	2	48.7	-16	02.6
18	340	34.3	82	05.3	-23	25.5	263	10.0	+24	58.1	341	00.7	-1	44.4	17	51.0	-16	02.5
19	355	36.8	97	04.3		25.9	278	13.6		58.1	356	03.1		44.4	32	53.3		02.5
20	10	39.3	112	03.4		26.2	293	17.1		58.1	11	05.5		44.4	47	55.6		02.4
21	25	41.7	127	02.5		26.6	308	20.6		58.2	26	08.0		44.3	62	57.9		02.4
22	40	44.2	142	01.5		26.9	323	24.1		58.2	41	10.4		44.3	78	00.2		02.3
23	55	46.7	157	00.6		27.2	338	27.6		58.2	56	12.8		44.2	93	02.5		02.2
24	70	49.1	171	59.6	-23	27.6	353	31.1	+24	58.2	71	15.2	-1	44.2	108	04.8	-16	02.2
Dif	—		-9		-4		+35		0		+24		0		+23		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 49 ^m 4			Edad: 8 ^d 0 PHE { 4 ^h : 57/7 12 ^h : 57/5 20 ^h : 57/3 PMG: 19 ^h 49 ^m R°: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m		h m m				
0	182	42.2	-21	54.9	71	43.6	-4	29.5	60 N	15 02	15 56	16 51	13 46 1	0 43 92				
1	197	41.9		55.2	86	16.0 ¹³⁴	-4	14.1 ¹⁵⁴	58	17	16 06	16 58	45 4	46 88				
2	212	41.7		55.6	100	48.5 ¹³⁵	-3	58.7 ¹⁵⁴	56	30	16	17 04	45 7	48 85				
3	227	41.4		56.0	115	21.0 ¹³⁵		43.4 ¹⁵³	54	41	24	09	44 10	50 82				
4	242	41.2		56.4	129	53.6 ¹³⁶		28.0 ¹⁵⁴	52	15 52	31	14	44 12	52 79				
5	257	41.0	-21	56.7	144	26.2 ¹³⁶	-3	12.6 ¹⁵⁴	50	16 01	16 38	17 19	13 44 14	0 54 76				
6	272	40.7	-21	57.1	158	58.9 ¹³⁷	-2	57.3 ¹⁵³	45	16 20	16 53	17 29	13 43 19	0 57 71				
7	287	40.5		57.5	173	31.6 ¹³⁷		41.9 ¹⁵⁴	40	35	17 05	39	42 23	1 00 67				
8	302	40.2		57.9	188	04.3 ¹³⁷		26.5 ¹⁵⁴	35	16 48	16	47	41 27	02 64				
9	317	40.0		58.2	202	37.1 ¹³⁸	-2	11.1 ¹⁵⁴	30	17 00	26	17 55	41 29	05 60				
10	332	39.8		58.6	217	09.9 ¹³⁸	-1	55.8 ¹⁵³	20	19	43	18 10	40 35	08 55				
11	347	39.5	-21	59.0	231	42.7 ¹³⁸	-1	40.4 ¹⁵⁴	10 N	17 37	17 59	18 25	13 39 40	1 12 49				
12	2	39.3	-21	59.3	246	15.6 ¹³⁹	-1	25.0 ¹⁵⁴	0	17 53	18 15	18 41	13 38 45	1 15 45				
13	17	39.1	-21	59.7	260	48.5 ¹³⁹	-1	09.7 ¹⁵³	10 S	18 10	32	18 59	38 49	18 40				
14	32	38.8	-22	00.1	275	21.4 ¹³⁹	-0	54.3 ¹⁵⁴	20	27	18 52	19 20	37 54	21 35				
15	47	38.6		00.4	289	54.4 ¹⁴⁰		39.0 ¹⁵³	30	18 48	19 15	19 48	36 59	25 29				
16	62	38.3		00.8	304	27.3 ¹³⁹		23.7 ¹⁵³	35	19 00	29	20 05	36 62	27 26				
17	77	38.1	-22	01.2	319	00.3 ¹⁴⁰	-0	08.3 ¹⁵⁴	40	19 14	19 46	20 26	13 35 66	1 29 23				
18	92	37.8	-22	01.5	333	33.3 ¹⁴⁰	+0	07.0 ¹⁵³	45	19 31	20 07	20 54	13 34 71	1 32 19				
19	107	37.6		01.9	348	06.4 ¹⁴¹		22.3 ¹⁵³	50	19 51	34	21 35	34 75	35 14				
20	122	37.4		02.2	2	39.5 ¹⁴¹		37.5 ¹⁵²	52	20 01	20 48	21 57	33 78	36 12				
21	137	37.1		02.6	17	12.5 ¹⁴⁰	+0	52.8 ¹⁵³	54	12	21 04	22 29	33 81	38 9				
22	152	36.9		03.0	31	45.7 ¹⁴²	+1	08.1 ¹⁵³	56	25	23	** **	33 83	39 7				
23	167	36.6		03.3	46	18.8 ¹⁴¹		23.3 ¹⁵²	58	40	21 47	** **	32 87	41 4				
24	182	36.4	-22	03.7	60	51.9 ¹⁴¹	+1	38.5 ¹⁵²	60 S	20 58	22 22	** **	13 32 90	1 43 1				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 19 ^h 13 ^m 6		Mag: -3.9 PMG: 12 ^h 33 ^m			Mag: -1.8 PMG: 0 ^h 26 ^m			Mag: -2.6 PMG: 19 ^h 12 ^m			Mag: +0.8 PMG: 16 ^h 45 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	70	49.1	171	59.6	-23	27.6	353	31.1	+24	58.2	71	15.2	-1	44.2	108	04.8	-16	02.2
1	85	51.6	186	58.7		27.9	8	34.7		58.3	86	17.6		44.2	123	07.1		02.1
2	100	54.1	201	57.8		28.3	23	38.2		58.3	101	20.0		44.1	138	09.4		02.1
3	115	56.5	216	56.8		28.6	38	41.7		58.3	116	22.4		44.1	153	11.8		02.0
4	130	59.0	231	55.9		28.9	53	45.2		58.3	131	24.8		44.1	168	14.1		02.0
5	146	01.5	246	55.0	-23	29.3	68	48.7	+24	58.4	146	27.2	-1	44.0	183	16.4	-16	01.9
6	161	03.9	261	54.0	-23	29.6	83	52.3	+24	58.4	161	29.6	-1	44.0	198	18.7	-16	01.9
7	176	06.4	276	53.1		29.9	98	55.8		58.4	176	32.0		43.9	213	21.0		01.8
8	191	08.8	291	52.1		30.3	113	59.3		58.5	191	34.4		43.9	228	23.3		01.8
9	206	11.3	306	51.2		30.6	129	02.8		58.5	206	36.8		43.9	243	25.6		01.7
10	221	13.8	321	50.3		30.9	144	06.4		58.5	221	39.2		43.8	258	27.9		01.7
11	236	16.2	336	49.3	-23	31.3	159	09.9	+24	58.5	236	41.6	-1	43.8	273	30.2	-16	01.6
12	251	18.7	351	48.4	-23	31.6	174	13.4	+24	58.6	251	44.0	-1	43.7	288	32.5	-16	01.6
13	266	21.2	6	47.4		31.9	189	16.9		58.6	266	46.4		43.7	303	34.8		01.5
14	281	23.6	21	46.5		32.2	204	20.4		58.6	281	48.8		43.7	318	37.1		01.4
15	296	26.1	36	45.6		32.6	219	24.0		58.6	296	51.2		43.6	333	39.4		01.4
16	311	28.6	51	44.6		32.9	234	27.5		58.6	311	53.6		43.6	348	41.7		01.3
17	326	31.0	66	43.7	-23	33.2	249	31.0	+24	58.7	326	56.0	-1	43.5	3	44.0	-16	01.3
18	341	33.5	81	42.7	-23	33.5	264	34.5	+24	58.7	341	58.4	-1	43.5	18	46.3	-16	01.2
19	356	35.9	96	41.8		33.8	279	38.1		58.7	357	00.8		43.5	33	48.6		01.2
20	11	38.4	111	40.8		34.1	294	41.6		58.7	12	03.2		43.4	48	50.9		01.1
21	26	40.9	126	39.9		34.5	309	45.1		58.8	27	05.6		43.4	63	53.2		01.1
22	41	43.3	141	39.0		34.8	324	48.6		58.8	42	08.0		43.3	78	55.5		01.0
23	56	45.8	156	38.0		35.1	339	52.2		58.8	57	10.4		43.3	93	57.8		01.0
24	71	48.3	171	37.1	-23	35.4	354	55.7	+24	58.8	72	12.8	-1	43.2	109	00.1	-16	00.9
Dif	—		-9		-3		+35		0		+24		0		+23		+1	

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 11 ^h 49 ^m 8			Edad: 9 ^d 0 SD: 15:6 PMG: 20 ^h 33 ^m	PHE { 4 ^h : 57:1 12 ^h : 56:9 20 ^h : 56:7 R°: 45 ^m												
	hG ☉	Dec				hG ☾		Dif	Dec		Dif	Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	
0	182	36.4	-22	03.7	60	51.9	+1	38.5	60 N	6 49	7 44	8 39	13 47	1	2 15	90	
1	197	36.1		04.0	75	25.1 ¹⁴²	+1	53.7 ¹⁵²	58	42	33	23	49	5	14	86	
2	212	35.9		04.4	89	58.2 ¹⁴¹	+2	08.9 ¹⁵²	56	36	24	8 10	52	7	13	83	
3	227	35.7		04.7	104	31.4 ¹⁴²		24.1 ¹⁵²	54	30	16	7 58	54	10	12	80	
4	242	35.4		05.1	119	04.6 ¹⁴²		39.2 ¹⁵¹	52	25	08	48	56	12	11	78	
5	257	35.2	-22	05.5	133	37.8 ¹⁴²	+2	54.3 ¹⁵¹	50	6 21	7 02	7 39	13 58	14	2 10	75	
6	272	34.9	-22	05.8	148	11.0 ¹⁴²	+3	09.4 ¹⁵¹	45	6 10	6 47	7 20	14 02	19	2 08	71	
7	287	34.7		06.2	162	44.2 ¹⁴²		24.5 ¹⁵¹	40	6 01	34	7 04	05	23	07	66	
8	302	34.4		06.5	177	17.5 ¹⁴³		39.5 ¹⁵⁰	35	5 52	23	6 51	08	27	06	62	
9	317	34.2		06.9	191	50.7 ¹⁴²	+3	54.5 ¹⁵⁰	30	44	6 14	40	10	30	05	59	
10	332	33.9		07.2	206	23.9 ¹⁴²	+4	09.5 ¹⁵⁰	20	29	5 56	20	15	35	03	53	
11	347	33.7	-22	07.6	220	57.1 ¹⁴²	+4	24.5 ¹⁵⁰	10 N	5 14	5 40	6 02	14 19	40	2 01	49	
12	2	33.5	-22	07.9	235	30.4 ¹⁴³	+4	39.4 ¹⁴⁹	0	4 58	5 24	5 46	14 23	44	2 00	44	
13	17	33.2		08.3	250	03.6 ¹⁴²	+4	54.3 ¹⁴⁹	10 S	40	5 07	30	27	48	1 58	40	
14	32	33.0		08.6	264	36.9 ¹⁴³	+5	09.1 ¹⁴⁸	20	4 19	4 48	5 12	31	53	56	35	
15	47	32.7		09.0	279	10.1 ¹⁴²		24.0 ¹⁴⁹	30	3 51	24	4 51	35	59	54	30	
16	62	32.5		09.3	293	43.3 ¹⁴²		38.8 ¹⁴⁸	35	34	4 10	39	38	62	53	27	
17	77	32.2	-22	09.7	308	16.6 ¹⁴³	+5	53.5 ¹⁴⁷	40	3 12	3 53	4 25	14 41	66	1 52	23	
18	92	32.0	-22	10.0	322	49.8 ¹⁴²	+6	08.3 ¹⁴⁸	45	2 44	3 32	4 08	14 45	70	1 51	19	
19	107	31.7		10.3	337	23.0 ¹⁴²		22.9 ¹⁴⁶	50	2 04	3 05	3 48	49	76	49	14	
20	122	31.5		10.7	351	56.2 ¹⁴²		37.6 ¹⁴⁷	52	1 41	2 51	38	51	78	48	12	
21	137	31.2		11.0	6	29.4 ¹⁴²	+6	52.2 ¹⁴⁶	54	1 10	35	26	54	80	47	10	
22	152	31.0		11.4	21	02.6 ¹⁴²	+7	06.8 ¹⁴⁶	56	** **	2 16	3 14	56	83	46	7	
23	167	30.7		11.7	35	35.8 ¹⁴²		21.3 ¹⁴⁵	58	** **	1 52	2 59	14	59	87	45	5
24	182	30.5	-22	12.1	50	09.0 ¹⁴²	+7	35.8 ¹⁴⁵	60 S	** **	1 17	2 41	15	02	91	1 44	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 09 ^m 6		Mag: -3.9 PMG: 12 ^h 34 ^m		Mag: -1.8 PMG: 0 ^h 20 ^m		Mag: -2.6 PMG: 19 ^h 08 ^m		Mag: +0.8 PMG: 16 ^h 41 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	71	48.3	171	37.1	-23	35.4	354	55.7	+24	58.8	72	12.8	-1	43.2	109	00.1	-16	00.9
1	86	50.7	186	36.1		35.7	9	59.2		58.9	87	15.2		43.2	124	02.4		00.9
2	101	53.2	201	35.2		36.0	25	02.8		58.9	102	17.6		43.2	139	04.7		00.8
3	116	55.7	216	34.2		36.3	40	06.3		58.9	117	20.0		43.1	154	07.0		00.7
4	131	58.1	231	33.3		36.6	55	09.8		58.9	132	22.4		43.1	169	09.3		00.7
5	147	00.6	246	32.4	-23	36.9	70	13.3	+24	58.9	147	24.8	-1	43.0	184	11.6	-16	00.6
6	162	03.1	261	31.4	-23	37.2	85	16.9	+24	59.0	162	27.2	-1	43.0	199	13.9	-16	00.6
7	177	05.5	276	30.5		37.5	100	20.4		59.0	177	29.6		42.9	214	16.2		00.5
8	192	08.0	291	29.5		37.8	115	23.9		59.0	192	32.0		42.9	229	18.5		00.5
9	207	10.4	306	28.6		38.1	130	27.4		59.0	207	34.4		42.9	244	20.8		00.4
10	222	12.9	321	27.6		38.4	145	31.0		59.0	222	36.7		42.8	259	23.1		00.4
11	237	15.4	336	26.7	-23	38.7	160	34.5	+24	59.1	237	39.1	-1	42.8	274	25.4	-16	00.3
12	252	17.8	351	25.7	-23	39.0	175	38.0	+24	59.1	252	41.5	-1	42.7	289	27.7	-16	00.3
13	267	20.3	6	24.8		39.3	190	41.6		59.1	267	43.9		42.7	304	30.0		00.2
14	282	22.8	21	23.8		39.6	205	45.1		59.1	282	46.3		42.6	319	32.3		00.1
15	297	25.2	36	22.9		39.9	220	48.6		59.1	297	48.7		42.6	334	34.6	-16	00.1
16	312	27.7	51	21.9		40.2	235	52.2		59.1	312	51.1		42.6	349	36.9	-16	00.0
17	327	30.2	66	21.0	-23	40.5	250	55.7	+24	59.2	327	53.5	-1	42.5	4	39.2	-16	00.0
18	342	32.6	81	20.0	-23	40.8	265	59.2	+24	59.2	342	55.9	-1	42.5	19	41.5	-15	59.9
19	357	35.1	96	19.1		41.1	281	02.7		59.2	357	58.3		42.4	34	43.8		59.9
20	12	37.5	111	18.2		41.4	296	06.3		59.2	13	00.7		42.4	49	46.1		59.8
21	27	40.0	126	17.2		41.6	311	09.8		59.2	28	03.1		42.3	64	48.4		59.8
22	42	42.5	141	16.3		41.9	326	13.3		59.2	43	05.5		42.3	79	50.7		59.7
23	57	44.9	156	15.3		42.2	341	16.9		59.3	58	07.8		42.2	94	53.0		59.6
24	72	47.4	171	14.4	-23	42.5	356	20.4	+24	59.3	73	10.2	-1	42.2	109	55.3	-15	59.6
Dif	—		-9		-3		+35		0		+24		0		+23		+1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16:2 PMG: 11 ^h 50 ^m 2				Edad: 10 ^d 0 PHE { SD: 15 ^h 4 PMG: 21 ^h 18 ^m 4 ^h : 56:6 12 ^h : 56:4 20 ^h : 56:2 R°: 46 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	182	30.5	-22	12.1	50	09.0	+7	35.8	60 N	14 59	15 54	16 50	13 48 2	3 45 91				
1	197	30.2		12.4	64	42.1 ¹⁴¹	+7	50.2 ¹⁴⁴	58	15 15	16 05	16 57	54 6	40 87				
2	212	30.0		12.7	79	15.3 ¹⁴²	+8	04.6 ¹⁴⁴	56	29	14	17 03	13 59 9	36 83				
3	227	29.7		13.1	93	48.4 ¹⁴¹		19.0 ¹⁴⁴	54	40	23	08	14 04 12	32 80				
4	242	29.5		13.4	108	21.5 ¹⁴¹		33.3 ¹⁴³	52	15 50	30	13	08 15	29 77				
5	257	29.2	-22	13.7	122	54.6 ¹⁴¹	+8	47.6 ¹⁴³	50	16 00	16 37	17 18	14 12 17	3 25 75				
6	272	29.0	-22	14.1	137	27.7 ¹⁴¹	+9	01.8 ¹⁴²	45	16 19	16 52	17 29	14 21 22	3 19 69				
7	287	28.7		14.4	152	00.7 ¹⁴⁰		15.9 ¹⁴¹	40	35	17 05	39	28 26	13 66				
8	302	28.5		14.7	166	33.8 ¹⁴¹		30.0 ¹⁴¹	35	16 48	16	47	35 29	08 62				
9	317	28.2		15.1	181	06.8 ¹⁴⁰		44.1 ¹⁴¹	30	17 00	26	17 55	40 32	3 04 59				
10	332	28.0		15.4	195	39.8 ¹⁴⁰	+9	58.1 ¹⁴⁰	20	20	17 44	18 11	50 37	2 56 54				
11	347	27.7	-22	15.7	210	12.8 ¹⁴⁰	+10	12.1 ¹⁴⁰	10 N	17 37	18 00	18 26	14 59 41	2 50 49				
12	2	27.5	-22	16.1	224	45.7 ¹³⁹	+10	26.0 ¹³⁹	0	17 54	18 16	18 42	15 07 46	2 44 45				
13	17	27.2		16.4	239	18.7 ¹⁴⁰		39.8 ¹³⁸	10 S	18 11	33	19 00	15 50	38 40				
14	32	27.0		16.7	253	51.6 ¹³⁹	+10	53.6 ¹³⁸	20	29	18 53	22	24 54	31 36				
15	47	26.7		17.1	268	24.5 ¹³⁹	+11	07.4 ¹³⁸	30	18 49	19 17	19 49	34 60	24 31				
16	62	26.5		17.4	282	57.3 ¹³⁸		21.1 ¹³⁷	35	19 02	31	20 07	40 62	20 28				
17	77	26.2	-22	17.7	297	30.2 ¹³⁹	+11	34.7 ¹³⁶	40	19 16	19 48	20 29	15 47 66	2 15 25				
18	92	26.0	-22	18.1	312	02.9 ¹³⁷	+11	48.2 ¹³⁵	45	19 33	20 09	20 57	15 55 70	2 10 20				
19	107	25.7		18.4	326	35.7 ¹³⁸	+12	01.7 ¹³⁵	50	19 54	37	21 38	16 05 75	03 16				
20	122	25.5		18.7	341	08.5 ¹³⁸		15.2 ¹³⁵	52	20 04	20 51	22 02	09 78	2 00 14				
21	137	25.2		19.0	355	41.2 ¹³⁷		28.6 ¹³⁴	54	15	21 07	22 36	14 80	1 57 11				
22	152	24.9		19.4	10	13.8 ¹³⁶		41.9 ¹³³	56	28	27	** **	19 84	53 9				
23	167	24.7		19.7	24	46.5 ¹³⁷	+12	55.1 ¹³²	58	20 44	21 52	** **	26 87	50 4				
24	182	24.4	-22	20.0	39	19.1 ¹³⁶	+13	08.3 ¹³²	60 S	21 02	22 29	** **	16 33 91	1 45 1				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 19 ^h 05 ^m 7		Mag: -3.9 PMG: 12 ^h 36 ^m				Mag: -1.9 PMG: 0 ^h 15 ^m				Mag: -2.6 PMG: 19 ^h 04 ^m				Mag: +0.8 PMG: 16 ^h 38 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	72	47.4	171	14.4	-23	42.5	356	20.4	+24	59.3	73	10.2	-1	42.2	109	55.3	-15	59.6
1	87	49.9	186	13.4		42.8	11	23.9		59.3	88	12.6		42.2	124	57.6		59.5
2	102	52.3	201	12.5		43.0	26	27.5		59.3	103	15.0		42.1	139	59.9		59.5
3	117	54.8	216	11.5		43.3	41	31.0		59.3	118	17.4		42.1	155	02.2		59.4
4	132	57.3	231	10.6		43.6	56	34.5		59.3	133	19.8		42.0	170	04.5		59.4
5	147	59.7	246	09.6	-23	43.9	71	38.1	+24	59.4	148	22.2	-1	42.0	185	06.8	-15	59.3
6	163	02.2	261	08.7	-23	44.2	86	41.6	+24	59.4	163	24.6	-1	41.9	200	09.1	-15	59.3
7	178	04.7	276	07.7		44.4	101	45.1		59.4	178	26.9		41.9	215	11.4		59.2
8	193	07.1	291	06.7		44.7	116	48.7		59.4	193	29.3		41.8	230	13.7		59.1
9	208	09.6	306	05.8		45.0	131	52.2		59.4	208	31.7		41.8	245	16.0		59.1
10	223	12.0	321	04.8		45.2	146	55.7		59.4	223	34.1		41.7	260	18.3		59.0
11	238	14.5	336	03.9	-23	45.5	161	59.3	+24	59.4	238	36.5	-1	41.7	275	20.6	-15	59.0
12	253	17.0	351	02.9	-23	45.8	177	02.8	+24	59.5	253	38.9	-1	41.7	290	22.9	-15	58.9
13	268	19.4	6	02.0		46.0	192	06.3		59.5	268	41.3		41.6	305	25.2		58.9
14	283	21.9	21	01.0		46.3	207	09.9		59.5	283	43.6		41.6	320	27.5		58.8
15	298	24.4	36	00.1		46.6	222	13.4		59.5	298	46.0		41.5	335	29.8		58.8
16	313	26.8	50	59.1		46.8	237	16.9		59.5	313	48.4		41.5	350	32.1		58.7
17	328	29.3	65	58.2	-23	47.1	252	20.5	+24	59.5	328	50.8	-1	41.4	5	34.4	-15	58.6
18	343	31.8	80	57.2	-23	47.3	267	24.0	+24	59.5	343	53.2	-1	41.4	20	36.7	-15	58.6
19	358	34.2	95	56.3		47.6	282	27.5		59.5	358	55.6		41.3	35	39.0		58.5
20	13	36.7	110	55.3		47.9	297	31.1		59.5	13	58.0		41.3	50	41.3		58.5
21	28	39.2	125	54.4		48.1	312	34.6		59.6	29	00.3		41.2	65	43.6		58.4
22	43	41.6	140	53.4		48.4	327	38.1		59.6	44	02.7		41.2	80	45.9		58.4
23	58	44.1	155	52.4		48.6	342	41.7		59.6	59	05.1		41.1	95	48.2		58.3
24	73	46.5	170	51.5	-23	48.9	357	45.2	+24	59.6	74	07.5	-1	41.1	110	50.5	-15	58.2
Dif	—		-10		-3		+35		0		+24		0		+23		+1	

UT	SOL			O LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 50 ^m 6			Edad: 11 ^d 0 PHE { SD: 15'3 PMG: 22 ^h 04 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	Rº	Hora	Rº
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m
0	182	24.4	-22	20.0	39	19.1	+13 08.3	60 N	6 52	7 47	8 42	13 50	4	5 16	92
1	197	24.2		20.3	53	51.7 ¹³⁶	21.4 ¹³¹	58	45	36	26	14 00	8	5 07	88
2	212	23.9		20.6	68	24.2 ¹³⁵	34.5 ¹³¹	56	39	27	13	08 12		4 59	84
3	227	23.7		21.0	82	56.7 ¹³⁵	+13 47.5 ¹³⁰	54	33	18	8 01	16 15		52	81
4	242	23.4		21.3	97	29.2 ¹³⁵	+14 00.4 ¹²⁹	52	28	11	7 51	23 18		46	78
5	257	23.2	-22	21.6	112	01.6 ¹³⁴	+14 13.2 ¹²⁸	50	6 23	7 04	7 42	14 29	21	4 40	76
6	272	22.9	-22	21.9	126	34.0 ¹³⁴	+14 26.0 ¹²⁸	45	6 12	6 49	7 22	14 43	25	4 28	70
7	287	22.6		22.2	141	06.4 ¹³⁴	38.7 ¹²⁷	40	6 02	36	7 06	14 54	29	19	65
8	302	22.4		22.6	155	38.7 ¹³³	+14 51.4 ¹²⁷	35	5 54	25	6 53	15 04	32	10	62
9	317	22.1		22.9	170	11.0 ¹³³	+15 03.9 ¹²⁵	30	45	6 15	41	12 35		4 03	59
10	332	21.9		23.2	184	43.2 ¹³²	16.4 ¹²⁵	20	30	5 57	21	27 40		3 50	55
11	347	21.6	-22	23.5	199	15.4 ¹³²	+15 28.8 ¹²⁴	10 N	5 15	5 41	6 03	15 40	44	3 39	50
12	2	21.4	-22	23.8	213	47.6 ¹³²	+15 41.1 ¹²³	0	4 58	5 25	5 47	15 53	47	3 29	46
13	17	21.1		24.1	228	19.7 ¹³¹	+15 53.4 ¹²³	10 S	40	5 07	30	16 05	51	18	43
14	32	20.8		24.4	242	51.8 ¹³¹	+16 05.6 ¹²²	20	4 19	4 48	5 12	18 55		3 07	39
15	47	20.6		24.7	257	23.8 ¹³⁰	17.7 ¹²¹	30	3 51	24	4 51	34 59		2 55	33
16	62	20.3		25.1	271	55.8 ¹³⁰	29.7 ¹²⁰	35	34	4 10	39	42 63		48	30
17	77	20.1	-22	25.4	286	27.7 ¹²⁹	+16 41.6 ¹¹⁹	40	3 12	3 52	4 25	16 53	65	2 40	27
18	92	19.8	-22	25.7	300	59.6 ¹²⁹	+16 53.4 ¹¹⁸	45	2 43	3 31	4 08	17 05	69	2 30	24
19	107	19.6		26.0	315	31.5 ¹²⁹	+17 05.2 ¹¹⁸	50	2 02	3 03	3 47	20 74		19	18
20	122	19.3		26.3	330	03.3 ¹²⁸	16.9 ¹¹⁷	52	1 38	2 50	36	27 77		14	16
21	137	19.0		26.6	344	35.0 ¹²⁷	28.5 ¹¹⁶	54	1 05	33	25	34 81		08	13
22	152	18.8		26.9	359	06.7 ¹²⁷	40.0 ¹¹⁵	56	** **	2 13	3 12	43 84		2 02	10
23	167	18.5		27.2	13	38.4 ¹²⁷	+17 51.4 ¹¹⁴	58	** **	1 48	2 57	17 53	88	1 54	7
24	182	18.3	-22	27.5	28	10.0 ¹²⁶	+18 02.8 ¹¹⁴	60 S	** **	1 12	2 38	18 04	94	1 46	3
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 19 ^h 01 ^m 8		Mag: -3.9 PMG: 12 ^h 37 ^m			Mag: -1.9 PMG: 0 ^h 09 ^m			Mag: -2.6 PMG: 19 ^h 00 ^m			Mag: +0.8 PMG: 16 ^h 34 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	73	46.5	170	51.5	-23	48.9	357	45.2	+24	59.6	74	07.5	-1	41.1	110
1	88	49.0	185	50.5		49.1	12	48.7		59.6	89	09.9		41.0	125
2	103	51.5	200	49.6		49.4	27	52.3		59.6	104	12.2		41.0	140
3	118	53.9	215	48.6		49.6	42	55.8		59.6	119	14.6		40.9	155
4	133	56.4	230	47.7		49.9	57	59.3		59.6	134	17.0		40.9	170
5	148	58.9	245	46.7	-23	50.1	73	02.9	+24	59.6	149	19.4	-1	40.8	186
6	164	01.3	260	45.8	-23	50.3	88	06.4	+24	59.6	164	21.8	-1	40.8	201
7	179	03.8	275	44.8		50.6	103	09.9		59.7	179	24.1		40.7	216
8	194	06.3	290	43.8		50.8	118	13.5		59.7	194	26.5		40.7	231
9	209	08.7	305	42.9		51.1	133	17.0		59.7	209	28.9		40.6	246
10	224	11.2	320	41.9		51.3	148	20.5		59.7	224	31.3		40.6	261
11	239	13.6	335	41.0	-23	51.5	163	24.1	+24	59.7	239	33.7	-1	40.5	276
12	254	16.1	350	40.0	-23	51.8	178	27.6	+24	59.7	254	36.0	-1	40.5	291
13	269	18.6		39.1		52.0	193	31.2		59.7	269	38.4		40.4	306
14	284	21.0	20	38.1		52.2	208	34.7		59.7	284	40.8		40.4	321
15	299	23.5	35	37.1		52.5	223	38.2		59.7	299	43.2		40.3	336
16	314	26.0	50	36.2		52.7	238	41.8		59.7	314	45.5		40.3	351
17	329	28.4	65	35.2	-23	52.9	253	45.3	+24	59.7	329	47.9	-1	40.2	6
18	344	30.9	80	34.3	-23	53.2	268	48.8	+24	59.7	344	50.3	-1	40.2	21
19	359	33.4	95	33.3		53.4	283	52.4		59.7	359	52.7		40.1	36
20	14	35.8	110	32.4		53.6	298	55.9		59.7	14	55.0		40.1	51
21	29	38.3	125	31.4		53.8	313	59.4		59.8	29	57.4		40.0	66
22	44	40.8	140	30.4		54.1	329	03.0		59.8	44	59.8		40.0	81
23	59	43.2	155	29.5		54.3	344	06.5		59.8	60	02.2		39.9	96
24	74	45.7	170	28.5	-23	54.5	359	10.0	+24	59.8	75	04.5	-1	39.9	111
Dif	—		-10		-2		+35		0		+24		+1		+23

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/2 PMG: 11 ^h 51 ^m 0				Edad: 12 ^d 0 PHE { SD: 15/2 PMG: 22 ^h 51 ^m R°: 50 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m		
0	182	18.3	-22	27.5	28	10.0	+18	02.8	60 N	14 57	15 53	16 49	13 54 7	6 48 94				
1	197	18.0		27.8	42	41.6 ¹²⁶		14.0 ¹¹²	58	15 14	16 04	16 56	14 08 13	35 87				
2	212	17.7		28.1	57	13.1 ¹²⁵		25.2 ¹¹²	56	27	14	17 02	20 18	23 83				
3	227	17.5		28.4	71	44.6 ¹²⁵		36.2 ¹¹⁰	54	39	22	08	31 21	13 79				
4	242	17.2		28.7	86	16.0 ¹²⁴		47.2 ¹¹⁰	52	50	30	13	41 24	6 04 76				
5	257	16.9	-22	29.0	100	47.4 ¹²⁴	+18	58.1 ¹⁰⁹	50	15 59	16 37	17 18	14 50 26	5 56 73				
6	272	16.7	-22	29.3	115	18.8 ¹²⁴	+19	08.9 ¹⁰⁸	45	16 19	16 52	17 29	15 08 31	5 38 69				
7	287	16.4		29.6	129	50.0 ¹²²		19.6 ¹⁰⁷	40	35	17 05	39	23 34	24 66				
8	302	16.2		29.9	144	21.3 ¹²³		30.2 ¹⁰⁶	35	16 48	16	47	36 37	12 63				
9	317	15.9		30.2	158	52.5 ¹²²		40.7 ¹⁰⁵	30	17 00	26	17 56	15 47 40	5 02 60				
10	332	15.6		30.5	173	23.6 ¹²¹	+19	51.1 ¹⁰⁴	20	20	17 44	18 11	16 07 43	4 45 55				
11	347	15.4	-22	30.8	187	54.7 ¹²¹	+20	01.4 ¹⁰³	10 N	17 38	18 01	18 27	16 24 46	4 29 52				
12	2	15.1	-22	31.1	202	25.7 ¹²⁰	+20	11.6 ¹⁰²	0	17 55	18 17	18 43	16 40 49	4 15 48				
13	17	14.8		31.4	216	56.7 ¹²⁰		21.7 ¹⁰¹	10 S	18 12	34	19 01	16 56 52	4 01 45				
14	32	14.6		31.7	231	27.6 ¹¹⁹		31.8 ¹⁰¹	20	30	18 54	23	17 13 56	3 46 41				
15	47	14.3		32.0	245	58.5 ¹¹⁹		41.7 ⁹⁹	30	18 51	19 18	19 51	33 59	28 37				
16	62	14.1		32.3	260	29.4 ¹¹⁹	+20	51.5 ⁹⁸	35	19 03	33	20 09	45 61	18 35				
17	77	13.8	-22	32.6	275	00.2 ¹¹⁸	+21	01.2 ⁹⁷	40	19 18	19 50	20 31	17 58 65	3 07 31				
18	92	13.5	-22	32.9	289	30.9 ¹¹⁷	+21	10.8 ⁹⁶	45	19 35	20 12	21 00	18 14 68	2 54 27				
19	107	13.3		33.1	304	01.6 ¹¹⁷		20.3 ⁹⁵	50	19 56	40	21 42	34 73	37 23				
20	122	13.0		33.4	318	32.2 ¹¹⁶		29.7 ⁹⁴	52	20 07	20 54	22 07	44 75	30 20				
21	137	12.7		33.7	333	02.8 ¹¹⁶		39.0 ⁹³	54	18	21 11	22 42	18 55 77	21 18				
22	152	12.5		34.0	347	33.3 ¹¹⁵		48.1 ⁹¹	56	32	31	** ** *	19 07 81	12 14				
23	167	12.2		34.3	2	03.8 ¹¹⁵	+21	57.2 ⁹¹	58	20 47	21 57	** ** *	21 86	2 01 11				
24	182	11.9	-22	34.6	16	34.3 ¹¹⁵	+22	06.2 ⁹⁰	60 S	21 06	22 36	** ** *	19 38 93	1 49 5				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 57 ^m 8		Mag: -3.9 PMG: 12 ^h 39 ^m				Mag: -1.9 PMG: 0 ^h 03 ^m				Mag: -2.6 PMG: 18 ^h 57 ^m				Mag: +0.8 PMG: 16 ^h 30 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec	hG ♁	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	74	45.7	170	28.5	-23	54.5	359	10.0	+24	59.8	75	04.5	-1	39.9	111	45.5	-15	56.9
1	89	48.1	185	27.6		54.7	14	13.6		59.8	90	06.9		39.8	126	47.8		56.8
2	104	50.6	200	26.6		54.9	29	17.1		59.8	105	09.3		39.8	141	50.1		56.8
3	119	53.1	215	25.6		55.2	44	20.6		59.8	120	11.7		39.7	156	52.4		56.7
4	134	55.5	230	24.7		55.4	59	24.2		59.8	135	14.0		39.7	171	54.7		56.6
5	149	58.0	245	23.7	-23	55.6	74	27.7	+24	59.8	150	16.4	-1	39.6	186	57.0	-15	56.6
6	165	00.5	260	22.8	-23	55.8	89	31.2	+24	59.8	165	18.8	-1	39.6	201	59.3	-15	56.5
7	180	02.9	275	21.8		56.0	104	34.8		59.8	180	21.2		39.5	217	01.5		56.5
8	195	05.4	290	20.8		56.2	119	38.3		59.8	195	23.5		39.5	232	03.8		56.4
9	210	07.9	305	19.9		56.4	134	41.8		59.8	210	25.9		39.4	247	06.1		56.4
10	225	10.3	320	18.9		56.6	149	45.4		59.8	225	28.3		39.3	262	08.4		56.3
11	240	12.8	335	17.9	-23	56.8	164	48.9	+24	59.8	240	30.6	-1	39.3	277	10.7	-15	56.2
12	255	15.3	350	17.0	-23	57.1	179	52.4	+24	59.8	255	33.0	-1	39.2	292	13.0	-15	56.2
13	270	17.7	5	16.0		57.3	194	56.0		59.8	270	35.4		39.2	307	15.3		56.1
14	285	20.2	20	15.1		57.5	209	59.5		59.8	285	37.7		39.1	322	17.6		56.1
15	300	22.6	35	14.1		57.7	225	03.1		59.8	300	40.1		39.1	337	19.9		56.0
16	315	25.1	50	13.1		57.9	240	06.6		59.8	315	42.5		39.0	352	22.2		56.0
17	330	27.6	65	12.2	-23	58.1	255	10.1	+24	59.8	330	44.9	-1	39.0	7	24.5	-15	55.9
18	345	30.0	80	11.2	-23	58.3	270	13.7	+24	59.8	345	47.2	-1	38.9	22	26.7	-15	55.8
19	0	32.5	95	10.2		58.5	285	17.2		59.8	0	49.6		38.9	37	29.0		55.8
20	15	35.0	110	09.3		58.7	300	20.7		59.8	15	52.0		38.8	52	31.3		55.7
21	30	37.4	125	08.3		58.8	315	24.3		59.8	30	54.3		38.8	67	33.6		55.7
22	45	39.9	140	07.4		59.0	330	27.8		59.8	45	56.7		38.7	82	35.9		55.6
23	60	42.4	155	06.4		59.2	345	31.3		59.8	60	59.1		38.6	97	38.2		55.5
24	75	44.8	170	05.4	-23	59.4	0	34.9	+24	59.8	76	01.4	-1	38.6	112	40.5	-15	55.5
Dif	—		-10		-2		-8965		0		+24		+1		+23		+1	

