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DOMINGO 1 DE ENERO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3 PMG: 12 ^h 03 ^m 3		SD: 14 ^h 8 Edad: 7 ^d 2 PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3 PMG: 18 ^h 09 ^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 m	h m	h m m			
0	179	13.9	− 23	03.8	95	27.2	+ 7 15.2	60 N	7 09	8 06	9 03	10 52	12	0 30	76	
1	194	13.6		03.6	110	01.6	154 26.1	58	7 02	7 54	8 46	10 58	13	26	73	
2	209	13.3		03.4	124	36.1	155 36.9	56	6 56	44	31	11 02	16	22	71	
3	224	13.0		03.2	139	10.5	154 47.7	54	50	36	19	06 18		19	68	
4	239	12.7		03.0	153	44.9	154 + 7 58.5	52	44	28	8 08	10 20		16	66	
5	254	12.4	− 23	02.8	168	19.3	154 + 8 09.2	50	6 39	7 20	7 59	11 13	22	0 13	65	
6	269	12.1	− 23	02.6	182	53.7	154 + 8 19.9	45	6 28	7 05	7 38	11 21	25	0 07	61	
7	284	11.8		02.4	197	28.0	153 30.5	40	17	6 51	22	27 28		0 02	58	
8	299	11.5		02.2	212	02.4	154 41.2	35	08	40	7 08	32 31		** ** *		
9	314	11.2		02.0	226	36.7	153 + 8 51.7	30	6 00	29	6 56	37 32		** ** *		
10	329	10.9		01.8	241	11.1	154 + 9 02.3	20	5 44	6 11	35	45 36		** ** *		
11	344	10.6	− 23	01.6	255	45.4	153 + 9 12.8	10 N	5 28	5 54	6 17	11 52	40	** ** *		
12	359	10.3	− 23	01.4	270	19.7	153 + 9 23.2	0	5 11	5 37	6 00	11 59	43	** ** *		
13	14	10.0		01.2	284	53.9	152 33.6	10 S	4 52	5 19	5 42	12 06	46	** ** *		
14	29	09.7		01.0	299	28.2	153 44.0	20	30	4 59	24	13 50		** ** *		
15	44	09.4		00.8	314	02.4	152 + 9 54.3	30	4 01	35	5 02	22 53		23 52	34	
16	59	09.1		00.6	328	36.7	153 + 10 04.6	35	3 43	20	4 49	27 55		46	32	
17	74	08.8	− 23	00.4	343	10.8	151 + 10 14.9	40	3 20	4 02	4 34	12 32	58	23 39	30	
18	89	08.5	− 23	00.2	357	45.0	152 + 10 25.1	45	2 50	3 40	4 17	12 39	61	23 32	26	
19	104	08.2	− 23	00.0	12	19.2	152 35.2	50	2 06	3 11	3 55	47 64		22	24	
20	119	07.9	− 22	59.8	26	53.3	151 45.3	52	1 40	2 56	44	50 67		18	22	
21	134	07.7		59.6	41	27.4	151 + 10 55.4	54	0 59	38	32	54 69		14	19	
22	149	07.4		59.4	56	01.5	151 + 11 05.4	56	** ** *	2 17	18	12 59	70	08	18	
23	164	07.1		59.2	70	35.5	150 15.4	58	** ** *	1 49	3 02	13 04	73	23 03	15	
24	179	06.8	− 22	59.0	85	09.5	150 + 11 25.3	60 S	** ** *	1 04	2 42	13 10	75	22 56	13	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 17 ^h 16 ^m 9		Mag.: −4.0 PMG: 14 ^h 28 ^m		Mag.: +0.2 PMG: 4 ^h 47 ^m		Mag.: −2.6 PMG: 19 ^h 12 ^m		Mag.: +0.7 PMG: 7 ^h 07 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	100	03.9	143	13.2	− 18	25.8	287	59.2	+ 6 37.2	71	18.3	+ 10 28.2	252	54.7	− 8 36.2	
1	115	06.3	158	12.6		24.9	303	01.1	37.0	86	20.8	28.2	267	57.0		36.2
2	130	08.8	173	12.0		24.0	318	03.0	36.8	101	23.2	28.2	282	59.3		36.3
3	145	11.3	188	11.4		23.1	333	04.9	36.7	116	25.6	28.2	298	01.6		36.3
4	160	13.7	203	10.8		22.2	348	06.8	36.5	131	28.0	28.3	313	03.9		36.4
5	175	16.2	218	10.1	− 18	21.3	3	08.6	+ 6 36.3	146	30.4	+ 10 28.3	328	06.3	− 8	36.4
6	190	18.7	233	09.5	− 18	20.4	18	10.5	+ 6 36.1	161	32.9	+ 10 28.3	343	08.6	− 8	36.4
7	205	21.1	248	08.9		19.5	33	12.4	36.0	176	35.3	28.4	358	10.9		36.5
8	220	23.6	263	08.3		18.6	48	14.3	35.8	191	37.7	28.4	13	13.2		36.5
9	235	26.1	278	07.7		17.6	63	16.2	35.6	206	40.1	28.4	28	15.5		36.6
10	250	28.5	293	07.0		16.7	78	18.1	35.4	221	42.5	28.5	43	17.8		36.6
11	265	31.0	308	06.4	− 18	15.8	93	20.0	+ 6 35.3	236	44.9	+ 10 28.5	58	20.1	− 8	36.7
12	280	33.4	323	05.8	− 18	14.9	108	21.8	+ 6 35.1	251	47.3	+ 10 28.5	73	22.4	− 8	36.7
13	295	35.9	338	05.2		14.0	123	23.7	34.9	266	49.8	28.6	88	24.8		36.8
14	310	38.4	353	04.6		13.1	138	25.6	34.8	281	52.2	28.6	103	27.1		36.8
15	325	40.8	8	04.0		12.1	153	27.5	34.6	296	54.6	28.6	118	29.4		36.9
16	340	43.3	23	03.3		11.2	168	29.4	34.4	311	57.0	28.7	133	31.7		36.9
17	355	45.8	38	02.7	− 18	10.3	183	31.3	+ 6 34.3	326	59.4	+ 10 28.7	148	34.0	− 8	36.9
18	10	48.2	53	02.1	− 18	09.4	198	33.2	+ 6 34.1	342	01.8	+ 10 28.7	163	36.3	− 8	37.0
19	25	50.7	68	01.5		08.5	213	35.1	33.9	357	04.2	28.8	178	38.6		37.0
20	40	53.2	83	00.9		07.5	228	37.0	33.7	12	06.6	28.8	193	41.0		37.1
21	55	55.6	98	00.3		06.6	243	38.9	33.6	27	09.1	28.8	208	43.3		37.1
22	70	58.1	112	59.7		05.7	258	40.8	33.4	42	11.5	28.9	223	45.6		37.2
23	86	00.5	127	59.1		04.8	273	42.7	33.2	57	13.9	28.9	238	47.9		37.2
24	101	03.0	142	58.5	− 18	03.8	288	44.6	+ 6 33.1	72	16.3	+ 10 28.9	253	50.2	− 8	37.3
Dif	—		−6		+9		+19		−2	+24		0	+23		0	

LUNES 2 DE ENERO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna	Puesta de Luna
	SD: 16 ^h 3 PMG: 12 ^h 03 ^m 8		SD: 14 ^h 8 Edad: 8 ^d 2 PHE $\begin{cases} 4^h: 54/2 \\ 12^h: 54/2 \\ 20^h: 54/2 \end{cases}$ PMG: 18 ^h 52 ^m R°: 45 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°
^h	[°] /	[°] /	[°] /		[°] /		^h ^m	^h ^m	^h ^m	^h ^m ^m	^h ^m ^m	^h ^m ^m
0	179 06.8	− 22 59.0	85 09.5		+ 11 25.3	99	60 N	15 06	16 02	16 59	11 04 14	1 46 75
1	194 06.5	58.8	99 43.5	150	35.2	99	58	23	14	17 06	11 17	39 73
2	209 06.2	58.6	114 17.5	150	45.0	98	56	37	24	12	18 20	33 70
3	224 05.9	58.3	128 51.4	149	+ 11 54.8	98	54	15 49	32	18	24 22	27 68
4	239 05.6	58.1	143 25.3	149	+ 12 04.6	98	52	16 00	40	24	30 23	22 66
5	254 05.3	− 22 57.9	157 59.2	149	+ 12 14.2	96	50	16 09	16 47	17 29	11 35 25	1 18 64
6	269 05.0	− 22 57.7	172 33.1	149	+ 12 23.9	97	45	16 29	17 03	17 40	11 46 28	1 08 61
7	284 04.7	57.5	187 06.9	148	33.5	96	40	16 46	16	50	11 55 31	1 00 58
8	299 04.4	57.3	201 40.7	148	43.0	95	35	17 00	28	17 59	12 03 33	0 53 56
9	314 04.1	57.1	216 14.4	147	+ 12 52.5	95	30	12	38	18 08	09 36	47 54
10	329 03.8	56.8	230 48.1	147	+ 13 01.9	94	20	32	17 56	24	21 39	37 50
11	344 03.5	− 22 56.6	245 21.8	147	+ 13 11.3	94	10 N	17 50	18 13	18 40	12 32 42	0 28 46
12	359 03.3	− 22 56.4	259 55.5	147	+ 13 20.6	93	0	18 08	18 30	18 56	12 42 44	0 20 43
13	14 03.0	56.2	274 29.1	146	29.8	92	10 S	25	18 48	19 15	12 52 47	11 41
14	29 02.7	56.0	289 02.6	145	39.0	92	20	18 43	19 08	19 37	13 03 50	0 02 38
15	44 02.4	55.7	303 36.2	146	48.2	92	30	19 05	32	20 05	15 53	*** **
16	59 02.1	55.5	318 09.7	145	+ 13 57.3	91	35	17	19 47	23	22 56	*** **
17	74 01.8	− 22 55.3	332 43.2	145	+ 14 06.3	90	40	19 32	20 05	20 46	13 30 58	*** **
18	89 01.5	− 22 55.1	347 16.6	144	+ 14 15.3	90	45	19 50	20 27	21 15	13 40 60	23 58 30
19	104 01.2	54.8	1 50.0	144	24.2	89	50	20 11	20 55	21 59	51 65	46 26
20	119 00.9	54.6	16 23.3	143	33.1	89	52	22	21 10	22 25	13 57 66	40 25
21	134 00.6	54.4	30 56.6	143	41.9	88	54	34	27	23 03	14 03 68	33 24
22	149 00.3	54.2	45 29.9	143	50.6	87	56	20 48	21 48	** **	09 70	26 21
23	164 00.0	53.9	60 03.1	142	+ 14 59.3	87	58	21 04	22 16	** **	17 72	18 19
24	178 59.8	− 22 53.7	74 36.3	142	+ 15 07.9	86	60 S	21 23	22 58	** **	14 25 76	23 09 16
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO			
	PMG: 17 ^h 13 ^m 0		Mag.: −4.0 PMG: 14 ^h 29 ^m		Mag.: +0.2 PMG: 4 ^h 44 ^m		Mag.: −2.6 PMG: 19 ^h 08 ^m		Mag.: +0.7 PMG: 7 ^h 04 ^m			
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec
^h	[°] /	[°] /	[°] /	[°] /	[°] /	[°] /	[°] /	[°] /	[°] /	[°] /	[°] /	[°] /
0	101 03.0	142 58.5	− 18 03.8	288 44.6	+ 6 33.1	72 16.3	+ 10 28.9	253 50.2	− 8 37.3			
1	116 05.5	157 57.9	02.9	303 46.5	32.9	87 18.7	29.0	268 52.5	37.3			
2	131 07.9	172 57.2	02.0	318 48.4	32.7	102 21.1	29.0	283 54.9	37.4			
3	146 10.4	187 56.6	01.0	333 50.3	32.6	117 23.5	29.0	298 57.2	37.4			
4	161 12.9	202 56.0	− 18 00.1	348 52.2	32.4	132 25.9	29.1	313 59.5	37.4			
5	176 15.3	217 55.4	− 17 59.2	3 54.1	+ 6 32.3	147 28.3	+ 10 29.1	329 01.8	− 8 37.5			
6	191 17.8	232 54.8	− 17 58.2	18 56.0	+ 6 32.1	162 30.7	+ 10 29.1	344 04.1	− 8 37.5			
7	206 20.3	247 54.2	57.3	33 57.9	31.9	177 33.2	29.2	359 06.4	37.6			
8	221 22.7	262 53.6	56.4	48 59.8	31.8	192 35.6	29.2	14 08.8	37.6			
9	236 25.2	277 53.0	55.4	64 01.7	31.6	207 38.0	29.2	29 11.1	37.7			
10	251 27.7	292 52.4	54.5	79 03.6	31.4	222 40.4	29.3	44 13.4	37.7			
11	266 30.1	307 51.8	− 17 53.6	94 05.5	+ 6 31.3	237 42.8	+ 10 29.3	59 15.7	− 8 37.8			
12	281 32.6	322 51.2	− 17 52.6	109 07.4	+ 6 31.1	252 45.2	+ 10 29.3	74 18.0	− 8 37.8			
13	296 35.0	337 50.6	51.7	124 09.3	30.9	267 47.6	29.4	89 20.3	37.8			
14	311 37.5	352 50.0	50.8	139 11.2	30.8	282 50.0	29.4	104 22.7	37.9			
15	326 40.0	7 49.4	49.8	154 13.1	30.6	297 52.4	29.4	119 25.0	37.9			
16	341 42.4	22 48.8	48.9	169 15.0	30.5	312 54.8	29.5	134 27.3	38.0			
17	356 44.9	37 48.2	− 17 47.9	184 16.9	+ 6 30.3	327 57.2	+ 10 29.5	149 29.6	− 8 38.0			
18	11 47.4	52 47.6	− 17 47.0	199 18.9	+ 6 30.1	342 59.6	+ 10 29.5	164 31.9	− 8 38.1			
19	26 49.8	67 47.0	46.1	214 20.8	30.0	358 02.0	29.6	179 34.2	38.1			
20	41 52.3	82 46.4	45.1	229 22.7	29.8	13 04.4	29.6	194 36.6	38.2			
21	56 54.8	97 45.8	44.2	244 24.6	29.7	28 06.8	29.7	209 38.9	38.2			
22	71 57.2	112 45.2	43.2	259 26.5	29.5	43 09.2	29.7	224 41.2	38.2			
23	86 59.7	127 44.6	42.3	274 28.4	29.3	58 11.6	29.7	239 43.5	38.3			
24	102 02.2	142 44.0	− 17 41.3	289 30.4	+ 6 29.2	73 14.0	+ 10 29.8	254 45.8	− 8 38.3			
Dif	—	−6	+9	+19	−2	+24	0	+23	0			

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MARTES 3 DE ENERO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 04 ^m 2		SD: 14 ^h 8 Edad: 9 ^d 2 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 2 20 ^h : 54 ^m 3 PMG: 19 ^h 37 ^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 m	h m m	h m m	
0	178 59.8	− 22 53.7	74 36.3		+ 15 07.9	86	60 N	7 09	8 05	9 01	11 18 19	3 01	75	
1	193 59.5		89 09.4	141	16.5	85	58	7 02	7 54	8 45	28 22	2 52	71	
2	208 59.2		103 42.5	141	25.0	84	56	6 55	44	31	38 24	43	69	
3	223 58.9		118 15.6	141	33.4	84	54	50	35	19	46 26	35	67	
4	238 58.6		132 48.6	140	41.8	84	52	44	27	8 08	11 53 28	28	66	
5	253 58.3	− 22 52.6	147 21.5	139	+ 15 50.1	83	50	6 39	7 20	7 58	12 00 29	2 22	64	
6	268 58.0	− 22 52.3	161 54.5	140	+ 15 58.3	82	45	6 28	7 05	7 38	12 14 33	2 09	60	
7	283 57.7		176 27.3	138	+ 16 06.5	82	40	18	6 52	22	26 35	1 58	58	
8	298 57.4		191 00.2	139	14.6	81	35	09	40	7 08	36 37	49	55	
9	313 57.1		205 32.9	137	22.7	81	30	6 00	30	6 56	12 45 39	41	53	
10	328 56.9		220 05.7	138	30.6	79	20	5 44	6 12	36	13 00 42	27	50	
11	343 56.6	− 22 51.2	234 38.4	137	+ 16 38.5	79	10 N	5 29	5 55	6 18	13 14 44	1 14	48	
12	358 56.3	− 22 50.9	249 11.0	136	+ 16 46.4	79	0	5 12	5 38	6 01	13 26 47	1 03	45	
13	13 56.0		263 43.6	136	+ 16 54.1	77	10 S	4 53	20	5 43	39 49	0 52	42	
14	28 55.7		278 16.1	135	+ 17 01.8	77	20	31	5 00	25	13 53 51	40	40	
15	43 55.4		292 48.6	135	09.5	77	30	4 03	4 36	5 03	14 08 54	26	37	
16	58 55.1		307 21.1	135	17.0	75	35	3 45	21	4 51	18 55	18	35	
17	73 54.8	− 22 49.7	321 53.5	134	+ 17 24.5	75	40	3 22	4 04	4 36	14 28 58	0 09	33	
18	88 54.6	− 22 49.5	336 25.8	133	+ 17 31.9	74	45	2 53	3 42	4 19	14 40 61	***	***	
19	103 54.3		350 58.1	133	39.2	73	50	2 09	3 13	3 57	14 56 63	***	***	
20	118 54.0		5 30.4	133	46.5	73	52	1 44	2 58	46	15 03 64	***	***	
21	133 53.7		20 02.6	132	+ 17 53.7	72	54	1 05	41	34	11 66	23 57	29	
22	148 53.4		34 34.7	131	+ 18 00.8	71	56	***	***	2 20	19 69	47	28	
23	163 53.1		49 06.8	131	07.8	70	58	***	***	1 53	29 71	37	25	
24	178 52.8	− 22 48.0	63 38.9	131	+ 18 14.8	70	60 S	***	***	1 11	15 41 74	23 25	22	

UT	♈ ARIES		♊ VENUS		♈ MARTE		♈ JÚPITER		♈ SATURNO	
	PMG 17 ^h 09 ^m 0		Mag.: −4.0 PMG: 14 ^h 30 ^m		Mag.: +0.2 PMG: 4 ^h 41 ^m		Mag.: −2.6 PMG: 19 ^h 04 ^m		Mag.: +0.7 PMG: 7 ^h 00 ^m	
	hG ♈	Dec	hG ♊	Dec	hG ♈	Dec	hG ♈	Dec	hG ♈	Dec
h	°	'	°	'	°	'	°	'	°	'
0	102 02.2	142 44.0	− 17 41.3	289 30.4	+ 6 29.2	73 14.0	+ 10 29.8	254 45.8	− 8 38.3	
1	117 04.6	157 43.5	40.4	304 32.3	29.0	88 16.4	29.8	269 48.2	38.4	
2	132 07.1	172 42.9	39.4	319 34.2	28.9	103 18.8	29.8	284 50.5	38.4	
3	147 09.5	187 42.3	38.5	334 36.1	28.7	118 21.2	29.9	299 52.8	38.5	
4	162 12.0	202 41.7	37.5	349 38.0	28.6	133 23.6	29.9	314 55.1	38.5	
5	177 14.5	217 41.1	− 17 36.6	4 40.0	+ 6 28.4	148 26.0	+ 10 30.0	329 57.4	− 8 38.5	
6	192 16.9	232 40.5	− 17 35.6	19 41.9	+ 6 28.3	163 28.4	+ 10 30.0	344 59.8	− 8 38.6	
7	207 19.4	247 39.9	34.7	34 43.8	28.1	178 30.8	30.0	0 02.1	38.6	
8	222 21.9	262 39.3	33.7	49 45.7	27.9	193 33.2	30.1	15 04.4	38.7	
9	237 24.3	277 38.7	32.8	64 47.6	27.8	208 35.6	30.1	30 06.7	38.7	
10	252 26.8	292 38.1	31.8	79 49.6	27.6	223 38.0	30.1	45 09.0	38.8	
11	267 29.3	307 37.6	− 17 30.9	94 51.5	+ 6 27.5	238 40.4	+ 10 30.2	60 11.4	− 8 38.8	
12	282 31.7	322 37.0	− 17 29.9	109 53.4	+ 6 27.3	253 42.8	+ 10 30.2	75 13.7	− 8 38.8	
13	297 34.2	337 36.4	28.9	124 55.4	27.2	268 45.2	30.3	90 16.0	38.9	
14	312 36.6	352 35.8	28.0	139 57.3	27.0	283 47.6	30.3	105 18.3	38.9	
15	327 39.1	7 35.2	27.0	154 59.2	26.9	298 50.0	30.3	120 20.6	39.0	
16	342 41.6	22 34.6	26.1	170 01.1	26.7	313 52.4	30.4	135 23.0	39.0	
17	357 44.0	37 34.1	− 17 25.1	185 03.1	+ 6 26.6	328 54.8	+ 10 30.4	150 25.3	− 8 39.1	
18	12 46.5	52 33.5	− 17 24.1	200 05.0	+ 6 26.4	343 57.2	+ 10 30.4	165 27.6	− 8 39.1	
19	27 49.0	67 32.9	23.2	215 06.9	26.3	358 59.6	30.5	180 29.9	39.1	
20	42 51.4	82 32.3	22.2	230 08.9	26.1	14 02.0	30.5	195 32.2	39.2	
21	57 53.9	97 31.7	21.2	245 10.8	26.0	29 04.4	30.6	210 34.6	39.2	
22	72 56.4	112 31.2	20.3	260 12.8	25.8	44 06.8	30.6	225 36.9	39.3	
23	87 58.8	127 30.6	19.3	275 14.7	25.7	59 09.2	30.6	240 39.2	39.3	
24	103 01.3	142 30.0	− 17 18.3	290 16.6	+ 6 25.5	74 11.6	+ 10 30.7	255 41.5	− 8 39.4	
Dif	—	−6	+10	+19	−2	+24	0	+23	0	

MIÉRCOL 4 DE ENERO DE 2012

UT	SOL		☾ LUNA					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 04 ^m 7		SD: 14 ^h 8 Edad: 10 ^d 2 PMG: 20 ^h 24 ^m R°: 49 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°	
^h 0	178 52.8	−22 48.0	63 38.9		14 14.8		60 N	15 09	16 05	17 01	11 37	27	4 16	72	
1	193 52.5		78 10.9	130	21.6	68	58	25	16	08	11 50	30	4 03	69	
2	208 52.3		92 42.8	129	28.4	68	56	39	26	14	12 02	32	3 52	67	
3	223 52.0		107 14.7	129	35.2	68	54	15 51	35	20	12 34		42	65	
4	238 51.7		121 46.5	128	41.8	66	52	16 02	42	26	21 35		34	63	
5	253 51.4	−22 46.8	136 18.3	128	+18 48.4	66	50	16 11	16 49	17 31	12 29	37	3 26	62	
6	268 51.1	−22 46.5	150 50.0	127	+18 54.8	64	45	16 31	17 05	17 42	12 47	38	3 09	60	
7	283 50.8		165 21.7	127	+19 01.2	64	40	16 47	18	17 52	13 01	40	2 56	57	
8	298 50.5		179 53.4	127	07.6	64	35	17 01	29	18 01	13 42		44	56	
9	313 50.3		194 24.9	125	13.8	62	30	13	39	09	24 43		34	54	
10	328 50.0		208 56.4	125	20.0	62	20	34	17 58	25	42 45		17	52	
11	343 49.7	−22 45.2	223 27.9	125	+19 26.0	60	10 N	17 52	18 14	18 41	13 58	47	2 02	50	
12	358 49.4	−22 45.0	237 59.3	124	+19 32.0	60	0	18 08	18 31	18 57	14 13	48	1 48	48	
13	13 49.1		252 30.7	124	37.9	59	10 S	25	18 48	19 15	28 50		34	46	
14	28 48.8		267 02.0	123	43.7	58	20	18 44	19 08	19 37	14 44	52	20	43	
15	43 48.6		281 33.3	123	49.4	57	30	19 05	32	20 05	15 02	54	1 03	41	
16	58 48.3		296 04.5	122	+19 55.1	57	35	18	19 47	23	13 55		0 53	39	
17	73 48.0	−22 43.7	310 35.6	121	+20 00.6	55	40	19 32	20 05	20 46	15 26	56	0 42	37	
18	88 47.7	−22 43.4	325 06.7	121	+20 06.1	55	45	19 50	20 26	21 15	15 41	58	0 28	36	
19	103 47.4		339 37.7	120	11.4	53	50	20 11	20 55	21 57	15 59	60	12	33	
20	118 47.1		354 08.7	120	16.7	53	52	21	21 09	22 22	16 07	62	0 05	31	
21	133 46.9		8 39.7	120	21.9	52	54	33	26	22 59	17 63		***	***	
22	148 46.6		23 10.6	119	27.0	51	56	20 47	21 46	***	28 64		***	***	
23	163 46.3		37 41.4	118	32.0	50	58	21 02	22 13	***	40 67		***	***	
24	178 46.0	−22 41.8	52 12.2	118	+20 36.9	49	60 S	21 21	22 53	***	16 55	69	23 47	33	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 17 ^h 05 ^m 1		Mag.: −4.0 PMG: 14 ^h 31 ^m			Mag.: +0.1 PMG: 4 ^h 38 ^m			Mag.: −2.6 PMG: 19 ^h 00 ^m			Mag.: +0.7 PMG: 6 ^h 56 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
^h 0	103 01.3		142 30.0	−17 18.3		290 16.6	+6 25.5		74 11.6	+10 30.7		255 41.5	−8 39.4		
1	118 03.8		157 29.4		17.4	305 18.6		25.4	89 14.0		30.7	270 43.9		39.4	
2	133 06.2		172 28.8		16.4	320 20.5		25.2	104 16.4		30.8	285 46.2		39.4	
3	148 08.7		187 28.3		15.4	335 22.4		25.1	119 18.8		30.8	300 48.5		39.5	
4	163 11.1		202 27.7		14.5	350 24.4		24.9	134 21.1		30.8	315 50.8		39.5	
5	178 13.6		217 27.1	−17 13.5		5 26.3	+6 24.8		149 23.5	+10 30.9		330 53.1	−8 39.6		
6	193 16.1		232 26.5	−17 12.5		20 28.3	+6 24.6		164 25.9	+10 30.9		345 55.5	−8 39.6		
7	208 18.5		247 26.0		11.6	35 30.2		24.5	179 28.3		31.0	0 57.8		39.7	
8	223 21.0		262 25.4		10.6	50 32.2		24.3	194 30.7		31.0	16 00.1		39.7	
9	238 23.5		277 24.8		09.6	65 34.1		24.2	209 33.1		31.0	31 02.4		39.7	
10	253 25.9		292 24.2		08.6	80 36.1		24.0	224 35.5		31.1	46 04.8		39.8	
11	268 28.4		307 23.7	−17 07.7		95 38.0	+6 23.9		239 37.9	+10 31.1		61 07.1	−8 39.8		
12	283 30.9		322 23.1	−17 06.7		110 39.9	+6 23.8		254 40.3	+10 31.2		76 09.4	−8 39.9		
13	298 33.3		337 22.5		05.7	125 41.9		23.6	269 42.7		31.2	91 11.7		39.9	
14	313 35.8		352 22.0		04.7	140 43.8		23.5	284 45.1		31.2	106 14.1		39.9	
15	328 38.3	7 21.4		03.7		155 45.8		23.3	299 47.4		31.3	121 16.4		40.0	
16	343 40.7	22 20.8		02.8		170 47.7		23.2	314 49.8		31.3	136 18.7		40.0	
17	358 43.2	37 20.3	−17 01.8			185 49.7	+6 23.0		329 52.2	+10 31.4		151 21.0	−8 40.1		
18	13 45.6	52 19.7	−17 00.8			200 51.7	+6 22.9		344 54.6	+10 31.4		166 23.4	−8 40.1		
19	28 48.1	67 19.1	−16 59.8			215 53.6		22.8	359 57.0		31.5	181 25.7		40.1	
20	43 50.6	82 18.6		58.8		230 55.6		22.6	14 59.4		31.5	196 28.0		40.2	
21	58 53.0	97 18.0		57.9		245 57.5		22.5	30 01.8		31.5	211 30.3		40.2	
22	73 55.5	112 17.4		56.9		260 59.5		22.3	45 04.2		31.6	226 32.7		40.3	
23	88 58.0	127 16.9		55.9		276 01.4		22.2	60 06.5		31.6	241 35.0		40.3	
24	104 00.4	142 16.3	−16 54.9			291 03.4	+6 22.1		75 08.9	+10 31.7		256 37.3	−8 40.4		
Dif	—		−6		+10	+19		−1	+24		0		+23		0

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JUEVES 5 DE ENERO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 05 ^m 2		SD: 14 ^h 9 Edad: 11 ^d 2		PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 7 20 ^h : 54 ^m 9									
	PMG: 21 ^h 13 ^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	h m m		
0	178 46.0	− 22 41.8	52 12.2		+ 20 36.9		60 N	7 08	8 04	9 00	12 04 39	5 28 64		
1	193 45.7		66 42.9	117	41.7	48	58	7 01	7 53	8 44	20 41	5 12 63		
2	208 45.4		81 13.6	117	46.5	46	56	6 55	44	30	34 42	4 59 61		
3	223 45.2		95 44.2	116	51.1	46	54	49	35	18	46 43	47 60		
4	238 44.9		110 14.8	116	+ 20 55.6	45	52	44	27	8 07	12 56 44	37 59		
5	253 44.6	− 22 40.5	124 45.3	115	+ 21 00.1	45	50	6 39	7 20	7 58	13 06 44	4 28 58		
6	268 44.3	− 22 40.2	139 15.8	115	+ 21 04.4	43	45	6 28	7 05	7 38	13 25 46	4 09 56		
7	283 44.0	40.0	153 46.2	114	08.7	43	40	18	6 52	22	41 47	3 53 55		
8	298 43.8	39.7	168 16.5	113	12.8	41	35	09	41	7 08	13 55 47	40 54		
9	313 43.5	39.4	182 46.8	113	16.8	40	30	6 01	30	6 57	14 07 48	28 54		
10	328 43.2	39.1	197 17.1	113	20.8	40	20	5 45	6 12	36	27 49	3 09 52		
11	343 42.9	− 22 38.9	211 47.3	112	+ 21 24.6	38	10 N	5 29	5 56	6 18	14 45 50	2 52 51		
12	358 42.6	− 22 38.6	226 17.5	112	+ 21 28.4	38	0	5 13	5 39	6 01	15 01 51	2 36 49		
13	13 42.4	38.3	240 47.6	111	32.0	36	10 S	4 55	22	5 44	18 51	20 48		
14	28 42.1	38.0	255 17.7	111	35.6	36	20	33	5 02	26	36 52	2 03 47		
15	43 41.8	37.8	269 47.7	110	39.0	34	30	4 05	4 38	5 05	15 56 53	1 44 45		
16	58 41.5	37.5	284 17.7	110	42.4	34	35	3 47	23	4 52	16 08 54	32 45		
17	73 41.2	− 22 37.2	298 47.6	109	+ 21 45.6	32	40	3 24	4 05	4 38	16 22 54	1 19 44		
18	88 41.0	− 22 36.9	313 17.5	109	+ 21 48.8	32	45	2 55	3 44	4 21	16 39 55	1 04 42		
19	103 40.7	36.6	327 47.3	108	51.8	30	50	2 13	15	3 59	16 59 56	0 45 40		
20	118 40.4	36.4	342 17.1	108	54.7	29	52	1 48	3 01	49	17 09 56	36 39		
21	133 40.1	36.1	356 46.8	107	+ 21 57.5	28	54	1 11	2 44	37	20 57	26 38		
22	148 39.8	35.8	11 16.5	107	+ 22 00.3	28	56	** **	2 24	23	32 58	15 36		
23	163 39.6	35.5	25 46.1	106	02.9	26	58	** **	1 57	3 08	17 47 58	0 02 35		
24	178 39.3	− 22 35.2	40 15.7	106	+ 22 05.4	25	60 S	** **	1 17	2 49	18 04 59	** **		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 17 ^h 01 ^m 2		Mag.: −4.0 PMG: 14 ^h 31 ^m		Mag.: +0.1 PMG: 4 ^h 35 ^m		Mag.: −2.5 PMG: 18 ^h 56 ^m		Mag.: +0.7 PMG: 6 ^h 52 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
^h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	104 00.4	142 16.3	− 16 54.9		291 03.4	+ 6 22.1	75 08.9	+ 10 31.7	256 37.3	− 8 40.4
1	119 02.9	157 15.7	53.9		306 05.4	21.9	90 11.3	31.7	271 39.6	40.4
2	134 05.4	172 15.2	52.9		321 07.3	21.8	105 13.7	31.7	286 42.0	40.4
3	149 07.8	187 14.6	51.9		336 09.3	21.6	120 16.1	31.8	301 44.3	40.5
4	164 10.3	202 14.1	51.0		351 11.2	21.5	135 18.5	31.8	316 46.6	40.5
5	179 12.8	217 13.5	− 16 50.0		6 13.2	+ 6 21.4	150 20.9	+ 10 31.9	331 48.9	− 8 40.6
6	194 15.2	232 12.9	− 16 49.0		21 15.2	+ 6 21.2	165 23.2	+ 10 31.9	346 51.3	− 8 40.6
7	209 17.7	247 12.4	48.0		36 17.1	21.1	180 25.6	32.0	1 53.6	40.6
8	224 20.1	262 11.8	47.0		51 19.1	21.0	195 28.0	32.0	16 55.9	40.7
9	239 22.6	277 11.3	46.0		66 21.1	20.8	210 30.4	32.0	31 58.3	40.7
10	254 25.1	292 10.7	45.0		81 23.0	20.7	225 32.8	32.1	47 00.6	40.8
11	269 27.5	307 10.2	− 16 44.0		96 25.0	+ 6 20.5	240 35.1	+ 10 32.1	62 02.9	− 8 40.8
12	284 30.0	322 09.6	− 16 43.0		111 27.0	+ 6 20.4	255 37.5	+ 10 32.2	77 05.2	− 8 40.8
13	299 32.5	337 09.1	42.0		126 28.9	20.3	270 39.9	32.2	92 07.6	40.9
14	314 34.9	352 08.5	41.0		141 30.9	20.1	285 42.3	32.3	107 09.9	40.9
15	329 37.4	7 07.9	40.0		156 32.9	20.0	300 44.7	32.3	122 12.2	41.0
16	344 39.9	22 07.4	39.0		171 34.8	19.9	315 47.1	32.4	137 14.6	41.0
17	359 42.3	37 06.8	− 16 38.0		186 36.8	+ 6 19.7	330 49.4	+ 10 32.4	152 16.9	− 8 41.0
18	14 44.8	52 06.3	− 16 37.0		201 38.8	+ 6 19.6	345 51.8	+ 10 32.4	167 19.2	− 8 41.1
19	29 47.2	67 05.7	36.0		216 40.8	19.5	0 54.2	32.5	182 21.5	41.1
20	44 49.7	82 05.2	35.0		231 42.7	19.3	15 56.6	32.5	197 23.9	41.2
21	59 52.2	97 04.6	34.0		246 44.7	19.2	30 59.0	32.6	212 26.2	41.2
22	74 54.6	112 04.1	33.0		261 46.7	19.1	46 01.3	32.6	227 28.5	41.2
23	89 57.1	127 03.5	32.0		276 48.7	18.9	61 03.7	32.7	242 30.9	41.3
24	104 59.6	142 03.0	− 16 31.0		291 50.7	+ 6 18.8	76 06.1	+ 10 32.7	257 33.2	− 8 41.3
Dif	—	−6	+10		+20	−1	+24	0	+23	0

VIERNES 6 DE ENERO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna											
	SD: 16 ^h 3 PMG: 12 ^h 05 ^m 6		SD: 15 ^h 0 Edad: 12 ^d 2 PHE { 4 ^h : 55 ^h 0 12 ^h : 55 ^h 2 20 ^h : 55 ^h 3 PMG: 22 ^h 04 ^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	^h ^m	^h ^m	^h ^m										
0	178	39.3	− 22	35.2	40	15.7	+ 22	05.4	24	60 N	15	12	16	08	17	04	12	43	54	6	32	53		
1	193	39.0		34.9	54	45.3	106	07.8	22	58		28	19		11		13	01	54		15	53		
2	208	38.7		34.6	69	14.8	105	10.0	22	56		42	28		17		16	54		6	00	53		
3	223	38.5		34.4	83	44.3	105	12.2	22	54		15	54	37	23		29	53		5	47	53		
4	238	38.2		34.1	98	13.7	104	14.3	21	52		16	04		45	28		40	53		36	53		
5	253	37.9	− 22	33.8	112	43.1	104	+ 22	16.3	20	50	16	14	16	52	17	33	13	50	53	5	26	53	
6	268	37.6	− 22	33.5	127	12.5	104	+ 22	18.1	18	45	16	33	17	07	17	44	14	11	53	5	05	53	
7	283	37.4		33.2	141	41.8	103	19.8	17	40		16	49		20	17	53		28	53	4	48	53	
8	298	37.1		32.9	156	11.0	102	21.5	17	35		17	03		31	18	02		42	53		34	53	
9	313	36.8		32.6	170	40.3	103	23.0	15	30			15		41	10		14	55	52		22	52	
10	328	36.5		32.3	185	09.5	102	24.4	14	20			35		17	59	26	15	16	53	4	01	52	
11	343	36.3	− 22	32.0	199	38.6	101	+ 22	25.7	13	10 N	17	53	18	15	18	42	15	35	52	3	43	51	
12	358	36.0	− 22	31.7	214	07.7	101	+ 22	26.9	12	0		18	09	18	32	18	58	15	52	52	3	25	52
13	13	35.7		31.5	228	36.8	101	27.9	10	10 S			26		18	49	19	16	16	09	52	3	08	51
14	28	35.4		31.2	243	05.9	101	28.9	10	20		18	44	19	09	19	38		28	51		2	50	51
15	43	35.2		30.9	257	34.9	100	29.7	8	30		19	05		33	20	05		16	49	51		29	50
16	58	34.9		30.6	272	03.9	100	30.4	7	35			18		19	47	23		17	02	51		17	50
17	73	34.6	− 22	30.3	286	32.8	99	+ 22	31.0	6	40	19	32	20	04	20	45	17	16	51	2	03	49	
18	88	34.3	− 22	30.0	301	01.7	99	+ 22	31.5	5	45	19	49	20	26	21	14	17	34	50	1	46	49	
19	103	34.1		29.7	315	30.6	99		31.9	4	50	20	11	20	54	21	56	17	55	49		25	49	
20	118	33.8		29.4	329	59.5	99		32.2	3	52		21	21	08	22	20	18	05	49		15	49	
21	133	33.5		29.1	344	28.3	98		32.3	1	54		32		24	22	55		17	48	1	04	48	
22	148	33.2		28.8	358	57.1	98		32.4	1	56	20	45	21	44	** **			30	48	0	51	48	
23	163	33.0		28.5	13	25.8	97		32.3	1	58	21	01	22	10	** **			18	45	47		37	47
24	178	32.7	− 22	28.2	27	54.6	98	+ 22	32.1	2	60 S	21	20	22	48	** **			19	03	47	0	20	46
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO															
	PMG 16 ^h 57 ^m 2		Mag.: −4.0 PMG: 14 ^h 32 ^m		Mag.: +0.1 PMG: 4 ^h 32 ^m		Mag.: −2.5 PMG: 18 ^h 53 ^m		Mag.: +0.7 PMG: 6 ^h 49 ^m															
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec										
^h	°	'	°	'	°	'	°	'	°	'	°	'	°	'										
0	104	59.6	142	03.0	− 16	31.0	291	50.7	+ 6	18.8	76	06.1	+ 10	32.7	257	33.2	− 8	41.3						
1	120	02.0	157	02.4		30.0	306	52.6		18.7	91	08.5		32.8	272	35.5		41.4						
2	135	04.5	172	01.9		29.0	321	54.6		18.6	106	10.8		32.8	287	37.8		41.4						
3	150	07.0	187	01.4		28.0	336	56.6		18.4	121	13.2		32.9	302	40.2		41.4						
4	165	09.4	202	00.8		27.0	351	58.6		18.3	136	15.6		32.9	317	42.5		41.5						
5	180	11.9	217	00.3	− 16	26.0	7	00.6	+ 6	18.2	151	18.0	+ 10	32.9	332	44.8	− 8	41.5						
6	195	14.4	231	59.7	− 16	25.0	22	02.5	+ 6	18.0	166	20.3	+ 10	33.0	347	47.2	− 8	41.5						
7	210	16.8	246	59.2		24.0	37	04.5		17.9	181	22.7		33.0		2	49.5		41.6					
8	225	19.3	261	58.6		23.0	52	06.5		17.8	196	25.1		33.1	17	51.8		41.6						
9	240	21.7	276	58.1		21.9	67	08.5		17.7	211	27.5		33.1	32	54.2		41.7						
10	255	24.2	291	57.5		20.9	82	10.5		17.5	226	29.8		33.2	47	56.5		41.7						
11	270	26.7	306	57.0	− 16	19.9	97	12.5	+ 6	17.4	241	32.2	+ 10	33.2	62	58.8	− 8	41.7						
12	285	29.1	321	56.5	− 16	18.9	112	14.5	+ 6	17.3	256	34.6	+ 10	33.3	78	01.2	− 8	41.8						
13	300	31.6	336	55.9		17.9	127	16.5		17.2	271	37.0		33.3	93	03.5		41.8						
14	315	34.1	351	55.4		16.9	142	18.5		17.0	286	39.3		33.4	108	05.8		41.9						
15	330	36.5	6	54.9		15.9	157	20.5		16.9	301	41.7		33.4	123	08.1		41.9						
16	345	39.0	21	54.3		14.8	172	22.4		16.8	316	44.1		33.5	138	10.5		41.9						
17	0	41.5	36	53.8	− 16	13.8	187	24.4	+ 6	16.7	331	46.5	+ 10	33.5	153	12.8	− 8	42.0						
18	15	43.9	51	53.2	− 16	12.8	202	26.4	+ 6	16.5	346	48.8	+ 10	33.6	168	15.1	− 8	42.0						
19	30	46.4	66	52.7		11.8	217	28.4		16.4	1	51.2		33.6	183	17.5		42.0						
20	45	48.9	81	52.2		10.8	232	30.4		16.3	16	53.6		33.6	198	19.8		42.1						
21	60	51.3	96	51.6		09.8	247	32.4		16.2	31	55.9		33.7	213	22.1		42.1						
22	75	53.8	111	51.1		08.7	262	34.4		16.0	46	58.3		33.7	228	24.5		42.2						
23	90	56.2	126	50.6		07.7	277	36.4		15.9	62	00.7		33.8	243	26.8		42.2						
24	105	58.7	141	50.0	− 16	06.7	292	38.4	+ 6	15.8	77	03.1	+ 10	33.8	258	29.1	− 8	42.2						
Dif	—		−5		+10		+20		−1		+24		0		+23		0							

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SÁBADO 7 DE ENERO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 3 PMG: 12 ^h 06 ^m 0		SD: 15 ^h 1 Edad: 13 ^d 2		PHE { 4 ^h : 55 ^s 5 12 ^h : 55 ^s 7 20 ^h : 55 ^s 9													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°				
h	°	′	°	′	°	′	° N	h m	h m	h m	h m	h m	h m					
0	178	32.7	− 22	28.2	27	54.6	+ 22	32.1	7 07	8 03	8 58	13 37	69					
1	193	32.4		27.9	42	23.3		31.8	7 01	7 52	42	13 55	66					
2	208	32.1		27.6	56	52.0		31.3	6 54	43	29	14 10	65					
3	223	31.9		27.2	71	20.6		30.8	49	34	17	22	64					
4	238	31.6		26.9	85	49.3		30.1	43	27	8 07	33	63					
5	253	31.3	− 22	26.6	100	17.9	+ 22	29.3	6 39	7 20	7 57	14 43	62					
6	268	31.1	− 22	26.3	114	46.5	+ 22	28.4	6 28	7 05	7 38	15 04	60					
7	283	30.8		26.0	129	15.1		27.4	18	6 52	22	21	59					
8	298	30.5		25.7	143	43.6		26.2	09	41	7 09	35	58					
9	313	30.2		25.4	158	12.1		24.9	6 01	31	6 57	15	47					
10	328	30.0		25.1	172	40.7		23.6	5 45	6 13	37	16	09					
11	343	29.7	− 22	24.8	187	09.2	+ 22	22.1	5 30	5 56	6 19	16	27					
12	358	29.4	− 22	24.5	201	37.6	+ 22	20.4	5 14	5 40	6 02	16	44					
13	13	29.2		24.2	216	06.1		18.7	4 56	23	5 46	17	01					
14	28	28.9		23.8	230	34.6		16.8	34	5 03	27	19	50					
15	43	28.6		23.5	245	03.0		14.9	4 06	4 39	5 06	40	48					
16	58	28.4		23.2	259	31.4		12.8	3 49	25	4 54	17	53					
17	73	28.1	− 22	22.9	273	59.8	+ 22	10.5	3 27	4 07	4 40	18	07					
18	88	27.8	− 22	22.6	288	28.2	+ 22	08.2	2 58	3 46	4 23	18	24					
19	103	27.5		22.3	302	56.6		05.7	2 16	18	4 01	44	42					
20	118	27.3		21.9	317	25.0		03.2	1 52	3 04	3 51	18	54					
21	133	27.0		21.6	331	53.4	+ 22	00.5	1 17	2 48	40	19	05					
22	148	26.7		21.3	346	21.7	+ 21	57.6	** **	27	26	18	38					
23	163	26.5		21.0	0	50.1		54.7	** **	2 02	3 11	32	37					
24	178	26.2	− 22	20.7	15	18.4	+ 21	51.6	** **	1 24	2 52	19	50					
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 53 ^m 3		Mag.: −4.0 PMG: 14 ^h 33 ^m		Mag.: +0.1 PMG: 4 ^h 29 ^m		Mag.: −2.5 PMG: 18 ^h 49 ^m		Mag.: +0.7 PMG: 6 ^h 45 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	′	°	′	°	′	°	′	°	′								
0	105	58.7	141	50.0	− 16	06.7	292	38.4	+ 6	15.8	77	03.1	+ 10	33.8	258	29.1	− 8	42.2
1	121	01.2	156	49.5		05.7	307	40.4		15.7	92	05.4		33.9	273	31.5		42.3
2	136	03.6	171	49.0		04.6	322	42.4		15.6	107	07.8		33.9	288	33.8		42.3
3	151	06.1	186	48.4		03.6	337	44.4		15.4	122	10.2		34.0	303	36.1		42.4
4	166	08.6	201	47.9		02.6	352	46.4		15.3	137	12.5		34.0	318	38.5		42.4
5	181	11.0	216	47.4	− 16	01.6	7	48.4	+ 6	15.2	152	14.9	+ 10	34.1	333	40.8	− 8	42.4
6	196	13.5	231	46.9	− 16	00.5	22	50.4	+ 6	15.1	167	17.3	+ 10	34.1	348	43.1	− 8	42.5
7	211	16.0	246	46.3	− 15	59.5	37	52.5		15.0	182	19.6		34.2	3	45.5		42.5
8	226	18.4	261	45.8		58.5	52	54.5		14.8	197	22.0		34.2	18	47.8		42.5
9	241	20.9	276	45.3		57.5	67	56.5		14.7	212	24.4		34.3	33	50.1		42.6
10	256	23.4	291	44.7		56.4	82	58.5		14.6	227	26.7		34.3	48	52.5		42.6
11	271	25.8	306	44.2	− 15	55.4	98	00.5	+ 6	14.5	242	29.1	+ 10	34.4	63	54.8	− 8	42.7
12	286	28.3	321	43.7	− 15	54.4	113	02.5	+ 6	14.4	257	31.5	+ 10	34.4	78	57.1	− 8	42.7
13	301	30.7	336	43.2		53.3	128	04.5		14.3	272	33.8		34.5	93	59.5		42.7
14	316	33.2	351	42.6		52.3	143	06.5		14.1	287	36.2		34.5	109	01.8		42.8
15	331	35.7	6	42.1		51.3	158	08.5		14.0	302	38.6		34.6	124	04.2		42.8
16	346	38.1	21	41.6		50.2	173	10.6		13.9	317	40.9		34.6	139	06.5		42.8
17	1	40.6	36	41.1	− 15	49.2	188	12.6	+ 6	13.8	332	43.3	+ 10	34.7	154	08.8	− 8	42.9
18	16	43.1	51	40.6	− 15	48.2	203	14.6	+ 6	13.7	347	45.6	+ 10	34.7	169	11.2	− 8	42.9
19	31	45.5	66	40.0		47.1	218	16.6		13.6	2	48.0		34.8	184	13.5		42.9
20	46	48.0	81	39.5		46.1	233	18.6		13.5	17	50.4		34.8	199	15.8		43.0
21	61	50.5	96	39.0		45.1	248	20.6		13.4	32	52.7		34.9	214	18.2		43.0
22	76	52.9	111	38.5		44.0	263	22.7		13.2	47	55.1		34.9	229	20.5		43.1
23	91	55.4	126	38.0		43.0	278	24.7		13.1	62	57.5		35.0	244	22.8		43.1
24	106	57.9	141	37.4	− 15	41.9	293	26.7	+ 6	13.0	77	59.8	+ 10	35.0	259	25.2	− 8	43.1
Dif	—		−5		+10		+20		−1		+24		0		+23		0	