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna			Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 51 ^m 4			Edad: 13 ^d 0 PHE { 4 ^h : 55:2 12 ^h : 55:0 20 ^h : 54:9 PMG: 23 ^h 41 ^m Rº: 52 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		Rº	Hora	Rº			
h	°	'	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	182	11.9	-22	34.6	16	34.3	+22	06.2	88	60 N	6	54	7	50	8	46	14	01
1	197	11.7		34.9	31	04.7 ¹¹⁴		15.0	88	58		47	39		30		21	23
2	212	11.4		35.2	45	35.0 ¹¹³		23.8	88	56		41	29		16		38	27
3	227	11.1		35.4	60	05.3 ¹¹³		32.4	86	54		35	21		8	04	14	52
4	242	10.9		35.7	74	35.5 ¹¹²		40.9	85	52		30	13		7	53	15	05
5	257	10.6	-22	36.0	89	05.7 ¹¹²	+22	49.3	84	50	6	25	7	06	7	44	15	16
6	272	10.3	-22	36.3	103	35.9 ¹¹²	+22	57.6	83	45	6	14	6	51	7	24	15	39
7	287	10.1		36.6	118	06.0 ¹¹¹	+23	05.8	82	40	6	04		38	7	08	15	57
8	302	09.8		36.8	132	36.1 ¹¹¹		13.9	81	35	5	55		27	6	55	16	13
9	317	09.5		37.1	147	06.1 ¹¹⁰		21.8	79	30		47	6	16	43		27	44
10	332	09.3		37.4	161	36.0 ¹⁰⁹		29.7	79	20		31	5	58	22		16	50
11	347	09.0	-22	37.7	176	05.9 ¹⁰⁹	+23	37.4	77	10 N	5	16	5	42	6	04	17	10
12	2	08.7	-22	38.0	190	35.8 ¹⁰⁹	+23	45.0	76	0	4	59	5	25	5	48	17	29
13	17	08.5		38.2	205	05.6 ¹⁰⁸		52.4	74	10 S		41	5	08	3	1	17	48
14	32	08.2		38.5	219	35.4 ¹⁰⁸	+23	59.8	74	20	4	19	4	48	5	13	18	09
15	47	07.9		38.8	234	05.2 ¹⁰⁸	+24	07.0	72	30	3	51		24	4	51		32
16	62	07.7		39.1	248	34.9 ¹⁰⁷		14.2	72	35		33	4	10		39	18	46
17	77	07.4	-22	39.3	263	04.5 ¹⁰⁶	+24	21.2	70	40	3	11	3	52	4	24	19	03
18	92	07.1	-22	39.6	277	34.1 ¹⁰⁶	+24	28.0	68	45		2	42	3	31	4	07	19
19	107	06.8		39.9	292	03.7 ¹⁰⁶		34.8	68	50	2	00	3	02	3	46		47
20	122	06.6		40.1	306	33.2 ¹⁰⁵		41.4	66	52		1	36		2	48	19	59
21	137	06.3		40.4	321	02.7 ¹⁰⁵		47.9	65	54		1	00		32	24	20	12
22	152	06.0		40.7	335	32.2 ¹⁰⁵	+24	54.3	64	56	** ** *		2	11		3	11	
23	167	05.8		41.0	350	01.6 ¹⁰⁴	+25	00.6	63	58	** ** *		1	45		2	55	
24	182	05.5	-22	41.2	4	30.9 ¹⁰³	+25	06.7	61	60 S	** ** *		1	06		2	36	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 18 ^h 53 ^m 9		Mag: -3.9 PMG: 12 ^h 40 ^m			Mag: -1.9 PMG: 23 ^h 52 ^m			Mag: -2.6 PMG: 18 ^h 53 ^m			Mag: +0.8 PMG: 16 ^h 27 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'					
0	75	44.8	170	05.4	-23	59.4	0	34.9	+24	59.8	76	01.4	-1	38.6	112	40.5	-15	55.5	
1	90	47.3	185	04.5		59.6	15	38.4		59.8	91	03.8		38.5	127	42.8		55.4	
2	105	49.8	200	03.5	-23	59.8	30	41.9		59.8	106	06.2		38.5	142	45.1		55.4	
3	120	52.2	215	02.5	-24	00.0	45	45.4		59.8	121	08.5		38.4	157	47.3		55.3	
4	135	54.7	230	01.6	-24	00.2	60	49.0		59.8	136	10.9		38.4	172	49.6		55.3	
5	150	57.1	245	00.6	-24	00.4	75	52.5	+24	59.8	151	13.3	-1	38.3	187	51.9	-15	55.2	
6	165	59.6	259	59.6	-24	00.5	90	56.0	+24	59.8	166	15.6	-1	38.3	202	54.2	-15	55.1	
7	181	02.1	274	58.7		00.7	105	59.6		59.8	181	18.0		38.2	217	56.5		55.1	
8	196	04.5	289	57.7		00.9	121	03.1		59.8	196	20.3		38.1	232	58.8		55.0	
9	211	07.0	304	56.7		01.1	136	06.6		59.8	211	22.7		38.1	248	01.1		55.0	
10	226	09.5	319	55.8		01.2	151	10.2		59.8	226	25.1		38.0	263	03.4		54.9	
11	241	11.9	334	54.8	-24	01.4	166	13.7	+24	59.8	241	27.4	-1	38.0	278	05.6	-15	54.8	
12	256	14.4	349	53.8	-24	01.6	181	17.2	+24	59.8	256	29.8	-1	37.9	293	07.9	-15	54.8	
13	271	16.9	4	52.9		01.8	196	20.8		59.8	271	32.2		37.9	308	10.2		54.7	
14	286	19.3	19	51.9		01.9	211	24.3		59.8	286	34.5		37.8	323	12.5		54.7	
15	301	21.8	34	50.9		02.1	226	27.8		59.8	301	36.9		37.7	338	14.8		54.6	
16	316	24.3	49	50.0		02.3	241	31.4		59.8	316	39.2		37.7	353	17.1		54.5	
17	331	26.7	64	49.0	-24	02.5	256	34.9	+24	59.8	331	41.6	-1	37.6	8	19.4	-15	54.5	
18	346	29.2	79	48.0	-24	02.6	271	38.4	+24	59.8	346	44.0	-1	37.6	23	21.7	-15	54.4	
19	1	31.6	94	47.1		02.8	286	41.9		59.7	1	46.3		37.5	38	23.9		54.4	
20	16	34.1	109	46.1		03.0	301	45.5		59.7	16	48.7		37.5	53	26.2		54.3	
21	31	36.6	124	45.1		03.1	316	49.0		59.7	31	51.0		37.4	68	28.5		54.2	
22	46	39.0	139	44.2		03.3	331	52.5		59.7	46	53.4		37.3	83	30.8		54.2	
23	61	41.5	154	43.2		03.4	346	56.1		59.7	61	55.8		37.3	98	33.1		54.1	
24	76	44.0	169	42.2	-24	03.6	1	59.6	+24	59.7	76	58.1	-1	37.2	113	35.4	-15	54.1	
Dif	—		-10			-2	+35			0	+24			+1	+23			+	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 11 ^h 51 ^m 8			Edad: 14 ^d 0 PHE { SD: 14:9 PMG: **h **m					Civil		Náutico	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	182	05.5	-22 41.2	4	30.9	+25 06.7	60	60 N	14 56	15 52	16 48	14 17 32	9 51 76		
1	197	05.2	41.5	19	00.3 ¹⁰⁴	12.7	60	58	15 12	16 03	16 55	14 44 37	25 70		
2	212	04.9	41.8	33	29.6 ¹⁰³	18.6	59	56	26	13	17 01	15 05 40	9 04 67		
3	227	04.7	42.0	47	58.9 ¹⁰³	24.3	57	54	38	21	07	22 42	8 47 65		
4	242	04.4	42.3	62	28.1 ¹⁰²	30.0	57	52	49	29	13	37 43	32 64		
5	257	04.1	-22 42.5	76	57.3 ¹⁰²	+25 35.5	55	50	15 58	16 36	17 18	15 50 44	8 19 63		
6	272	03.9	-22 42.8	91	26.4 ¹⁰¹	+25 40.8	53	45	16 18	16 52	17 29	16 17 46	7 53 60		
7	287	03.6	43.1	105	55.6 ¹⁰²	46.1	53	40	35	17 05	39	38 47	33 58		
8	302	03.3	43.3	120	24.7 ¹⁰¹	51.2	51	35	16 48	16	48	16 56 48	15 58		
9	317	03.0	43.6	134	53.7 ¹⁰⁰	+25 56.1	49	30	17 00	26	17 56	17 11 49	7 01 56		
10	332	02.8	43.9	149	22.8 ¹⁰¹	+26 01.0	49	20	21	17 45	18 12	37 50	6 35 55		
11	347	02.5	-22 44.1	163	51.8 ¹⁰⁰	+26 05.7	47	10 N	17 39	18 01	18 28	17 59 51	6 14 53		
12	2	02.2	-22 44.4	178	20.8 ¹⁰⁰	+26 10.3	46	0	17 56	18 18	18 44	18 20 52	5 54 51		
13	17	01.9	44.6	192	49.8 ¹⁰⁰	14.8	45	10 S	18 13	36	19 03	18 41 53	33 51		
14	32	01.7	44.9	207	18.7 ⁹⁹	19.1	43	20	31	18 55	24	19 04 53	5 12 49		
15	47	01.4	45.1	221	47.6 ⁹⁹	23.3	42	30	18 52	19 20	19 53	30 54	4 47 47		
16	62	01.1	45.4	236	16.5 ⁹⁹	27.3	40	35	19 05	34	20 11	19 46 55	32 46		
17	77	00.9	-22 45.7	250	45.4 ⁹⁹	+26 31.2	39	40	19 20	19 52	20 33	20 04 55	4 16 43		
18	92	00.6	-22 45.9	265	14.2 ⁹⁸	+26 35.0	38	45	19 37	20 14	21 03	20 26 56	3 55 42		
19	107	00.3	46.2	279	43.0 ⁹⁸	38.7	37	50	19 59	42	21 45	20 54 57	30 39		
20	122	00.0	46.4	294	11.8 ⁹⁸	42.2	35	52	20 09	20 57	22 11	21 07 58	18 37		
21	136	59.8	46.7	308	40.6 ⁹⁸	45.6	34	54	21	21 14	22 49	23 59	3 04 35		
22	151	59.5	46.9	323	09.4 ⁹⁸	48.9	33	56	34	21 35	** ** *	21 42 59	2 48 32		
23	166	59.2	47.2	337	38.2 ⁹⁸	52.0	31	58	20 50	22 02	** ** *	22 05 61	28 29		
24	181	58.9	-22 47.4	352	06.9 ⁹⁷	+26 55.0	30	60 S	21 09	22 42	** ** *	22 35 64	2 05 21		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 50 ^m 0		Mag: -3.9 PMG: 12 ^h 42 ^m		Mag: -1.9 PMG: 23 ^h 46 ^m		Mag: -2.6 PMG: 18 ^h 49 ^m		Mag: +0.8 PMG: 16 ^h 23 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	76	44.0	169	42.2	-24 03.6	1	59.6	+24 59.7	76	58.1	-1 37.2	113	35.4	-15 54.1
1	91	46.4	184	41.3	03.8	17	03.1	59.7	92	00.5	37.2	128	37.7	54.0
2	106	48.9	199	40.3	03.9	32	06.7	59.7	107	02.8	37.1	143	39.9	53.9
3	121	51.4	214	39.3	04.1	47	10.2	59.7	122	05.2	37.1	158	42.2	53.9
4	136	53.8	229	38.4	04.2	62	13.7	59.7	137	07.6	37.0	173	44.5	53.8
5	151	56.3	244	37.4	-24 04.4	77	17.2	+24 59.7	152	09.9	-1 36.9	188	46.8	-15 53.8
6	166	58.7	259	36.4	-24 04.5	92	20.8	+24 59.7	167	12.3	-1 36.9	203	49.1	-15 53.7
7	182	01.2	274	35.5	04.7	107	24.3	59.7	182	14.6	36.8	218	51.4	53.6
8	197	03.7	289	34.5	04.8	122	27.8	59.7	197	17.0	36.8	233	53.6	53.6
9	212	06.1	304	33.5	05.0	137	31.3	59.6	212	19.3	36.7	248	55.9	53.5
10	227	08.6	319	32.6	05.1	152	34.9	59.6	227	21.7	36.6	263	58.2	53.5
11	242	11.1	334	31.6	-24 05.3	167	38.4	+24 59.6	242	24.0	-1 36.6	279	00.5	-15 53.4
12	257	13.5	349	30.6	-24 05.4	182	41.9	+24 59.6	257	26.4	-1 36.5	294	02.8	-15 53.3
13	272	16.0	4	29.7	05.6	197	45.4	59.6	272	28.8	36.5	309	05.1	53.3
14	287	18.5	19	28.7	05.7	212	49.0	59.6	287	31.1	36.4	324	07.3	53.2
15	302	20.9	34	27.7	05.8	227	52.5	59.6	302	33.5	36.3	339	09.6	53.2
16	317	23.4	49	26.7	06.0	242	56.0	59.6	317	35.8	36.3	354	11.9	53.1
17	332	25.9	64	25.8	-24 06.1	257	59.5	+24 59.6	332	38.2	-1 36.2	9	14.2	-15 53.0
18	347	28.3	79	24.8	-24 06.2	273	03.1	+24 59.6	347	40.5	-1 36.2	24	16.5	-15 53.0
19	2	30.8	94	23.8	06.4	288	06.6	59.6	2	42.9	36.1	39	18.8	52.9
20	17	33.2	109	22.9	06.5	303	10.1	59.5	17	45.2	36.0	54	21.0	52.9
21	32	35.7	124	21.9	06.6	318	13.6	59.5	32	47.6	36.0	69	23.3	52.8
22	47	38.2	139	20.9	06.8	333	17.2	59.5	47	49.9	35.9	84	25.6	52.7
23	62	40.6	154	20.0	06.9	348	20.7	59.5	62	52.3	35.8	99	27.9	52.7
24	77	43.1	169	19.0	-24 07.0	3	24.2	+24 59.5	77	54.6	-1 35.8	114	30.2	-15 52.6
Dif	—		-10		-1	+35	0		+24		+1	+23		+

UT	SOL			LUNA					Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2			Edad: 15 ^d 0	PHE {	SD: 14'8	4 ^h : 54'5 12 ^h : 54'4 20 ^h : 54'3	PMG: 0 ^h 33 ^m		R°: 52 ^m							
	PMG: 11 ^h 52 ^m 3																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	181	58.9	-22	47.4	352	06.9	+26	55.0	60 N	6 57	7 53	8 49	14 49	58	11 07	49	
1	196	58.7		47.7	6	35.6	97	+26	57.8	58	50	42	33	15 21	57	10 35	
2	211	58.4		47.9	21	04.4	98	+27	00.5	56	43	32	18	15 45	56	10 11	
3	226	58.1		48.2	35	33.1	97		03.1	54	37	23	8 06	16 04	56	9 52	
4	241	57.8		48.4	50	01.8	97		05.5	52	32	15	7 56	20 55	36	51	
5	256	57.5	-22	48.6	64	30.5	97	+27	07.8	50	6 27	7 08	7 46	16 34	55	9 22	
6	271	57.3	-22	48.9	78	59.1	96	+27	10.0	45	6 16	6 53	7 26	17 03	54	8 53	
7	286	57.0		49.1	93	27.8	97		12.0	40	6 06	40	7 10	25 54		31 52	
8	301	56.7		49.4	107	56.5	97		13.9	35	5 57	28	6 56	17 44	53	8 13	
9	316	56.4		49.6	122	25.2	97		15.7	30	48	18	44	18 00	53	7 57	
10	331	56.2		49.9	136	53.8	96		17.3	20	32	6 00	24	27 52		30 52	
11	346	55.9	-22	50.1	151	22.5	97	+27	18.8	10 N	5 17	5 43	6 06	18 50	52	7 07	
12	1	55.6	-22	50.3	165	51.2	97	+27	20.2	0	5 00	5 26	5 49	19 12	51	6 45	
13	16	55.3		50.6	180	19.9	97		21.4	10 S	4 42	5 09	31	34 51		24 51	
14	31	55.0		50.8	194	48.5	96		22.5	20	4 20	4 49	5 13	19 57	50	6 01	
15	46	54.8		51.1	209	17.2	97		23.4	30	3 51	24	4 52	20 24	50	5 34	
16	61	54.5		51.3	223	45.9	97		24.2	35	33	4 10	39	41 48		5 18 51	
17	76	54.2	-22	51.5	238	14.6	97	+27	24.9	40	3 11	3 52	4 24	20 59	48	4 59 51	
18	91	53.9	-22	51.8	252	43.3	97	+27	25.4	45	2 41	3 30	4 07	21 22	47	4 37 51	
19	106	53.6		52.0	267	12.0	97		25.8	50	1 58	3 02	3 45	21 51	46	4 09 50	
20	121	53.4		52.2	281	40.7	97		26.1	52	1 33	2 47	35	22 05	45	3 55 50	
21	136	53.1		52.5	296	09.5	98		26.2	54	0 55	30	23	22 43		39 49	
22	151	52.8		52.7	310	38.2	97		26.2	56	** **	2 09	3 10	22 41	43	3 20 48	
23	166	52.5		52.9	325	07.0	98		26.1	58	** **	1 42	2 54	23 06	40	2 57 47	
24	181	52.2	-22	53.2	339	35.7	97	+27	25.8	60 S	** **	1 01	2 34	23 39	36	2 26 45	

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 46 ^m 0		Mag: -3.9 PMG: 12 ^h 44 ^m			Mag: -1.9 PMG: 23 ^h 41 ^m			Mag: -2.6 PMG: 18 ^h 45 ^m			Mag: +0.8 PMG: 16 ^h 20 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	°	'	°	°	'	°	°	'	°				
0	77	43.1	169	19.0	-24	07.0	3	24.2	+24	59.5	77	54.6	-1	35.8	114	30.2	-15	52.6
1	92	45.6	184	18.0		07.2	18	27.7		59.5	92	57.0		35.7	129	32.5		52.6
2	107	48.0	199	17.0		07.3	33	31.3		59.5	107	59.3		35.7	144	34.7		52.5
3	122	50.5	214	16.1		07.4	48	34.8		59.5	123	01.7		35.6	159	37.0		52.4
4	137	53.0	229	15.1		07.5	63	38.3		59.4	138	04.0		35.5	174	39.3		52.4
5	152	55.4	244	14.1	-24	07.7	78	41.8	+24	59.4	153	06.4	-1	35.5	189	41.6	-15	52.3
6	167	57.9	259	13.2	-24	07.8	93	45.3	+24	59.4	168	08.7	-1	35.4	204	43.9	-15	52.3
7	183	00.4	274	12.2		07.9	108	48.9		59.4	183	11.1		35.3	219	46.1		52.2
8	198	02.8	289	11.2		08.0	123	52.4		59.4	198	13.4		35.3	234	48.4		52.1
9	213	05.3	304	10.2		08.1	138	55.9		59.4	213	15.8		35.2	249	50.7		52.1
10	228	07.7	319	09.3		08.2	153	59.4		59.4	228	18.1		35.2	264	53.0		52.0
11	243	10.2	334	08.3	-24	08.4	169	02.9	+24	59.4	243	20.5	-1	35.1	279	55.3	-15	51.9
12	258	12.7	349	07.3	-24	08.5	184	06.5	+24	59.3	258	22.8	-1	35.0	294	57.6	-15	51.9
13	273	15.1	4	06.4		08.6	199	10.0		59.3	273	25.2		35.0	309	59.8		51.8
14	288	17.6	19	05.4		08.7	214	13.5		59.3	288	27.5		34.9	325	02.1		51.8
15	303	20.1	34	04.4		08.8	229	17.0		59.3	303	29.9		34.8	340	04.4		51.7
16	318	22.5	49	03.4		08.9	244	20.5		59.3	318	32.2		34.8	355	06.7		51.6
17	333	25.0	64	02.5	-24	09.0	259	24.0	+24	59.3	333	34.6	-1	34.7	10	09.0	-15	51.6
18	348	27.5	79	01.5	-24	09.1	274	27.6	+24	59.3	348	36.9	-1	34.7	25	11.2	-15	51.5
19	3	29.9	94	00.5		09.2	289	31.1		59.2	3	39.3		34.6	40	13.5		51.5
20	18	32.4	108	59.6		09.3	304	34.6		59.2	18	41.6		34.5	55	15.8		51.4
21	33	34.9	123	58.6		09.4	319	38.1		59.2	33	43.9		34.5	70	18.1		51.3
22	48	37.3	138	57.6		09.5	334	41.6		59.2	48	46.3		34.4	85	20.4		51.3
23	63	39.8	153	56.6		09.6	349	45.1		59.2	63	48.6		34.3	100	22.6		51.2
24	78	42.2	168	55.7	-24	09.7	4	48.6	+24	59.2	78	51.0	-1	34.3	115	24.9	-15	51.1
Dif	—		-10		-1		+35		0		+23		+1		+23		+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna				
	SD: 16 ^h 2			Edad: 16 ^d 0	PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/1	SD: 14 ^h 8			PMG: 1 ^h 25 ^m	R°: 51 ^m							
	hG ☉	Dec									hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m
0	181	52.2	-22	53.2	339	35.7	+27	25.8	60 N	14 55	15 51	16 47	15 47	79	11 56	26	
1	196	52.0		53.4	354	04.5		25.4	58	15 11	16 02	16 55	16 18	72	26	31	
2	211	51.7		53.6	8	33.3		24.8	56	26	12	17 01	16 41	69	11 02	35	
3	226	51.4		53.8	23	02.2		24.1	54	38	21	07	17 00	66	10 43	37	
4	241	51.1		54.1	37	31.0		23.3	52	49	29	12	15	65	27	39	
5	256	50.8	-22	54.3	51	59.9	+27	22.4	50	15 58	16 36	17 18	17 29	63	10 14	40	
6	271	50.6	-22	54.5	66	28.8	+27	21.3	45	16 18	16 52	17 29	17 57	60	9 45	43	
7	286	50.3		54.7	80	57.7		20.1	40	35	17 05	39	18 19	58	23	44	
8	301	50.0		55.0	95	26.7		18.7	35	16 48	16	48	37	57	9 05	45	
9	316	49.7		55.2	109	55.6		17.2	30	17 01	27	17 57	18 53	55	8 49	46	
10	331	49.4		55.4	124	24.6		15.6	20	21	17 45	18 13	19 19	54	8 22	48	
11	346	49.2	-22	55.6	138	53.6	+27	13.8	10 N	17 39	18 02	18 28	19 42	52	7 59	49	
12	1	48.9	-22	55.9	153	22.7	+27	12.0	0	17 56	18 19	18 45	20 03	50	7 37	51	
13	16	48.6		56.1	167	51.8		09.9	10 S	18 14	37	19 04	25	48	7 15	52	
14	31	48.3		56.3	182	20.9		07.8	20	32	18 57	26	20 47	47	6 52	53	
15	46	48.0		56.5	196	50.1		05.5	30	18 54	19 21	19 54	21 14	44	25	54	
16	61	47.7		56.7	211	19.2		03.1	35	19 07	36	20 13	29	43	6 09	55	
17	76	47.5	-22	57.0	225	48.5	+27	00.6	40	19 21	19 54	20 35	21 47	41	5 50	57	
18	91	47.2	-22	57.2	240	17.7	+26	57.9	45	19 39	20 16	21 05	22 09	38	5 28	57	
19	106	46.9		57.4	254	47.0		55.1	50	20 01	45	21 49	37	34	4 59	59	
20	121	46.6		57.6	269	16.3		52.2	52	11	20 59	22 15	22 50	33	45	60	
21	136	46.3		57.8	283	45.7		49.2	54	23	21 17	22 54	23 05	31	28	62	
22	151	46.0		58.0	298	15.1		46.0	56	37	21 38	** **	24	27	4 08	64	
23	166	45.7		58.2	312	44.6		42.7	58	20 53	22 06	** **	23 46	23	3 44	66	
24	181	45.5	-22	58.5	327	14.1	+26	39.2	60 S	21 13	22 49	** **	** **	**	3 11	71	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 18 ^h 42 ^m 1		Mag: -3.9 PMG: 12 ^h 45 ^m		Mag: -1.8 PMG: 23 ^h 35 ^m		Mag: -2.6 PMG: 18 ^h 42 ^m		Mag: +0.8 PMG: 16 ^h 16 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	78	42.2	168	55.7	4	48.6	78	51.0	115	24.9
1	93	44.7	183	54.7	19	52.2	93	53.3	130	27.2
2	108	47.2	198	53.7	34	55.7	108	55.7	145	29.5
3	123	49.6	213	52.7	49	59.2	123	58.0	160	31.7
4	138	52.1	228	51.8	65	02.7	139	00.3	175	34.0
5	153	54.6	243	50.8	80	06.2	154	02.7	190	36.3
6	168	57.0	258	49.8	95	09.7	169	05.0	205	38.6
7	183	59.5	273	48.8	110	13.2	184	07.4	220	40.9
8	199	02.0	288	47.9	125	16.7	199	09.7	235	43.1
9	214	04.4	303	46.9	140	20.2	214	12.1	250	45.4
10	229	06.9	318	45.9	155	23.8	229	14.4	265	47.7
11	244	09.4	333	45.0	170	27.3	244	16.7	280	50.0
12	259	11.8	348	44.0	185	30.8	259	19.1	295	52.3
13	274	14.3	3	43.0	200	34.3	274	21.4	310	54.5
14	289	16.7	18	42.0	215	37.8	289	23.8	325	56.8
15	304	19.2	33	41.1	230	41.3	304	26.1	340	59.1
16	319	21.7	48	40.1	245	44.8	319	28.4	356	01.4
17	334	24.1	63	39.1	260	48.3	334	30.8	11	03.6
18	349	26.6	78	38.1	275	51.8	349	33.1	26	05.9
19	4	29.1	93	37.2	290	55.3	4	35.4	41	08.2
20	19	31.5	108	36.2	305	58.8	19	37.8	56	10.5
21	34	34.0	123	35.2	321	02.3	34	40.1	71	12.7
22	49	36.5	138	34.2	336	05.8	49	42.5	86	15.0
23	64	38.9	153	33.3	351	09.3	64	44.8	101	17.3
24	79	41.4	168	32.3	6	12.8	79	47.1	116	19.6
Dif	—		-10	-1	+35	0	+23	+1	+23	+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 2			Edad: 17 ^d 0 PHE { 4 ^h : 54'1 12 ^h : 54'0 20 ^h : 54'0 SD: 14'7 PMG: 2 ^h 16 ^m R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	181	45.5	-22	58.5	327	14.1	+26	39.2	60 N	6 59	7 55	8 52	17 06	87	12 22	12		
1	196	45.2		58.7	341	43.6 ¹⁰⁵		35.7 ³⁵	58	52	44	35	30	81	11 57	18		
2	211	44.9		58.9	356	13.2 ¹⁰⁶		32.0 ³⁷	56	45	34	21	17 50	76	37	23		
3	226	44.6		59.1	10	42.8 ¹⁰⁶		28.2 ³⁸	54	39	25	8 09	18 06	73	20	26		
4	241	44.3		59.3	25	12.5 ¹⁰⁷		24.3 ³⁹	52	34	17	7 58	20	70	11 06	29		
5	256	44.0	-22	59.5	39	42.2 ¹⁰⁷	+26	20.2 ⁴¹	50	6 29	7 10	7 48	18 32	69	10 54	30		
6	271	43.8	-22	59.7	54	11.9 ¹⁰⁷	+26	16.0 ⁴²	45	6 17	6 54	7 28	18 57	64	10 28	34		
7	286	43.5	-22	59.9	68	41.7 ¹⁰⁸		11.7 ⁴³	40	6 07	41	7 12	19 17	61	10 07	37		
8	301	43.2	-23	00.1	83	11.6 ¹⁰⁹		07.3 ⁴⁴	35	5 58	30	6 58	34	58	9 50	39		
9	316	42.9		00.3	97	41.5 ¹⁰⁹	+26	02.8 ⁴⁵	30	49	19	46	19 48	57	35	41		
10	331	42.6		00.5	112	11.5 ¹¹⁰	+25	58.1 ⁴⁷	20	33	6 01	25	20 13	53	9 10	44		
11	346	42.3	-23	00.7	126	41.5 ¹¹⁰	+25	53.3 ⁴⁸	10 N	5 18	5 44	6 07	20 34	50	8 48	47		
12	1	42.0	-23	00.9	141	11.5 ¹¹⁰	+25	48.4 ⁴⁹	0	5 01	5 27	5 49	20 53	48	8 28	48		
13	16	41.7		01.1	155	41.6 ¹¹¹		43.4 ⁵⁰	10 S	4 42	5 09	32	21 13	44	8 07	51		
14	31	41.5		01.3	170	11.8 ¹¹²		38.2 ⁵²	20	4 20	4 49	5 14	34	41	7 45	53		
15	46	41.2		01.5	184	42.0 ¹¹²		33.0 ⁵²	30	3 52	25	4 52	21 58	38	19	57		
16	61	40.9		01.7	199	12.3 ¹¹³		27.6 ⁵⁴	35	33	4 10	39	22 12	36	7 04	58		
17	76	40.6	-23	01.9	213	42.6 ¹¹³	+25	22.1 ⁵⁵	40	3 11	3 52	4 25	22 28	34	6 47	60		
18	91	40.3	-23	02.1	228	12.9 ¹¹³	+25	16.5 ⁵⁶	45	2 41	3 30	4 07	22 47	31	6 25	63		
19	106	40.0		02.3	242	43.4 ¹¹⁵		10.8 ⁵⁷	50	1 57	3 01	3 45	23 11	27	5 58	67		
20	121	39.7		02.5	257	13.8 ¹¹⁴	+25	04.9 ⁵⁹	52	1 31	2 46	34	23	24	45	68		
21	136	39.4		02.7	271	44.4 ¹¹⁶	+24	59.0 ⁵⁹	54	0 51	29	22	36	22	30	70		
22	151	39.2		02.9	286	15.0 ¹¹⁶		52.9 ⁶¹	56	** ** *	2 08	3 09	23 51	19	5 12	74		
23	166	38.9		03.1	300	45.6 ¹¹⁶		46.8 ⁶¹	58	** ** *	1 40	2 53	** ** *	**	4 50	78		
24	181	38.6	-23	03.3	315	16.3 ¹¹⁷	+24	40.5 ⁶³	60 S	** ** *	0 57	2 33	0 14	17	4 22	85		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG 18 ^h 38 ^m 2			Mag: -3.9 PMG: 12 ^h 47 ^m			Mag: -1.8 PMG: 23 ^h 30 ^m			Mag: -2.6 PMG: 18 ^h 38 ^m			Mag: +0.8 PMG: 16 ^h 12 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	79	41.4	168	32.3	-24	11.7	6	12.8	+24	58.7	79	47.1	-1	32.7	116	19.6	-15	49.6
1	94	43.9	183	31.3		11.7	21	16.3		58.7	94	49.5		32.6	131	21.8		49.6
2	109	46.3	198	30.3		11.8	36	19.8		58.6	109	51.8		32.5	146	24.1		49.5
3	124	48.8	213	29.4		11.9	51	23.3		58.6	124	54.1		32.5	161	26.4		49.5
4	139	51.2	228	28.4		11.9	66	26.8		58.6	139	56.5		32.4	176	28.7		49.4
5	154	53.7	243	27.4	-24	12.0	81	30.3	+24	58.6	154	58.8	-1	32.3	191	31.0	-15	49.3
6	169	56.2	258	26.4	-24	12.1	96	33.8	+24	58.6	170	01.1	-1	32.3	206	33.2	-15	49.3
7	184	58.6	273	25.5		12.1	111	37.3		58.5	185	03.5		32.2	221	35.5		49.2
8	200	01.1	288	24.5		12.2	126	40.8		58.5	200	05.8		32.1	236	37.8		49.1
9	215	03.6	303	23.5		12.2	141	44.3		58.5	215	08.1		32.1	251	40.1		49.1
10	230	06.0	318	22.5		12.3	156	47.8		58.5	230	10.5		32.0	266	42.3		49.0
11	245	08.5	333	21.6	-24	12.3	171	51.3	+24	58.4	245	12.8	-1	31.9	281	44.6	-15	49.0
12	260	11.0	348	20.6	-24	12.4	186	54.8	+24	58.4	260	15.1	-1	31.8	296	46.9	-15	48.9
13	275	13.4	3	19.6		12.4	201	58.3		58.4	275	17.5		31.8	311	49.1		48.8
14	290	15.9	18	18.6		12.5	217	01.8		58.4	290	19.8		31.7	326	51.4		48.8
15	305	18.3	33	17.7		12.5	232	05.3		58.3	305	22.1		31.6	341	53.7		48.7
16	320	20.8	48	16.7		12.6	247	08.8		58.3	320	24.5		31.6	356	56.0		48.6
17	335	23.3	63	15.7	-24	12.6	262	12.3	+24	58.3	335	26.8	-1	31.5	11	58.2	-15	48.6
18	350	25.7	78	14.7	-24	12.7	277	15.8	+24	58.3	350	29.1	-1	31.4	27	00.5	-15	48.5
19	5	28.2	93	13.8		12.7	292	19.3		58.2	5	31.5		31.4	42	02.8		48.4
20	20	30.7	108	12.8		12.7	307	22.8		58.2	20	33.8		31.3	57	05.1		48.4
21	35	33.1	123	11.8		12.8	322	26.3		58.2	35	36.1		31.2	72	07.3		48.3
22	50	35.6	138	10.8		12.8	337	29.8		58.2	50	38.4		31.1	87	09.6		48.3
23	65	38.1	153	09.9		12.9	352	33.3		58.1	65	40.8		31.1	102	11.9		48.2
24	80	40.5	168	08.9	-24	12.9	7	36.8	+24	58.1	80	43.1	-1	31.0	117	14.2	-15	48.1
Dif	—		-10		-1		+35		0		+23		+1		+23		+	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16:2			Edad: 18 ^d 0 PHE { 4 ^h : 54:0 12 ^h : 54:0 20 ^h : 54:1										
	PMG: 11 ^h 53 ^m 7			SD: 14:7 PMG: 3 ^h 05 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m	h m	h m
0	181	38.6	-23 03.3	315	16.3	+24 40.5	64	60 N	14 54	15 51	16 47	18 33	88	12 34 6
1	196	38.3	03.5	329	47.1 ¹¹⁸	34.1	64	58	15 11	16 02	16 54	18 51	83	15 11
2	211	38.0	03.7	344	17.9 ¹¹⁸	27.6	65	56	25	12	17 01	19 06	79	12 00 15
3	226	37.7	03.9	358	48.8 ¹¹⁹	20.9	67	54	37	21	07	19 75		11 46 19
4	241	37.4	04.1	13	19.7 ¹¹⁹	14.2	67	52	48	29	13	30 73		35 20
5	256	37.1	-23 04.2	27	50.7 ¹²⁰	+24 07.4	68	50	15 58	16 36	17 18	19 41	70	11 24 23
6	271	36.8	-23 04.4	42	21.8 ¹²¹	+24 00.4	70	45	16 18	16 52	17 29	20 01	66	11 02 28
7	286	36.6	04.6	56	52.9 ¹²¹	+23 53.4	70	40	35	17 05	39	18 62		10 44 31
8	301	36.3	04.8	71	24.0 ¹²¹	46.2	72	35	16 49	17	49	32 59		29 34
9	316	36.0	05.0	85	55.3 ¹²³	39.0	72	30	17 01	27	17 57	20 45	56	10 16 37
10	331	35.7	05.2	100	26.5 ¹²²	31.6	74	20	22	17 46	18 13	21 06	52	9 54 40
11	346	35.4	-23 05.4	114	57.9 ¹²⁴	+23 24.2	74	10 N	17 40	18 03	18 29	21 24	48	9 35 43
12	1	35.1	-23 05.5	129	29.3 ¹²⁴	+23 16.6	76	0	17 57	18 20	18 46	21 41	45	9 16 47
13	16	34.8	05.7	144	00.7 ¹²⁴	08.9	77	10 S	18 15	38	19 05	21 57	42	8 58 49
14	31	34.5	05.9	158	32.3 ¹²⁶	+23 01.2	77	20	33	18 58	27	22 15	39	38 53
15	46	34.2	06.1	173	03.8 ¹²⁵	+22 53.3	79	30	18 55	19 23	19 56	36 34		16 56
16	61	33.9	06.3	187	35.5 ¹²⁷	45.3	80	35	19 08	38	20 14	22 48	31	8 02 59
17	76	33.6	-23 06.4	202	07.2 ¹²⁷	+22 37.2	81	40	19 23	19 56	20 37	23 02	28	7 47 61
18	91	33.4	-23 06.6	216	38.9 ¹²⁷	+22 29.1	81	45	19 41	20 18	21 07	23 18	25	7 28 65
19	106	33.1	06.8	231	10.8 ¹²⁹	20.8	83	50	20 03	20 47	21 51	38 20		7 05 69
20	121	32.8	07.0	245	42.6 ¹²⁸	12.4	84	52	13	21 02	22 18	47 18		6 53 72
21	136	32.5	07.2	260	14.6 ¹³⁰	+22 04.0	84	54	25	19	23 00	23 58	15	40 75
22	151	32.2	07.3	274	46.6 ¹³⁰	+21 55.4	86	56	39	21 41	** ** *	** ** *	**	26 78
23	166	31.9	07.5	289	18.6 ¹³⁰	46.8	86	58	20 56	22 09	** ** *	0 09	14	6 08 83
24	181	31.6	-23 07.7	303	50.7 ¹³¹	+21 38.0	88	60 S	21 16	22 55	** ** *	0 31	8	5 47 88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 34 ^m 2		Mag: -3.9 PMG: 12 ^h 48 ^m		Mag: -1.8 PMG: 23 ^h 24 ^m		Mag: -2.6 PMG: 18 ^h 34 ^m		Mag: +0.8 PMG: 16 ^h 09 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	80	40.5	168 08.9	-24 12.9	7 36.8	+24 58.1	80 43.1	-1 31.0	117 14.2	-15 48.1
1	95	43.0	183 07.9	12.9	22 40.2	58.1	95 45.4	30.9	132 16.4	48.1
2	110	45.5	198 06.9	13.0	37 43.7	58.1	110 47.8	30.9	147 18.7	48.0
3	125	47.9	213 06.0	13.0	52 47.2	58.0	125 50.1	30.8	162 21.0	47.9
4	140	50.4	228 05.0	13.0	67 50.7	58.0	140 52.4	30.7	177 23.2	47.9
5	155	52.8	243 04.0	-24 13.0	82 54.2	+24 58.0	155 54.7	-1 30.6	192 25.5	-15 47.8
6	170	55.3	258 03.0	-24 13.1	97 57.7	+24 58.0	170 57.1	-1 30.6	207 27.8	-15 47.7
7	185	57.8	273 02.1	13.1	113 01.2	57.9	185 59.4	30.5	222 30.1	47.7
8	201	00.2	288 01.1	13.1	128 04.7	57.9	201 01.7	30.4	237 32.3	47.6
9	216	02.7	303 00.1	13.1	143 08.1	57.9	216 04.0	30.3	252 34.6	47.6
10	231	05.2	317 59.1	13.2	158 11.6	57.8	231 06.4	30.3	267 36.9	47.5
11	246	07.6	332 58.2	-24 13.2	173 15.1	+24 57.8	246 08.7	-1 30.2	282 39.2	-15 47.4
12	261	10.1	347 57.2	-24 13.2	188 18.6	+24 57.8	261 11.0	-1 30.1	297 41.4	-15 47.4
13	276	12.6	2 56.2	13.2	203 22.1	57.8	276 13.3	30.1	312 43.7	47.3
14	291	15.0	17 55.2	13.2	218 25.6	57.7	291 15.7	30.0	327 46.0	47.2
15	306	17.5	32 54.3	13.3	233 29.0	57.7	306 18.0	29.9	342 48.2	47.2
16	321	20.0	47 53.3	13.3	248 32.5	57.7	321 20.3	29.8	357 50.5	47.1
17	336	22.4	62 52.3	-24 13.3	263 36.0	+24 57.6	336 22.6	-1 29.8	12 52.8	-15 47.0
18	351	24.9	77 51.3	-24 13.3	278 39.5	+24 57.6	351 25.0	-1 29.7	27 55.0	-15 47.0
19	6	27.3	92 50.4	13.3	293 42.9	57.6	6 27.3	29.6	42 57.3	46.9
20	21	29.8	107 49.4	13.3	308 46.4	57.6	21 29.6	29.5	57 59.6	46.8
21	36	32.3	122 48.4	13.3	323 49.9	57.5	36 31.9	29.5	73 01.9	46.8
22	51	34.7	137 47.4	13.3	338 53.4	57.5	51 34.3	29.4	88 04.1	46.7
23	66	37.2	152 46.5	13.3	353 56.9	57.5	66 36.6	29.3	103 06.4	46.6
24	81	39.7	167 45.5	-24 13.3	9 00.3	+24 57.4	81 38.9	-1 29.2	118 08.7	-15 46.6
Dif	—		-10	0	+35	0	+23	+1	+23	+