DOMINGO 8 DE ENERO DE 2012

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UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 3 PMG: 12 ^h 06 ^m 5			SD: 15 ^h 2 Edad: 14 ^d 2 PHE { 4 ^h : 56 ^h 1 12 ^h : 56 ^h 2 20 ^h : 56 ^h 4 PMG: 23 ^h 49 ^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	^h ^m	^h ^m	^h ^m	^h ^m		
0	178	26.2	− 22	15	18.4	+ 21	51.6	31	60 N	15 16	16 11	17 06	14 46	79	8 05	29		
1	193	25.9		29	46.8		48.5	33	58	32	22	13	15 01	77	7 49	32		
2	208	25.7		44	15.1		45.2	33	56	45	31	19	15 73		36	34		
3	223	25.4		58	43.4		41.7	35	54	15 57	39	25	26 72		24	36		
4	238	25.1		73	11.8		38.2	35	52	16 07	47	30	36 70		14	37		
5	253	24.9	− 22	87	40.1	+ 21	34.6	36	50	16 16	16 54	17 35	15 45	69	7 04	39		
6	268	24.6	− 22	102	08.5	+ 21	30.8	38	45	16 35	17 09	17 46	16 04	66	6 45	41		
7	283	24.3		116	36.8		26.9	39	40	16 51	21	17 55	20 63		29	43		
8	298	24.1		131	05.1		22.9	40	35	17 05	32	18 04	33 61		15	45		
9	313	23.8		145	33.5		18.8	41	30	16	17 42	12	16 44	60	6 04	46		
10	328	23.5		160	01.8		14.5	43	20	36	18 00	27	17 04	56	5 43	49		
11	343	23.3	− 22	174	30.1	+ 21	10.1	44	10 N	17 54	18 16	18 42	17 21	54	5 26	50		
12	358	23.0	− 22	188	58.5	+ 21	05.7	44	0	18 10	18 33	18 59	17 36	53	5 09	53		
13	13	22.7		203	26.9	+ 21	01.1	46	10 S	27	18 50	19 16	17 52	50	4 53	54		
14	28	22.5		217	55.2	+ 20	56.3	48	20	18 45	19 09	19 38	18 09	47	35	56		
15	43	22.2		232	23.6		51.5	48	30	19 06	33	20 05	28 45		14	59		
16	58	21.9		246	52.0		46.6	49	35	18	19 47	23	40 42		4 02	60		
17	73	21.7	− 22	261	20.3	+ 20	41.5	51	40	19 32	20 04	20 45	18 53	40	3 48	61		
18	88	21.4	− 22	275	48.7	+ 20	36.3	52	45	19 49	20 25	21 13	19 08	38	3 32	63		
19	103	21.2		290	17.1		31.0	53	50	20 10	20 53	21 54	26 36		12	65		
20	118	20.9		304	45.6		25.6	54	52	20	21 06	22 17	35 34		3 02	67		
21	133	20.6		319	14.0		20.1	55	54	31	23	22 50	45 32		2 51	68		
22	148	20.4		333	42.4		14.4	57	56	44	21 42	** **	19 56	30	39	69		
23	163	20.1		348	10.9		08.7	57	58	20 59	22 07	** **	20 09	27	24	72		
24	178	19.8	− 22	2	39.3	+ 20	02.8	59	60 S	21 17	22 43	** **	20 23	24	2 07	75		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 16 ^h 49 ^m 4		Mag.: −4.0 PMG: 14 ^h 34 ^m		Mag.: +0.0 PMG: 4 ^h 26 ^m		Mag.: −2.5 PMG: 18 ^h 45 ^m		Mag.: +0.7 PMG: 6 ^h 41 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
^h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	106	57.9	141	37.4	− 15	41.9	293	26.7	+ 6	13.0	77	59.8	+ 10	35.0	259	25.2	− 8	43.1
1	122	00.3	156	36.9		40.9	308	28.7		12.9	93	02.2		35.1	274	27.5		43.2
2	137	02.8	171	36.4		39.9	323	30.8		12.8	108	04.5		35.1	289	29.9		43.2
3	152	05.2	186	35.9		38.8	338	32.8		12.7	123	06.9		35.2	304	32.2		43.2
4	167	07.7	201	35.4		37.8	353	34.8		12.6	138	09.3		35.2	319	34.5		43.3
5	182	10.2	216	34.9	− 15	36.7	8	36.8	+ 6	12.5	153	11.6	+ 10	35.3	334	36.9	− 8	43.3
6	197	12.6	231	34.3	− 15	35.7	23	38.9	+ 6	12.4	168	14.0	+ 10	35.3	349	39.2	− 8	43.3
7	212	15.1	246	33.8		34.6	38	40.9		12.2	183	16.3		35.4	4	41.5		43.4
8	227	17.6	261	33.3		33.6	53	42.9		12.1	198	18.7		35.4	19	43.9		43.4
9	242	20.0	276	32.8		32.6	68	45.0		12.0	213	21.1		35.5	34	46.2		43.5
10	257	22.5	291	32.3		31.5	83	47.0		11.9	228	23.4		35.5	49	48.6		43.5
11	272	25.0	306	31.8	− 15	30.5	98	49.0	+ 6	11.8	243	25.8	+ 10	35.6	64	50.9	− 8	43.5
12	287	27.4	321	31.3	− 15	29.4	113	51.1	+ 6	11.7	258	28.1	+ 10	35.7	79	53.2	− 8	43.6
13	302	29.9	336	30.8		28.4	128	53.1		11.6	273	30.5		35.7	94	55.6		43.6
14	317	32.4	351	30.3		27.3	143	55.1		11.5	288	32.9		35.8	109	57.9		43.6
15	332	34.8	6	29.8		26.3	158	57.2		11.4	303	35.2		35.8	125	00.3		43.7
16	347	37.3	21	29.2		25.2	173	59.2		11.3	318	37.6		35.9	140	02.6		43.7
17	2	39.7	36	28.7	− 15	24.2	189	01.2	+ 6	11.2	333	39.9	+ 10	35.9	155	04.9	− 8	43.7
18	17	42.2	51	28.2	− 15	23.1	204	03.3	+ 6	11.1	348	42.3	+ 10	36.0	170	07.3	− 8	43.8
19	32	44.7	66	27.7		22.1	219	05.3		11.0	3	44.6		36.0	185	09.6		43.8
20	47	47.1	81	27.2		21.0	234	07.4		10.9	18	47.0		36.1	200	11.9		43.8
21	62	49.6	96	26.7		19.9	249	09.4		10.8	33	49.3		36.1	215	14.3		43.9
22	77	52.1	111	26.2		18.9	264	11.4		10.7	48	51.7		36.2	230	16.6		43.9
23	92	54.5	126	25.7		17.8	279	13.5		10.6	63	54.1		36.2	245	19.0		44.0
24	107	57.0	141	25.2	− 15	16.8	294	15.5	+ 6	10.5	78	56.4	+ 10	36.3	260	21.3	− 8	44.0
Dif	—		−5		+10		+20		−1		+24		+1		+23		0	

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LUNES 9 DE ENERO DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 06 ^m 9		SD: 15:4 Edad: 15 ^d 2		PHE { 4 ^h : 56'6 12 ^h : 56'8 20 ^h : 57'0									
	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	m	h m	m
0	178 19.8	− 22 12.7	2 39.3		+ 20 02.8	60	60 N	7 06	8 02	8 56	16 05	86	8 34	20
1	193 19.6	12.4	17 07.8	95	+ 19 56.8	60	58	7 00	7 51	41	18 82		21	24
2	208 19.3	12.0	31 36.3	95	50.8	60	56	6 54	42	27	28 80		10	26
3	223 19.1	11.7	46 04.8	95	44.5	63	54	48	33	16	38 77		8 00	28
4	238 18.8	11.3	60 33.3	95	38.2	63	52	43	26	8 06	46 75		7 51	30
5	253 18.5	− 22 11.0	75 01.9	96	+ 19 31.8	64	50	6 38	7 19	7 57	16 54	73	7 43	32
6	268 18.3	− 22 10.7	89 30.4	95	+ 19 25.3	65	45	6 27	7 04	7 37	17 10	69	7 26	36
7	283 18.0	10.3	103 59.0	96	18.6	67	40	18	6 52	22	23 66		12	39
8	298 17.8	10.0	118 27.6	96	11.9	67	35	09	41	7 09	34 63		7 00	41
9	313 17.5	09.6	132 56.2	96	+ 19 05.0	69	30	6 01	31	6 57	17 44	61	6 50	43
10	328 17.2	09.3	147 24.9	97	+ 18 58.0	70	20	5 46	6 13	37	18 00	58	32	46
11	343 17.0	− 22 08.9	161 53.5	96	+ 18 50.9	71	10 N	5 31	5 57	6 20	18 15	54	6 16	49
12	358 16.7	− 22 08.6	176 22.2	97	+ 18 43.8	71	0	5 15	5 41	6 03	18 29	51	6 02	51
13	13 16.5	08.2	190 50.9	97	36.5	73	10 S	4 57	24	5 47	42 48		5 47	54
14	28 16.2	07.9	205 19.6	97	29.1	74	20	36	5 04	29	18 56	45	31	57
15	43 15.9	07.5	219 48.4	98	21.6	75	30	4 08	4 41	5 08	19 13	41	13	60
16	58 15.7	07.2	234 17.1	97	13.9	77	35	3 51	27	4 56	22 39		5 02	62
17	73 15.4	− 22 06.8	248 45.9	98	+ 18 06.2	77	40	3 29	4 09	4 42	19 33	37	4 49	65
18	88 15.2	− 22 06.5	263 14.7	98	+ 17 58.4	78	45	3 01	3 48	4 25	19 46	34	4 35	67
19	103 14.9	06.1	277 43.6	99	50.5	79	50	2 20	21	4 04	20 02	29	17	71
20	118 14.6	05.8	292 12.4	98	42.5	80	52	1 57	3 07	3 54	09 28		4 09	72
21	133 14.4	05.4	306 41.3	99	34.3	82	54	1 24	2 51	43	17 26		3 59	75
22	148 14.1	05.1	321 10.2	99	26.1	82	56	** **	32	30	26 23		48	77
23	163 13.9	04.7	335 39.1	99	17.8	83	58	** **	2 07	3 15	36 21		36	80
24	178 13.6	− 22 04.3	350 08.1	100	+ 17 09.4	84	60 S	** **	1 31	2 56	20 47	18	3 22	83
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 16 ^h 45 ^m 4		Mag.: −4.0 PMG: 14 ^h 35 ^m		Mag.: +0.0 PMG: 4 ^h 22 ^m		Mag.: −2.5 PMG: 18 ^h 41 ^m		Mag.: +0.7 PMG: 6 ^h 38 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
0	107 57.0	141 25.2	− 15 16.8		294 15.5	+ 6 10.5	78 56.4	+ 10 36.3	260 21.3	− 8 44.0				
1	122 59.5	156 24.7	15.7		309 17.6	10.4	93 58.8	36.3	275 23.7	44.0				
2	138 01.9	171 24.2	14.7		324 19.6	10.3	109 01.1	36.4	290 26.0	44.1				
3	153 04.4	186 23.7	13.6		339 21.7	10.2	124 03.5	36.5	305 28.3	44.1				
4	168 06.8	201 23.2	12.6		354 23.7	10.1	139 05.8	36.5	320 30.7	44.1				
5	183 09.3	216 22.7	− 15 11.5		9 25.8	+ 6 10.0	154 08.2	+ 10 36.6	335 33.0	− 8 44.2				
6	198 11.8	231 22.2	− 15 10.4		24 27.8	+ 6 09.9	169 10.5	+ 10 36.6	350 35.4	− 8 44.2				
7	213 14.2	246 21.7	09.4		39 29.9	09.8	184 12.9	36.7	5 37.7	44.2				
8	228 16.7	261 21.2	08.3		54 31.9	09.7	199 15.2	36.7	20 40.0	44.3				
9	243 19.2	276 20.7	07.2		69 34.0	09.6	214 17.6	36.8	35 42.4	44.3				
10	258 21.6	291 20.2	06.2		84 36.0	09.5	229 19.9	36.8	50 44.7	44.3				
11	273 24.1	306 19.7	− 15 05.1		99 38.1	+ 6 09.4	244 22.3	+ 10 36.9	65 47.1	− 8 44.4				
12	288 26.6	321 19.2	− 15 04.1		114 40.1	+ 6 09.3	259 24.6	+ 10 36.9	80 49.4	− 8 44.4				
13	303 29.0	336 18.7	03.0		129 42.2	09.2	274 27.0	37.0	95 51.8	44.4				
14	318 31.5	351 18.2	01.9		144 44.3	09.1	289 29.3	37.1	110 54.1	44.5				
15	333 34.0	6 17.7	− 15 00.9		159 46.3	09.0	304 31.7	37.1	125 56.4	44.5				
16	348 36.4	21 17.2	− 14 59.8		174 48.4	08.9	319 34.0	37.2	140 58.8	44.5				
17	3 38.9	36 16.7	− 14 58.7		189 50.4	+ 6 08.8	334 36.4	+ 10 37.2	156 01.1	− 8 44.6				
18	18 41.3	51 16.3	− 14 57.7		204 52.5	+ 6 08.7	349 38.7	+ 10 37.3	171 03.5	− 8 44.6				
19	33 43.8	66 15.8	56.6		219 54.6	08.6	4 41.1	37.3	186 05.8	44.6				
20	48 46.3	81 15.3	55.5		234 56.6	08.5	19 43.4	37.4	201 08.2	44.7				
21	63 48.7	96 14.8	54.4		249 58.7	08.4	34 45.8	37.4	216 10.5	44.7				
22	78 51.2	111 14.3	53.4		265 00.8	08.3	49 48.1	37.5	231 12.8	44.7				
23	93 53.7	126 13.8	52.3		280 02.8	08.2	64 50.5	37.6	246 15.2	44.8				
24	108 56.1	141 13.3	− 14 51.2		295 04.9	+ 6 08.1	79 52.8	+ 10 37.6	261 17.5	− 8 44.8				
Dif	—	−5	+11		+21	−1	+23	+1	+23	0				

MARTES 10 DE ENERO DE 2012

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UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 07 ^m 3			SD: 15 ^h 6 Edad: 16 ^d 2 PHE { 4 ^h : 57/2 12 ^h : 57/3 20 ^h : 57/5 PMG: 0 ^h 41 ^m R°: 51 ^m						Civil	Náutico	Hora	R°	Hora	R°
	hG ☉	Dec		hG ☾	Dif	Dec	Dif								
^h	°	'	°	°	'	°	'	°	^h ^m	^h ^m	^h ^m	^h ^m ^s	^h ^m ^s	^h ^m ^s	^h ^m ^s
0	178	13.6	− 22 04.3	350	08.1	+ 17 09.4	85	60 N	15 20	16 14	17 09	17 31	87	8 54	16
1	193	13.4		4	37.1	+ 17 00.9	85	58	35	25	16	40	84	45	18
2	208	13.1		19	06.1	+ 16 52.2	87	56	15 48	34	22	48	81	36	21
3	223	12.8		33	35.1		87	54	16 00	42	27	17 55	79	28	24
4	238	12.6		48	04.2		88	52	10	50	32	18 01	77	21	26
5	253	12.3	− 22 02.5	62	33.3	+ 16 25.8	89	50	16 19	16 56	17 37	18 07	74	8 15	28
6	268	12.1	− 22 02.2	77	02.4	+ 16 16.8	90	45	16 38	17 11	17 48	18 19	70	8 02	31
7	283	11.8		91	31.5	+ 16 07.7	91	40	16 53	23	17 57	29	67	7 51	34
8	298	11.6		106	00.7	+ 15 58.5	92	35	17 06	34	18 05	37	65	41	37
9	313	11.3		120	29.9		92	30	18	17 44	13	45	62	33	39
10	328	11.1		134	59.1		94	20	37	18 01	28	18 58	57	18	44
11	343	10.8	− 22 00.4	149	28.4	+ 15 30.4	95	10 N	17 55	18 17	18 43	19 09	54	7 05	47
12	358	10.6	− 22 00.0	163	57.7	+ 15 20.9	95	0	18 11	18 33	18 59	19 20	50	6 53	51
13	13	10.3	− 21 59.6	178	27.0		96	10 S	27	18 50	19 17	30	47	41	54
14	28	10.0		192	56.3	+ 15 01.6	97	20	18 45	19 09	19 38	41	43	28	57
15	43	09.8		207	25.7	+ 14 51.7	99	30	19 06	33	20 05	19 54	39	13	61
16	58	09.5		221	55.1		98	35	18	19 47	23	20 01	36	6 04	64
17	73	09.3	− 21 58.1	236	24.5	+ 14 31.9	100	40	19 32	20 04	20 44	20 10	33	5 54	67
18	88	09.0	− 21 57.8	250	53.9	+ 14 21.8	101	45	19 48	20 24	21 12	20 20	29	5 42	70
19	103	08.8		265	23.4		101	50	20 09	20 51	21 51	31	26	28	74
20	118	08.5		279	52.9	+ 14 01.5	102	52	19	21 05	22 14	37	23	21	76
21	133	08.3		294	22.4	+ 13 51.1	104	54	30	21	22 45	43	21	14	78
22	148	08.0		308	52.0		103	56	42	21 39	23 52	49	20	5 05	81
23	163	07.8		323	21.6		105	58	20 57	22 03	** **	20 57	16	4 56	83
24	178	07.5	− 21 55.5	337	51.2	+ 13 19.8	105	60 S	21 15	22 37	** **	21 05	13	4 45	87
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 41 ^m 5		Mag.: −4.0 PMG: 14 ^h 36 ^m			Mag.: +0.0 PMG: 4 ^h 19 ^m			Mag.: −2.5 PMG: 18 ^h 38 ^m			Mag.: +0.7 PMG: 6 ^h 34 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
^h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	108	56.1	141 13.3	− 14 51.2		295 04.9	+ 6 08.1		79 52.8	+ 10 37.6		261 17.5	− 8 44.8		
1	123	58.6	156 12.8	50.2		310 07.0	08.1		94 55.1	37.7		276 19.9	44.8		
2	139	01.1	171 12.3	49.1		325 09.0	08.0		109 57.5	37.7		291 22.2	44.9		
3	154	03.5	186 11.9	48.0		340 11.1	07.9		124 59.8	37.8		306 24.6	44.9		
4	169	06.0	201 11.4	46.9		355 13.2	07.8		140 02.2	37.8		321 26.9	44.9		
5	184	08.5	216 10.9	− 14 45.9		10 15.2	+ 6 07.7		155 04.5	+ 10 37.9		336 29.3	− 8 45.0		
6	199	10.9	231 10.4	− 14 44.8		25 17.3	+ 6 07.6		170 06.9	+ 10 38.0		351 31.6	− 8 45.0		
7	214	13.4	246 09.9	43.7		40 19.4	07.5		185 09.2	38.0		6 33.9	45.0		
8	229	15.8	261 09.4	42.6		55 21.5	07.4		200 11.6	38.1		21 36.3	45.1		
9	244	18.3	276 09.0	41.5		70 23.5	07.3		215 13.9	38.1		36 38.6	45.1		
10	259	20.8	291 08.5	40.5		85 25.6	07.3		230 16.2	38.2		51 41.0	45.1		
11	274	23.2	306 08.0	− 14 39.4		100 27.7	+ 6 07.2		245 18.6	+ 10 38.2		66 43.3	− 8 45.2		
12	289	25.7	321 07.5	− 14 38.3		115 29.8	+ 6 07.1		260 20.9	+ 10 38.3		81 45.7	− 8 45.2		
13	304	28.2	336 07.0	37.2		130 31.8	07.0		275 23.3	38.4		96 48.0	45.2		
14	319	30.6	351 06.5	36.1		145 33.9	06.9		290 25.6	38.4		111 50.4	45.3		
15	334	33.1	6 06.1	35.1		160 36.0	06.8		305 27.9	38.5		126 52.7	45.3		
16	349	35.6	21 05.6	34.0		175 38.1	06.7		320 30.3	38.5		141 55.1	45.3		
17	4	38.0	36 05.1	− 14 32.9		190 40.2	+ 6 06.7		335 32.6	+ 10 38.6		156 57.4	− 8 45.4		
18	19	40.5	51 04.6	− 14 31.8		205 42.3	+ 6 06.6		350 35.0	+ 10 38.7		171 59.8	− 8 45.4		
19	34	43.0	66 04.2	30.7		220 44.3	06.5		5 37.3	38.7		187 02.1	45.4		
20	49	45.4	81 03.7	29.6		235 46.4	06.4		20 39.6	38.8		202 04.4	45.5		
21	64	47.9	96 03.2	28.6		250 48.5	06.3		35 42.0	38.8		217 06.8	45.5		
22	79	50.3	111 02.7	27.5		265 50.6	06.2		50 44.3	38.9		232 09.1	45.5		
23	94	52.8	126 02.3	26.4		280 52.7	06.2		65 46.7	39.0		247 11.5	45.6		
24	109	55.3	141 01.8	− 14 25.3		295 54.8	+ 6 06.1		80 49.0	+ 10 39.0		262 13.8	− 8 45.6		
Dif	—	—	−5	+11		+21	−1		+23	+1		+23	0		

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MIÉRCOL 11 DE ENERO DE 2012

UT	SOL			☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3 PMG: 12 ^h 07 ^m 7			SD: 15 ^h 7 Edad: 17 ^d 2 PHE { 4 ^h : 57 ^m 7 12 ^h : 57 ^m 8 20 ^h : 58 ^m 0 PMG: 1 ^h 32 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	N	h	m	h	m	h	m	m
0	178	07.5	− 21 55.5	337	51.2	+ 13 19.8	107	58	7 05	8 00	8 54	18 58	89	9 10	12	
1	193	07.3	55.2	352	20.8	+ 13 09.1	106	58	6 58	7 49	39	19 04	86	9 03	15	
2	208	07.0	54.8	6	50.5	+ 12 58.4	107	56	53	40	26	09 83	8	57	18	
3	223	06.8	54.4	21	20.2	47.7	107	54	47	32	15	14 80	52	20		
4	238	06.5	54.0	35	49.9	36.8	107	52	42	25	8 05	18 78	47	23		
5	253	06.3	− 21 53.6	50	19.6	+ 12 25.9	109	50	6 38	7 18	7 56	19 21	76	8 43	24	
6	268	06.0	− 21 53.3	64	49.4	+ 12 14.9	110	45	6 27	7 04	7 37	19 29	72	8 33	29	
7	283	05.8	52.9	79	19.2	+ 12 03.9	110	40	18	6 51	21	36 68	25	32		
8	298	05.5	52.5	93	49.0	+ 11 52.7	112	35	09	41	7 08	42 64	18	35		
9	313	05.3	52.1	108	18.8	41.5	112	30	6 01	31	6 57	47 61	12	38		
10	328	05.0	51.7	122	48.7	30.3	112	20	5 46	6 14	37	19 55	57	8 02	42	
11	343	04.8	− 21 51.3	137	18.6	+ 11 18.9	114	10 N	5 32	5 58	6 20	20 03	53	7 52	46	
12	358	04.5	− 21 51.0	151	48.5	+ 11 07.5	114	0	5 16	5 42	6 04	20 10	49	7 44	49	
13	13	04.3	50.6	166	18.5	+ 10 56.1	114	10 S	4 58	25	5 48	17 45	35	53		
14	28	04.0	50.2	180	48.4	44.6	115	20	37	5 06	30	24 41	25	57		
15	43	03.8	49.8	195	18.4	33.0	116	30	4 10	4 43	5 10	33 36	14	62		
16	58	03.5	49.4	209	48.4	21.3	117	35	3 53	28	4 58	37 34	08	64		
17	73	03.3	− 21 49.0	224	18.4	+ 10 09.6	117	40	3 31	4 12	4 44	20 43	31	7 01	67	
18	88	03.0	− 21 48.6	238	48.5	+ 9 57.8	118	45	3 04	3 51	4 27	20 49	28	6 52	71	
19	103	02.8	48.2	253	18.6	46.0	118	50	2 24	24	4 07	20 57	23	42	75	
20	118	02.6	47.9	267	48.7	34.1	119	52	2 02	3 11	3 57	21 00	22	37	78	
21	133	02.3	47.5	282	18.8	22.2	119	54	1 31	2 55	46	04 20	32	80		
22	148	02.1	47.1	296	48.9	+ 9 10.2	120	56	0 24	36	33	09 17	26	82		
23	163	01.8	46.7	311	19.1	+ 8 58.1	121	58	** **	2 12	18	13 15	19	85		
24	178	01.6	− 21 46.3	325	49.2	+ 8 46.0	121	60 S	** **	1 39	3 01	21 18	12	6 12	88	
UT	ARIES PMG: 16 ^h 37 ^m 6		VENUS Mag.: −4.0 PMG: 14 ^h 36 ^m		MARTE Mag.: −0.0 PMG: 4 ^h 16 ^m		JÚPITER Mag.: −2.5 PMG: 18 ^h 34 ^m		SATURNO Mag.: +0.7 PMG: 6 ^h 30 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
	°	'	°	'	°	'	°	'	°	'	°	'				
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'	°
0	109	55.3	141 01.8	− 14 25.3	295 54.8	+ 6 06.1	80 49.0	+ 10 39.0	262 13.8	− 8 45.6						
1	124	57.7	156 01.3	24.2	310 56.9	06.0	95 51.3	39.1	277 16.2	45.6						
2	140	00.2	171 00.8	23.1	325 59.0	05.9	110 53.7	39.1	292 18.5	45.7						
3	155	02.7	186 00.4	22.0	341 01.1	05.8	125 56.0	39.2	307 20.9	45.7						
4	170	05.1	200 59.9	20.9	356 03.2	05.8	140 58.4	39.3	322 23.2	45.7						
5	185	07.6	215 59.4	− 14 19.8	11 05.3	+ 6 05.7	156 00.7	+ 10 39.3	337 25.6	− 8 45.8						
6	200	10.1	230 59.0	− 14 18.8	26 07.4	+ 6 05.6	171 03.0	+ 10 39.4	352 27.9	− 8 45.8						
7	215	12.5	245 58.5	17.7	41 09.5	05.5	186 05.4	39.4	7 30.3	45.8						
8	230	15.0	260 58.0	16.6	56 11.5	05.4	201 07.7	39.5	22 32.6	45.8						
9	245	17.5	275 57.5	15.5	71 13.6	05.4	216 10.0	39.6	37 35.0	45.9						
10	260	19.9	290 57.1	14.4	86 15.7	05.3	231 12.4	39.6	52 37.3	45.9						
11	275	22.4	305 56.6	− 14 13.3	101 17.8	+ 6 05.2	246 14.7	+ 10 39.7	67 39.7	− 8 45.9						
12	290	24.8	320 56.1	− 14 12.2	116 20.0	+ 6 05.1	261 17.0	+ 10 39.7	82 42.0	− 8 46.0						
13	305	27.3	335 55.7	11.1	131 22.1	05.1	276 19.4	39.8	97 44.4	46.0						
14	320	29.8	350 55.2	10.0	146 24.2	05.0	291 21.7	39.9	112 46.7	46.0						
15	335	32.2	5 54.7	08.9	161 26.3	04.9	306 24.0	39.9	127 49.1	46.1						
16	350	34.7	20 54.3	07.8	176 28.4	04.8	321 26.4	40.0	142 51.4	46.1						
17	5	37.2	35 53.8	− 14 06.7	191 30.5	+ 6 04.8	336 28.7	+ 10 40.0	157 53.8	− 8 46.1						
18	20	39.6	50 53.4	− 14 05.6	206 32.6	+ 6 04.7	351 31.0	+ 10 40.1	172 56.1	− 8 46.2						
19	35	42.1	65 52.9	04.5	221 34.7	04.6	6 33.4	40.2	187 58.5	46.2						
20	50	44.6	80 52.4	03.4	236 36.8	04.5	21 35.7	40.2	203 00.8	46.2						
21	65	47.0	95 52.0	02.3	251 38.9	04.5	36 38.0	40.3	218 03.2	46.3						
22	80	49.5	110 51.5	01.2	266 41.0	04.4	51 40.4	40.3	233 05.5	46.3						
23	95	51.9	125 51.1	− 14 00.1	281 43.1	04.3	66 42.7	40.4	248 07.9	46.3						
24	110	54.4	140 50.6	− 13 59.0	296 45.3	+ 6 04.2	81 45.0	+ 10 40.5	263 10.2	− 8 46.3						
Dif	—		−5	+11	+21	−1	+23	+1	+23	0						

JUEVES 12 DE ENERO DE 2012

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UT	SOL			LUNA					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 08 ^m 1			SD: 15 ^h 8 Edad: 18 ^d 2 PHE { 4 ^h : 58 ¹ / ₁ 12 ^h : 58 ² / ₂ 20 ^h : 58 ⁴ / ₄ PMG: 2 ^h 21 ^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	^h m	^h m	^h m	^h m
0	178	01.6	− 21 46.3	325	49.2	+ 8 46.0	121	60 N	15 24	16 18	17 13	20 27 89	9 22 11			
1	193	01.3		340	19.4		112	58	39	28	19	30 86	18 14			
2	208	01.1		354	49.6		112	56	15 52	37	25	32 83	15 17			
3	223	00.8		9	19.8	+ 8 09.4	112	54	16 03	45	30	34 81	12 19			
4	238	00.6		23	50.1	+ 7 57.1	113	52	13	52	35	36 78	10 20			
5	253	00.3	− 21 44.3	38	20.3	+ 7 44.8	112	50	16 21	16 59	17 39	20 37 77	9 07 23			
6	268	00.1	− 21 43.9	52	50.6	+ 7 32.4	113	45	16 40	17 13	17 50	20 41 72	9 02 27			
7	282	59.9	43.5	67	20.9		113	40	16 55	25	17 59	44 68	8 57 31			
8	297	59.6	43.1	81	51.2	+ 7 07.4	113	35	17 08	36	18 07	46 65	53 34			
9	312	59.4	42.7	96	21.5	+ 6 54.9	113	30	19	17 45	15	48 62	50 36			
10	327	59.1	42.3	110	51.8		113	20	39	18 03	30	52 57	44 41			
11	342	58.9	− 21 41.9	125	22.2	+ 6 29.7	114	10 N	17 56	18 18	18 44	20 56 53	8 38 45			
12	357	58.6	− 21 41.5	139	52.5	+ 6 17.1	113	0	18 12	18 34	19 00	20 59 49	8 33 49			
13	12	58.4	41.1	154	22.9	+ 6 04.4	114	10 S	28	18 51	17	21 02 45	28 53			
14	27	58.2	40.7	168	53.3	+ 5 51.7	114	20	18 45	19 09	19 38	05 41	22 58			
15	42	57.9	40.3	183	23.6		113	30	19 05	32	20 05	09 36	16 62			
16	57	57.7	39.9	197	54.0		114	35	17	19 46	22	11 34	12 65			
17	72	57.4	− 21 39.5	212	24.4	+ 5 13.3	114	40	19 31	20 03	20 43	21 14 30	8 08 68			
18	87	57.2	− 21 39.1	226	54.8	+ 5 00.4	114	45	19 47	20 23	21 10	21 17 27	8 03 72			
19	102	57.0	38.7	241	25.3	+ 4 47.5	115	50	20 07	20 50	21 49	20 23	7 57 76			
20	117	56.7	38.3	255	55.7		114	52	17	21 03	22 10	22 20	55 78			
21	132	56.5	37.9	270	26.1		114	54	28	18	22 40	24 18	52 80			
22	147	56.2	37.4	284	56.5	+ 4 08.6	114	56	40	21 37	23 32	26 16	48 83			
23	162	56.0	37.0	299	27.0	+ 3 55.6	115	58	20 55	22 00	** **	28 13	44 86			
24	177	55.8	− 21 36.6	313	57.4	+ 3 42.6	114	60 S	21 12	22 31	** **	21 30 11	7 40 89			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG		Mag.: −4.0			Mag.: −0.0			Mag.: −2.5			Mag.: +0.7				
	16 ^h 33 ^m 7		PMG: 14 ^h 37 ^m			PMG: 4 ^h 12 ^m			PMG: 18 ^h 30 ^m			PMG: 6 ^h 26 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
^h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'	
0	110	54.4	140	50.6	− 13 59.0	296	45.3	+ 6 04.2	81	45.0	+ 10 40.5	263	10.2	− 8 46.3		
1	125	56.9	155	50.1	57.9	311	47.4	04.2	96	47.4	40.5	278	12.6	46.4		
2	140	59.3	170	49.7	56.8	326	49.5	04.1	111	49.7	40.6	293	14.9	46.4		
3	156	01.8	185	49.2	55.7	341	51.6	04.0	126	52.0	40.7	308	17.3	46.4		
4	171	04.3	200	48.8	54.6	356	53.7	04.0	141	54.3	40.7	323	19.6	46.5		
5	186	06.7	215	48.3	− 13 53.5	11	55.8	+ 6 03.9	156	56.7	+ 10 40.8	338	22.0	− 8 46.5		
6	201	09.2	230	47.8	− 13 52.4	26	58.0	+ 6 03.8	171	59.0	+ 10 40.8	353	24.3	− 8 46.5		
7	216	11.7	245	47.4	51.2	42	00.1	03.8	187	01.3	40.9	8	26.7	46.6		
8	231	14.1	260	46.9	50.1	57	02.2	03.7	202	03.7	41.0	23	29.1	46.6		
9	246	16.6	275	46.5	49.0	72	04.3	03.6	217	06.0	41.0	38	31.4	46.6		
10	261	19.1	290	46.0	47.9	87	06.4	03.6	232	08.3	41.1	53	33.8	46.6		
11	276	21.5	305	45.6	− 13 46.8	102	08.6	+ 6 03.5	247	10.6	+ 10 41.2	68	36.1	− 8 46.7		
12	291	24.0	320	45.1	− 13 45.7	117	10.7	+ 6 03.4	262	13.0	+ 10 41.2	83	38.5	− 8 46.7		
13	306	26.4	335	44.7	44.6	132	12.8	03.4	277	15.3	41.3	98	40.8	46.7		
14	321	28.9	350	44.2	43.5	147	15.0	03.3	292	17.6	41.4	113	43.2	46.8		
15	336	31.4	5	43.8	42.4	162	17.1	03.2	307	19.9	41.4	128	45.5	46.8		
16	351	33.8	20	43.3	41.2	177	19.2	03.2	322	22.3	41.5	143	47.9	46.8		
17	6	36.3	35	42.9	− 13 40.1	192	21.3	+ 6 03.1	337	24.6	+ 10 41.5	158	50.2	− 8 46.9		
18	21	38.8	50	42.4	− 13 39.0	207	23.5	+ 6 03.0	352	26.9	+ 10 41.6	173	52.6	− 8 46.9		
19	36	41.2	65	42.0	37.9	222	25.6	03.0	7	29.2	41.7	188	54.9	46.9		
20	51	43.7	80	41.5	36.8	237	27.7	02.9	22	31.6	41.7	203	57.3	46.9		
21	66	46.2	95	41.1	35.7	252	29.9	02.9	37	33.9	41.8	218	59.7	47.0		
22	81	48.6	110	40.6	34.6	267	32.0	02.8	52	36.2	41.9	234	02.0	47.0		
23	96	51.1	125	40.2	33.4	282	34.2	02.7	67	38.5	41.9	249	04.4	47.0		
24	111	53.6	140	39.7	− 13 32.3	297	36.3	+ 6 02.7	82	40.9	+ 10 42.0	264	06.7	− 8 47.1		
Dif	—		−5		+11	+21		−1	+23		+1	+24		0		

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VIERNES 13 DE ENERO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 08 ^m 5		SD: 15 ^h 9 Edad: 19 ^d 2		PHE { 4 ^h : 58 ^h 5 12 ^h : 58 ^h 6 20 ^h : 58 ^h 7			R°: 49 ^m			Hora R°		Hora R°	
	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 55.8	− 21 36.6	313 57.4	115	+ 3 42.6	131	60 N	7 03	7 58	8 51	21 56 91		9 33 11	
1	192 55.5	36.2	328 27.9	114	29.5	130	58	6 57	48	37	56 87		32 14	
2	207 55.3	35.8	342 58.3	114	16.5	130	56	51	39	24	55 84		32 16	
3	222 55.0	35.4	357 28.7	114	+ 3 03.4	131	54	46	31	13	55 81		31 18	
4	237 54.8	35.0	11 59.2	115	+ 2 50.2	132	52	41	24	8 03	54 79		30 21	
5	252 54.6	− 21 34.6	26 29.6	114	+ 2 37.1	131	50	6 37	7 17	7 54	21 54 77		9 30 22	
6	267 54.3	− 21 34.1	41 00.1	115	+ 2 23.9	132	45	6 27	7 03	7 36	21 53 72		9 29 26	
7	282 54.1	33.7	55 30.5	114	+ 2 10.7	132	40	18	6 51	21	52 69		28 30	
8	297 53.9	33.3	70 01.0	115	+ 1 57.5	132	35	09	40	7 08	51 66		27 33	
9	312 53.6	32.9	84 31.4	114	44.3	132	30	6 02	31	6 57	50 63		26 36	
10	327 53.4	32.5	99 01.8	114	31.1	132	20	5 47	6 14	38	49 58		25 40	
11	342 53.2	− 21 32.1	113 32.2	114	+ 1 17.9	132	10 N	5 32	5 58	6 21	21 49 53		9 23 45	
12	357 52.9	− 21 31.6	128 02.7	115	+ 1 04.6	133	0	5 17	5 43	6 05	21 48 49		9 22 49	
13	12 52.7	31.2	142 33.1	114	+ 0 51.4	132	10 S	4 59	26	5 49	47 46		21 53	
14	27 52.4	30.8	157 03.5	114	38.1	133	20	39	5 07	31	46 42		20 57	
15	42 52.2	30.4	171 33.9	114	24.8	133	30	4 12	4 44	5 11	45 37		18 62	
16	57 52.0	30.0	186 04.2	113	+ 0 11.5	133	35	3 55	30	4 59	45 34		17 65	
17	72 51.7	− 21 29.5	200 34.6	114	− 0 01.8	133	40	3 34	4 14	4 46	21 44 31		9 16 69	
18	87 51.5	− 21 29.1	215 05.0	114	− 0 15.1	133	45	3 07	3 54	4 30	21 44 27		9 15 72	
19	102 51.3	28.7	229 35.3	113	28.4	133	50	2 28	27	09	43 23		13 77	
20	117 51.0	28.3	244 05.7	114	41.7	133	52	2 07	3 14	4 00	42 22		13 79	
21	132 50.8	27.8	258 36.0	113	− 0 55.0	133	54	1 37	2 59	3 49	42 19		12 81	
22	147 50.6	27.4	273 06.3	113	− 1 08.3	133	56	0 45	40	37	42 16		11 84	
23	162 50.3	27.0	287 36.6	113	21.5	132	58	** **	2 17	22	41 14		10 87	
24	177 50.1	− 21 26.5	302 06.9	113	− 1 34.8	133	60 S	** **	1 46	3 05	21 41 11		9 09 90	
UT	ARIES PMG 16 ^h 29 ^m 7		VENUS Mag.: −4.0 PMG: 14 ^h 38 ^m		MARTE Mag.: −0.1 PMG: 4 ^h 09 ^m		JÚPITER Mag.: −2.5 PMG: 18 ^h 26 ^m		SATURNO Mag.: +0.7 PMG: 6 ^h 23 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
h	° /	° /	° /		° /		° /		° /					
0	111 53.6	− 13 32.3	140 39.7	32.3	297 36.3	+ 6 02.7	82 40.9	+ 10 42.0	264 06.7	− 8 47.1				
1	126 56.0	31.2	155 39.3	31.2	312 38.4	02.6	97 43.2	42.1	279 09.1	47.1				
2	141 58.5	30.1	170 38.9	30.1	327 40.6	02.6	112 45.5	42.1	294 11.4	47.1				
3	157 00.9	29.0	185 38.4	29.0	342 42.7	02.5	127 47.8	42.2	309 13.8	47.1				
4	172 03.4	27.8	200 38.0	27.8	357 44.9	02.4	142 50.1	42.3	324 16.1	47.2				
5	187 05.9	− 13 26.7	215 37.5	26.7	12 47.0	+ 6 02.4	157 52.5	+ 10 42.3	339 18.5	− 8 47.2				
6	202 08.3	− 13 25.6	230 37.1	25.6	27 49.1	+ 6 02.3	172 54.8	+ 10 42.4	354 20.9	− 8 47.2				
7	217 10.8	24.5	245 36.6	24.5	42 51.3	02.3	187 57.1	42.5	9 23.2	47.3				
8	232 13.3	23.4	260 36.2	23.4	57 53.4	02.2	202 59.4	42.5	24 25.6	47.3				
9	247 15.7	22.2	275 35.8	22.2	72 55.6	02.1	218 01.7	42.6	39 27.9	47.3				
10	262 18.2	21.1	290 35.3	21.1	87 57.7	02.1	233 04.1	42.7	54 30.3	47.3				
11	277 20.7	− 13 20.0	305 34.9	20.0	102 59.9	+ 6 02.0	248 06.4	+ 10 42.7	69 32.6	− 8 47.4				
12	292 23.1	− 13 18.9	320 34.4	18.9	118 02.0	+ 6 02.0	263 08.7	+ 10 42.8	84 35.0	− 8 47.4				
13	307 25.6	17.7	335 34.0	17.7	133 04.2	01.9	278 11.0	42.9	99 37.4	47.4				
14	322 28.0	16.6	350 33.6	16.6	148 06.3	01.9	293 13.3	42.9	114 39.7	47.5				
15	337 30.5	15.5	5 33.1	15.5	163 08.5	01.8	308 15.7	43.0	129 42.1	47.5				
16	352 33.0	14.4	20 32.7	14.4	178 10.6	01.8	323 18.0	43.1	144 44.4	47.5				
17	7 35.4	− 13 13.2	35 32.3	13.2	193 12.8	+ 6 01.7	338 20.3	+ 10 43.1	159 46.8	− 8 47.5				
18	22 37.9	− 13 12.1	50 31.8	12.1	208 14.9	+ 6 01.7	353 22.6	+ 10 43.2	174 49.1	− 8 47.6				
19	37 40.4	11.0	65 31.4	11.0	223 17.1	01.6	8 24.9	43.3	189 51.5	47.6				
20	52 42.8	09.8	80 31.0	09.8	238 19.3	01.6	23 27.2	43.3	204 53.9	47.6				
21	67 45.3	08.7	95 30.5	08.7	253 21.4	01.5	38 29.6	43.4	219 56.2	47.7				
22	82 47.8	07.6	110 30.1	07.6	268 23.6	01.5	53 31.9	43.5	234 58.6	47.7				
23	97 50.2	06.4	125 29.7	06.4	283 25.7	01.4	68 34.2	43.5	250 00.9	47.7				
24	112 52.7	− 13 05.3	140 29.2	05.3	298 27.9	+ 6 01.4	83 36.5	+ 10 43.6	265 03.3	− 8 47.7				
Dif	—	−4	+11		+22	−1	+23	+1	+24	0				

SÁBADO 14 DE ENERO DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16'3 PMG: 12 ^h 08 ^m 8		SD: 16'0 Edad: 20 ^d 2 PHE { 4 ^h : 58'8 12 ^h : 58'8 20 ^h : 58'9 PMG: 3 ^h 59 ^m R°: 50 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	177 50.1	− 21 26.5	302 06.9		− 1 34.8	133	60 N	15 28	16 21	17 16	23 27	91	9 44	11
1	192 49.9	26.1	316 37.1	112	− 1 48.1	133	58	43	31	22	23 88		46 14	
2	207 49.6	25.7	331 07.4	113	− 2 01.4	133	56	15 55	40	28	19 86		48 17	
3	222 49.4	25.3	345 37.6	112	14.7	133	54	16 06	48	33	16 83		49 20	
4	237 49.2	24.8	0 07.8	112	28.0	133	52	16	16 55	37	13 81		51 22	
5	252 48.9	− 21 24.4	14 38.0	112	− 2 41.2	132	50	16 24	17 01	17 42	23 11	78	9 52	24
6	267 48.7	− 21 24.0	29 08.1	111	− 2 54.5	133	45	16 42	17 15	17 52	23 05	74	9 55	28
7	282 48.5	23.5	43 38.3	112	− 3 07.7	132	40	16 57	27	18 01	23 01	70	9 58	32
8	297 48.3	23.1	58 08.4	111	20.9	132	35	17 10	38	09	22 57	66	10 00	35
9	312 48.0	22.7	72 38.5	111	34.1	132	30	21	17 47	16	53 64		02 37	
10	327 47.8	22.2	87 08.5	110	− 3 47.3	132	20	40	18 04	31	47 60		05 43	
11	342 47.6	− 21 21.8	101 38.6	111	− 4 00.5	132	10 N	17 57	18 19	18 45	22 42	55	10 08	47
12	357 47.3	− 21 21.4	116 08.6	110	− 4 13.7	132	0	18 13	18 35	19 01	22 37	52	10 11	50
13	12 47.1	20.9	130 38.6	110	26.8	131	10 S	28	18 51	18	33 47		14 54	
14	27 46.9	20.5	145 08.5	109	40.0	132	20	18 45	19 10	19 38	28 43		17 58	
15	42 46.6	20.0	159 38.5	110	− 4 53.1	131	30	19 05	32	20 04	22 39		20 64	
16	57 46.4	19.6	174 08.4	109	− 5 06.1	130	35	17	19 46	21	19 36		22 66	
17	72 46.2	− 21 19.2	188 38.2	108	− 5 19.2	131	40	19 30	20 02	20 42	22 15	33	10 25	69
18	87 46.0	− 21 18.7	203 08.1	109	− 5 32.2	130	45	19 46	20 22	21 08	22 11	29	10 27	73
19	102 45.7	18.3	217 37.9	108	45.2	130	50	20 06	20 48	21 46	06 25		30 78	
20	117 45.5	17.8	232 07.6	107	− 5 58.2	130	52	15	21 01	22 07	04 23		32 79	
21	132 45.3	17.4	246 37.4	108	− 6 11.1	129	54	26	16	22 34	22 01	21	33 82	
22	147 45.1	16.9	261 07.1	107	24.1	130	56	38	33	23 19	21 58	19	35 84	
23	162 44.8	16.5	275 36.7	106	37.0	129	58	20 52	21 55	** **	55 16		37 87	
24	177 44.6	− 21 16.1	290 06.3	106	− 6 49.8	128	60 S	21 09	22 25	** **	21 52	13	10 39	91
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 25 ^m 8		Mag.: −4.0 PMG: 14 ^h 38 ^m		Mag.: −0.1 PMG: 4 ^h 06 ^m		Mag.: −2.5 PMG: 18 ^h 23 ^m		Mag.: +0.7 PMG: 6 ^h 19 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h 0	112 52.7	140 29.2	− 13 05.3		298 27.9	+ 6 01.4	83 36.5	+ 10 43.6	265 03.3	− 8 47.7				
1	127 55.2	155 28.8	04.2		313 30.1	01.3	98 38.8	43.7	280 05.7	47.8				
2	142 57.6	170 28.4	03.0		328 32.2	01.3	113 41.1	43.7	295 08.0	47.8				
3	158 00.1	185 27.9	01.9		343 34.4	01.2	128 43.4	43.8	310 10.4	47.8				
4	173 02.5	200 27.5	− 13 00.8		358 36.6	01.2	143 45.8	43.9	325 12.7	47.8				
5	188 05.0	215 27.1	− 12 59.6		13 38.7	+ 6 01.1	158 48.1	+ 10 43.9	340 15.1	− 8 47.9				
6	203 07.5	230 26.6	− 12 58.5		28 40.9	+ 6 01.1	173 50.4	+ 10 44.0	355 17.5	− 8 47.9				
7	218 09.9	245 26.2	57.4		43 43.1	01.0	188 52.7	44.1	10 19.8	47.9				
8	233 12.4	260 25.8	56.2		58 45.2	01.0	203 55.0	44.1	25 22.2	48.0				
9	248 14.9	275 25.4	55.1		73 47.4	00.9	218 57.3	44.2	40 24.5	48.0				
10	263 17.3	290 24.9	54.0		88 49.6	00.9	233 59.6	44.3	55 26.9	48.0				
11	278 19.8	305 24.5	− 12 52.8		103 51.8	+ 6 00.8	249 01.9	+ 10 44.3	70 29.3	− 8 48.0				
12	293 22.3	320 24.1	− 12 51.7		118 53.9	+ 6 00.8	264 04.3	+ 10 44.4	85 31.6	− 8 48.1				
13	308 24.7	335 23.7	50.5		133 56.1	00.7	279 06.6	44.5	100 34.0	48.1				
14	323 27.2	350 23.2	49.4		148 58.3	00.7	294 08.9	44.5	115 36.3	48.1				
15	338 29.6	5 22.8	48.3		164 00.5	00.7	309 11.2	44.6	130 38.7	48.1				
16	353 32.1	20 22.4	47.1		179 02.6	00.6	324 13.5	44.7	145 41.1	48.2				
17	8 34.6	35 22.0	− 12 46.0		194 04.8	+ 6 00.6	339 15.8	+ 10 44.8	160 43.4	− 8 48.2				
18	23 37.0	50 21.6	− 12 44.8		209 07.0	+ 6 00.5	354 18.1	+ 10 44.8	175 45.8	− 8 48.2				
19	38 39.5	65 21.1	43.7		224 09.2	00.5	9 20.4	44.9	190 48.2	48.2				
20	53 42.0	80 20.7	42.6		239 11.4	00.5	24 22.7	45.0	205 50.5	48.3				
21	68 44.4	95 20.3	41.4		254 13.6	00.4	39 25.0	45.0	220 52.9	48.3				
22	83 46.9	110 19.9	40.3		269 15.7	00.4	54 27.4	45.1	235 55.2	48.3				
23	98 49.4	125 19.5	39.1		284 17.9	00.3	69 29.7	45.2	250 57.6	48.3				
24	113 51.8	140 19.0	− 12 38.0		299 20.1	+ 6 00.3	84 32.0	+ 10 45.2	266 00.0	− 8 48.4				
Dif	—	−4	+11		+22	0	+23	+1	+24	0				