UT	SOL			LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16'2 PMG: 11 ^h 54 ^m 1			Edad: 19 ^d 0 PHE { 4 ^h : 54'1 12 ^h : 54'2 20 ^h : 54'3 SD: 14'7 PMG: 3 ^h 52 ^m R°: 44 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	181	31.6	-23	07.7	303	50.7	+21	38.0	60 N	7 01	7 58	8 55	20 01	87	12 40	3		
1	196	31.3		07.9	318	22.9 ¹³²		29.2 ⁸⁸	58	6 54	46	38		14 82	26	8		
2	211	31.0		08.0	332	55.1 ¹³²		20.3 ⁹⁰	56		47	36	23	25 78	15	10		
3	226	30.7		08.2	347	27.4 ¹³³		11.3 ⁸⁹	54		41	27	11	34 76	12	05	13	
4	241	30.4		08.4	1	59.7 ¹³³	+21	02.2 ⁹¹	52		35	19	8 00	43 73	11 55	17		
5	256	30.1	-23	08.5	16	32.1 ¹³⁴	+20	53.0 ⁹²	50	6 30	7 12	7 50	20 51	70	11 47	19		
6	271	29.8	-23	08.7	31	04.6 ¹³⁵	+20	43.7 ⁹³	45	6 19	6 56	7 30	21 07	65	11 30	23		
7	286	29.5		08.9	45	37.1 ¹³⁵		34.3 ⁹⁴	40	6 09	43	7 13		20 62	15	27		
8	301	29.3		09.0	60	09.6 ¹³⁵		24.8 ⁹⁵	35	5 59	31	6 59		31 58	11	03	30	
9	316	29.0		09.2	74	42.3 ¹³⁷		15.3 ⁹⁵	30		51	21	47	41 55	10	53	32	
10	331	28.7		09.4	89	14.9 ¹³⁶	+20	05.6 ⁹⁷	20		34	6 02	26	21 58	51	34	37	
11	346	28.4	-23	09.5	103	47.7 ¹³⁸	+19	55.9 ⁹⁷	10 N	5 19	5 45	6 08	22 12	47	10 18	40		
12	1	28.1	-23	09.7	118	20.4 ¹³⁷	+19	46.1 ⁹⁸	0	5 02	5 28	5 50	22 26	43	10 03	44		
13	16	27.8		09.9	132	53.3 ¹³⁹		36.2 ⁹⁹	10 S	4 43	5 10	33		39 40	9	47	48	
14	31	27.5		10.0	147	26.2 ¹³⁹		26.3 ⁹⁹	20	4 21	4 50	5 14	22 54	35	31	51		
15	46	27.2		10.2	161	59.1 ¹³⁹		16.2 ¹⁰¹	30	3 52	25	4 53	23 10	31	12	56		
16	61	26.9		10.3	176	32.1 ¹⁴⁰	+19	06.1 ¹⁰¹	35		33	4 10	40	19 28	9	01	58	
17	76	26.6	-23	10.5	191	05.2 ¹⁴¹	+18	55.8 ¹⁰³	40	3 11	3 52	4 25	23 30	25	8	48	62	
18	91	26.3	-23	10.7	205	38.3 ¹⁴¹	+18	45.5 ¹⁰³	45	2 41	3 30	4 07	23 43	21	8	33	65	
19	106	26.0		10.8	220	11.4 ¹⁴¹		35.2 ¹⁰³	50	1 56	3 01	3 45	23 58	17	14	70		
20	121	25.7		11.0	234	44.6 ¹⁴²		24.7 ¹⁰⁵	52	1 30	2 46	34	** ** *	**	8	05	73	
21	136	25.4		11.1	249	17.9 ¹⁴³		14.2 ¹⁰⁵	54	0 48	28	22	** ** *	**	7	55	76	
22	151	25.1		11.3	263	51.2 ¹⁴³	+18	03.6 ¹⁰⁶	56	** ** *	2 07	3 08	0	10	12	44	78	
23	166	24.8		11.5	278	24.5 ¹⁴³	+17	52.9 ¹⁰⁷	58	** ** *	1 38	2 52	23	9	31	82		
24	181	24.5	-23	11.6	292	57.9 ¹⁴⁴	+17	42.1 ¹⁰⁸	60 S	** ** *	0 53	2 32	0	39	4	7	15	88

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 30 ^m 3		Mag: -3.9 PMG: 12 ^h 50 ^m		Mag: -1.8 PMG: 23 ^h 19 ^m		Mag: -2.6 PMG: 18 ^h 31 ^m		Mag: +0.8 PMG: 16 ^h 05 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	81	39.7	167	45.5	-24	13.3	9	00.3	+24	57.4
1	96	42.1	182	44.5		13.3	24	03.8		57.4
2	111	44.6	197	43.5		13.3	39	07.3		57.4
3	126	47.1	212	42.6		13.3	54	10.7		57.3
4	141	49.5	227	41.6		13.3	69	14.2		57.3
5	156	52.0	242	40.6	-24	13.3	84	17.7	+24	57.3
6	171	54.5	257	39.6	-24	13.3	99	21.2	+24	57.2
7	186	56.9	272	38.7		13.3	114	24.6		57.2
8	201	59.4	287	37.7		13.3	129	28.1		57.2
9	217	01.8	302	36.7		13.3	144	31.6		57.2
10	232	04.3	317	35.7		13.3	159	35.0		57.1
11	247	06.8	332	34.7	-24	13.3	174	38.5	+24	57.1
12	262	09.2	347	33.8	-24	13.3	189	42.0	+24	57.1
13	277	11.7	2	32.8		13.3	204	45.4		57.0
14	292	14.2	17	31.8		13.3	219	48.9		57.0
15	307	16.6	32	30.8		13.2	234	52.4		57.0
16	322	19.1	47	29.9		13.2	249	55.8		56.9
17	337	21.6	62	28.9	-24	13.2	264	59.3	+24	56.9
18	352	24.0	77	27.9	-24	13.2	280	02.8	+24	56.9
19	7	26.5	92	26.9		13.2	295	06.2		56.8
20	22	29.0	107	26.0		13.2	310	09.7		56.8
21	37	31.4	122	25.0		13.1	325	13.1		56.8
22	52	33.9	137	24.0		13.1	340	16.6		56.7
23	67	36.3	152	23.0		13.1	355	20.1		56.7
24	82	38.8	167	22.1	-24	13.0	10	23.5	+24	56.7
Dif	—		-10		0		+35		0	
							+23		+1	

UT	SOL			LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/2 PMG: 11 ^h 54 ^m 6			Edad: 20 ^d 0 PHE { SD: 14'8 PMG: 4 ^h 36 ^m R°: 43 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	181	24.5	-23	11.6	292	57.9	+17	42.1	60 N	14 53	15 50	16 47	21 28 84	12 43 1
1	196	24.2		11.8	307	31.4 ¹⁴⁵		31.3 ¹⁰⁸	58	15 10	16 02	16 54	36 81	34 5
2	211	23.9		11.9	322	04.9 ¹⁴⁵		20.3 ¹¹⁰	56	25	12	17 01	43 78	25 8
3	226	23.6		12.1	336	38.4 ¹⁴⁵	+17	09.4 ¹⁰⁹	54	37	21	07	50 75	18 1
4	241	23.3		12.2	351	12.0 ¹⁴⁶	+16	58.3 ¹¹¹	52	48	29	13	21 56 72	12 13
5	256	23.1	-23	12.4	5	45.6 ¹⁴⁶	+16	47.2 ¹¹¹	50	15 58	16 36	17 18	22 01 70	12 06 15
6	271	22.8	-23	12.5	20	19.3 ¹⁴⁷	+16	36.0 ¹¹²	45	16 19	16 52	17 30	22 12 66	11 53 20
7	286	22.5		12.7	34	53.0 ¹⁴⁷		24.7 ¹¹³	40	35	17 06	40	22 61	42 24
8	301	22.2		12.8	49	26.8 ¹⁴⁸		13.3 ¹¹⁴	35	16 49	17	49	29 59	33 27
9	316	21.9		13.0	64	00.6 ¹⁴⁸	+16	01.9 ¹¹⁴	30	17 02	28	17 58	36 56	25 29
10	331	21.6		13.1	78	34.5 ¹⁴⁹	+15	50.4 ¹¹⁵	20	23	17 47	18 14	49 50	11 11 34
11	346	21.3	-23	13.3	93	08.3 ¹⁴⁸	+15	38.9 ¹¹⁵	10 N	17 41	18 04	18 30	22 59 46	10 58 39
12	1	21.0	-23	13.4	107	42.3 ¹⁵⁰	+15	27.3 ¹¹⁶	0	17 58	18 21	18 47	23 09 42	10 47 42
13	16	20.7		13.5	122	16.2 ¹⁴⁹		15.6 ¹¹⁷	10 S	18 16	39	19 06	19 37	35 46
14	31	20.4		13.7	136	50.2 ¹⁵⁰	+15	03.8 ¹¹⁸	20	35	18 59	28	29 33	22 51
15	46	20.1		13.8	151	24.3 ¹⁵¹	+14	52.0 ¹¹⁸	30	18 56	19 24	19 57	41 28	10 08 55
16	61	19.8		14.0	165	58.4 ¹⁵¹		40.1 ¹¹⁹	35	19 09	39	20 16	47 26	9 59 59
17	76	19.5	-23	14.1	180	32.5 ¹⁵¹	+14	28.2 ¹¹⁹	40	19 24	19 57	20 39	23 55 23	9 50 61
18	91	19.2	-23	14.3	195	06.6 ¹⁵¹	+14	16.2 ¹²⁰	45	19 42	20 20	21 09	** ** *	9 38 66
19	106	18.9		14.4	209	40.8 ¹⁵²	+14	04.1 ¹²¹	50	20 05	20 49	21 54	** ** *	24 71
20	121	18.6		14.5	224	15.0 ¹⁵²	+13	52.0 ¹²¹	52	15	21 04	22 21	0 05 15	18 72
21	136	18.3		14.7	238	49.3 ¹⁵³		39.8 ¹²²	54	27	22	23 05	13 12	11 75
22	151	18.0		14.8	253	23.6 ¹⁵³		27.5 ¹²³	56	42	21 43	** ** *	22 9	9 02 79
23	166	17.7		14.9	267	57.9 ¹⁵³		15.2 ¹²³	58	20 58	22 13	** ** *	32 6	8 53 82
24	181	17.4	-23	15.1	282	32.2 ¹⁵³	+13	02.8 ¹²⁴	60 S	21 18	23 00	** ** *	0 43 2	8 43 85
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 18 ^h 26 ^m 4		Mag: -3.9 PMG: 12 ^h 51 ^m		Mag: -1.7 PMG: 23 ^h 13 ^m		Mag: -2.5 PMG: 18 ^h 27 ^m		Mag: +0.8 PMG: 16 ^h 01 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	82	38.8	167	22.1	10	23.5	+24	56.7	82	34.5	-1	27.4	119	03.1
1	97	41.3	182	21.1		13.0		56.6	97	36.8		27.3	134	05.4
2	112	43.7	197	20.1		13.0		56.6	112	39.1		27.3	149	07.6
3	127	46.2	212	19.1		13.0		56.5	127	41.5		27.2	164	09.9
4	142	48.7	227	18.2		12.9		56.5	142	43.8		27.1	179	12.2
5	157	51.1	242	17.2	-24	12.9		56.5	157	46.1	-1	27.0	194	14.4
6	172	53.6	257	16.2	-24	12.9		56.4	172	48.4	-1	27.0	209	16.7
7	187	56.1	272	15.2		12.8		56.4	187	50.7		26.9	224	19.0
8	202	58.5	287	14.3		12.8		56.4	202	53.0		26.8	239	21.2
9	218	01.0	302	13.3		12.7		56.3	217	55.3		26.7	254	23.5
10	233	03.4	317	12.3		12.7		56.3	232	57.6		26.6	269	25.8
11	248	05.9	332	11.3	-24	12.7		56.3	248	00.0	-1	26.6	284	28.0
12	263	08.4	347	10.4	-24	12.6		56.2	263	02.3	-1	26.5	299	30.3
13	278	10.8		09.4		12.6		56.2	278	04.6		26.4	314	32.6
14	293	13.3		08.4		12.5		56.2	293	06.9		26.3	329	34.8
15	308	15.8		07.4		12.5		56.1	308	09.2		26.2	344	37.1
16	323	18.2		06.5		12.4		56.1	323	11.5		26.2	359	39.4
17	338	20.7		05.5	-24	12.4		56.0	338	13.8	-1	26.1	14	41.6
18	353	23.2		04.5	-24	12.3		56.0	353	16.1	-1	26.0	29	43.9
19	8	25.6		03.5		12.3		56.0	8	18.4		25.9	44	46.2
20	23	28.1		02.6		12.2		55.9	23	20.7		25.8	59	48.4
21	38	30.6		01.6		12.2		55.9	38	23.0		25.8	74	50.7
22	53	33.0		00.6		12.1		55.9	53	25.4		25.7	89	52.9
23	68	35.5		59.6		12.1		55.8	68	27.7		25.6	104	55.2
24	83	37.9		58.7	-24	12.0		55.8	83	30.0	-1	25.5	119	57.5
Dif	—		-10		0		+34		+23		+1		+23	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 11 ^h 55 ^m 1			Edad: 21 ^d 0 PHE { 4 ^h : 54'7 12 ^h : 54'9 20 ^h : 55'1 PMG: 5 ^h 19 ^m R°: 42 ^m				Náutico	Civil		Hora	R°	Hora	R°		
	hG ☉	Dec		hG ☾	Dif	Dec									Dif	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	181	17.4	-23	15.1	282	32.2	+13	02.8	60 N	7 03	8 00	8 57	22 52	86	12 44	1
1	196	17.1		15.2	297	06.6 ¹⁵⁴	+12	50.4 ¹²⁴	58	6 56	7 48	40	22 57	82	39	4
2	211	16.8		15.3	311	41.0 ¹⁵⁴		37.9 ¹²⁵	56	49	38	25	23 01	79	33	7
3	226	16.5		15.5	326	15.4 ¹⁵⁴		25.3 ¹²⁶	54	43	29	13	05 76		29	9
4	241	16.2		15.6	340	49.9 ¹⁵⁵		12.7 ¹²⁶	52	37	21	8 02	08 73		25	11
5	256	15.9	-23	15.7	355	24.3 ¹⁵⁴	+12	00.1 ¹²⁶	50	6 32	7 13	7 52	23 11	71	12 21	14
6	271	15.6	-23	15.9	9	58.8 ¹⁵⁵	+11	47.3 ¹²⁸	45	6 20	6 57	7 31	23 18	66	12 13	18
7	286	15.3		16.0	24	33.4 ¹⁵⁶		34.6 ¹²⁷	40	10	44	15	23 62		06	22
8	301	15.0		16.1	39	07.9 ¹⁵⁵		21.7 ¹²⁹	35	6 01	32	7 00	28 58		12 00	25
9	316	14.7		16.3	53	42.5 ¹⁵⁶	+11	08.9 ¹²⁸	30	5 52	22	6 48	32 55		11 54	28
10	331	14.4		16.4	68	17.1 ¹⁵⁶	+10	55.9 ¹³⁰	20	36	6 03	27	39 50		45	33
11	346	14.1	-23	16.5	82	51.7 ¹⁵⁶	+10	43.0 ¹²⁹	10 N	5 20	5 46	6 09	23 45	46	11 37	37
12	1	13.8	-23	16.6	97	26.3 ¹⁵⁶	+10	29.9 ¹³¹	0	5 03	5 29	5 51	23 51	41	11 29	42
13	16	13.5		16.8	112	01.0 ¹⁵⁷		16.8 ¹³¹	10 S	4 44	5 11	34	23 56	38	21	46
14	31	13.2		16.9	126	35.6 ¹⁵⁶	+10	03.7 ¹³¹	20	4 21	4 50	5 15	** ** *	**	13	50
15	46	12.9		17.0	141	10.3 ¹⁵⁷	+9	50.5 ¹³²	30	3 52	26	4 53	** ** *	**	11 03	55
16	61	12.6		17.1	155	45.0 ¹⁵⁷		37.3 ¹³²	35	34	4 11	40	** ** *	**	10 58	58
17	76	12.3	-23	17.2	170	19.7 ¹⁵⁷	+9	24.0 ¹³³	40	3 11	3 52	4 25	** ** *	**	10 51	62
18	91	12.0	-23	17.4	184	54.4 ¹⁵⁷	+9	10.7 ¹³³	45	2 41	3 30	4 07	0 04	19	10 44	65
19	106	11.7		17.5	199	29.1 ¹⁵⁷	+8	57.3 ¹³⁴	50	1 56	3 01	3 45	15 14		35	70
20	121	11.4		17.6	214	03.9 ¹⁵⁸		43.9 ¹³⁴	52	1 29	2 46	34	20 12		30	73
21	136	11.1		17.7	228	38.6 ¹⁵⁷		30.4 ¹³⁵	54	0 45	28	22	25 10		26	75
22	151	10.8		17.8	243	13.4 ¹⁵⁸		16.9 ¹³⁵	56	** ** *	2 06	3 08	31 7		21	78
23	166	10.5		18.0	257	48.2 ¹⁵⁸	+8	03.3 ¹³⁶	58	** ** *	1 37	2 51	38 4		15	81
24	181	10.2	-23	18.1	272	22.9 ¹⁵⁷	+7	49.7 ¹³⁶	60 S	** ** *	0 49	2 31	0 45	1	10 08	85

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 18 ^h 22 ^m 5		Mag: -3.9 PMG: 12 ^h 53 ^m		Mag: -1.7 PMG: 23 ^h 08 ^m		Mag: -2.5 PMG: 18 ^h 23 ^m		Mag: +0.8 PMG: 15 ^h 58 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	83	37.9	166	58.7	11	46.3	+24	55.8	83	30.0	-1	25.5	119	57.5	-15	43.4		
1	98	40.4	181	57.7		11.9		55.7	98	32.3		25.4	134	59.7		43.4		
2	113	42.9	196	56.7		11.9		55.7	113	34.6		25.4	150	02.0		43.3		
3	128	45.3	211	55.8		11.8		55.7	128	36.9		25.3	165	04.3		43.2		
4	143	47.8	226	54.8		11.8		55.6	143	39.2		25.2	180	06.5		43.2		
5	158	50.3	241	53.8	-24	11.7		55.6	158	41.5	-1	25.1	195	08.8	-15	43.1		
6	173	52.7	256	52.8	-24	11.6		55.5	173	43.8	-1	25.0	210	11.1	-15	43.0		
7	188	55.2	271	51.9		11.6		55.5	188	46.1		25.0	225	13.3		43.0		
8	203	57.7	286	50.9		11.5		55.5	203	48.4		24.9	240	15.6		42.9		
9	219	00.1	301	49.9		11.4		55.4	218	50.7		24.8	255	17.8		42.8		
10	234	02.6	316	48.9		11.4		55.4	233	53.0		24.7	270	20.1		42.7		
11	249	05.1	331	48.0	-24	11.3		55.3	248	55.3	-1	24.6	285	22.4	-15	42.7		
12	264	07.5	346	47.0	-24	11.2		55.3	263	57.6	-1	24.5	300	24.6	-15	42.6		
13	279	10.0	1	46.0		11.1		55.3	278	59.9		24.5	315	26.9		42.5		
14	294	12.4	16	45.0		11.1		55.2	294	02.2		24.4	330	29.2		42.5		
15	309	14.9	31	44.1		11.0		55.2	309	04.5		24.3	345	31.4		42.4		
16	324	17.4	46	43.1		10.9		55.1	324	06.8		24.2	0	33.7		42.3		
17	339	19.8	61	42.1	-24	10.8		55.1	339	09.1	-1	24.1	15	35.9	-15	42.3		
18	354	22.3	76	41.2	-24	10.7		55.1	354	11.4	-1	24.1	30	38.2	-15	42.2		
19	9	24.8	91	40.2		10.7		55.0	9	13.7		24.0	45	40.5		42.1		
20	24	27.2	106	39.2		10.6		55.0	24	16.0		23.9	60	42.7		42.1		
21	39	29.7	121	38.2		10.5		54.9	39	18.3		23.8	75	45.0		42.0		
22	54	32.2	136	37.3		10.4		54.9	54	20.6		23.7	90	47.2		41.9		
23	69	34.6	151	36.3		10.3		54.9	69	22.9		23.6	105	49.5		41.9		
24	84	37.1	166	35.3	-24	10.2		54.8	84	25.2	-1	23.6	120	51.8	-15	41.8		
Dif	—		-10		+1		+34		0		+23		+1		+23		+	

UT	SOL				☾ LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna			
	SD: 16:2				Edad: 22 ^d 0	PHE { 4 ^h : 55/3 12 ^h : 55/5 20 ^h : 55/8	SD: 15:0				R°: 41 ^m								
	PMG: 11 ^h 55 ^m 6						PMG: 6 ^h 01 ^m												
	hG ☉		Dec		hG ☾		Dif		Dec		Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	181	10.2	-23	18.1	272	22.9	+7	49.7	60 N	14	53	15	50	16	47	**	**	**	12 45 1
1	196	09.9		18.2	286	57.7 ¹⁵⁸		36.1 ¹³⁶	58	15	10	16	02	16	55	**	**	**	43 3
2	211	09.6		18.3	301	32.5 ¹⁵⁸		22.4 ¹³⁷	56	25		12	17	01	17	01	**	**	40 7
3	226	09.3		18.4	316	07.3 ¹⁵⁸	+7	08.7 ¹³⁷	54	38	21	08				**	**	**	38 9
4	241	09.0		18.5	330	42.0 ¹⁵⁷	+6	54.9 ¹³⁸	52	49	29	13				**	**	**	36 11
5	256	08.7	-23	18.6	345	16.8 ¹⁵⁸	+6	41.1 ¹³⁸	50	15	58	16	37	17	18	**	**	**	12 35 13
6	271	08.4	-23	18.8	359	51.6 ¹⁵⁸	+6	27.3 ¹³⁸	45	16	19	16	53	17	30	**	**	**	12 31 18
7	286	08.1		18.9	14	26.4 ¹⁵⁸	+6	13.4 ¹³⁹	40	36		17	06	40		**	**	**	28 21
8	301	07.8		19.0	29	01.2 ¹⁵⁸	+5	59.5 ¹³⁹	35	16	50	18	50			**	**	**	25 25
9	316	07.4		19.1	43	35.9 ¹⁵⁷		45.5 ¹⁴⁰	30	17	02	29	17	59		**	**	**	22 28
10	331	07.1		19.2	58	10.7 ¹⁵⁸		31.5 ¹⁴⁰	20	23		17	47	18	15	**	**	**	18 33
11	346	06.8	-23	19.3	72	45.5 ¹⁵⁸	+5	17.5 ¹⁴⁰	10 N	17	42	18	05	18	31	**	**	**	12 14 38
12	1	06.5	-23	19.4	87	20.2 ¹⁵⁷	+5	03.4 ¹⁴¹	0	17	59	18	22	18	48	**	**	**	12 11 41
13	16	06.2		19.5	101	55.0 ¹⁵⁸	+4	49.3 ¹⁴¹	10 S	18	17	18	40	19	07	**	**	**	07 46
14	31	05.9		19.6	116	29.7 ¹⁵⁷		35.2 ¹⁴¹	20	36		19	00	30		0	02	33	12 03 51
15	46	05.6		19.7	131	04.4 ¹⁵⁷		21.0 ¹⁴²	30	18	58	25	19	59		09	28		11 58 57
16	61	05.3		19.8	145	39.1 ¹⁵⁷	+4	06.8 ¹⁴²	35	19	11	40	20	17		13	25		56 59
17	76	05.0	-23	19.9	160	13.8 ¹⁵⁷	+3	52.6 ¹⁴²	40	19	26	19	59	20	40	0	18	21	11 53 63
18	91	04.7	-23	20.0	174	48.5 ¹⁵⁷	+3	38.4 ¹⁴²	45	19	44	20	21	21	11	0	23	18	11 49 67
19	106	04.4		20.1	189	23.2 ¹⁵⁷		24.1 ¹⁴³	50	20	06	20	51	21	56		29	14	45 72
20	121	04.1		20.2	203	57.8 ¹⁵⁶	+3	09.8 ¹⁴³	52	17		21	06	22	24		32	11	43 74
21	136	03.8		20.3	218	32.5 ¹⁵⁷	+2	55.4 ¹⁴⁴	54	29		24	23	09		35	9		41 76
22	151	03.5		20.4	233	07.1 ¹⁵⁶		41.0 ¹⁴⁴	56	20	43	21	46	**	**	**	38	7	39 79
23	166	03.2		20.5	247	41.7 ¹⁵⁶		26.6 ¹⁴⁴	58	21	00	22	15	**	**	**	42	4	36 82
24	181	02.9	-23	20.6	262	16.2 ¹⁵⁵	+2	12.2 ¹⁴⁴	60 S	21	20	23	05	**	**	0	46	1	11 33 86

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 18 ^h 18 ^m 5		Mag: -3.9 PMG: 12 ^h 54 ^m			Mag: -1.7 PMG: 23 ^h 02 ^m			Mag: -2.5 PMG: 18 ^h 20 ^m			Mag: +0.8 PMG: 15 ^h 54 ^m						
	hG ♈		hG ♀		Dec	hG ♂		Dec		hG ♃		Dec		hG ♄		Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	84	37.1	166	35.3	-24	10.2	13	08.5	+24	54.8	84	25.2	-1	23.6	120	51.8	-15	41.8
1	99	39.5	181	34.3		10.1	28	12.0		54.8	99	27.5		23.5	135	54.0		41.7
2	114	42.0	196	33.4		10.0	43	15.4		54.7	114	29.8		23.4	150	56.3		41.7
3	129	44.5	211	32.4		09.9	58	18.8		54.7	129	32.1		23.3	165	58.6		41.6
4	144	46.9	226	31.4		09.8	73	22.2		54.6	144	34.4		23.2	181	00.8		41.5
5	159	49.4	241	30.5	-24	09.8	88	25.6	+24	54.6	159	36.7	-1	23.1	196	03.1	-15	41.5
6	174	51.9	256	29.5	-24	09.7	103	29.0	+24	54.6	174	39.0	-1	23.0	211	05.3	-15	41.4
7	189	54.3	271	28.5		09.6	118	32.4		54.5	189	41.3		23.0	226	07.6		41.3
8	204	56.8	286	27.5		09.5	133	35.8		54.5	204	43.6		22.9	241	09.9		41.3
9	219	59.3	301	26.6		09.4	148	39.3		54.4	219	45.9		22.8	256	12.1		41.2
10	235	01.7	316	25.6		09.3	163	42.7		54.4	234	48.2		22.7	271	14.4		41.1
11	250	04.2	331	24.6	-24	09.1	178	46.1	+24	54.3	249	50.5	-1	22.6	286	16.6	-15	41.1
12	265	06.7	346	23.7	-24	09.0	193	49.5	+24	54.3	264	52.8	-1	22.5	301	18.9	-15	41.0
13	280	09.1	1	22.7		08.9	208	52.9		54.3	279	55.1		22.5	316	21.1		40.9
14	295	11.6	16	21.7		08.8	223	56.3		54.2	294	57.4		22.4	331	23.4		40.8
15	310	14.0	31	20.7		08.7	238	59.7		54.2	309	59.7		22.3	346	25.7		40.8
16	325	16.5	46	19.8		08.6	254	03.1		54.1	325	02.0		22.2	1	27.9		40.7
17	340	19.0	61	18.8	-24	08.5	269	06.5	+24	54.1	340	04.3	-1	22.1	16	30.2	-15	40.6
18	355	21.4	76	17.8	-24	08.4	284	09.9	+24	54.0	355	06.6	-1	22.0	31	32.4	-15	40.6
19	10	23.9	91	16.9		08.3	299	13.3		54.0	10	08.9		21.9	46	34.7		40.5
20	25	26.4	106	15.9		08.2	314	16.7		54.0	25	11.2		21.9	61	37.0		40.4
21	40	28.8	121	14.9		08.0	329	20.1		53.9	40	13.5		21.8	76	39.2		40.4
22	55	31.3	136	13.9		07.9	344	23.5		53.9	55	15.8		21.7	91	41.5		40.3
23	70	33.8	151	13.0		07.8	359	26.9		53.8	70	18.0		21.6	106	43.7		40.2
24	85	36.2	166	12.0	-24	07.7	14	30.3	+24	53.8	85	20.3	-1	21.5	121	46.0	-15	40.2
Dif	—		-10		+1		+34		0		+23		+1		+23		+1	

UT	SOL			☾ LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 11 ^h 56 ^m 1			Edad: 23 ^d 0 PHE { 4 ^h : 56/0 12 ^h : 56/3 20 ^h : 56/6 PMG: 6 ^h 42 ^m R°: 43 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	181	02.9	-23	20.6	262	16.2	+2 12.2	60 N	7 05	8 01	8 59	0 18	87	12 46	0	0
1	196	02.6		20.7	276	50.8 ¹⁵⁶	+1 57.7 ¹⁴⁵	58	6 57	7 50	42	19	83	46	4	0
2	211	02.3		20.8	291	25.3 ¹⁵⁵	43.3 ¹⁴⁴	56	50	40	27	20	80	47	6	0
3	226	02.0		20.9	305	59.8 ¹⁵⁵	28.8 ¹⁴⁵	54	44	30	14	21	77	47	9	0
4	241	01.7		21.0	320	34.3 ¹⁵⁵	+1 14.2 ¹⁴⁶	52	39	22	8 03	21	76	47	12	0
5	256	01.4	-23	21.1	335	08.7 ¹⁵⁴	+0 59.7 ¹⁴⁵	50	6 33	7 15	7 53	0 22	73	12 48	14	0
6	271	01.1	-23	21.2	349	43.1 ¹⁵⁴	+0 45.1 ¹⁴⁶	45	6 22	6 59	7 33	0 24	68	12 49	18	0
7	286	00.8		21.3	4	17.5 ¹⁵⁴	30.5 ¹⁴⁶	40	11	45	16	25	64	49	23	0
8	301	00.5		21.4	18	51.8 ¹⁵³	15.9 ¹⁴⁶	35	6 02	34	7 02	26	61	50	26	0
9	316	00.1		21.4	33	26.1 ¹⁵³	+0 01.3 ¹⁴⁶	30	5 53	23	6 49	27	58	50	29	0
10	330	59.8		21.5	48	00.4 ¹⁵³	-0 13.3 ¹⁴⁶	20	37	6 04	28	29	52	51	34	0
11	345	59.5	-23	21.6	62	34.7 ¹⁵³	-0 28.0 ¹⁴⁷	10 N	5 21	5 47	6 10	0 31	47	12 52	39	0
12	0	59.2	-23	21.7	77	08.9 ¹⁵²	-0 42.7 ¹⁴⁷	0	5 04	5 30	5 52	0 32	43	12 52	44	0
13	15	58.9		21.8	91	43.0 ¹⁵¹	-0 57.4 ¹⁴⁷	10 S	4 45	5 12	35	34	38	53	48	0
14	30	58.6		21.9	106	17.2 ¹⁵²	-1 12.1 ¹⁴⁷	20	4 22	4 51	5 16	35	34	54	53	0
15	45	58.3		22.0	120	51.2 ¹⁵⁰	26.8 ¹⁴⁷	30	3 53	26	4 54	37	29	55	58	0
16	60	58.0		22.1	135	25.3 ¹⁵¹	41.6 ¹⁴⁸	35	34	4 11	41	38	26	55	62	0
17	75	57.7	-23	22.1	149	59.3 ¹⁵⁰	-1 56.3 ¹⁴⁷	40	3 11	3 53	4 26	0 39	23	12 56	65	0
18	90	57.4	-23	22.2	164	33.2 ¹⁴⁹	-2 11.1 ¹⁴⁸	45	2 41	3 30	4 08	0 41	18	12 56	70	0
19	105	57.1		22.3	179	07.1 ¹⁴⁹	25.8 ¹⁴⁷	50	1 56	3 01	3 45	43	13	57	74	0
20	120	56.8		22.4	193	41.0 ¹⁴⁹	40.6 ¹⁴⁸	52	1 28	2 46	35	43	12	57	77	0
21	135	56.5		22.5	208	14.8 ¹⁴⁸	-2 55.4 ¹⁴⁸	54	0 43	28	22	44	9	57	80	0
22	150	56.2		22.5	222	48.5 ¹⁴⁷	-3 10.2 ¹⁴⁸	56	** **	2 06	3 08	45	7	58	82	0
23	165	55.9		22.6	237	22.2 ¹⁴⁷	25.0 ¹⁴⁸	58	** **	1 36	2 51	46	4	58	86	0
24	180	55.6	-23	22.7	251	55.9 ¹⁴⁷	-3 39.8 ¹⁴⁸	60 S	** **	0 47	2 31	0 47	1	12 59	89	0

UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 18 ^h 14 ^m 6		Mag: -3.9 PMG: 12 ^h 56 ^m			Mag: -1.7 PMG: 22 ^h 57 ^m			Mag: -2.5 PMG: 18 ^h 16 ^m			Mag: +0.8 PMG: 15 ^h 51 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	85	36.2	166	12.0	-24	07.7	14	30.3	+24	53.8	85	20.3	-1	21.5	121	46.0	-15	40.2
1	100	38.7	181	11.0		07.6	29	33.7		53.7	100	22.6		21.4	136	48.3		40.1
2	115	41.2	196	10.1		07.4	44	37.1		53.7	115	24.9		21.3	151	50.5		40.0
3	130	43.6	211	09.1		07.3	59	40.5		53.6	130	27.2		21.2	166	52.8		40.0
4	145	46.1	226	08.1		07.2	74	43.9		53.6	145	29.5		21.2	181	55.0		39.9
5	160	48.5	241	07.2	-24	07.1	89	47.2	+24	53.6	160	31.8	-1	21.1	196	57.3	-15	39.8
6	175	51.0	256	06.2	-24	06.9	104	50.6	+24	53.5	175	34.1	-1	21.0	211	59.5	-15	39.7
7	190	53.5	271	05.2		06.8	119	54.0		53.5	190	36.4		20.9	227	01.8		39.7
8	205	55.9	286	04.3		06.7	134	57.4		53.4	205	38.7		20.8	242	04.1		39.6
9	220	58.4	301	03.3		06.5	150	00.8		53.4	220	41.0		20.7	257	06.3		39.5
10	236	00.9	316	02.3		06.4	165	04.2		53.3	235	43.2		20.6	272	08.6		39.5
11	251	03.3	331	01.3	-24	06.3	180	07.6	+24	53.3	250	45.5	-1	20.5	287	10.8	-15	39.4
12	266	05.8	346	00.4	-24	06.1	195	10.9	+24	53.2	265	47.8	-1	20.5	302	13.1	-15	39.3
13	281	08.3	0	59.4		06.0	210	14.3		53.2	280	50.1		20.4	317	15.3		39.3
14	296	10.7	15	58.4		05.9	225	17.7		53.1	295	52.4		20.3	332	17.6		39.2
15	311	13.2	30	57.5		05.7	240	21.1		53.1	310	54.7		20.2	347	19.8		39.1
16	326	15.6	45	56.5		05.6	255	24.5		53.0	325	57.0		20.1	2	22.1		39.1
17	341	18.1	60	55.5	-24	05.4	270	27.8	+24	53.0	340	59.3	-1	20.0	17	24.4	-15	39.0
18	356	20.6	75	54.6	-24	05.3	285	31.2	+24	53.0	356	01.5	-1	19.9	32	26.6	-15	38.9
19	11	23.0	90	53.6		05.1	300	34.6		52.9	11	03.8		19.8	47	28.9		38.8
20	26	25.5	105	52.6		05.0	315	38.0		52.9	26	06.1		19.7	62	31.1		38.8
21	41	28.0	120	51.7		04.8	330	41.3		52.8	41	08.4		19.7	77	33.4		38.7
22	56	30.4	135	50.7		04.7	345	44.7		52.8	56	10.7		19.6	92	35.6		38.6
23	71	32.9	150	49.7		04.5	0	48.1		52.7	71	13.0		19.5	107	37.9		38.6
24	86	35.4	165	48.8	-24	04.4	15	51.5	+24	52.7	86	15.3	-1	19.4	122	40.2	-15	38.5
Dif	—		-10		+1		+34		0		+23		+1		+23		+1	

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16/3 PMG: 11 ^h 56 ^m 5			Edad: 24 ^d 0 PHE { SD: 15/4 PMG: 7 ^h 25 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	180	55.6	-23	22.7	251	55.9	-3	39.8	60 N	14 53	15 51	16 48	1 45	92	12 46	2		
1	195	55.2		22.8	266	29.5 ¹⁴⁶	-3	54.6 ¹⁴⁸	58	15 11	16 03	16 55	42	89	50	5		
2	210	54.9		22.8	281	03.0 ¹⁴⁵	-4	09.5 ¹⁴⁹	56	25	13	17 02	40	85	53	9		
3	225	54.6		22.9	295	36.5 ¹⁴⁵		24.3 ¹⁴⁸	54	38	22	08	38	82	56	1		
4	240	54.3		23.0	310	09.9 ¹⁴⁴		39.1 ¹⁴⁸	52	49	30	14	37	79	12 59	14		
5	255	54.0	-23	23.1	324	43.3 ¹⁴⁴	-4	53.9 ¹⁴⁸	50	15 59	16 38	17 19	1 35	77	13 02	16		
6	270	53.7	-23	23.1	339	16.5 ¹⁴²	-5	08.7 ¹⁴⁸	45	16 20	16 54	17 31	1 32	71	13 07	21		
7	285	53.4		23.2	353	49.8 ¹⁴³		23.6 ¹⁴⁹	40	37	17 07	41	29	67	12	25		
8	300	53.1		23.3	8	22.9 ¹⁴¹		38.4 ¹⁴⁸	35	16 51	19	51	27	63	16	29		
9	315	52.8		23.3	22	56.0 ¹⁴¹	-5	53.2 ¹⁴⁸	30	17 03	29	17 59	25	60	19	32		
10	330	52.5		23.4	37	29.1 ¹⁴¹	-6	08.0 ¹⁴⁸	20	24	17 48	18 16	21	54	25	38		
11	345	52.2	-23	23.5	52	02.0 ¹³⁹	-6	22.8 ¹⁴⁸	10 N	17 43	18 06	18 32	1 18	49	13 31	42		
12	0	51.9	-23	23.5	66	34.9 ¹³⁹	-6	37.6 ¹⁴⁸	0	18 00	18 23	18 49	1 15	45	13 36	47		
13	15	51.6		23.6	81	07.8 ¹³⁹	-6	52.4 ¹⁴⁸	10 S	18	18 41	19 08	12	41	41	51		
14	30	51.3		23.7	95	40.5 ¹³⁷	-7	07.2 ¹⁴⁸	20	37	19 01	19 31	09	36	47	56		
15	45	50.9		23.7	110	13.2 ¹³⁷		21.9 ¹⁴⁷	30	18 59	26	20 00	06	30	53	62		
16	60	50.6		23.8	124	45.8 ¹³⁶		36.7 ¹⁴⁸	35	19 12	19 42	18	04	27	13 57	65		
17	75	50.3	-23	23.9	139	18.3 ¹³⁵	-7	51.4 ¹⁴⁷	40	19 27	20 00	20 42	1 02	23	14 01	69		
18	90	50.0	-23	23.9	153	50.7 ¹³⁴	-8	06.2 ¹⁴⁸	45	19 45	20 22	21 12	0 59	20	14 06	73		
19	105	49.7		24.0	168	23.1 ¹³⁴		20.9 ¹⁴⁷	50	20 08	20 52	21 58	56	15	11	79		
20	120	49.4		24.1	182	55.4 ¹³³		35.6 ¹⁴⁷	52	18	21 07	22 26	55	12	14	81		
21	135	49.1		24.1	197	27.6 ¹³²	-8	50.2 ¹⁴⁶	54	31	25	23 12	53	11	17	84		
22	150	48.8		24.2	211	59.7 ¹³¹	-9	04.9 ¹⁴⁷	56	20 45	21 48	** **	52	7	20	87		
23	165	48.5		24.2	226	31.7 ¹³⁰		19.5 ¹⁴⁶	58	21 02	22 17	** **	50	4	24	91		
24	180	48.2	-23	24.3	241	03.7 ¹³⁰	-9	34.2 ¹⁴⁷	60 S	21 22	23 08	** **	0 48	1	14 28	95		
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 10 ^m 7		Mag: -3.9 PMG: 12 ^h 58 ^m				Mag: -1.6 PMG: 22 ^h 51 ^m				Mag: -2.5 PMG: 18 ^h 12 ^m				Mag: +0.8 PMG: 15 ^h 47 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♎		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	86	35.4	165	48.8	-24	04.4	15	51.5	+24	52.7	86	15.3	-1	19.4	122	40.2	-15	38.5
1	101	37.8	180	47.8		04.2	30	54.8		52.6	101	17.5		19.3	137	42.4		38.4
2	116	40.3	195	46.8		04.1	45	58.2		52.6	116	19.8		19.2	152	44.7		38.4
3	131	42.8	210	45.9		03.9	61	01.6		52.5	131	22.1		19.1	167	46.9		38.3
4	146	45.2	225	44.9		03.8	76	04.9		52.5	146	24.4		19.0	182	49.2		38.2
5	161	47.7	240	43.9	-24	03.6	91	08.3	+24	52.4	161	26.7	-1	18.9	197	51.4	-15	38.1
6	176	50.1	255	43.0	-24	03.5	106	11.7	+24	52.4	176	29.0	-1	18.8	212	53.7	-15	38.1
7	191	52.6	270	42.0		03.3	121	15.0		52.3	191	31.2		18.8	227	55.9		38.0
8	206	55.1	285	41.0		03.1	136	18.4		52.3	206	33.5		18.7	242	58.2		37.9
9	221	57.5	300	40.1		03.0	151	21.7		52.2	221	35.8		18.6	258	00.4		37.9
10	237	00.0	315	39.1		02.8	166	25.1		52.2	236	38.1		18.5	273	02.7		37.8
11	252	02.5	330	38.1	-24	02.6	181	28.5	+24	52.1	251	40.4	-1	18.4	288	04.9	-15	37.7
12	267	04.9	345	37.2	-24	02.5	196	31.8	+24	52.1	266	42.7	-1	18.3	303	07.2	-15	37.7
13	282	07.4	0	36.2		02.3	211	35.2		52.0	281	44.9		18.2	318	09.5		37.6
14	297	09.9	15	35.2		02.1	226	38.5		52.0	296	47.2		18.1	333	11.7		37.5
15	312	12.3	30	34.3		02.0	241	41.9		52.0	311	49.5		18.0	348	14.0		37.4
16	327	14.8	45	33.3		01.8	256	45.2		51.9	326	51.8		17.9	3	16.2		37.4
17	342	17.2	60	32.4	-24	01.6	271	48.6	+24	51.9	341	54.1	-1	17.8	18	18.5	-15	37.3
18	357	19.7	75	31.4	-24	01.4	286	51.9	+24	51.8	356	56.3	-1	17.7	33	20.7	-15	37.2
19	12	22.2	90	30.4		01.3	301	55.3		51.8	11	58.6		17.7	48	23.0		37.2
20	27	24.6	105	29.5		01.1	316	58.6		51.7	27	00.9		17.6	63	25.2		37.1
21	42	27.1	120	28.5		00.9	332	02.0		51.7	42	03.2		17.5	78	27.5		37.0
22	57	29.6	135	27.5		00.7	347	05.3		51.6	57	05.5		17.4	93	29.7		37.0
23	72	32.0	150	26.6		00.5	2	08.7		51.6	72	07.7		17.3	108	32.0		36.9
24	87	34.5	165	25.6	-24	00.4	17	12.0	+24	51.5	87	10.0	-1	17.2	123	34.2	-15	36.8
Dif	—		-10		+2		+34		0		+23		+1		+23		+	

UT	SOL			 LUNA			Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 11 ^h 57 ^m 0			Edad: 25 ^d 0 PHE { 4 ^h : 57/8 12 ^h : 58/1 20 ^h : 58/5 PMG: 8 ^h 11 ^m R°: 50 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	48.2	-23	241	03.7	-9	34.2	60 N	7 06	8 03	9 01	3 17	99	12 48	2	
1	195	47.9		255	35.5 ¹²⁸	-9	48.7 ¹⁴⁵	58	6 58	7 51	8 43	11 94		12 55	7	
2	210	47.6		270	07.3 ¹²⁸	-10	03.3 ¹⁴⁶	56	52	41	28	05 91		13 02	11	
3	225	47.2		284	38.9 ¹²⁶		17.9 ¹⁴⁶	54	46	32	16	3 00	88	07	15	
4	240	46.9		299	10.5 ¹²⁶		32.4 ¹⁴⁵	52	40	24	8 05	2 56	84	13	17	
5	255	46.6	-23	313	42.0 ¹²⁵	-10	46.9 ¹⁴⁵	50	6 35	7 16	7 55	2 52	81	13 18	20	
6	270	46.3	-23	328	13.4 ¹²⁴	-11	01.3 ¹⁴⁴	45	6 23	7 00	7 34	2 43	76	13 28	26	
7	285	46.0		342	44.7 ¹²³		15.7 ¹⁴⁴	40	12	6 46	17	36 71		37 30		
8	300	45.7		357	15.9 ¹²²		30.1 ¹⁴⁴	35	6 03	35	7 03	30 67		45 33		
9	315	45.4		11	47.0 ¹²¹		44.5 ¹⁴⁴	30	5 54	24	6 51	25 64		13 51	37	
10	330	45.1		26	18.0 ¹²⁰	-11	58.8 ¹⁴³	20	38	6 05	29	15 59		14 03	42	
11	345	44.8	-23	40	48.9 ¹¹⁹	-12	13.1 ¹⁴³	10 N	5 22	5 48	6 11	2 07	54	14 13	47	
12	0	44.5	-23	55	19.6 ¹¹⁷	-12	27.3 ¹⁴²	0	5 05	5 31	5 53	2 00	49	14 23	51	
13	15	44.2		69	50.3 ¹¹⁷		41.5 ¹⁴²	10 S	4 46	5 13	36	1 53	44	32	56	
14	30	43.8		84	20.9 ¹¹⁶	-12	55.7 ¹⁴²	20	4 23	4 52	5 17	45 40		43 60		
15	45	43.5		98	51.4 ¹¹⁵	-13	09.8 ¹⁴¹	30	3 54	27	4 55	36 34		14 55	66	
16	60	43.2		113	21.7 ¹¹³		23.8 ¹⁴⁰	35	35	4 12	42	31 31		15 02	69	
17	75	42.9	-23	127	52.0 ¹¹³	-13	37.9 ¹⁴¹	40	3 12	3 54	4 27	1 25	28	15 10	73	
18	90	42.6	-23	142	22.1 ¹¹¹	-13	51.8 ¹³⁹	45	2 41	3 31	4 09	1 19	23	15 19	78	
19	105	42.3		156	52.2 ¹¹¹	-14	05.8 ¹⁴⁰	50	1 56	3 01	3 46	11 18		30 84		
20	120	42.0		171	22.1 ¹⁰⁹		19.6 ¹³⁸	52	1 28	2 46	35	07 16		35 87		
21	135	41.7		185	51.9 ¹⁰⁸		33.4 ¹³⁸	54	0 41	28	23	1 04	12	41 90		
22	150	41.4		200	21.5 ¹⁰⁶	-14	47.2 ¹³⁸	56	** **	2 06	3 09	0 59	10	47 94		
23	165	41.1		214	51.1 ¹⁰⁶	-15	00.9 ¹³⁷	58	** **	1 36	2 52	54 7		15 55	97	
24	180	40.7	-23	229	20.6 ¹⁰⁵	-15	14.5 ¹³⁶	60 S	** **	0 45	2 31	0 49	2	16 03	103	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 18 ^h 06 ^m 7		Mag: -3.9 PMG: 12 ^h 59 ^m		Mag: -1.6 PMG: 22 ^h 46 ^m		Mag: -2.5 PMG: 18 ^h 09 ^m		Mag: +0.8 PMG: 15 ^h 43 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	87	34.5	165	25.6	-24	00.4	17	12.0	-1	17.2
1	102	37.0	180	24.6	-24	00.2	32	15.4		17.1
2	117	39.4	195	23.7	-24	00.0	47	18.7		17.0
3	132	41.9	210	22.7	-23	59.8	62	22.1		16.9
4	147	44.4	225	21.8		59.6	77	25.4		16.8
5	162	46.8	240	20.8	-23	59.4	92	28.7	+24	16.7
6	177	49.3	255	19.8	-23	59.2	107	32.1	+24	16.6
7	192	51.7	270	18.9		59.0	122	35.4		16.5
8	207	54.2	285	17.9		58.9	137	38.7		16.4
9	222	56.7	300	16.9		58.7	152	42.1		16.4
10	237	59.1	315	16.0		58.5	167	45.4		16.3
11	253	01.6	330	15.0	-23	58.3	182	48.7	+24	16.2
12	268	04.1	345	14.1	-23	58.1	197	52.1	+24	16.1
13	283	06.5	0	13.1		57.9	212	55.4		16.0
14	298	09.0	15	12.1		57.7	227	58.7		15.9
15	313	11.5	30	11.2		57.5	243	02.1		15.8
16	328	13.9	45	10.2		57.3	258	05.4		15.7
17	343	16.4	60	09.3	-23	57.1	273	08.7	+24	15.6
18	358	18.9	75	08.3	-23	56.9	288	12.0	+24	15.5
19	13	21.3	90	07.3		56.6	303	15.4		15.4
20	28	23.8	105	06.4		56.4	318	18.7		15.3
21	43	26.2	120	05.4		56.2	333	22.0		15.2
22	58	28.7	135	04.5		56.0	348	25.3		15.1
23	73	31.2	150	03.5		55.8	3	28.6		15.0
24	88	33.6	165	02.5	-23	55.6	18	31.9	+24	14.9
Dif	—		-10		+2		+33		-1	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna		
	SD: 16°3 PMG: 11 ^h 57 ^m 5				Edad: 26 ^d 0 PHE { 4 ^h : 58'8 12 ^h : 59'1 20 ^h : 59'4 R°: 56 ^m													
	hG ☉ Dec		hG ☾ Dif Dec Dif					Civil			Náutico	Hora R°	Hora R°					
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m			
0	180	40.7	-23	25.4	229	20.6	-15	14.5	60 N	14 54	15 52	16 48	4 56 108	12 50 7				
1	195	40.4		25.5	243	49.9 ¹⁰³		28.1 ¹³⁶	58	15 11	16 03	16 56	45 102	13 02 13				
2	210	40.1		25.5	258	19.1 ¹⁰²		41.6 ¹³⁵	56	26	14	17 03	36 96	13 17				
3	225	39.8		25.5	272	48.2 ¹⁰¹	-15	55.1 ¹³⁵	54	39	23	09	28 92	22 21				
4	240	39.5		25.6	287	17.2 ¹⁰⁰	-16	08.5 ¹³⁴	52	15 50	31	15	20 89	30 25				
5	255	39.2	-23	25.6	301	46.0 ⁹⁸	-16	21.8 ¹³³	50	16 00	16 38	17 20	4 13 86	13 38 27				
6	270	38.9	-23	25.6	316	14.7 ⁹⁷	-16	35.0 ¹³²	45	16 21	16 54	17 32	3 59 80	13 54 32				
7	285	38.6		25.7	330	43.3 ⁹⁶	-16	48.2 ¹³²	40	37	17 08	42	47 76	14 07 37				
8	300	38.3		25.7	345	11.8 ⁹⁵	-17	01.3 ¹³¹	35	16 52	20	17 51	37 72	18 41				
9	315	38.0		25.7	359	40.1 ⁹³		14.3 ¹³⁰	30	17 04	30	18 00	29 68	28 44				
10	330	37.6		25.8	14	08.3 ⁹²		27.3 ¹³⁰	20	25	17 49	17	14 63	14 45 49				
11	345	37.3	-23	25.8	28	36.4 ⁹¹	-17	40.1 ¹²⁸	10 N	17 44	18 07	18 33	3 01 58	15 00 53				
12	0	37.0	-23	25.8	43	04.3 ⁸⁹	-17	52.9 ¹²⁸	0	18 01	18 24	18 50	2 49 54	15 14 57				
13	15	36.7		25.8	57	32.2 ⁸⁹	-18	05.6 ¹²⁷	10 S	19	18 42	19 09	37 50	28 61				
14	30	36.4		25.9	71	59.8 ⁸⁶		18.2 ¹²⁶	20	18 38	19 02	19 32	25 45	15 43 65				
15	45	36.1		25.9	86	27.4 ⁸⁶		30.7 ¹²⁵	30	19 00	27	20 01	10 40	16 01 70				
16	60	35.8		25.9	100	54.8 ⁸⁴		43.2 ¹²⁵	35	13	19 43	20	2 02 37	11 73				
17	75	35.5	-23	25.9	115	22.1 ⁸³	-18	55.5 ¹²³	40	19 28	20 01	20 43	1 53 33	16 23 76				
18	90	35.2	-23	26.0	129	49.3 ⁸²	-19	07.8 ¹²³	45	19 46	20 24	21 13	1 42 29	16 37 81				
19	105	34.8		26.0	144	16.3 ⁸⁰		19.9 ¹²¹	50	20 09	20 53	21 59	29 23	16 54 86				
20	120	34.5		26.0	158	43.2 ⁷⁹		32.0 ¹²¹	52	20	21 09	22 27	23 21	17 02 89				
21	135	34.2		26.0	173	09.9 ⁷⁷		43.9 ¹¹⁹	54	32	27	23 14	16 18	11 93				
22	150	33.9		26.1	187	36.5 ⁷⁶	-19	55.8 ¹¹⁹	56	20 46	21 49	** ** *	09 14	21 97				
23	165	33.6		26.1	202	03.0 ⁷⁵	-20	07.5 ¹¹⁷	58	21 03	22 19	** ** *	1 01 10	32 103				
24	180	33.3	-23	26.1	216	29.3 ⁷³	-20	19.1 ¹¹⁶	60 S	21 24	23 10	** ** *	0 51 5	17 46 110				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 18 ^h 02 ^m 8		Mag: -3.9 PMG: 13 ^h 01 ^m				Mag: -1.6 PMG: 22 ^h 41 ^m				Mag: -2.5 PMG: 18 ^h 05 ^m				Mag: +0.8 PMG: 15 ^h 40 ^m			
	hG ♈		hG ♀ Dec				hG ♂ Dec				hG ♃ Dec				hG ♄ Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	88	33.6	165	02.5	-23	55.6	18	31.9	+24	50.3	88	04.6	-1	14.9	124	28.3		
1	103	36.1	180	01.6		55.4	33	35.3		50.2	103	06.9		14.8	139	30.5		
2	118	38.6	195	00.6		55.2	48	38.6		50.2	118	09.1		14.7	154	32.8		
3	133	41.0	209	59.7		54.9	63	41.9		50.1	133	11.4		14.6	169	35.0		
4	148	43.5	224	58.7		54.7	78	45.2		50.1	148	13.7		14.5	184	37.3		
5	163	46.0	239	57.8	-23	54.5	93	48.5	+24	50.0	163	16.0	-1	14.4	199	39.5		
6	178	48.4	254	56.8	-23	54.3	108	51.8	+24	50.0	178	18.2	-1	14.3	214	41.8		
7	193	50.9	269	55.8		54.1	123	55.1		49.9	193	20.5		14.3	229	44.0		
8	208	53.4	284	54.9		53.8	138	58.4		49.9	208	22.8		14.2	244	46.3		
9	223	55.8	299	53.9		53.6	154	01.7		49.8	223	25.0		14.1	259	48.5		
10	238	58.3	314	53.0		53.4	169	05.0		49.8	238	27.3		14.0	274	50.8		
11	254	00.7	329	52.0	-23	53.2	184	08.3	+24	49.7	253	29.6	-1	13.9	289	53.0		
12	269	03.2	344	51.1	-23	52.9	199	11.7	+24	49.7	268	31.8	-1	13.8	304	55.2		
13	284	05.7	359	50.1		52.7	214	15.0		49.6	283	34.1		13.7	319	57.5		
14	299	08.1	14	49.1		52.5	229	18.3		49.6	298	36.4		13.6	334	59.7		
15	314	10.6	29	48.2		52.2	244	21.5		49.5	313	38.6		13.5	350	02.0		
16	329	13.1	44	47.2		52.0	259	24.8		49.5	328	40.9		13.4	5	04.2		
17	344	15.5	59	46.3	-23	51.8	274	28.1	+24	49.4	343	43.2	-1	13.3	20	06.5		
18	359	18.0	74	45.3	-23	51.5	289	31.4	+24	49.4	358	45.4	-1	13.2	35	08.7		
19	14	20.5	89	44.4		51.3	304	34.7		49.3	13	47.7		13.1	50	11.0		
20	29	22.9	104	43.4		51.0	319	38.0		49.3	28	50.0		13.0	65	13.2		
21	44	25.4	119	42.5		50.8	334	41.3		49.2	43	52.2		12.9	80	15.5		
22	59	27.8	134	41.5		50.6	349	44.6		49.1	58	54.5		12.8	95	17.7		
23	74	30.3	149	40.6		50.3	4	47.9		49.1	73	56.8		12.7	110	20.0		
24	89	32.8	164	39.6	-23	50.1	19	51.2	+24	49.0	88	59.0	-1	12.6	125	22.2		
Dif	—		-10 +2				+33 -1				+23 +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 58 ^m 0			Edad: 27 ^d 0 PHE { 4 ^h : 59/7 12 ^h : 60/0 20 ^h : 60/2 PMG: 9 ^h 57 ^m R°: 61 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m
0	180	33.3	-23	26.1	216	29.3	-20	19.1	60 N	7 07	8 04	9 02	6 44	113	12 57	15
1	195	33.0		26.1	230	55.5	72	30.7 ¹¹⁶	58	7 00	7 52	8 44	27	104	13 15	23
2	210	32.7		26.1	245	21.6	71	42.1 ¹¹⁴	56	6 53	42	30	12	98	30	29
3	225	32.4		26.1	259	47.5	69	-20 53.4 ¹¹³	54	47	33	17	6	00	94	43
4	240	32.1		26.2	274	13.3	68	-21 04.6 ¹¹²	52	41	25	8 06	5	49	90	13
5	255	31.7	-23	26.2	288	38.9	66	-21 15.6 ¹¹⁰	50	6 36	7 17	7 56	5	39	88	14
6	270	31.4	-23	26.2	303	04.5	66	-21 26.6 ¹¹⁰	45	6 24	7 01	7 35	5	19	82	14
7	285	31.1		26.2	317	29.8	63	37.4 ¹⁰⁸	40	13	6 48	18	5	03	77	44
8	300	30.8		26.2	331	55.1	63	48.1 ¹⁰⁷	35	6 04	36	7 04	4	49	74	14
9	315	30.5		26.2	346	20.2	61	-21 58.7 ¹⁰⁶	30	5 55	25	6 52	37	72	15	12
10	330	30.2		26.2	0	45.1	59	-22 09.1 ¹⁰⁴	20	39	6 06	30	4	17	67	34
11	345	29.9	-23	26.2	15	09.9	58	-22 19.4 ¹⁰³	10 N	5 23	5 49	6 12	3	59	64	15
12	0	29.6	-23	26.2	29	34.6	57	-22 29.6 ¹⁰²	0	5 05	5 32	5 54	3	43	60	16
13	15	29.2		26.3	43	59.2	56	39.6 ¹⁰⁰	10 S	4 46	5 14	37	27	56	29	65
14	30	28.9		26.3	58	23.6	54	49.5 ⁹⁹	20	4 24	4 53	5 18	3	10	53	16
15	45	28.6		26.3	72	47.9	53	-22 59.3 ⁹⁸	30	3 55	28	4 56	2	50	49	17
16	60	28.3		26.3	87	12.0	51	-23 08.9 ⁹⁶	35	36	4 13	43	39	46	24	74
17	75	28.0	-23	26.3	101	36.0	50	-23 18.4 ⁹⁵	40	3 13	3 55	4 27	2	26	42	17
18	90	27.7	-23	26.3	115	59.9	49	-23 27.7 ⁹³	45	2 42	3 32	4 09	2	11	38	17
19	105	27.4		26.3	130	23.6	47	36.9 ⁹²	50	1 56	3 02	3 47	1	52	33	18
20	120	27.1		26.3	144	47.3	47	45.9 ⁹⁰	52	1 28	2 47	36	44	30	31	88
21	135	26.8		26.3	159	10.7	44	-23 54.8 ⁸⁹	54	0 41	29	24	34	27	44	90
22	150	26.4		26.3	173	34.1	44	-24 03.5 ⁸⁷	56	** **	2 07	3 09	23	23	18	58
23	165	26.1		26.3	187	57.3	42	12.1 ⁸⁶	58	** **	1 37	2 52	1	11	17	19
24	180	25.8	-23	26.3	202	20.4	41	-24 20.5 ⁸⁴	60 S	** **	0 45	2 32	0	56	11	19