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DOMINGO 15 DE ENERO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3		SD: 16:1		PHE { 4 ^h : 59:0 12 ^h : 59:1 20 ^h : 59:1									
	PMG: 12 ^h 09 ^m 2		Edad: 21 ^d 2											
	PMG: 4 ^h 49 ^m R°: 52 ^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	44.6	- 21	16.1	290	06.3	- 6 49.8 ¹²⁸	7 01	7 56	8 49	***	***	9 55	15
1	192	44.4		15.6	304	35.9 ¹⁰⁶	- 7 02.6 ¹²⁸	6 55	46	34	***	***	10 00	18
2	207	44.2		15.2	319	05.5 ¹⁰⁶	15.4 ¹²⁸	50	37	22	***	***	05	20
3	222	43.9		14.7	333	35.0 ¹⁰⁵	28.2 ¹²⁸	45	29	11	***	***	09	23
4	237	43.7		14.3	348	04.5 ¹⁰⁵	40.9 ¹²⁷	40	22	8 02	***	***	13	24
5	252	43.5	- 21	13.8	2	33.9 ¹⁰⁴	- 7 53.5 ¹²⁶	6 36	7 16	7 53	***	***	10 16	27
6	267	43.3	- 21	13.4	17	03.3 ¹⁰⁴	- 8 06.2 ¹²⁷	6 26	7 02	7 35	***	***	10 23	31
7	282	43.0		12.9	31	32.6 ¹⁰³	18.8 ¹²⁶	17	6 50	20	***	***	30	34
8	297	42.8		12.5	46	01.9 ¹⁰³	31.3 ¹²⁵	09	40	7 08	***	***	35	37
9	312	42.6		12.0	60	31.2 ¹⁰³	43.8 ¹²⁵	6 01	31	6 57	23 57	65	39	41
10	327	42.4		11.6	75	00.4 ¹⁰²	- 8 56.3 ¹²⁵	5 47	6 14	38	47	60	48	44
11	342	42.1	- 21	11.1	89	29.6 ¹⁰²	- 9 08.7 ¹²⁴	5 33	5 59	6 21	23 37	57	10 55	48
12	357	41.9	- 21	10.6	103	58.7 ¹⁰¹	- 9 21.0 ¹²³	5 18	5 43	6 06	23 29	53	11 01	53
13	12	41.7		10.2	118	27.8 ¹⁰¹	33.3 ¹²³	5 00	27	5 50	20	50	08	56
14	27	41.5		09.7	132	56.8 ¹⁰⁰	45.6 ¹²³	4 40	5 09	33	11	46	15	60
15	42	41.2		09.3	147	25.8 ¹⁰⁰	- 9 57.8 ¹²²	4 14	4 46	13	23 01	42	24	64
16	57	41.0		08.8	161	54.7 ⁹⁹	- 10 10.0 ¹²²	3 57	33	5 01	22 55	39	28	68
17	72	40.8	- 21	08.4	176	23.6 ⁹⁹	- 10 22.1 ¹²¹	3 37	4 16	4 48	22 48	37	11 34	70
18	87	40.6	- 21	07.9	190	52.4 ⁹⁸	- 10 34.1 ¹²⁰	3 10	3 56	4 32	22 40	33	11 40	74
19	102	40.4		07.5	205	21.2 ⁹⁸	46.1 ¹²⁰	2 33	31	12	31	29	48	78
20	117	40.1		07.0	219	49.9 ⁹⁷	- 10 58.0 ¹¹⁹	2 12	18	4 03	27	27	51	81
21	132	39.9		06.5	234	18.6 ⁹⁷	- 11 09.9 ¹¹⁹	1 44	3 03	3 52	22	25	55	83
22	147	39.7		06.1	248	47.2 ⁹⁶	21.7 ¹¹⁸	1 00	2 45	40	17	22	11 59	86
23	162	39.5		05.6	263	15.8 ⁹⁶	33.5 ¹¹⁸	** **	2 23	26	11	20	12 04	89
24	177	39.3	- 21	05.1	277	44.3 ⁹⁵	- 11 45.1 ¹¹⁶	** **	1 53	3 10	22 05	16	12 10	92
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 21 ^m 9		Mag.: -4.0 PMG: 14 ^h 39 ^m		Mag.: -0.1 PMG: 4 ^h 02 ^m		Mag.: -2.5 PMG: 18 ^h 19 ^m		Mag.: +0.7 PMG: 6 ^h 15 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	113	51.8	140	19.0	299	20.1	84	32.0	266	00.0				
1	128	54.3	155	18.6	314	22.3	99	34.3	281	02.3				
2	143	56.8	170	18.2	329	24.5	114	36.6	296	04.7				
3	158	59.2	185	17.8	344	26.7	129	38.9	311	07.1				
4	174	01.7	200	17.4	359	28.9	144	41.2	326	09.4				
5	189	04.1	215	17.0	14	31.1	159	43.5	341	11.8				
6	204	06.6	230	16.5	29	33.3	174	45.8	356	14.2				
7	219	09.1	245	16.1	44	35.5	189	48.1	11	16.5				
8	234	11.5	260	15.7	59	37.7	204	50.4	26	18.9				
9	249	14.0	275	15.3	74	39.9	219	52.7	41	21.3				
10	264	16.5	290	14.9	89	42.1	234	55.0	56	23.6				
11	279	18.9	305	14.5	104	44.3	249	57.3	71	26.0				
12	294	21.4	320	14.1	119	46.5	264	59.6	86	28.3				
13	309	23.9	335	13.6	134	48.7	280	01.9	101	30.7				
14	324	26.3	350	13.2	149	50.9	295	04.2	116	33.1				
15	339	28.8	5	12.8	164	53.1	310	06.5	131	35.4				
16	354	31.3	20	12.4	179	55.3	325	08.8	146	37.8				
17	9	33.7	35	12.0	194	57.5	340	11.1	161	40.2				
18	24	36.2	50	11.6	209	59.7	355	13.4	176	42.5				
19	39	38.6	65	11.2	225	01.9	10	15.7	191	44.9				
20	54	41.1	80	10.8	240	04.1	25	18.0	206	47.3				
21	69	43.6	95	10.4	255	06.3	40	20.3	221	49.6				
22	84	46.0	110	10.0	270	08.5	55	22.6	236	52.0				
23	99	48.5	125	09.6	285	10.7	70	24.9	251	54.4				
24	114	51.0	140	09.2	300	12.9	85	27.2	266	56.7				
Dif	—		-4	+12	+22	0	+23	+1	+24	0				

LUNES 16 DE ENERO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 09 ^m 6		SD: 16 ^h 1 Edad: 22 ^d 2		PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/2									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	177 39.3	−21 05.1	277 44.3		−11 45.1		[°] 58 N	^{h m} 15 33	^{h m} 16 25	^{h m} 17 19	^{h m} 0 58	^m 93	^{h m} 10 10	^m 18
1	192 39.0		292 12.8	95	−11 56.8	117	50	47	35	25	51	89	18	22
2	207 38.8		306 41.2	94	−12 08.3	115	56	15 59	43	31	45	85	25	25
3	222 38.6		321 09.6	94		19.8	54	16 09	51	36	39	83	32	27
4	237 38.4		335 37.9	93		31.2	52	19	16 58	40	34	80	37	30
5	252 38.2	−21 02.8	350 06.1	92	−12 42.6	114	50	16 27	17 04	17 44	0 29	78	10 43	32
6	267 37.9	−21 02.4	4 34.3	92	−12 53.8	112	45	16 45	17 18	17 54	0 19	74	10 54	36
7	282 37.7	01.9	19 02.4	91	−13 05.1	113	40	17 00	29	18 03	11	70	11 04	39
8	297 37.5	01.4	33 30.5	91		16.2	35	12	39	11	0 03	68	12	42
9	312 37.3	01.0	47 58.5	90		27.2	30	23	17 49	18	** ** *	** *	20	44
10	327 37.1	00.5	62 26.4	89		38.2	20	41	18 05	32	** ** *	** *	32	48
11	342 36.9	−21 00.0	76 54.3	89	−13 49.1	109	10 N	17 58	18 20	18 46	** ** *	** *	11 43	52
12	357 36.6	−20 59.5	91 22.2	89	−13 59.9	108	0	18 13	18 35	19 01	** ** *	** *	11 54	54
13	12 36.4	59.1	105 49.9	87	−14 10.7	108	10 S	29	18 51	18	** ** *	** *	12 04	58
14	27 36.2	58.6	120 17.6	87		21.3	20	18 46	19 10	19 38	23 57	50	15	62
15	42 36.0	58.1	134 45.3	87		31.9	30	19 05	32	20 04	43	46	28	65
16	57 35.8	57.6	149 12.9	86		42.4	35	16	19 45	20	34	45	36	67
17	72 35.6	−20 57.2	163 40.4	85	−14 52.8	104	40	19 29	20 01	20 40	23 25	42	12 44	70
18	87 35.4	−20 56.7	178 07.9	85	−15 03.1	103	45	19 45	20 21	21 06	23 13	40	12 54	74
19	102 35.1	56.2	192 35.3	84		13.4	50	20 04	46	21 43	23 00	35	13 06	78
20	117 34.9	55.7	207 02.7	84		23.5	52	14	20 58	22 03	22 54	33	12	79
21	132 34.7	55.3	221 29.9	82		33.6	54	24	21 13	22 29	47	31	18	82
22	147 34.5	54.8	235 57.2	83		43.5	56	36	30	23 08	39	29	25	84
23	162 34.3	54.3	250 24.3	81	−15 53.4	99	58	20 49	21 51	** ** *	31	26	33	87
24	177 34.1	−20 53.8	264 51.4	81	−16 03.2	98	60 S	21 05	22 19	** ** *	22 21	23	13 42	91
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 16 ^h 17 ^m 9		Mag.: −4.0 PMG: 14 ^h 40 ^m		Mag.: −0.1 PMG: 3 ^h 59 ^m		Mag.: −2.5 PMG: 18 ^h 15 ^m		Mag.: +0.7 PMG: 6 ^h 11 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h 0	114 51.0		140 09.2	−12 10.3	300 12.9	+5 59.5	85 27.2	+10 47.0	266 56.7	−8 49.0				
1	129 53.4		155 08.8	09.2	315 15.2	59.5	100 29.5	47.0	281 59.1	49.0				
2	144 55.9		170 08.4	08.0	330 17.4	59.4	115 31.8	47.1	297 01.5	49.0				
3	159 58.4		185 08.0	06.8	345 19.6	59.4	130 34.1	47.2	312 03.8	49.1				
4	175 00.8		200 07.6	05.7	0 21.8	59.4	145 36.4	47.3	327 06.2	49.1				
5	190 03.3		215 07.1	−12 04.5	15 24.0	+5 59.4	160 38.7	+10 47.3	342 08.6	−8 49.1				
6	205 05.7		230 06.7	−12 03.4	30 26.2	+5 59.3	175 41.0	+10 47.4	357 10.9	−8 49.1				
7	220 08.2		245 06.3	02.2	45 28.5	59.3	190 43.3	47.5	12 13.3	49.1				
8	235 10.7		260 05.9	−12 01.0	60 30.7	59.3	205 45.6	47.5	27 15.7	49.2				
9	250 13.1		275 05.5	−11 59.9	75 32.9	59.3	220 47.9	47.6	42 18.1	49.2				
10	265 15.6		290 05.1	58.7	90 35.1	59.2	235 50.2	47.7	57 20.4	49.2				
11	280 18.1		305 04.7	−11 57.5	105 37.4	+5 59.2	250 52.5	+10 47.8	72 22.8	−8 49.2				
12	295 20.5		320 04.3	−11 56.4	120 39.6	+5 59.2	265 54.8	+10 47.8	87 25.2	−8 49.3				
13	310 23.0		335 04.0	55.2	135 41.8	59.2	280 57.1	47.9	102 27.5	49.3				
14	325 25.5		350 03.6	54.0	150 44.0	59.2	295 59.4	48.0	117 29.9	49.3				
15	340 27.9	5 03.2		52.9	165 46.3	59.1	311 01.7	48.1	132 32.3	49.3				
16	355 30.4	20 02.8		51.7	180 48.5	59.1	326 04.0	48.1	147 34.6	49.4				
17	10 32.9	35 02.4	−11 50.5	195 50.7	+5 59.1		341 06.3	+10 48.2	162 37.0	−8 49.4				
18	25 35.3	50 02.0	−11 49.4	210 53.0	+5 59.1		356 08.6	+10 48.3	177 39.4	−8 49.4				
19	40 37.8	65 01.6	48.2	225 55.2	59.1		11 10.9	48.4	192 41.7	49.4				
20	55 40.2	80 01.2	47.0	240 57.4	59.0		26 13.2	48.4	207 44.1	49.5				
21	70 42.7	95 00.8	45.9	255 59.7	59.0		41 15.5	48.5	222 46.5	49.5				
22	85 45.2	110 00.4	44.7	271 01.9	59.0		56 17.8	48.6	237 48.9	49.5				
23	100 47.6	125 00.0	43.5	286 04.1	59.0		71 20.1	48.7	252 51.2	49.5				
24	115 50.1	139 59.6	−11 42.3	301 06.4	+5 59.0		86 22.4	+10 48.7	267 53.6	−8 49.5				
Dif	—	−4	+12		+22	0	+23	+1	+24	0				

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MARTES 17 DE ENERO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 3 PMG: 12 ^h 09 ^m 9		SD: 16 ^h 1 Edad: 23 ^d 2 PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3 PMG: 6 ^h 35 ^m R°: 57 ^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	34.1	− 20	53.8	264	51.4	− 16	03.2	97	60 N	6 59	7 53	8 45	2 31	90
1	192	33.9		53.4	279	18.5	81	12.9	95	58	54	44	31	20	86
2	207	33.7		52.9	293	45.4	79	22.4	95	56	48	35	20	10	83
3	222	33.4		52.4	308	12.4	80	31.9	95	54	43	28	09	2 02	80
4	237	33.2		51.9	322	39.2	78	41.3	94	52	39	21	8 00	1 54	79
5	252	33.0	− 20	51.4	337	06.0	78	− 16	50.6	93	50	6 35	7 15	7 52	1 47
6	267	32.8	− 20	50.9	351	32.7	77	− 16	59.8	92	45	6 25	7 01	7 34	1 33
7	282	32.6		50.5	5 59.4	77	− 17	08.8	90	40	16	6 50	19	21	70
8	297	32.4		50.0	20 26.0	76	17.8	89	90	35	09	40	7 07	11	68
9	312	32.2		49.5	34 52.5	75	26.7	89	30	30	6 01	31	6 56	1 02	66
10	327	32.0		49.0	49 19.0	75	35.5	88	20	20	5 47	6 14	38	0 47	62
11	342	31.8	− 20	48.5	63 45.4	74	− 17	44.1	86	10 N	5 33	5 59	6 22	0 34	59
12	357	31.5	− 20	48.0	78 11.8	74	− 17	52.7	86	0	5 18	5 44	6 06	0 22	56
13	12	31.3		47.5	92 38.1	73	− 18	01.1	84	10 S	5 02	5 28	5 51	0 10	53
14	27	31.1		47.0	107 04.3	72	09.4	83	20	20	4 42	5 10	34	***	***
15	42	30.9		46.6	121 30.5	72	17.6	82	30	30	4 16	4 48	15	***	***
16	57	30.7		46.1	135 56.6	71	25.7	81	35	35	3 59	35	5 03	***	***
17	72	30.5	− 20	45.6	150 22.7	71	− 18	33.7	80	40	3 39	4 19	4 50	***	***
18	87	30.3	− 20	45.1	164 48.7	70	− 18	41.6	79	45	3 13	3 59	4 35	23 53	46
19	102	30.1		44.6	179 14.6	69	49.3	77	50	50	2 37	34	15	35	44
20	117	29.9		44.1	193 40.5	69	− 18	57.0	77	52	2 17	22	4 06	27	43
21	132	29.7		43.6	208 06.4	69	− 19	04.5	75	54	1 51	3 07	3 56	18	41
22	147	29.5		43.1	222 32.1	67	11.9	74	56	56	1 12	2 50	44	23 08	39
23	162	29.3		42.6	236 57.8	67	19.1	72	58	58	** **	29	31	22 57	36
24	177	29.1	− 20	42.1	251 23.5	67	− 19	26.3	72	60 S	** **	2 01	3 15	22 44	33
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 16 ^h 14 ^m 0		Mag.: −4.0 PMG: 14 ^h 40 ^m		Mag.: −0.2 PMG: 3 ^h 55 ^m		Mag.: −2.5 PMG: 18 ^h 12 ^m		Mag.: +0.7 PMG: 6 ^h 07 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	115	50.1	139	59.6	− 11	42.3	301	06.4	+ 5	59.0					
1	130	52.6	154	59.2		41.2	316	08.6		59.0					
2	145	55.0	169	58.8		40.0	331	10.9		58.9					
3	160	57.5	184	58.4		38.8	346	13.1		58.9					
4	176	00.0	199	58.0		37.7	1 15.3			58.9					
5	191	02.4	214	57.7	− 11	36.5	16 17.6	+ 5	58.9	58.9					
6	206	04.9	229	57.3	− 11	35.3	31 19.8	+ 5	58.9	58.9					
7	221	07.4	244	56.9		34.1	46 22.1		58.9	58.9					
8	236	09.8	259	56.5		33.0	61 24.3		58.9	58.9					
9	251	12.3	274	56.1		31.8	76 26.6		58.8	58.8					
10	266	14.7	289	55.7		30.6	91 28.8		58.8	58.8					
11	281	17.2	304	55.3	− 11	29.4	106 31.1	+ 5	58.8	58.8					
12	296	19.7	319	54.9	− 11	28.3	121 33.3	+ 5	58.8	58.8					
13	311	22.1	334	54.6		27.1	136 35.6		58.8	58.8					
14	326	24.6	349	54.2		25.9	151 37.8		58.8	58.8					
15	341	27.1	4 53.8	24.7		24.7	166 40.1		58.8	58.8					
16	356	29.5	19 53.4	23.5		23.5	181 42.4		58.8	58.8					
17	11	32.0	34 53.0	− 11	22.4	196 44.6	+ 5	58.8	58.8	58.8					
18	26	34.5	49 52.6	− 11	21.2	211 46.9	+ 5	58.8	58.8	58.8					
19	41	36.9	64 52.3		20.0	226 49.1		58.8	58.8	58.8					
20	56	39.4	79 51.9		18.8	241 51.4		58.7	58.7	58.7					
21	71	41.8	94 51.5		17.6	256 53.7		58.7	58.7	58.7					
22	86	44.3	109 51.1		16.5	271 55.9		58.7	58.7	58.7					
23	101	46.8	124 50.7		15.3	286 58.2		58.7	58.7	58.7					
24	116	49.2	139 50.4	− 11	14.1	302 00.4	+ 5	58.7	58.7	58.7					
Dif	—	−4	+12		+23	0	+23	+1	+24	0					

MIÉRCOL 18 DE ENERO DE 2012

UT	SOL		☉ LUNA					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna								
	SD: 16 ^h 3 PMG: 12 ^h 10 ^m 2		SD: 16 ^h 2 Edad: 24 ^d 2		PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/2		PMG: 7 ^h 32 ^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	h	m					
0	177	29.1	−20	42.1	251	23.5	−19	26.3	70	60 N	15	37	16	29	17	23	4	01	81	10	55	41
1	192	28.9		41.6	265	49.1		33.3	66	58	15	51		39		29	3	46	79	11	11	42
2	207	28.7		41.1	280	14.7		40.2	69	56	16	03		47		34	33	77		24	44	
3	222	28.4		40.6	294	40.2		47.0	68	54		13	16	54		38	22	75		35	46	
4	237	28.2		40.1	309	05.6	−19	53.6	66	52		22	17	01		43	13	73		45	47	
5	252	28.0	−20	39.6	323	31.0	−20	00.2	66	50	16	30	17	07	17	47	3	04	72	11	54	49
6	267	27.8	−20	39.1	337	56.3	−20	06.6	64	45	16	48	17	20	17	56	2	46	69	12	13	51
7	282	27.6		38.6	352	21.6		12.8	62	40	17	02		31	18	05	31	68		28	53	
8	297	27.4		38.1	6	46.9		19.0	62	35		14		41		12	19	65		41	54	
9	312	27.2		37.6	21	12.0		25.0	60	30		24	17	50		19	2	08	64	12	53	55
10	327	27.0		37.1	35	37.2		30.8	58	20		43	18	06		33	1	49	62	13	12	57
11	342	26.8	−20	36.6	50	02.3	−20	36.6	58	10 N	17	59	18	21	18	47	1	33	60	13	30	57
12	357	26.6	−20	36.1	64	27.3	−20	42.2	56	0	18	14	18	36	19	02	1	18	58	13	46	59
13	12	26.4		35.6	78	52.3		47.6	54	10 S		29	18	52		18	1	03	57	14	02	60
14	27	26.2		35.1	93	17.3		53.0	54	20	18	46	19	09	19	38	0	47	55		19	61
15	42	26.0		34.6	107	42.2	−20	58.2	52	30	19	05		31	20	03	29	52		39	63	
16	57	25.8		34.1	122	07.1	−21	03.2	50	35		16	19	44		19	19	50		14	50	64
17	72	25.6	−20	33.6	136	31.9	−21	08.1	49	40	19	29	20	00	20	39	0	07	48	15	03	66
18	87	25.4	−20	33.1	150	56.7	−21	12.9	48	45	19	44	20	19	21	04	***	***	***	15	19	67
19	102	25.2		32.6	165	21.5		17.6	47	50	20	03		44		40	***	***	***		39	68
20	117	25.0		32.1	179	46.2		22.1	45	52		12	20	56	21	59	***	***	***		48	69
21	132	24.8		31.6	194	10.9		26.4	43	54		22	21	10	22	23	23	59	53	15	58	70
22	147	24.6		31.0	208	35.5		30.7	43	56		33		26	22	59		47	52	16	10	71
23	162	24.4		30.5	223	00.2		34.7	40	58	20	46	21	47	***	***		33	51		23	73
24	177	24.2	−20	30.0	237	24.7	−21	38.7	40	60 S	21	02	22	13	***	***	23	17	49	16	39	74
UT	ARIES PMG 16 ^h 10 ^m 1		VENUS Mag.: −4.0 PMG: 14 ^h 41 ^m			MARTE Mag.: −0.2 PMG: 3 ^h 51 ^m			JÚPITER Mag.: −2.4 PMG: 18 ^h 08 ^m			SATURNO Mag.: +0.7 PMG: 6 ^h 04 ^m										
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'								
0	116	49.2	139	50.4	−11	14.1	302	00.4	+5	58.7	87	17.3	+10	50.6	268	50.6	−8	50.1				
1	131	51.7	154	50.0		12.9	317	02.7		58.7	102	19.6		50.7	283	52.9		50.1				
2	146	54.2	169	49.6		11.7	332	05.0		58.7	117	21.8		50.7	298	55.3		50.1				
3	161	56.6	184	49.2		10.5	347	07.2		58.7	132	24.1		50.8	313	57.7		50.1				
4	176	59.1	199	48.9		09.4	2	09.5		58.7	147	26.4		50.9	329	00.1		50.2				
5	192	01.6	214	48.5	−11	08.2	17	11.8	+5	58.7	162	28.7	+10	51.0	344	02.4	−8	50.2				
6	207	04.0	229	48.1	−11	07.0	32	14.1	+5	58.7	177	31.0	+10	51.1	359	04.8	−8	50.2				
7	222	06.5	244	47.7		05.8	47	16.3		58.7	192	33.3		51.1	14	07.2		50.2				
8	237	09.0	259	47.3		04.6	62	18.6		58.7	207	35.5		51.2	29	09.6		50.2				
9	252	11.4	274	47.0		03.4	77	20.9		58.7	222	37.8		51.3	44	11.9		50.3				
10	267	13.9	289	46.6		02.2	92	23.2		58.7	237	40.1		51.4	59	14.3		50.3				
11	282	16.3	304	46.2	−11	01.0	107	25.4	+5	58.7	252	42.4	+10	51.5	74	16.7	−8	50.3				
12	297	18.8	319	45.9	−10	59.9	122	27.7	+5	58.7	267	44.7	+10	51.5	89	19.1	−8	50.3				
13	312	21.3	334	45.5		58.7	137	30.0		58.7	282	46.9		51.6	104	21.4		50.4				
14	327	23.7	349	45.1		57.5	152	32.3		58.7	297	49.2		51.7	119	23.8		50.4				
15	342	26.2	4	44.7		56.3	167	34.6		58.7	312	51.5		51.8	134	26.2		50.4				
16	357	28.7	19	44.4		55.1	182	36.8		58.7	327	53.8		51.9	149	28.6		50.4				
17	12	31.1	34	44.0	−10	53.9	197	39.1	+5	58.7	342	56.1	+10	51.9	164	31.0	−8	50.4				
18	27	33.6	49	43.6	−10	52.7	212	41.4	+5	58.7	357	58.3	+10	52.0	179	33.3	−8	50.5				
19	42	36.1	64	43.3		51.5	227	43.7		58.7	13	00.6		52.1	194	35.7		50.5				
20	57	38.5	79	42.9		50.3	242	46.0		58.7	28	02.9		52.2	209	38.1		50.5				
21	72	41.0	94	42.5		49.1	257	48.3		58.7	43	05.2		52.3	224	40.5		50.5				
22	87	43.5	109	42.1		47.9	272	50.6		58.7	58	07.5		52.3	239	42.8		50.5				
23	102	45.9	124	41.8		46.7	287	52.9		58.7	73	09.7		52.4	254	45.2		50.6				
24	117	48.4	139	41.4	−10	45.5	302	55.2	+5	58.7	88	12.0	+10	52.5	269	47.6	−8	50.6				
Dif	—		−4		+12		+23	0		+23	+1		+24	0								

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JUEVES 19 DE ENERO DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 10 ^m 5			SD: 16 ^h 1 Edad: 25 ^d 2 PMG: 8 ^h 31 ^m R°: 59 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
^h 0	177	24.2	− 20 30.0	237	24.7	− 21 38.7	60 N	6 57	7 50	8 42	5 22	66	11 36	58	
1	192	24.0		251	49.3	56 42.5	58	51	41	29	5 05	64	11 53	59	
2	207	23.8		266	13.8	55 46.1	56	46	33	17	4 50	64	12 08	59	
3	222	23.6		280	38.3	55 49.6	54	42	26	8 07	37	64	21	59	
4	237	23.4		295	02.8	55 53.0	52	37	19	7 58	26	64	32	59	
5	252	23.2	− 20 27.4	309	27.2	54 − 21 56.2	50	6 33	7 13	7 50	4 16	63	12 43	59	
6	267	23.0	− 20 26.9	323	51.7	55 − 21 59.3	45	6 24	7 00	7 33	3 55	63	13 04	59	
7	282	22.8		338	16.1	54 − 22 02.2	40	16	6 49	18	39	62	21	59	
8	297	22.6		352	40.4	53 05.0	35	08	39	7 06	24	62	35	59	
9	312	22.4		7	04.8	54 07.6	30	6 01	30	6 56	3 12	62	13 48	59	
10	327	22.3		21	29.1	53 10.1	20	5 47	14	38	2 51	61	14 09	59	
11	342	22.1	− 20 24.3	35	53.5	54 − 22 12.4	10 N	5 34	6 00	6 22	2 33	60	14 27	60	
12	357	21.9	− 20 23.8	50	17.8	53 − 22 14.6	0	5 19	5 45	6 07	2 16	60	14 45	59	
13	12	21.7	23.3	64	42.1	53 16.6	10 S	5 03	29	5 52	2 00	58	15 02	59	
14	27	21.5	22.8	79	06.3	52 18.5	20	4 43	5 11	35	1 42	58	20	60	
15	42	21.3	22.3	93	30.6	53 20.3	30	18	4 50	16	21	57	42	59	
16	57	21.1	21.7	107	54.9	53 21.8	35	4 02	37	5 05	1 09	57	15 54	59	
17	72	20.9	− 20 21.2	122	19.1	52 − 22 23.3	40	3 42	4 21	4 53	0 55	56	16 09	58	
18	87	20.7	− 20 20.7	136	43.4	53 − 22 24.6	45	3 17	4 02	4 37	0 39	55	16 26	58	
19	102	20.5	20.2	151	07.7	53 25.7	50	2 42	3 38	19	19	54	47	58	
20	117	20.3	19.6	165	31.9	52 26.7	52	2 22	26	10	0 10	53	16 57	58	
21	132	20.1	19.1	179	56.2	53 27.5	54	1 58	3 12	4 00	** ** *	** *	17 08	58	
22	147	19.9	18.6	194	20.4	52 28.2	56	1 23	2 55	3 48	** ** *	** *	21	57	
23	162	19.7	18.0	208	44.7	53 28.8	58	** ** *	35	35	** ** *	** *	36	57	
24	177	19.6	− 20 17.5	223	08.9	52 − 22 29.2	60 S	** ** *	2 09	3 20	** ** *	** *	17 53	57	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 16 ^h 06 ^m 1		Mag.: −4.0 PMG: 14 ^h 42 ^m			Mag.: −0.2 PMG: 3 ^h 48 ^m			Mag.: −2.4 PMG: 18 ^h 04 ^m			Mag.: +0.7 PMG: 6 ^h 00 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
^h 0	117	48.4	139	41.4	− 10 45.5	302	55.2	+ 5 58.7	88	12.0	+ 10 52.5	269	47.6	− 8 50.6	
1	132	50.8	154	41.1	44.4	317	57.4	58.7	103	14.3	52.6	284	50.0	50.6	
2	147	53.3	169	40.7	43.2	332	59.7	58.8	118	16.6	52.7	299	52.4	50.6	
3	162	55.8	184	40.3	42.0	348	02.0	58.8	133	18.8	52.7	314	54.7	50.6	
4	177	58.2	199	40.0	40.8	3	04.3	58.8	148	21.1	52.8	329	57.1	50.7	
5	193	00.7	214	39.6	− 10 39.6	18	06.6	+ 5 58.8	163	23.4	+ 10 52.9	344	59.5	− 8 50.7	
6	208	03.2	229	39.2	− 10 38.4	33	08.9	+ 5 58.8	178	25.7	+ 10 53.0	0	01.9	− 8 50.7	
7	223	05.6	244	38.9	37.2	48	11.2	58.8	193	27.9	53.1	15	04.3	50.7	
8	238	08.1	259	38.5	36.0	63	13.5	58.8	208	30.2	53.1	30	06.6	50.7	
9	253	10.6	274	38.1	34.8	78	15.8	58.8	223	32.5	53.2	45	09.0	50.7	
10	268	13.0	289	37.8	33.6	93	18.1	58.8	238	34.8	53.3	60	11.4	50.8	
11	283	15.5	304	37.4	− 10 32.4	108	20.4	+ 5 58.8	253	37.0	+ 10 53.4	75	13.8	− 8 50.8	
12	298	18.0	319	37.1	− 10 31.2	123	22.8	+ 5 58.9	268	39.3	+ 10 53.5	90	16.2	− 8 50.8	
13	313	20.4	334	36.7	30.0	138	25.1	58.9	283	41.6	53.6	105	18.5	50.8	
14	328	22.9	349	36.3	28.8	153	27.4	58.9	298	43.9	53.6	120	20.9	50.8	
15	343	25.3	4	36.0	27.6	168	29.7	58.9	313	46.1	53.7	135	23.3	50.9	
16	358	27.8	19	35.6	26.4	183	32.0	58.9	328	48.4	53.8	150	25.7	50.9	
17	13	30.3	34	35.3	− 10 25.2	198	34.3	+ 5 58.9	343	50.7	+ 10 53.9	165	28.1	− 8 50.9	
18	28	32.7	49	34.9	− 10 24.0	213	36.6	+ 5 58.9	358	53.0	+ 10 54.0	180	30.5	− 8 50.9	
19	43	35.2	64	34.5	22.8	228	38.9	59.0	13	55.2	54.0	195	32.8	50.9	
20	58	37.7	79	34.2	21.6	243	41.2	59.0	28	57.5	54.1	210	35.2	51.0	
21	73	40.1	94	33.8	20.4	258	43.6	59.0	43	59.8	54.2	225	37.6	51.0	
22	88	42.6	109	33.5	19.2	273	45.9	59.0	59	02.0	54.3	240	40.0	51.0	
23	103	45.1	124	33.1	17.9	288	48.2	59.0	74	04.3	54.4	255	42.4	51.0	
24	118	47.5	139	32.8	− 10 16.7	303	50.5	+ 5 59.0	89	06.6	+ 10 54.5	270	44.7	− 8 51.0	
Dif	—		−4		+12	+23		0	+23		+1	+24		0	


VIERNES 20 DE ENERO DE 2012

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UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 10 ^m 8			SD: 16 ^h 1 Edad: 26 ^d 2 PHE { 4 ^h : 59 ⁰ 12 ^h : 58 ⁹ 20 ^h : 58 ⁸ PMG: 9 ^h 30 ^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	h m m		
0	177	19.6	− 20	223	08.9	− 22	29.2	15 42	16 33	17 27	6 28 46	12 34 74			
1	192	19.4		237	33.2		29.4	15 55	42	32	6 09 49	12 52 72			
2	207	19.2		251	57.4		29.5	16 07	50	37	5 54 50	13 07 71			
3	222	19.0		266	21.7		29.4	17	16 57	42	41 51	20 70			
4	237	18.8		280	46.0		29.2	25	17 04	46	30 51	31 69			
5	252	18.6	− 20	295	10.3	− 22	28.9	16 33	17 10	17 50	5 19 53	13 42 67			
6	267	18.4	− 20	309	34.6	− 22	28.4	16 50	17 23	17 59	4 58 54	14 03 66			
7	282	18.2		323	59.0		27.7	17 04	34	18 07	41 55	20 65			
8	297	18.0		338	23.3		26.9	16	43	14	26 56	34 64			
9	312	17.8		352	47.7		25.9	26	17 52	21	4 14 56	14 47 63			
10	327	17.7		7	12.1		24.8	17 44	18 07	34	3 52 57	15 08 61			
11	342	17.5	− 20	21	36.5	− 22	23.6	18 00	18 22	18 48	3 33 58	15 27 59			
12	357	17.3	− 20	36	01.0	− 22	22.2	18 14	18 36	19 02	3 16 59	15 44 58			
13	12	17.1		50	25.4		20.7	29	18 52	18	2 58 60	16 01 57			
14	27	16.9		64	49.9		19.0	18 45	19 09	19 38	40 60	20 55			
15	42	16.7		79	14.4		17.1	19 04	30	20 02	18 62	41 53			
16	57	16.5		93	39.0		15.2	15	43	18	2 06 62	16 53 53			
17	72	16.4	− 20	108	03.6	− 22	13.0	19 27	19 59	20 37	1 51 63	17 07 51			
18	87	16.2	− 20	122	28.2	− 22	10.8	19 42	20 17	21 02	1 34 63	17 24 49			
19	102	16.0		136	52.9		08.3	20 01	41	36	13 64	45 47			
20	117	15.8		151	17.6		05.8	20 53	21 55	21 55	1 03 64	17 55 46			
21	132	15.6		165	42.3		03.1	19	21 06	22 18	0 52 64	18 06 44			
22	147	15.4		180	07.1	− 22	00.2	30	22	22 50	39 65	18 43			
23	162	15.2		194	31.9	− 21	57.2	43	21 42	** **	24 66	33 41			
24	177	15.1	− 20	208	56.7	− 21	54.1	20 58	22 07	** **	0 06 67	18 50 38			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 16 ^h 02 ^m 2		Mag.: −4.0 PMG: 14 ^h 42 ^m			Mag.: −0.2 PMG: 3 ^h 44 ^m			Mag.: −2.4 PMG: 18 ^h 01 ^m			Mag.: +0.6 PMG: 5 ^h 56 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	'	°	°	'		
0	118	47.5	139	32.8	− 10	303	50.5	+ 5	89	06.6	+ 10	270	44.7	− 8	51.0
1	133	50.0	154	32.4		318	52.8	59.1	104	08.8	54.5	285	47.1		51.0
2	148	52.5	169	32.1		333	55.2	59.1	119	11.1	54.6	300	49.5		51.1
3	163	54.9	184	31.7		348	57.5	59.1	134	13.4	54.7	315	51.9		51.1
4	178	57.4	199	31.3		3	59.8	59.1	149	15.7	54.8	330	54.3		51.1
5	193	59.8	214	31.0	− 10	19	02.1	+ 5	164	17.9	+ 10	345	56.7	− 8	51.1
6	209	02.3	229	30.6	− 10	34	04.5	+ 5	179	20.2	+ 10	0	59.1	− 8	51.1
7	224	04.8	244	30.3		49	06.8	59.2	194	22.5	55.0	16	01.4		51.2
8	239	07.2	259	29.9		64	09.1	59.2	209	24.7	55.1	31	03.8		51.2
9	254	09.7	274	29.6		79	11.4	59.2	224	27.0	55.2	46	06.2		51.2
10	269	12.2	289	29.2		94	13.8	59.2	239	29.3	55.3	61	08.6		51.2
11	284	14.6	304	28.9	− 10	109	16.1	+ 5	254	31.5	+ 10	76	11.0	− 8	51.2
12	299	17.1	319	28.5	− 10	124	18.4	+ 5	269	33.8	+ 10	91	13.4	− 8	51.2
13	314	19.6	334	28.2	− 10	139	20.8	59.3	284	36.1	55.6	106	15.7		51.3
14	329	22.0	349	27.8	− 9	154	23.1	59.3	299	38.3	55.6	121	18.1		51.3
15	344	24.5	4	27.5		169	25.5	59.4	314	40.6	55.7	136	20.5		51.3
16	359	27.0	19	27.2		184	27.8	59.4	329	42.9	55.8	151	22.9		51.3
17	14	29.4	34	26.8	− 9	199	30.1	+ 5	344	45.1	+ 10	166	25.3	− 8	51.3
18	29	31.9	49	26.5	− 9	214	32.5	+ 5	359	47.4	+ 10	181	27.7	− 8	51.4
19	44	34.3	64	26.1		229	34.8	59.5	14	49.6	56.1	196	30.1		51.4
20	59	36.8	79	25.8		244	37.2	59.5	29	51.9	56.1	211	32.4		51.4
21	74	39.3	94	25.4		259	39.5	59.5	44	54.2	56.2	226	34.8		51.4
22	89	41.7	109	25.1		274	41.8	59.6	59	56.4	56.3	241	37.2		51.4
23	104	44.2	124	24.7		289	44.2	59.6	74	58.7	56.4	256	39.6		51.4
24	119	46.7	139	24.4	− 9	304	46.5	+ 5	90	01.0	+ 10	271	42.0	− 8	51.5
Dif	—	−3	+12			+23	0		+23	+1		+24	0		

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SÁBADO 21 DE ENERO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 3 PMG: 12 ^h 11 ^m 1		SD: 16 ^h 0 Edad: 27 ^d 2		PHE { 4 ^h : 58 ^h /7 12 ^h : 58 ^h /6 20 ^h : 58 ^h /4	PMG: 10 ^h 29 ^m R°: 56 ^m		Hora R°			Hora R°							
	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	177	15.1	− 20	04.6	208	56.7	− 21	54.1	60 N	6 55	7 47	8 38	7 14	32	13 48	85		
1	192	14.9		04.1	223	21.6	59	50.8	58	49	39	25	6 58	34	14 04	82		
2	207	14.7		03.6	237	46.6	60	47.4	56	44	31	14	44	37	18 79			
3	222	14.5		03.0	252	11.6	60	43.9	54	40	24	8 04	32	39	30 76			
4	237	14.3		02.5	266	36.6	60	40.2	52	36	17	7 56	21	41	40 75			
5	252	14.2	− 20	01.9	281	01.7	61	− 21	50	6 32	7 12	7 48	6 12	42	14 49	73		
6	267	14.0	− 20	01.4	295	26.8	61	− 21	45	6 23	6 59	7 31	5 52	45	15 09	70		
7	282	13.8		00.8	309	52.0	62	28.3	40	15	48	17	36	47	25 67			
8	297	13.6	− 20	00.3	324	17.3	63	24.1	35	08	38	7 06	22	49	38 65			
9	312	13.4	− 19	59.7	338	42.6	63	19.7	30	6 01	30	6 55	5 10	50	15 50	63		
10	327	13.3		59.2	353	07.9	63	15.2	20	5 47	14	38	4 49	53	16 09	61		
11	342	13.1	− 19	58.6	7 33.3	64	− 21	10.6	10 N	5 34	6 00	6 22	4 31	55	16 26	58		
12	357	12.9	− 19	58.1	21 58.8	65	− 21	05.8	0	5 20	5 46	6 08	4 15	57	16 42	56		
13	12	12.7		57.5	36 24.3	65	− 21	00.9	10 S	5 04	30	5 53	3 58	59	16 58	53		
14	27	12.5		57.0	50 49.9	66	− 20	55.9	20	4 45	5 13	37	40	61	17 15	50		
15	42	12.4		56.4	65 15.6	67		50.7	30	20	4 52	18	20	63	34 48			
16	57	12.2		55.8	79 41.3	67		45.5	35	4 04	39	5 07	3 08	64	46 45			
17	72	12.0	− 19	55.3	94 07.1	68	− 20	40.0	40	3 45	4 24	4 55	2 54	66	17 58	44		
18	87	11.8	− 19	54.7	108 32.9	68	− 20	34.5	45	3 20	4 05	4 40	2 37	68	18 13	41		
19	102	11.6		54.2	122 58.8	69		28.9	50	2 46	3 41	22	17	71	32 38			
20	117	11.5		53.6	137 24.8	70		23.1	52	28	30	13	2 07	72	41 36			
21	132	11.3		53.1	151 50.9	71		17.2	54	2 05	16	4 03	1 56	74	18 50	34		
22	147	11.1		52.5	166 17.0	71		11.1	56	1 33	3 00	3 52	44	75	19 01	32		
23	162	10.9		52.0	180 43.2	72	− 20	05.0	58	** **	2 41	40	30	77	14 29			
24	177	10.8	− 19	51.4	195 09.4	72	− 19	58.7	60 S	** **	2 16	3 25	1 13	80	19 28	26		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 15 ^h 58 ^m 3		Mag.: −4.1 PMG: 14 ^h 43 ^m		Mag.: −0.3 PMG: 3 ^h 40 ^m		Mag.: −2.4 PMG: 17 ^h 57 ^m		Mag.: +0.6 PMG: 5 ^h 52 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	119	46.7	139	24.4	− 9	47.7	304	46.5	+ 5	59.6	90	01.0	+ 10	56.5	271	42.0	− 8	51.5
1	134	49.1	154	24.1		46.5	319	48.9		59.7	105	03.2		56.6	286	44.4		51.5
2	149	51.6	169	23.7		45.2	334	51.2		59.7	120	05.5		56.7	301	46.8		51.5
3	164	54.1	184	23.4		44.0	349	53.6		59.7	135	07.7		56.7	316	49.2		51.5
4	179	56.5	199	23.0		42.8	4 55.9	59.7			150	10.0		56.8	331	51.5		51.5
5	194	59.0	214	22.7	− 9	41.6	19 58.3	+ 5	59.8		165	12.3	+ 10	56.9	346	53.9	− 8	51.5
6	210	01.4	229	22.4	− 9	40.4	35 00.7	+ 5	59.8		180	14.5	+ 10	57.0	1 56.3	− 8	51.6	
7	225	03.9	244	22.0		39.2	50 03.0		59.8		195	16.8		57.1	16 58.7		51.6	
8	240	06.4	259	21.7		37.9	65 05.4		59.9		210	19.1		57.2	32 01.1		51.6	
9	255	08.8	274	21.3		36.7	80 07.7		59.9		225	21.3		57.3	47 03.5		51.6	
10	270	11.3	289	21.0		35.5	95 10.1	+ 5	59.9		240	23.6		57.4	62 05.9		51.6	
11	285	13.8	304	20.7	− 9	34.3	110 12.4	+ 6	00.0		255	25.8	+ 10	57.4	77 08.3	− 8	51.6	
12	300	16.2	319	20.3	− 9	33.1	125 14.8	+ 6	00.0		270	28.1	+ 10	57.5	92 10.6	− 8	51.6	
13	315	18.7	334	20.0		31.8	140 17.2		00.1		285	30.3		57.6	107 13.0		51.7	
14	330	21.2	349	19.6		30.6	155 19.5		00.1		300	32.6		57.7	122 15.4		51.7	
15	345	23.6	4 19.3	29.4		29.4	170 21.9		00.1		315	34.9		57.8	137 17.8		51.7	
16	0	26.1	19 19.0	28.2		28.2	185 24.3		00.2		330	37.1		57.9	152 20.2		51.7	
17	15	28.6	34 18.6	− 9	27.0		200 26.6	+ 6	00.2		345	39.4	+ 10	58.0	167 22.6	− 8	51.7	
18	30	31.0	49 18.3	− 9	25.7		215 29.0	+ 6	00.2		0 41.6	+ 10	58.1		182 25.0	− 8	51.7	
19	45	33.5	64 18.0		24.5		230 31.4		00.3		15 43.9		58.1		197 27.4		51.8	
20	60	35.9	79 17.6		23.3		245 33.7		00.3		30 46.2		58.2		212 29.8		51.8	
21	75	38.4	94 17.3		22.1		260 36.1		00.4		45 48.4		58.3		227 32.2		51.8	
22	90	40.9	109 17.0		20.8		275 38.5		00.4		60 50.7		58.4		242 34.5		51.8	
23	105	43.3	124 16.6		19.6		290 40.9		00.4		75 52.9		58.5		257 36.9		51.8	
24	120	45.8	139 16.3	− 9	18.4		305 43.2	+ 6	00.5		90 55.2	+ 10	58.6		272 39.3	− 8	51.8	
Dif	—		−3		+12		+24		0		+23		+1		+24		0	

DOMINGO 22 DE ENERO DE 2012

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UT	SOL			● LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 12 ^h 11 ^m 4			SD: 15:9 Edad: 28 ^d 2 PHE { 4 ^h : 58/3 12 ^h : 58/1 20 ^h : 57/9 PMG: 11 ^h 25 ^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	
0	177	10.8	− 19 51.4	195	09.4	− 19 58.7	63	60 N	15 47	16 38	17 30	7 46 21		15 13 88	
1	192	10.6	50.8	209	35.7	52.4	63	58	16 00	46	36	32 25		26 84	
2	207	10.4	50.3	224	02.1	45.9	65	56	11	16 54	40	21 27		37 81	
3	222	10.2	49.7	238	28.6	39.2	67	54	20	17 01	45	11 29		46 79	
4	237	10.1	49.1	252	55.1	32.5	67	52	29	07	49	7 02 32		15 55 76	
5	252	09.9	− 19 48.6	267	21.7	− 19 25.7	68	50	16 36	17 13	17 52	6 54 33		16 02 75	
6	267	09.7	− 19 48.0	281	48.4	− 19 18.7	70	45	16 53	17 25	18 01	6 37 37		16 19 70	
7	282	09.5	47.5	296	15.2	11.7	70	40	17 06	36	09	23 40		32 67	
8	297	09.4	46.9	310	42.0	− 19 04.5	72	35	18	45	16	11 42		43 65	
9	312	09.2	46.3	325	09.0	− 18 57.2	73	30	28	17 54	23	6 00 45		16 53 62	
10	327	09.0	45.8	339	35.9	49.8	74	20	17 45	18 09	36	5 42 48		17 10 58	
11	342	08.9	− 19 45.2	354	03.0	− 18 42.3	75	10 N	18 01	18 23	18 49	5 26 51		17 24 55	
12	357	08.7	− 19 44.6	8 30.2	82	− 18 34.7	76	0	18 15	18 37	19 03	5 12 53		17 38 52	
13	12	08.5	44.1	22 57.4	82	27.0	77	10 S	30	18 52	18	4 57 56		17 51 49	
14	27	08.3	43.5	37 24.7	83	19.2	78	20	18 45	19 09	19 37	41 59		18 05 46	
15	42	08.2	42.9	51 52.1	84	11.3	79	30	19 03	30	20 01	23 63		22 42	
16	57	08.0	42.3	66 19.5	84	− 18 03.3	80	35	14	42	17	12 65		31 40	
17	72	07.8	− 19 41.8	80 47.1	86	− 17 55.2	81	40	19 26	19 57	20 36	4 00 67		18 42 37	
18	87	07.7	− 19 41.2	95 14.7	86	− 17 47.0	82	45	19 41	20 15	21 00	3 45 71		18 54 34	
19	102	07.5	40.6	109 42.4	87	38.7	83	50	19 58	39	33	28 74		19 10 30	
20	117	07.3	40.1	124 10.2	88	30.3	84	52	20 07	20 50	21 50	19 76		17 28	
21	132	07.2	39.5	138 38.0	88	21.8	85	54	16	21 03	22 12	3 10 78		24 27	
22	147	07.0	38.9	153 06.0	90	13.2	86	56	27	18	22 42	2 59 80		33 24	
23	162	06.8	38.3	167 34.0	90	− 17 04.5	87	58	39	21 37	23 35	47 83		43 21	
24	177	06.7	− 19 37.8	182 02.1	91	− 16 55.8	87	60 S	20 54	22 00	** **	2 33 87		19 54 18	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 54 ^m 3			Mag.: −4.1 PMG: 14 ^h 43 ^m			Mag.: −0.3 PMG: 3 ^h 37 ^m			Mag.: −2.4 PMG: 17 ^h 54 ^m			Mag.: +0.6 PMG: 5 ^h 48 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	120	45.8	139 16.3	− 9 18.4	17.2	305 43.2	+ 6 00.5	90 55.2	+ 10 58.6	272 39.3	− 8 51.8				
1	135	48.3	154 16.0	17.2		320 45.6	00.5	105 57.4	58.7	287 41.7	51.9				
2	150	50.7	169 15.7	15.9		335 48.0	00.6	120 59.7	58.8	302 44.1	51.9				
3	165	53.2	184 15.3	14.7		350 50.4	00.6	136 01.9	58.8	317 46.5	51.9				
4	180	55.7	199 15.0	13.5		5 52.8	00.7	151 04.2	58.9	332 48.9	51.9				
5	195	58.1	214 14.7	− 9 12.2		20 55.1	+ 6 00.7	166 06.4	+ 10 59.0	347 51.3	− 8 51.9				
6	211	00.6	229 14.3	− 9 11.0		35 57.5	+ 6 00.7	181 08.7	+ 10 59.1	2 53.7	− 8 51.9				
7	226	03.1	244 14.0	09.8		50 59.9	00.8	196 11.0	59.2	17 56.1	51.9				
8	241	05.5	259 13.7	08.6		66 02.3	00.8	211 13.2	59.3	32 58.5	52.0				
9	256	08.0	274 13.4	07.3		81 04.7	00.9	226 15.5	59.4	48 00.9	52.0				
10	271	10.4	289 13.0	06.1		96 07.1	00.9	241 17.7	59.5	63 03.3	52.0				
11	286	12.9	304 12.7	− 9 04.9		111 09.5	+ 6 01.0	256 20.0	+ 10 59.6	78 05.6	− 8 52.0				
12	301	15.4	319 12.4	− 9 03.6		126 11.8	+ 6 01.0	271 22.2	+ 10 59.6	93 08.0	− 8 52.0				
13	316	17.8	334 12.0	02.4		141 14.2	01.1	286 24.5	59.7	108 10.4	52.0				
14	331	20.3	349 11.7	01.2		156 16.6	01.1	301 26.7	59.8	123 12.8	52.0				
15	346	22.8	4 11.4	− 9 00.0		171 19.0	01.2	316 29.0	+ 10 59.9	138 15.2	52.1				
16	1 25.2		19 11.1	− 8 58.7		186 21.4	01.2	331 31.2	+ 11 00.0	153 17.6	52.1				
17	16 27.7		34 10.8	− 8 57.5		201 23.8	+ 6 01.3	346 33.5	+ 11 00.1	168 20.0	− 8 52.1				
18	31 30.2		49 10.4	− 8 56.3		216 26.2	+ 6 01.3	1 35.7	+ 11 00.2	183 22.4	− 8 52.1				
19	46 32.6		64 10.1	55.0		231 28.6	01.4	16 38.0	00.3	198 24.8	52.1				
20	61 35.1		79 09.8	53.8		246 31.0	01.4	31 40.2	00.4	213 27.2	52.1				
21	76 37.6		94 09.5	52.6		261 33.4	01.5	46 42.5	00.5	228 29.6	52.1				
22	91 40.0		109 09.1	51.3		276 35.8	01.5	61 44.7	00.5	243 32.0	52.2				
23	106 42.5		124 08.8	50.1		291 38.2	01.6	76 47.0	00.6	258 34.4	52.2				
24	121 44.9		139 08.5	− 8 48.9		306 40.6	+ 6 01.6	91 49.2	+ 11 00.7	273 36.8	− 8 52.2				
Dif	—		−3	+12		+24	0	+23	+1	+24	0				

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LUNES 23 DE ENERO DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 11 ^m 7		SD: 15 ^h 8 Edad: 29 ^d 2		PHE { 4 ^h : 57/7 12 ^h : 57/5 20 ^h : 57/3									
	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	^h ^m ^m
0	177 06.7	− 19 37.8	182 02.1	92	− 16 55.8	89	60 N	6 52	7 44	8 35	8 07 15	16 41 86		
1	192 06.5	37.2	196 30.3	92	46.9	89	58	47	36	22	7 57 18	50 82		
2	207 06.3	36.6	210 58.6	93	38.0	89	56	42	28	11	48 21	16 58 79		
3	222 06.2	36.0	225 26.9	93	29.0	90	54	38	22	8 02	40 24	17 05 77		
4	237 06.0	35.5	239 55.3	94	19.9	91	52	34	15	7 53	34 25	11 75		
5	252 05.8	− 19 34.9	254 23.9	96	− 16 10.7	92	50	6 30	7 10	7 46	7 27 27	17 17 73		
6	267 05.7	− 19 34.3	268 52.4	95	− 16 01.4	93	45	6 22	6 57	7 30	7 14 31	17 29 69		
7	282 05.5	33.7	283 21.1	97	− 15 52.1	93	40	14	47	16	7 03 34	39 66		
8	297 05.3	33.1	297 49.9	98	42.7	94	35	07	38	7 05	6 53 37	48 62		
9	312 05.2	32.6	312 18.7	98	33.2	95	30	6 00	29	6 55	45 39	17 55 60		
10	327 05.0	32.0	326 47.6	99	23.6	96	20	5 47	14	38	30 43	18 08 56		
11	342 04.8	− 19 31.4	341 16.6	100	− 15 13.9	97	10 N	5 34	6 00	6 22	6 17 47	18 19 52		
12	357 04.7	− 19 30.8	355 45.7	101	− 15 04.2	97	0	5 21	5 46	6 08	6 05 50	18 30 48		
13	12 04.5	30.2	10 14.8	101	− 14 54.4	98	10 S	5 05	31	5 54	5 53 54	40 45		
14	27 04.3	29.7	24 44.1	103	44.5	99	20	4 46	5 14	38	40 57	18 51 42		
15	42 04.2	29.1	39 13.4	103	34.6	99	30	22	4 54	20	26 61	19 04 37		
16	57 04.0	28.5	53 42.8	104	24.6	100	35	4 07	41	5 09	17 64	11 35		
17	72 03.9	− 19 27.9	68 12.3	105	− 14 14.5	101	40	3 48	4 26	4 57	5 07 66	19 19 32		
18	87 03.7	− 19 27.3	82 41.8	105	− 14 04.4	101	45	3 24	4 08	4 43	4 56 69	19 28 29		
19	102 03.5	26.7	97 11.5	107	− 13 54.2	102	50	2 51	3 45	25	42 73	40 25		
20	117 03.4	26.1	111 41.2	107	43.9	103	52	33	34	17	35 76	45 23		
21	132 03.2	25.5	126 11.0	108	33.6	103	54	2 12	21	4 07	28 77	51 21		
22	147 03.0	25.0	140 40.8	108	23.2	104	56	1 42	3 05	3 57	19 81	19 57 19		
23	162 02.9	24.4	155 10.8	110	12.7	105	58	0 48	2 47	44	10 83	20 04 17		
24	177 02.7	− 19 23.8	169 40.8	110	− 13 02.2	105	60 S	** **	2 23	3 30	4 00 86	20 12 14		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 15 ^h 50 ^m 4		Mag.: −4.1 PMG: 14 ^h 44 ^m		Mag.: −0.3 PMG: 3 ^h 33 ^m		Mag.: −2.4 PMG: 17 ^h 50 ^m		Mag.: +0.6 PMG: 5 ^h 45 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h	° /	° /	° /		° /		° /		° /					
0	121 44.9	139 08.5	− 8 48.9	306 40.6	+ 6 01.6	91 49.2	+ 11 00.7	273 36.8	− 8 52.2					
1	136 47.4	154 08.2	47.6	321 43.0	01.7	106 51.5	00.8	288 39.2	52.2					
2	151 49.9	169 07.9	46.4	336 45.4	01.7	121 53.7	00.9	303 41.6	52.2					
3	166 52.3	184 07.5	45.1	351 47.8	01.8	136 56.0	01.0	318 44.0	52.2					
4	181 54.8	199 07.2	43.9	6 50.2	01.9	151 58.2	01.1	333 46.4	52.2					
5	196 57.3	214 06.9	− 8 42.7	21 52.7	+ 6 01.9	167 00.4	+ 11 01.2	348 48.7	− 8 52.3					
6	211 59.7	229 06.6	− 8 41.4	36 55.1	+ 6 02.0	182 02.7	+ 11 01.3	3 51.1	− 8 52.3					
7	227 02.2	244 06.3	40.2	51 57.5	02.0	197 04.9	01.4	18 53.5	52.3					
8	242 04.7	259 06.0	39.0	66 59.9	02.1	212 07.2	01.5	33 55.9	52.3					
9	257 07.1	274 05.6	37.7	82 02.3	02.1	227 09.4	01.5	48 58.3	52.3					
10	272 09.6	289 05.3	36.5	97 04.7	02.2	242 11.7	01.6	64 00.7	52.3					
11	287 12.1	304 05.0	− 8 35.2	112 07.1	+ 6 02.3	257 13.9	+ 11 01.7	79 03.1	− 8 52.3					
12	302 14.5	319 04.7	− 8 34.0	127 09.6	+ 6 02.3	272 16.2	+ 11 01.8	94 05.5	− 8 52.3					
13	317 17.0	334 04.4	32.8	142 12.0	02.4	287 18.4	01.9	109 07.9	52.4					
14	332 19.4	349 04.1	31.5	157 14.4	02.4	302 20.7	02.0	124 10.3	52.4					
15	347 21.9	4 03.8	30.3	172 16.8	02.5	317 22.9	02.1	139 12.7	52.4					
16	2 24.4	19 03.4	29.0	187 19.3	02.6	332 25.1	02.2	154 15.1	52.4					
17	17 26.8	34 03.1	− 8 27.8	202 21.7	+ 6 02.6	347 27.4	+ 11 02.3	169 17.5	− 8 52.4					
18	32 29.3	49 02.8	− 8 26.6	217 24.1	+ 6 02.7	2 29.6	+ 11 02.4	184 19.9	− 8 52.4					
19	47 31.8	64 02.5	25.3	232 26.5	02.8	17 31.9	02.5	199 22.3	52.4					
20	62 34.2	79 02.2	24.1	247 29.0	02.8	32 34.1	02.6	214 24.7	52.4					
21	77 36.7	94 01.9	22.8	262 31.4	02.9	47 36.4	02.7	229 27.1	52.5					
22	92 39.2	109 01.6	21.6	277 33.8	02.9	62 38.6	02.7	244 29.5	52.5					
23	107 41.6	124 01.3	20.4	292 36.3	03.0	77 40.8	02.8	259 31.9	52.5					
24	122 44.1	139 01.0	− 8 19.1	307 38.7	+ 6 03.1	92 43.1	+ 11 02.9	274 34.3	− 8 52.5					
Dif	—	−3 +12		+24 +1		+22 +1		+24 0						

MARTES 24 DE ENERO DE 2012

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UT	SOL			● LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 12 ^h 11 ^m 9			SD: 15:6 Edad: 0 ^d 7 PHE { 4 ^h : 57/1 12 ^h : 56/9 20 ^h : 56/7 PMG: 13 ^h 07 ^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	02.7	− 19 23.8	169	40.8	− 13 02.2	106	60 N	15 52	16 42	17 34	8 22	11	18 07	83
1	192	02.6	23.2	184	10.9	− 12 51.6	106	58	16 04	50	39	15	15	12	80
2	207	02.4	22.6	198	41.1	41.0	106	56	15	16 58	44	09	17	17	78
3	222	02.3	22.0	213	11.3	30.3	107	54	24	17 04	48	8 04	19	22	75
4	237	02.1	21.4	227	41.6	19.6	107	52	32	10	52	7 59	21	26	73
5	252	01.9	− 19 20.8	242	12.0	− 12 08.8	108	50	16 40	17 16	17 55	7 54	24	18 30	71
6	267	01.8	− 19 20.2	256	42.5	− 11 58.0	108	45	16 56	17 28	18 03	7 45	27	18 38	67
7	282	01.6	19.6	271	13.1	47.1	109	40	17 09	38	11	37	30	45	63
8	297	01.5	19.0	285	43.7	36.2	109	35	20	47	18	30	33	50	61
9	312	01.3	18.4	300	14.4	25.2	110	30	30	17 55	24	24	36	18 55	58
10	327	01.2	17.8	314	45.1	14.2	110	20	17 47	18 10	37	13	40	19 04	53
11	342	01.0	− 19 17.2	329	16.0	− 11 03.1	111	10 N	18 02	18 24	18 49	7 04	44	19 11	50
12	357	00.8	− 19 16.7	343	46.9	− 10 52.0	111	0	18 16	18 37	19 03	6 55	48	19 18	46
13	12	00.7	16.1	358	17.9	40.9	111	10 S	30	18 52	18	47	50	25	43
14	27	00.5	15.5	12	48.9	29.7	112	20	18 45	19 09	19 37	37	55	33	38
15	42	00.4	14.9	27	20.0	18.4	113	30	19 03	29	20 00	27	59	41	34
16	57	00.2	14.3	41	51.2	− 10 07.2	112	35	13	41	15	21	61	46	32
17	72	00.1	− 19 13.7	56	22.5	− 9 55.9	113	40	19 25	19 56	20 34	6 13	65	19 51	29
18	86	59.9	− 19 13.1	70	53.8	− 9 44.5	114	45	19 39	20 13	20 57	6 05	68	19 57	26
19	101	59.8	12.5	85	25.2	33.1	114	50	19 56	36	21 29	5 55	72	20 05	22
20	116	59.6	11.8	99	56.6	21.7	114	52	20 04	47	21 46	51	73	08	20
21	131	59.5	11.2	114	28.1	− 9 10.3	114	54	13	20 59	22 06	45	77	12	18
22	146	59.3	10.6	128	59.7	− 8 58.8	115	56	24	21 14	22 34	40	78	16	16
23	161	59.2	10.0	143	31.4	47.3	115	58	36	32	23 17	33	82	21	13
24	176	59.0	− 19 09.4	158	03.1	− 8 35.8	115	60 S	20 49	21 54	** **	5 26	85	20 26	11
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 15 ^h 46 ^m 5			Mag.: −4.1 PMG: 14 ^h 44 ^m			Mag.: −0.3 PMG: 3 ^h 29 ^m			Mag.: −2.4 PMG: 17 ^h 46 ^m			Mag.: +0.6 PMG: 5 ^h 41 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	122	44.1	139 01.0	− 8 19.1	307 38.7	+ 6 03.1	92 43.1	+ 11 02.9	274 34.3	− 8 52.5					
1	137	46.5	154 00.6	17.9	322 41.1	03.1	107 45.3	03.0	289 36.7	52.5					
2	152	49.0	169 00.3	16.6	337 43.6	03.2	122 47.6	03.1	304 39.1	52.5					
3	167	51.5	184 00.0	15.4	352 46.0	03.3	137 49.8	03.2	319 41.5	52.5					
4	182	53.9	198 59.7	14.1	7 48.4	03.3	152 52.0	03.3	334 43.9	52.5					
5	197	56.4	213 59.4	− 8 12.9	22 50.9	+ 6 03.4	167 54.3	+ 11 03.4	349 46.3	− 8 52.6					
6	212	58.9	228 59.1	− 8 11.6	37 53.3	+ 6 03.5	182 56.5	+ 11 03.5	4 48.7	− 8 52.6					
7	228	01.3	243 58.8	10.4	52 55.8	03.6	197 58.8	03.6	19 51.1	52.6					
8	243	03.8	258 58.5	09.2	67 58.2	03.6	213 01.0	03.7	34 53.5	52.6					
9	258	06.3	273 58.2	07.9	83 00.6	03.7	228 03.2	03.8	49 55.9	52.6					
10	273	08.7	288 57.9	06.7	98 03.1	03.8	243 05.5	03.9	64 58.3	52.6					
11	288	11.2	303 57.6	− 8 05.4	113 05.5	+ 6 03.8	258 07.7	+ 11 04.0	80 00.7	− 8 52.6					
12	303	13.7	318 57.3	− 8 04.2	128 08.0	+ 6 03.9	273 09.9	+ 11 04.1	95 03.1	− 8 52.6					
13	318	16.1	333 57.0	02.9	143 10.4	04.0	288 12.2	04.1	110 05.5	52.6					
14	333	18.6	348 56.7	01.7	158 12.9	04.1	303 14.4	04.2	125 07.9	52.7					
15	348	21.0	3 56.4	− 8 00.4	173 15.3	04.1	318 16.7	04.3	140 10.3	52.7					
16	3 23.5	18 56.1	− 7 59.2	188 17.8	04.2		333 18.9	04.4	155 12.7	52.7					
17	18 26.0	33 55.8	− 7 57.9	203 20.2	+ 6 04.3		348 21.1	+ 11 04.5	170 15.1	− 8 52.7					
18	33 28.4	48 55.5	− 7 56.7	218 22.7	+ 6 04.4		3 23.4	+ 11 04.6	185 17.5	− 8 52.7					
19	48 30.9	63 55.2	55.4	233 25.2	04.4		18 25.6	04.7	200 19.9	52.7					
20	63 33.4	78 54.9	54.2	248 27.6	04.5		33 27.8	04.8	215 22.3	52.7					
21	78 35.8	93 54.6	52.9	263 30.1	04.6		48 30.1	04.9	230 24.7	52.7					
22	93 38.3	108 54.3	51.7	278 32.5	04.7		63 32.3	05.0	245 27.1	52.7					
23	108 40.8	123 54.0	50.4	293 35.0	04.7		78 34.5	05.1	260 29.5	52.8					
24	123 43.2	138 53.7	− 7 49.2	308 37.5	+ 6 04.8		93 36.8	+ 11 05.2	275 31.9	− 8 52.8					
Dif	—	−3	+12		+24	+1		+22	+1		+24				


JUEVES 26 DE ENERO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 12 ^m 4		SD: 15 ^h 2 Edad: 2 ^d 7 PHE { 4 ^h : 55 ^m /8 12 ^h : 55 ^m /6 20 ^h : 55 ^m /5 PMG: 14 ^h 38 ^m R°: 43 ^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	176	55.5	− 18	54.7	147	01.0	− 3 52.7	120	15 57	16 46	17 38	8 43	9	20 50	78
1	191	55.3		54.1	161	34.1	40.7	120	16 09	16 54	43	42	12	50 75	
2	206	55.2		53.5	176	07.1	28.8	119	19	17 01	47	41	14	50 73	
3	221	55.1		52.9	190	40.3	16.8	120	28	08	51	40	16	50 70	
4	236	54.9		52.3	205	13.4	− 3 04.9	119	36	13	55	39	18	50 68	
5	251	54.8	− 18	51.6	219	46.6	− 2 52.9	120	16 43	17 19	17 58	8 38	20	20 49	67
6	266	54.6	− 18	51.0	234	19.9	− 2 41.0	119	16 58	17 30	18 06	8 37	23	20 49	63
7	281	54.5		50.4	248	53.1	29.0	120	17 11	40	13	35	27	49 60	
8	296	54.4		49.8	263	26.4	17.1	119	22	49	20	34	29	49 57	
9	311	54.2		49.1	277	59.8	− 2 05.1	120	31	17 57	26	33	32	49 54	
10	326	54.1		48.5	292	33.2	− 1 53.2	119	17 48	18 11	38	31	36	49 50	
11	341	53.9	− 18	47.9	307	06.6	− 1 41.2	120	18 02	18 24	18 50	8 29	40	20 49	46
12	356	53.8	− 18	47.3	321	40.1	− 1 29.3	119	18 16	18 38	19 03	8 27	44	20 48	43
13	11	53.7		46.6	336	13.6	17.4	119	30	18 52	18	26	47	48 40	
14	26	53.5		46.0	350	47.1	− 1 05.4	120	18 45	19 08	36	24	51	48 36	
15	41	53.4		45.4	5	20.6	− 0 53.5	119	19 02	28	19 59	22	55	48 31	
16	56	53.2		44.7	19	54.2	41.6	119	12	40	20 14	21	58	48 29	
17	71	53.1	− 18	44.1	34	27.9	− 0 29.7	119	19 23	19 54	20 32	8 20	60	20 47	27
18	86	53.0	− 18	43.5	49	01.5	− 0 17.8	119	19 37	20 11	20 54	8 19	63	20 47	24
19	101	52.8		42.9	63	35.2	− 0 05.9	119	19 54	33	21 25	17	67	47 20	
20	116	52.7		42.2	78	08.9	+ 0 06.0	119	20 02	44	21 41	16	69	47 18	
21	131	52.6		41.6	92	42.6	17.8	118	10	20 56	22 01	15	72	47 16	
22	146	52.4		41.0	107	16.4	29.7	119	20	21 10	22 26	14	74	47 14	
23	161	52.3		40.3	121	50.1	41.5	118	32	27	23 03	13	76	46 12	
24	176	52.2	− 18	39.7	136	23.9	+ 0 53.3	118	20 45	21 48	** **	8 12	79	20 46	9
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 15 ^h 38 ^m 6		Mag.: −4.1 PMG: 14 ^h 45 ^m		Mag.: −0.4 PMG: 3 ^h 21 ^m		Mag.: −2.4 PMG: 17 ^h 39 ^m		Mag.: +0.6 PMG: 5 ^h 33 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	124	42.4	138	46.6	− 7	19.0	309	36.9	+ 6	06.8	94	30.3	+ 11	07.5	
1	139	44.8	153	46.4		17.8	324	39.4		06.9	109	32.5		07.6	
2	154	47.3	168	46.1		16.5	339	41.9		07.0	124	34.8		07.7	
3	169	49.8	183	45.8		15.3	354	44.4		07.1	139	37.0		07.8	
4	184	52.2	198	45.5		14.0	9	46.9		07.2	154	39.2		07.9	
5	199	54.7	213	45.2	− 7	12.7	24	49.4	+ 6	07.3	169	41.4	+ 11	08.0	
6	214	57.1	228	44.9	− 7	11.5	39	51.9	+ 6	07.4	184	43.7	+ 11	08.1	
7	229	59.6	243	44.6		10.2	54	54.4		07.5	199	45.9		08.2	
8	245	02.1	258	44.3		09.0	69	56.9		07.6	214	48.1		08.3	
9	260	04.5	273	44.1		07.7	84	59.4		07.7	229	50.3		08.4	
10	275	07.0	288	43.8		06.4	100	01.9		07.8	244	52.6		08.5	
11	290	09.5	303	43.5	− 7	05.2	115	04.4	+ 6	07.9	259	54.8	+ 11	08.6	
12	305	11.9	318	43.2	− 7	03.9	130	06.9	+ 6	08.0	274	57.0	+ 11	08.7	
13	320	14.4	333	42.9		02.6	145	09.4		08.0	289	59.2		08.8	
14	335	16.9	348	42.7		01.4	160	12.0		08.1	305	01.5		08.9	
15	350	19.3	3	42.4	− 7	00.1	175	14.5		08.2	320	03.7		09.0	
16	5	21.8	18	42.1	− 6	58.8	190	17.0		08.3	335	05.9		09.1	
17	20	24.3	33	41.8	− 6	57.6	205	19.5	+ 6	08.4	350	08.1	+ 11	09.2	
18	35	26.7	48	41.5	− 6	56.3	220	22.0	+ 6	08.5	5	10.3	+ 11	09.3	
19	50	29.2	63	41.2		55.1	235	24.5		08.6	20	12.6		09.4	
20	65	31.6	78	41.0		53.8	250	27.0		08.7	35	14.8		09.5	
21	80	34.1	93	40.7		52.5	265	29.6		08.8	50	17.0		09.6	
22	95	36.6	108	40.4		51.3	280	32.1		08.9	65	19.2		09.7	
23	110	39.0	123	40.1		50.0	295	34.6		09.0	80	21.4		09.8	
24	125	41.5	138	39.9	− 6	48.7	310	37.1	+ 6	09.1	95	23.7	+ 11	09.9	
Dif	—		−3	+13		+25	+1		+22	+1		+24		0	

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VIERNES 27 DE ENERO DE 2012


UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 12 ^m 6		SD: 15 ^h 1 Edad: 3 ^d 7 PHE { 4 ^h : 55 ^h 3 12 ^h : 55 ^h 1 20 ^h : 54 ^h 9 PMG: 15 ^h 21 ^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 m		h m m	
0	176 52.2	− 18 39.7	136 23.9		+ 0 53.3	118	60 N	6 46	7 37	8 26	8 52 10		22 08 77	
1	191 52.0	39.1	150 57.8	149	+ 1 05.1	118	58	41	30	15	54 12		05 74	
2	206 51.9	38.4	165 31.6	148	16.9	118	56	37	23	8 05	55 14		03 71	
3	221 51.8	37.8	180 05.5	149	28.7	118	54	33	16	7 56	56 16		22 00 70	
4	236 51.6	37.2	194 39.4	149	40.4	117	52	30	11	48	57 18		21 58 68	
5	251 51.5	− 18 36.5	209 13.3	149	+ 1 52.2	118	50	6 26	7 06	7 41	8 58 20		21 56 66	
6	266 51.4	− 18 35.9	223 47.2	149	+ 2 03.9	117	45	6 19	6 54	7 26	9 00 23		21 52 62	
7	281 51.2	35.2	238 21.2	150	15.6	117	40	12	44	13	02 26		49 59	
8	296 51.1	34.6	252 55.1	149	27.3	117	35	6 05	36	7 03	03 29		46 56	
9	311 51.0	34.0	267 29.1	150	38.9	116	30	5 59	28	6 53	05 31		43 54	
10	326 50.8	33.3	282 03.1	150	+ 2 50.6	117	20	47	14	37	07 35		39 49	
11	341 50.7	− 18 32.7	296 37.1	150	+ 3 02.2	116	10 N	5 35	6 01	6 23	9 09 39		21 35 46	
12	356 50.6	− 18 32.0	311 11.1	150	+ 3 13.8	116	0	5 22	5 47	6 09	9 11 42		21 31 43	
13	11 50.4	31.4	325 45.2	151	25.4	116	10 S	5 07	33	5 55	13 46		28 39	
14	26 50.3	30.8	340 19.2	150	36.9	115	20	4 49	5 17	41	15 50		24 36	
15	41 50.2	30.1	354 53.3	151	48.4	115	30	26	4 57	24	17 54		19 32	
16	56 50.1	29.5	9 27.4	151	+ 3 59.9	115	35	4 12	46	14	19 56		17 29	
17	71 49.9	− 18 28.8	24 01.4	150	+ 4 11.4	115	40	3 54	4 32	5 02	9 20 59		21 14 27	
18	86 49.8	− 18 28.2	38 35.5	151	+ 4 22.8	114	45	3 31	4 14	4 49	9 22 62		21 11 23	
19	101 49.7	27.5	53 09.6	151	34.3	115	50	3 01	3 53	32	24 67		07 20	
20	116 49.5	26.9	67 43.7	151	45.6	113	52	2 45	42	24	25 68		05 18	
21	131 49.4	26.3	82 17.9	152	+ 4 57.0	114	54	25	30	15	27 70		03 17	
22	146 49.3	25.6	96 52.0	151	+ 5 08.3	113	56	2 00	3 16	4 05	28 72		21 01 14	
23	161 49.2	25.0	111 26.1	151	19.6	113	58	1 22	2 59	3 54	29 75		20 58 13	
24	176 49.0	− 18 24.3	126 00.2	151	+ 5 30.9	113	60 S	** **	2 38	3 41	9 31 77		20 55 10	
UT	ARIES PMG 15 ^h 34 ^m 7		VENUS Mag.: −4.1 PMG: 14 ^h 46 ^m		MARTE Mag.: −0.4 PMG: 3 ^h 17 ^m		JÚPITER Mag.: −2.4 PMG: 17 ^h 36 ^m		SATURNO Mag.: +0.6 PMG: 5 ^h 29 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /		
h	° /	° /	° /		° /		°	h m	h m	h m	h m m		h m m	
0	125 41.5	138 39.9	− 6 48.7	310 37.1	+ 6 09.1	95 23.7	+ 11 09.9	277 27.5	− 8 53.2					
1	140 44.0	153 39.6	47.5	325 39.6	09.2	110 25.9	10.0	292 29.9	53.2					
2	155 46.4	168 39.3	46.2	340 42.2	09.3	125 28.1	10.1	307 32.3	53.2					
3	170 48.9	183 39.0	44.9	355 44.7	09.5	140 30.3	10.2	322 34.7	53.2					
4	185 51.4	198 38.7	43.7	10 47.2	09.6	155 32.5	10.3	337 37.2	53.2					
5	200 53.8	213 38.5	− 6 42.4	25 49.7	+ 6 09.7	170 34.8	+ 11 10.4	352 39.6	− 8 53.2					
6	215 56.3	228 38.2	− 6 41.1	40 52.3	+ 6 09.8	185 37.0	+ 11 10.5	7 42.0	− 8 53.2					
7	230 58.7	243 37.9	39.9	55 54.8	09.9	200 39.2	10.6	22 44.4	53.2					
8	246 01.2	258 37.6	38.6	70 57.3	10.0	215 41.4	10.7	37 46.8	53.3					
9	261 03.7	273 37.4	37.3	85 59.9	10.1	230 43.6	10.8	52 49.2	53.3					
10	276 06.1	288 37.1	36.1	101 02.4	10.2	245 45.8	10.9	67 51.6	53.3					
11	291 08.6	303 36.8	− 6 34.8	116 04.9	+ 6 10.3	260 48.1	+ 11 11.0	82 54.0	− 8 53.3					
12	306 11.1	318 36.5	− 6 33.5	131 07.5	+ 6 10.4	275 50.3	+ 11 11.1	97 56.5	− 8 53.3					
13	321 13.5	333 36.3	32.2	146 10.0	10.5	290 52.5	11.2	112 58.9	53.3					
14	336 16.0	348 36.0	31.0	161 12.6	10.6	305 54.7	11.3	128 01.3	53.3					
15	351 18.5	3 35.7	29.7	176 15.1	10.7	320 56.9	11.4	143 03.7	53.3					
16	6 20.9	18 35.5	28.4	191 17.6	10.8	335 59.1	11.5	158 06.1	53.3					
17	21 23.4	33 35.2	− 6 27.2	206 20.2	+ 6 11.0	351 01.4	+ 11 11.6	173 08.5	− 8 53.3					
18	36 25.9	48 34.9	− 6 25.9	221 22.7	+ 6 11.1	6 03.6	+ 11 11.7	188 10.9	− 8 53.3					
19	51 28.3	63 34.6	24.6	236 25.3	11.2	21 05.8	11.8	203 13.4	53.3					
20	66 30.8	78 34.4	23.3	251 27.8	11.3	36 08.0	11.9	218 15.8	53.3					
21	81 33.2	93 34.1	22.1	266 30.4	11.4	51 10.2	12.0	233 18.2	53.3					
22	96 35.7	108 33.8	20.8	281 32.9	11.5	66 12.4	12.1	248 20.6	53.3					
23	111 38.2	123 33.6	19.5	296 35.5	11.6	81 14.6	12.2	263 23.0	53.4					
24	126 40.6	138 33.3	− 6 18.3	311 38.0	+ 6 11.7	96 16.9	+ 11 12.3	278 25.4	− 8 53.4					
Dif	—	−3	+13	+25	+1	+22	+1	+24	0					

SÁBADO 28 DE ENERO DE 2012

UT	SOL		 LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 12 ^m 8		SD: 14 ^h 9 Edad: 4 ^d 7 PHE { 4 ^h : 54/8 12 ^h : 54/7 20 ^h : 54/5 PMG: 16 ^h 04 ^m R°: 43 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
^h 0	176 49.0	− 18 24.3	126 00.2		+ 5 30.9	113	60 N	16 02	16 51	17 43	9 02	11	23 25	76	
1	191 48.9	23.7	140 34.4	152	42.2	113	58	13	16 58	47	06	13	19 73		
2	206 48.8	23.0	155 08.5	151	+ 5 53.4	112	56	23	17 05	51	09	16	14 71		
3	221 48.7	22.4	169 42.6	151	+ 6 04.5	111	54	32	11	54	12	18	10 68		
4	236 48.5	21.7	184 16.8	152	15.7	112	52	39	17	58	15	20	06 66		
5	251 48.4	− 18 21.1	198 50.9	151	+ 6 26.8	111	50	16 46	17 22	18 01	9 18	21	23 02	65	
6	266 48.3	− 18 20.4	213 25.0	151	+ 6 37.9	111	45	17 01	17 33	18 08	9 23	25	22 54	61	
7	281 48.2	19.8	227 59.2	152	48.9	110	40	13	42	15	28	28	48 58		
8	296 48.0	19.1	242 33.3	151	+ 6 59.9	110	35	24	51	21	32	31	42 56		
9	311 47.9	18.5	257 07.4	151	+ 7 10.9	110	30	33	17 58	27	36	32	37 53		
10	326 47.8	17.8	271 41.6	152	21.8	109	20	17 49	18 12	39	42	37	28 50		
11	341 47.7	− 18 17.2	286 15.7	151	+ 7 32.7	109	10 N	18 03	18 25	18 51	9 48	40	22 21	46	
12	356 47.6	− 18 16.5	300 49.8	151	+ 7 43.6	109	0	18 16	18 38	19 03	9 53	43	22 14	43	
13	11 47.4	15.8	315 23.9	151	+ 7 54.4	108	10 S	30	18 52	18	9 59	46	07 40		
14	26 47.3	15.2	329 58.0	151	+ 8 05.2	108	20	18 44	19 08	35	10 05	49	22 00	36	
15	41 47.2	14.5	344 32.1	151	15.9	107	30	19 01	27	19 58	11	54	21 51	33	
16	56 47.1	13.9	359 06.2	151	26.6	107	35	11	38	20 12	15	56	46 31		
17	71 47.0	− 18 13.2	13 40.3	151	+ 8 37.3	107	40	19 22	19 52	20 29	10 19	59	21 41	28	
18	86 46.8	− 18 12.6	28 14.3	150	+ 8 47.9	106	45	19 35	20 09	20 51	10 24	62	21 34	26	
19	101 46.7	11.9	42 48.4	151	+ 8 58.5	106	50	51	30	21 21	31	65	27 22		
20	116 46.6	11.2	57 22.4	150	+ 9 09.0	105	52	19 59	40	36	33	67	23 21		
21	131 46.5	10.6	71 56.5	151	19.5	105	54	20 07	20 52	21 55	37	69	20 18		
22	146 46.4	09.9	86 30.5	150	30.0	105	56	17	21 05	22 18	40	71	15 17		
23	161 46.2	09.3	101 04.5	150	40.4	104	58	28	21	22 52	44	74	11 14		
24	176 46.1	− 18 08.6	115 38.5	150	+ 9 50.8	104	60 S	20 40	21 41	** **	10 48	77	21 05	12	
UT	ARIES PMG: 15 ^h 30 ^m 7		VENUS Mag.: −4.1 PMG: 14 ^h 46 ^m		MARTE Mag.: −0.4 PMG: 3 ^h 13 ^m		JÚPITER Mag.: −2.4 PMG: 17 ^h 32 ^m			SATURNO Mag.: +0.6 PMG: 5 ^h 25 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
^h 0	126 40.6	138 33.3	− 6 18.3	311 38.0	+ 6 11.7	96 16.9	+ 11 12.3	278 25.4	− 8 53.4						
1	141 43.1	153 33.0	17.0	326 40.6	11.9	111 19.1	12.4	293 27.9	53.4						
2	156 45.6	168 32.8	15.7	341 43.1	12.0	126 21.3	12.5	308 30.3	53.4						
3	171 48.0	183 32.5	14.4	356 45.7	12.1	141 23.5	12.6	323 32.7	53.4						
4	186 50.5	198 32.2	13.2	11 48.2	12.2	156 25.7	12.7	338 35.1	53.4						
5	201 53.0	213 32.0	− 6 11.9	26 50.8	+ 6 12.3	171 27.9	+ 11 12.8	353 37.5	− 8 53.4						
6	216 55.4	228 31.7	− 6 10.6	41 53.4	+ 6 12.4	186 30.1	+ 11 12.9	8 39.9	− 8 53.4						
7	231 57.9	243 31.4	09.3	56 55.9	12.6	201 32.3	13.0	23 42.4	53.4						
8	247 00.3	258 31.2	08.1	71 58.5	12.7	216 34.6	13.1	38 44.8	53.4						
9	262 02.8	273 30.9	06.8	87 01.0	12.8	231 36.8	13.2	53 47.2	53.4						
10	277 05.3	288 30.6	05.5	102 03.6	12.9	246 39.0	13.3	68 49.6	53.4						
11	292 07.7	303 30.4	− 6 04.2	117 06.2	+ 6 13.0	261 41.2	+ 11 13.4	83 52.0	− 8 53.4						
12	307 10.2	318 30.1	− 6 03.0	132 08.7	+ 6 13.2	276 43.4	+ 11 13.5	98 54.4	− 8 53.4						
13	322 12.7	333 29.9	01.7	147 11.3	13.3	291 45.6	13.6	113 56.9	53.4						
14	337 15.1	348 29.6	− 6 00.4	162 13.9	13.4	306 47.8	13.7	128 59.3	53.4						
15	352 17.6	3 29.3	− 5 59.1	177 16.5	13.5	321 50.0	13.9	144 01.7	53.4						
16	7 20.1	18 29.1	57.9	192 19.0	13.6	336 52.2	14.0	159 04.1	53.4						
17	22 22.5	33 28.8	− 5 56.6	207 21.6	+ 6 13.8	351 54.4	+ 11 14.1	174 06.5	− 8 53.4						
18	37 25.0	48 28.5	− 5 55.3	222 24.2	+ 6 13.9	6 56.6	+ 11 14.2	189 09.0	− 8 53.5						
19	52 27.5	63 28.3	54.0	237 26.8	14.0	21 58.9	14.3	204 11.4	53.5						
20	67 29.9	78 28.0	52.8	252 29.3	14.1	37 01.1	14.4	219 13.8	53.5						
21	82 32.4	93 27.8	51.5	267 31.9	14.3	52 03.3	14.5	234 16.2	53.5						
22	97 34.8	108 27.5	50.2	282 34.5	14.4	67 05.5	14.6	249 18.6	53.5						
23	112 37.3	123 27.2	48.9	297 37.1	14.5	82 07.7	14.7	264 21.1	53.5						
24	127 39.8	138 27.0	− 5 47.6	312 39.7	+ 6 14.6	97 09.9	+ 11 14.8	279 23.5	− 8 53.5						
Dif	—	−3	+13	+26	+1	+22	+1	+24	0						

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DOMINGO 29 DE ENERO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 0		SD: 14 ^h 8 Edad: 5 ^d 7 PHE { 4 ^h : 54 ^m 4 12 ^h : 54 ^m 4 20 ^h : 54 ^m 3 PMG: 16 ^h 47 ^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	h m	h m	h m
0	176	46.1	− 18	08.6	115	38.5	+ 9	50.8	60 N	6 42	7 34	8 22	9 13	12
1	191	46.0		07.9	130	12.4	149	+ 10	01.1	58	38	26	11	19
2	206	45.9		07.3	144	46.4	150			56	34	20	8	01
3	221	45.8		06.6	159	20.3	149			54	31	14	7	53
4	236	45.7		06.0	173	54.3	150			52	27	08	45	35
5	251	45.5	− 18	05.3	188	28.2	149	+ 10	41.9	50	6 24	7 03	7 39	9 39
6	266	45.4	− 18	04.6	203	02.1	149	+ 10	52.0	45	6 17	6 52	7 24	9 48
7	281	45.3		04.0	217	35.9	148	+ 11	02.0	40	10	43	12	9 56
8	296	45.2		03.3	232	09.8	149			35	6 04	35	7	01
9	311	45.1		02.6	246	43.6	148			30	5 58	27	6	52
10	326	45.0		02.0	261	17.4	148			20	47	13	37	19
11	341	44.9	− 18	01.3	275	51.2	148	+ 11	41.6	10 N	5 35	6 01	6 23	10 28
12	356	44.7	− 18	00.6	290	25.0	148	+ 11	51.4	0	5 22	5 48	6	09
13	11	44.6	− 18	00.0	304	58.7	147	+ 12	01.1	10 S	5 08	34	5	56
14	26	44.5	− 17	59.3	319	32.4	147			20	4 51	5 18	42	10 54
15	41	44.4		58.6	334	06.1	147			30	28	4 59	25	11 05
16	56	44.3		58.0	348	39.8	147			35	4 14	48	16	11 55
17	71	44.2	− 17	57.3	3 13.4		146	+ 12	39.5	40	3 57	4 34	5 05	11 18
18	86	44.1	− 17	56.6	17	47.1	147	+ 12	49.0	45	3 35	4 18	4 51	11 26
19	101	44.0		55.9	32	20.7	146	+ 12	58.4	50	3 05	3 57	35	36 64
20	116	43.9		55.3	46	54.2	145	+ 13	07.7	52	2 50	46	28	40 67
21	131	43.7		54.6	61	27.7	145			54	32	35	19	46 68
22	146	43.6		53.9	76	01.2	145			56	2 08	21	4 10	51 70
23	161	43.5		53.2	90	34.7	145			58	1 35	3 05	3 59	11 58
24	176	43.4	− 17	52.6	105	08.2	145	+ 13	44.6	60 S	** **	2 46	3 46	12 05
UT	ARIES PMG: 15 ^h 26 ^m 8		VENUS Mag.: −4.1 PMG: 14 ^h 46 ^m		MARTE Mag.: −0.5 PMG: 3 ^h 09 ^m		JÚPITER Mag.: −2.4 PMG: 17 ^h 29 ^m		SATURNO Mag.: +0.6 PMG: 5 ^h 22 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
	°	'	°	'	°	'	°	'	°	'	°	'	°	'
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	127	39.8	138	27.0	− 5	47.6	312	39.7	+ 6	14.6	97	09.9	+ 11	14.8
1	142	42.2	153	26.7		46.4	327	42.2		14.8	112	12.1		14.9
2	157	44.7	168	26.5		45.1	342	44.8		14.9	127	14.3		15.0
3	172	47.2	183	26.2		43.8	357	47.4		15.0	142	16.5		15.1
4	187	49.6	198	26.0		42.5	12	50.0		15.1	157	18.7		15.2
5	202	52.1	213	25.7	− 5	41.2	27	52.6	+ 6	15.3	172	20.9	+ 11	15.3
6	217	54.6	228	25.4	− 5	40.0	42	55.2	+ 6	15.4	187	23.1	+ 11	15.4
7	232	57.0	243	25.2		38.7	57	57.8		15.5	202	25.3		15.5
8	247	59.5	258	24.9		37.4	73	00.4		15.7	217	27.5		15.6
9	263	02.0	273	24.7		36.1	88	02.9		15.8	232	29.7		15.7
10	278	04.4	288	24.4		34.8	103	05.5		15.9	247	31.9		15.8
11	293	06.9	303	24.2	− 5	33.6	118	08.1	+ 6	16.1	262	34.1	+ 11	15.9
12	308	09.3	318	23.9	− 5	32.3	133	10.7	+ 6	16.2	277	36.3	+ 11	16.0
13	323	11.8	333	23.7		31.0	148	13.3		16.3	292	38.5		16.2
14	338	14.3	348	23.4		29.7	163	15.9		16.5	307	40.8		16.3
15	353	16.7	3 23.2			28.4	178	18.5		16.6	322	43.0		16.4
16	8	19.2	18	22.9		27.2	193	21.1		16.7	337	45.2		16.5
17	23	21.7	33	22.7	− 5	25.9	208	23.7	+ 6	16.9	352	47.4	+ 11	16.6
18	38	24.1	48	22.4	− 5	24.6	223	26.3	+ 6	17.0	7	49.6	+ 11	16.7
19	53	26.6	63	22.1		23.3	238	29.0		17.1	22	51.8		16.8
20	68	29.1	78	21.9		22.0	253	31.6		17.3	37	54.0		16.9
21	83	31.5	93	21.6		20.7	268	34.2		17.4	52	56.2		17.0
22	98	34.0	108	21.4		19.5	283	36.8		17.5	67	58.4		17.1
23	113	36.4	123	21.1		18.2	298	39.4		17.7	83	00.6		17.2
24	128	38.9	138	20.9	− 5	16.9	313	42.0	+ 6	17.8	98	02.8	+ 11	17.3
Dif	—		−3		+13		+26		+1		+22		+1	

LUNES 30 DE ENERO DE 2012

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UT	SOL		☾ LUNA						Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2		Edad: 6 ^d 7		PHE { 4 ^h : 54/3 12 ^h : 54/2 20 ^h : 54/2		PMG: 17 ^h 31 ^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
0	176	43.4	− 17	52.6	105	08.2	+ 13	44.6	90	60 N	16 07	16 55	17 47	9 25	17	0 41	75		
1	191	43.3		51.9	119	41.6 ¹⁴⁴	+ 13	53.6	90	58	18	17 03	51	35	19	32	73		
2	206	43.2		51.2	134	15.0 ¹⁴⁴	+ 14	02.6	90	56	27	09	54	43	22	25	70		
3	221	43.1		50.5	148	48.3 ¹⁴³		11.6	88	54	36	15	17 58	50	24	18	68		
4	236	43.0		49.9	163	21.6 ¹⁴³		20.4	89	52	43	20	18 01	9 56	26	12	66		
5	251	42.9	− 17	49.2	177	54.9 ¹⁴³	+ 14	29.3	87	50	16 50	17 25	18 04	10 02	28	0 07	64		
6	266	42.8	− 17	48.5	192	28.2 ¹⁴³	+ 14	38.0	87	45	17 04	17 36	18 11	10 15	31	**	***		
7	281	42.7		47.8	207	01.4 ¹⁴²		46.7	86	40	16	45	17	26	33	**	***		
8	296	42.6		47.2	221	34.6 ¹⁴²	+ 14	55.3	86	35	26	17 53	23	35	35	**	***		
9	311	42.5		46.5	236	07.7 ¹⁴¹	+ 15	03.9	86	30	35	18 00	29	43	37	**	***		
10	326	42.4		45.8	250	40.8 ¹⁴¹		12.4	85	20	17 50	13	40	10 56	41	**	***		
11	341	42.2	− 17	45.1	265	13.9 ¹⁴¹	+ 15	20.9	85	10 N	18 04	18 26	18 51	11 09	42	23	54		
12	356	42.1	− 17	44.4	279	46.9 ¹⁴⁰	+ 15	29.2	83	0	18 17	18 38	19 04	11 20	45	23	42		
13	11	42.0		43.7	294	19.9 ¹⁴⁰		37.5	83	10 S	30	18 52	18	32	47	29	44		
14	26	41.9		43.1	308	52.9 ¹⁴⁰		45.8	83	20	18 44	19 07	35	44	50	15	42		
15	41	41.8		42.4	323	25.8 ¹³⁹	+ 15	54.0	82	30	19 00	26	19 57	11 58	54	23	00		
16	56	41.7		41.7	337	58.7 ¹³⁹	+ 16	02.1	81	35	09	37	20 10	12 06	56	22	51		
17	71	41.6	− 17	41.0	352	31.6 ¹³⁹	+ 16	10.1	80	40	19 20	19 50	20 27	12 16	57	22	41		
18	86	41.5	− 17	40.3	7 04.4 ¹³⁸		+ 16	18.1	80	45	19 33	20 06	20 48	12 27	60	22	29		
19	101	41.4		39.6	21 37.1 ¹³⁷			26.0	79	50	48	27	21 17	40	64	14	30		
20	116	41.3		39.0	36 09.9 ¹³⁸			33.8	78	52	19 56	37	32	47	65	07	29		
21	131	41.2		38.3	50 42.6 ¹³⁷			41.6	78	54	20 04	20 48	21 49	12 54	66	22	00		
22	146	41.1		37.6	65 15.2 ¹³⁶			49.3	77	56	13	21 01	22 11	13 01	69	21	52		
23	161	41.0		36.9	79 47.8 ¹³⁶		+ 16	56.9	76	58	23	16	22 41	10	72	42	23		
24	176	40.9	− 17	36.2	94 20.4 ¹³⁶		+ 17	04.5	76	60 S	20 35	21 35	23 35	13 20	75	21	31		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG: 15 ^h 22 ^m 9		Mag.: −4.1 PMG: 14 ^h 47 ^m		Mag.: −0.5 PMG: 3 ^h 05 ^m		Mag.: −2.4 PMG: 17 ^h 25 ^m		Mag.: +0.6 PMG: 5 ^h 18 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'									
0	128	38.9	138	20.9	− 5	16.9	313	42.0	+ 6	17.8	98	02.8	+ 11	17.3	280	21.6	− 8	53.6	
1	143	41.4	153	20.6		15.6	328	44.6		18.0	113	05.0		17.4	295	24.0		53.6	
2	158	43.8	168	20.4		14.3	343	47.2		18.1	128	07.2		17.5	310	26.5		53.6	
3	173	46.3	183	20.2		13.0	358	49.9		18.2	143	09.4		17.6	325	28.9		53.6	
4	188	48.8	198	19.9		11.7	13	52.5		18.4	158	11.6		17.7	340	31.3		53.6	
5	203	51.2	213	19.7	− 5	10.5	28	55.1	+ 6	18.5	173	13.8	+ 11	17.9	355	33.7	− 8	53.6	
6	218	53.7	228	19.4	− 5	09.2	43	57.7	+ 6	18.7	188	16.0	+ 11	18.0	10	36.2	− 8	53.6	
7	233	56.2	243	19.2		07.9	59	00.3		18.8	203	18.2		18.1	25	38.6		53.6	
8	248	58.6	258	18.9		06.6	74	03.0		18.9	218	20.3		18.2	40	41.0		53.6	
9	264	01.1	273	18.7		05.3	89	05.6		19.1	233	22.5		18.3	55	43.4		53.6	
10	279	03.6	288	18.4		04.0	104	08.2		19.2	248	24.7		18.4	70	45.9		53.6	
11	294	06.0	303	18.2	− 5	02.7	119	10.8	+ 6	19.4	263	26.9	+ 11	18.5	85	48.3	− 8	53.6	
12	309	08.5	318	17.9	− 5	01.5	134	13.5	+ 6	19.5	278	29.1	+ 11	18.6	100	50.7	− 8	53.6	
13	324	10.9	333	17.7	− 5	00.2	149	16.1		19.7	293	31.3		18.7	115	53.1		53.6	
14	339	13.4	348	17.4	− 4	58.9	164	18.7		19.8	308	33.5		18.8	130	55.6		53.6	
15	354	15.9	3 17.2	57.6		179	21.3		20.0		323	35.7		18.9	145	58.0		53.6	
16	9	18.3	18	17.0		56.3	194	24.0		20.1	338	37.9		19.0	161	00.4		53.6	
17	24	20.8	33	16.7	− 4	55.0	209	26.6	+ 6	20.3	353	40.1	+ 11	19.1	176	02.8	− 8	53.6	
18	39	23.3	48	16.5	− 4	53.7	224	29.3	+ 6	20.4	8	42.3	+ 11	19.3	191	05.3	− 8	53.6	
19	54	25.7	63	16.2		52.4	239	31.9		20.5	23	44.5		19.4	206	07.7		53.6	
20	69	28.2	78	16.0		51.2	254	34.5		20.7	38	46.7		19.5	221	10.1		53.6	
21	84	30.7	93	15.7		49.9	269	37.2		20.8	53	48.9		19.6	236	12.6		53.6	
22	99	33.1	108	15.5		48.6	284	39.8		21.0	68	51.1		19.7	251	15.0		53.6	
23	114	35.6	123	15.3		47.3	299	42.4		21.1	83	53.3		19.8	266	17.4		53.6	
24	129	38.1	138	15.0	− 4	46.0	314	45.1	+ 6	21.3	98	55.5	+ 11	19.9	281	19.8	− 8	53.6	
Dif	—		−2	+13			+26	+1			+22	+1			+24				