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 58 ^m 9		Mag: -3.9 PMG: 13 ^h 02 ^m		Mag: -1.5 PMG: 22 ^h 36 ^m		Mag: -2.5 PMG: 18 ^h 01 ^m		Mag: +0.8 PMG: 15 ^h 36 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	89	32.8	164	39.6	-23	50.1	19	51.2	+24	49.0
1	104	35.2	179	38.6		49.8	34	54.5		49.0
2	119	37.7	194	37.7		49.6	49	57.8		48.9
3	134	40.2	209	36.7		49.3	65	01.0		48.9
4	149	42.6	224	35.8		49.1	80	04.3		48.8
5	164	45.1	239	34.8	-23	48.8	95	07.6	+24	48.8
6	179	47.6	254	33.9	-23	48.6	110	10.9	+24	48.7
7	194	50.0	269	32.9		48.3	125	14.2		48.7
8	209	52.5	284	32.0		48.1	140	17.4		48.6
9	224	55.0	299	31.0		47.8	155	20.7		48.6
10	239	57.4	314	30.1		47.6	170	24.0		48.5
11	254	59.9	329	29.1	-23	47.3	185	27.3	+24	48.5
12	270	02.3	344	28.2	-23	47.0	200	30.5	+24	48.4
13	285	04.8	359	27.2		46.8	215	33.8		48.3
14	300	07.3	14	26.3		46.5	230	37.1		48.3
15	315	09.7	29	25.3		46.3	245	40.3		48.2
16	330	12.2	44	24.4		46.0	260	43.6		48.2
17	345	14.7	59	23.4	-23	45.7	275	46.9	+24	48.1
18	0	17.1	74	22.5	-23	45.5	290	50.1	+24	48.1
19	15	19.6	89	21.5		45.2	305	53.4		48.0
20	30	22.1	104	20.6		44.9	320	56.7		48.0
21	45	24.5	119	19.6		44.7	335	59.9		47.9
22	60	27.0	134	18.7		44.4	351	03.2		47.9
23	75	29.5	149	17.7		44.1	6	06.4		47.8
24	90	31.9	164	16.8	-23	43.8	21	09.7	+24	47.8
Dif	—		-10		+3		+33		-1	
							+23		+1	
									+22	
									+	

UT	SOL				● LUNA				Latitud	Puesta de Sol	Final del crepúsculo			Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 11 ^h 58 ^m 5				Edad: 28 ^d 0 PHE { 4 ^h : 60'5 12 ^h : 60'7 20 ^h : 60'8 R°: 66 ^m												
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	180	25.8	-23	26.3	202	20.4	-24	20.5	60 N	14 55	15 52	16 49	8 37	99	13 12	38	
1	195	25.5		26.3	216	43.4	40	28.7	58	15 12	16 04	16 57	8 11	92		38 45	
2	210	25.2		26.3	231	06.2	38	36.8	56		27	14	17 04	7 50	88	13 59 49	
3	225	24.9		26.3	245	28.9	37	44.7	54		40	24	10	34	84	14 16 52	
4	240	24.6		26.3	259	51.5	36	-24 52.5	52	15 51		32	16	19	83	31 54	
5	255	24.3	-23	26.3	274	14.0	35	-25 00.0	50	16 01	16 39	17 21	7 07	80	14 44	55	
6	270	24.0	-23	26.3	288	36.4	34	-25 07.4	45	16 22	16 55	17 33	6 41	77	15 10	59	
7	285	23.6		26.3	302	58.6	32	14.7	73		38	17 09		43	20 75	31 61	
8	300	23.3		26.2	317	20.7	31	21.7	70	16 53		21	17 52	6 03	74	15 49 62	
9	315	23.0		26.2	331	42.8	31	28.6	69	30	17 05	31	18 01	5 49	71	16 04 63	
10	330	22.7		26.2	346	04.7	29	35.3	67	20		26	17 50		24 69	30 64	
11	345	22.4	-23	26.2	0	26.5	28	-25 41.8	65	10 N	17 45	18 08	18 34	5 03	67	16 53 65	
12	0	22.1	-23	26.2	14	48.1	26	-25 48.1	63	0	18 02	18 25	18 51	4 43	65	17 13 67	
13	15	21.8		26.2	29	09.7	26	-25 54.3	62	10 S		20	18 43		23 63	34 68	
14	30	21.5		26.2	43	31.2	25	-26 00.2	59	20	18 39	19 03	19 33	4 03	60	17 57 68	
15	45	21.1		26.2	57	52.6	24	06.0	58	30	19 01		28	20 02	3 39	57 18 23 70	
16	60	20.8		26.2	72	13.9	23	11.6	56	35		14	19 44		25 56	38 71	
17	75	20.5	-23	26.1	86	35.1	22	-26 17.0	54	40	19 29	20 02	20 44	3 08	54	18 56 72	
18	90	20.2	-23	26.1	100	56.2	21	-26 22.1	51	45	19 47	20 25	21 14	2 49	51	19 18 72	
19	105	19.9		26.1	115	17.2	20	27.1	50	50	20 10	20 54	22 00		25 47	45 74	
20	120	19.6		26.1	129	38.1	19	31.9	48	52		21	21 10	22 28	14 45	19 59 74	
21	135	19.3		26.1	143	58.9	18	36.5	46	54		33	28	23 15	2 01	42 20 14 75	
22	150	19.0		26.1	158	19.6	17	40.9	44	56	20 47	21 50	** **	1 46	39	32 77	
23	165	18.6		26.0	172	40.3	17	45.1	42	58	21 04	22 20	** **	28 34	20 54	79	
24	180	18.3	-23	26.0	187	00.9	16	-26 49.1	40	60 S	21 25	23 11	** **	1 07	26	21 23 81	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 17 ^h 54 ^m 9		Mag: -3.9 PMG: 13 ^h 04 ^m		Mag: -1.5 PMG: 22 ^h 30 ^m		Mag: -2.5 PMG: 17 ^h 58 ^m		Mag: +0.8 PMG: 15 ^h 33 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♎	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	90	31.9	164	16.8	-23	43.8	21	09.7	+24	47.8	89	53.3	-1	10.2	126	16.1	-15	31.6
1	105	34.4	179	15.8		43.6	36	13.0		47.7	104	55.5		10.1	141	18.4		31.5
2	120	36.8	194	14.9		43.3	51	16.2		47.6	119	57.8		10.0	156	20.6		31.5
3	135	39.3	209	13.9		43.0	66	19.5		47.6	135	00.0		09.9	171	22.8		31.4
4	150	41.8	224	13.0		42.7	81	22.7		47.5	150	02.3		09.8	186	25.1		31.3
5	165	44.2	239	12.0	-23	42.4	96	26.0	+24	47.5	165	04.5	-1	09.7	201	27.3	-15	31.2
6	180	46.7	254	11.1	-23	42.2	111	29.2	+24	47.4	180	06.8	-1	09.6	216	29.6	-15	31.2
7	195	49.2	269	10.2		41.9	126	32.5		47.4	195	09.1		09.5	231	31.8		31.1
8	210	51.6	284	09.2		41.6	141	35.7		47.3	210	11.3		09.4	246	34.1		31.0
9	225	54.1	299	08.3		41.3	156	38.9		47.3	225	13.6		09.3	261	36.3		30.9
10	240	56.6	314	07.3		41.0	171	42.2		47.2	240	15.8		09.2	276	38.5		30.9
11	255	59.0	329	06.4	-23	40.7	186	45.4	+24	47.2	255	18.1	-1	09.1	291	40.8	-15	30.8
12	271	01.5	344	05.4	-23	40.4	201	48.7	+24	47.1	270	20.3	-1	09.0	306	43.0	-15	30.7
13	286	04.0	359	04.5		40.1	216	51.9		47.1	285	22.6		08.8	321	45.3		30.6
14	301	06.4	14	03.5		39.9	231	55.2		47.0	300	24.8		08.7	336	47.5		30.6
15	316	08.9	29	02.6		39.6	246	58.4		46.9	315	27.1		08.6	351	49.8		30.5
16	331	11.3	44	01.7		39.3	262	01.6		46.9	330	29.3		08.5	6	52.0		30.4
17	346	13.8	59	00.7	-23	39.0	277	04.9	+24	46.8	345	31.6	-1	08.4	21	54.2	-15	30.3
18	1	16.3	73	59.8	-23	38.7	292	08.1	+24	46.8	0	33.8	-1	08.3	36	56.5	-15	30.3
19	16	18.7	88	58.8		38.4	307	11.3		46.7	15	36.1		08.2	51	58.7		30.2
20	31	21.2	103	57.9		38.1	322	14.6		46.7	30	38.3		08.1	67	01.0		30.1
21	46	23.7	118	56.9		37.8	337	17.8		46.6	45	40.6		08.0	82	03.2		30.1
22	61	26.1	133	56.0		37.5	352	21.0		46.6	60	42.9		07.9	97	05.5		30.0
23	76	28.6	148	55.1		37.2	7	24.2		46.5	75	45.1		07.8	112	07.7		29.9
24	91	31.1	163	54.1	-23	36.9	22	27.5	+24	46.5	90	47.4	-1	07.7	127	09.9	-15	29.8
Dif	—		-9		+3		+32		-1		+23		+1		+22		+	

UT	SOL			● LUNA							Latitud	Principio del crepúsculo		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 11 ^h 59 ^m 0			Edad: 29 ^d 0 PHE { 4 ^h : 61'0 12 ^h : 61'1 20 ^h : 61'2 R°: 67 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico		Civil	Hora		R°	Hora	R°			
h	°	'	°	'	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	180	18.3	-23	26.0	187	00.9		-26	49.1		60 N	7 08	8 05	9 03	10 16	59		13 50	82	
1	195	18.0		26.0	201	21.4	15		52.9	38	58	7 01	7 53	8 45	9 43	62		14 23	79	
2	210	17.7		26.0	215	41.9	15		56.5	36	56	6 54		43	31	9 18	64		14 48	
3	225	17.4		25.9	230	02.3	14		-26	59.9	34	54		48	34	18	58	65	15 08	
4	240	17.1		25.9	244	22.6	13		-27	03.1	32	52		42	26	8 07	42	65	25	
5	255	16.8	-23	25.9	258	42.8	12		-27	06.0	29	50	6 37	7 18	7 57	8 27	66		15 39	
6	270	16.5	-23	25.9	273	03.0	12		-27	08.8	28	45	6 25	7 02	7 36	7 58	66		16 09	
7	285	16.2		25.8	287	23.2	12		11.3	25	40		14	6 49	19	35	67		32	
8	300	15.8		25.8	301	43.3	11		13.7	24	35	6 05		37	7 05	17	66		16 51	
9	315	15.5		25.8	316	03.3	10		15.8	21	30	5 56		26	6 53	7 00	67		17 07	
10	330	15.2		25.8	330	23.3	10		17.7	19	20		40	6 07	31	6 33	67		34	
11	345	14.9	-23	25.7	344	43.3	10		-27	19.4	17	10 N	5 24	5 50	6 13	6 10	67		17 58	
12	0	14.6	-23	25.7	359	03.2	9		-27	20.9	15	0	5 06	5 33	5 55	5 48	67		18 20	
13	15	14.3		25.7	13	23.1	9		22.2	13	10 S	4 47	5 15	38		26	68		18 42	
14	30	14.0		25.6	27	43.0	9		23.2	10	20	4 25	4 54	5 19	5 03	67		19 05	66	
15	45	13.7		25.6	42	02.8	8		24.1	9	30	3 56		29	4 57	4 36	67		33	
16	60	13.3		25.6	56	22.6	8		24.7	6	35		37	4 14	44	21	66		19 49	
17	75	13.0	-23	25.5	70	42.4	8		-27	25.1	4	40	3 14	3 56	4 28	4 02	67		20 08	
18	90	12.7	-23	25.5	85	02.2	8		-27	25.3	2	45	2 43	3 33	4 10	3 40	66		20 30	
19	105	12.4		25.5	99	22.0	8		25.2	1	50	1 57	3 03	3 48	3 12	66		20 59	56	
20	120	12.1		25.4	113	41.7	7		25.0	2	52	1 29	2 48		37	2 59	65		21 13	
21	135	11.8		25.4	128	01.5	8		24.5	5	54	0 42		30	25	43	64		29	
22	150	11.5		25.3	142	21.2	7		23.8	7	56	** **	2 08	3 10		25	63		21 49	
23	165	11.2		25.3	156	41.0	8		22.9	9	58	** **	1 38	2 53		2 02	62		22 13	
24	180	10.9	-23	25.3	171	00.7	7		-27	21.8	11	60 S	** **	0 46	2 33	1 33	60		22 44	

UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 17 ^h 51 ^m 0		Mag: -3.9 PMG: 13 ^h 05 ^m				Mag: -1.5 PMG: 22 ^h 25 ^m				Mag: -2.5 PMG: 17 ^h 54 ^m				Mag: +0.8 PMG: 15 ^h 29 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	91	31.1	163	54.1	-23	36.9			22	27.5	+24	46.5	90	47.4	-1	07.7	127	09.9
1	106	33.5	178	53.2		36.5			37	30.7		46.4	105	49.6		07.6	142	12.2
2	121	36.0	193	52.2		36.2			52	33.9		46.3	120	51.9		07.5	157	14.4
3	136	38.5	208	51.3		35.9			67	37.1		46.3	135	54.1		07.4	172	16.7
4	151	40.9	223	50.4		35.6			82	40.3		46.2	150	56.3		07.3	187	18.9
5	166	43.4	238	49.4	-23	35.3			97	43.6	+24	46.2	165	58.6	-1	07.2	202	21.1
6	181	45.8	253	48.5	-23	35.0			112	46.8	+24	46.1	181	00.8	-1	07.1	217	23.4
7	196	48.3	268	47.5		34.7			127	50.0		46.1	196	03.1		07.0	232	25.6
8	211	50.8	283	46.6		34.4			142	53.2		46.0	211	05.3		06.9	247	27.9
9	226	53.2	298	45.7		34.1			157	56.4		46.0	226	07.6		06.8	262	30.1
10	241	55.7	313	44.7		33.7			172	59.6		45.9	241	09.8		06.6	277	32.3
11	256	58.2	328	43.8	-23	33.4			188	02.8	+24	45.9	256	12.1	-1	06.5	292	34.6
12	272	00.6	343	42.8	-23	33.1			203	06.1	+24	45.8	271	14.3	-1	06.4	307	36.8
13	287	03.1	358	41.9		32.8			218	09.3		45.7	286	16.6		06.3	322	39.1
14	302	05.6	13	41.0		32.5			233	12.5		45.7	301	18.8		06.2	337	41.3
15	317	08.0	28	40.0		32.1			248	15.7		45.6	316	21.1		06.1	352	43.5
16	332	10.5	43	39.1		31.8			263	18.9		45.6	331	23.3		06.0	7	45.8
17	347	13.0	58	38.2	-23	31.5			278	22.1	+24	45.5	346	25.6	-1	05.9	22	48.0
18	2	15.4	73	37.2	-23	31.1			293	25.3	+24	45.5	1	27.8	-1	05.8	37	50.3
19	17	17.9	88	36.3		30.8			308	28.5		45.4	16	30.1		05.7	52	52.5
20	32	20.3	103	35.3		30.5			323	31.7		45.4	31	32.3		05.6	67	54.7
21	47	22.8	118	34.4		30.2			338	34.9		45.3	46	34.5		05.5	82	57.0
22	62	25.3	133	33.5		29.8			353	38.1		45.2	61	36.8		05.4	97	59.2
23	77	27.7	148	32.5		29.5			8	41.3		45.2	76	39.0		05.3	113	01.5
24	92	30.2	163	31.6	-23	29.2			23	44.4	+24	45.1	91	41.3	-1	05.2	128	03.7
Dif	—		-9		+3		+32		-1		+22		+1		+22		+1	

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna					
	SD: 16:3 PMG: 11 ^h 59 ^m 5			Edad: 30 ^d 0 PHE { SD: 16:7 PMG: 13 ^h 11 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	180	10.9	-23	25.3	171	00.7	-27	21.8	60 N	14 56	15 54	16 51	11 15 25	15 12 112				
1	195	10.5		25.2	185	20.5	8	20.5	58	15 14	16 05	16 58	10 45 33	15 42 103				
2	210	10.2		25.2	199	40.3	8	18.9	56	28	16	17 05	22 38	16 05 97				
3	225	09.9		25.1	214	00.1	8	17.2	54	41	25	11	10 03 42	24 93				
4	240	09.6		25.1	228	19.9	8	15.2	52	15 52	33	17	9 47 45	40 89				
5	255	09.3	-23	25.0	242	39.8	9	-27 13.0	50	16 02	16 40	17 22	9 33 47	16 54 86				
6	270	09.0	-23	25.0	256	59.7	9	-27 10.6	45	16 23	16 57	17 34	9 04 52	17 21 83				
7	285	08.7		25.0	271	19.6	9	08.0	40	39	17 10	44	8 42 54	17 43 79				
8	300	08.4		24.9	285	39.5	9	05.1	35	16 54	22	17 54	23 57	18 02 75				
9	315	08.0		24.9	299	59.5	10	-27 02.1	30	17 06	32	18 02	8 07 59	17 74				
10	330	07.7		24.8	314	19.5	10	-26 58.8	20	27	17 51	19	7 40 62	18 43 70				
11	345	07.4	-23	24.8	328	39.6	11	-26 55.3	10 N	17 46	18 09	18 35	7 17 64	19 06 67				
12	0	07.1	-23	24.7	342	59.7	11	-26 51.6	0	18 03	18 26	18 52	6 55 66	19 27 64				
13	15	06.8		24.7	357	19.9	12	47.7	10 S	21	18 44	19 11	34 67	19 48 61				
14	30	06.5		24.6	11	40.1	12	43.6	20	18 40	19 04	19 34	6 10 70	20 10 58				
15	45	06.2		24.6	26	00.4	13	39.3	30	19 02	29	20 03	5 43 73	36 54				
16	60	05.9		24.5	40	20.7	13	34.8	35	15	19 45	21	27 74	20 51 51				
17	75	05.6	-23	24.4	54	41.1	14	-26 30.0	40	19 30	20 03	20 45	5 09 76	21 08 49				
18	90	05.2	-23	24.4	69	01.6	15	-26 25.1	45	19 48	20 25	21 15	4 46 78	21 29 45				
19	105	04.9		24.3	83	22.1	15	20.0	50	20 11	20 55	22 01	18 81	21 55 40				
20	120	04.6		24.3	97	42.8	17	14.6	52	21	21 10	22 29	4 04 83	22 08 37				
21	135	04.3		24.2	112	03.5	17	09.1	54	34	28	23 15	3 47 86	22 34				
22	150	04.0		24.2	126	24.2	17	-26 03.4	56	20 48	21 51	** **	28 88	39 30				
23	165	03.7		24.1	140	45.1	19	-25 57.4	58	21 05	22 20	** **	3 04 93	22 59 25				
24	180	03.4	-23	24.0	155	06.0	19	-25 51.3	60 S	21 25	23 11	** **	2 33 99	23 24 17				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 17 ^h 47 ^m 1		Mag: -3.9 PMG: 13 ^h 07 ^m			Mag: -1.5 PMG: 22 ^h 20 ^m			Mag: -2.5 PMG: 17 ^h 51 ^m			Mag: +0.8 PMG: 15 ^h 25 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	92	30.2	163	31.6	-23	29.2	23	44.4	+24	45.1	91	41.3	-1	05.2	128	03.7	-15	28.0
1	107	32.7	178	30.7		28.8	38	47.6		45.1	106	43.5		05.0	143	05.9		28.0
2	122	35.1	193	29.7		28.5	53	50.8		45.0	121	45.8		04.9	158	08.2		27.9
3	137	37.6	208	28.8		28.1	68	54.0		45.0	136	48.0		04.8	173	10.4		27.8
4	152	40.1	223	27.9		27.8	83	57.2		44.9	151	50.2		04.7	188	12.7		27.7
5	167	42.5	238	26.9	-23	27.5	99	00.4	+24	44.9	166	52.5	-1	04.6	203	14.9	-15	27.6
6	182	45.0	253	26.0	-23	27.1	114	03.6	+24	44.8	181	54.7	-1	04.5	218	17.1	-15	27.6
7	197	47.5	268	25.1		26.8	129	06.7		44.8	196	57.0		04.4	233	19.4		27.5
8	212	49.9	283	24.1		26.4	144	09.9		44.7	211	59.2		04.3	248	21.6		27.4
9	227	52.4	298	23.2		26.1	159	13.1		44.6	227	01.5		04.2	263	23.8		27.3
10	242	54.8	313	22.3		25.7	174	16.3		44.6	242	03.7		04.1	278	26.1		27.3
11	257	57.3	328	21.3	-23	25.4	189	19.5	+24	44.5	257	05.9	-1	04.0	293	28.3	-15	27.2
12	272	59.8	343	20.4	-23	25.0	204	22.6	+24	44.5	272	08.2	-1	03.9	308	30.6	-15	27.1
13	288	02.2	358	19.5		24.7	219	25.8		44.4	287	10.4		03.7	323	32.8		27.0
14	303	04.7	13	18.6		24.3	234	29.0		44.4	302	12.7		03.6	338	35.0		27.0
15	318	07.2	28	17.6		24.0	249	32.2		44.3	317	14.9		03.5	353	37.3		26.9
16	333	09.6	43	16.7		23.6	264	35.3		44.3	332	17.1		03.4	8	39.5		26.8
17	348	12.1	58	15.8	-23	23.3	279	38.5	+24	44.2	347	19.4	-1	03.3	23	41.7	-15	26.7
18	3	14.6	73	14.8	-23	22.9	294	41.7	+24	44.2	2	21.6	-1	03.2	38	44.0	-15	26.7
19	18	17.0	88	13.9		22.5	309	44.8		44.1	17	23.8		03.1	53	46.2		26.6
20	33	19.5	103	13.0		22.2	324	48.0		44.0	32	26.1		03.0	68	48.5		26.5
21	48	22.0	118	12.1		21.8	339	51.1		44.0	47	28.3		02.9	83	50.7		26.4
22	63	24.4	133	11.1		21.5	354	54.3		43.9	62	30.6		02.8	98	52.9		26.4
23	78	26.9	148	10.2		21.1	9	57.5		43.9	77	32.8		02.6	113	55.2		26.3
24	93	29.3	163	09.3	-23	20.7	25	00.6	+24	43.8	92	35.0	-1	02.5	128	57.4	-15	26.2
Dif	—		-9		+4		+32		-1		+22		+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 00 ^m 0			Edad: 1 ^d 6 PHE { SD: 16'6 PMG: 14 ^h 16 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m	m	
0	180	03.4	-23	24.0	155	06.0	-25	51.3	60 N	7 09	8 06	9 03	11 40	9	17 04	114		
1	195	03.1		24.0	169	27.0	20	45.0	58	7 01	7 54	8 46	18 17		25 107			
2	210	02.8		23.9	183	48.2	22	38.4	56	6 55	44	31	11 00	22	42 101			
3	225	02.4		23.9	198	09.4	22	31.7	54	48	35	19	10 45	26	17 57	97		
4	240	02.1		23.8	212	30.7	23	24.8	52	43	26	8 07	32 30		18 09	94		
5	255	01.8	-23	23.7	226	52.1	24	-25 17.7	50	6 37	7 19	7 58	10 20	33	18 20	91		
6	270	01.5	-23	23.7	241	13.5	24	-25 10.4	45	6 26	7 03	7 37	9 56	38	18 44	84		
7	285	01.2		23.6	255	35.1	26	-25 03.0	40	15	6 49	20	36 43		19 02	79		
8	300	00.9		23.5	269	56.8	27	-24 55.3	35	6 06	38	7 06	20 46		17 76			
9	315	00.6		23.5	284	18.6	28	47.5	30	5 57	27	6 53	9 06	49	31 72			
10	330	00.3		23.4	298	40.5	29	39.5	20	41	6 08	32	8 42	53	19 53	68		
11	345	00.0	-23	23.3	313	02.6	31	-24 31.3	10 N	5 25	5 51	6 14	8 21	57	20 13	63		
12	359	59.6	-23	23.3	327	24.7	31	-24 23.0	0	5 08	5 34	5 56	8 01	61	20 31	59		
13	14	59.3		23.2	341	46.9	32	14.4	10 S	4 49	5 16	39	7 41	65	20 49	54		
14	29	59.0		23.1	356	09.3	34	-24 05.7	20	4 26	4 55	5 20	7 20	69	21 08	50		
15	44	58.7		23.0	10	31.7	34	-23 56.9	30	3 57	30	4 58	6 56	73	30 45			
16	59	58.4		23.0	24	54.3	36	47.8	35	38	4 15	45	41 76		42 42			
17	74	58.1	-23	22.9	39	17.0	37	-23 38.6	40	3 15	3 57	4 30	6 25	79	21 57	38		
18	89	57.8	-23	22.8	53	39.8	38	-23 29.3	45	2 44	3 34	4 12	6 04	84	22 14	34		
19	104	57.5		22.7	68	02.8	40	19.7	50	1 59	3 04	3 49	5 39	89	35 28			
20	119	57.2		22.7	82	25.8	40	10.0	52	1 31	2 49	38	27 92		45 25			
21	134	56.9		22.6	96	49.0	42	-23 00.2	54	0 45	31	26	5 13	95	22 56	22		
22	149	56.5		22.5	111	12.3	43	-22 50.2	56	** **	2 09	3 12	4 56	100	23 09	18		
23	164	56.2		22.4	125	35.8	45	40.1	58	** **	1 39	2 55	37 105		24 13			
24	179	55.9	-23	22.4	139	59.3	45	-22 29.8	60 S	** **	0 49	2 34	4 12	114	23 41	8		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 17 ^h 43 ^m 1			Mag: -3.9 PMG: 13 ^h 08 ^m			Mag: -1.4 PMG: 22 ^h 15 ^m			Mag: -2.5 PMG: 17 ^h 47 ^m			Mag: +0.8 PMG: 15 ^h 22 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	93	29.3	163	09.3	-23	20.7	25	00.6	+24	43.8	92	35.0	-1	02.5	128	57.4	-15	26.2
1	108	31.8	178	08.3		20.4	40	03.8		43.8	107	37.3		02.4	143	59.6		26.1
2	123	34.3	193	07.4		20.0	55	06.9		43.7	122	39.5		02.3	159	01.9		26.1
3	138	36.7	208	06.5		19.6	70	10.1		43.7	137	41.7		02.2	174	04.1		26.0
4	153	39.2	223	05.6		19.3	85	13.2		43.6	152	44.0		02.1	189	06.3		25.9
5	168	41.7	238	04.6	-23	18.9	100	16.4	+24	43.6	167	46.2	-1	02.0	204	08.6	-15	25.8
6	183	44.1	253	03.7	-23	18.5	115	19.5	+24	43.5	182	48.4	-1	01.9	219	10.8	-15	25.7
7	198	46.6	268	02.8		18.1	130	22.7		43.4	197	50.7		01.8	234	13.1		25.7
8	213	49.1	283	01.9		17.8	145	25.8		43.4	212	52.9		01.7	249	15.3		25.6
9	228	51.5	298	00.9		17.4	160	29.0		43.3	227	55.1		01.5	264	17.5		25.5
10	243	54.0	313	00.0		17.0	175	32.1		43.3	242	57.4		01.4	279	19.8		25.4
11	258	56.5	327	59.1	-23	16.6	190	35.3	+24	43.2	257	59.6	-1	01.3	294	22.0	-15	25.4
12	273	58.9	342	58.2	-23	16.3	205	38.4	+24	43.2	273	01.8	-1	01.2	309	24.2	-15	25.3
13	289	01.4	357	57.3		15.9	220	41.5		43.1	288	04.1		01.1	324	26.5		25.2
14	304	03.8	12	56.3		15.5	235	44.7		43.1	303	06.3		01.0	339	28.7		25.1
15	319	06.3	27	55.4		15.1	250	47.8		43.0	318	08.5		00.9	354	30.9		25.1
16	334	08.8	42	54.5		14.7	265	51.0		43.0	333	10.8		00.8	9	33.2		25.0
17	349	11.2	57	53.6	-23	14.3	280	54.1	+24	42.9	348	13.0	-1	00.6	24	35.4	-15	24.9
18	4	13.7	72	52.6	-23	14.0	295	57.2	+24	42.8	3	15.2	-1	00.5	39	37.6	-15	24.8
19	19	16.2	87	51.7		13.6	311	00.3		42.8	18	17.5		00.4	54	39.9		24.7
20	34	18.6	102	50.8		13.2	326	03.5		42.7	33	19.7		00.3	69	42.1		24.7
21	49	21.1	117	49.9		12.8	341	06.6		42.7	48	21.9		00.2	84	44.3		24.6
22	64	23.6	132	49.0		12.4	356	09.7		42.6	63	24.2	-1	00.1	99	46.6		24.5
23	79	26.0	147	48.0		12.0	11	12.9		42.6	78	26.4	-1	00.0	114	48.8		24.4
24	94	28.5	162	47.1	-23	11.6	26	16.0	+24	42.5	93	28.6	-0	59.9	129	51.0	-15	24.4
Dif	—			-9 +4			+31 -1			+22 +1			+22 +1					

UT	SOL			● LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 00 ^m 5			Edad: 2 ^d 6 PHE { 4 ^h : 60'7 12 ^h : 60'5 20 ^h : 60'3 R°: 55 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	
0	179	55.9	-23	22.4	139	59.3	-22 29.8	60 N	14 58	15 55	16 52	11 49 5	18 58 108	
1	194	55.6		22.3	154	23.0	47 19.3	58	15 15	16 07	17 00	35 9	19 12 102	
2	209	55.3		22.2	168	46.8	48 -22 08.7	56	30	17	06	22 14	23 98	
3	224	55.0		22.1	183	10.7	49 -21 58.0	54	42	26	12	11 18	34 93	
4	239	54.7		22.0	197	34.8	51 47.1	52	15 53	34	18	11 02 21	43 90	
5	254	54.4	-23	21.9	211	59.0	52 -21 36.1	50	16 03	16 42	17 23	10 53 24	19 51 87	
6	269	54.1	-23	21.9	226	23.3	53 -21 24.9	45	16 24	16 58	17 35	10 34 30	20 08 81	
7	284	53.8		21.8	240	47.7	54 13.6	40	41	17 11	45	19 34	21 77	
8	299	53.4		21.7	255	12.3	56 -21 02.2	35	16 55	23	17 55	10 06 38	33 72	
9	314	53.1		21.6	269	37.0	57 -20 50.7	30	17 07	34	18 03	9 55 41	20 43 69	
10	329	52.8		21.5	284	01.8	58 39.0	20	28	17 52	20	35 47	21 01 63	
11	344	52.5	-23	21.4	298	26.8	60 -20 27.2	10 N	17 47	18 10	18 36	9 18 52	21 16 58	
12	359	52.2	-23	21.3	312	51.9	61 -20 15.3	0	18 04	18 27	18 53	9 02 56	21 30 53	
13	14	51.9		21.2	327	17.1	62 -20 03.2	10 S	22	18 45	19 12	8 46 61	43 49	
14	29	51.6		21.1	341	42.5	64 -19 51.1	20	18 41	19 05	19 35	29 65	21 58 44	
15	44	51.3		21.1	356	07.9	64 38.8	30	19 03	30	20 04	8 09 71	22 15 38	
16	59	51.0		21.0	10	33.6	67 26.4	35	16	19 45	22	7 57 75	24 35	
17	74	50.7	-23	20.9	24	59.3	67 -19 13.9	40	19 31	20 04	20 45	7 44 78	22 35 31	
18	89	50.4	-23	20.8	39	25.2	69 -19 01.2	45	19 49	20 26	21 16	7 28 83	22 48 26	
19	104	50.0		20.7	53	51.1	69 -18 48.5	50	20 11	20 56	22 01	7 08 89	23 03 21	
20	119	49.7		20.6	68	17.3	72 35.7	52	22	21 11	22 28	6 59 92	10 19	
21	134	49.4		20.5	82	43.5	72 22.7	54	34	29	23 14	48 96	18 16	
22	149	49.1		20.4	97	09.9	74 -18 09.7	56	20 48	21 51	** **	36 100	27 12	
23	164	48.8		20.3	111	36.4	75 -17 56.6	58	21 05	22 20	** **	22 105	37 8	
24	179	48.5	-23	20.2	126	03.0	76 -17 43.3	60 S	21 25	23 09	** **	6 06 110	23 49 3	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 39 ^m 2		Mag: -3.9 PMG: 13 ^h 10 ^m		Mag: -1.4 PMG: 22 ^h 10 ^m		Mag: -2.5 PMG: 17 ^h 43 ^m		Mag: +0.8 PMG: 15 ^h 18 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	94	28.5	162	47.1	26	16.0	+24 42.5	93	28.6	-0 59.9	129	51.0	-15 24.4	
1	109	31.0	177	46.2	41	19.1	42.5	108	30.9	59.7	144	53.3	24.3	
2	124	33.4	192	45.3	56	22.2	42.4	123	33.1	59.6	159	55.5	24.2	
3	139	35.9	207	44.4	71	25.3	42.4	138	35.3	59.5	174	57.7	24.1	
4	154	38.3	222	43.5	86	28.5	42.3	153	37.5	59.4	190	00.0	24.1	
5	169	40.8	237	42.5	101	31.6	+24 42.2	168	39.8	-0 59.3	205	02.2	-15 24.0	
6	184	43.3	252	41.6	116	34.7	+24 42.2	183	42.0	-0 59.2	220	04.4	-15 23.9	
7	199	45.7	267	40.7	131	37.8	42.1	198	44.2	59.1	235	06.7	23.8	
8	214	48.2	282	39.8	146	40.9	42.1	213	46.5	58.9	250	08.9	23.7	
9	229	50.7	297	38.9	161	44.0	42.0	228	48.7	58.8	265	11.1	23.7	
10	244	53.1	312	38.0	176	47.1	42.0	243	50.9	58.7	280	13.4	23.6	
11	259	55.6	327	37.0	191	50.2	+24 41.9	258	53.1	-0 58.6	295	15.6	-15 23.5	
12	274	58.1	342	36.1	206	53.3	+24 41.9	273	55.4	-0 58.5	310	17.8	-15 23.4	
13	290	00.5	357	35.2	221	56.4	41.8	288	57.6	58.4	325	20.1	23.4	
14	305	03.0	12	34.3	236	59.5	41.8	303	59.8	58.3	340	22.3	23.3	
15	320	05.4	27	33.4	252	02.6	41.7	319	02.0	58.1	355	24.5	23.2	
16	335	07.9	42	32.5	267	05.7	41.7	334	04.3	58.0	10	26.8	23.1	
17	350	10.4	57	31.6	282	08.8	+24 41.6	349	06.5	-0 57.9	25	29.0	-15 23.0	
18	5	12.8	72	30.7	297	11.9	+24 41.6	4	08.7	-0 57.8	40	31.2	-15 23.0	
19	20	15.3	87	29.7	312	15.0	41.5	19	10.9	57.7	55	33.5	22.9	
20	35	17.8	102	28.8	327	18.1	41.4	34	13.2	57.6	70	35.7	22.8	
21	50	20.2	117	27.9	342	21.2	41.4	49	15.4	57.4	85	37.9	22.7	
22	65	22.7	132	27.0	357	24.3	41.3	64	17.6	57.3	100	40.2	22.7	
23	80	25.2	147	26.1	12	27.4	41.3	79	19.8	57.2	115	42.4	22.6	
24	95	27.6	162	25.2	27	30.5	+24 41.2	94	22.1	-0 57.1	130	44.6	-15 22.5	
Dif	—		-9		+4		+31	-1	+22		+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 0			Edad: 3 ^d 6	PHE { 4 ^h : 60':1 12 ^h : 59:8 20 ^h : 59:6 R°: 50 ^m										
	hG ☉	Dec		hG ☾		Dif		Dec	Dif		Náutico	Civil	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m
0	179	48.5	-23	20.2	126	03.0	-17	43.3	60 N	7 09	8 06	9 04	11 54	2	20 46 100
1	194	48.2		20.1	140	29.8	78	30.0	58	7 02	7 54	8 46	44	7	20 54 95
2	209	47.9		20.0	154	56.7	79	16.6	56	6 55	44	32	36	10	21 01 92
3	224	47.6		19.9	169	23.7	80	-17 03.1	54	49	35	19	29	13	07 89
4	239	47.3		19.8	183	50.8	81	-16 49.5	52	43	27	8 08	23	15	13 85
5	254	47.0	-23	19.7	198	18.0	82	-16 35.8	50	6 38	7 20	7 58	11 17	18	21 18 83
6	269	46.6	-23	19.6	212	45.4	84	-16 22.0	45	6 26	7 04	7 37	11 04	24	21 29 77
7	284	46.3		19.5	227	12.9	85	-16 08.2	40	16	6 50	21	10 53	28	38 72
8	299	46.0		19.4	241	40.5	86	-15 54.3	35	6 07	38	7 07	44	32	45 69
9	314	45.7		19.3	256	08.2	87	40.2	30	5 58	28	6 54	36	35	21 52 65
10	329	45.4		19.2	270	36.1	89	26.2	20	42	6 09	33	22	41	22 04 59
11	344	45.1	-23	19.0	285	04.0	89	-15 12.0	10 N	5 25	5 52	6 15	10 10	46	22 14 53
12	359	44.8	-23	18.9	299	32.1	91	-14 57.8	0	5 09	5 35	5 57	9 58	51	22 23 49
13	14	44.5		18.8	314	00.3	92	43.5	10 S	4 50	5 17	40	47	55	32 44
14	29	44.2		18.7	328	28.6	93	29.1	20	4 27	4 56	5 21	34	61	42 39
15	44	43.9		18.6	342	57.0	94	14.7	30	3 58	31	4 59	20	67	53 33
16	59	43.6		18.5	357	25.5	95	-14 00.2	35	39	4 16	46	12	70	22 59 30
17	74	43.3	-23	18.4	11	54.2	97	-13 45.6	40	3 16	3 58	4 31	9 02	74	23 06 27
18	89	43.0	-23	18.3	26	22.9	97	-13 31.0	45	2 46	3 36	4 13	8 51	79	23 14 23
19	104	42.6		18.1	40	51.8	99	16.3	50	2 01	3 06	3 50	37	85	24 17
20	119	42.3		18.0	55	20.7	99	-13 01.6	52	1 33	2 51	40	31	87	29 14
21	134	42.0		17.9	69	49.8	101	-12 46.8	54	0 48	33	27	24	90	34 12
22	149	41.7		17.8	84	19.0	102	32.0	56	** ** *	2 11	3 13	16	94	39 9
23	164	41.4		17.7	98	48.3	103	17.1	58	** ** *	1 41	2 57	8 07	98	45 6
24	179	41.1	-23	17.6	113	17.6	103	-12 02.1	60 S	** ** *	0 52	2 36	7 56	103	23 52 2