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MARTES 31 DE ENERO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 4		SD: 14 ^h 8 Edad: 7 ^d 7 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 3 20 ^h : 54 ^m 3 PMG: 18 ^h 17 ^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 m	h m m	h m m						
0	176	40.9	- 17	36.2	94	20.4	+ 17 04.5	60 N	6 39	7 30	8 18	9 42 24	1 56 73						
1	191	40.8		35.5	108	52.9	135 11.9	58	35	23	8 07	9 54 26	45 69						
2	206	40.7		34.8	123	25.4	135 19.3	56	31	16	7 58	10 05 28	35 67						
3	221	40.6		34.1	137	57.8	134 26.7	54	28	11	50	14 30	26 65						
4	236	40.5		33.5	152	30.2	134 33.9	52	25	06	42	22 32	18 64						
5	251	40.4	- 17	32.8	167	02.6	134 + 17 41.1	50	6 22	7 01	7 36	10 30 33	1 11 62						
6	266	40.3	- 17	32.1	181	34.9	133 + 17 48.2	45	6 15	6 50	7 22	10 46 35	0 56 59						
7	281	40.2		31.4	196	07.2	133 + 17 55.2	40	09	41	10	10 59 37	44 57						
8	296	40.1		30.7	210	39.4	132 + 18 02.2	35	6 03	33	7 00	11 10 39	33 55						
9	311	40.0		30.0	225	11.5	131 09.1	30	5 57	26	6 51	20 41	24 53						
10	326	39.9		29.3	239	43.7	132 15.9	20	46	13	36	37 43	0 08 51						
11	341	39.8	- 17	28.6	254	15.8	131 + 18 22.6	10 N	5 35	6 01	6 23	11 51 46	*** **						
12	356	39.7	- 17	27.9	268	47.8	130 + 18 29.2	0	5 23	5 48	6 10	12 05 48	*** **						
13	11	39.7		27.2	283	19.8	130 35.8	10 S	5 09	35	5 57	19 49	*** **						
14	26	39.6		26.5	297	51.7	129 42.3	20	4 52	20	43	34 52	23 57 45						
15	41	39.5		25.8	312	23.6	129 48.7	30	30	5 01	27	12 52 53	39 43						
16	56	39.4		25.1	326	55.5	129 + 18 55.0	35	17	4 50	18	13 02 55	28 42						
17	71	39.3	- 17	24.4	341	27.3	128 + 19 01.2	40	4 00	4 37	5 07	13 13 57	23 16 40						
18	86	39.2	- 17	23.7	355	59.1	128 + 19 07.4	45	3 39	4 21	4 54	13 27 59	23 01 39						
19	101	39.1		23.0	10	30.8	127 13.4	50	3 10	4 00	39	44 61	22 44 36						
20	116	39.0		22.3	25	02.4	126 19.4	52	2 56	3 51	32	13 52 62	36 35						
21	131	38.9		21.6	39	34.1	127 25.3	54	38	39	23	14 00 64	27 33						
22	146	38.8		20.9	54	05.6	125 31.1	56	2 16	26	14	10 66	16 32						
23	161	38.7		20.2	68	37.2	126 36.9	58	1 46	3 11	4 04	22 68	22 05 30						
24	176	38.6	- 17	19.5	83	08.6	124 + 19 42.5	60 S	0 52	2 53	3 52	14 35 71	21 51 27						
UT	ARIES PMG 15 ^h 18 ^m 9		VENUS Mag.: -4.1 PMG: 14 ^h 47 ^m		MARTE Mag.: -0.5 PMG: 3 ^h 00 ^m		JÚPITER Mag.: -2.4 PMG: 17 ^h 22 ^m		SATURNO Mag.: +0.6 PMG: 5 ^h 14 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
	°	'	°	'	°	'	°	'	°	'									
h	°	'	°	'	°	'	°	'	°	'									
0	129	38.1	138	15.0	- 4	46.0	314	45.1	+ 6	21.3	98	55.5	+ 11	19.9	281	19.8	- 8	53.6	
1	144	40.5	153	14.8		44.7	329	47.7		21.4	113	57.7		20.0	296	22.3		53.6	
2	159	43.0	168	14.5		43.4	344	50.4		21.6	128	59.9		20.1	311	24.7		53.6	
3	174	45.4	183	14.3		42.1	359	53.0		21.7	144	02.1		20.2	326	27.1		53.6	
4	189	47.9	198	14.1		40.8	14	55.7		21.9	159	04.2		20.3	341	29.6		53.6	
5	204	50.4	213	13.8	- 4	39.6	29	58.3	+ 6	22.1	174	06.4	+ 11	20.5	356	32.0	- 8	53.6	
6	219	52.8	228	13.6	- 4	38.3	45	01.0	+ 6	22.2	189	08.6	+ 11	20.6	11	34.4	- 8	53.6	
7	234	55.3	243	13.3		37.0	60	03.6		22.4	204	10.8		20.7	26	36.8		53.6	
8	249	57.8	258	13.1		35.7	75	06.3		22.5	219	13.0		20.8	41	39.3		53.6	
9	265	00.2	273	12.9		34.4	90	08.9		22.7	234	15.2		20.9	56	41.7		53.6	
10	280	02.7	288	12.6		33.1	105	11.6		22.8	249	17.4		21.0	71	44.1		53.6	
11	295	05.2	303	12.4	- 4	31.8	120	14.3	+ 6	23.0	264	19.6	+ 11	21.1	86	46.6	- 8	53.6	
12	310	07.6	318	12.2	- 4	30.5	135	16.9	+ 6	23.1	279	21.8	+ 11	21.2	101	49.0	- 8	53.6	
13	325	10.1	333	11.9		29.2	150	19.6		23.3	294	24.0		21.3	116	51.4		53.6	
14	340	12.5	348	11.7		27.9	165	22.2		23.5	309	26.1		21.4	131	53.9		53.6	
15	355	15.0	3	11.5		26.6	180	24.9		23.6	324	28.3		21.5	146	56.3		53.6	
16	10	17.5	18	11.2		25.4	195	27.6		23.8	339	30.5		21.7	161	58.7		53.6	
17	25	19.9	33	11.0	- 4	24.1	210	30.2	+ 6	23.9	354	32.7	+ 11	21.8	177	01.1	- 8	53.6	
18	40	22.4	48	10.8	- 4	22.8	225	32.9	+ 6	24.1	9	34.9	+ 11	21.9	192	03.6	- 8	53.6	
19	55	24.9	63	10.5		21.5	240	35.6		24.2	24	37.1		22.0	207	06.0		53.6	
20	70	27.3	78	10.3		20.2	255	38.2		24.4	39	39.3		22.1	222	08.4		53.6	
21	85	29.8	93	10.1		18.9	270	40.9		24.6	54	41.5		22.2	237	10.9		53.6	
22	100	32.3	108	09.8		17.6	285	43.6		24.7	69	43.7		22.3	252	13.3		53.6	
23	115	34.7	123	09.6		16.3	300	46.2		24.9	84	45.8		22.4	267	15.7		53.6	
24	130	37.2	138	09.4	- 4	15.0	315	48.9	+ 6	25.1	99	48.0	+ 11	22.5	282	18.2	- 8	53.6	
Dif	—		-2		+13		+27		+2		+22		+1		+24		0		

MIÉRCOL 1 DE FEBRERO DE 2012

UT	SOL		LUNA					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 5		SD: 14 ^h 8 Edad: 8 ^d 7 PHE $\begin{cases} 4^h: 54^m/4 \\ 12^h: 54^m/5 \\ 20^h: 54^m/6 \end{cases}$ PMG: 19 ^h 04 ^m R°: 50 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°	
^h 0	176 38.6	− 17 19.5	83 08.6		+ 19 42.5	56	60 N	^h ^m 16 13	^h ^m 17 00	^h ^m 17 51	^h ^m ^m 10 06 33	^h ^m ^m 3 09 67			
1	191 38.5	18.8	97 40.1	125	48.1	56	58	23	07	55	20 36	2 54 65			
2	206 38.4	18.1	112 11.4	123	53.6	55	56	32	13	17 58	33 37	42 63			
3	221 38.4	17.4	126 42.8	124	+ 19 58.9	53	54	40	18	18 01	44 38	31 62			
4	236 38.3	16.7	141 14.1	123	+ 20 04.2	53	52	47	23	04	10 54 39	22 60			
5	251 38.2	− 17 16.0	155 45.3	122	+ 20 09.4	52	50	16 53	17 28	18 07	11 03 40	2 13 60			
6	266 38.1	− 17 15.3	170 16.5	122	+ 20 14.6	52	45	17 07	17 38	18 13	11 21 42	1 55 58			
7	281 38.0	14.6	184 47.6	121	19.6	50	40	18	47	19	36 44	41 55			
8	296 37.9	13.9	199 18.7	121	24.5	49	35	28	17 55	25	11 49 45	28 55			
9	311 37.8	13.2	213 49.8	121	29.4	49	30	37	18 02	30	12 01 45	1 17 54			
10	326 37.7	12.5	228 20.8	120	34.1	47	20	17 52	15	41	20 47	0 59 51			
11	341 37.6	− 17 11.8	242 51.7	119	+ 20 38.8	47	10 N	18 05	18 27	18 52	12 37 48	0 43 50			
12	356 37.6	− 17 11.1	257 22.6	119	+ 20 43.3	45	0	18 17	18 39	19 04	12 53 49	0 28 48			
13	11 37.5	10.4	271 53.5	119	47.8	45	10 S	30	18 52	17	13 08 51	0 13 47			
14	26 37.4	09.7	286 24.3	118	52.2	44	20	43	19 06	34	26 51	*** **			
15	41 37.3	09.0	300 55.0	117	+ 20 56.5	43	30	18 59	24	19 55	45 53	*** **			
16	56 37.2	08.3	315 25.8	118	+ 21 00.7	42	35	19 08	35	20 08	13 57 54	*** **			
17	71 37.1	− 17 07.6	329 56.4	116	+ 21 04.8	41	40	19 18	19 48	20 25	14 10 55	23 56 46			
18	86 37.0	− 17 06.8	344 27.0	116	+ 21 08.8	40	45	19 30	20 04	20 45	14 26 56	23 40 45			
19	101 37.0	06.1	358 57.6	116	12.7	39	50	45	23	21 13	45 57	20 44			
20	116 36.9	05.4	13 28.1	115	16.5	38	52	19 52	33	27	14 54 58	11 43			
21	131 36.8	04.7	27 58.6	115	20.2	37	54	20 00	44	21 43	15 04 60	23 00 43			
22	146 36.7	04.0	42 29.0	114	23.8	36	56	09	20 56	22 04	16 60	22 48 42			
23	161 36.6	03.3	56 59.4	114	27.3	35	58	19	21 11	22 31	30 61	35 40			
24	176 36.5	− 17 02.6	71 29.8	114	+ 21 30.7	34	60 S	20 31	21 28	23 14	15 46 63	22 18 39			
UT	ARIES PMG 15 ^h 15 ^m 0		VENUS Mag.: −4.1 PMG: 14 ^h 48 ^m		MARTE Mag.: −0.6 PMG: 2 ^h 56 ^m		JÚPITER Mag.: −2.3 PMG: 17 ^h 18 ^m		SATURNO Mag.: +0.6 PMG: 5 ^h 10 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
^h 0	130 37.2	138 09.4	− 4 15.0	315 48.9	+ 6 25.1	99 48.0	+ 11 22.5	282 18.2	− 8 53.6						
1	145 39.7	153 09.1	13.7	330 51.6	25.2	114 50.2	22.7	297 20.6	53.6						
2	160 42.1	168 08.9	12.4	345 54.3	25.4	129 52.4	22.8	312 23.0	53.6						
3	175 44.6	183 08.7	11.1	0 56.9	25.5	144 54.6	22.9	327 25.5	53.6						
4	190 47.0	198 08.4	09.8	15 59.6	25.7	159 56.8	23.0	342 27.9	53.6						
5	205 49.5	213 08.2	− 4 08.5	31 02.3	+ 6 25.9	174 59.0	+ 11 23.1	357 30.3	− 8 53.6						
6	220 52.0	228 08.0	− 4 07.2	46 05.0	+ 6 26.0	190 01.1	+ 11 23.2	12 32.8	− 8 53.6						
7	235 54.4	243 07.7	06.0	61 07.7	26.2	205 03.3	23.3	27 35.2	53.6						
8	250 56.9	258 07.5	04.7	76 10.4	26.4	220 05.5	23.4	42 37.6	53.6						
9	265 59.4	273 07.3	03.4	91 13.0	26.5	235 07.7	23.5	57 40.1	53.6						
10	281 01.8	288 07.1	02.1	106 15.7	26.7	250 09.9	23.7	72 42.5	53.6						
11	296 04.3	303 06.8	− 4 00.8	121 18.4	+ 6 26.9	265 12.1	+ 11 23.8	87 44.9	− 8 53.6						
12	311 06.8	318 06.6	− 3 59.5	136 21.1	+ 6 27.0	280 14.2	+ 11 23.9	102 47.4	− 8 53.6						
13	326 09.2	333 06.4	58.2	151 23.8	27.2	295 16.4	24.0	117 49.8	53.6						
14	341 11.7	348 06.1	56.9	166 26.5	27.4	310 18.6	24.1	132 52.2	53.6						
15	356 14.2	3 05.9	55.6	181 29.2	27.6	325 20.8	24.2	147 54.7	53.6						
16	11 16.6	18 05.7	54.3	196 31.9	27.7	340 23.0	24.3	162 57.1	53.6						
17	26 19.1	33 05.5	− 3 53.0	211 34.6	+ 6 27.9	355 25.2	+ 11 24.4	177 59.6	− 8 53.6						
18	41 21.5	48 05.2	− 3 51.7	226 37.3	+ 6 28.1	10 27.3	+ 11 24.5	193 02.0	− 8 53.6						
19	56 24.0	63 05.0	50.4	241 40.0	28.2	25 29.5	24.7	208 04.4	53.6						
20	71 26.5	78 04.8	49.1	256 42.7	28.4	40 31.7	24.8	223 06.9	53.6						
21	86 28.9	93 04.6	47.8	271 45.4	28.6	55 33.9	24.9	238 09.3	53.6						
22	101 31.4	108 04.3	46.5	286 48.1	28.8	70 36.1	25.0	253 11.7	53.6						
23	116 33.9	123 04.1	45.2	301 50.8	28.9	85 38.2	25.1	268 14.2	53.6						
24	131 36.3	138 03.9	− 3 43.9	316 53.5	+ 6 29.1	100 40.4	+ 11 25.2	283 16.6	− 8 53.6						
Dif	—	−2	+13	+27	+2	+22	+1	+24	0						

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JUEVES 2 DE FEBRERO DE 2012

UT	SOL		LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 12 ^h 13 ^m 6		SD: 14:9 Edad: 9 ^d 7 PHE { 4 ^h : 54:7 12 ^h : 54:9 20 ^h : 55:1 PMG: 19 ^h 54 ^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	h m					
0	176	36.5	− 17	02.6	71	29.8	+ 21	30.7	6 35	7 26	8 13	10 39	46	4 16	58			
1	191	36.5		01.9	86	00.1		34.0	31	19	8 03	10 56	47	3 59	57			
2	206	36.4		01.1	100	30.3		37.2	28	13	7 54	11 10	47	45	57			
3	221	36.3	− 17	00.4	115	00.5		40.3	25	08	46	22	48	33	56			
4	236	36.2	− 16	59.7	129	30.7		43.3	22	7 03	39	33	48	22	56			
5	251	36.1	− 16	59.0	144	00.8	+ 21	46.2	6 19	6 58	7 33	11 43	48	3 13	55			
6	266	36.1	− 16	58.3	158	30.9	+ 21	49.0	6 13	6 48	7 19	12 03	49	2 53	54			
7	281	36.0		57.6	173	00.9		51.7	07	40	7 08	20	49	36	54			
8	296	35.9		56.9	187	30.9		54.3	6 02	32	6 59	34	50	23	52			
9	311	35.8		56.1	202	00.8		56.8	5 56	25	50	12	46	50	2 11	52		
10	326	35.7		55.4	216	30.7	+ 21	59.2	46	12	35	13	07	50	1 50	52		
11	341	35.7	− 16	54.7	231	00.6	+ 22	01.4	5 35	6 00	6 22	13	25	51	1 33	50		
12	356	35.6	− 16	54.0	245	30.4	+ 22	03.6	5 23	5 48	6 10	13	42	51	1 16	50		
13	11	35.5		53.3	260	00.1		05.7	5 10	36	5 58	13	59	51	1 00	49		
14	26	35.4		52.5	274	29.9		07.6	4 53	21	44	14	17	51	0 42	48		
15	41	35.4		51.8	288	59.6		09.5	32	5 03	29	38	52	22	47			
16	56	35.3		51.1	303	29.2		11.2	19	4 52	20	14	51	51	0 10	47		
17	71	35.2	− 16	50.4	317	58.8	+ 22	12.9	4 03	4 40	5 09	15	05	51	***	***		
18	86	35.1	− 16	49.7	332	28.4	+ 22	14.4	3 42	4 24	4 57	15	22	51	***	***		
19	101	35.0		48.9	346	57.9		15.8	15	4 04	42	42	53	***	***			
20	116	35.0		48.2	1	27.4		17.1	3 01	3 55	35	15	52	53	23	54		
21	131	34.9		47.5	15	56.9		18.3	2 44	44	28	16	04	52	43	53		
22	146	34.8		46.8	30	26.3		19.4	2 24	32	19	16	53	30	54			
23	161	34.7		46.0	44	55.7		20.4	1 57	17	4 09	31	52	23	15	54		
24	176	34.7	− 16	45.3	59	25.0	+ 22	21.2	1 14	3 00	3 57	16	49	52	22	57		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 15 ^h 11 ^m 1		Mag.: −4.1 PMG: 14 ^h 48 ^m		Mag.: −0.6 PMG: 2 ^h 52 ^m		Mag.: −2.3 PMG: 17 ^h 15 ^m		Mag.: +0.6 PMG: 5 ^h 06 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	131	36.3	138	03.9	− 3	43.9	316	53.5	+ 6	29.1	100	40.4	+ 11	25.2	283	16.6	− 8	53.6
1	146	38.8	153	03.7		42.6	331	56.2		29.3	115	42.6		25.3	298	19.0		53.6
2	161	41.3	168	03.4		41.3	346	58.9		29.5	130	44.8		25.5	313	21.5		53.6
3	176	43.7	183	03.2		40.0	2	01.6		29.6	145	47.0		25.6	328	23.9		53.6
4	191	46.2	198	03.0		38.7	17	04.3		29.8	160	49.1		25.7	343	26.4		53.6
5	206	48.6	213	02.8	− 3	37.4	32	07.0	+ 6	30.0	175	51.3	+ 11	25.8	358	28.8	− 8	53.6
6	221	51.1	228	02.6	− 3	36.1	47	09.7	+ 6	30.2	190	53.5	+ 11	25.9	13	31.2	− 8	53.6
7	236	53.6	243	02.3		34.8	62	12.4		30.3	205	55.7		26.0	28	33.7		53.6
8	251	56.0	258	02.1		33.5	77	15.2		30.5	220	57.9		26.1	43	36.1		53.6
9	266	58.5	273	01.9		32.2	92	17.9		30.7	236	00.0		26.2	58	38.5		53.6
10	282	01.0	288	01.7		30.9	107	20.6		30.9	251	02.2		26.4	73	41.0		53.6
11	297	03.4	303	01.5	− 3	29.6	122	23.3	+ 6	31.1	266	04.4	+ 11	26.5	88	43.4	− 8	53.6
12	312	05.9	318	01.2	− 3	28.3	137	26.0	+ 6	31.2	281	06.6	+ 11	26.6	103	45.9	− 8	53.6
13	327	08.4	333	01.0		27.0	152	28.8		31.4	296	08.7		26.7	118	48.3		53.6
14	342	10.8	348	00.8		25.7	167	31.5		31.6	311	10.9		26.8	133	50.7		53.6
15	357	13.3	3	00.6		24.4	182	34.2		31.8	326	13.1		26.9	148	53.2		53.6
16	12	15.8	18	00.4		23.1	197	36.9		32.0	341	15.3		27.0	163	55.6		53.6
17	27	18.2	33	00.1	− 3	21.8	212	39.7	+ 6	32.1	356	17.4	+ 11	27.2	178	58.1	− 8	53.6
18	42	20.7	47	59.9	− 3	20.5	227	42.4	+ 6	32.3	11	19.6	+ 11	27.3	194	00.5	− 8	53.6
19	57	23.1	62	59.7		19.2	242	45.1		32.5	26	21.8		27.4	209	02.9		53.6
20	72	25.6	77	59.5		17.9	257	47.8		32.7	41	24.0		27.5	224	05.4		53.5
21	87	28.1	92	59.3		16.6	272	50.6		32.9	56	26.1		27.6	239	07.8		53.5
22	102	30.5	107	59.1		15.3	287	53.3		33.1	71	28.3		27.7	254	10.3		53.5
23	117	33.0	122	58.8		14.0	302	56.0		33.2	86	30.5		27.8	269	12.7		53.5
24	132	35.5	137	58.6	− 3	12.7	317	58.8	+ 6	33.4	101	32.7	+ 11	28.0	284	15.1	− 8	53.5
Dif	—		−2	+13		+27	+2		+22	+1		+24						

VIERNES 3 DE FEBRERO DE 2012

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UT	SOL		LUNA					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna										
	SD: 16 ^h 2		SD: 15 ^h 0		Edad: 10 ^d 7		PHE { 4 ^h : 55/2 12 ^h : 55/4 20 ^h : 55/6									PMG: 20 ^h 45 ^m	R°: 52 ^m							
	PMG: 12 ^h 13 ^m 7																							
	hG ☉	Dec	hG ☾	Dif	Dec	Dif																		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m									
0	176	34.7	−16	45.3	59	25.0	+22	21.2	8	60 N	16	18	17	05	11	25	62	5	14	46				
1	191	34.6		44.6	73	54.3		22.0	6	58	28	11	17	59	43	60		4	56	47				
2	206	34.5		43.9	88	23.6		22.6	6	56	36	17	18	02	11	57	60		42	47				
3	221	34.5		43.1	102	52.8		23.2	6	54	44	22	05	12	10	59		29	48					
4	236	34.4		42.4	117	22.0		23.6	4	52	50	27	07	21	59		18	48						
5	251	34.3	−16	41.7	131	51.2	+22	23.9	3	50	16	57	17	31	18	10	12	31	58	4	08	48		
6	266	34.2	−16	40.9	146	20.3	+22	24.1	2	45	17	10	17	41	18	16	12	52	57	3	47	49		
7	281	34.2		40.2	160	49.4		24.2	1	40	21		49	22	13	09	56		30	50				
8	296	34.1		39.5	175	18.5		24.1	1	35	30		17	57	27	24	55		15	51				
9	311	34.0		38.8	189	47.6		24.0	1	30	38		18	03	32	36	55		3	03	51			
10	326	34.0		38.0	204	16.6		23.7	3	20	17	53	16	42	13	57	54		2	42	51			
11	341	33.9	−16	37.3	218	45.6	+22	23.3	4	10 N	18	05	18	27	18	52	14	16	52		2	23	52	
12	356	33.8	−16	36.6	233	14.5	+22	22.8	5	0	18	17	18	39	19	04	14	33	52		2	06	52	
13	11	33.7		35.8	247	43.4		22.2	6	10 S	29	18	51	17	14	50	51		1	49	52			
14	26	33.7		35.1	262	12.3		21.5	7	20	42		19	06	33	15	08	51		30	53			
15	41	33.6		34.4	276	41.2		20.7	8	30	18	57	23	19	54	30	49		1	09	53			
16	56	33.5		33.6	291	10.1		19.7	10	35	19	06	33	20	07	42	49		0	57	52			
17	71	33.5	−16	32.9	305	38.9	+22	18.6	11	40	19	16	19	46	20	22	15	56	48		0	42	53	
18	86	33.4	−16	32.2	320	07.7	+22	17.4	12	45	19	28	20	01	20	42	16	13	47		0	25	53	
19	101	33.3		31.4	334	36.4		16.1	13	50	42		20	21	08	35	45		0	04	53			
20	116	33.3		30.7	349	05.2		14.7	14	52	49		29	22	45	44			***	***	***			
21	131	33.2		30.0	3	33.9		13.2	15	54	19	57	39	38	16	56	43			***	***	***		
22	146	33.1		29.2	18	02.6		11.5	17	56	20	05	20	51	21	57	17	09	42		***	***	***	
23	161	33.1		28.5	32	31.3		09.7	18	58	15		21	05	22	22	23	42			***	***	***	
24	176	33.0	−16	27.7	47	00.0	+22	07.8	19	60 S	20	26	21	22	22	58	17	41	40		23	51	69	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO												
	PMG		Mag.: −4.1			Mag.: −0.6			Mag.: −2.3			Mag.: +0.6												
	15 ^h 07 ^m 2		PMG: 14 ^h 48 ^m			PMG: 2 ^h 48 ^m			PMG: 17 ^h 11 ^m			PMG: 5 ^h 02 ^m												
	hG ♊		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	132	35.5	137	58.6	−3	12.7		317	58.8	+6	33.4		101	32.7	+11	28.0		284	15.1	−8	53.5			
1	147	37.9		58.4		11.4		333	01.5		33.6		116	34.8		28.1		299	17.6		53.5			
2	162	40.4		58.2		10.1		348	04.2		33.8		131	37.0		28.2		314	20.0		53.5			
3	177	42.9		58.0		08.8		3	07.0		34.0		146	39.2		28.3		329	22.5		53.5			
4	192	45.3		57.8		07.5		18	09.7		34.2		161	41.4		28.4		344	24.9		53.5			
5	207	47.8		57.5	−3	06.2		33	12.5	+6	34.4		176	43.5	+11	28.5		359	27.3	−8	53.5			
6	222	50.3		57.3	−3	04.9		48	15.2	+6	34.6		191	45.7	+11	28.7		14	29.8	−8	53.5			
7	237	52.7		57.1		03.6		63	18.0		34.7		206	47.9		28.8		29	32.2		53.5			
8	252	55.2		56.9		02.3		78	20.7		34.9		221	50.1		28.9		44	34.7		53.5			
9	267	57.6		56.7	−3	01.0		93	23.5		35.1		236	52.2		29.0		59	37.1		53.5			
10	283	00.1		56.5	−2	59.7		108	26.2		35.3		251	54.4		29.1		74	39.6		53.5			
11	298	02.6		56.3	−2	58.4		123	28.9	+6	35.5		266	56.6	+11	29.2		89	42.0	−8	53.5			
12	313	05.0		56.1	−2	57.1		138	31.7	+6	35.7		281	58.7	+11	29.3		104	44.4	−8	53.5			
13	328	07.5		55.8		55.8		153	34.5		35.9		297	00.9		29.5		119	46.9		53.5			
14	343	10.0		55.6		54.5		168	37.2		36.1		312	03.1		29.6		134	49.3		53.5			
15	358	12.4		55.4		53.2		183	40.0		36.3		327	05.2		29.7		149	51.8		53.5			
16	13	14.9		55.2		51.9		198	42.7		36.5		342	07.4		29.8		164	54.2		53.5			
17	28	17.4		55.0	−2	50.6		213	45.5	+6	36.7		357	09.6	+11	29.9		179	56.7	−8	53.5			
18	43	19.8		54.8	−2	49.3		228	48.2	+6	36.9		12	11.8	+11	30.0		194	59.1	−8	53.5			
19	58	22.3		54.6		48.0		243	51.0		37.1		27	13.9		30.2		210	01.6		53.5			
20	73	24.8		54.4		46.7		258	53.8		37.3		42	16.1		30.3		225	04.0		53.5			
21	88	27.2		54.2		45.4		273	56.5		37.5		57	18.3		30.4		240	06.4		53.5			
22	103	29.7		54.0		44.1		288	59.3		37.6		72	20.4		30.5		255	08.9		53.4			
23	118	32.1		53.7		42.8		304	02.0		37.8		87	22.6		30.6		270	11.3		53.4			
24	133	34.6		53.5	−2	41.5		319	04.8	+6	38.0		102	24.8	+11	30.7		285	13.8	−8	53.4			
Dif	—		−2		+13		+28		+2		+22		+1		+24		0							

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SÁBADO 4 DE FEBRERO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 9		SD: 15 ^h 2 Edad: 11 ^d 7 PHE { 4 ^h : 55 ^h 8 12 ^h : 56 ^h 1 20 ^h : 56 ^h 3 PMG: 21 ^h 37 ^m R°: 53 ^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	176 33.0	− 16 27.7	47 00.0		+ 22 07.8	20	60 N	6 31	7 21	8 08	12 27 74		6 00 33	
1	191 32.9	27.0	61 28.6	96	05.8	21	58	28	15	7 59	43 72		5 43 36	
2	206 32.9	26.3	75 57.2	96	03.7	21	56	25	10	50	12 57 70		29 38	
3	221 32.8	25.5	90 25.8	96	+ 22 01.4	23	54	22	04	43	13 09 68		17 39	
4	236 32.8	24.8	104 54.4	96	+ 21 59.1	23	52	19	7 00	36	20 66		5 06 41	
5	251 32.7	− 16 24.0	119 23.0	96	+ 21 56.6	25	50	6 17	6 55	7 30	13 29 66		4 56 42	
6	266 32.6	− 16 23.3	133 51.5	95	+ 21 54.0	26	45	6 11	6 46	7 17	13 49 63		4 36 44	
7	281 32.6	22.6	148 20.1	96	51.3	27	40	06	38	7 06	14 05 61		20 45	
8	296 32.5	21.8	162 48.6	95	48.4	29	35	6 00	31	6 57	19 59		4 06 46	
9	311 32.4	21.1	177 17.1	95	45.5	29	30	5 55	24	49	31 58		3 54 47	
10	326 32.4	20.3	191 45.6	95	42.4	31	20	45	12	35	14 51 56		33 49	
11	341 32.3	− 16 19.6	206 14.1	95	+ 21 39.2	32	10 N	5 35	6 00	6 22	15 08 55		3 15 51	
12	356 32.3	− 16 18.9	220 42.5	94	+ 21 35.9	33	0	5 24	5 49	6 10	15 25 52		2 58 52	
13	11 32.2	18.1	235 11.0	95	32.5	34	10 S	5 11	36	5 58	41 51		41 53	
14	26 32.1	17.4	249 39.5	95	28.9	36	20	4 55	22	46	15 59 48		23 55	
15	41 32.1	16.6	264 07.9	94	25.2	37	30	34	5 05	31	16 19 46		2 02 56	
16	56 32.0	15.9	278 36.3	94	21.4	38	35	21	4 55	22	31 45		1 49 58	
17	71 32.0	− 16 15.1	293 04.8	95	+ 21 17.5	39	40	4 06	4 42	5 12	16 44 43		1 35 59	
18	86 31.9	− 16 14.4	307 33.2	94	+ 21 13.5	40	45	3 46	4 27	5 00	17 00 41		1 18 60	
19	101 31.8	13.6	322 01.6	94	09.4	41	50	20	4 08	4 46	20 38		0 57 62	
20	116 31.8	12.9	336 30.0	94	05.1	43	52	3 06	3 59	39	29 37		47 63	
21	131 31.7	12.1	350 58.4	94	+ 21 00.7	44	54	2 51	49	32	39 36		36 64	
22	146 31.7	11.4	5 26.8	94	+ 20 56.2	45	56	32	37	23	17 51 34		24 64	
23	161 31.6	10.6	19 55.2	94	51.6	46	58	2 07	23	14	18 05 31		0 09 66	
24	176 31.5	− 16 09.9	34 23.5	93	+ 20 46.9	47	60 S	1 30	3 07	4 03	18 21 28		** ** *	
UT	ARIES PMG 15 ^h 03 ^m 2		VENUS Mag.: −4.1 PMG: 14 ^h 49 ^m		MARTE Mag.: −0.6 PMG: 2 ^h 43 ^m		JÚPITER Mag.: −2.3 PMG: 17 ^h 08 ^m		SATURNO Mag.: +0.6 PMG: 4 ^h 58 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	h	°	'	°	'	°	'	°	'	°	'			
0	133 34.6	137 53.5	− 2 41.5	319 04.8	+ 6 38.0	102 24.8	+ 11 30.7	285 13.8	− 8 53.4					
1	148 37.1	152 53.3	40.2	334 07.6	38.2	117 26.9	30.9	300 16.2	53.4					
2	163 39.5	167 53.1	38.9	349 10.3	38.4	132 29.1	31.0	315 18.7	53.4					
3	178 42.0	182 52.9	37.6	4 13.1	38.6	147 31.3	31.1	330 21.1	53.4					
4	193 44.5	197 52.7	36.3	19 15.9	38.8	162 33.4	31.2	345 23.6	53.4					
5	208 46.9	212 52.5	− 2 35.0	34 18.7	+ 6 39.0	177 35.6	+ 11 31.3	0 26.0	− 8 53.4					
6	223 49.4	227 52.3	− 2 33.7	49 21.4	+ 6 39.2	192 37.8	+ 11 31.4	15 28.5	− 8 53.4					
7	238 51.9	242 52.1	32.4	64 24.2	39.4	207 39.9	31.6	30 30.9	53.4					
8	253 54.3	257 51.9	31.1	79 27.0	39.6	222 42.1	31.7	45 33.3	53.4					
9	268 56.8	272 51.7	29.8	94 29.8	39.8	237 44.3	31.8	60 35.8	53.4					
10	283 59.3	287 51.5	28.4	109 32.5	40.0	252 46.4	31.9	75 38.2	53.4					
11	299 01.7	302 51.3	− 2 27.1	124 35.3	+ 6 40.2	267 48.6	+ 11 32.0	90 40.7	− 8 53.4					
12	314 04.2	317 51.1	− 2 25.8	139 38.1	+ 6 40.5	282 50.8	+ 11 32.2	105 43.1	− 8 53.4					
13	329 06.6	332 50.9	24.5	154 40.9	40.7	297 52.9	32.3	120 45.6	53.4					
14	344 09.1	347 50.7	23.2	169 43.7	40.9	312 55.1	32.4	135 48.0	53.4					
15	359 11.6	2 50.4	21.9	184 46.5	41.1	327 57.2	32.5	150 50.5	53.4					
16	14 14.0	17 50.2	20.6	199 49.2	41.3	342 59.4	32.6	165 52.9	53.4					
17	29 16.5	32 50.0	− 2 19.3	214 52.0	+ 6 41.5	358 01.6	+ 11 32.7	180 55.4	− 8 53.3					
18	44 19.0	47 49.8	− 2 18.0	229 54.8	+ 6 41.7	13 03.7	+ 11 32.9	195 57.8	− 8 53.3					
19	59 21.4	62 49.6	16.7	244 57.6	41.9	28 05.9	33.0	211 00.3	53.3					
20	74 23.9	77 49.4	15.4	260 00.4	42.1	43 08.1	33.1	226 02.7	53.3					
21	89 26.4	92 49.2	14.1	275 03.2	42.3	58 10.2	33.2	241 05.2	53.3					
22	104 28.8	107 49.0	12.8	290 06.0	42.5	73 12.4	33.3	256 07.6	53.3					
23	119 31.3	122 48.8	11.5	305 08.8	42.7	88 14.5	33.5	271 10.1	53.3					
24	134 33.7	137 48.6	− 2 10.2	320 11.6	+ 6 42.9	103 16.7	+ 11 33.6	286 12.5	− 8 53.3					
Dif	—	−2	+13	+28	+2	+22	+1	+24	0					

DOMINGO 5 DE FEBRERO DE 2012

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UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 9			SD: 15 ^h 4 Edad: 12 ^d 7 PHE { 4 ^h : 56 ^s 5 12 ^h : 56 ^s 8 20 ^h : 57 ^s 0 PMG: 22 ^h 30 ^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	
0	176	31.5	− 16	09.9	34	23.5	+ 20	46.9	60 N	16	23	17	09	18	00	13	41
1	191	31.5		09.1	48	51.9	94	42.1	58	32		16	03		13	55	80
2	206	31.4		08.4	63	20.3	94	37.1	56	40		21	06		14	07	77
3	221	31.4		07.6	77	48.7	94	32.0	54	48		26	08		17	75	5
4	236	31.3		06.9	92	17.1	94	26.8	52	16	54	30	11		26	74	47
5	251	31.3	− 16	06.1	106	45.5	94	+ 20	50	17	00	17	34	18	13	14	35
6	266	31.2	− 16	05.4	121	13.8	93	+ 20	45	17	13	17	44	18	19	14	52
7	281	31.2		04.6	135	42.2	94	10.5	40	23		52	24		15	06	66
8	296	31.1		03.9	150	10.6	94	+ 20	35	32	17	59	29		18	63	4
9	311	31.1		03.1	164	39.0	94	+ 19	30	40	18	05	33		29	61	41
10	326	31.0		02.4	179	07.4	94	53.2	20	17	54	17	43		15	47	58
11	341	30.9	− 16	01.6	193	35.8	94	+ 19	10 N	18	06	18	28	18	53	16	03
12	356	30.9	− 16	00.9	208	04.2	94	+ 19	0	18	17	18	39	19	04	16	17
13	11	30.8	− 16	00.1	222	32.6	94	34.9	10 S	29		18	51	17		32	49
14	26	30.8	− 15	59.4	237	01.0	94	28.5	20	42		19	05	32		16	47
15	41	30.7		58.6	251	29.4	94	22.0	30	18	56	21	19	52		17	05
16	56	30.7		57.8	265	57.8	94	15.5	35	19	04	32	20	04		16	41
17	71	30.6	− 15	57.1	280	26.3	95	+ 19	40	19	14	19	44	20	20	17	27
18	86	30.6	− 15	56.3	294	54.7	94	+ 19	45	19	25	19	58	20	39	17	41
19	101	30.5		55.6	309	23.1	94	+ 18	50	39		20	16	21	04	17	58
20	116	30.5		54.8	323	51.6	95	48.1	52	46		25	17		18	06	31
21	131	30.4		54.1	338	20.1	95	41.0	54	19	53	35	32		15	29	40
22	146	30.4		53.3	352	48.5	94	33.7	56	20	01	46	21	50		25	27
23	161	30.3		52.5	7	17.0	95	26.4	58	10		20	59	22	13	36	24
24	176	30.3	− 15	51.8	21	45.5	95	+ 18	60 S	20	20	21	15	22	45	18	49
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 14 ^h 59 ^m 3			Mag.: −4.1 PMG: 14 ^h 49 ^m			Mag.: −0.7 PMG: 2 ^h 39 ^m			Mag.: −2.3 PMG: 17 ^h 04 ^m			Mag.: +0.6 PMG: 4 ^h 54 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	134	33.7	137	48.6	− 2	10.2	320	11.6	+ 6	42.9	103	16.7	+ 11	33.6	286	12.5	− 8
1	149	36.2	152	48.4		08.9	335	14.4		43.1	118	18.9		33.7	301	15.0	
2	164	38.7	167	48.2		07.6	350	17.2		43.4	133	21.0		33.8	316	17.4	
3	179	41.1	182	48.0		06.3	5	20.0		43.6	148	23.2		33.9	331	19.9	
4	194	43.6	197	47.8		04.9	20	22.8		43.8	163	25.3		34.0	346	22.3	
5	209	46.1	212	47.6	− 2	03.6	35	25.6	+ 6	44.0	178	27.5	+ 11	34.2	1	24.8	− 8
6	224	48.5	227	47.4	− 2	02.3	50	28.4	+ 6	44.2	193	29.7	+ 11	34.3	16	27.2	− 8
7	239	51.0	242	47.2	− 2	01.0	65	31.2		44.4	208	31.8		34.4	31	29.7	
8	254	53.5	257	47.0	− 1	59.7	80	34.0		44.6	223	34.0		34.5	46	32.1	
9	269	55.9	272	46.8		58.4	95	36.8		44.8	238	36.1		34.6	61	34.6	
10	284	58.4	287	46.6		57.1	110	39.6		45.0	253	38.3		34.8	76	37.0	
11	300	00.9	302	46.4	− 1	55.8	125	42.4	+ 6	45.3	268	40.5	+ 11	34.9	91	39.5	− 8
12	315	03.3	317	46.2	− 1	54.5	140	45.3	+ 6	45.5	283	42.6	+ 11	35.0	106	41.9	− 8
13	330	05.8	332	46.0		53.2	155	48.1		45.7	298	44.8		35.1	121	44.4	
14	345	08.2	347	45.8		51.9	170	50.9		45.9	313	46.9		35.2	136	46.8	
15	0	10.7	2	45.6		50.6	185	53.7		46.1	328	49.1		35.4	151	49.3	
16	15	13.2	17	45.5		49.3	200	56.5		46.3	343	51.3		35.5	166	51.7	
17	30	15.6	32	45.3	− 1	48.0	215	59.3	+ 6	46.6	358	53.4	+ 11	35.6	181	54.2	− 8
18	45	18.1	47	45.1	− 1	46.6	231	02.2	+ 6	46.8	13	55.6	+ 11	35.7	196	56.6	− 8
19	60	20.6	62	44.9		45.3	246	05.0		47.0	28	57.7		35.8	211	59.1	
20	75	23.0	77	44.7		44.0	261	07.8		47.2	43	59.9		36.0	227	01.5	
21	90	25.5	92	44.5		42.7	276	10.6		47.4	59	02.0		36.1	242	04.0	
22	105	28.0	107	44.3		41.4	291	13.5		47.7	74	04.2		36.2	257	06.4	
23	120	30.4	122	44.1		40.1	306	16.3		47.9	89	06.3		36.3	272	08.9	
24	135	32.9	137	43.9	− 1	38.8	321	19.1	+ 6	48.1	104	08.5	+ 11	36.4	287	11.3	− 8
Dif	—		−2		+13		+28		+2		+22		+1		+25		0

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LUNES 6 DE FEBRERO DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2		SD: 15 ^h 6		PHE { 4 ^h : 57/3 12 ^h : 57/5 20 ^h : 57/7			Edad: 13 ^d 7			R°: 51 ^m		Hora		R°	
	PMG: 12 ^h 14 ^m 0		PMG: 23 ^h 22 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	176	30.3	− 15	51.8	21	45.5	+ 18	18.9	6	27	7	17	8	03	15	05
1	191	30.2		51.0	36	14.0	95	11.4	75	58	24	11	7	54	15	85
2	206	30.2		50.3	50	42.5	95	+ 18	03.7	77	21	06	46	24	82	37
3	221	30.2		49.5	65	11.1	96	+ 17	55.9	78	19	7	01	39	32	80
4	236	30.1		48.7	79	39.6	95	48.0	79	52	16	6	57	33	40	77
5	251	30.1	− 15	48.0	94	08.2	96	+ 17	40.0	80	50	6	14	6	53	7
6	266	30.0	− 15	47.2	108	36.7	95	+ 17	31.9	81	45	6	09	6	44	7
7	281	30.0		46.4	123	05.3	96	23.7	82	40	6	04	36	7	04	12
8	296	29.9		45.7	137	33.9	96	15.4	83	35	5	59	29	6	55	21
9	311	29.9		44.9	152	02.5	96	+ 17	07.0	84	30	54	23	48	30	63
10	326	29.8		44.1	166	31.1	96	+ 16	58.5	85	20	45	11	34	45	58
11	341	29.8	− 15	43.4	180	59.8	97	+ 16	49.9	86	10	5	35	6	00	6
12	356	29.7	− 15	42.6	195	28.4	96	+ 16	41.2	87	0	5	24	5	49	6
13	11	29.7		41.8	209	57.1	97	32.4	88	10	5	12	37	5	59	21
14	26	29.7		41.1	224	25.8	97	23.5	89	20	4	56	24	47	34	45
15	41	29.6		40.3	238	54.5	97	14.5	90	30	36	5	07	32	49	40
16	56	29.6		39.5	253	23.2	97	+ 16	05.4	91	35	24	4	57	24	17
17	71	29.5	− 15	38.8	267	51.9	97	+ 15	56.2	92	40	4	09	4	45	5
18	86	29.5	− 15	38.0	282	20.7	98	+ 15	46.9	93	45	3	50	4	30	5
19	101	29.4		37.2	296	49.4	97	37.5	94	50	25	12	4	49	31	28
20	116	29.4		36.5	311	18.2	98	28.0	95	52	3	12	4	04	43	37
21	131	29.4		35.7	325	47.0	98	18.4	96	54	2	57	3	54	36	44
22	146	29.3		34.9	340	15.8	98	+ 15	08.7	97	56	39	42	28	18	52
23	161	29.3		34.1	354	44.7	99	+ 14	58.9	98	58	2	16	29	19	19
24	176	29.2	− 15	33.4	9	13.5	98	+ 14	49.1	98	60	1	44	3	14	4
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 14 ^h 55 ^m 4		Mag.: −4.1 PMG: 14 ^h 49 ^m		Mag.: −0.7 PMG: 2 ^h 34 ^m		Mag.: −2.3 PMG: 17 ^h 01 ^m		Mag.: +0.6 PMG: 4 ^h 50 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	135	32.9	137	43.9	321	19.1	+ 6	48.1	104	08.5	+ 11	36.4	287	11.3	− 8	53.1
1	150	35.4	152	43.7	336	21.9		48.3	119	10.7		36.6	302	13.8		53.1
2	165	37.8	167	43.5	351	24.8		48.5	134	12.8		36.7	317	16.3		53.1
3	180	40.3	182	43.3	366	27.6		48.8	149	15.0		36.8	332	18.7		53.1
4	195	42.7	197	43.1	381	30.4		49.0	164	17.1		36.9	347	21.2		53.1
5	210	45.2	212	42.9	396	33.3	+ 6	49.2	179	19.3	+ 11	37.1	2	23.6	− 8	53.1
6	225	47.7	227	42.7	411	36.1	+ 6	49.4	194	21.4	+ 11	37.2	17	26.1	− 8	53.1
7	240	50.1	242	42.5	426	38.9		49.6	209	23.6		37.3	32	28.5		53.1
8	255	52.6	257	42.4	441	41.8		49.9	224	25.7		37.4	47	31.0		53.1
9	270	55.1	272	42.2	456	44.6		50.1	239	27.9		37.5	62	33.4		53.1
10	285	57.5	287	42.0	471	47.5		50.3	254	30.0		37.7	77	35.9		53.0
11	301	00.0	302	41.8	486	50.3	+ 6	50.5	269	32.2	+ 11	37.8	92	38.3	− 8	53.0
12	316	02.5	317	41.6	501	53.1	+ 6	50.8	284	34.3	+ 11	37.9	107	40.8	− 8	53.0
13	331	04.9	332	41.4	516	56.0		51.0	299	36.5		38.0	122	43.3		53.0
14	346	07.4	347	41.2	531	58.8		51.2	314	38.6		38.1	137	45.7		53.0
15	1	09.9	2	41.0	546	01.7		51.5	329	40.8		38.3	152	48.2		53.0
16	16	12.3	17	40.8	561	04.5		51.7	344	42.9		38.4	167	50.6		53.0
17	31	14.8	32	40.6	576	07.4	+ 6	51.9	359	45.1	+ 11	38.5	182	53.1	− 8	53.0
18	46	17.2	47	40.4	591	10.2	+ 6	52.1	14	47.3	+ 11	38.6	197	55.5	− 8	53.0
19	61	19.7	62	40.3	606	13.1		52.4	29	49.4		38.8	212	58.0		53.0
20	76	22.2	77	40.1	621	15.9		52.6	44	51.6		38.9	228	00.5		53.0
21	91	24.6	92	39.9	636	18.8		52.8	59	53.7		39.0	243	02.9		53.0
22	106	27.1	107	39.7	651	21.6		53.1	74	55.9		39.1	258	05.4		52.9
23	121	29.6	122	39.5	666	24.5		53.3	89	58.0		39.2	273	07.8		52.9
24	136	32.0	137	39.3	681	27.4	+ 6	53.5	105	00.1	+ 11	39.4	288	10.3	− 8	52.9
Dif	—		−2	+13	+28	+2			+22	+1			+25	0		