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 35 ^m 3		Mag: -3.9 PMG: 13 ^h 11 ^m		Mag: -1.4 PMG: 22 ^h 05 ^m		Mag: -2.5 PMG: 17 ^h 40 ^m		Mag: +0.8 PMG: 15 ^h 15 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	95	27.6	162	25.2	-23	01.8	27	30.5	+24	41.2
1	110	30.1	177	24.3		01.3	42	33.6		41.2
2	125	32.6	192	23.4		00.9	57	36.6		41.1
3	140	35.0	207	22.5		00.5	72	39.7		41.1
4	155	37.5	222	21.6	-23	00.1	87	42.8		41.0
5	170	39.9	237	20.7	-22	59.6	102	45.9	+24	41.0
6	185	42.4	252	19.7	-22	59.2	117	49.0	+24	40.9
7	200	44.9	267	18.8		58.8	132	52.0		40.9
8	215	47.3	282	17.9		58.3	147	55.1		40.8
9	230	49.8	297	17.0		57.9	162	58.2		40.8
10	245	52.3	312	16.1		57.5	178	01.3		40.7
11	260	54.7	327	15.2	-22	57.0	193	04.3	+24	40.6
12	275	57.2	342	14.3	-22	56.6	208	07.4	+24	40.6
13	290	59.7	357	13.4		56.1	223	10.5		40.5
14	306	02.1	12	12.5		55.7	238	13.5		40.5
15	321	04.6	27	11.6		55.3	253	16.6		40.4
16	336	07.1	42	10.7		54.8	268	19.7		40.4
17	351	09.5	57	09.8	-22	54.4	283	22.7	+24	40.3
18	6	12.0	72	08.9	-22	53.9	298	25.8	+24	40.3
19	21	14.4	87	08.0		53.5	313	28.8		40.2
20	36	16.9	102	07.1		53.0	328	31.9		40.2
21	51	19.4	117	06.2		52.6	343	35.0		40.1
22	66	21.8	132	05.3		52.1	358	38.0		40.1
23	81	24.3	147	04.4		51.7	13	41.1		40.0
24	96	26.8	162	03.5	-22	51.2	28	44.1	+24	40.0
Dif	—		-9		+4		+31		-1	

UT	SOL				LUNA				Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna			
	SD: 16/3 PMG: 12 ^h 01 ^m 5				Edad: 4 ^d 6 PHE { SD: 16/2 PMG: 17 ^h 01 ^m													
	hG ☉		Dec		hG ☾		Dif				Civil		Náutico		Hora R°		Hora R°	
h	°	'	°	'	°	'	°	'	°	h m	h m	h m	h m m		h m m			
0	179	41.1	-23	17.6	113	17.6	-12	02.1	60 N	15 00	15 57	16 54	11 56 1		22 26 94			
1	194	40.8		17.4	127	47.1 ¹⁰⁵	-11	47.2 ¹⁴⁹	58	17	16 09	17 01	51 4		29 91			
2	209	40.5		17.3	142	16.7 ¹⁰⁶		32.1 ¹⁵¹	56	32	19	08	46 8		33 87			
3	224	40.2		17.2	156	46.4 ¹⁰⁷		17.1 ¹⁵⁰	54	44	28	14	42 11		36 84			
4	239	39.9		17.1	171	16.1 ¹⁰⁷	-11	01.9 ¹⁵²	52	15 55	36	20	38 14		38 82			
5	254	39.6	-23	17.0	185	46.0 ¹⁰⁹	-10	46.8 ¹⁵¹	50	16 05	16 43	17 25	11 35 16		22 41 78			
6	269	39.3	-23	16.8	200	16.0 ¹¹⁰	-10	31.6 ¹⁵²	45	16 25	16 59	17 36	11 28 20		22 46 73			
7	284	39.0		16.7	214	46.0 ¹¹⁰		16.4 ¹⁵²	40	42	17 13	47	21 25		50 69			
8	299	38.7		16.6	229	16.2 ¹¹²	-10	01.1 ¹⁵³	35	16 56	24	17 56	16 29		54 65			
9	314	38.4		16.5	243	46.4 ¹¹²	-9	45.8 ¹⁵³	30	17 08	35	18 05	11 32		22 57 62			
10	329	38.1		16.3	258	16.7 ¹¹³		30.5 ¹⁵³	20	30	17 54	21	11 03 38		23 03 56			
11	344	37.7	-23	16.2	272	47.2 ¹¹⁵	-9	15.1 ¹⁵⁴	10 N	17 48	18 11	18 37	10 56 42		23 07 51			
12	359	37.4	-23	16.1	287	17.7 ¹¹⁵	-8	59.7 ¹⁵⁴	0	18 05	18 28	18 54	10 49 47		23 12 46			
13	14	37.1		15.9	301	48.2 ¹¹⁵		44.3 ¹⁵⁴	10 S	23	18 46	19 13	42 52		16 42			
14	29	36.8		15.8	316	18.9 ¹¹⁷		28.8 ¹⁵⁵	20	18 42	19 06	19 35	35 57		21 36			
15	44	36.5		15.7	330	49.6 ¹¹⁷	-8	13.4 ¹⁵⁴	30	19 03	31	20 04	27 63		26 31			
16	59	36.2		15.5	345	20.5 ¹¹⁹	-7	57.9 ¹⁵⁵	35	16	19 46	23	22 66		29 28			
17	74	35.9	-23	15.4	359	51.4 ¹¹⁹	-7	42.4 ¹⁵⁵	40	19 31	20 04	20 46	10 16 70		23 33 24			
18	89	35.6	-23	15.3	14	22.4 ¹²⁰	-7	26.8 ¹⁵⁶	45	19 49	20 26	21 16	10 10 75		23 37 19			
19	104	35.3		15.1	28	53.4 ¹²⁰	-7	11.3 ¹⁵⁵	50	20 11	20 56	22 01	10 02 80		41 15			
20	119	35.0		15.0	43	24.6 ¹²²	-6	55.7 ¹⁵⁶	52	22	21 11	22 28	9 58 83		43 13			
21	134	34.7		14.9	57	55.8 ¹²²		40.1 ¹⁵⁶	54	34	29	23 12	54 86		46 10			
22	149	34.4		14.7	72	27.0 ¹²²		24.5 ¹⁵⁶	56	20 48	21 50	** **	50 89		48 8			
23	164	34.1		14.6	86	58.4 ¹²⁴	-6	08.9 ¹⁵⁶	58	21 05	22 19	** **	45 92		51 4			
24	179	33.8	-23	14.5	101	29.8 ¹²⁴	-5	53.3 ¹⁵⁶	60 S	21 25	23 07	** **	9 39 97		23 54 1			
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG 17 ^h 31 ^m 3		Mag: -3.9 PMG: 13 ^h 13 ^m				Mag: -1.3 PMG: 22 ^h 01 ^m				Mag: -2.4 PMG: 17 ^h 36 ^m				Mag: +0.8 PMG: 15 ^h 11 ^m			
	hG ♈		hG ♀		Dec		hG ♂		Dec		hG ♃		Dec		hG ♄		Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	96	26.8	162	03.5	-22	51.2	28	44.1	+24	40.0	95	15.3	-0	54.3	131	38.2	-15	20.6
1	111	29.2	177	02.6		50.8	43	47.2		39.9	110	17.6		54.2	146	40.4		20.5
2	126	31.7	192	01.7		50.3	58	50.2		39.9	125	19.8		54.0	161	42.6		20.5
3	141	34.2	207	00.8		49.9	73	53.2		39.8	140	22.0		53.9	176	44.8		20.4
4	156	36.6	221	59.9		49.4	88	56.3		39.8	155	24.2		53.8	191	47.1		20.3
5	171	39.1	236	59.0	-22	48.9	103	59.3	+24	39.7	170	26.4	-0	53.7	206	49.3	-15	20.2
6	186	41.5	251	58.1	-22	48.5	119	02.4	+24	39.7	185	28.6	-0	53.6	221	51.5	-15	20.1
7	201	44.0	266	57.2		48.0	134	05.4		39.6	200	30.9		53.5	236	53.8		20.1
8	216	46.5	281	56.3		47.6	149	08.5		39.6	215	33.1		53.3	251	56.0		20.0
9	231	48.9	296	55.4		47.1	164	11.5		39.5	230	35.3		53.2	266	58.2		19.9
10	246	51.4	311	54.5		46.6	179	14.5		39.4	245	37.5		53.1	282	00.4		19.8
11	261	53.9	326	53.6	-22	46.2	194	17.6	+24	39.4	260	39.7	-0	53.0	297	02.7	-15	19.7
12	276	56.3	341	52.7	-22	45.7	209	20.6	+24	39.3	275	41.9	-0	52.9	312	04.9	-15	19.7
13	291	58.8	356	51.8		45.2	224	23.6		39.3	290	44.1		52.7	327	07.1		19.6
14	307	01.3	11	50.9		44.8	239	26.7		39.2	305	46.4		52.6	342	09.4		19.5
15	322	03.7	26	50.0		44.3	254	29.7		39.2	320	48.6		52.5	357	11.6		19.4
16	337	06.2	41	49.1		43.8	269	32.7		39.1	335	50.8		52.4	12	13.8		19.4
17	352	08.7	56	48.2	-22	43.3	284	35.7	+24	39.1	350	53.0	-0	52.2	27	16.0	-15	19.3
18	7	11.1	71	47.3	-22	42.9	299	38.8	+24	39.0	5	55.2	-0	52.1	42	18.3	-15	19.2
19	22	13.6	86	46.4		42.4	314	41.8		39.0	20	57.4		52.0	57	20.5		19.1
20	37	16.0	101	45.6		41.9	329	44.8		38.9	35	59.6		51.9	72	22.7		19.0
21	52	18.5	116	44.7		41.4	344	47.8		38.9	51	01.8		51.8	87	24.9		19.0
22	67	21.0	131	43.8		40.9	359	50.8		38.8	66	04.1		51.6	102	27.2		18.9
23	82	23.4	146	42.9		40.5	14	53.8		38.8	81	06.3		51.5	117	29.4		18.8
24	97	25.9	161	42.0	-22	40.0	29	56.9	+24	38.7	96	08.5	-0	51.4	132	31.6	-15	18.7
Dif	—		-9		+5		+30		-1		+22		+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 0			Edad: 5 ^d 6 PHE { 4 ^h : 58'5 12 ^h : 58'2 20 ^h : 57'9 R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	33.8	-23	14.5	101	29.8	-5 53.3	60 N	7 10	8 06	9 03	11 57	1	***	***
1	194	33.5		14.3	116	01.3 ¹²⁵	37.7 ¹⁵⁶	58	7 02	7 55	8 46	55	4	***	***
2	209	33.2		14.2	130	32.9 ¹²⁶	22.1 ¹⁵⁶	56	6 55	44	32	54	7	***	***
3	224	32.9		14.0	145	04.5 ¹²⁶	-5 06.4 ¹⁵⁷	54	49	35	19	53	9	***	***
4	239	32.6		13.9	159	36.1 ¹²⁶	-4 50.8 ¹⁵⁶	52	44	27	8 08	52	12	***	***
5	254	32.3	-23	13.8	174	07.9 ¹²⁸	-4 35.1 ¹⁵⁷	50	6 39	7 20	7 58	11 51	14	23 59	77
6	269	32.0	-23	13.6	188	39.7 ¹²⁸	-4 19.5 ¹⁵⁶	45	6 27	7 04	7 38	11 48	19	23 59	71
7	284	31.6		13.5	203	11.6 ¹²⁹	-4 03.8 ¹⁵⁷	40	17	6 51	21	46	24	59	67
8	299	31.3		13.3	217	43.5 ¹²⁹	-3 48.2 ¹⁵⁶	35	6 07	39	7 07	45	27	59	63
9	314	31.0		13.2	232	15.4 ¹²⁹	32.5 ¹⁵⁷	30	5 59	29	6 55	43	30	59	60
10	329	30.7		13.0	246	47.5 ¹³¹	16.9 ¹⁵⁶	20	42	6 10	34	41	35	59	54
11	344	30.4	-23	12.9	261	19.5 ¹³⁰	-3 01.2 ¹⁵⁷	10 N	5 26	5 53	6 16	11 38	41	23 58	50
12	359	30.1	-23	12.7	275	51.7 ¹³²	-2 45.6 ¹⁵⁶	0	5 10	5 36	5 58	11 36	46	23 58	45
13	14	29.8		12.6	290	23.9 ¹³²	29.9 ¹⁵⁷	10 S	4 51	5 18	41	34	50	58	40
14	29	29.5		12.4	304	56.1 ¹³²	-2 14.3 ¹⁵⁶	20	4 28	4 57	22	32	55	57	36
15	44	29.2		12.3	319	28.4 ¹³³	-1 58.7 ¹⁵⁶	30	3 59	33	5 00	30	60	57	30
16	59	28.9		12.1	334	00.7 ¹³³	43.1 ¹⁵⁶	35	41	18	4 47	28	64	57	27
17	74	28.6	-23	12.0	348	33.1 ¹³⁴	-1 27.5 ¹⁵⁶	40	3 18	4 00	4 32	11 26	68	23 57	23
18	89	28.3	-23	11.8	3	05.5 ¹³⁴	-1 11.9 ¹⁵⁶	45	2 48	3 37	4 14	11 25	72	23 56	20
19	104	28.0		11.7	17	37.9 ¹³⁴	-0 56.3 ¹⁵⁶	50	2 03	3 08	3 52	22	77	56	14
20	119	27.7		11.5	32	10.4 ¹³⁵	40.8 ¹⁵⁵	52	1 36	2 53	41	21	80	56	12
21	134	27.4		11.4	46	43.0 ¹³⁶	25.2 ¹⁵⁶	54	0 52	35	29	20	82	56	9
22	149	27.1		11.2	61	15.5 ¹³⁵	-0 09.7 ¹⁵⁵	56	*** **	2 13	3 15	19	85	56	7
23	164	26.8		11.1	75	48.1 ¹³⁶	+0 05.8 ¹⁵⁵	58	*** **	1 44	2 59	17	89	55	5
24	179	26.5	-23	10.9	90	20.8 ¹³⁷	+0 21.3 ¹⁵⁵	60 S	*** **	0 57	2 38	11 16	92	23 55	1

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 17 ^h 27 ^m 4		Mag: -3.9 PMG: 13 ^h 14 ^m		Mag: -1.3 PMG: 21 ^h 56 ^m		Mag: -2.4 PMG: 17 ^h 33 ^m		Mag: +0.8 PMG: 15 ^h 08 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	97	25.9	161	42.0	29	56.9	+24 38.7	96 08.5	-0 51.4	132 31.6	-15 18.7				
1	112	28.4	176	41.1	44	59.9	38.7	111 10.7	51.3	147 33.9	18.6				
2	127	30.8	191	40.2	60	02.9	38.6	126 12.9	51.2	162 36.1	18.6				
3	142	33.3	206	39.3	75	05.9	38.6	141 15.1	51.0	177 38.3	18.5				
4	157	35.8	221	38.4	90	08.9	38.5	156 17.3	50.9	192 40.5	18.4				
5	172	38.2	236	37.5	105	11.9	+24 38.5	171 19.5	-0 50.8	207 42.8	-15 18.3				
6	187	40.7	251	36.7	120	14.9	+24 38.4	186 21.7	-0 50.7	222 45.0	-15 18.2				
7	202	43.2	266	35.8	135	17.9	38.4	201 23.9	50.6	237 47.2	18.2				
8	217	45.6	281	34.9	150	20.9	38.3	216 26.1	50.4	252 49.4	18.1				
9	232	48.1	296	34.0	165	23.9	38.3	231 28.4	50.3	267 51.7	18.0				
10	247	50.5	311	33.1	180	26.9	38.2	246 30.6	50.2	282 53.9	17.9				
11	262	53.0	326	32.2	195	29.9	+24 38.2	261 32.8	-0 50.1	297 56.1	-15 17.8				
12	277	55.5	341	31.3	210	32.9	+24 38.1	276 35.0	-0 49.9	312 58.3	-15 17.8				
13	292	57.9	356	30.5	225	35.9	38.1	291 37.2	49.8	328 00.6	17.7				
14	308	00.4	11	29.6	240	38.9	38.0	306 39.4	49.7	343 02.8	17.6				
15	323	02.9	26	28.7	255	41.9	38.0	321 41.6	49.6	358 05.0	17.5				
16	338	05.3	41	27.8	270	44.9	37.9	336 43.8	49.4	13 07.2	17.4				
17	353	07.8	56	26.9	285	47.9	+24 37.9	351 46.0	-0 49.3	28 09.5	-15 17.4				
18	8	10.3	71	26.0	300	50.8	+24 37.8	6 48.2	-0 49.2	43 11.7	-15 17.3				
19	23	12.7	86	25.2	315	53.8	37.8	21 50.4	49.1	58 13.9	17.2				
20	38	15.2	101	24.3	330	56.8	37.7	36 52.6	49.0	73 16.1	17.1				
21	53	17.6	116	23.4	345	59.8	37.7	51 54.8	48.8	88 18.4	17.0				
22	68	20.1	131	22.5	1	02.8	37.6	66 57.0	48.7	103 20.6	17.0				
23	83	22.6	146	21.6	16	05.7	37.6	81 59.2	48.6	118 22.8	16.9				
24	98	25.0	161	20.7	31	08.7	+24 37.5	97 01.4	-0 48.5	133 25.0	-15 16.8				
Dif	—		-9		+5		0	+22		+1		+22		+	

UT	SOL			 LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3			Edad: 6 ^d 6 PHE { 4 ^h : 57 ^m 6 12 ^h : 57 ^m 4 20 ^h : 57 ^m 1 R°: 45 ^m											
	PMG: 12 ^h 02 ^m 5	PMG: 18 ^h 32 ^m		Civil	Náutico	Hora			R°	Hora	R°				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
h	°	'	°	°	'	°	'	°	h m	h m	h m	h m m	h m m	h m m	h m m
0	179	26.5	-23	90	20.8	+0	21.3	60 N	15 02	15 59	16 56	11 58 1	0 00 91		
1	194	26.2		104	53.5 ¹³⁷		36.8 ¹⁵⁵	58	19	16 11	17 03	11 59 5	00 87		
2	209	25.9		119	26.2 ¹³⁷	+0	52.2 ¹⁵⁴	56	34	21	10	12 01 7	00 84		
3	224	25.6		133	58.9 ¹³⁷	+1	07.6 ¹⁵⁴	54	46	30	16	02 10	00 81		
4	239	25.3		148	31.7 ¹³⁸		23.1 ¹⁵⁵	52	15 57	38	21	04 12	0 00 78		
5	254	25.0	-23	163	04.5 ¹³⁸	+1	38.4 ¹⁵³	50	16 07	16 45	17 26	12 05 14	** ** *		
6	269	24.7	-23	177	37.3 ¹³⁸	+1	53.8 ¹⁵⁴	45	16 27	17 01	17 38	12 07 20	** ** *		
7	284	24.4		192	10.1 ¹³⁸	+2	09.1 ¹⁵³	40	44	14	48	10 23	** ** *		
8	299	24.1		206	43.0 ¹³⁹		24.4 ¹⁵³	35	16 58	26	17 57	12 26	** ** *		
9	314	23.8		221	15.9 ¹³⁹		39.7 ¹⁵³	30	17 10	36	18 06	13 30	** ** *		
10	329	23.5		235	48.8 ¹³⁹	+2	54.9 ¹⁵²	20	31	17 55	22	16 36	** ** *		
11	344	23.2	-23	250	21.8 ¹⁴⁰	+3	10.2 ¹⁵³	10 N	17 49	18 12	18 38	12 19 40	** ** *		
12	359	22.9	-23	264	54.7 ¹³⁹	+3	25.3 ¹⁵¹	0	18 06	18 29	18 55	12 22 44	** ** *		
13	14	22.6		279	27.7 ¹⁴⁰		40.5 ¹⁵²	10 S	24	18 47	19 14	24 49	** ** *		
14	29	22.3		294	00.7 ¹⁴⁰	+3	55.6 ¹⁵¹	20	18 42	19 07	19 36	27 54	** ** *		
15	44	22.0		308	33.7 ¹⁴⁰	+4	10.7 ¹⁵¹	30	19 04	31	20 05	30 59	** ** *		
16	59	21.7		323	06.7 ¹⁴⁰		25.7 ¹⁵⁰	35	17	19 46	23	32 62	** ** *		
17	74	21.4	-23	337	39.7 ¹⁴⁰	+4	40.7 ¹⁵⁰	40	19 32	20 04	20 46	12 34 66	** ** *		
18	89	21.1	-23	352	12.8 ¹⁴¹	+4	55.7 ¹⁵⁰	45	19 49	20 27	21 16	12 37 70	** ** *		
19	104	20.8		6	45.8 ¹⁴⁰	+5	10.7 ¹⁵⁰	50	20 12	20 56	22 00	39 76	** ** *		
20	119	20.5		21	18.9 ¹⁴¹		25.6 ¹⁴⁹	52	22	21 11	22 27	41 78	** ** *		
21	134	20.2		35	52.0 ¹⁴¹		40.4 ¹⁴⁸	54	34	28	23 08	42 81	** ** *		
22	149	19.9		50	25.0 ¹⁴⁰	+5	55.2 ¹⁴⁸	56	20 48	21 50	** ** *	44 84	** ** *		
23	164	19.6		64	58.1 ¹⁴¹	+6	10.0 ¹⁴⁸	58	21 05	22 18	** ** *	46 87	** ** *		
24	179	19.3	-23	79	31.2 ¹⁴¹	+6	24.7 ¹⁴⁷	60 S	21 25	23 03	** ** *	12 48 91	23 56 1		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 23 ^m 5		Mag: -3.9 PMG: 13 ^h 15 ^m		Mag: -1.3 PMG: 21 ^h 51 ^m		Mag: -2.4 PMG: 17 ^h 29 ^m		Mag: +0.8 PMG: 15 ^h 04 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	98	25.0	161	20.7	31	08.7	97	01.4	133	25.0
1	113	27.5	176	19.9	46	11.7	112	03.6	148	27.3
2	128	30.0	191	19.0	61	14.7	127	05.9	163	29.5
3	143	32.4	206	18.1	76	17.6	142	08.1	178	31.7
4	158	34.9	221	17.2	91	20.6	157	10.3	193	33.9
5	173	37.4	236	16.4	106	23.6	172	12.5	208	36.2
6	188	39.8	251	15.5	121	26.5	187	14.7	223	38.4
7	203	42.3	266	14.6	136	29.5	202	16.9	238	40.6
8	218	44.8	281	13.7	151	32.5	217	19.1	253	42.8
9	233	47.2	296	12.8	166	35.4	232	21.3	268	45.1
10	248	49.7	311	12.0	181	38.4	247	23.5	283	47.3
11	263	52.1	326	11.1	196	41.4	262	25.7	298	49.5
12	278	54.6	341	10.2	211	44.3	277	27.9	313	51.7
13	293	57.1	356	09.3	226	47.3	292	30.1	328	54.0
14	308	59.5	11	08.5	241	50.2	307	32.3	343	56.2
15	324	02.0	26	07.6	256	53.2	322	34.5	358	58.4
16	339	04.5	41	06.7	271	56.1	337	36.7	14	00.6
17	354	06.9	56	05.9	286	59.1	352	38.9	29	02.8
18	9	09.4	71	05.0	302	02.0	7	41.1	44	05.1
19	24	11.9	86	04.1	317	05.0	22	43.3	59	07.3
20	39	14.3	101	03.2	332	07.9	37	45.5	74	09.5
21	54	16.8	116	02.4	347	10.9	52	47.7	89	11.7
22	69	19.3	131	01.5	2	13.8	67	49.9	104	14.0
23	84	21.7	146	00.6	17	16.7	82	52.1	119	16.2
24	99	24.2	160	59.8	32	19.7	97	54.3	134	18.4
Dif	—		-9		+5		+22		+1	

ALMANAQUE NÁUTICO PERSEIS

UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Final del crepúsculo		Salida de Luna		Puesta de Luna	
	SD: 16/3 PMG: 12 ^h 03 ^m 4			Edad: 8 ^d 6 PHE { SD: 15/3 PMG: 20 ^h 02 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
h	°	'	°	'	°	'	°	'	h m	h m	h m	h m m	h m m	h m m
0	179	12.1	-23	02.4	68	43.6	+12	03.2	60 N	15 05	16 01	16 58	12 00 3	3 02 91
1	194	11.8		02.2	83	16.4 ¹³⁸		16.6 ¹³⁴	58	22	13	17 05	09 7	2 54 87
2	209	11.5		02.0	97	49.2 ¹³⁸		29.9 ¹³³	56	36	23	12	17 11	47 83
3	224	11.3		01.8	112	22.0 ¹³⁸		43.2 ¹³³	54	48	32	18	24 14	41 80
4	239	11.0		01.6	126	54.8 ¹³⁸	+12	56.3 ¹³¹	52	15 59	39	23	30 17	36 77
5	254	10.7	-23	01.4	141	27.5 ¹³⁷	+13	09.4 ¹³¹	50	16 09	16 47	17 28	12 35 20	2 31 74
6	269	10.4	-23	01.2	156	00.2 ¹³⁷	+13	22.5 ¹³¹	45	16 29	17 02	17 40	12 48 24	2 20 70
7	284	10.1		01.0	170	32.9 ¹³⁷		35.5 ¹³⁰	40	45	16	50	12 58 28	11 66
8	299	09.8		00.8	185	05.5 ¹³⁶	+13	48.4 ¹²⁹	35	16 59	27	17 59	13 07 31	2 04 62
9	314	09.5		00.6	199	38.2 ¹³⁷	+14	01.2 ¹²⁸	30	17 11	37	18 07	14 34	1 57 59
10	329	09.2		00.4	214	10.7 ¹³⁵		14.0 ¹²⁸	20	32	17 56	23	28 38	46 54
11	344	08.9	-23	00.2	228	43.3 ¹³⁶	+14	26.6 ¹²⁶	10 N	17 50	18 13	18 39	13 40 42	1 36 50
12	359	08.6	-23	00.0	243	15.8 ¹³⁵	+14	39.3 ¹²⁷	0	18 07	18 30	18 56	13 51 46	1 27 46
13	14	08.3	-22	59.8	257	48.3 ¹³⁵	+14	51.8 ¹²⁵	10 S	24	18 47	19 14	14 02 50	18 42
14	29	08.0		59.6	272	20.8 ¹³⁵	+15	04.3 ¹²⁵	20	18 43	19 07	19 37	14 54	1 08 38
15	44	07.7		59.3	286	53.2 ¹³⁴		16.7 ¹²⁴	30	19 05	32	20 05	28 59	0 57 33
16	59	07.4		59.1	301	25.6 ¹³⁴		29.0 ¹²³	35	17	19 47	23	36 62	51 30
17	74	07.1	-22	58.9	315	58.0 ¹³⁴	+15	41.2 ¹²²	40	19 32	20 05	20 46	14 45 66	0 44 26
18	89	06.8	-22	58.7	330	30.3 ¹³³	+15	53.3 ¹²¹	45	19 50	20 27	21 16	14 56 69	0 36 22
19	104	06.5		58.5	345	02.6 ¹³³	+16	05.4 ¹²¹	50	20 12	20 56	21 59	15 10 74	26 17
20	119	06.2		58.3	359	34.8 ¹³²		17.4 ¹²⁰	52	22	21 10	22 25	16 77	21 15
21	134	06.0		58.1	14	07.0 ¹³²		29.3 ¹¹⁹	54	34	27	23 05	23 80	16 12
22	149	05.7		57.9	28	39.2 ¹³²		41.2 ¹¹⁹	56	20 48	21 49	** **	31 83	10 10
23	164	05.4		57.6	43	11.3 ¹³¹	+16	52.9 ¹¹⁷	58	21 04	22 16	** **	39 87	0 04 6
24	179	05.1	-22	57.4	57	43.4 ¹³¹	+17	04.6 ¹¹⁷	60 S	21 23	22 59	** **	15 49 93	23 59 5

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 17 ^h 15 ^m 6		Mag: -3.9 PMG: 13 ^h 18 ^m		Mag: -1.2 PMG: 21 ^h 42 ^m		Mag: -2.4 PMG: 17 ^h 22 ^m		Mag: +0.8 PMG: 14 ^h 57 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	100	23.3	160	39.0	33	29.7	+24	35.3	98	46.9
1	115	25.8	175	38.2	48	32.6		35.3	113	49.1
2	130	28.2	190	37.3	63	35.5		35.2	128	51.3
3	145	30.7	205	36.5	78	38.4		35.2	143	53.5
4	160	33.2	220	35.6	93	41.3		35.1	158	55.7
5	175	35.6	235	34.7	108	44.2	+24	35.1	173	57.9
6	190	38.1	250	33.9	123	47.1	+24	35.0	189	00.1
7	205	40.6	265	33.0	138	50.0		35.0	204	02.3
8	220	43.0	280	32.2	153	52.9		34.9	219	04.5
9	235	45.5	295	31.3	168	55.8		34.9	234	06.7
10	250	48.0	310	30.5	183	58.7		34.9	249	08.8
11	265	50.4	325	29.6	199	01.6	+24	34.8	264	11.0
12	280	52.9	340	28.8	214	04.4	+24	34.8	279	13.2
13	295	55.4	355	27.9	229	07.3		34.7	294	15.4
14	310	57.8	10	27.1	244	10.2		34.7	309	17.6
15	326	00.3	25	26.2	259	13.1		34.6	324	19.8
16	341	02.7	40	25.4	274	16.0		34.6	339	22.0
17	356	05.2	55	24.5	289	18.8	+24	34.6	354	24.2
18	11	07.7	70	23.7	304	21.7	+24	34.5	9	26.3
19	26	10.1	85	22.8	319	24.6		34.5	24	28.5
20	41	12.6	100	22.0	334	27.4		34.4	39	30.7
21	56	15.1	115	21.1	349	30.3		34.4	54	32.9
22	71	17.5	130	20.3	4	33.2		34.3	69	35.1
23	86	20.0	145	19.4	19	36.0		34.3	84	37.3
24	101	22.5	160	18.6	34	38.9	+24	34.3	99	39.5
Dif	—		-9		+6		+29		+22	
									+1	