MARTES 7 DE FEBRERO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 1		SD: 15 ^h 8 Edad: 14 ^d 7 PMG: **h **m R°: ****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 29.2	− 15 33.4	9 13.5	99	+ 14 49.1	100	60 N	16 28	17 14	18 04	16 33 90	7 16 14		
1	191 29.2	32.6	23 42.4	99	39.1	100	58	37	20	07	40 87	08 17		
2	206 29.2	31.8	38 11.3	99	29.1	100	56	45	25	09	46 85	7 01 20		
3	221 29.1	31.1	52 40.2	99	18.9	102	54	52	30	12	52 82	6 54 23		
4	236 29.1	30.3	67 09.1	99	+ 14 08.7	102	52	16 58	34	14	16 57 79	49 24		
5	251 29.1	− 15 29.5	81 38.0	99	+ 13 58.4	103	50	17 03	17 38	18 16	17 02 77	6 44 26		
6	266 29.0	− 15 28.7	96 07.0	100	+ 13 48.0	104	45	17 16	17 46	18 21	17 11 73	6 32 31		
7	281 29.0	28.0	110 36.0	100	37.5	105	40	26	17 54	26	19 70	23 34		
8	296 28.9	27.2	125 04.9	99	27.0	105	35	34	18 00	30	26 67	15 37		
9	311 28.9	26.4	139 34.0	101	16.3	107	30	42	07	35	33 63	6 08 39		
10	326 28.9	25.6	154 03.0	100	+ 13 05.6	107	20	17 55	18	44	43 59	5 55 44		
11	341 28.8	− 15 24.9	168 32.0	100	+ 12 54.8	108	10 N	18 07	18 28	18 53	17 52 55	5 44 48		
12	356 28.8	− 15 24.1	183 01.1	101	+ 12 43.9	109	0	18 18	18 39	19 04	18 01 51	5 34 51		
13	11 28.8	23.3	197 30.1	100	32.9	110	10 S	29	18 51	16	09 48	24 54		
14	26 28.7	22.5	211 59.2	101	21.9	110	20	41	19 04	31	19 43	13 58		
15	41 28.7	21.7	226 28.3	101	+ 12 10.7	112	30	18 55	20	19 50	29 38	5 00 63		
16	56 28.7	21.0	240 57.5	102	+ 11 59.5	112	35	19 03	30	20 02	35 36	4 52 66		
17	71 28.6	− 15 20.2	255 26.6	101	+ 11 48.2	113	40	19 12	19 41	20 17	18 42 33	4 44 68		
18	86 28.6	− 15 19.4	269 55.8	102	+ 11 36.9	113	45	19 23	19 55	20 35	18 50 29	4 34 72		
19	101 28.6	18.6	284 24.9	101	25.5	114	50	36	20 13	21 00	18 59 25	22 76		
20	116 28.5	17.8	298 54.1	102	14.0	115	52	42	21	12	19 03 24	16 78		
21	131 28.5	17.1	313 23.3	102	+ 11 02.4	116	54	49	31	26	08 21	10 80		
22	146 28.5	16.3	327 52.5	102	+ 10 50.7	117	56	19 57	41	21 43	13 19	4 03 83		
23	161 28.4	15.5	342 21.8	103	39.0	117	58	20 05	20 54	22 04	19 16	3 55 86		
24	176 28.4	− 15 14.7	356 51.0	102	+ 10 27.3	117	60 S	20 15	21 09	22 33	19 26 13	3 46 89		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 14 ^h 51 ^m 4		Mag.: −4.1 PMG: 14 ^h 50 ^m		Mag.: −0.7 PMG: 2 ^h 30 ^m		Mag.: −2.3 PMG: 16 ^h 58 ^m		Mag.: +0.6 PMG: 4 ^h 47 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	° /	° /	° /		° /		° /		° /		° /			
0	136 32.0	137 39.3	− 1 07.4		322 27.4	+ 6 53.5	105 00.1	+ 11 39.4	288 10.3	− 8 52.9				
1	151 34.5	152 39.1	06.1		337 30.2	53.8	120 02.3	39.5	303 12.7	52.9				
2	166 37.0	167 38.9	04.8		352 33.1	54.0	135 04.4	39.6	318 15.2	52.9				
3	181 39.4	182 38.8	03.5		7 35.9	54.2	150 06.6	39.7	333 17.7	52.9				
4	196 41.9	197 38.6	02.2		22 38.8	54.5	165 08.7	39.9	348 20.1	52.9				
5	211 44.3	212 38.4	− 1 00.9		37 41.7	+ 6 54.7	180 10.9	+ 11 40.0	3 22.6	− 8 52.9				
6	226 46.8	227 38.2	− 0 59.5		52 44.5	+ 6 54.9	195 13.0	+ 11 40.1	18 25.0	− 8 52.9				
7	241 49.3	242 38.0	58.2		67 47.4	55.2	210 15.2	40.2	33 27.5	52.9				
8	256 51.7	257 37.8	56.9		82 50.3	55.4	225 17.3	40.4	48 30.0	52.8				
9	271 54.2	272 37.6	55.6		97 53.1	55.6	240 19.5	40.5	63 32.4	52.8				
10	286 56.7	287 37.5	54.3		112 56.0	55.9	255 21.6	40.6	78 34.9	52.8				
11	301 59.1	302 37.3	− 0 53.0		127 58.9	+ 6 56.1	270 23.8	+ 11 40.7	93 37.3	− 8 52.8				
12	317 01.6	317 37.1	− 0 51.7		143 01.8	+ 6 56.3	285 25.9	+ 11 40.8	108 39.8	− 8 52.8				
13	332 04.1	332 36.9	50.4		158 04.6	56.6	300 28.1	41.0	123 42.2	52.8				
14	347 06.5	347 36.7	49.1		173 07.5	56.8	315 30.2	41.1	138 44.7	52.8				
15	2 09.0	2 36.5	47.8		188 10.4	57.1	330 32.4	41.2	153 47.2	52.8				
16	17 11.5	17 36.4	46.4		203 13.3	57.3	345 34.5	41.3	168 49.6	52.8				
17	32 13.9	32 36.2	− 0 45.1		218 16.2	+ 6 57.5	0 36.6	+ 11 41.5	183 52.1	− 8 52.8				
18	47 16.4	47 36.0	− 0 43.8		233 19.0	+ 6 57.8	15 38.8	+ 11 41.6	198 54.6	− 8 52.7				
19	62 18.8	62 35.8	42.5		248 21.9	58.0	30 40.9	41.7	213 57.0	52.7				
20	77 21.3	77 35.6	41.2		263 24.8	58.3	45 43.1	41.8	228 59.5	52.7				
21	92 23.8	92 35.4	39.9		278 27.7	58.5	60 45.2	42.0	244 01.9	52.7				
22	107 26.2	107 35.3	38.6		293 30.6	58.7	75 47.4	42.1	259 04.4	52.7				
23	122 28.7	122 35.1	37.3		308 33.5	59.0	90 49.5	42.2	274 06.9	52.7				
24	137 31.2	137 34.9	− 0 36.0		323 36.4	+ 6 59.2	105 51.7	+ 11 42.3	289 09.3	− 8 52.7				
Dif	—	−2	+13		+29	+2	+21	+1	+25	0				

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MIÉRCOL 8 DE FEBRERO DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2		SD: 15 ^h 9		PHE { 4 ^h : 58'6 12 ^h : 58'8 20 ^h : 58'9											
	PMG: 12 ^h 14 ^m 1		PMG: 0 ^h 13 ^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	176	28.4	− 15	14.7	356	51.0	+ 10	27.3	60 N	6	23	7	13	7	58	
1	191	28.4		13.9	11	20.3		15.4	58	20		07	50	18	03	
2	206	28.3		13.1	25	49.6		103	56	18		7	02	42	11	
3	221	28.3		12.4	40	18.9		103	54	16		6	58	35	14	
4	236	28.3		11.6	54	48.2		103	52	13		53	29	16	81	
5	251	28.2	− 15	10.8	69	17.5		103	50	6	11	6	50	7	24	
6	266	28.2	− 15	10.0	83	46.8		103	45	6	06	6	41	7	12	
7	281	28.2		09.2	98	16.2		104	40	6	02	34	7	02	29	
8	296	28.2		08.4	112	45.5		103	35	5	57	27	6	54	33	
9	311	28.1		07.7	127	14.9		104	30	53		21	46	36	64	
10	326	28.1		06.9	141	44.3		104	20	44		10	33	42	59	
11	341	28.1	− 15	06.1	156	13.6		103	10 N	5	35	6	00	6	22	
12	356	28.0	− 15	05.3	170	43.1		105	0	5	24	5	49	6	11	
13	11	28.0		04.5	185	12.5		104	10 S	5	12	38	6	00	18	
14	26	28.0		03.7	199	41.9		104	20	4	58	25	5	48	19	
15	41	28.0		02.9	214	11.3		104	30	38		5	09	34	07	
16	56	27.9		02.1	228	40.8		105	35	26		4	59	26	11	
17	71	27.9	− 15	01.3	243	10.2		104	40	4	12	4	47	5	17	
18	86	27.9	− 15	00.5	257	39.7		105	45	3	53	4	34	5	06	
19	101	27.9	− 14	59.8	272	09.1		104	50	29		16	4	53	24	
20	116	27.8		59.0	286	38.6		105	52	17		4	08	47	27	
21	131	27.8		58.2	301	08.1		105	54	3	03	3	58	40	29	
22	146	27.8		57.4	315	37.5		104	56	2	46		48	32	32	
23	161	27.8		56.6	330	07.0		105	58	2	25		35	24	35	
24	176	27.7	− 14	55.8	344	36.5		105	60 S	1	56	3	20	4	14	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG		Mag.: −4.1		Mag.: −0.7		Mag.: −2.3		Mag.: +0.6							
	14 ^h 47 ^m 5		PMG: 14 ^h 50 ^m		PMG: 2 ^h 25 ^m		PMG: 16 ^h 54 ^m		PMG: 4 ^h 43 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	137	31.2	137	34.9	− 0	36.0	323	36.4	+ 6	59.2	105	51.7	+ 11	42.3	289	09.3
1	152	33.6	152	34.7		34.7	338	39.2		59.5	120	53.8		42.5	304	11.8
2	167	36.1	167	34.5		33.3	353	42.1	+ 6	59.7	135	55.9		42.6	319	14.2
3	182	38.6	182	34.4		32.0	8	45.0	+ 7	00.0	150	58.1		42.7	334	16.7
4	197	41.0	197	34.2		30.7	23	47.9		00.2	166	00.2		42.8	349	19.2
5	212	43.5	212	34.0	− 0	29.4	38	50.8	+ 7	00.4	181	02.4	+ 11	43.0	4	21.6
6	227	46.0	227	33.8	− 0	28.1	53	53.7	+ 7	00.7	196	04.5	+ 11	43.1	19	24.1
7	242	48.4	242	33.6		26.8	68	56.6		00.9	211	06.6		43.2	34	26.6
8	257	50.9	257	33.5		25.5	83	59.5		01.2	226	08.8		43.3	49	29.0
9	272	53.3	272	33.3		24.2	99	02.4		01.4	241	10.9		43.5	64	31.5
10	287	55.8	287	33.1		22.9	114	05.3		01.7	256	13.1		43.6	79	33.9
11	302	58.3	302	32.9	− 0	21.6	129	08.2	+ 7	01.9	271	15.2	+ 11	43.7	94	36.4
12	318	00.7	317	32.7	− 0	20.2	144	11.1	+ 7	02.2	286	17.4	+ 11	43.8	109	38.9
13	333	03.2	332	32.6		18.9	159	14.0		02.4	301	19.5		44.0	124	41.3
14	348	05.7	347	32.4		17.6	174	16.9		02.7	316	21.6		44.1	139	43.8
15	3	08.1	2	32.2		16.3	189	19.8		02.9	331	23.8		44.2	154	46.3
16	18	10.6	17	32.0		15.0	204	22.7		03.2	346	25.9		44.3	169	48.7
17	33	13.1	32	31.9	− 0	13.7	219	25.7	+ 7	03.4	1	28.1	+ 11	44.5	184	51.2
18	48	15.5	47	31.7	− 0	12.4	234	28.6	+ 7	03.7	16	30.2	+ 11	44.6	199	53.7
19	63	18.0	62	31.5		11.1	249	31.5		03.9	31	32.3		44.7	214	56.1
20	78	20.4	77	31.3		09.8	264	34.4		04.2	46	34.5		44.8	229	58.6
21	93	22.9	92	31.2		08.4	279	37.3		04.4	61	36.6		45.0	245	01.1
22	108	25.4	107	31.0		07.1	294	40.2		04.7	76	38.7		45.1	260	03.5
23	123	27.8	122	30.8		05.8	309	43.2		04.9	91	40.9		45.2	275	06.0
24	138	30.3	137	30.6	− 0	04.5	324	46.1	+ 7	05.2	106	43.0	+ 11	45.3	290	08.5
Dif	—		−2		+13		+29		+2		+21		+1		+25	

JUEVES 9 DE FEBRERO DE 2012

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UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 2			SD: 16 ^h 1 Edad: 16 ^d 7 PHE { 4 ^h : 59/1 12 ^h : 59/2 20 ^h : 59/3 PMG: 1 ^h 04 ^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	176	27.7	− 14	344	36.5	+ 5	27.3	131	16 34	17 19	18 09	19 35	92	7 42	12			
1	191	27.7		359	06.0		14.2	131	42	24	11	36	89	40	15			
2	206	27.7	54.2	13	35.5	+ 5	01.1	131	49	29	13	36	86	38	17			
3	221	27.7	53.4	28	05.0	+ 4	48.0	131	16 56	33	15	36	84	37	19			
4	236	27.7	52.6	42	34.5		34.8	132	17 02	37	17	37	81	35	22			
5	251	27.6	− 14	57	04.0	+ 4	21.6	132	17 07	17 41	18 19	19 37	79	7 34	24			
6	266	27.6	− 14	71	33.6	+ 4	08.3	133	17 18	17 49	18 24	19 38	75	7 31	28			
7	281	27.6	50.2	86	03.1	+ 3	55.0	133	28	17 56	28	39	70	29	31			
8	296	27.6	49.4	100	32.6		41.7	133	36	18 02	32	39	68	27	34			
9	311	27.6	48.6	115	02.1		28.4	133	43	08	36	40	64	25	37			
10	326	27.5	47.8	129	31.6		15.0	134	17 56	19	45	41	59	21	43			
11	341	27.5	− 14	144	01.1	+ 3	01.7	133	18 07	18 29	18 54	19 41	55	7 19	46			
12	356	27.5	− 14	158	30.6	+ 2	48.3	134	18 18	18 39	19 04	19 42	51	7 16	50			
13	11	27.5	45.4	173	00.1		34.8	135	28	18 50	16	43	47	13	55			
14	26	27.5	44.6	187	29.6		21.4	134	40	19 03	30	44	42	10	59			
15	41	27.4	43.8	201	59.1	+ 2	07.9	135	18 53	18	19 48	45	37	06	64			
16	56	27.4	43.0	216	28.6	+ 1	54.4	135	19 01	28	20 00	45	35	04	67			
17	71	27.4	− 14	230	58.1	+ 1	40.9	135	19 10	19 39	20 14	19 46	32	7 02	70			
18	86	27.4	− 14	245	27.6	+ 1	27.4	135	19 20	19 52	20 32	19 47	28	6 59	74			
19	101	27.4	40.6	259	57.1		13.9	135	33	20 09	20 55	48	23	56	79			
20	116	27.4	39.8	274	26.5	+ 1	00.4	135	38	17	21 07	48	22	54	81			
21	131	27.3	39.0	288	56.0	+ 0	46.8	136	45	26	20	49	19	53	83			
22	146	27.3	38.2	303	25.4		33.3	135	19 52	36	36	49	17	51	86			
23	161	27.3	37.4	317	54.9		19.7	136	20 00	20 48	21 56	50	14	49	89			
24	176	27.3	− 14	332	24.3	+ 0	06.1	136	20 10	21 02	22 22	19 50	12	6 47	91			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 43 ^m 6		Mag.: −4.1 PMG: 14 ^h 50 ^m		Mag.: −0.8 PMG: 2 ^h 20 ^m		Mag.: −2.3 PMG: 16 ^h 51 ^m		Mag.: +0.6 PMG: 4 ^h 39 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	°	°	'	°	'	°	'								
0	138	30.3	137	30.6	− 0	04.5	324	46.1	+ 7	05.2	106	43.0	+ 11	45.3	290	08.5	− 8	52.4
1	153	32.8	152	30.5		03.2	339	49.0		05.4	121	45.2		45.5	305	10.9		52.4
2	168	35.2	167	30.3		01.9	354	51.9		05.7	136	47.3		45.6	320	13.4		52.4
3	183	37.7	182	30.1	− 0	00.6	9	54.8		05.9	151	49.4		45.7	335	15.9		52.4
4	198	40.2	197	29.9	+ 0	00.7	24	57.8		06.2	166	51.6		45.8	350	18.3		52.3
5	213	42.6	212	29.8	+ 0	02.0	40	00.7	+ 7	06.5	181	53.7	+ 11	46.0	5	20.8	− 8	52.3
6	228	45.1	227	29.6	+ 0	03.3	55	03.6	+ 7	06.7	196	55.8	+ 11	46.1	20	23.3	− 8	52.3
7	243	47.6	242	29.4		04.7	70	06.5		07.0	211	58.0		46.2	35	25.7		52.3
8	258	50.0	257	29.2		06.0	85	09.5		07.2	227	00.1		46.4	50	28.2		52.3
9	273	52.5	272	29.1		07.3	100	12.4		07.5	242	02.2		46.5	65	30.7		52.3
10	288	54.9	287	28.9		08.6	115	15.3		07.7	257	04.4		46.6	80	33.1		52.3
11	303	57.4	302	28.7	+ 0	09.9	130	18.3	+ 7	08.0	272	06.5	+ 11	46.7	95	35.6	− 8	52.3
12	318	59.9	317	28.5	+ 0	11.2	145	21.2	+ 7	08.3	287	08.6	+ 11	46.9	110	38.1	− 8	52.2
13	334	02.3	332	28.4		12.5	160	24.1		08.5	302	10.8		47.0	125	40.5		52.2
14	349	04.8	347	28.2		13.8	175	27.1		08.8	317	12.9		47.1	140	43.0		52.2
15	4	07.3	2	28.0		15.1	190	30.0		09.0	332	15.0		47.2	155	45.5		52.2
16	19	09.7	17	27.9		16.5	205	33.0		09.3	347	17.2		47.4	170	47.9		52.2
17	34	12.2	32	27.7	+ 0	17.8	220	35.9	+ 7	09.6	2	19.3	+ 11	47.5	185	50.4	− 8	52.2
18	49	14.7	47	27.5	+ 0	19.1	235	38.8	+ 7	09.8	17	21.4	+ 11	47.6	200	52.9	− 8	52.2
19	64	17.1	62	27.3		20.4	250	41.8		10.1	32	23.6		47.7	215	55.3		52.1
20	79	19.6	77	27.2		21.7	265	44.7		10.3	47	25.7		47.9	230	57.8		52.1
21	94	22.0	92	27.0		23.0	280	47.7		10.6	62	27.8		48.0	246	00.3		52.1
22	109	24.5	107	26.8		24.3	295	50.6		10.9	77	30.0		48.1	261	02.8		52.1
23	124	27.0	122	26.7		25.6	310	53.6		11.1	92	32.1		48.3	276	05.2		52.1
24	139	29.4	137	26.5	+ 0	26.9	325	56.5	+ 7	11.4	107	34.2	+ 11	48.4	291	07.7	− 8	52.1
Dif	—		−2	+13		+29	+3		+21		+1		+25		0			

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VIERNES 10 DE FEBRERO DE 2012

UT	SOL			☉ LUNA			Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2			SD: 16:2 Edad: 17 ^d 7											
				PHE { 4 ^h : 59/4 12 ^h : 59/5 20 ^h : 59/5											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	'	'	'	° N	h	m	h	m	m	h	m
0	176	27.3	− 14	36.6	332	24.3	+ 0 06.1	60	6 19	7 08	7 53	21 07	94	7 54	12
1	191	27.3		35.8	346	53.7	− 0 07.5	58	16	7 03	45	05	90	55	14
2	206	27.3		35.0	1	23.1	21.0	56	14	6 58	38	02	87	55	18
3	221	27.2		34.2	15	52.5	34.6	54	12	54	31	21 00	84	56	20
4	236	27.2		33.4	30	21.9	− 0 48.2	52	10	50	26	20 58	82	57	22
5	251	27.2	− 14	32.6	44	51.3	− 1 01.8	50	6 08	6 47	7 20	20 56	80	7 58	24
6	266	27.2	− 14	31.8	59	20.6	− 1 15.3	45	6 04	6 39	7 09	20 53	75	7 59	28
7	281	27.2		31.0	73	50.0	28.9	40	6 00	32	7 00	49	72	8 00	32
8	296	27.2		30.2	88	19.3	42.5	35	5 56	26	6 52	47	68	01	35
9	311	27.2		29.4	102	48.6	− 1 56.1	30	52	20	45	44	65	02	38
10	326	27.2		28.6	117	17.9	− 2 09.6	20	43	09	32	40	60	04	43
11	341	27.1	− 14	27.8	131	47.2	− 2 23.1	10 N	5 34	6 00	6 21	20 36	56	8 05	47
12	356	27.1	− 14	26.9	146	16.4	− 2 36.7	0	5 25	5 49	6 11	20 33	52	8 06	52
13	11	27.1		26.1	160	45.7	− 2 50.2	10 S	5 13	38	6 00	30	48	08	55
14	26	27.1		25.3	175	14.9	− 3 03.7	20	4 59	26	5 49	26	44	09	60
15	41	27.1		24.5	189	44.1	17.2	30	40	10	36	22	39	10	65
16	56	27.1		23.7	204	13.3	30.7	35	29	5 01	28	20	36	11	68
17	71	27.1	− 14	22.9	218	42.4	− 3 44.1	40	4 15	4 50	5 19	20 18	33	8 12	71
18	86	27.1	− 14	22.1	233	11.6	− 3 57.6	45	3 57	4 37	5 09	20 15	29	8 13	75
19	101	27.1		21.3	247	40.7	− 4 11.0	50	34	20	4 56	11	26	15	79
20	116	27.1		20.5	262	09.8	24.4	52	22	12	51	10	23	15	82
21	131	27.1		19.6	276	38.8	37.8	54	3 09	4 03	44	08	21	16	84
22	146	27.0		18.8	291	07.9	− 4 51.1	56	2 53	3 53	37	06	19	17	86
23	161	27.0		18.0	305	36.9	− 5 04.4	58	33	41	29	04	16	18	89
24	176	27.0	− 14	17.2	320	05.9	− 5 17.7	60 S	2 07	3 27	4 20	20 02	13	8 18	93

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 14 ^h 39 ^m 6		Mag.: −4.1 PMG: 14 ^h 50 ^m		Mag.: −0.8 PMG: 2 ^h 16 ^m		Mag.: −2.3 PMG: 16 ^h 47 ^m		Mag.: +0.6 PMG: 4 ^h 35 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	139	29.4	137	26.5	+ 0 26.9	325	56.5	+ 7 11.4	107	34.2	+ 11 48.4	291	07.7	− 8 52.1	
1	154	31.9	152	26.3	28.2	340	59.5	11.7	122	36.4	48.5	306	10.2	52.1	
2	169	34.4	167	26.2	29.6	356	02.4	11.9	137	38.5	48.6	321	12.6	52.0	
3	184	36.8	182	26.0	30.9	11	05.4	12.2	152	40.6	48.8	336	15.1	52.0	
4	199	39.3	197	25.8	32.2	26	08.3	12.5	167	42.8	48.9	351	17.6	52.0	
5	214	41.8	212	25.7	+ 0 33.5	41	11.3	+ 7 12.7	182	44.9	+ 11 49.0	6	20.0	− 8 52.0	
6	229	44.2	227	25.5	+ 0 34.8	56	14.2	+ 7 13.0	197	47.0	+ 11 49.2	21	22.5	− 8 52.0	
7	244	46.7	242	25.3	36.1	71	17.2	13.3	212	49.2	49.3	36	25.0	52.0	
8	259	49.2	257	25.1	37.4	86	20.2	13.5	227	51.3	49.4	51	27.5	52.0	
9	274	51.6	272	25.0	38.7	101	23.1	13.8	242	53.4	49.5	66	29.9	51.9	
10	289	54.1	287	24.8	40.0	116	26.1	14.1	257	55.5	49.7	81	32.4	51.9	
11	304	56.5	302	24.6	+ 0 41.4	131	29.0	+ 7 14.3	272	57.7	+ 11 49.8	96	34.9	− 8 51.9	
12	319	59.0	317	24.5	+ 0 42.7	146	32.0	+ 7 14.6	287	59.8	+ 11 49.9	111	37.3	− 8 51.9	
13	335	01.5	332	24.3	44.0	161	35.0	14.9	303	01.9	50.1	126	39.8	51.9	
14	350	03.9	347	24.1	45.3	176	37.9	15.1	318	04.1	50.2	141	42.3	51.9	
15	5	06.4	2	24.0	46.6	191	40.9	15.4	333	06.2	50.3	156	44.8	51.9	
16	20	08.9	17	23.8	47.9	206	43.9	15.7	348	08.3	50.4	171	47.2	51.8	
17	35	11.3	32	23.6	+ 0 49.2	221	46.9	+ 7 15.9	3	10.4	+ 11 50.6	186	49.7	− 8 51.8	
18	50	13.8	47	23.5	+ 0 50.5	236	49.8	+ 7 16.2	18	12.6	+ 11 50.7	201	52.2	− 8 51.8	
19	65	16.3	62	23.3	51.8	251	52.8	16.5	33	14.7	50.8	216	54.7	51.8	
20	80	18.7	77	23.1	53.1	266	55.8	16.8	48	16.8	51.0	231	57.1	51.8	
21	95	21.2	92	23.0	54.5	281	58.7	17.0	63	18.9	51.1	246	59.6	51.8	
22	110	23.7	107	22.8	55.8	297	01.7	17.3	78	21.1	51.2	262	02.1	51.8	
23	125	26.1	122	22.7	57.1	312	04.7	17.6	93	23.2	51.3	277	04.6	51.7	
24	140	28.6	137	22.5	+ 0 58.4	327	07.7	+ 7 17.9	108	25.3	+ 11 51.5	292	07.0	− 8 51.7	
Dif	—		−2	+13		+30	+3		+21	+1		+25		0	

SÁBADO 11 DE FEBRERO DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna			
	SD: 16'2 PMG: 12 ^h 14 ^m 2		SD: 16'2 Edad: 18 ^d 7 PHE $\begin{cases} 4^h: 59'6 \\ 12^h: 59'6 \\ 20^h: 59'6 \end{cases}$ PMG: 2 ^h 45 ^m R°: 53 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
^h 0	176 27.0	− 14 17.2	320 05.9		− 5 17.7		60 N	16 39	17 24	18 13	22 41	93	8 06	13		
1	191 27.0		334 34.8	99	31.0	133	58	47	29	15	35	89	09	17		
2	206 27.0		349 03.8	100	44.2	132	56	16 54	33	17	29	87	13	20		
3	221 27.0		3 32.7	99	− 5 57.4	132	54	17 00	37	19	24	84	16	22		
4	236 27.0		18 01.5	98	− 6 10.6	132	52	05	41	21	20	82	19	24		
5	251 27.0	− 14 13.1	32 30.4	99	− 6 23.7	131	50	17 10	17 44	18 22	22 16	80	8 22	26		
6	266 27.0	− 14 12.3	46 59.2	98	− 6 36.8	131	45	17 21	17 52	18 26	22 08	75	8 27	31		
7	281 27.0		61 28.0	98	− 6 49.9	131	40	30	17 58	30	22 01	71	32	35		
8	296 27.0		75 56.7	97	− 7 02.9	130	35	38	18 04	34	21 55	68	36	38		
9	311 27.0		90 25.4	97	15.9	130	30	45	10	38	49	66	40	40		
10	326 27.0		104 54.1	97	28.9	130	20	17 57	20	46	40	61	47	44		
11	341 27.0	− 14 08.2	119 22.8	97	− 7 41.7	128	10 N	18 08	18 29	18 54	21 32	58	8 52	49		
12	356 27.0	− 14 07.4	133 51.4	96	− 7 54.6	129	0	18 18	18 39	19 04	21 25	54	8 58	52		
13	11 27.0		148 20.0	96	− 8 07.4	128	10 S	28	18 50	15	18 50		9 03	56		
14	26 27.0		162 48.5	95	20.2	127	20	39	19 02	29	10 46		09	60		
15	41 27.0		177 17.0	95	32.9	126	30	51	17	46	21 01	42	15	66		
16	56 27.0		191 45.5	95	45.5	126	35	18 59	26	19 58	20 56	39	19	68		
17	71 27.0	− 14 03.3	206 13.9	94	− 8 58.1	126	40	19 07	19 36	20 11	20 51	36	9 23	72		
18	86 27.0	− 14 02.5	220 42.3	94	− 9 10.7	126	45	19 17	19 49	20 28	20 44	33	9 28	75		
19	101 27.0		235 10.7	94	23.2	125	50	29	20 05	20 51	37 28		34	80		
20	116 27.0		249 39.0	93	35.6	124	52	35	13	21 02	33 26		37	82		
21	131 27.0	− 14 00.0	264 07.3	93	− 9 48.0	124	54	41	21	14	29 24		40	84		
22	146 27.0	− 13 59.2	278 35.6	93	− 10 00.4	124	56	48	31	29	25 22		43	87		
23	161 27.0		293 03.8	92	12.6	122	58	19 56	42	21 48	20 19		47	90		
24	176 27.0	− 13 57.5	307 31.9	91	− 10 24.8	122	60 S	20 04	20 56	22 11	20 15	15	9 51	93		
UT	ARIES PMG: 14 ^h 35 ^m 7		VENUS Mag.: −4.1 PMG: 14 ^h 51 ^m		MARTE Mag.: −0.8 PMG: 2 ^h 11 ^m		JÚPITER Mag.: −2.3 PMG: 16 ^h 44 ^m		SATURNO Mag.: +0.5 PMG: 4 ^h 31 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
	^h 0	140 28.6	137 22.5	+ 0 58.4		327 07.7	+ 7 17.9	108 25.3	+ 11 51.5	292 07.0	− 8 51.7					
1	155 31.0	152 22.3	+ 0 59.7		342 10.7	18.1	123 27.4	51.6	307 09.5	51.7						
2	170 33.5	167 22.2	+ 1 01.0		357 13.6	18.4	138 29.6	51.7	322 12.0	51.7						
3	185 36.0	182 22.0	02.3		12 16.6	18.7	153 31.7	51.9	337 14.5	51.7						
4	200 38.4	197 21.8	03.6		27 19.6	19.0	168 33.8	52.0	352 16.9	51.7						
5	215 40.9	212 21.7	+ 1 04.9		42 22.6	+ 7 19.2	183 35.9	+ 11 52.1	7 19.4	− 8 51.6						
6	230 43.4	227 21.5	+ 1 06.2		57 25.6	+ 7 19.5	198 38.1	+ 11 52.3	22 21.9	− 8 51.6						
7	245 45.8	242 21.3	07.5		72 28.6	19.8	213 40.2	52.4	37 24.4	51.6						
8	260 48.3	257 21.2	08.9		87 31.6	20.1	228 42.3	52.5	52 26.8	51.6						
9	275 50.8	272 21.0	10.2		102 34.6	20.3	243 44.4	52.6	67 29.3	51.6						
10	290 53.2	287 20.9	11.5		117 37.5	20.6	258 46.6	52.8	82 31.8	51.6						
11	305 55.7	302 20.7	+ 1 12.8		132 40.5	+ 7 20.9	273 48.7	+ 11 52.9	97 34.3	− 8 51.5						
12	320 58.1	317 20.5	+ 1 14.1		147 43.5	+ 7 21.2	288 50.8	+ 11 53.0	112 36.7	− 8 51.5						
13	336 00.6	332 20.4	15.4		162 46.5	21.5	303 52.9	53.2	127 39.2	51.5						
14	351 03.1	347 20.2	16.7		177 49.5	21.7	318 55.1	53.3	142 41.7	51.5						
15	6 05.5	2 20.0	18.0		192 52.5	22.0	333 57.2	53.4	157 44.2	51.5						
16	21 08.0	17 19.9	19.3		207 55.5	22.3	348 59.3	53.6	172 46.6	51.5						
17	36 10.5	32 19.7	+ 1 20.6		222 58.5	+ 7 22.6	4 01.4	+ 11 53.7	187 49.1	− 8 51.5						
18	51 12.9	47 19.6	+ 1 22.0		238 01.5	+ 7 22.9	19 03.5	+ 11 53.8	202 51.6	− 8 51.4						
19	66 15.4	62 19.4	23.3		253 04.5	23.1	34 05.7	54.0	217 54.1	51.4						
20	81 17.9	77 19.2	24.6		268 07.5	23.4	49 07.8	54.1	232 56.5	51.4						
21	96 20.3	92 19.1	25.9		283 10.5	23.7	64 09.9	54.2	247 59.0	51.4						
22	111 22.8	107 18.9	27.2		298 13.5	24.0	79 12.0	54.3	263 01.5	51.4						
23	126 25.3	122 18.8	28.5		313 16.6	24.3	94 14.1	54.5	278 04.0	51.3						
24	141 27.7	137 18.6	+ 1 29.8		328 19.6	+ 7 24.6	109 16.3	+ 11 54.6	293 06.5	− 8 51.3						
Dif	—	−2	+13		+30	+3	+21	+1	+25	0						

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DOMINGO 12 DE FEBRERO DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:2 PMG: 12 ^h 14 ^m 2			SD: 16:2 Edad: 19 ^d 7 PHE { 4 ^h : 59/6 12 ^h : 59/6 20 ^h : 59/5 PMG: 3 ^h 38 ^m R°: 54 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	176	27.0	-13 57.5	307	31.9	-10 24.8	122	60 N	6 14	7 03	7 48	8 19	18			
1	191	27.0	56.7	322	00.1	92 37.0	121	58	12	6 58	40	26	21			
2	206	27.0	55.9	336	28.2	91 -10 49.1	121	56	10	54	33	33	24			
3	221	27.0	55.1	350	56.2	90 -11 01.1	120	54	09	50	27	38	27			
4	236	27.0	54.2	5 24.2	90 13.0	119	52	07	47	22	42	43	29			
5	251	27.0	-13 53.4	19 52.2	90 -11 24.9	119	50	6 05	6 43	7 17	23 36	77	8 48	31		
6	266	27.0	-13 52.6	34 20.1	89 -11 36.7	118	45	6 01	6 36	7 06	23 23	73	8 58	35		
7	281	27.0	51.8	48 48.0	89 -11 48.5	118	40	5 58	29	6 57	12	71	9 07	38		
8	296	27.0	50.9	63 15.8	88 -12 00.1	116	35	54	24	50	23 03	68	14	41		
9	311	27.0	50.1	77 43.6	88 11.7	116	30	50	18	43	22 55	66	20	44		
10	326	27.0	49.3	92 11.3	87 23.3	116	20	42	6 09	31	41	62	31	48		
11	341	27.0	-13 48.5	106 39.0	87 -12 34.7	114	10 N	5 34	5 59	6 21	22 30	58	9 41	51		
12	356	27.0	-13 47.6	121 06.7	87 -12 46.1	114	0	5 25	5 49	6 11	22 19	55	9 50	55		
13	11	27.0	46.8	135 34.3	86 -12 57.4	113	10 S	14	39	6 01	22 08	52	9 59	58		
14	26	27.0	46.0	150 01.8	85 -13 08.6	112	20	5 00	27	5 50	21 56	49	10 09	62		
15	41	27.0	45.1	164 29.3	85 19.7	111	30	4 42	12	37	43	45	21	65		
16	56	27.0	44.3	178 56.8	85 30.8	111	35	31	5 03	30	35	44	27	68		
17	71	27.0	-13 43.5	193 24.2	84 -13 41.7	109	40	4 18	4 53	5 22	21 27	40	10 35	71		
18	86	27.0	-13 42.7	207 51.6	84 -13 52.6	109	45	4 01	4 40	5 12	21 17	37	10 43	75		
19	101	27.0	41.8	222 18.9	83 -14 03.4	108	50	3 38	24	5 00	21 05	33	54	79		
20	116	27.0	41.0	236 46.2	83 14.1	107	52	27	16	4 54	20 59	32	10 59	81		
21	131	27.0	40.2	251 13.5	83 24.7	106	54	15	4 08	48	53	30	11 04	83		
22	146	27.1	39.3	265 40.7	82 35.2	105	56	3 00	3 58	42	47	27	10	86		
23	161	27.1	38.5	280 07.8	81 45.7	105	58	2 41	47	34	39	24	17	89		
24	176	27.1	-13 37.7	294 34.9	81 -14 56.0	103	60 S	2 18	3 34	4 25	20 30	21	11 24	93		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 14 ^h 31 ^m 8		Mag.: -4.1 PMG: 14 ^h 51 ^m		Mag.: -0.8 PMG: 2 ^h 06 ^m		Mag.: -2.3 PMG: 16 ^h 41 ^m		Mag.: +0.5 PMG: 4 ^h 27 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	141	27.7	137 18.6	+1 29.8	328 19.6	+7 24.6	109 16.3	+11 54.6	293 06.5	-8 51.3						
1	156	30.2	152 18.4	31.1	343 22.6	24.8	124 18.4	54.7	308 08.9	51.3						
2	171	32.6	167 18.3	32.4	358 25.6	25.1	139 20.5	54.9	323 11.4	51.3						
3	186	35.1	182 18.1	33.7	13 28.6	25.4	154 22.6	55.0	338 13.9	51.3						
4	201	37.6	197 18.0	35.0	28 31.6	25.7	169 24.7	55.1	353 16.4	51.3						
5	216	40.0	212 17.8	+1 36.4	43 34.6	+7 26.0	184 26.9	+11 55.3	8 18.9	-8 51.2						
6	231	42.5	227 17.7	+1 37.7	58 37.6	+7 26.3	199 29.0	+11 55.4	23 21.3	-8 51.2						
7	246	45.0	242 17.5	39.0	73 40.7	26.6	214 31.1	55.5	38 23.8	51.2						
8	261	47.4	257 17.3	40.3	88 43.7	26.8	229 33.2	55.7	53 26.3	51.2						
9	276	49.9	272 17.2	41.6	103 46.7	27.1	244 35.3	55.8	68 28.8	51.2						
10	291	52.4	287 17.0	42.9	118 49.7	27.4	259 37.4	55.9	83 31.3	51.2						
11	306	54.8	302 16.9	+1 44.2	133 52.7	+7 27.7	274 39.6	+11 56.1	98 33.7	-8 51.1						
12	321	57.3	317 16.7	+1 45.5	148 55.8	+7 28.0	289 41.7	+11 56.2	113 36.2	-8 51.1						
13	336	59.7	332 16.6	46.8	163 58.8	28.3	304 43.8	56.3	128 38.7	51.1						
14	352	02.2	347 16.4	48.1	179 01.8	28.6	319 45.9	56.5	143 41.2	51.1						
15	7 04.7	2 16.2	49.4	49.4	194 04.8	28.9	334 48.0	56.6	158 43.7	51.1						
16	22 07.1	17 16.1	50.7	209 07.9	29.1	29.1	349 50.2	56.7	173 46.1	51.1						
17	37 09.6	32 15.9	+1 52.1	224 10.9	+7 29.4	29.4	4 52.3	+11 56.9	188 48.6	-8 51.0						
18	52 12.1	47 15.8	+1 53.4	239 13.9	+7 29.7	29.7	19 54.4	+11 57.0	203 51.1	-8 51.0						
19	67 14.5	62 15.6	54.7	254 17.0	30.0	30.0	34 56.5	57.1	218 53.6	51.0						
20	82 17.0	77 15.5	56.0	269 20.0	30.3	30.3	49 58.6	57.2	233 56.1	51.0						
21	97 19.5	92 15.3	57.3	284 23.0	30.6	30.6	65 00.7	57.4	248 58.6	51.0						
22	112 21.9	107 15.1	58.6	299 26.1	30.9	30.9	80 02.8	57.5	264 01.0	50.9						
23	127 24.4	122 15.0	+1 59.9	314 29.1	31.2	31.2	95 05.0	57.6	279 03.5	50.9						
24	142 26.9	137 14.8	+2 01.2	329 32.1	+7 31.5	31.5	110 07.1	+11 57.8	294 06.0	-8 50.9						
Dif	—	-2	+13	+30	+3		+21	+1	+25	0						

LUNES 13 DE FEBRERO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 2		SD: 16 ^h 2 Edad: 20 ^d 7		PHE { 4 ^h : 59/5 12 ^h : 59/4 20 ^h : 59/3									
	PMG: 4 ^h 32 ^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
0	176	27.1	−13	37.7	294	34.9	80	−14	56.0	16 44	17 29	18 18	0 14	91
1	191	27.1		36.8	309	01.9	80	−15	06.3	52	33	19	0 04	88
2	206	27.1		36.0	323	28.9	80		16.4	58	37	21	** ** *	
3	221	27.1		35.2	337	55.9	80		26.5	17 04	41	23	** ** *	
4	236	27.1		34.3	352	22.8	79		36.4	09	44	24	** ** *	
5	251	27.1	−13	33.5	6	49.7	79	−15	46.3	17 14	17 47	18 25	** ** *	
6	266	27.1	−13	32.6	21	16.5	78	−15	56.1	17 24	17 54	18 29	** ** *	
7	281	27.1		31.8	35	43.3	78	−16	05.7	33	18 01	32	** ** *	
8	296	27.2		31.0	50	10.0	77		15.3	40	06	36	** ** *	
9	311	27.2		30.1	64	36.6	76		24.7	47	11	39	** ** *	
10	326	27.2		29.3	79	03.3	77		34.1	17 58	21	47	23 43	62
11	341	27.2	−13	28.5	93	29.9	76	−16	43.3	18 08	18 30	18 55	23 28	60
12	356	27.2	−13	27.6	107	56.4	75	−16	52.5	18 18	18 39	19 04	23 14	57
13	11	27.2		26.8	122	22.9	75	−17	01.5	27	18 49	14	23 00	55
14	26	27.2		25.9	136	49.3	74		10.4	38	19 01	27	22 45	53
15	41	27.2		25.1	151	15.7	74		19.2	50	15	44	28 50	
16	56	27.3		24.3	165	42.1	74		28.0	18 57	23	19 55	19 48	
17	71	27.3	−13	23.4	180	08.4	73	−17	36.5	19 05	19 34	20 08	22 07	47
18	86	27.3	−13	22.6	194	34.6	72	−17	45.0	19 14	19 46	20 25	21 54	44
19	101	27.3		21.8	209	00.9	73	−17	53.4	26	20 01	46	38 41	
20	116	27.3		20.9	223	27.0	71	−18	01.6	31	08	20 56	31 39	
21	131	27.3		20.1	237	53.2	72		09.8	37	17	21 09	23 37	
22	146	27.3		19.2	252	19.3	71		17.8	43	26	23	14 35	
23	161	27.4		18.4	266	45.3	70		25.7	50	37	21 40	21 03	33
24	176	27.4	−13	17.5	281	11.3	70	−18	33.5	19 59	20 49	22 02	20 51	30
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 14 ^h 27 ^m 8		Mag.: −4.1 PMG: 14 ^h 51 ^m		Mag.: −0.9 PMG: 2 ^h 01 ^m		Mag.: −2.3 PMG: 16 ^h 37 ^m		Mag.: +0.5 PMG: 4 ^h 23 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	142	26.9	137	14.8	+ 2	01.2	329	32.1	+ 7	31.5				
1	157	29.3	152	14.7		02.5	344	35.2		31.8				
2	172	31.8	167	14.5		03.8	359	38.2		32.1				
3	187	34.2	182	14.4		05.1	14	41.3		32.4				
4	202	36.7	197	14.2		06.4	29	44.3		32.7				
5	217	39.2	212	14.1	+ 2	07.7	44	47.4	+ 7	33.0				
6	232	41.6	227	13.9	+ 2	09.0	59	50.4	+ 7	33.3				
7	247	44.1	242	13.8		10.4	74	53.4		33.5				
8	262	46.6	257	13.6		11.7	89	56.5		33.8				
9	277	49.0	272	13.4		13.0	104	59.5		34.1				
10	292	51.5	287	13.3		14.3	120	02.6		34.4				
11	307	54.0	302	13.1	+ 2	15.6	135	05.6	+ 7	34.7				
12	322	56.4	317	13.0	+ 2	16.9	150	08.7	+ 7	35.0				
13	337	58.9	332	12.8		18.2	165	11.8		35.3				
14	353	01.4	347	12.7		19.5	180	14.8		35.6				
15	8	03.8	2	12.5		20.8	195	17.9		35.9				
16	23	06.3	17	12.4		22.1	210	20.9		36.2				
17	38	08.7	32	12.2	+ 2	23.4	225	24.0	+ 7	36.5				
18	53	11.2	47	12.1	+ 2	24.7	240	27.0	+ 7	36.8				
19	68	13.7	62	11.9		26.0	255	30.1		37.1				
20	83	16.1	77	11.8		27.3	270	33.2		37.4				
21	98	18.6	92	11.6		28.6	285	36.2		37.7				
22	113	21.1	107	11.5		29.9	300	39.3		38.0				
23	128	23.5	122	11.3		31.3	315	42.4		38.3				
24	143	26.0	137	11.2	+ 2	32.6	330	45.4	+ 7	38.6				
Dif	—		−2	+13		+31	+3		+21	+1		+25	0	

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MARTES 14 DE FEBRERO DE 2012


UT	SOL			☾ LUNA					Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 2 PMG: 12 ^h 14 ^m 2			SD: 16 ^h 2 Edad: 21 ^d 7 PHE { 4 ^h : 59 ^m 3 12 ^h : 59 ^m 2 20 ^h : 59 ^m 1 PMG: 5 ^h 28 ^m R°: 57 ^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	176	27.4	− 13	281	11.3	70	− 18	33.5	60 N	6 09	6 58	7 42	1 45	84	9 02	35			
1	191	27.4		295	37.3			41.1	58	08	54	35	32	81	15	39			
2	206	27.4		310	03.2	69		48.7	56	06	50	29	20	79	27	41			
3	221	27.4		324	29.1	69	− 18	56.1	54	05	46	23	10	77	38	42			
4	236	27.4		338	54.9	68	− 19	03.4	52	04	43	18	1 01	75	47	44			
5	251	27.5	− 13	353	20.7	68	− 19	10.6	50	6 02	6 40	7 14	0 53	73	9 56	45			
6	266	27.5	− 13	7 46.5	68	− 19	17.6	70	45	5 59	6 33	7 03	0 36	71	10 13	48			
7	281	27.5		22 12.2	67		24.5	69	40	55	27	6 55	23	68	28	50			
8	296	27.5		36 37.9	67		31.3	68	35	52	22	48	11	66	40	51			
9	311	27.5		51 03.5	66		38.0	67	30	49	17	41	0 01	64	10 51	53			
10	326	27.6		65 29.1	66		44.6	66	20	42	6 08	30	** ** *	** ** *	11 10	54			
11	341	27.6	− 13	79 54.7	66	− 19	51.0	64	10 N	5 34	5 59	6 20	** ** *	** ** *	11 26	56			
12	356	27.6	− 13	94 20.3	66	− 19	57.3	63	0	5 25	5 50	6 11	** ** *	** ** *	11 41	58			
13	11 27.6			108 45.8	65	− 20	03.4	61	10 S	14	40	6 01	23 55	57	11 57	59			
14	26 27.6			123 11.3	65		09.4	60	20	5 01	28	5 51	38	56	12 13	61			
15	41 27.7			137 36.7	64		15.3	59	30	4 44	14	39	18	55	32	63			
16	56 27.7			152 02.1	64		21.1	58	35	33	5 05	32	23 07	54	43	64			
17	71 27.7	− 13	03.2	166 27.5	64	− 20	26.7	56	40	4 20	4 55	5 24	22 54	53	12 55	66			
18	86 27.7	− 13	02.3	180 52.9	64	− 20	32.2	55	45	4 04	4 43	5 15	22 38	52	13 10	68			
19	101 27.7		01.5	195 18.2	63		37.6	54	50	3 43	28	5 04	19	50	28	70			
20	116 27.8	− 13	00.6	209 43.5	63		42.8	52	52	33	21	4 58	10	49	37	71			
21	131 27.8	− 12	59.8	224 08.8	63		47.9	51	54	20	12	53	22 00	48	47	72			
22	146 27.8		58.9	238 34.0	62		52.9	50	56	3 06	4 03	46	21 49	47	13 58	73			
23	161 27.8		58.1	252 59.2	62	− 20	57.7	48	58	2 49	3 53	39	36	45	14 10	75			
24	176 27.9	− 12	57.2	267 24.4	62	− 21	02.4	47	60 S	2 28	3 40	4 31	21 21	43	14 25	77			
UT	ARIES PMG: 14 ^h 23 ^m 9			VENUS Mag.: −4.1 PMG: 14 ^h 51 ^m			MARTE Mag.: −0.9 PMG: 1 ^h 57 ^m			JÚPITER Mag.: −2.3 PMG: 16 ^h 34 ^m			SATURNO Mag.: +0.5 PMG: 4 ^h 19 ^m						
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
	h	°	'	h	°	'	h	°	'	h	°	'	h	°	'				
0	143	26.0		137	11.2	+ 2	32.6	330	45.4	+ 7	38.6	110	57.7	+ 12	01.0	295	05.6	− 8	50.4
1	158	28.5		152	11.0		33.9	345	48.5		38.9	125	59.9		01.1	310	08.1		50.4
2	173	30.9		167	10.9		35.2	0 51.6	39.2			141	02.0		01.3	325	10.6		50.4
3	188	33.4		182	10.7		36.5	15 54.6	39.5			156	04.1		01.4	340	13.1		50.4
4	203	35.8		197	10.6		37.8	30 57.7	39.8			171	06.2		01.5	355	15.6		50.4
5	218	38.3		212	10.4	+ 2	39.1	46 00.8	+ 7	40.2		186	08.3	+ 12	01.7	10 18.1	− 8	50.3	
6	233	40.8		227	10.3	+ 2	40.4	61 03.8	+ 7	40.5		201	10.4	+ 12	01.8	25 20.6	− 8	50.3	
7	248	43.2		242	10.1		41.7	76 06.9		40.8		216	12.5		01.9	40 23.0		50.3	
8	263	45.7		257	10.0		43.0	91 10.0		41.1		231	14.6		02.1	55 25.5		50.3	
9	278	48.2		272	09.8		44.3	106 13.1		41.4		246	16.7		02.2	70 28.0		50.3	
10	293	50.6		287	09.7		45.6	121 16.2		41.7		261	18.8		02.3	85 30.5		50.2	
11	308	53.1		302	09.5	+ 2	46.9	136 19.2	+ 7	42.0		276	20.9	+ 12	02.5	100 33.0	− 8	50.2	
12	323	55.6		317	09.4	+ 2	48.2	151 22.3	+ 7	42.3		291	23.0	+ 12	02.6	115 35.5	− 8	50.2	
13	338	58.0		332	09.2		49.5	166 25.4		42.6		306	25.1		02.7	130 38.0		50.2	
14	354	00.5		347	09.1		50.8	181 28.5		42.9		321	27.2		02.9	145 40.5		50.2	
15	9 03.0			2 08.9			52.1	196 31.6		43.2		336	29.3		03.0	160 43.0		50.1	
16	24 05.4			17 08.8			53.4	211 34.6		43.5		351	31.5		03.2	175 45.4		50.1	
17	39 07.9			32 08.6	+ 2	54.7		226 37.7	+ 7	43.8		6 33.6	+ 12	03.3		190 47.9	− 8	50.1	
18	54 10.3			47 08.5	+ 2	56.0		241 40.8	+ 7	44.1		21 35.7	+ 12	03.4		205 50.4	− 8	50.1	
19	69 12.8			62 08.3		57.3		256 43.9		44.4		36 37.8		03.6		220 52.9		50.1	
20	84 15.3			77 08.2	+ 2	58.6		271 47.0		44.8		51 39.9		03.7		235 55.4		50.0	
21	99 17.7			92 08.0	+ 3	00.0		286 50.1		45.1		66 42.0		03.8		250 57.9		50.0	
22	114 20.2			107 07.9		01.3		301 53.2		45.4		81 44.1		04.0		266 00.4		50.0	
23	129 22.7			122 07.7		02.6		316 56.3		45.7		96 46.2		04.1		281 02.9		50.0	
24	144 25.1			137 07.6	+ 3	03.9		331 59.4	+ 7	46.0		111 48.3	+ 12	04.2		296 05.4	− 8	49.9	
Dif	—			−1	+13			+31	+3			+21	+1			+25		0	