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	'	'	'	'	'	'	'	'	'	'	'	'
1 - α And	<i>Alpheratz</i>	2.1	357	37.4	37.5	37.5	37.4	37.3	37.0	36.7	36.5	36.4	36.4	36.4	36.5
2 - β Cas	<i>Caph</i>	2.3	357	25.1	25.3	25.3	25.2	25.0	24.6	24.2	23.9	23.7	23.7	23.8	24.0
3 - γ Peg	<i>Algenib</i>	2.8	356	24.7	24.8	24.8	24.8	24.6	24.4	24.1	23.9	23.8	23.7	23.8	23.8
4 - α Phe	<i>Ankaa</i>	2.4	353	9.7	9.8	9.9	9.8	9.7	9.4	9.1	8.8	8.7	8.6	8.7	8.8
5 - α Cas	<i>Schedar</i>	2.2	349	33.9	34.1	34.2	34.2	33.9	33.6	33.2	32.9	32.7	32.6	32.6	32.8
6 - β Cet	<i>Diphda</i>	2.0	348	49.8	49.9	49.9	49.9	49.8	49.5	49.3	49.1	48.9	48.8	48.9	48.9
7 - γ Cas	<i>Navi</i>	1.6	345	29.6	29.9	30.0	30.0	29.8	29.4	29.0	28.6	28.4	28.3	28.3	28.4
8 - β And	<i>Mirach</i>	2.1	342	15.7	15.8	15.9	15.9	15.8	15.5	15.2	15.0	14.8	14.7	14.7	14.7
9 - α Eri	<i>Achernar</i>	0.5	335	22.0	22.3	22.4	22.5	22.4	22.1	21.8	21.4	21.1	21.0	21.0	21.2
10 - γ And	<i>Almak</i>	2.3	328	41.3	41.5	41.6	41.6	41.5	41.3	41.0	40.7	40.4	40.3	40.2	40.2
12 - α Ari	<i>Hamal</i>	2.0	327	53.9	54.0	54.1	54.1	54.0	53.8	53.6	53.3	53.1	53.0	52.9	52.9
11 - α UMi	<i>Polaris</i>	2.0	314	58.5	73.1	85.4	93.6	93.3	84.9	71.7	56.0	40.8	29.6	24.2	26.9
13 - θ Eri	<i>Acamar</i>	3.3	315	13.5	13.6	13.8	13.9	13.9	13.7	13.5	13.2	13.0	12.8	12.7	12.7
14 - α Cet	<i>Menkar</i>	2.5	314	8.6	8.7	8.8	8.8	8.8	8.6	8.4	8.2	8.0	7.8	7.7	7.7
15 - β Per	<i>Algol</i>	2.1	312	35.9	36.1	36.2	36.3	36.3	36.1	35.8	35.5	35.2	35.0	34.9	34.8
16 - α Per	<i>Mirfak</i>	1.8	308	31.5	31.6	31.8	31.9	31.9	31.7	31.4	31.1	30.8	30.5	30.3	30.3
17 - η Tau	<i>Alcyone</i>	2.9	302	48.1	48.2	48.3	48.4	48.4	48.2	48.0	47.8	47.5	47.3	47.2	47.1
18 - γ Eri	<i>Zaurak</i>	3.0	300	14.1	14.2	14.3	14.4	14.4	14.3	14.1	13.9	13.7	13.5	13.4	13.3
19 - α Tau	<i>Aldebaran</i>	0.9	290	42.2	42.2	42.4	42.5	42.5	42.4	42.2	42.0	41.8	41.5	41.4	41.3
20 - β Ori	<i>Rigel</i>	0.1	281	5.9	6.0	6.1	6.3	6.3	6.3	6.1	5.9	5.7	5.5	5.3	5.2
21 - α Aur	<i>Capella</i>	0.1	280	25.1	25.2	25.3	25.5	25.6	25.5	25.3	25.0	24.7	24.4	24.1	23.9
22 - γ Ori	<i>Bellatrix</i>	1.6	278	25.2	25.3	25.4	25.5	25.6	25.5	25.4	25.2	24.9	24.7	24.5	24.4
23 - β Tau	<i>Elnath</i>	1.7	278	4.6	4.7	4.8	4.9	5.0	4.9	4.8	4.6	4.3	4.0	3.8	3.7
24 - δ Ori	<i>Mintaka</i>	2.2	276	42.9	43.0	43.1	43.2	43.3	43.2	43.1	42.9	42.7	42.5	42.3	42.1
25 - ε Ori	<i>Alnilam</i>	1.7	275	39.9	40.0	40.1	40.2	40.3	40.2	40.1	39.9	39.7	39.5	39.3	39.1
26 - ζ Ori	<i>Alnitak</i>	1.9	274	31.8	31.9	32.0	32.1	32.2	32.1	32.0	31.8	31.6	31.4	31.2	31.1
27 - κ Ori	<i>Saiph</i>	2.1	272	47.8	47.9	48.0	48.1	48.2	48.2	48.1	47.9	47.7	47.5	47.3	47.1
28 - α Ori	<i>Betelgeuse</i>	0.4	270	54.4	54.5	54.6	54.7	54.8	54.7	54.6	54.4	54.2	54.0	53.8	53.6
29 - β Aur	<i>Menkalinan</i>	1.9	269	42.7	42.7	42.9	43.1	43.2	43.1	43.0	42.7	42.4	42.1	41.8	41.6
30 - β CMa	<i>Mirzam</i>	2.0	264	4.8	4.8	4.9	5.1	5.2	5.2	5.1	4.9	4.7	4.5	4.3	4.1
31 - α Car	<i>Canopus</i>	-0.7	263	52.9	53.1	53.3	53.6	53.8	53.9	53.8	53.6	53.4	53.1	52.8	52.6
32 - γ Gem	<i>Alhena</i>	1.9	260	15.1	15.1	15.2	15.4	15.4	15.4	15.3	15.2	14.9	14.7	14.5	14.3
33 - α CMa	<i>Sirius</i>	-1.5	258	28.1	28.1	28.2	28.3	28.5	28.5	28.4	28.3	28.1	27.8	27.6	27.4
34 - ε CMa	<i>Adhara</i>	1.5	255	7.4	7.4	7.6	7.7	7.9	7.9	7.8	7.7	7.5	7.3	7.0	6.9
35 - δ CMa	<i>Wezen</i>	1.9	252	40.5	40.5	40.6	40.8	40.9	40.9	40.9	40.8	40.6	40.4	40.1	39.9
36 - η CMa	<i>Aludra</i>	2.5	248	45.3	45.3	45.4	45.6	45.7	45.8	45.7	45.6	45.4	45.2	45.0	44.8
37 - α Gem	<i>Castor</i>	2.0	245	59.8	59.8	59.8	60.0	60.1	60.1	60.1	59.9	59.7	59.4	59.2	58.9
38 - α CMi	<i>Procyon</i>	0.4	244	53.1	53.0	53.1	53.2	53.3	53.4	53.3	53.2	53.0	52.8	52.6	52.3
39 - β Gem	<i>Pollux</i>	1.1	243	19.9	19.9	20.0	20.1	20.2	20.2	20.2	20.1	19.9	19.6	19.3	19.1
40 - ζ Pup	<i>Naos</i>	2.3	238	54.3	54.3	54.5	54.6	54.8	54.9	54.9	54.9	54.7	54.4	54.2	53.9
41 - γ Vel	<i>Regor</i>	1.8	237	26.5	26.5	26.6	26.8	27.0	27.2	27.2	27.2	27.0	26.7	26.4	26.2
42 - ε Car	<i>Avior</i>	1.9	234	15.0	15.1	15.2	15.5	15.8	16.1	16.2	16.1	15.9	15.6	15.2	14.9
43 - δ Velorum		2.0	228	39.9	39.9	40.0	40.3	40.5	40.7	40.8	40.8	40.7	40.4	40.0	39.7
44 - ζ Hydrae		3.1	225	51.5	51.4	51.5	51.6	51.7	51.7	51.7	51.7	51.5	51.4	51.1	50.9
45 - λ Vel	<i>Suhail</i>	2.2	222	47.6	47.6	47.6	47.8	48.0	48.1	48.2	48.2	48.1	47.9	47.6	47.3
46 - β Car	<i>Miaplacidus</i>	1.7	221	37.8	37.8	38.0	38.4	38.8	39.2	39.5	39.6	39.4	39.0	38.5	38.0
47 - ι Car	<i>Aspidiske</i>	2.3	220	34.4	34.3	34.5	34.7	35.0	35.2	35.4	35.4	35.3	35.0	34.6	34.3
48 - α Lyn	<i>Elvashak</i>	3.1	219	24.0	23.8	23.9	24.0	24.1	24.2	24.2	24.1	24.0	23.8	23.5	23.2
49 - α Hyd	<i>Alphard</i>	2.0	217	49.9	49.7	49.8	49.8	50.0	50.0	50.0	50.0	49.9	49.7	49.5	49.3
50 - α Leo	<i>Regulus</i>	1.4	207	36.8	36.6	36.6	36.7	36.8	36.8	36.9	36.9	36.8	36.6	36.4	36.2

ESTRELLAS, 2022
Posiciones aparentes377
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
1 - α And	<i>Alpheratz</i>	2.1	+29	12.7	12.7	12.6	12.5	12.5	12.6	12.7	12.8	13.0	13.1	13.1	13.1
2 - β Cas	<i>Caph</i>	2.3	+59	16.4	16.3	16.2	16.1	16.0	16.0	16.1	16.3	16.4	16.6	16.7	16.8
3 - γ Peg	<i>Algenib</i>	2.8	+15	18.3	18.3	18.2	18.2	18.2	18.3	18.4	18.5	18.6	18.7	18.7	18.7
4 - α Phe	<i>Ankaa</i>	2.4	-42	11.5	11.5	11.4	11.2	11.1	10.9	10.8	10.8	10.9	11.0	11.1	11.2
5 - α Cas	<i>Schedar</i>	2.2	+56	39.6	39.6	39.5	39.3	39.3	39.3	39.3	39.5	39.6	39.8	39.9	40.0
6 - β Cet	<i>Diphda</i>	2.0	-17	52.2	52.2	52.1	52.0	51.9	51.8	51.7	51.6	51.6	51.7	51.7	51.8
7 - γ Cas	<i>Navi</i>	1.6	+60	50.3	50.3	50.2	50.0	49.9	49.9	50.0	50.1	50.3	50.4	50.6	50.7
8 - β And	<i>Mirach</i>	2.1	+35	44.3	44.2	44.2	44.1	44.1	44.1	44.2	44.3	44.4	44.5	44.6	44.7
9 - α Eri	<i>Achernar</i>	0.5	-57	7.9	7.8	7.7	7.6	7.4	7.2	7.1	7.1	7.1	7.3	7.4	7.5
10 - γ And	<i>Almak</i>	2.3	+42	26.2	26.2	26.1	26.0	26.0	26.0	26.0	26.1	26.2	26.3	26.4	26.5
12 - α Ari	<i>Hamal</i>	2.0	+23	34.0	34.0	33.9	33.9	33.9	33.9	34.0	34.1	34.2	34.2	34.3	34.3
11 - α UMi	<i>Polaris</i>	2.0	+89	21.7	21.7	21.7	21.5	21.4	21.2	21.2	21.2	21.3	21.4	21.6	21.8
13 - θ Eri	<i>Acamar</i>	3.3	-40	13.3	13.3	13.3	13.1	13.0	12.8	12.7	12.6	12.6	12.7	12.8	12.9
14 - α Cet	<i>Menkar</i>	2.5	+4	10.4	10.4	10.4	10.4	10.5	10.6	10.7	10.7	10.8	10.8	10.8	10.8
15 - β Per	<i>Algol</i>	2.1	+41	2.5	2.5	2.5	2.4	2.3	2.3	2.3	2.4	2.5	2.5	2.6	2.7
16 - α Per	<i>Mirfak</i>	1.8	+49	56.5	56.5	56.4	56.4	56.3	56.2	56.2	56.2	56.3	56.4	56.5	56.6
17 - η Tau	<i>Alcyone</i>	2.9	+24	10.4	10.4	10.3	10.3	10.3	10.3	10.4	10.4	10.5	10.5	10.6	10.6
18 - γ Eri	<i>Zaurak</i>	3.0	-13	26.9	27.0	27.0	26.9	26.8	26.7	26.6	26.5	26.5	26.5	26.6	26.6
19 - α Tau	<i>Aldebaran</i>	0.9	+16	33.2	33.1	33.1	33.1	33.1	33.2	33.2	33.3	33.3	33.3	33.3	33.3
20 - β Ori	<i>Rigel</i>	0.1	-8	10.7	10.7	10.8	10.7	10.7	10.6	10.5	10.4	10.3	10.4	10.4	10.5
21 - α Aur	<i>Capella</i>	0.1	+46	1.2	1.3	1.3	1.3	1.2	1.1	1.1	1.1	1.1	1.1	1.2	1.3
22 - γ Ori	<i>Bellatrix</i>	1.6	+6	22.1	22.1	22.1	22.1	22.1	22.1	22.2	22.3	22.3	22.3	22.3	22.2
23 - β Tau	<i>Elnath</i>	1.7	+28	37.5	37.6	37.6	37.5	37.5	37.5	37.5	37.5	37.5	37.6	37.6	37.6
24 - δ Ori	<i>Mintaka</i>	2.2	-0	17.1	17.1	17.1	17.1	17.1	17.0	16.9	16.8	16.8	16.8	16.9	16.9
25 - ϵ Ori	<i>Alnilam</i>	1.7	-1	11.4	11.4	11.4	11.4	11.4	11.3	11.2	11.1	11.1	11.1	11.2	11.2
26 - ζ Ori	<i>Alnitak</i>	1.9	-1	56.0	56.0	56.0	56.0	55.9	55.9	55.8	55.7	55.7	55.7	55.7	55.8
27 - κ Ori	<i>Saiph</i>	2.1	-9	39.8	39.9	39.9	39.9	39.8	39.7	39.6	39.5	39.5	39.5	39.6	39.7
28 - α Ori	<i>Betelgeuse</i>	0.4	+7	24.6	24.6	24.6	24.6	24.6	24.6	24.7	24.7	24.8	24.8	24.7	24.7
29 - β Aur	<i>Menkalinan</i>	1.9	+44	57.0	57.0	57.1	57.0	57.0	56.9	56.9	56.8	56.8	56.8	56.9	56.9
30 - β CMa	<i>Mirzam</i>	2.0	-17	58.1	58.2	58.2	58.2	58.2	58.1	57.9	57.8	57.8	57.8	57.9	58.0
31 - α Car	<i>Canopus</i>	-0.7	-52	42.5	42.7	42.7	42.7	42.6	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	22.8	22.8	22.9	22.8	22.8	22.8
33 - α CMa	<i>Sirius</i>	-1.5	-16	44.9	44.9	45.0	45.0	44.9	44.8	44.7	44.6	44.6	44.6	44.7	44.8
34 - ϵ CMa	<i>Adhara</i>	1.5	-28	60.2	60.3	60.4	60.4	60.3	60.2	60.1	59.9	59.9	59.9	59.9	60.1
35 - δ CMa	<i>Wezen</i>	1.9	-26	25.7	25.9	25.9	25.9	25.9	25.8	25.7	25.5	25.5	25.5	25.5	25.7
36 - η CMa	<i>Aludra</i>	2.5	-29	20.8	20.9	21.0	21.0	21.0	20.9	20.7	20.6	20.5	20.5	20.6	20.7
37 - α Gem	<i>Castor</i>	2.0	+31	50.3	50.4	50.4	50.5	50.5	50.4	50.4	50.4	50.3	50.3	50.2	50.2
38 - α CMi	<i>Procyon</i>	0.4	+5	10.1	10.0	10.0	10.0	10.0	10.1	10.1	10.2	10.2	10.1	10.1	10.0
39 - β Gem	<i>Pollux</i>	1.1	+27	58.3	58.3	58.4	58.4	58.4	58.4	58.4	58.3	58.3	58.3	58.2	58.2
40 - ζ Pup	<i>Naos</i>	2.3	-40	3.9	4.0	4.1	4.2	4.2	4.1	3.9	3.8	3.7	3.7	3.7	3.9
41 - γ Vel	<i>Regor</i>	1.8	-47	24.0	24.2	24.3	24.4	24.4	24.3	24.1	24.0	23.9	23.8	23.9	24.0
42 - ϵ Car	<i>Avior</i>	1.9	-59	34.7	34.9	35.0	35.1	35.1	35.0	34.9	34.7	34.6	34.5	34.6	34.7
43 - δ Velorum		2.0	-54	47.3	47.4	47.6	47.7	47.7	47.6	47.5	47.3	47.2	47.1	47.2	47.3
44 - ζ Hydrae		3.1	+5	51.7	51.6	51.6	51.6	51.6	51.7	51.7	51.7	51.7	51.7	51.6	51.5
45 - λ Vel	<i>Suhail</i>	2.2	-43	31.2	31.4	31.5	31.6	31.6	31.5	31.4	31.3	31.1	31.1	31.1	31.2
46 - β Car	<i>Miaplacidus</i>	1.7	-69	48.3	48.5	48.6	48.7	48.8	48.7	48.6	48.5	48.3	48.2	48.2	48.3
47 - ι Car	<i>Aspidiske</i>	2.3	-59	21.9	22.1	22.2	22.3	22.4	22.3	22.2	22.1	21.9	21.8	21.8	21.9
48 - α Lyn	<i>Elvashak</i>	3.1	+34	17.9	17.9	18.0	18.0	18.1	18.0	18.0	18.0	17.9	17.8	17.7	17.6
49 - α Hyd	<i>Alphard</i>	2.0	-8	45.2	45.3	45.4	45.4	45.4	45.4	45.3	45.2	45.2	45.2	45.3	45.4
50 - α Leo	<i>Regulus</i>	1.4	+11	51.5	51.5	51.5	51.5	51.5	51.6	51.6	51.6	51.6	51.5	51.4	51.3

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	198	4.1	3.9	3.9	4.0	4.1	4.3	4.4	4.5	4.5	4.3	4.1	3.7
52 - ν	Hydrae	3.1	197	19.3	19.1	19.1	19.1	19.2	19.3	19.3	19.4	19.3	19.2	19.0	18.7
53 - β	UMa Merak	2.4	194	12.4	12.1	12.0	12.1	12.3	12.5	12.6	12.7	12.7	12.5	12.2	11.8
54 - α	UMa Dubhe	1.8	193	43.6	43.3	43.2	43.3	43.5	43.8	43.9	44.0	44.0	43.8	43.5	43.0
55 - β	Leo Denebola	2.1	182	27.3	27.1	27.0	27.0	27.0	27.1	27.2	27.2	27.2	27.2	27.0	26.7
56 - γ	Crv Gienah	2.6	175	46.0	45.8	45.6	45.6	45.7	45.7	45.8	45.9	45.9	45.8	45.7	45.4
57 - α	Cru Acrux	1.4	173	2.6	2.2	2.0	2.0	2.1	2.3	2.5	2.8	2.9	2.9	2.6	2.2
58 - γ	Cru Gacrux	1.6	171	54.2	53.8	53.7	53.6	53.7	53.8	54.0	54.2	54.4	54.3	54.1	53.7
59 - γ	Cen Muhlifain	2.2	169	19.1	18.8	18.6	18.5	18.6	18.7	18.8	19.0	19.1	19.0	18.9	18.6
60 - β	Cru Mimosa	1.3	167	44.9	44.5	44.3	44.2	44.3	44.4	44.7	44.9	45.0	45.0	44.8	44.4
61 - ε	UMa Alioth	1.8	166	15.1	14.7	14.5	14.4	14.5	14.7	14.9	15.1	15.2	15.2	15.0	14.7
62 - α^2	CVn Cor Caroli	2.9	165	44.2	44.0	43.8	43.7	43.8	43.9	44.0	44.1	44.2	44.1	44.0	43.8
63 - ε	Vir Vindemiatrix	2.8	164	11.0	10.8	10.7	10.6	10.6	10.6	10.7	10.8	10.8	10.8	10.7	10.5
64 - ζ	UMa Mizar	2.3	158	47.9	47.5	47.3	47.2	47.3	47.4	47.6	47.8	47.9	48.0	47.8	47.6
65 - α	Vir Spica	1.0	158	24.9	24.6	24.5	24.4	24.4	24.4	24.4	24.5	24.6	24.6	24.5	24.3
66 - η	UMa Alkaid	1.9	152	54.0	53.7	53.5	53.3	53.3	53.4	53.6	53.8	53.9	54.0	53.9	53.7
67 - β	Cen Hadar	0.6	148	39.5	39.1	38.8	38.6	38.5	38.6	38.8	39.0	39.2	39.3	39.2	38.9
68 - θ	Cen Menkent	2.1	147	60.5	60.3	60.0	59.9	59.8	59.9	59.9	60.1	60.2	60.2	60.1	59.9
69 - α	Boo Arcturus	0.0	145	50.2	50.0	49.8	49.7	49.6	49.6	49.7	49.8	49.9	50.0	49.9	49.7
70 - α^1	Cen Rigil Kentaurus	0.0	139	43.9	43.5	43.1	42.9	42.8	42.8	43.0	43.3	43.5	43.6	43.6	43.3
71 - α^2	Lib Zubenelgenubi	2.8	136	58.8	58.6	58.4	58.2	58.1	58.1	58.1	58.2	58.4	58.4	58.4	58.2
72 - β	UMi Kochab	2.1	137	20.3	19.6	19.0	18.7	18.6	18.9	19.4	19.9	20.5	20.9	21.0	20.7
73 - β	Lib Zubeneschamali	2.6	130	27.4	27.2	27.0	26.8	26.7	26.7	26.7	26.8	26.9	27.0	26.9	26.8
74 - α	CrB Alphecca	2.2	126	6.0	5.8	5.5	5.4	5.3	5.2	5.3	5.4	5.5	5.6	5.6	5.5
75 - α	Ser Unukalhai	2.7	123	40.1	39.8	39.6	39.4	39.3	39.3	39.3	39.4	39.5	39.6	39.6	39.5
76 - α	Sco Antares	0.9	112	19.1	18.8	18.6	18.4	18.2	18.1	18.1	18.2	18.3	18.4	18.4	18.3
77 - α	TrA Atria	1.9	107	16.0	15.4	14.8	14.3	13.9	13.7	13.7	13.9	14.3	14.6	14.8	14.7
78 - ε	Scorpii	2.3	107	6.7	6.4	6.1	5.9	5.7	5.6	5.5	5.6	5.8	5.9	5.9	5.8
79 - η	Oph Sabik	2.4	102	5.9	5.6	5.4	5.2	5.0	4.9	4.8	4.9	5.0	5.1	5.2	5.1
80 - α	Her Rasalgethi	3.1	101	5.7	5.5	5.2	5.0	4.9	4.7	4.7	4.8	4.9	5.0	5.1	5.1
81 - λ	Sco Shaula	1.6	96	14.0	13.8	13.5	13.2	13.0	12.8	12.8	12.8	13.0	13.1	13.2	13.1
82 - α	Oph Rasalhague	2.1	96	1.1	0.9	0.7	0.5	0.3	0.2	0.1	0.2	0.3	0.4	0.5	0.5
83 - θ	Sco Sargas	1.9	95	17.1	16.9	16.6	16.3	16.0	15.8	15.7	15.8	16.0	16.1	16.2	16.2
84 - γ	Dra Eltanin	2.2	90	43.8	43.6	43.3	43.0	42.8	42.6	42.6	42.8	43.0	43.3	43.5	43.5
85 - ε	Sgr Kaus Australis	1.9	83	36.1	35.9	35.7	35.4	35.1	34.9	34.8	34.8	35.0	35.1	35.2	35.2
86 - α	Lyr Vega	0.0	80	35.3	35.1	34.9	34.6	34.4	34.2	34.2	34.2	34.4	34.6	34.7	34.8
87 - σ	Sgr Nunki	2.0	75	51.2	51.0	50.8	50.5	50.3	50.0	49.9	49.9	50.0	50.1	50.2	50.3
88 - α	Aql Altair	0.8	62	2.7	2.6	2.4	2.2	1.9	1.7	1.6	1.6	1.6	1.8	1.9	1.9
89 - γ	Cyg Sadr	2.2	54	15.3	15.2	15.1	14.8	14.6	14.3	14.2	14.2	14.2	14.4	14.6	14.7
90 - α	Pav Peacock	1.9	53	10.2	10.0	9.8	9.4	9.0	8.6	8.4	8.3	8.3	8.5	8.8	8.9
91 - α	Cyg Deneb	1.3	49	27.9	27.8	27.7	27.4	27.2	26.9	26.7	26.7	26.8	26.9	27.1	27.3
92 - α	Cep Alderamin	2.4	40	14.3	14.3	14.2	13.9	13.5	13.1	12.8	12.8	12.9	13.1	13.5	13.8
93 - ε	Peg Enif	0.7	33	41.5	41.4	41.4	41.2	41.0	40.7	40.5	40.4	40.4	40.5	40.6	40.6
94 - δ	Cap Deneb Algedi	2.9	32	56.7	56.6	56.5	56.4	56.1	55.9	55.7	55.5	55.5	55.6	55.7	55.8
95 - α	Gru Al Na'ir	1.7	27	36.4	36.4	36.3	36.0	35.8	35.4	35.1	34.9	34.9	35.0	35.1	35.3
96 - β	Gruis	2.1	18	60.9	60.9	60.8	60.7	60.4	60.1	59.8	59.5	59.5	59.5	59.6	59.8
97 - α	PsA Fomalhaut	1.2	15	17.5	17.5	17.4	17.3	17.1	16.8	16.5	16.4	16.3	16.3	16.4	16.5
98 - β	Peg Scheat	2.4	13	47.8	47.8	47.8	47.7	47.5	47.2	47.0	46.8	46.7	46.7	46.8	46.9
99 - α	Peg Markab	2.5	13	32.5	32.6	32.5	32.4	32.2	32.0	31.7	31.6	31.5	31.5	31.6	31.7

ESTRELLAS, 2022
Posiciones aparentes379
DECLINACIÓN

Nº	NOMBRE	Mag		Ene	Feb	Mar	Abr	May	Jun	Jul	Ago	Sep	Oct	Nov	Dic
			°	/	/	/	/	/	/	/	/	/	/	/	/
51 - μ	Velorum	2.7	-49	32.0	32.1	32.3	32.4	32.5	32.5	32.4	32.3	32.2	32.1	32.1	32.1
52 - ν	Hydrae	3.1	-16	18.4	18.6	18.7	18.7	18.7	18.7	18.6	18.6	18.5	18.5	18.6	18.6
53 - β	UMa Merak	2.4	+56	15.7	15.7	15.8	16.0	16.1	16.1	16.0	15.9	15.8	15.6	15.4	15.4
54 - α	UMa Dubhe	1.8	+61	37.7	37.8	37.9	38.0	38.1	38.1	38.1	38.0	37.8	37.6	37.5	37.4
55 - β	Leo Denebola	2.1	+14	26.9	26.8	26.8	26.9	26.9	27.0	27.0	27.0	26.9	26.9	26.7	26.6
56 - γ	Crv Gienah	2.6	-17	39.7	39.8	39.9	40.0	40.0	40.0	40.0	39.9	39.9	39.9	39.9	40.0
57 - α	Cru Acrux	1.4	-63	12.9	13.1	13.2	13.4	13.5	13.6	13.6	13.5	13.4	13.3	13.2	13.2
58 - γ	Cru Gacrux	1.6	-57	13.9	14.0	14.2	14.3	14.5	14.5	14.5	14.5	14.3	14.2	14.1	14.1
59 - γ	Cen Muhlifain	2.2	-49	4.5	4.7	4.8	5.0	5.1	5.1	5.1	5.1	5.0	4.9	4.8	4.8
60 - β	Cru Mimoso	1.3	-59	48.2	48.3	48.5	48.7	48.8	48.9	48.9	48.8	48.7	48.6	48.5	48.5
61 - ϵ	UMa Alioth	1.8	+55	50.2	50.2	50.3	50.4	50.5	50.6	50.6	50.6	50.4	50.3	50.1	49.9
62 - α^2	CVn Cor Caroli	2.9	+38	11.8	11.8	11.8	11.9	12.0	12.1	12.1	12.1	12.0	11.9	11.7	11.5
63 - ϵ	Vir Vindemiatrix	2.8	+10	50.4	50.3	50.3	50.3	50.4	50.4	50.5	50.5	50.5	50.4	50.3	50.2
64 - ζ	UMa Mizar	2.3	+54	48.4	48.4	48.4	48.6	48.7	48.8	48.8	48.8	48.7	48.5	48.3	48.2
65 - α	Vir Spica	1.0	-11	16.5	16.6	16.6	16.7	16.7	16.7	16.7	16.6	16.6	16.6	16.6	16.7
66 - η	UMa Alkaid	1.9	+49	12.0	12.0	12.0	12.1	12.3	12.4	12.4	12.4	12.3	12.1	11.9	11.8
67 - β	Cen Hadar	0.6	-60	28.4	28.5	28.6	28.8	28.9	29.0	29.1	29.1	29.0	28.9	28.7	28.7
68 - θ	Cen Menkent	2.1	-36	28.5	28.6	28.7	28.8	28.8	28.9	28.9	28.9	28.8	28.8	28.7	28.7
69 - α	Boo Arcturus	0.0	+19	4.0	3.9	3.9	3.9	4.0	4.1	4.1	4.1	4.1	4.0	3.9	3.8
70 - α^1	Cen Rigil Kentaurus	0.0	-60	55.2	55.3	55.4	55.6	55.7	55.8	55.9	55.9	55.8	55.7	55.6	55.5
71 - α^2	Lib Zubenelgenubi	2.8	-16	7.9	8.0	8.0	8.1	8.1	8.1	8.1	8.1	8.0	8.0	8.0	8.1
72 - β	UMi Kochab	2.1	+74	3.6	3.6	3.6	3.7	3.9	4.0	4.1	4.1	4.0	3.9	3.7	3.5
73 - β	Lib Zubeneshamali	2.6	-9	27.8	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	27.9	28.0
74 - α	CrB Alphecca	2.2	+26	38.3	38.2	38.2	38.3	38.4	38.5	38.5	38.6	38.6	38.5	38.4	38.2
75 - α	Ser Unukalhai	2.7	+6	21.4	21.3	21.2	21.2	21.3	21.4	21.4	21.4	21.5	21.4	21.3	21.2
76 - α	Sco Antares	0.9	-26	28.7	28.8	28.8	28.8	28.9	28.9	28.9	28.9	28.9	28.9	28.9	28.9
77 - α	TrA Atria	1.9	-69	3.8	3.7	3.7	3.8	3.9	4.1	4.2	4.3	4.3	4.2	4.1	4.0
78 - ϵ	Scorpii	2.3	-34	19.8	19.9	19.9	19.9	20.0	20.0	20.1	20.1	20.1	20.1	20.0	20.0
79 - η	Oph Sabik	2.4	-15	45.1	45.1	45.2	45.2	45.2	45.1	45.1	45.1	45.1	45.1	45.1	45.1
80 - α	Her Rasalgethi	3.1	+14	21.8	21.7	21.7	21.7	21.8	21.9	22.0	22.0	22.1	22.0	22.0	21.9
81 - λ	Sco Shaula	1.6	-37	7.1	7.1	7.1	7.1	7.1	7.2	7.2	7.3	7.3	7.3	7.2	7.2
82 - α	Oph Rasalhague	2.1	+12	32.6	32.5	32.4	32.5	32.5	32.6	32.7	32.8	32.8	32.8	32.7	32.6
83 - θ	Sco Sargas	1.9	-43	0.6	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.7
84 - γ	Dra Eltanin	2.2	+51	29.0	28.9	28.8	28.8	28.9	29.1	29.3	29.4	29.4	29.4	29.3	29.2
85 - ϵ	Sgr Kaus Australis	1.9	-34	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.5	22.5	22.5	22.5	22.4
86 - α	Lyr Vega	0.0	+38	48.1	48.0	47.9	47.9	48.0	48.2	48.3	48.5	48.5	48.5	48.5	48.3
87 - σ	Sgr Nunki	2.0	-26	16.2	16.2	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1	16.1
88 - α	Aql Altair	0.8	+8	55.5	55.4	55.4	55.4	55.5	55.6	55.7	55.8	55.8	55.8	55.8	55.7
89 - γ	Cyg Sadr	2.2	+40	19.6	19.4	19.3	19.3	19.4	19.5	19.7	19.8	19.9	20.0	20.0	19.9
90 - α	Pav Peacock	1.9	-56	40.0	39.8	39.7	39.6	39.6	39.6	39.7	39.8	39.9	39.9	39.9	39.9
91 - α	Cyg Deneb	1.3	+45	21.5	21.4	21.3	21.2	21.3	21.4	21.5	21.7	21.8	21.9	21.9	21.9
92 - α	Cep Alderamin	2.4	+62	40.8	40.6	40.5	40.4	40.4	40.5	40.7	40.8	41.0	41.1	41.2	41.1
93 - ϵ	Peg Enif	0.7	+9	58.5	58.4	58.4	58.4	58.4	58.5	58.7	58.8	58.8	58.9	58.9	58.8
94 - δ	Cap Deneb Algedi	2.9	-16	1.8	1.8	1.8	1.7	1.6	1.5	1.5	1.4	1.4	1.5	1.5	1.5
95 - α	Gru Al Na'ir	1.7	-46	51.5	51.4	51.3	51.2	51.1	51.0	51.0	51.0	51.1	51.2	51.3	51.3
96 - β	Gruis	2.1	-46	46.5	46.4	46.2	46.1	46.0	45.9	45.9	45.9	46.0	46.1	46.2	46.2
97 - α	PsA Fomalhaut	1.2	-29	30.6	30.5	30.5	30.3	30.2	30.1	30.1	30.1	30.1	30.2	30.2	30.3
98 - β	Peg Scheat	2.4	+28	12.1	12.0	12.0	11.9	11.9	12.0	12.1	12.3	12.4	12.5	12.5	12.5
99 - α	Peg Markab	2.5	+15	19.4	19.3	19.3	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.8	19.8