MIÉRCOL 15 DE FEBRERO DE 2012

UT	SOL		<div><div><div></div></div>LUNA</div> <div>SD: 16^h2 Edad: 22^d7</div> <div>PHE {<div>4^h: 59/0</div><div>12^h: 58/9</div><div>20^h: 58/7</div></div> <div>PMG: 6^h 25^m R°: 59^m</div>					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna								
	hG ☉	Dec	hG ☾	Dif	Dec	Dif																
	h	°	'	°	'	°	'			°	'	h	m	h	m	h	m	h	m			
0	176	27.9	-12	57.2	267	24.4	-21	02.4	45	60 N	16	49	17	34	18	22	3	09	70	9	37	51
1	191	27.9		56.4	281	49.6		06.9	44	58	16	56		38	24		2	53	68	9	54	52
2	206	27.9		55.5	296	14.8		11.3	43	56	17	02		41	25		39	67		10	08	53
3	221	27.9		54.6	310	39.9		15.6	41	54		08		45	26		27	66		20	54	
4	236	27.9		53.8	325	05.0		19.7	41	52		13		48	27		16	66		31	54	
5	251	28.0	-12	52.9	339	30.1	-21	23.7	40	50	17	17	17	51	18	29	2	06	66	10	41	54
6	266	28.0	-12	52.1	353	55.2	-21	27.6	39	45	17	27	17	57	18	32	1	47	64	11	01	55
7	281	28.0		51.2	8	20.3		31.3	37	40		35	18	03	35		31	62		18	56	
8	296	28.1		50.4	22	45.3		34.9	36	35		42		08	38		17	62		31	57	
9	311	28.1		49.5	37	10.3		38.3	34	30		48	13		41		1	05	62	11	44	56
10	326	28.1		48.7	51	35.4		41.6	33	20	17	59	21		47		0	45	60	12	04	58
11	341	28.1	-12	47.8	66	00.4	-21	44.7	31	10 N	18	08	18	30	18	55	0	28	59	12	22	58
12	356	28.2	-12	47.0	80	25.4	-21	47.8	31	0	18	18	18	39	19	03	0	11	59	12	39	58
13	11	28.2		46.1	94	50.4		50.6	28	10 S		27		48	13		***	***	***	12	56	59
14	26	28.2		45.2	109	15.4		53.3	27	20		37	18	59	26		***	***	***	13	14	59
15	41	28.2		44.4	123	40.3		55.9	26	30		48	19	13	42		***	***	***		35	59
16	56	28.3		43.5	138	05.3	-21	58.4	25	35	18	55	21	19	53		***	***	***	13	47	60
17	71	28.3	-12	42.7	152	30.3	-22	00.7	23	40	19	02	19	31	20	05	23	47	58	14	01	60
18	86	28.3	-12	41.8	166	55.3	-22	02.8	21	45	19	11	19	43	20	21	23	30	59	14	18	60
19	101	28.4		41.0	181	20.2		04.8	20	50		22	19	57	41		23	09	59		38	60
20	116	28.4		40.1	195	45.2		06.7	19	52		27	20	04	20	51	22	59	59		48	60
21	131	28.4		39.2	210	10.2		08.4	17	54		32		12	21	03	48	59		14	59	60
22	146	28.4		38.4	224	35.1		10.0	16	56		39		21	16		36	59		15	11	61
23	161	28.5		37.5	239	00.1		11.4	14	58		45		31	32		21	59		25	61	
24	176	28.5	-12	36.7	253	25.1	-22	12.7	13	60 S	19	53	20	43	21	52	22	04	59	15	42	62
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 14 ^h 20 ^m 0		Mag.: -4.1 PMG: 14 ^h 52 ^m			Mag.: -0.9 PMG: 1 ^h 52 ^m			Mag.: -2.3 PMG: 16 ^h 30 ^m			Mag.: +0.5 PMG: 4 ^h 15 ^m										
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec									
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'								
0	144	25.1	137	07.6	+3	331	59.4	+7	111	48.3	+12	296	05.4	-8	49.9							
1	159	27.6		05.2		347	02.5		126	50.4		311	07.9		49.9							
2	174	30.1		06.5		2	05.6		141	52.5		326	10.4		49.9							
3	189	32.5		07.8		17	08.7		156	54.6		341	12.8		49.9							
4	204	35.0		09.1		32	11.8		171	56.7		356	15.3		49.9							
5	219	37.5		10.4	+3	47	14.9	+7	186	58.8	+12	11	17.8	-8	49.8							
6	234	39.9		11.7	+3	62	18.0	+7	202	00.9	+12	26	20.3	-8	49.8							
7	249	42.4		13.0		77	21.1		217	03.0		41	22.8		49.8							
8	264	44.8		14.3		92	24.2		232	05.1		56	25.3		49.8							
9	279	47.3		15.6		107	27.3		247	07.2		71	27.8		49.8							
10	294	49.8		16.9		122	30.4		262	09.3		86	30.3		49.7							
11	309	52.2		18.2	+3	137	33.5	+7	277	11.4	+12	101	32.8	-8	49.7							
12	324	54.7		19.5	+3	152	36.6	+7	292	13.5	+12	116	35.3	-8	49.7							
13	339	57.2		20.8		167	39.7		307	15.6		131	37.8		49.7							
14	354	59.6		22.1		182	42.8		322	17.7		146	40.3		49.6							
15	10	02.1		23.4		197	45.9		337	19.8		161	42.8		49.6							
16	25	04.6		24.7		212	49.1		352	21.9		176	45.2		49.6							
17	40	07.0		26.0	+3	227	52.2	+7	7	24.0	+12	191	47.7	-8	49.6							
18	55	09.5		27.3	+3	242	55.3	+7	22	26.1	+12	206	50.2	-8	49.6							
19	70	12.0		28.6		257	58.4		37	28.2		221	52.7		49.5							
20	85	14.4		29.9		273	01.5		52	30.3		236	55.2		49.5							
21	100	16.9		31.2		288	04.6		67	32.4		251	57.7		49.5							
22	115	19.3		32.5		303	07.8		82	34.5		267	00.2		49.5							
23	130	21.8		33.8		318	10.9		97	36.6		282	02.7		49.4							
24	145	24.3		35.1	+3	333	14.0	+7	112	38.7	+12	297	05.2	-8	49.4							
Dif	—		-1	+13		+31	+3		+21		+1	+25			0							

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JUEVES 16 DE FEBRERO DE 2012

UT	SOL			 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16:2 PMG: 12 ^h 14 ^m 1			SD: 16:0 Edad: 23 ^d 7 PHE $\begin{cases} 4^h: 58/6 \\ 12^h: 58/5 \\ 20^h: 58/4 \end{cases}$ PMG: 7 ^h 24 ^m 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	176	28.5	− 12	36.7	253	25.1	− 22	12.7	60 N	6 05	6 53	7 37	4 19	52	10 28	67		
1	191	28.5		35.8	267	50.1		13.9	58	03	49	30	4 01	53	10 46	66		
2	206	28.6		34.9	282	15.1		14.9	56	02	46	24	3 46	54	11 01	65		
3	221	28.6		34.1	296	40.1		15.7	54	01	42	19	33	54	14	64		
4	236	28.6		33.2	311	05.1		16.4	52	6 00	39	14	22	54	25	64		
5	251	28.7	− 12	32.4	325	30.1	− 22	17.0	50	5 59	6 37	7 10	3 12	55	11 35	64		
6	266	28.7	− 12	31.5	339	55.2	− 22	17.5	45	5 56	6 30	7 00	2 51	55	11 56	63		
7	281	28.7		30.6	354	20.2		17.7	40	53	25	6 52	33	57	12 14	61		
8	296	28.8		29.8	8 45.3	61		17.9	35	50	20	46	19	57	28	61		
9	311	28.8		28.9	23 10.4	61		17.9	30	47	15	40	2 07	56	12 40	60		
10	326	28.8		28.0	37 35.5	61		17.8	20	41	6 06	29	1 45	58	13 02	59		
11	341	28.9	− 12	27.2	52 00.6	61	− 22	17.5	10 N	5 33	5 58	6 20	1 27	57	13 20	58		
12	356	28.9	− 12	26.3	66 25.8	62	− 22	17.1	0	5 25	5 49	6 11	1 10	58	13 37	58		
13	11	28.9		25.4	80 50.9	61		16.5	10 S	15	40	6 02	0 52	59	13 55	56		
14	26	29.0		24.6	95 16.1	62		15.8	20	5 02	29	5 52	34	58	14 13	55		
15	41	29.0		23.7	109 41.3	62		14.9	30	4 46	16	41	13	59	34	54		
16	56	29.0		22.8	124 06.6	63		14.0	35	36	5 08	34	0 01	58	14 47	53		
17	71	29.1	− 12	22.0	138 31.9	63	− 22	12.8	40	4 23	4 58	5 27	** ** *	** *	15 01	52		
18	86	29.1	− 12	21.1	152 57.2	63	− 22	11.6	45	4 08	4 46	5 18	** ** *	** *	15 18	51		
19	101	29.2		20.2	167 22.5	63		10.1	50	3 48	32	07	** ** *	** *	38	50		
20	116	29.2		19.4	181 47.9	64		08.6	52	38	25	5 02	23 58	68	48	49		
21	131	29.2		18.5	196 13.3	64		06.9	54	26	17	4 57	47	69	15 59	48		
22	146	29.3		17.6	210 38.7	64		05.1	56	3 13	4 08	51	35	70	16 12	47		
23	161	29.3		16.8	225 04.2	65		03.1	58	2 57	3 58	44	20	72	26	46		
24	176	29.3	− 12	15.9	239 29.7	65	− 22	01.0	60 S	2 37	3 47	4 36	23 03	74	16 44	43		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 14 ^h 16 ^m 0		Mag.: −4.1 PMG: 14 ^h 52 ^m		Mag.: −0.9 PMG: 1 ^h 47 ^m		Mag.: −2.3 PMG: 16 ^h 27 ^m		Mag.: +0.5 PMG: 4 ^h 11 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	145	24.3	137	04.1	+ 3	35.1	333	14.0	+ 7	53.6	112	38.7	+ 12	07.5	297	05.2	− 8	49.4
1	160	26.7	152	04.0		36.4	348	17.1		53.9	127	40.8		07.7	312	07.7		49.4
2	175	29.2	167	03.8		37.7	3	20.2		54.2	142	42.9		07.8	327	10.2		49.4
3	190	31.7	182	03.7		39.0	18	23.4		54.5	157	45.0		07.9	342	12.7		49.3
4	205	34.1	197	03.6		40.3	33	26.5		54.8	172	47.1		08.1	357	15.2		49.3
5	220	36.6	212	03.4	+ 3	41.6	48	29.6	+ 7	55.2	187	49.2	+ 12	08.2	12	17.7	− 8	49.3
6	235	39.1	227	03.3	+ 3	42.9	63	32.8	+ 7	55.5	202	51.3	+ 12	08.4	27	20.2	− 8	49.3
7	250	41.5	242	03.1		44.2	78	35.9		55.8	217	53.4		08.5	42	22.7		49.3
8	265	44.0	257	03.0		45.5	93	39.0		56.1	232	55.5		08.6	57	25.2		49.2
9	280	46.4	272	02.8		46.8	108	42.1		56.4	247	57.6		08.8	72	27.7		49.2
10	295	48.9	287	02.7		48.1	123	45.3		56.8	262	59.7		08.9	87	30.2		49.2
11	310	51.4	302	02.6	+ 3	49.4	138	48.4	+ 7	57.1	278	01.8	+ 12	09.0	102	32.7	− 8	49.2
12	325	53.8	317	02.4	+ 3	50.7	153	51.6	+ 7	57.4	293	03.8	+ 12	09.2	117	35.2	− 8	49.1
13	340	56.3	332	02.3		52.0	168	54.7		57.7	308	05.9		09.3	132	37.7		49.1
14	355	58.8	347	02.1		53.3	183	57.8		58.1	323	08.0		09.5	147	40.2		49.1
15	11	01.2	2 02.0			54.6	199	01.0		58.4	338	10.1		09.6	162	42.6		49.1
16	26	03.7	17 01.8			55.9	214	04.1		58.7	353	12.2		09.7	177	45.1		49.0
17	41	06.2	32 01.7	+ 3	57.2		229	07.2	+ 7	59.0	8 14.3	+ 12	09.9		192	47.6	− 8	49.0
18	56	08.6	47 01.6	+ 3	58.5		244	10.4	+ 7	59.4	23 16.4	+ 12	10.0		207	50.1	− 8	49.0
19	71	11.1	62 01.4	+ 3	59.8		259	13.5	+ 7	59.7	38 18.5		10.2		222	52.6		49.0
20	86	13.6	77 01.3	+ 4	01.1		274	16.7	+ 8	00.0	53 20.6		10.3		237	55.1		48.9
21	101	16.0	92 01.1		02.4		289	19.8		00.3	68 22.7		10.4		252	57.6		48.9
22	116	18.5	107 01.0		03.7		304	23.0		00.7	83 24.8		10.6		268	00.1		48.9
23	131	20.9	122 00.9		05.0		319	26.1		01.0	98 26.9		10.7		283	02.6		48.9
24	146	23.4	137 00.7	+ 4	06.3		334	29.3	+ 8	01.3	113 29.0	+ 12	10.9		298	05.1	− 8	48.9
Dif	—		−1	+13		+31	+3			+21	+1			+25		0		


VIERNES 17 DE FEBRERO DE 2012

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UT	SOL		☾ LUNA					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2		SD: 15 ^h 9 Edad: 24 ^d 7 PHE { 4 ^h : 58/2 12 ^h : 58/1 20 ^h : 58/0												
	PMG: 12 ^h 14 ^m 0		PMG: 8 ^h 21 ^m R°: 56 ^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	176 29.3	− 12 15.9	239 29.7		− 22 01.0		60 N	16 55	17 38	18 27	5 11 36		11 35 80		
1	191 29.4	15.0	253 55.2	65	− 21 58.8	22	58	17 01	42	28	4 54 38		11 52 76		
2	206 29.4	14.2	268 20.8	66	56.4	24	56	07	45	29	40 40		12 06 74		
3	221 29.5	13.3	282 46.4	66	53.9	25	54	12	49	30	27 42		18 73		
4	236 29.5	12.4	297 12.0	66	51.3	26	52	17	51	31	16 44		29 71		
5	251 29.5	− 12 11.6	311 37.7	67	− 21 48.5	28	50	17 21	17 54	18 32	4 07 44		12 39 69		
6	266 29.6	− 12 10.7	326 03.5	68	− 21 45.6	29	45	17 30	18 00	18 34	3 46 47		12 59 66		
7	281 29.6	09.8	340 29.3	68	42.6	30	40	37	05	37	30 48		13 15 64		
8	296 29.7	08.9	354 55.1	68	39.4	32	35	44	10	39	16 50		29 62		
9	311 29.7	08.1	9 21.0	69	36.1	33	30	17 50	14	42	3 03 52		13 40 62		
10	326 29.7	07.2	23 46.9	69	32.6	35	20	18 00	22	48	2 43 53		14 01 59		
11	341 29.8	− 12 06.3	38 12.9	70	− 21 29.1	35	10 N	18 09	18 30	18 55	2 24 55		14 18 57		
12	356 29.8	− 12 05.5	52 38.9	70	− 21 25.4	37	0	18 17	18 39	19 03	2 08 56		14 35 55		
13	11 29.9	04.6	67 05.0	71	21.6	38	10 S	26	48	13	1 51 57		14 51 53		
14	26 29.9	03.7	81 31.1	71	17.6	40	20	35	18 58	25	32 60		15 08 51		
15	41 30.0	02.8	95 57.2	71	13.5	41	30	46	19 11	40	1 12 61		28 49		
16	56 30.0	02.0	110 23.5	73	09.3	42	35	18 52	19	19 50	0 59 62		40 47		
17	71 30.0	− 12 01.1	124 49.8	73	− 21 05.0	43	40	19 00	19 28	20 02	0 45 64		15 53 45		
18	86 30.1	− 12 00.2	139 16.1	73	− 21 00.5	45	45	19 08	19 39	20 17	0 29 64		16 09 43		
19	101 30.1	− 11 59.3	153 42.5	74	− 20 55.9	46	50	18	19 53	37	0 08 67		28 40		
20	116 30.2	58.5	168 08.9	74	51.2	47	52	23	20 00	46	*** ** *		37 39		
21	131 30.2	57.6	182 35.4	75	46.4	48	54	28	07	20 57	*** ** *		47 37		
22	146 30.3	56.7	197 02.0	76	41.4	50	56	34	15	21 10	*** ** *		16 59 35		
23	161 30.3	55.8	211 28.6	76	36.4	50	58	40	25	25	*** ** *		17 12 33		
24	176 30.4	− 11 55.0	225 55.3	77	− 20 31.2	52	60 S	19 48	20 36	21 43	*** ** *		17 27 30		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG 14 ^h 12 ^m 1		Mag.: −4.2 PMG: 14 ^h 52 ^m		Mag.: −1.0 PMG: 1 ^h 42 ^m		Mag.: −2.2 PMG: 16 ^h 24 ^m			Mag.: +0.5 PMG: 4 ^h 07 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec				
h	° /		° /	° /	° /		° /	° /		° /	° /				
0	146 23.4		137 00.7	+ 4 06.3	334 29.3	+ 8 01.3	113 29.0	+ 12 10.9		298 05.1	− 8 48.9				
1	161 25.9		152 00.6	07.6	349 32.4	01.6	128 31.1	11.0		313 07.6	48.8				
2	176 28.3		167 00.4	08.9	4 35.6	02.0	143 33.2	11.1		328 10.1	48.8				
3	191 30.8		182 00.3	10.2	19 38.7	02.3	158 35.2	11.3		343 12.6	48.8				
4	206 33.3		197 00.2	11.5	34 41.9	02.6	173 37.3	11.4		358 15.1	48.8				
5	221 35.7		212 00.0	+ 4 12.7	49 45.0	+ 8 03.0	188 39.4	+ 12 11.5		13 17.6	− 8 48.7				
6	236 38.2		226 59.9	+ 4 14.0	64 48.2	+ 8 03.3	203 41.5	+ 12 11.7		28 20.1	− 8 48.7				
7	251 40.7		241 59.7	15.3	79 51.3	03.6	218 43.6	11.8		43 22.6	48.7				
8	266 43.1		256 59.6	16.6	94 54.5	03.9	233 45.7	12.0		58 25.1	48.7				
9	281 45.6		271 59.5	17.9	109 57.7	04.3	248 47.8	12.1		73 27.6	48.6				
10	296 48.1		286 59.3	19.2	125 00.8	04.6	263 49.9	12.2		88 30.1	48.6				
11	311 50.5		301 59.2	+ 4 20.5	140 04.0	+ 8 04.9	278 52.0	+ 12 12.4		103 32.6	− 8 48.6				
12	326 53.0		316 59.1	+ 4 21.8	155 07.1	+ 8 05.3	293 54.1	+ 12 12.5		118 35.1	− 8 48.6				
13	341 55.4		331 58.9	23.1	170 10.3	05.6	308 56.1	12.7		133 37.6	48.5				
14	356 57.9		346 58.8	24.4	185 13.5	05.9	323 58.2	12.8		148 40.1	48.5				
15	12 00.4		1 58.6	25.7	200 16.6	06.2	339 00.3	12.9		163 42.6	48.5				
16	27 02.8		16 58.5	27.0	215 19.8	06.6	354 02.4	13.1		178 45.1	48.5				
17	42 05.3		31 58.4	+ 4 28.3	230 23.0	+ 8 06.9	9 04.5	+ 12 13.2		193 47.6	− 8 48.4				
18	57 07.8		46 58.2	+ 4 29.6	245 26.1	+ 8 07.2	24 06.6	+ 12 13.4		208 50.1	− 8 48.4				
19	72 10.2		61 58.1	30.9	260 29.3	07.6	39 08.7	13.5		223 52.7	48.4				
20	87 12.7		76 58.0	32.2	275 32.5	07.9	54 10.8	13.6		238 55.2	48.4				
21	102 15.2		91 57.8	33.5	290 35.6	08.2	69 12.9	13.8		253 57.7	48.3				
22	117 17.6		106 57.7	34.8	305 38.8	08.6	84 14.9	13.9		269 00.2	48.3				
23	132 20.1		121 57.5	36.1	320 42.0	08.9	99 17.0	14.1		284 02.7	48.3				
24	147 22.6		136 57.4	+ 4 37.3	335 45.2	+ 8 09.2	114 19.1	+ 12 14.2		299 05.2	− 8 48.3				
Dif	—		−1	+13	+32	+3	+21	+1		+25	0				

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SÁBADO 18 DE FEBRERO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2		SD: 15 ^h 8											
	PMG: 12 ^h 13 ^m 9		Edad: 25 ^d 7											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
0	176 30.4	− 11 55.0	225 55.3	77	− 20 31.2	53	60 N	6 00	6 48	7 32	5 47	24	12 55	84
1	191 30.4	54.1	240 22.0	78	25.9	55	58	5 59	45	25	32	28	13 08	81
2	206 30.4	53.2	254 48.8	79	20.4	55	56	58	41	20	20	30	20 78	
3	221 30.5	52.3	269 15.7	79	14.9	55	54	57	38	15	09	33	31 75	
4	236 30.5	51.4	283 42.6	80	09.2	57	52	56	36	10	5 00	34	40 74	
5	251 30.6	− 11 50.6	298 09.6	81	− 20 03.4	58	50	5 55	6 33	7 06	4 51	36	13 48	72
6	266 30.6	− 11 49.7	312 36.7	81	− 19 57.6	58	45	5 53	6 27	6 57	4 33	39	14 05	69
7	281 30.7	48.8	327 03.8	82	51.6	60	40	51	22	50	18	42	19 66	
8	296 30.7	47.9	341 31.0	82	45.4	62	35	48	18	43	4 06	43	31 64	
9	311 30.8	47.1	355 58.2	82	39.2	62	30	45	13	38	3 55	45	14 42	61
10	326 30.8	46.2	10 25.5	83	32.9	63	20	39	6 05	28	36	48	15 00	58
11	341 30.9	− 11 45.3	24 52.9	84	− 19 26.4	65	10 N	5 33	5 58	6 19	3 19	51	15 15	55
12	356 30.9	− 11 44.4	39 20.3	84	− 19 19.9	65	0	5 25	5 49	6 11	3 04	53	15 30	52
13	11 31.0	43.5	53 47.8	85	13.2	67	10 S	15	41	6 02	2 48	56	44 49	
14	26 31.0	42.6	68 15.4	86	− 19 06.4	68	20	5 04	30	5 53	32	58	15 59	47
15	41 31.1	41.8	82 43.1	87	− 18 59.6	68	30	4 48	17	42	13	61	16 17	43
16	56 31.1	40.9	97 10.8	87	52.6	70	35	38	10	36	2 01	64	27 41	
17	71 31.2	− 11 40.0	111 38.6	88	− 18 45.5	71	40	4 26	5 00	5 29	1 49	65	16 38	39
18	86 31.2	− 11 39.1	126 06.4	88	− 18 38.3	72	45	4 11	4 49	5 21	1 33	68	16 52	36
19	101 31.3	38.2	140 34.3	89	31.0	73	50	3 52	36	11	15	71	17 08	32
20	116 31.3	37.4	155 02.3	90	23.6	74	52	42	29	06	1 06	72	16 30	
21	131 31.4	36.5	169 30.4	91	16.2	74	54	32	22	5 01	0 56	74	24 29	
22	146 31.4	35.6	183 58.5	91	08.6	76	56	19	13	4 55	45	76	34 26	
23	161 31.5	34.7	198 26.7	92	− 18 00.9	77	58	3 04	4 04	49	32	79	45 24	
24	176 31.5	− 11 33.8	212 55.0	93	− 17 53.1	78	60 S	2 46	3 53	4 41	0 17	82	17 57	21
UT	ARIES		VENUS		MARTE		JÚPITER				SATURNO			
	PMG		Mag.: −4.2		Mag.: −1.0		Mag.: −2.2				Mag.: +0.5			
	14 ^h 08 ^m 2		PMG: 14 ^h 52 ^m		PMG: 1 ^h 37 ^m		PMG: 16 ^h 20 ^m				PMG: 4 ^h 03 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec
0	147 22.6	136 57.4	+ 4 37.3	335 45.2	+ 8 09.2		114 19.1	+ 12 14.2	299 05.2	− 8 48.3				
1	162 25.0	151 57.3	38.6	350 48.3	09.6		129 21.2	14.4	314 07.7	48.2				
2	177 27.5	166 57.1	39.9	5 51.5	09.9		144 23.3	14.5	329 10.2	48.2				
3	192 29.9	181 57.0	41.2	20 54.7	10.2		159 25.4	14.6	344 12.7	48.2				
4	207 32.4	196 56.9	42.5	35 57.9	10.6		174 27.5	14.8	359 15.2	48.1				
5	222 34.9	211 56.7	+ 4 43.8	51 01.0	+ 8 10.9		189 29.5	+ 12 14.9	14 17.7	− 8 48.1				
6	237 37.3	226 56.6	+ 4 45.1	66 04.2	+ 8 11.2		204 31.6	+ 12 15.1	29 20.2	− 8 48.1				
7	252 39.8	241 56.4	46.4	81 07.4	11.6		219 33.7	15.2	44 22.7	48.1				
8	267 42.3	256 56.3	47.7	96 10.6	11.9		234 35.8	15.3	59 25.2	48.0				
9	282 44.7	271 56.2	49.0	111 13.8	12.3		249 37.9	15.5	74 27.7	48.0				
10	297 47.2	286 56.0	50.3	126 17.0	12.6		264 40.0	15.6	89 30.2	48.0				
11	312 49.7	301 55.9	+ 4 51.6	141 20.1	+ 8 12.9		279 42.1	+ 12 15.8	104 32.7	− 8 48.0				
12	327 52.1	316 55.8	+ 4 52.8	156 23.3	+ 8 13.3		294 44.1	+ 12 15.9	119 35.2	− 8 47.9				
13	342 54.6	331 55.6	54.1	171 26.5	13.6		309 46.2	16.0	134 37.7	47.9				
14	357 57.1	346 55.5	55.4	186 29.7	13.9		324 48.3	16.2	149 40.2	47.9				
15	12 59.5	1 55.4	56.7	201 32.9	14.3		339 50.4	16.3	164 42.7	47.9				
16	28 02.0	16 55.2	58.0	216 36.1	14.6		354 52.5	16.5	179 45.2	47.8				
17	43 04.4	31 55.1	+ 4 59.3	231 39.3	+ 8 15.0		9 54.6	+ 12 16.6	194 47.7	− 8 47.8				
18	58 06.9	46 55.0	+ 5 00.6	246 42.5	+ 8 15.3		24 56.6	+ 12 16.8	209 50.3	− 8 47.8				
19	73 09.4	61 54.8	01.9	261 45.7	15.6		39 58.7	16.9	224 52.8	47.8				
20	88 11.8	76 54.7	03.2	276 48.9	16.0		55 00.8	17.0	239 55.3	47.7				
21	103 14.3	91 54.6	04.5	291 52.1	16.3		70 02.9	17.2	254 57.8	47.7				
22	118 16.8	106 54.4	05.7	306 55.3	16.6		85 05.0	17.3	270 00.3	47.7				
23	133 19.2	121 54.3	07.0	321 58.5	17.0		100 07.1	17.5	285 02.8	47.6				
24	148 21.7	136 54.1	+ 5 08.3	337 01.7	+ 8 17.3		115 09.1	+ 12 17.6	300 05.3	− 8 47.6				
Dif	—	−1	+13	+32	+3		+21	+1	+25	0				


DOMINGO 19 DE FEBRERO DE 2012

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UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 9			SD: 15 ^h 7 Edad: 26 ^d 7 PMG: 10 ^h 10 ^m R°: 49 ^m						PHE { 4 ^h : 57 ^m 4 12 ^h : 57 ^m 2 20 ^h : 57 ^m 0							
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	176	31.5	− 11	212	55.0	− 17	53.1	78	60 N	17 00	17 43	18 32	6 11	17	14 19	85	
1	191	31.6		227	23.3	93	45.3	84	58	06	47	32	6 00	20	29	82	
2	206	31.6		241	51.7	94	37.3	80	56	11	50	33	5 50	23	38	79	
3	221	31.7		256	20.2	95	29.3	80	54	16	52	34	42	25	46	77	
4	236	31.7		270	48.7	95	21.1	82	52	20	55	34	34	27	14	54	
5	251	31.8	− 11	285	17.4	97	− 17	12.9	50	17 24	17 57	18 35	5 27	29	15 00	72	
6	266	31.8	− 11	299	46.0	96	− 17	04.6	45	17 33	18 03	18 37	5 12	33	15 14	68	
7	281	31.9		314	14.8	98	− 16	56.2	40	40	07	39	5 00	36	25	65	
8	296	32.0		328	43.6	98	47.7	85	35	46	12	41	4 49	39	35	62	
9	311	32.0		343	12.5	99	39.1	86	30	17 51	16	44	40	41	43	60	
10	326	32.1		357	41.5	100	30.4	87	20	18 01	23	49	24	45	15 58	55	
11	341	32.1	− 11	12	10.6	101	− 16	21.7	10 N	18 09	18 31	18 55	4 10	48	16 10	52	
12	356	32.2	− 11	26	39.7	101	− 16	12.9	88	18 17	18 38	19 03	3 57	51	16 22	49	
13	11	32.2		41	08.9	102	− 16	03.9	90	25	47	12	44	54	33	46	
14	26	32.3		55	38.1	102	− 15	55.0	89	34	18 57	23	30	57	16 46	42	
15	41	32.3		70	07.4	103	45.9	91	30	44	19 09	38	14	60	17 00	38	
16	56	32.4		84	36.8	104	36.8	91	35	50	16	48	3 05	62	08	36	
17	71	32.5	− 11	99	06.3	105	− 15	27.5	93	40	18 57	19 25	19 59	2 54	65	17 17	34
18	86	32.5	− 11	113	35.8	105	− 15	18.2	93	45	19 05	19 36	20 14	2 41	69	17 28	30
19	101	32.6		128	05.5	107	− 15	08.9	93	50	14	49	32	26	72	40	27
20	116	32.6		142	35.1	106	− 14	59.4	95	52	19	19 55	41	18	75	46	25
21	131	32.7		157	04.9	108	49.9	95	54	24	20 02	20 51	10	77	17 53	23	
22	146	32.8		171	34.7	108	40.3	96	56	29	10	21 03	2	01	79	18 00	21
23	161	32.8		186	04.6	109	30.7	96	58	35	19	17	1	51	81	09	18
24	176	32.9	− 11	200	34.5	109	− 14	21.0	97	58 S	19 42	20 29	21 35	1 39	85	18 18	15
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 14 ^h 04 ^m 2			Mag.: −4.2 PMG: 14 ^h 53 ^m			Mag.: −1.0 PMG: 1 ^h 32 ^m			Mag.: −2.2 PMG: 16 ^h 17 ^m			Mag.: +0.5 PMG: 3 ^h 59 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	148	21.7		136	54.1	+ 5	337	01.7	+ 8	115	09.1	+ 12	300	05.3	− 8		
1	163	24.2		151	54.0	09.6	352	04.9	17.7	130	11.2		315	07.8	47.6		
2	178	26.6		166	53.9	10.9	7	08.1	18.0	145	13.3		330	10.3	47.6		
3	193	29.1		181	53.7	12.2	22	11.3	18.4	160	15.4		345	12.8	47.5		
4	208	31.5		196	53.6	13.5	37	14.5	18.7	175	17.5		0	15.3	47.5		
5	223	34.0		211	53.5	+ 5	52	17.7	+ 8	190	19.5	+ 12	15	17.8	− 8		
6	238	36.5		226	53.3	+ 5	67	20.9	+ 8	205	21.6	+ 12	30	20.3	− 8		
7	253	38.9		241	53.2	17.3	82	24.1	19.7	220	23.7		45	22.9	47.4		
8	268	41.4		256	53.1	18.6	97	27.3	20.1	235	25.8		60	25.4	47.4		
9	283	43.9		271	52.9	19.9	112	30.5	20.4	250	27.9		75	27.9	47.4		
10	298	46.3		286	52.8	21.2	127	33.7	20.7	265	29.9		90	30.4	47.3		
11	313	48.8		301	52.7	+ 5	142	36.9	+ 8	280	32.0	+ 12	105	32.9	− 8		
12	328	51.3		316	52.5	+ 5	157	40.1	+ 8	295	34.1	+ 12	120	35.4	− 8		
13	343	53.7		331	52.4	25.1	172	43.3	21.8	310	36.2		135	37.9	47.3		
14	358	56.2		346	52.3	26.3	187	46.6	22.1	325	38.3		150	40.4	47.2		
15	13	58.7		1	52.1	27.6	202	49.8	22.5	340	40.3		165	42.9	47.2		
16	29	01.1		16	52.0	28.9	217	53.0	22.8	355	42.4		180	45.4	47.2		
17	44	03.6		31	51.9	+ 5	232	56.2	+ 8	10	44.5	+ 12	195	47.9	− 8		
18	59	06.0		46	51.8	+ 5	247	59.4	+ 8	25	46.6	+ 12	210	50.5	− 8		
19	74	08.5		61	51.6	32.8	263	02.6	23.8	40	48.6		225	53.0	47.1		
20	89	11.0		76	51.5	34.1	278	05.9	24.2	55	50.7		240	55.5	47.1		
21	104	13.4		91	51.4	35.3	293	09.1	24.5	70	52.8		255	58.0	47.0		
22	119	15.9		106	51.2	36.6	308	12.3	24.9	85	54.9		271	00.5	47.0		
23	134	18.4		121	51.1	37.9	323	15.5	25.2	100	57.0		286	03.0	47.0		
24	149	20.8		136	51.0	+ 5	338	18.7	+ 8	115	59.0	+ 12	301	05.5	− 8		
Dif	—			−1	+13		+32	+3		+21	+1		+25	0			

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LUNES 20 DE FEBRERO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 8		SD: 15 ^h Edad: 27 ^d 7	PHE { 4 ^h : 56'9 12 ^h : 56'7 20 ^h : 56'6										
			PMG: 10 ^h 59 ^m	R°: 48 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
0	176 32.9	− 11 12.5	200 34.5		− 14 21.0		60 N	5 55	6 43	7 26	6 28	13	15 44	83
1	191 32.9		215 04.6	111	11.2	98	58	54	40	20	20	16	51	80
2	206 33.0	10.7	229 34.6	110	− 14 01.3	99	56	54	37	15	13	19	15 57	77
3	221 33.1	09.8	244 04.8	112	− 13 51.4	99	54	53	34	10	07	21	16 03	75
4	236 33.1	08.9	258 35.0	112	41.4	100	52	53	32	06	6 01	23	08	72
5	251 33.2	− 11 08.0	273 05.3	113	− 13 31.4	100	50	5 52	6 29	7 02	5 56	25	16 12	71
6	266 33.2	− 11 07.1	287 35.7	114	− 13 21.3	101	45	5 50	6 24	6 54	5 45	28	16 22	67
7	281 33.3	06.2	302 06.1	114	11.1	102	40	48	20	47	36	31	30	64
8	296 33.4	05.3	316 36.6	115	− 13 00.9	102	35	46	16	41	28	34	37	61
9	311 33.4	04.5	331 07.1	115	− 12 50.6	103	30	44	12	36	21	36	43	58
10	326 33.5	03.6	345 37.8	117	40.3	103	20	38	6 04	27	5 09	40	16 53	54
11	341 33.5	− 11 02.7	0 08.4	116	− 12 29.9	104	10 N	5 32	5 57	6 18	4 58	44	17 02	51
12	356 33.6	− 11 01.8	14 39.2	118	− 12 19.4	105	0	5 25	5 49	6 10	4 48	48	17 11	47
13	11 33.7	00.9	29 10.0	118	− 12 08.9	105	10 S	16	41	6 02	38	51	19	43
14	26 33.7	− 11 00.0	43 40.9	119	− 11 58.4	105	20	5 05	31	5 54	27	55	28	40
15	41 33.8	− 10 59.1	58 11.8	119	47.8	106	30	4 50	19	44	14	59	38	36
16	56 33.9	58.2	72 42.8	120	37.1	107	35	40	12	38	4 07	62	44	33
17	71 33.9	− 10 57.3	87 13.9	121	− 11 26.4	107	40	4 29	5 03	5 31	3 59	64	17 51	30
18	86 34.0	− 10 56.4	101 45.0	121	− 11 15.7	107	45	4 15	4 52	5 23	3 50	67	17 58	27
19	101 34.1	55.5	116 16.2	122	− 11 04.9	108	50	3 56	39	14	38	71	18 07	23
20	116 34.1	54.6	130 47.4	122	− 10 54.0	109	52	47	33	10	33	73	11	22
21	131 34.2	53.7	145 18.7	123	43.2	108	54	37	26	05	27	75	16	19
22	146 34.2	52.8	159 50.1	124	32.2	110	56	25	18	5 00	20	78	21	17
23	161 34.3	51.9	174 21.5	124	21.3	109	58	3 11	4 09	4 54	12	81	27	14
24	176 34.4	− 10 51.0	188 53.0	125	− 10 10.2	111	60 S	2 54	3 59	4 47	3 04	84	18 33	12
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 14 ^h 00 ^m 3		Mag.: −4.2 PMG: 14 ^h 53 ^m		Mag.: −1.0 PMG: 1 ^h 26 ^m		Mag.: −2.2 PMG: 16 ^h 14 ^m		Mag.: +0.5 PMG: 3 ^h 55 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
0	149 20.8	136 51.0	+ 5 39.2	338 18.7	+ 8 25.6	115 59.0	+ 12 21.0	301 05.5	− 8 46.9					
1	164 23.3	151 50.8	40.5	353 22.0	25.9	131 01.1	21.2	316 08.0	46.9					
2	179 25.8	166 50.7	41.8	8 25.2	26.3	146 03.2	21.3	331 10.5	46.9					
3	194 28.2	181 50.6	43.0	23 28.4	26.6	161 05.3	21.5	346 13.1	46.9					
4	209 30.7	196 50.4	44.3	38 31.6	26.9	176 07.3	21.6	1 15.6	46.8					
5	224 33.2	211 50.3	+ 5 45.6	53 34.9	+ 8 27.3	191 09.4	+ 12 21.8	16 18.1	− 8 46.8					
6	239 35.6	226 50.2	+ 5 46.9	68 38.1	+ 8 27.6	206 11.5	+ 12 21.9	31 20.6	− 8 46.8					
7	254 38.1	241 50.0	48.2	83 41.3	28.0	221 13.6	22.0	46 23.1	46.7					
8	269 40.5	256 49.9	49.5	98 44.6	28.3	236 15.6	22.2	61 25.6	46.7					
9	284 43.0	271 49.8	50.7	113 47.8	28.7	251 17.7	22.3	76 28.1	46.7					
10	299 45.5	286 49.6	52.0	128 51.0	29.0	266 19.8	22.5	91 30.6	46.7					
11	314 47.9	301 49.5	+ 5 53.3	143 54.3	+ 8 29.4	281 21.9	+ 12 22.6	106 33.2	− 8 46.6					
12	329 50.4	316 49.4	+ 5 54.6	158 57.5	+ 8 29.7	296 23.9	+ 12 22.8	121 35.7	− 8 46.6					
13	344 52.9	331 49.3	55.9	174 00.7	30.1	311 26.0	22.9	136 38.2	46.6					
14	359 55.3	346 49.1	57.1	189 04.0	30.4	326 28.1	23.0	151 40.7	46.5					
15	14 57.8	1 49.0	58.4	204 07.2	30.8	341 30.2	23.2	166 43.2	46.5					
16	30 00.3	16 48.9	+ 5 59.7	219 10.4	31.1	356 32.2	23.3	181 45.7	46.5					
17	45 02.7	31 48.7	+ 6 01.0	234 13.7	+ 8 31.5	11 34.3	+ 12 23.5	196 48.2	− 8 46.5					
18	60 05.2	46 48.6	+ 6 02.3	249 16.9	+ 8 31.8	26 36.4	+ 12 23.6	211 50.8	− 8 46.4					
19	75 07.6	61 48.5	03.5	264 20.2	32.2	41 38.4	23.8	226 53.3	46.4					
20	90 10.1	76 48.3	04.8	279 23.4	32.5	56 40.5	23.9	241 55.8	46.4					
21	105 12.6	91 48.2	06.1	294 26.6	32.9	71 42.6	24.1	256 58.3	46.3					
22	120 15.0	106 48.1	07.4	309 29.9	33.2	86 44.7	24.2	272 00.8	46.3					
23	135 17.5	121 48.0	08.7	324 33.1	33.6	101 46.7	24.3	287 03.3	46.3					
24	150 20.0	136 47.8	+ 6 09.9	339 36.4	+ 8 33.9	116 48.8	+ 12 24.5	302 05.8	− 8 46.2					
Dif	—	−1	+13	+32	+3	+21	+1	+25	0					

MARTES 21 DE FEBRERO DE 2012

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UT	SOL		● LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 7		SD: 15 ^h 4 Edad: 28 ^d 7 PHE { 4 ^h : 56 ^h 4 12 ^h : 56 ^h 2 20 ^h : 56 ^h 0 PMG: 11 ^h 47 ^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	^h ^m ^m
0	176 34.4	− 10 51.0	188 53.0		− 10 10.2	110	60 N	17 05	17 48	18 37	6 41	11	17 07	81
1	191 34.4	50.1	203 24.5	125	− 9 59.2	110	58	11	51	37	36	14	11	78
2	206 34.5	49.2	217 56.1	126	48.1	111	56	16	54	37	32	16	14	76
3	221 34.6	48.3	232 27.8	127	37.0	111	54	20	56	37	28	18	18	73
4	236 34.6	47.4	246 59.5	127	25.8	112	52	24	17 58	38	24	20	20	72
5	251 34.7	− 10 46.5	261 31.3	128	− 9 14.6	112	50	17 28	18 01	18 38	6 21	21	17 23	69
6	266 34.8	− 10 45.6	276 03.1	128	− 9 03.4	112	45	17 35	18 05	18 39	6 13	26	17 29	65
7	281 34.9	44.7	290 35.0	129	− 8 52.1	113	40	42	10	41	07	29	34	61
8	296 34.9	43.8	305 06.9	129	40.8	113	35	48	13	43	6 02	32	38	58
9	311 35.0	42.9	319 38.9	130	29.4	114	30	17 53	17	45	5 57	34	41	57
10	326 35.1	42.0	334 10.9	130	18.1	113	20	18 02	24	50	49	39	47	52
11	341 35.1	− 10 41.1	348 43.0	131	− 8 06.7	114	10 N	18 10	18 31	18 56	5 42	42	17 53	48
12	356 35.2	− 10 40.2	3 15.1	131	− 7 55.3	114	0	18 17	18 38	19 02	5 36	45	17 58	44
13	11 35.3	39.3	17 47.3	132	43.8	115	10 S	25	46	11	29	49	18 02	42
14	26 35.3	38.4	32 19.5	132	32.3	115	20	33	18 55	22	22	52	08	37
15	41 35.4	37.5	46 51.8	133	20.8	115	30	42	19 07	36	13	58	14	33
16	56 35.5	36.6	61 24.1	133	− 7 09.3	115	35	48	14	45	09	59	17	31
17	71 35.5	− 10 35.7	75 56.5	134	− 6 57.7	116	40	18 54	19 22	19 56	5 03	63	18 21	28
18	86 35.6	− 10 34.8	90 28.9	134	− 6 46.2	115	45	19 02	19 32	20 10	4 57	66	18 25	25
19	101 35.7	33.9	105 01.4	135	34.6	116	50	10	45	27	49	70	30	21
20	116 35.8	33.0	119 33.9	135	22.9	117	52	15	51	36	46	72	33	19
21	131 35.8	32.0	134 06.5	136	− 6 11.3	116	54	19	19 57	46	42	74	35	18
22	146 35.9	31.1	148 39.1	136	− 5 59.6	117	56	24	20 05	20 57	38	76	38	15
23	161 36.0	30.2	163 11.7	136	48.0	116	58	30	13	21 10	33	79	41	13
24	176 36.1	− 10 29.3	177 44.4	137	− 5 36.3	117	60 S	19 36	20 23	21 26	4 28	81	18 45	10
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 56 ^m 4		Mag.: −4.2 PMG: 14 ^h 53 ^m		Mag.: −1.0 PMG: 1 ^h 21 ^m		Mag.: −2.2 PMG: 16 ^h 11 ^m		Mag.: +0.5 PMG: 3 ^h 51 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
^h	° /		° /		° /		° /		° /		° /		° /	
0	150 20.0		136 47.8	+ 6 09.9	339 36.4	+ 8 33.9	116 48.8	+ 12 24.5	302 05.8	− 8 46.2				
1	165 22.4		151 47.7	11.2	354 39.6	34.3	131 50.9	24.6	317 08.4	46.2				
2	180 24.9		166 47.6	12.5	9 42.9	34.6	146 52.9	24.8	332 10.9	46.2				
3	195 27.4		181 47.4	13.8	24 46.1	35.0	161 55.0	24.9	347 13.4	46.2				
4	210 29.8		196 47.3	15.1	39 49.4	35.3	176 57.1	25.1	2 15.9	46.1				
5	225 32.3		211 47.2	+ 6 16.3	54 52.6	+ 8 35.7	191 59.2	+ 12 25.2	17 18.4	− 8 46.1				
6	240 34.8		226 47.1	+ 6 17.6	69 55.9	+ 8 36.0	207 01.2	+ 12 25.4	32 20.9	− 8 46.1				
7	255 37.2		241 46.9	18.9	84 59.1	36.4	222 03.3	25.5	47 23.5	46.0				
8	270 39.7		256 46.8	20.2	100 02.4	36.7	237 05.4	25.7	62 26.0	46.0				
9	285 42.1		271 46.7	21.4	115 05.6	37.1	252 07.4	25.8	77 28.5	46.0				
10	300 44.6		286 46.5	22.7	130 08.9	37.4	267 09.5	25.9	92 31.0	45.9				
11	315 47.1		301 46.4	+ 6 24.0	145 12.1	+ 8 37.8	282 11.6	+ 12 26.1	107 33.5	− 8 45.9				
12	330 49.5		316 46.3	+ 6 25.3	160 15.4	+ 8 38.2	297 13.6	+ 12 26.2	122 36.0	− 8 45.9				
13	345 52.0		331 46.2	26.5	175 18.6	38.5	312 15.7	26.4	137 38.6	45.8				
14	0 54.5		346 46.0	27.8	190 21.9	38.9	327 17.8	26.5	152 41.1	45.8				
15	15 56.9		1 45.9	29.1	205 25.2	39.2	342 19.9	26.7	167 43.6	45.8				
16	30 59.4		16 45.8	30.4	220 28.4	39.6	357 21.9	26.8	182 46.1	45.8				
17	46 01.9		31 45.6	+ 6 31.6	235 31.7	+ 8 39.9	12 24.0	+ 12 27.0	197 48.6	− 8 45.7				
18	61 04.3		46 45.5	+ 6 32.9	250 34.9	+ 8 40.3	27 26.1	+ 12 27.1	212 51.2	− 8 45.7				
19	76 06.8		61 45.4	34.2	265 38.2	40.6	42 28.1	27.3	227 53.7	45.7				
20	91 09.3		76 45.3	35.5	280 41.5	41.0	57 30.2	27.4	242 56.2	45.6				
21	106 11.7		91 45.1	36.7	295 44.7	41.3	72 32.3	27.5	257 58.7	45.6				
22	121 14.2		106 45.0	38.0	310 48.0	41.7	87 34.3	27.7	273 01.2	45.6				
23	136 16.6		121 44.9	39.3	325 51.3	42.1	102 36.4	27.8	288 03.7	45.5				
24	151 19.1		136 44.7	+ 6 40.6	340 54.5	+ 8 42.4	117 38.5	+ 12 28.0	303 06.3	− 8 45.5				
Dif	—		−1	+13	+33	+4	+21	+1	+25	0				

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MIÉRCOL 22 DE FEBRERO DE 2012