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

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

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

Nº	NOMBRE	Mag	Ago	Sep	Oct	Nov	Dic	1ª CORRECCIÓN
			h m	h m	h m	h m	h m	
1 - α Andromedae	<i>Alpheratz</i>	2.1	3 31	1 29	23 27	21 25	19 27	Se restará para obtener la hora del paso en otro día del mismo mes.
2 - β Cassiopeae	<i>Caph</i>	2.3	3 31	1 30	23 28	21 26	19 28	
6 - β Ceti	<i>Diphda</i>	2.0	4 06	2 04	0 06	22 00	20 02	
9 - α Eridani	<i>Achernar</i>	0.5	4 59	2 58	1 00	22 54	20 56	Día Corr.
12 - α Arietis	<i>Hamal</i>	2.0	5 29	3 27	1 29	23 24	21 26	
13 - θ Eridani	<i>Acamar</i>	3.3	6 20	4 18	2 20	0 18	22 16	1 h m
16 - α Persei	<i>Mirfak</i>	1.8	6 46	4 45	2 47	0 45	22 43	2 0 00
19 - α Tauri	<i>Aldebaran</i>	0.9	7 58	5 56	3 58	1 56	23 54	3 0 04
20 - β Orionis	<i>Rigel</i>	0.1	8 36	6 34	4 36	2 34	0 36	4 0 08
21 - α Aurigae	<i>Capella</i>	0.1	8 39	6 37	4 39	2 37	0 39	5 0 12
22 - γ Orionis	<i>Bellatrix</i>	1.6	8 47	6 45	4 47	2 45	0 47	6 0 16
28 - α Orionis	<i>Betelgeuse</i>	0.4	9 17	7 15	5 17	3 15	1 17	7 0 20
31 - α Carinae	<i>Canopus</i>	-0.7	9 44	7 43	5 45	3 43	1 45	8 0 24
33 - α Canis Majoris	<i>Sirius</i>	-1.5	10 06	8 04	6 06	4 04	2 06	9 0 28
34 - ϵ Canis Majoris	<i>Adhara</i>	1.5	10 19	8 18	6 20	4 18	2 20	10 0 31
38 - α Canis Minoris	<i>Procyon</i>	0.4	11 00	8 58	7 00	4 59	3 01	11 0 35
39 - β Geminorum	<i>Pollux</i>	1.1	11 06	9 05	7 07	5 05	3 07	12 0 39
42 - ϵ Carinae	<i>Avior</i>	1.9	11 43	9 41	7 43	5 41	3 43	13 0 43
45 - λ Velorum	<i>Suhail</i>	2.2	12 28	10 27	8 29	6 27	4 29	14 0 47
46 - β Carinae	<i>Miaplacidus</i>	1.7	12 33	10 31	8 33	6 31	4 33	15 0 51
49 - α Hydrae	<i>Alphard</i>	2.0	12 48	10 46	8 48	6 47	4 49	16 0 55
50 - α Leonis	<i>Regulus</i>	1.4	13 29	11 27	9 29	7 27	5 29	17 0 59
54 - α Ursae Majoris	<i>Dubhe</i>	1.8	14 24	12 22	10 25	8 23	6 25	18 1 03
55 - β Leonis	<i>Denebola</i>	2.1	15 09	13 07	11 10	9 08	7 10	19 1 07
57 - α Crucis	<i>Acrux</i>	1.4	15 47	13 45	11 47	9 45	7 47	20 1 11
58 - γ Crucis	<i>Gacrux</i>	1.6	15 51	13 50	11 52	9 50	7 52	21 1 15
60 - β Crucis	<i>Mimosa</i>	1.3	16 08	14 06	12 08	10 06	8 08	22 1 19
61 - ϵ Ursae Majoris	<i>Alioth</i>	1.8	16 14	14 12	12 14	10 12	8 14	23 1 23
64 - ζ Ursae Majoris	<i>Mizar</i>	2.3	16 44	14 42	12 44	10 42	8 44	24 1 27
65 - α Virginis	<i>Spica</i>	1.0	16 45	14 43	12 45	10 44	8 46	25 1 30
68 - θ Centauri	<i>Menkent</i>	2.1	17 27	15 25	13 27	11 25	9 27	26 1 34
69 - α Bootis	<i>Arcturus</i>	0.0	17 35	15 34	13 36	11 34	9 36	27 1 38
70 - α^1 Centauri	<i>Rigil Kentaurus</i>	0.0	18 00	15 58	14 00	11 58	10 00	28 1 42
72 - β Ursae Minoris	<i>Kochab</i>	2.1	18 09	16 07	14 09	12 08	10 10	29 1 46
74 - α Coronae Borealis	<i>Alphecca</i>	2.2	18 54	16 52	14 54	12 52	10 55	30 1 50
76 - α Scorpii	<i>Antares</i>	0.9	19 49	17 47	15 49	13 47	11 49	31 1 54
77 - α Trianguli Aust.	<i>Atria</i>	1.9	20 09	18 08	16 10	14 08	12 10	31 1 58
81 - λ Scorpii	<i>Shaula</i>	1.6	20 53	18 51	16 54	14 52	12 54	Si el resultado es negativo sumar 23 ^h 56 ^m .
82 - α Ophiuchi	<i>Rasalhague</i>	2.1	20 54	18 52	16 54	14 52	12 55	
84 - γ Draconis	<i>Eltanin</i>	2.2	21 15	19 13	17 15	15 14	13 16	
85 - ϵ Sagittarii	<i>Kaus Australis</i>	1.9	21 44	19 42	17 44	15 42	13 44	2ª CORRECCIÓN
86 - α Lyrae	<i>Vega</i>	0.0	21 56	19 54	17 56	15 54	13 56	
87 - σ Sagittarii	<i>Nunki</i>	2.0	22 15	20 13	18 15	16 13	14 15	Se aplicará para tener la hora civil del paso por otro meridiano.
88 - α Aquilae	<i>Altair</i>	0.8	23 10	21 08	19 10	17 08	15 10	
90 - α Pavonis	<i>Peacock</i>	1.9	23 45	21 43	19 45	17 43	15 45	
91 - α Cygni	<i>Deneb</i>	1.3	0 04	21 58	20 00	17 58	16 00	
93 - ϵ Pegasi	<i>Enif</i>	0.7	1 07	23 01	21 03	19 01	17 03	
95 - α Gruis	<i>Al Na'ir</i>	1.7	1 31	23 25	21 27	19 25	17 27	
97 - α Piscis Austrini	<i>Fomalhaut</i>	1.2	2 20	0 18	22 16	20 15	18 17	Long. Corr.
99 - α Pegasi	<i>Markab</i>	2.5	2 27	0 25	22 23	20 21	18 24	
								o m
								180 W -2
								138 W -1
								46 W 0
								46 E +1
								136 E +2
								180 E

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2022

TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
0 00	-27.2	26 00	-36.4	52 00	-38.2	78 00	-32.3	104 00	-19.8	130 00	-3.4	156 00	+13.8
0 30	-27.5	26 30	-36.5	52 30	-38.2	78 30	-32.1	104 30	-19.5	130 30	-3.0	156 30	+14.1
1 00	-27.7	27 00	-36.6	53 00	-38.1	79 00	-31.9	105 00	-19.2	131 00	-2.7	157 00	+14.4
1 30	-27.9	27 30	-36.7	53 30	-38.1	79 30	-31.7	105 30	-19.0	131 30	-2.4	157 30	+14.7
2 00	-28.2	28 00	-36.8	54 00	-38.0	80 00	-31.5	106 00	-18.7	132 00	-2.0	158 00	+15.0
2 30	-28.4	28 30	-36.9	54 30	-38.0	80 30	-31.3	106 30	-18.4	132 30	-1.7	158 30	+15.4
3 00	-28.6	29 00	-37.0	55 00	-37.9	81 00	-31.1	107 00	-18.1	133 00	-1.3	159 00	+15.7
3 30	-28.8	29 30	-37.1	55 30	-37.9	81 30	-30.9	107 30	-17.8	133 30	-1.0	159 30	+16.0
4 00	-29.1	30 00	-37.2	56 00	-37.8	82 00	-30.7	108 00	-17.5	134 00	-0.7	160 00	+16.3
4 30	-29.3	30 30	-37.3	56 30	-37.7	82 30	-30.5	108 30	-17.2	134 30	-0.3	160 30	+16.6
5 00	-29.5	31 00	-37.4	57 00	-37.7	83 00	-30.3	109 00	-16.9	135 00	0.0	161 00	+16.9
5 30	-29.7	31 30	-37.4	57 30	-37.6	83 30	-30.1	109 30	-16.6	135 30	+0.3	161 30	+17.2
6 00	-29.9	32 00	-37.5	58 00	-37.5	84 00	-29.9	110 00	-16.3	136 00	+0.7	162 00	+17.5
6 30	-30.1	32 30	-37.6	58 30	-37.4	84 30	-29.7	110 30	-16.0	136 30	+1.0	162 30	+17.8
7 00	-30.3	33 00	-37.7	59 00	-37.4	85 00	-29.5	111 00	-15.7	137 00	+1.3	163 00	+18.1
7 30	-30.5	33 30	-37.7	59 30	-37.3	85 30	-29.3	111 30	-15.4	137 30	+1.7	163 30	+18.4
8 00	-30.7	34 00	-37.8	60 00	-37.2	86 00	-29.1	112 00	-15.0	138 00	+2.0	164 00	+18.7
8 30	-30.9	34 30	-37.9	60 30	-37.1	86 30	-28.8	112 30	-14.7	138 30	+2.3	164 30	+19.0
9 00	-31.1	35 00	-37.9	61 00	-37.0	87 00	-28.6	113 00	-14.4	139 00	+2.7	165 00	+19.2
9 30	-31.3	35 30	-38.0	61 30	-36.9	87 30	-28.4	113 30	-14.1	139 30	+3.0	165 30	+19.5
10 00	-31.5	36 00	-38.0	62 00	-36.8	88 00	-28.2	114 00	-13.8	140 00	+3.4	166 00	+19.8
10 30	-31.7	36 30	-38.1	62 30	-36.7	88 30	-27.9	114 30	-13.5	140 30	+3.7	166 30	+20.1
11 00	-31.9	37 00	-38.1	63 00	-36.6	89 00	-27.7	115 00	-13.2	141 00	+4.0	167 00	+20.4
11 30	-32.1	37 30	-38.2	63 30	-36.5	89 30	-27.5	115 30	-12.9	141 30	+4.4	167 30	+20.7
12 00	-32.3	38 00	-38.2	64 00	-36.4	90 00	-27.2	116 00	-12.5	142 00	+4.7	168 00	+21.0
12 30	-32.5	38 30	-38.2	64 30	-36.3	90 30	-27.0	116 30	-12.2	142 30	+5.0	168 30	+21.2
13 00	-32.6	39 00	-38.3	65 00	-36.2	91 00	-26.7	117 00	-11.9	143 00	+5.4	169 00	+21.5
13 30	-32.8	39 30	-38.3	65 30	-36.1	91 30	-26.5	117 30	-11.6	143 30	+5.7	169 30	+21.8
14 00	-33.0	40 00	-38.4	66 00	-35.9	92 00	-26.3	118 00	-11.3	144 00	+6.0	170 00	+22.1
14 30	-33.2	40 30	-38.4	66 30	-35.8	92 30	-26.0	118 30	-10.9	144 30	+6.4	170 30	+22.4
15 00	-33.3	41 00	-38.4	67 00	-35.7	93 00	-25.8	119 00	-10.6	145 00	+6.7	171 00	+22.6
15 30	-33.5	41 30	-38.4	67 30	-35.6	93 30	-25.5	119 30	-10.3	145 30	+7.0	171 30	+22.9
16 00	-33.7	42 00	-38.4	68 00	-35.4	94 00	-25.3	120 00	-10.0	146 00	+7.3	172 00	+23.2
16 30	-33.8	42 30	-38.5	68 30	-35.3	94 30	-25.0	120 30	-9.6	146 30	+7.7	172 30	+23.4
17 00	-34.0	43 00	-38.5	69 00	-35.2	95 00	-24.7	121 00	-9.3	147 00	+8.0	173 00	+23.7
17 30	-34.1	43 30	-38.5	69 30	-35.0	95 30	-24.5	121 30	-9.0	147 30	+8.3	173 30	+24.0
18 00	-34.3	44 00	-38.5	70 00	-34.9	96 00	-24.2	122 00	-8.7	148 00	+8.7	174 00	+24.2
18 30	-34.5	44 30	-38.5	70 30	-34.7	96 30	-24.0	122 30	-8.3	148 30	+9.0	174 30	+24.5
19 00	-34.6	45 00	-38.5	71 00	-34.6	97 00	-23.7	123 00	-8.0	149 00	+9.3	175 00	+24.7
19 30	-34.7	45 30	-38.5	71 30	-34.5	97 30	-23.4	123 30	-7.7	149 30	+9.6	175 30	+25.0
20 00	-34.9	46 00	-38.5	72 00	-34.3	98 00	-23.2	124 00	-7.3	150 00	+10.0	176 00	+25.3
20 30	-35.0	46 30	-38.5	72 30	-34.1	98 30	-22.9	124 30	-7.0	150 30	+10.3	176 30	+25.5
21 00	-35.2	47 00	-38.5	73 00	-34.0	99 00	-22.6	125 00	-6.7	151 00	+10.6	177 00	+25.8
21 30	-35.3	47 30	-38.5	73 30	-33.8	99 30	-22.4	125 30	-6.4	151 30	+10.9	177 30	+26.0
22 00	-35.4	48 00	-38.4	74 00	-33.7	100 00	-22.1	126 00	-6.0	152 00	+11.3	178 00	+26.3
22 30	-35.6	48 30	-38.4	74 30	-33.5	100 30	-21.8	126 30	-5.7	152 30	+11.6	178 30	+26.5
23 00	-35.7	49 00	-38.4	75 00	-33.3	101 00	-21.5	127 00	-5.4	153 00	+11.9	179 00	+26.7
23 30	-35.8	49 30	-38.4	75 30	-33.2	101 30	-21.2	127 30	-5.0	153 30	+12.2	179 30	+27.0
24 00	-35.9	50 00	-38.4	76 00	-33.0	102 00	-21.0	128 00	-4.7	154 00	+12.5	180 00	+27.2
24 30	-36.1	50 30	-38.3	76 30	-32.8	102 30	-20.7	128 30	-4.4	154 30	+12.8	180 30	+27.5
25 00	-36.2	51 00	-38.3	77 00	-32.6	103 00	-20.4	129 00	-4.0	155 00	+13.2	181 00	+27.7
25 30	-36.3	51 30	-38.2	77 30	-32.5	103 30	-20.1	129 30	-3.7	155 30	+13.5	181 30	+27.9
26 00	-36.4	52 00	-38.2	78 00	-32.3	104 00	-19.8	130 00	-3.4	156 00	+13.8	182 00	+28.2

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2022

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TABLA I

h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.	h.L.Υ	Corr.
° /	'	° /	'	° /	'	° /	'	° /	'	° /	'	° /	'
182 00	+28.2	208 00	+36.8	234 00	+38.0	260 00	+31.5	286 00	+18.7	312 00	+2.0	338 00	-15.0
182 30	+28.4	208 30	+36.9	234 30	+38.0	260 30	+31.3	286 30	+18.4	312 30	+1.7	338 30	-15.4
183 00	+28.6	209 00	+37.0	235 00	+37.9	261 00	+31.1	287 00	+18.1	313 00	+1.3	339 00	-15.7
183 30	+28.8	209 30	+37.1	235 30	+37.9	261 30	+30.9	287 30	+17.8	313 30	+1.0	339 30	-16.0
184 00	+29.1	210 00	+37.2	236 00	+37.8	262 00	+30.7	288 00	+17.5	314 00	+0.7	340 00	-16.3
184 30	+29.3	210 30	+37.3	236 30	+37.7	262 30	+30.5	288 30	+17.2	314 30	+0.3	340 30	-16.6
185 00	+29.5	211 00	+37.4	237 00	+37.7	263 00	+30.3	289 00	+16.9	315 00	0.0	341 00	-16.9
185 30	+29.7	211 30	+37.4	237 30	+37.6	263 30	+30.1	289 30	+16.6	315 30	-0.3	341 30	-17.2
186 00	+29.9	212 00	+37.5	238 00	+37.5	264 00	+29.9	290 00	+16.3	316 00	-0.7	342 00	-17.5
186 30	+30.1	212 30	+37.6	238 30	+37.4	264 30	+29.7	290 30	+16.0	316 30	-1.0	342 30	-17.8
187 00	+30.3	213 00	+37.7	239 00	+37.4	265 00	+29.5	291 00	+15.7	317 00	-1.3	343 00	-18.1
187 30	+30.5	213 30	+37.7	239 30	+37.3	265 30	+29.3	291 30	+15.4	317 30	-1.7	343 30	-18.4
188 00	+30.7	214 00	+37.8	240 00	+37.2	266 00	+29.1	292 00	+15.0	318 00	-2.0	344 00	-18.7
188 30	+30.9	214 30	+37.9	240 30	+37.1	266 30	+28.8	292 30	+14.7	318 30	-2.3	344 30	-19.0
189 00	+31.1	215 00	+37.9	241 00	+37.0	267 00	+28.6	293 00	+14.4	319 00	-2.7	345 00	-19.2
189 30	+31.3	215 30	+38.0	241 30	+36.9	267 30	+28.4	293 30	+14.1	319 30	-3.0	345 30	-19.5
190 00	+31.5	216 00	+38.0	242 00	+36.8	268 00	+28.2	294 00	+13.8	320 00	-3.4	346 00	-19.8
190 30	+31.7	216 30	+38.1	242 30	+36.7	268 30	+27.9	294 30	+13.5	320 30	-3.7	346 30	-20.1
191 00	+31.9	217 00	+38.1	243 00	+36.6	269 00	+27.7	295 00	+13.2	321 00	-4.0	347 00	-20.4
191 30	+32.1	217 30	+38.2	243 30	+36.5	269 30	+27.5	295 30	+12.9	321 30	-4.4	347 30	-20.7
192 00	+32.3	218 00	+38.2	244 00	+36.4	270 00	+27.2	296 00	+12.5	322 00	-4.7	348 00	-21.0
192 30	+32.5	218 30	+38.2	244 30	+36.3	270 30	+27.0	296 30	+12.2	322 30	-5.0	348 30	-21.2
193 00	+32.6	219 00	+38.3	245 00	+36.2	271 00	+26.7	297 00	+11.9	323 00	-5.4	349 00	-21.5
193 30	+32.8	219 30	+38.3	245 30	+36.1	271 30	+26.5	297 30	+11.6	323 30	-5.7	349 30	-21.8
194 00	+33.0	220 00	+38.4	246 00	+35.9	272 00	+26.3	298 00	+11.3	324 00	-6.0	350 00	-22.1
194 30	+33.2	220 30	+38.4	246 30	+35.8	272 30	+26.0	298 30	+10.9	324 30	-6.4	350 30	-22.4
195 00	+33.3	221 00	+38.4	247 00	+35.7	273 00	+25.8	299 00	+10.6	325 00	-6.7	351 00	-22.6
195 30	+33.5	221 30	+38.4	247 30	+35.6	273 30	+25.5	299 30	+10.3	325 30	-7.0	351 30	-22.9
196 00	+33.7	222 00	+38.4	248 00	+35.4	274 00	+25.3	300 00	+10.0	326 00	-7.3	352 00	-23.2
196 30	+33.8	222 30	+38.5	248 30	+35.3	274 30	+25.0	300 30	+9.6	326 30	-7.7	352 30	-23.4
197 00	+34.0	223 00	+38.5	249 00	+35.2	275 00	+24.7	301 00	+9.3	327 00	-8.0	353 00	-23.7
197 30	+34.1	223 30	+38.5	249 30	+35.0	275 30	+24.5	301 30	+9.0	327 30	-8.3	353 30	-24.0
198 00	+34.3	224 00	+38.5	250 00	+34.9	276 00	+24.2	302 00	+8.7	328 00	-8.7	354 00	-24.2
198 30	+34.5	224 30	+38.5	250 30	+34.7	276 30	+24.0	302 30	+8.3	328 30	-9.0	354 30	-24.5
199 00	+34.6	225 00	+38.5	251 00	+34.6	277 00	+23.7	303 00	+8.0	329 00	-9.3	355 00	-24.7
199 30	+34.7	225 30	+38.5	251 30	+34.5	277 30	+23.4	303 30	+7.7	329 30	-9.6	355 30	-25.0
200 00	+34.9	226 00	+38.5	252 00	+34.3	278 00	+23.2	304 00	+7.3	330 00	-10.0	356 00	-25.3
200 30	+35.0	226 30	+38.5	252 30	+34.1	278 30	+22.9	304 30	+7.0	330 30	-10.3	356 30	-25.5
201 00	+35.2	227 00	+38.5	253 00	+34.0	279 00	+22.6	305 00	+6.7	331 00	-10.6	357 00	-25.8
201 30	+35.3	227 30	+38.5	253 30	+33.8	279 30	+22.4	305 30	+6.4	331 30	-10.9	357 30	-26.0
202 00	+35.4	228 00	+38.4	254 00	+33.7	280 00	+22.1	306 00	+6.0	332 00	-11.3	358 00	-26.3
202 30	+35.6	228 30	+38.4	254 30	+33.5	280 30	+21.8	306 30	+5.7	332 30	-11.6	358 30	-26.5
203 00	+35.7	229 00	+38.4	255 00	+33.3	281 00	+21.5	307 00	+5.4	333 00	-11.9	359 00	-26.7
203 30	+35.8	229 30	+38.4	255 30	+33.2	281 30	+21.2	307 30	+5.0	333 30	-12.2	359 30	-27.0
204 00	+35.9	230 00	+38.4	256 00	+33.0	282 00	+21.0	308 00	+4.7	334 00	-12.5	360 00	-27.2
204 30	+36.1	230 30	+38.3	256 30	+32.8	282 30	+20.7	308 30	+4.4	334 30	-12.8		
205 00	+36.2	231 00	+38.3	257 00	+32.6	283 00	+20.4	309 00	+4.0	335 00	-13.2		
205 30	+36.3	231 30	+38.2	257 30	+32.5	283 30	+20.1	309 30	+3.7	335 30	-13.5		
206 00	+36.4	232 00	+38.2	258 00	+32.3	284 00	+19.8	310 00	+3.4	336 00	-13.8		
206 30	+36.5	232 30	+38.2	258 30	+32.1	284 30	+19.5	310 30	+3.0	336 30	-14.1		
207 00	+36.6	233 00	+38.1	259 00	+31.9	285 00	+19.2	311 00	+2.7	337 00	-14.4		
207 30	+36.7	233 30	+38.1	259 30	+31.7	285 30	+19.0	311 30	+2.4	337 30	-14.7		
208 00	+36.8	234 00	+38.0	260 00	+31.5	286 00	+18.7	312 00	+2.0	338 00	-15.0		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2022

TABLA II

(SIEMPRE POSITIVA)

hL $\cap$	Altura											
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°
°	/	/	/	/	/	/	/	/	/	/	/	/
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
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
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
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
80	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
100	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3
120	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
140	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5
160	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4
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
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
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
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
260	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
280	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3
300	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4
320	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5
340	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4
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

TABLA III

hL $\cap$	Ene 1	Feb 1	Mar 1	Abr 1	May 1	Jun 1	Jul 1	Ago 1	Sep 1	Oct 1	Nov 1	Dic 1	Dic 32
°	/	/	/	/	/	/	/	/	/	/	/	/	/
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	-0.1	+0.1	+0.3
80	+0.1	+0.2	+0.3	+0.3	+0.2	0.0	-0.1	-0.2	-0.3	-0.3	-0.2	0.0	+0.1
100	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0
120	0.0	+0.1	+0.3	+0.4	+0.4	+0.3	+0.1	0.0	-0.2	-0.3	-0.4	-0.3	-0.2
140	-0.1	+0.1	+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	-0.5	-0.5
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	+0.1	-0.1	-0.3
260	-0.1	-0.2	-0.3	-0.3	-0.2	0.0	+0.1	+0.2	+0.3	+0.3	+0.2	0.0	-0.1
280	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0	+0.2	+0.3	+0.3	+0.3	+0.2	0.0
300	0.0	-0.1	-0.3	-0.4	-0.4	-0.3	-0.1	0.0	+0.2	+0.3	+0.4	+0.3	+0.2
320	+0.1	-0.1	-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	+0.5	+0.5
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

Dic 32 corresponde al 1 de enero del año siguiente

hL [°]	Latitud												hL [°]
	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	+0.7	+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	+0.6	+0.7	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	-0.1	50
60	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-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	-0.7	-0.9	80
90	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9	-1.1	90
100	-0.5	-0.5	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.1	-1.3	100
110	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	110
120	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.5	120
130	-0.6	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	130
140	-0.6	-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	-0.4	-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	-0.3	-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	+0.5	+0.6	250
260	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.6	+0.7	+0.9	260
270	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	270
280	+0.5	+0.5	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.0	+1.2	280
290	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.2	+1.4	290
300	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.5	300
310	+0.6	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	310
320	+0.6	+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	+1.2	+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	+0.7	+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
o	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, 2022**

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TABLA A				TABLA B = SOL (LIMBO INFERIOR)											
Depresión del horizonte				Semidiámetro, refracción y paralaje										Correc. adicional (2022)	
Elevación del observador	Corrección	Elevación del observador	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección	Altura apte. ⊙	Corrección		
1.6	-2.3	12.7	-6.4	6 15	+8.2	8 45	+10.2	13 23	+12.2	25 59	+14.2			Ene 1	+0'3
1.7	-2.4	13.1	-6.5	6 21	+8.3	8 54	+10.3	13 44	+12.3	27 12	+14.3			Ene 23	+0'2
1.9	-2.5	13.6	-6.6	6 27	+8.4	9 05	+10.4	14 06	+12.4	28 32	+14.4			Feb 27	+0'1
2.0	-2.6	14.0	-6.7	6 33	+8.5	9 15	+10.5	14 29	+12.5	29 59	+14.5			Mar 23	0'0
2.2	-2.7	14.4	-6.8	6 40	+8.6	9 26	+10.6	14 53	+12.6	31 34	+14.6			Abr 13	-0'1
2.3	-2.8	14.8	-6.9	6 46	+8.7	9 37	+10.7	15 18	+12.7	33 19	+14.7			May 7	-0'2
2.5	-2.9	15.3	-7.0	6 53	+8.8	9 47	+10.8	15 45	+12.8	35 16	+14.8			Jun 12	-0'3
2.7	-3.0	15.7	-7.1	7 00	+8.9	10 00	+10.9	16 13	+12.9	37 25	+14.9			Jul 28	-0'2
2.9	-3.1	16.2	-7.2	7 06	+9.0	10 12	+11.0	16 43	+13.0	39 49	+15.0			Sep 2	-0'1
3.1	-3.2	16.6	-7.3	7 14	+9.1	10 25	+11.1	17 14	+13.1	42 30	+15.1			Sep 26	0'0
3.3	-3.3	17.1	-7.4	7 21	+9.2	10 38	+11.2	17 47	+13.2	44 30	+15.2			Oct 18	+0'1
3.5	-3.4	17.6	-7.5	7 28	+9.3	10 52	+11.3	18 23	+13.3	46 30	+15.3			Nov 10	+0'2
3.7	-3.5	18.0	-7.6	7 36	+9.4	11 06	+11.4	19 01	+13.4	48 30	+15.4			Dic 16	+0'3
3.9	-3.6	18.5	-7.7	7 44	+9.5	11 21	+11.5	19 41	+13.5	50 30	+15.5			Dic 31	
4.2	-3.7	19.0	-7.8	7 52	+9.6	11 36	+11.6	20 24	+13.6	52 30	+15.6				
4.4	-3.8	19.5	-7.9	8 00	+9.7	11 52	+11.7	21 10	+13.7	54 30	+15.7				
4.7	-3.9	20.0	-8.0	8 08	+9.8	12 09	+11.8	21 59	+13.8	56 30	+15.8				
4.9	-4.0	20.5	-8.1	8 17	+9.9	12 26	+11.9	22 53	+13.9	58 30	+15.9				
5.2	-4.1	21.0	-8.2	8 26	+10.0	12 44	+12.0	23 50	+14.0	60 30	+16.0				
5.4	-4.2	21.5	-8.3	8 35	+10.1	13 03	+12.1	24 52	+14.1						
5.7	-4.3	22.1	-8.4	8 45	+10.2	13 23	+12.2	25 59	+14.2						
6.0	-4.4	22.6	-8.5												
6.2	-4.5	23.1	-8.6												
6.5	-4.6	23.7	-8.7												
6.8	-4.7	24.2	-8.8												
7.1	-4.8	24.8	-8.9												
7.4	-4.9	25.4	-9.0												
7.7	-5.0	25.9	-9.1												
8.0	-5.1	26.5	-9.2												
8.4	-5.2	27.1	-9.3												
8.7	-5.3	27.7	-9.4												
9.0	-5.4	28.3	-9.5												
9.4	-5.5	28.9	-9.6												
9.7	-5.6	29.5	-9.7												
10.1	-5.7	30.1	-9.8												
10.4	-5.8	30.7	-9.9												
10.8	-5.9	31.3	-10.0												
11.2	-6.0	32.0	-10.1												
11.6	-6.1	32.6	-10.2												
11.9	-6.2	33.3	-10.3												
12.3	-6.3	33.9	-10.4												
12.7		34.6													

La altura aparente es la observada corregida por depresión del horizonte.
En estas tablas, para los valores explícitos tomar el valor superior.

**CORRECCIÓN POR REFRACCIÓN, PARALAJE Y SEMIDIÁMETRO
A APLICAR A LA ALTURA APARENTE DE LA LUNA**

Altura ap. °	LIMBO INFERIOR Paralaje Horizontal								Altura ap. °	LIMBO SUPERIOR Paralaje Horizontal							
	54'	55'	56'	57'	58'	59'	60'	61'		54'	55'	56'	57'	58'	59'	60'	61'
10	62.6	63.9	65.1	66.4	67.7	68.9	70.2	71.4	10	33.1	33.8	34.5	35.2	36.0	36.7	37.4	38.1
11	62.9	64.2	65.4	66.7	67.9	69.2	70.4	71.7	11	33.4	34.1	34.8	35.5	36.2	36.9	37.7	38.4
12	63.1	64.4	65.6	66.9	68.1	69.4	70.6	71.9	12	33.6	34.3	35.0	35.7	36.4	37.1	37.8	38.5
13	63.3	64.5	65.7	67.0	68.2	69.5	70.7	72.0	13	33.7	34.4	35.1	35.8	36.5	37.2	37.9	38.6
14	63.3	64.6	65.8	67.1	68.3	69.5	70.8	72.0	14	33.8	34.5	35.2	35.9	36.6	37.3	38.0	38.7
15	63.3	64.6	65.8	67.1	68.3	69.5	70.8	72.0	15	33.8	34.5	35.2	35.9	36.6	37.3	38.0	38.7
16	63.3	64.6	65.8	67.0	68.3	69.5	70.7	72.0	16	33.8	34.5	35.2	35.9	36.6	37.2	37.9	38.6
17	63.3	64.5	65.7	66.9	68.2	69.4	70.6	71.9	17	33.7	34.4	35.1	35.8	36.5	37.2	37.8	38.5
18	63.2	64.4	65.6	66.8	68.1	69.3	70.5	71.7	18	33.6	34.3	35.0	35.7	36.4	37.0	37.7	38.4
19	63.0	64.2	65.5	66.7	67.9	69.1	70.3	71.5	19	33.5	34.2	34.9	35.5	36.2	36.9	37.5	38.2
20	62.9	64.1	65.3	66.5	67.7	68.9	70.1	71.3	20	33.3	34.0	34.7	35.3	36.0	36.7	37.3	38.0
21	62.7	63.9	65.1	66.3	67.5	68.7	69.9	71.1	21	33.1	33.8	34.5	35.1	35.8	36.4	37.1	37.8
22	62.4	63.6	64.8	66.0	67.2	68.4	69.6	70.8	22	32.9	33.6	34.2	34.9	35.5	36.2	36.8	37.5
23	62.2	63.4	64.6	65.8	67.0	68.2	69.4	70.5	23	32.7	33.3	34.0	34.6	35.3	35.9	36.6	37.2
24	61.9	63.1	64.3	65.5	66.7	67.9	69.0	70.2	24	32.4	33.0	33.7	34.3	35.0	35.6	36.2	36.9
25	61.6	62.8	64.0	65.2	66.3	67.5	68.7	69.9	25	32.1	32.7	33.4	34.0	34.6	35.3	35.9	36.5
26	61.3	62.5	63.7	64.8	66.0	67.2	68.3	69.5	26	31.8	32.4	33.0	33.7	34.3	34.9	35.5	36.2
27	61.0	62.1	63.3	64.5	65.6	66.8	68.0	69.1	27	31.5	32.1	32.7	33.3	33.9	34.5	35.2	35.8
28	60.6	61.8	62.9	64.1	65.2	66.4	67.6	68.7	28	31.1	31.7	32.3	32.9	33.5	34.2	34.8	35.4
29	60.2	61.4	62.5	63.7	64.8	66.0	67.1	68.3	29	30.7	31.3	31.9	32.5	33.1	33.7	34.3	34.9
30	59.8	61.0	62.1	63.3	64.4	65.5	66.7	67.8	30	30.3	30.9	31.5	32.1	32.7	33.3	33.9	34.5
31	59.4	60.6	61.7	62.8	64.0	65.1	66.2	67.3	31	29.9	30.5	31.1	31.7	32.3	32.8	33.4	34.0
32	59.0	60.1	61.2	62.4	63.5	64.6	65.7	66.8	32	29.5	30.1	30.6	31.2	31.8	32.4	32.9	33.5
33	58.6	59.7	60.8	61.9	63.0	64.1	65.2	66.3	33	29.0	29.6	30.2	30.7	31.3	31.9	32.4	33.0
34	58.1	59.2	60.3	61.4	62.5	63.6	64.7	65.8	34	28.6	29.1	29.7	30.2	30.8	31.4	31.9	32.5
35	57.6	58.7	59.8	60.9	62.0	63.1	64.2	65.3	35	28.1	28.6	29.2	29.7	30.3	30.8	31.4	31.9
36	57.1	58.2	59.3	60.4	61.4	62.5	63.6	64.7	36	27.6	28.1	28.7	29.2	29.7	30.3	30.8	31.3
37	56.6	57.7	58.7	59.8	60.9	62.0	63.0	64.1	37	27.1	27.6	28.1	28.7	29.2	29.7	30.2	30.8
38	56.1	57.1	58.2	59.3	60.3	61.4	62.4	63.5	38	26.6	27.1	27.6	28.1	28.6	29.1	29.6	30.2
39	55.5	56.6	57.6	58.7	59.7	60.8	61.8	62.9	39	26.0	26.5	27.0	27.5	28.0	28.5	29.0	29.5
40	55.0	56.0	57.0	58.1	59.1	60.2	61.2	62.2	40	25.5	25.9	26.4	26.9	27.4	27.9	28.4	28.9
41	54.4	55.4	56.4	57.5	58.5	59.5	60.6	61.6	41	24.9	25.4	25.8	26.3	26.8	27.3	27.8	28.3
42	53.8	54.8	55.8	56.9	57.9	58.9	59.9	60.9	42	24.3	24.8	25.2	25.7	26.2	26.6	27.1	27.6
43	53.2	54.2	55.2	56.2	57.2	58.2	59.2	60.2	43	23.7	24.2	24.6	25.1	25.5	26.0	26.4	26.9
44	52.6	53.6	54.6	55.6	56.6	57.6	58.6	59.5	44	23.1	23.5	24.0	24.4	24.9	25.3	25.8	26.2
45	52.0	52.9	53.9	54.9	55.9	56.9	57.9	58.8	45	22.5	22.9	23.3	23.8	24.2	24.6	25.1	25.5
46	51.3	52.3	53.3	54.2	55.2	56.2	57.1	58.1	46	21.8	22.2	22.7	23.1	23.5	23.9	24.3	24.8
47	50.7	51.6	52.6	53.5	54.5	55.5	56.4	57.4	47	21.2	21.6	22.0	22.4	22.8	23.2	23.6	24.0
48	50.0	51.0	51.9	52.8	53.8	54.7	55.7	56.6	48	20.5	20.9	21.3	21.7	22.1	22.5	22.9	23.3
49	49.3	50.3	51.2	52.1	53.1	54.0	54.9	55.8	49	19.8	20.2	20.6	21.0	21.4	21.7	22.1	22.5
50	48.7	49.6	50.5	51.4	52.3	53.2	54.1	55.1	50	19.1	19.5	19.9	20.2	20.6	21.0	21.4	21.7
51	48.0	48.9	49.8	50.7	51.6	52.5	53.4	54.3	51	18.4	18.8	19.2	19.5	19.9	20.2	20.6	20.9
52	47.2	48.1	49.0	49.9	50.8	51.7	52.6	53.5	52	17.7	18.1	18.4	18.8	19.1	19.4	19.8	20.1
53	46.5	47.4	48.3	49.1	50.0	50.9	51.8	52.6	53	17.0	17.3	17.7	18.0	18.3	18.7	19.0	19.3
54	45.8	46.7	47.5	48.4	49.2	50.1	51.0	51.8	54	16.3	16.6	16.9	17.2	17.5	17.9	18.2	18.5
55	45.0	45.9	46.7	47.6	48.4	49.3	50.1	51.0	55	15.5	15.8	16.1	16.4	16.7	17.0	17.3	17.6

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La altura aparente es la observada corregida por depresión del horizonte con los datos de la tabla A de la página 387.

Variación tabular por grado de altura
(corrección sustractiva, excepto para alturas $<15^\circ$, que es aditiva)

ALMANAQUE NÁUTICO PERSEIS