UT	SOL		● LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 5		SD: 15 ^h 2 Edad: 0 ^d 1 PMG: 12 ^h 32 ^m R°: 43 ^m					PHE $\begin{cases} 4^h: 55/9 \\ 12^h: 55/7 \\ 20^h: 55/6 \end{cases}$			de Luna		de Luna			
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
^h	°	'	°	'	°	'	°	^h	^m	^h	^m	^h	^m	^h	^m	
0	176	36.1	− 10	29.3	177	44.4	− 5	36.3	5 49	6 38	7 20	6 52	10	18 28	79	
1	191	36.1		28.4	192	17.1		24.6	49	35	15	50	12	29	76	
2	206	36.2		27.5	206	49.9		12.8	49	32	10	48	14	30	73	
3	221	36.3		26.6	221	22.7	− 5	01.1	49	30	06	46	16	31	71	
4	236	36.3		25.7	235	55.6	− 4	49.4	49	28	7 02	44	19	32	69	
5	251	36.4	− 10	24.8	250	28.5	− 4	37.6	5 48	6 26	6 59	6 42	21	18 32	68	
6	266	36.5	− 10	23.9	265	01.4	− 4	25.8	5 47	6 21	6 51	6 39	24	18 34	64	
7	281	36.6		23.0	279	34.4		14.0	46	17	44	36	27	35	61	
8	296	36.6		22.1	294	07.4	− 4	02.3	44	13	39	34	30	36	58	
9	311	36.7		21.2	308	40.4	− 3	50.5	42	10	34	31	33	38	55	
10	326	36.8		20.3	323	13.5		38.6	37	6 03	25	28	36	39	51	
11	341	36.9	− 10	19.3	337	46.6	− 3	26.8	5 32	5 56	6 18	6 24	41	18 41	47	
12	356	36.9	− 10	18.4	352	19.8	− 3	15.0	5 25	5 49	6 10	6 21	44	18 42	44	
13	11	37.0		17.5	6	52.9	− 3	03.2	16	41	6 03	18	47	44	40	
14	26	37.1		16.6	21	26.2	− 2	51.4	5 06	32	5 55	14	52	45	36	
15	41	37.2		15.7	35	59.4		39.5	4 52	21	45	11	55	47	32	
16	56	37.3		14.8	50	32.7		27.7	43	14	40	08	58	48	29	
17	71	37.3	− 10	13.9	65	06.0	− 2	15.9	4 32	5 05	5 34	6 06	61	18 49	27	
18	86	37.4	− 10	13.0	79	39.3	− 2	04.0	4 18	4 56	5 26	6 03	64	18 50	24	
19	101	37.5		12.1	94	12.7	− 1	52.2	4 01	43	18	5 59	69	51	20	
20	116	37.6		11.2	108	46.1		40.4	3 52	37	13	58	70	52	18	
21	131	37.6		10.2	123	19.5		28.5	42	31	09	56	72	53	16	
22	146	37.7		09.3	137	53.0		16.7	31	23	5 04	54	74	53	15	
23	161	37.8		08.4	152	26.4	− 1	04.9	18	15	4 58	52	77	54	12	
24	176	37.9	− 10	07.5	166	59.9	− 0	53.1	3 02	4 05	4 52	5 49	80	18 55	10	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 13 ^h 52 ^m 4		Mag.: −4.2 PMG: 14 ^h 53 ^m		Mag.: −1.1 PMG: 1 ^h 16 ^m		Mag.: −2.2 PMG: 16 ^h 07 ^m		Mag.: +0.5 PMG: 3 ^h 47 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
^h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	151	19.1	136	44.7	+ 6	40.6	340	54.5	+ 8	42.4	117	38.5	+ 12	28.0	303	06.3
1	166	21.6	151	44.6		41.8	355	57.8		42.8	132	40.5		28.1	318	08.8
2	181	24.0	166	44.5		43.1	11	01.1		43.1	147	42.6		28.3	333	11.3
3	196	26.5	181	44.4		44.4	26	04.3		43.5	162	44.7		28.4	348	13.8
4	211	29.0	196	44.2		45.6	41	07.6		43.8	177	46.7		28.6	3	16.3
5	226	31.4	211	44.1	+ 6	46.9	56	10.9	+ 8	44.2	192	48.8	+ 12	28.7	18	18.9
6	241	33.9	226	44.0	+ 6	48.2	71	14.2	+ 8	44.5	207	50.9	+ 12	28.9	33	21.4
7	256	36.4	241	43.9		49.5	86	17.4		44.9	222	52.9		29.0	48	23.9
8	271	38.8	256	43.7		50.7	101	20.7		45.3	237	55.0		29.2	63	26.4
9	286	41.3	271	43.6		52.0	116	24.0		45.6	252	57.0		29.3	78	28.9
10	301	43.7	286	43.5		53.3	131	27.2		46.0	267	59.1		29.4	93	31.5
11	316	46.2	301	43.4	+ 6	54.5	146	30.5	+ 8	46.3	283	01.2	+ 12	29.6	108	34.0
12	331	48.7	316	43.2	+ 6	55.8	161	33.8	+ 8	46.7	298	03.2	+ 12	29.7	123	36.5
13	346	51.1	331	43.1		57.1	176	37.1		47.0	313	05.3		29.9	138	39.0
14	1	53.6	346	43.0		58.4	191	40.4		47.4	328	07.4		30.0	153	41.6
15	16	56.1	1	42.8	+ 6	59.6	206	43.6		47.8	343	09.4		30.2	168	44.1
16	31	58.5	16	42.7	+ 7	00.9	221	46.9		48.1	358	11.5		30.3	183	46.6
17	47	01.0	31	42.6	+ 7	02.2	236	50.2	+ 8	48.5	13	13.6	+ 12	30.5	198	49.1
18	62	03.5	46	42.5	+ 7	03.4	251	53.5	+ 8	48.8	28	15.6	+ 12	30.6	213	51.6
19	77	05.9	61	42.3		04.7	266	56.8		49.2	43	17.7		30.8	228	54.2
20	92	08.4	76	42.2		06.0	282	00.0		49.5	58	19.7		30.9	243	56.7
21	107	10.9	91	42.1		07.2	297	03.3		49.9	73	21.8		31.1	258	59.2
22	122	13.3	106	42.0		08.5	312	06.6		50.3	88	23.9		31.2	274	01.7
23	137	15.8	121	41.8		09.8	327	09.9		50.6	103	25.9		31.4	289	04.3
24	152	18.2	136	41.7	+ 7	11.0	342	13.2	+ 8	51.0	118	28.0	+ 12	31.5	304	06.8
Dif	—		−1	+13		+33	+4		+21		+1		+25		0	

JUEVES 23 DE FEBRERO DE 2012

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UT	SOL		● LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 4		SD: 15 ^h 1 Edad: 1 ^d 1 PHE { 4 ^h : 55 ^m 4 12 ^h : 55 ^m 2 20 ^h : 55 ^m 1 PMG: 13 ^h 15 ^m R°: 43 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	m	h m	m	m
0	176	37.9	- 10	07.5	166	59.9	- 0 53.1	119	60 N	17 10	17 53	18 41	7 02 9	19 47 77
1	191	38.0		06.6	181	33.5	146	41.2	118	15	56	41	02 12	45 75
2	206	38.0		05.7	196	07.0	145	29.4	118	20	17 58	41	02 15	43 73
3	221	38.1		04.8	210	40.6	146	17.6	118	24	18 00	41	02 17	42 70
4	236	38.2		03.8	225	14.2	146	- 0 05.9	117	28	02	41	03 18	41 68
5	251	38.3	- 10	02.9	239	47.8	146	+ 0 05.9	118	17 31	18 04	18 41	7 03 20	19 40 66
6	266	38.4	- 10	02.0	254	21.4	146	+ 0 17.7	118	17 38	18 08	18 42	7 03 24	19 38 62
7	281	38.4		01.1	268	55.1	147	29.5	118	44	12	43	03 27	36 59
8	296	38.5	- 10	00.2	283	28.8	147	41.2	117	50	15	45	04 29	34 57
9	311	38.6	- 9	59.3	298	02.5	147	+ 0 53.0	118	17 54	18	46	04 32	33 54
10	326	38.7		58.4	312	36.2	147	+ 1 04.7	117	18 02	25	51	04 36	30 50
11	341	38.8	- 9	57.4	327	09.9	147	+ 1 16.4	117	18 10	18 31	18 56	7 05 39	19 28 46
12	356	38.9	- 9	56.5	341	43.7	148	+ 1 28.1	117	18 17	18 38	19 02	7 05 43	19 26 43
13	11	38.9		55.6	356	17.4	147	39.8	117	24	45	10	05 47	24 39
14	26	39.0		54.7	10	51.2	148	+ 1 51.4	116	31	18 54	20	06 50	21 36
15	41	39.1		53.8	25	25.0	148	+ 2 03.1	117	40	19 05	34	06 55	19 32
16	56	39.2		52.9	39	58.8	148	14.7	116	45	11	42	06 57	17 30
17	71	39.3	- 9	51.9	54	32.6	148	+ 2 26.3	116	40	18 51	19 19	19 53	7 07 60
18	86	39.4	- 9	51.0	69	06.5	149	+ 2 37.9	116	45	18 58	19 29	20 06	7 07 63
19	101	39.4		50.1	83	40.3	148	+ 2 49.5	116	50	19 06	41	23	08 67
20	116	39.5		49.2	98	14.2	149	+ 3 01.1	116	52	10	46	31	08 69
21	131	39.6		48.3	112	48.0	148	12.6	115	54	15	52	40	08 71
22	146	39.7		47.4	127	21.9	149	24.1	115	56	19	19 59	20 51	08 73
23	161	39.8		46.4	141	55.8	149	35.6	115	58	24	20 07	21 03	09 75
24	176	39.9	- 9	45.5	156	29.7	149	+ 3 47.1	115	60 S	19 30	20 17	21 18	7 09 78
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 48 ^m 5		Mag.: -4.2 PMG: 14 ^h 53 ^m		Mag.: -1.1 PMG: 1 ^h 11 ^m		Mag.: -2.2 PMG: 16 ^h 04 ^m		Mag.: +0.5 PMG: 3 ^h 43 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	152	18.2	136	41.7	+ 7	11.0	342	13.2	+ 8	51.0	118	28.0	+ 12	31.5
1	167	20.7	151	41.6		12.3	357	16.5		51.3	133	30.0		31.7
2	182	23.2	166	41.5		13.6	12	19.8		51.7	148	32.1		31.8
3	197	25.6	181	41.3		14.8	27	23.1		52.1	163	34.2		32.0
4	212	28.1	196	41.2		16.1	42	26.3		52.4	178	36.2		32.1
5	227	30.6	211	41.1	+ 7	17.4	57	29.6	+ 8	52.8	193	38.3	+ 12	32.2
6	242	33.0	226	41.0	+ 7	18.6	72	32.9	+ 8	53.1	208	40.4	+ 12	32.4
7	257	35.5	241	40.8		19.9	87	36.2		53.5	223	42.4		32.5
8	272	38.0	256	40.7		21.2	102	39.5		53.9	238	44.5		32.7
9	287	40.4	271	40.6		22.4	117	42.8		54.2	253	46.5		32.8
10	302	42.9	286	40.5		23.7	132	46.1		54.6	268	48.6		33.0
11	317	45.3	301	40.3	+ 7	24.9	147	49.4	+ 8	54.9	283	50.6	+ 12	33.1
12	332	47.8	316	40.2	+ 7	26.2	162	52.7	+ 8	55.3	298	52.7	+ 12	33.3
13	347	50.3	331	40.1		27.5	177	56.0		55.7	313	54.8		33.4
14	2	52.7	346	40.0		28.7	192	59.3		56.0	328	56.8		33.6
15	17	55.2	1	39.8		30.0	208	02.6		56.4	343	58.9		33.7
16	32	57.7	16	39.7		31.3	223	05.9		56.7	359	00.9		33.9
17	48	00.1	31	39.6	+ 7	32.5	238	09.2	+ 8	57.1	14	03.0	+ 12	34.0
18	63	02.6	46	39.5	+ 7	33.8	253	12.5	+ 8	57.5	29	05.1	+ 12	34.2
19	78	05.1	61	39.3		35.0	268	15.8		57.8	44	07.1		34.3
20	93	07.5	76	39.2		36.3	283	19.1		58.2	59	09.2		34.5
21	108	10.0	91	39.1		37.6	298	22.4		58.6	74	11.2		34.6
22	123	12.5	106	39.0		38.8	313	25.7		58.9	89	13.3		34.8
23	138	14.9	121	38.9		40.1	328	29.0		59.3	104	15.3		34.9
24	153	17.4	136	38.7	+ 7	41.3	343	32.3	+ 8	59.6	119	17.4	+ 12	35.1
Dif	—		-1		+13		+33		+4		+21		+1	
											+25		0	

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VIERNES 24 DE FEBRERO DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 3		SD: 15 ^h 0 Edad: 2 ^d 1		PHE { 4 ^h : 54 ^h 9 12 ^h : 54 ^h 8 20 ^h : 54 ^h 7																	
	PMG: 13 ^h 58 ^m R°: 43 ^m																					
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°		°	'	°	h	m	h	m	m	h	m								
0	176	39.9	− 9	45.5	156	29.7	+ 3	47.1	114	60 N	5	44	6	32	7	15	7	11	11	21	04	77
1	191	40.0		44.6	171	03.6	+ 3	58.5	114	58	45	30	10	14	13	21	00	73	21	00	73	
2	206	40.0		43.7	185	37.5	+ 4	09.9	114	56	45	28	05	17	15	20	56	71	20	56	71	
3	221	40.1		42.8	200	11.4		21.3	114	54	45	26	7	02	19	17	52	69	52	69		
4	236	40.2		41.8	214	45.3		32.7	114	52	45	24	6	58	21	19	49	67	49	67		
5	251	40.3	− 9	40.9	229	19.3	+ 4	44.0	113	50	5	45	6	22	6	55	7	23	20	20	46	66
6	266	40.4	− 9	40.0	243	53.2	+ 4	55.3	113	45	5	44	6	18	6	48	7	27	24	20	40	62
7	281	40.5		39.1	258	27.1	+ 5	06.6	113	40	43	14	42	30	27	35	59					
8	296	40.6		38.2	273	01.1		17.9	113	35	42	11	37	33	30	31	56					
9	311	40.7		37.2	287	35.0		29.1	112	30	40	08	32	36	32	27	53					
10	326	40.7		36.3	302	08.9		40.3	112	20	36	6	02	40	36	20	50					
11	341	40.8	− 9	35.4	316	42.9	+ 5	51.5	112	10 N	5	31	5	55	6	17	7	44	40	20	14	47
12	356	40.9	− 9	34.5	331	16.8	+ 6	02.6	111	0	5	25	5	49	6	10	7	48	43	20	09	43
13	11	41.0		33.6	345	50.7		13.7	111	10 S	17	42	6	03	52	46	20	03	40	20	03	40
14	26	41.1		32.6	0	24.7		24.7	110	20	5	07	33	5	55	7	56	50	19	57	37	
15	41	41.2		31.7	14	58.6		35.8	111	30	4	53	22	47	8	01	54	51	33			
16	56	41.3		30.8	29	32.5		46.8	110	35	45	16	42	03	57	47	30					
17	71	41.4	− 9	29.9	44	06.5	+ 6	57.7	109	40	4	34	5	08	5	36	8	07	58	19	43	28
18	86	41.5	− 9	28.9	58	40.4	+ 7	08.7	110	45	4	21	4	59	5	29	8	10	62	19	38	25
19	101	41.6		28.0	73	14.3		19.5	108	50	4	05	47	21	15	65	32	21				
20	116	41.6		27.1	87	48.2		30.4	109	52	3	57	41	17	17	67	29	20				
21	131	41.7		26.2	102	22.1		41.2	108	54	48	35	13	19	69	26	18					
22	146	41.8		25.2	116	56.0	+ 7	52.0	108	56	37	28	08	21	72	23	16					
23	161	41.9		24.3	131	29.9	+ 8	02.7	107	58	25	20	5	03	24	74	19	14				
24	176	42.0	− 9	23.4	146	03.8	+ 8	13.4	107	60 S	3	10	4	11	4	57	8	27	77	19	15	11
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO													
	PMG		Mag.: −4.2		Mag.: −1.1		Mag.: −2.2		Mag.: +0.5													
	13 ^h 44 ^m 6		PMG: 14 ^h 54 ^m		PMG: 1 ^h 06 ^m		PMG: 16 ^h 01 ^m		PMG: 3 ^h 39 ^m													
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec										
h	°		°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	153	17.4	136	38.7	+ 7	41.3	343	32.3	+ 8	59.6	119	17.4	+ 12	35.1	305	07.4	− 8	43.9				
1	168	19.8	151	38.6		42.6	358	35.6	+ 9	00.0	134	19.5		35.2	320	09.9		43.9				
2	183	22.3	166	38.5		43.9	13	38.9		00.4	149	21.5		35.4	335	12.4		43.9				
3	198	24.8	181	38.4		45.1	28	42.2		00.7	164	23.6		35.5	350	15.0		43.8				
4	213	27.2	196	38.2		46.4	43	45.5		01.1	179	25.6		35.7	5	17.5		43.8				
5	228	29.7	211	38.1	+ 7	47.6	58	48.8	+ 9	01.4	194	27.7	+ 12	35.8	20	20.0	− 8	43.8				
6	243	32.2	226	38.0	+ 7	48.9	73	52.1	+ 9	01.8	209	29.7	+ 12	36.0	35	22.6	− 8	43.7				
7	258	34.6	241	37.9		50.2	88	55.5		02.2	224	31.8		36.1	50	25.1		43.7				
8	273	37.1	256	37.7		51.4	103	58.8		02.5	239	33.8		36.3	65	27.6		43.7				
9	288	39.6	271	37.6		52.7	119	02.1		02.9	254	35.9		36.4	80	30.1		43.6				
10	303	42.0	286	37.5		53.9	134	05.4		03.3	269	38.0		36.6	95	32.7		43.6				
11	318	44.5	301	37.4	+ 7	55.2	149	08.7	+ 9	03.6	284	40.0	+ 12	36.7	110	35.2	− 8	43.6				
12	333	46.9	316	37.3	+ 7	56.4	164	12.0	+ 9	04.0	299	42.1	+ 12	36.8	125	37.7	− 8	43.5				
13	348	49.4	331	37.1		57.7	179	15.3		04.4	314	44.1		37.0	140	40.3		43.5				
14	3	51.9	346	37.0	+ 7	59.0	194	18.7		04.7	329	46.2		37.1	155	42.8		43.4				
15	18	54.3	1	36.9	+ 8	00.2	209	22.0		05.1	344	48.2		37.3	170	45.3		43.4				
16	33	56.8	16	36.8		01.5	224	25.3		05.4	359	50.3		37.4	185	47.9		43.4				
17	48	59.3	31	36.6	+ 8	02.7	239	28.6	+ 9	05.8	14	52.3	+ 12	37.6	200	50.4	− 8	43.3				
18	64	01.7	46	36.5	+ 8	04.0	254	31.9	+ 9	06.2	29	54.4	+ 12	37.7	215	52.9	− 8	43.3				
19	79	04.2	61	36.4		05.2	269	35.2		06.5	44	56.4		37.9	230	55.4		43.3				
20	94	06.7	76	36.3		06.5	284	38.6		06.9	59	58.5		38.0	245	58.0		43.2				
21	109	09.1	91	36.2		07.7	299	41.9		07.3	75	00.5		38.2	261	00.5		43.2				
22	124	11.6	106	36.0		09.0	314	45.2		07.6	90	02.6		38.3	276	03.0		43.2				
23	139	14.1	121	35.9		10.2	329	48.5		08.0	105	04.6		38.5	291	05.6		43.1				
24	154	16.5	136	35.8	+ 8	11.5	344	51.8	+ 9	08.4	120	06.7	+ 12	38.6	306	08.1	− 8	43.1				
Dif	—		−1	+13		+33		+4			+21		+1		+25							

SÁBADO 25 DE FEBRERO DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 13 ^m 1		SD: 14 ^h 9 Edad: 3 ^d 1 PMG: 14 ^h 41 ^m R°: 44 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	176 42.0	−9 23.4	146 03.8		13.4		60 N	17 15	17 58	18 46	7 22	12	22 21	75
1	191 42.1	22.5	160 37.7	149	24.1	107	58	20	18 00	46	27 15	13	73	
2	206 42.2	21.5	175 11.6	149	34.7	106	56	24	02	45	32 17	07	70	
3	221 42.3	20.6	189 45.4	148	45.3	106	54	28	04	45	36 19	22	01	68
4	236 42.4	19.7	204 19.3	149	+ 8 55.8	105	52	31	05	45	40 21	21	56	66
5	251 42.5	−9 18.8	218 53.1	148	+ 9 06.3	105	50	17 34	18 07	18 45	7 43	23	21 52	64
6	266 42.6	−9 17.8	233 26.9	148	+ 9 16.7	104	45	17 41	18 11	18 45	7 51	26	21 42	61
7	281 42.7	16.9	248 00.7	148	27.1	104	40	47	14	45	7 57	29	34	58
8	296 42.8	16.0	262 34.5	148	37.5	104	35	51	17	46	8 03	31	27	55
9	311 42.9	15.1	277 08.3	148	47.8	103	30	17 56	20	48	08 33	20	54	
10	326 43.0	14.1	291 42.1	148	+ 9 58.0	102	20	18 03	26	51	16 38	10	50	
11	341 43.0	−9 13.2	306 15.9	148	+ 10 08.3	103	10 N	18 10	18 31	18 56	8 24	40	21 01	47
12	356 43.1	−9 12.3	320 49.6	147	+ 10 18.4	101	0	18 16	18 37	19 02	8 31	44	20 52	44
13	11 43.2	11.3	335 23.3	147	28.6	102	10 S	23	44	09	38	47	43	41
14	26 43.3	10.4	349 57.0	147	38.6	100	20	30	18 52	19	46 50	34	38	
15	41 43.4	09.5	4 30.7	147	48.6	100	30	38	19 03	31	8 55 53	24	34	
16	56 43.5	08.6	19 04.4	147	+ 10 58.6	100	35	43	09	40	9 00 55	17	33	
17	71 43.6	−9 07.6	33 38.1	147	+ 11 08.5	99	40	18 48	19 16	19 50	9 05 59	20	11	30
18	86 43.7	−9 06.7	48 11.7	146	+ 11 18.4	99	45	18 55	19 25	20 02	9 12 62	20	03	27
19	101 43.8	05.8	62 45.3	146	28.2	98	50	19 02	36	18	20 65	19	53	24
20	116 43.9	04.8	77 18.9	146	38.0	98	52	06	42	26	24 67	49	22	
21	131 44.0	03.9	91 52.5	146	47.7	97	54	10	47	34	28 69	44	21	
22	146 44.1	03.0	106 26.1	146	+ 11 57.4	97	56	14	19 54	44	33 71	39	18	
23	161 44.2	02.1	120 59.6	145	+ 12 07.0	96	58	19	20 01	20 56	38 73	33	16	
24	176 44.3	−9 01.1	135 33.1	145	+ 12 16.5	95	60 S	19 24	20 10	21 10	9 44 76	19	26	14
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG 13 ^h 40 ^m 7	Mag.: −4.2 PMG: 14 ^h 54 ^m			Mag.: −1.1 PMG: 1 ^h 00 ^m				Mag.: −2.2 PMG: 15 ^h 57 ^m			Mag.: +0.5 PMG: 3 ^h 35 ^m		
	hG ♈	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
^h 0	154 16.5	136 35.8	+ 8 11.5		344 51.8	+ 9 08.4		120 06.7	+ 12 38.6		306 08.1	− 8 43.1		
1	169 19.0	151 35.7	12.7		359 55.2	08.7		135 08.7	38.8		321 10.6	43.1		
2	184 21.4	166 35.5	14.0		14 58.5	09.1		150 10.8	38.9		336 13.2	43.0		
3	199 23.9	181 35.4	15.3		30 01.8	09.4		165 12.8	39.1		351 15.7	43.0		
4	214 26.4	196 35.3	16.5		45 05.1	09.8		180 14.9	39.2		6 18.2	43.0		
5	229 28.8	211 35.2	+ 8 17.8		60 08.5	+ 9 10.2		195 16.9	+ 12 39.4		21 20.8	− 8 42.9		
6	244 31.3	226 35.1	+ 8 19.0		75 11.8	+ 9 10.5		210 19.0	+ 12 39.5		36 23.3	− 8 42.9		
7	259 33.8	241 34.9	20.3		90 15.1	10.9		225 21.0	39.7		51 25.8	42.8		
8	274 36.2	256 34.8	21.5		105 18.4	11.3		240 23.1	39.8		66 28.4	42.8		
9	289 38.7	271 34.7	22.8		120 21.8	11.6		255 25.1	40.0		81 30.9	42.8		
10	304 41.2	286 34.6	24.0		135 25.1	12.0		270 27.2	40.1		96 33.4	42.7		
11	319 43.6	301 34.4	+ 8 25.3		150 28.4	+ 9 12.4		285 29.2	+ 12 40.3		111 36.0	− 8 42.7		
12	334 46.1	316 34.3	+ 8 26.5		165 31.8	+ 9 12.7		300 31.3	+ 12 40.4		126 38.5	− 8 42.7		
13	349 48.6	331 34.2	27.8		180 35.1	13.1		315 33.3	40.6		141 41.0	42.6		
14	4 51.0	346 34.1	29.0		195 38.4	13.5		330 35.4	40.7		156 43.6	42.6		
15	19 53.5	1 34.0	30.2		210 41.8	13.8		345 37.4	40.9		171 46.1	42.6		
16	34 55.9	16 33.8	31.5		225 45.1	14.2		0 39.5	41.0		186 48.6	42.5		
17	49 58.4	31 33.7	+ 8 32.7		240 48.4	+ 9 14.6		15 41.5	+ 12 41.2		201 51.2	− 8 42.5		
18	65 00.9	46 33.6	+ 8 34.0		255 51.8	+ 9 14.9		30 43.6	+ 12 41.3		216 53.7	− 8 42.4		
19	80 03.3	61 33.5	35.2		270 55.1	15.3		45 45.6	41.5		231 56.2	42.4		
20	95 05.8	76 33.4	36.5		285 58.4	15.6		60 47.7	41.7		246 58.8	42.4		
21	110 08.3	91 33.2	37.7		301 01.8	16.0		75 49.7	41.8		262 01.3	42.3		
22	125 10.7	106 33.1	39.0		316 05.1	16.4		90 51.8	42.0		277 03.8	42.3		
23	140 13.2	121 33.0	40.2		331 08.4	16.7		105 53.8	42.1		292 06.4	42.3		
24	155 15.7	136 32.9	+ 8 41.5		346 11.8	+ 9 17.1		120 55.9	+ 12 42.3		307 08.9	− 8 42.2		
Dif	—	−1	+12		+33	+4		+20	+2		+25	0		

LUNES 27 DE FEBRERO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 12 ^h 12 ^m 8		SD: 14 ^h 8 Edad: 5 ^d 1 PHE { 4 ^h : 54 ^h /2 12 ^h : 54 ^h /2 20 ^h : 54 ^h /2 PMG: 16 ^h 10 ^m R°: 47 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	176 46.7	− 8 38.7	124 49.7		+ 15 47.9	80	60 N	17 21	18 03	18 51	7 50	20	** ** *	** ** *
1	191 46.9		139 22.6	139	+ 15 55.9	80	58	25	05	50	8 00	24	** ** *	** ** *
2	206 47.0		153 55.4	138	+ 16 03.9	80	56	29	06	49	10 25		** ** *	** ** *
3	221 47.1		168 28.1	137	11.7	78	54	32	08	49	18 27		** ** *	** ** *
4	236 47.2		183 00.8	137	19.5	78	52	35	09	48	25 29		** ** *	** ** *
5	251 47.3	− 8 34.0	197 33.5	137	+ 16 27.2	77	50	17 38	18 10	18 48	8 32	30	23 59	60
6	266 47.4	− 8 33.1	212 06.2	137	+ 16 34.9	77	45	17 44	18 13	18 47	8 46	34	23 43	57
7	281 47.5	32.2	226 38.8	136	42.4	75	40	49	16	48	8 58	36	29 56	
8	296 47.6	31.2	241 11.4	136	49.9	75	35	53	19	48	9 08	38	17 55	
9	311 47.7	30.3	255 43.9	135	+ 16 57.4	75	30	17 57	21	49	17 39		23 07	53
10	326 47.8	29.3	270 16.4	135	+ 17 04.7	73	20	18 04	26	52	33 42		22 50	51
11	341 47.9	− 8 28.4	284 48.9	135	+ 17 12.0	73	10 N	18 10	18 31	18 56	9 46	45	22 35	49
12	356 48.0	− 8 27.5	299 21.4	135	+ 17 19.2	72	0	18 16	18 37	19 01	9 59	46	22 21	47
13	11 48.1	26.5	313 53.8	134	26.3	71	10 S	22	43	08	10 12	48	22 07	46
14	26 48.2	25.6	328 26.1	133	33.4	71	20	29	18 51	17	26 50		21 53	43
15	41 48.3	24.7	342 58.5	134	40.4	70	30	36	19 00	29	42 53		36 40	
16	56 48.5	23.7	357 30.8	133	47.3	69	35	40	06	37	10 51	55	26 39	
17	71 48.6	− 8 22.8	12 03.0	132	+ 17 54.1	68	40	18 45	19 13	19 46	11 02	56	21 14	38
18	86 48.7	− 8 21.8	26 35.2	132	+ 18 00.8	67	45	18 51	19 22	19 58	11 14	59	21 01	36
19	101 48.8	20.9	41 07.4	132	07.5	67	50	18 58	32	20 13	29 62		20 45	33
20	116 48.9	20.0	55 39.6	132	14.1	66	52	19 02	37	20	36 64		38 32	
21	131 49.0	19.0	70 11.7	131	20.6	65	54	05	42	29	44 65		29 31	
22	146 49.1	18.1	84 43.7	130	27.0	64	56	09	49	38	11 53	67	20 29	
23	161 49.2	17.1	99 15.8	131	33.4	64	58	14	19 56	20 49	12 03	69	20 09	27
24	176 49.3	− 8 16.2	113 47.8	130	+ 18 39.6	62	60 S	19 19	20 04	21 02	12 15	72	19 57	24
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO				
	PMG: 13 ^h 32 ^m 8		Mag.: −4.2 PMG: 14 ^h 54 ^m		Mag.: −1.2 PMG: 0 ^h 50 ^m		Mag.: −2.2 PMG: 15 ^h 51 ^m			Mag.: +0.5 PMG: 3 ^h 27 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec		hG ♄	Dec			
^h 0	156 14.8		136 30.0	+ 9 11.2	347 32.1	+ 9 25.9	121 44.9	+ 12 45.9	308 09.8	− 8 41.3				
1	171 17.3		151 29.9	12.5	2 35.4	26.3	136 47.0	46.0	323 12.3	41.3				
2	186 19.7		166 29.8	13.7	17 38.8	26.6	151 49.0	46.2	338 14.9	41.2				
3	201 22.2		181 29.6	15.0	32 42.1	27.0	166 51.1	46.3	353 17.4	41.2				
4	216 24.6		196 29.5	16.2	47 45.5	27.4	181 53.1	46.5	8 19.9	41.2				
5	231 27.1		211 29.4	+ 9 17.4	62 48.8	+ 9 27.7	196 55.1	+ 12 46.7	23 22.5	− 8 41.1				
6	246 29.6		226 29.3	+ 9 18.7	77 52.2	+ 9 28.1	211 57.2	+ 12 46.8	38 25.0	− 8 41.1				
7	261 32.0		241 29.2	19.9	92 55.5	28.5	226 59.2	47.0	53 27.6	41.1				
8	276 34.5		256 29.1	21.1	107 58.9	28.8	242 01.3	47.1	68 30.1	41.0				
9	291 37.0		271 28.9	22.4	123 02.3	29.2	257 03.3	47.3	83 32.6	41.0				
10	306 39.4		286 28.8	23.6	138 05.6	29.6	272 05.4	47.4	98 35.2	40.9				
11	321 41.9		301 28.7	+ 9 24.8	153 09.0	+ 9 29.9	287 07.4	+ 12 47.6	113 37.7	− 8 40.9				
12	336 44.4		316 28.6	+ 9 26.1	168 12.3	+ 9 30.3	302 09.4	+ 12 47.7	128 40.3	− 8 40.9				
13	351 46.8		331 28.5	27.3	183 15.7	30.7	317 11.5	47.9	143 42.8	40.8				
14	6 49.3		346 28.3	28.5	198 19.0	31.0	332 13.5	48.0	158 45.3	40.8				
15	21 51.8		1 28.2	29.8	213 22.4	31.4	347 15.6	48.2	173 47.9	40.7				
16	36 54.2		16 28.1	31.0	228 25.8	31.8	2 17.6	48.3	188 50.4	40.7				
17	51 56.7		31 28.0	+ 9 32.2	243 29.1	+ 9 32.1	17 19.6	+ 12 48.5	203 53.0	− 8 40.7				
18	66 59.1		46 27.9	+ 9 33.5	258 32.5	+ 9 32.5	32 21.7	+ 12 48.6	218 55.5	− 8 40.6				
19	82 01.6		61 27.8	34.7	273 35.8	32.9	47 23.7	48.8	233 58.1	40.6				
20	97 04.1		76 27.6	35.9	288 39.2	33.2	62 25.7	48.9	249 00.6	40.6				
21	112 06.5		91 27.5	37.1	303 42.6	33.6	77 27.8	49.1	264 03.1	40.5				
22	127 09.0		106 27.4	38.4	318 45.9	33.9	92 29.8	49.3	279 05.7	40.5				
23	142 11.5		121 27.3	39.6	333 49.3	34.3	107 31.9	49.4	294 08.2	40.4				
24	157 13.9		136 27.2	+ 9 40.8	348 52.7	+ 9 34.7	122 33.9	+ 12 49.6	309 10.8	− 8 40.4				
Dif	—		−1	+12	+34	+4	+20	+2	+25					

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MARTES 28 DE FEBRERO DE 2012


UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 12 ^m 6		SD: 14 ^h 8 Edad: 6 ^d 1 PHE $\begin{cases} 4^h: 54/2 \\ 12^h: 54/2 \\ 20^h: 54/3 \end{cases}$ PMG: 16 ^h 57 ^m R ^o : 48 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o
^h 0	176 49.3	− 8 16.2	113 47.8		39.6		60 N	5 33	6 21	7 03	8 10 29		0 49 69	
1	191 49.4	15.2	128 19.7	129	45.8	62	58	34	20	6 59	24 30		36 67	
2	206 49.6	14.3	142 51.6	129	51.9	61	56	35	18	56	35 33		25 65	
3	221 49.7	13.4	157 23.5	129	+ 18 57.9	60	54	36	17	52	45 34		16 62	
4	236 49.8	12.4	171 55.3	128	+ 19 03.9	60	52	37	15	49	8 54 36	0 07 61		
5	251 49.9	− 8 11.5	186 27.1	128	+ 19 09.7	58	50	5 37	6 14	6 47	9 02 37	** ** *	***	
6	266 50.0	− 8 10.5	200 58.9	128	+ 19 15.5	57	45	5 37	6 11	6 41	9 20 38	** ** *	***	
7	281 50.1	09.6	215 30.6	127	21.2	58	40	37	09	36	34 40	** ** *	***	
8	296 50.2	08.7	230 02.3	127	26.8	56	35	37	06	32	46 42	** ** *	***	
9	311 50.3	07.7	244 34.0	127	32.3	55	30	36	6 04	28	9 56 43	** ** *	***	
10	326 50.4	06.8	259 05.6	126	37.7	54	20	33	5 59	21	10 15 44	23 41 51		
11	341 50.6	− 8 05.8	273 37.1	125	+ 19 43.0	53	10 N	5 29	5 54	6 15	10 31 46	23 24 50		
12	356 50.7	− 8 04.9	288 08.6	125	+ 19 48.3	53	0	5 24	5 48	6 09	10 45 48	23 08 49		
13	11 50.8	03.9	302 40.1	125	53.4	51	10 S	17	42	6 03	11 00 50	22 53 47		
14	26 50.9	03.0	317 11.6	125	+ 19 58.5	51	20	5 09	35	5 57	16 51	36 46		
15	41 51.0	02.0	331 43.0	124	+ 20 03.5	50	30	4 57	25	50	35 53	16 45		
16	56 51.1	01.1	346 14.3	123	08.4	49	35	49	20	45	46 54	22 05 45		
17	71 51.2	− 8 00.2	0 45.7	124	+ 20 13.2	48	40	4 40	5 13	5 41	11 58 55	21 52 43		
18	86 51.4	− 7 59.2	15 17.0	123	+ 20 17.9	47	45	4 28	5 04	5 35	12 13 56	21 37 42		
19	101 51.5	58.3	29 48.2	122	22.5	46	50	13	4 54	28	31 58	18 41		
20	116 51.6	57.3	44 19.4	122	27.0	45	52	4 06	49	25	40 59	10 39		
21	131 51.7	56.4	58 50.6	122	31.5	45	54	3 58	44	21	12 49 61	21 00 38		
22	146 51.8	55.4	73 21.7	121	35.8	43	56	48	38	17	13 00 62	20 49 37		
23	161 51.9	54.5	87 52.8	121	40.1	43	58	37	31	13	12 64	36 35		
24	176 52.0	− 7 53.5	102 23.9	121	+ 20 44.2	41	60 S	3 24	4 23	5 08	13 27 66	20 21 34		
UT	♈ ARIES PMG: 13 ^h 28 ^m 9		♊ VENUS Mag.: −4.2 PMG: 14 ^h 54 ^m		♈ MARTE Mag.: −1.2 PMG: 0 ^h 44 ^m		♈ JÚPITER Mag.: −2.2 PMG: 15 ^h 48 ^m		♈ SATURNO Mag.: +0.5 PMG: 3 ^h 23 ^m					
	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec				
	^h 0	157 13.9	136 27.2	+ 9 40.8		348 52.7	+ 9 34.7	122 33.9	+ 12 49.6	309 10.8	− 8 40.4			
1	172 16.4	151 27.0	42.1		3 56.0	35.0	137 35.9	49.7	324 13.3	40.4				
2	187 18.9	166 26.9	43.3		18 59.4	35.4	152 38.0	49.9	339 15.8	40.3				
3	202 21.3	181 26.8	44.5		34 02.8	35.8	167 40.0	50.0	354 18.4	40.3				
4	217 23.8	196 26.7	45.7		49 06.1	36.1	182 42.0	50.2	9 20.9	40.2				
5	232 26.3	211 26.6	+ 9 47.0		64 09.5	+ 9 36.5	197 44.1	+ 12 50.3	24 23.5	− 8 40.2				
6	247 28.7	226 26.5	+ 9 48.2		79 12.9	+ 9 36.9	212 46.1	+ 12 50.5	39 26.0	− 8 40.2				
7	262 31.2	241 26.3	49.4		94 16.2	37.2	227 48.2	50.6	54 28.6	40.1				
8	277 33.6	256 26.2	50.6		109 19.6	37.6	242 50.2	50.8	69 31.1	40.1				
9	292 36.1	271 26.1	51.9		124 23.0	38.0	257 52.2	50.9	84 33.7	40.0				
10	307 38.6	286 26.0	53.1		139 26.3	38.3	272 54.3	51.1	99 36.2	40.0				
11	322 41.0	301 25.9	+ 9 54.3		154 29.7	+ 9 38.7	287 56.3	+ 12 51.2	114 38.7	− 8 40.0				
12	337 43.5	316 25.8	+ 9 55.5		169 33.1	+ 9 39.1	302 58.3	+ 12 51.4	129 41.3	− 8 39.9				
13	352 46.0	331 25.6	56.8		184 36.4	39.4	318 00.4	51.6	144 43.8	39.9				
14	7 48.4	346 25.5	58.0		199 39.8	39.8	333 02.4	51.7	159 46.4	39.8				
15	22 50.9	1 25.4	+ 9 59.2		214 43.2	40.2	348 04.4	51.9	174 48.9	39.8				
16	37 53.4	16 25.3	+ 10 00.4		229 46.6	40.5	3 06.5	52.0	189 51.5	39.8				
17	52 55.8	31 25.2	+ 10 01.7		244 49.9	+ 9 40.9	18 08.5	+ 12 52.2	204 54.0	− 8 39.7				
18	67 58.3	46 25.1	+ 10 02.9		259 53.3	+ 9 41.3	33 10.5	+ 12 52.3	219 56.6	− 8 39.7				
19	83 00.7	61 24.9	04.1		274 56.7	41.6	48 12.6	52.5	234 59.1	39.6				
20	98 03.2	76 24.8	05.3		290 00.0	42.0	63 14.6	52.6	250 01.6	39.6				
21	113 05.7	91 24.7	06.5		305 03.4	42.4	78 16.6	52.8	265 04.2	39.6				
22	128 08.1	106 24.6	07.8		320 06.8	42.7	93 18.7	52.9	280 06.7	39.5				
23	143 10.6	121 24.5	09.0		335 10.2	43.1	108 20.7	53.1	295 09.3	39.5				
24	158 13.1	136 24.4	+ 10 10.2		350 13.5	+ 9 43.5	123 22.7	+ 12 53.2	310 11.8	− 8 39.4				
Dif	—	−1	+12		+34	+4	+20	+2	+25	0				

MIÉRCOL 29 DE FEBRERO DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		SD: 14 ^h 8		PHE { 4 ^h : 54/4 12 ^h : 54/5 20 ^h : 54/6									
	PMG: 12 ^h 12 ^m 4		Edad: 7 ^d 1											
	PMG: 17 ^h 45 ^m R°: 50 ^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	176 52.0	− 7 53.5	102 23.9		+ 20 44.2	41	60 N	17 26	18 08	18 56	8 39	39	1 58	62
1	191 52.2	52.6	116 54.9	120	48.3	35	58	29	09	54	8 54	41	43	60
2	206 52.3	51.6	131 25.9	120	52.3	40	56	33	10	53	9 08	42	30	58
3	221 52.4	50.7	145 56.8	119	56.1	38	54	36	11	52	19 43		18	58
4	236 52.5	49.8	160 27.7	119	+ 20 59.9	38	52	39	12	52	30 43		1 08	57
5	251 52.6	− 7 48.8	174 58.6	119	+ 21 03.6	37	50	17 41	18 14	18 51	9 39	44	0 59	56
6	266 52.8	− 7 47.9	189 29.4	118	+ 21 07.2	36	45	17 46	18 16	18 50	9 58	46	0 40	55
7	281 52.9	46.9	204 00.2	118	10.7	35	40	51	18	50	10 14	46	25	54
8	296 53.0	46.0	218 30.9	117	14.1	34	35	55	20	50	28 46		12	53
9	311 53.1	45.0	233 01.6	117	17.4	33	30	17 59	23	50	39 48		0 00	53
10	326 53.2	44.1	247 32.3	117	20.6	32	20	18 05	27	53	10 59	48	** **	****
11	341 53.3	− 7 43.1	262 02.9	116	+ 21 23.7	31	10 N	18 10	18 32	18 56	11 17	49	** **	****
12	356 53.5	− 7 42.2	276 33.5	116	+ 21 26.7	30	0	18 16	18 37	19 01	11 33	50	23 57	50
13	11 53.6	41.2	291 04.1	116	29.6	29	10 S	21	42	07	11 50	50	40	50
14	26 53.7	40.3	305 34.6	115	32.4	28	20	27	49	15	12 07	51	22	50
15	41 53.8	39.3	320 05.1	115	35.1	27	30	34	18 58	27	28 51		23 01	50
16	56 53.9	38.4	334 35.6	115	37.7	26	35	38	19 04	34	40 51		22 49	49
17	71 54.1	− 7 37.4	349 06.0	114	+ 21 40.2	25	40	18 43	19 10	19 43	12 53	53	22 35	49
18	86 54.2	− 7 36.5	3 36.4	114	+ 21 42.6	24	45	18 48	19 18	19 54	13 09	53	22 19	48
19	101 54.3	35.5	18 06.7	113	44.9	23	50	54	28	20 08	29 54		21 59	48
20	116 54.4	34.6	32 37.0	113	47.1	22	52	18 57	32	15	39 54		49	48
21	131 54.5	33.6	47 07.3	113	49.1	20	54	19 00	37	23	13 50	54	38	48
22	146 54.7	32.7	61 37.5	112	51.1	20	56	04	43	32	14 02	55	26	47
23	161 54.8	31.7	76 07.7	112	53.0	19	58	08	50	42	16 56		21 11	47
24	176 54.9	− 7 30.8	90 37.9	112	+ 21 54.8	18	60 S	19 13	19 57	20 54	14 33	56	20 55	46
UT	ARIES PMG 13 ^h 24 ^m 9		VENUS Mag.: −4.2 PMG: 14 ^h 54 ^m		MARTE Mag.: −1.2 PMG: 0 ^h 39 ^m		JÚPITER Mag.: −2.2 PMG: 15 ^h 44 ^m		SATURNO Mag.: +0.5 PMG: 3 ^h 19 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	°	'	°	'	°	'	°	'	°	'				
h	°	'	°	'	°	'	°	'	°	'				
0	158 13.1	136 24.4	+ 10 10.2	350 13.5	+ 9 43.5	123 22.7	+ 12 53.2	310 11.8	− 8 39.4					
1	173 15.5	151 24.2	11.4	5 16.9	43.8	138 24.8	53.4	325 14.4	39.4					
2	188 18.0	166 24.1	12.6	20 20.3	44.2	153 26.8	53.6	340 16.9	39.4					
3	203 20.5	181 24.0	13.9	35 23.7	44.6	168 28.8	53.7	355 19.5	39.3					
4	218 22.9	196 23.9	15.1	50 27.0	44.9	183 30.9	53.9	10 22.0	39.3					
5	233 25.4	211 23.8	+ 10 16.3	65 30.4	+ 9 45.3	198 32.9	+ 12 54.0	25 24.6	− 8 39.2					
6	248 27.9	226 23.7	+ 10 17.5	80 33.8	+ 9 45.6	213 34.9	+ 12 54.2	40 27.1	− 8 39.2					
7	263 30.3	241 23.5	18.7	95 37.2	46.0	228 37.0	54.3	55 29.7	39.1					
8	278 32.8	256 23.4	19.9	110 40.6	46.4	243 39.0	54.5	70 32.2	39.1					
9	293 35.2	271 23.3	21.2	125 43.9	46.7	258 41.0	54.6	85 34.8	39.1					
10	308 37.7	286 23.2	22.4	140 47.3	47.1	273 43.1	54.8	100 37.3	39.0					
11	323 40.2	301 23.1	+ 10 23.6	155 50.7	+ 9 47.5	288 45.1	+ 12 54.9	115 39.9	− 8 39.0					
12	338 42.6	316 23.0	+ 10 24.8	170 54.1	+ 9 47.8	303 47.1	+ 12 55.1	130 42.4	− 8 38.9					
13	353 45.1	331 22.8	26.0	185 57.4	48.2	318 49.2	55.3	145 44.9	38.9					
14	8 47.6	346 22.7	27.2	201 00.8	48.6	333 51.2	55.4	160 47.5	38.9					
15	23 50.0	1 22.6	28.4	216 04.2	48.9	348 53.2	55.6	175 50.0	38.8					
16	38 52.5	16 22.5	29.7	231 07.6	49.3	3 55.2	55.7	190 52.6	38.8					
17	53 55.0	31 22.4	+ 10 30.9	246 11.0	+ 9 49.7	18 57.3	+ 12 55.9	205 55.1	− 8 38.7					
18	68 57.4	46 22.3	+ 10 32.1	261 14.4	+ 9 50.0	33 59.3	+ 12 56.0	220 57.7	− 8 38.7					
19	83 59.9	61 22.1	33.3	276 17.7	50.4	49 01.3	56.2	236 00.2	38.7					
20	99 02.4	76 22.0	34.5	291 21.1	50.8	64 03.4	56.3	251 02.8	38.6					
21	114 04.8	91 21.9	35.7	306 24.5	51.1	79 05.4	56.5	266 05.3	38.6					
22	129 07.3	106 21.8	36.9	321 27.9	51.5	94 07.4	56.7	281 07.9	38.5					
23	144 09.7	121 21.7	38.1	336 31.3	51.8	109 09.5	56.8	296 10.4	38.5					
24	159 12.2	136 21.6	+ 10 39.3	351 34.7	+ 9 52.2	124 11.5	+ 12 57.0	311 13.0	− 8 38.4					
Dif	—	−1	+12	+34	+4	+20	+2	+25	0					

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JUEVES 1 DE MARZO DE 2012

UT	SOL			 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 12 ^m 2			SD: 14'9 Edad: 8 ^d 1 PHE $\begin{cases} 4^h: 54'7 \\ 12^h: 54'9 \\ 20^h: 55'0 \end{cases}$ PMG: 18 ^h 35 ^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		h m m	
0	176 54.9	− 7 30.8		90 37.9		+ 21 54.8	17	60 N	5 28	6 16	6 57	9 18 54		3 00 50	
1	191 55.0		29.8	105 08.1	112		56.5	58	29		14 54	35 54		2 43 50	
2	206 55.1		28.9	119 38.2	111		58.1	56	30		13 51	9 50 53		28 51	
3	221 55.3		27.9	134 08.3	111	+ 21 59.5	16	54	31		12 48	10 02 53		16 51	
4	236 55.4		27.0	148 38.3	110	+ 22 00.9	14	52	32		11 45	13 53		2 05 51	
5	251 55.5	− 7 26.0		163 08.3	110	+ 22 02.1	12	50	5 33	6 10	6 43	10 23 53		1 55 51	
6	266 55.6	− 7 25.1		177 38.3	110	+ 22 03.3	12	45	5 34	6 08	6 37	10 44 52		1 35 51	
7	281 55.8		24.1	192 08.2	109		04.3	40	34		06 33	11 00 52		19 50	
8	296 55.9		23.2	206 38.2	110		05.3	35	34		04 29	14 52		1 05 50	
9	311 56.0		22.2	221 08.1	109		06.1	30	34	6 02	26 27	51 0 53		50	
10	326 56.1		21.3	235 37.9	108		06.8	20	32	5 57	20 11	47 52		32 50	
11	341 56.3	− 7 20.3		250 07.7	108	+ 22 07.5	7	10 N	5 29	5 53	6 14	12 06 51		0 14 50	
12	356 56.4	− 7 19.4		264 37.6	109	+ 22 08.0	5	0	5 24	5 48	6 09	12 23 50	***	***	***
13	11 56.5		18.4	279 07.3	107		08.4	10 S	18		42 6 04	40 50	***	***	***
14	26 56.6		17.4	293 37.1	108		08.7	20	5 09		36 5 58	12 58 50	***	***	***
15	41 56.8		16.5	308 06.8	107		08.9	30	4 58		27 51	13 19 49	23 51	53	
16	56 56.9		15.5	322 36.5	107		08.9	35	51		21 47	31 49	38 55		
17	71 57.0	− 7 14.6		337 06.1	106	+ 22 08.9	0	40	4 42	5 15	5 43	13 46 48	23 24	55	
18	86 57.1	− 7 13.6		351 35.8	107	+ 22 08.8	1	45	4 31	5 07	5 38	14 02 49	23 07	56	
19	101 57.3		12.7	6 05.4	106		08.5	50	17	4 58	31 23	48 22	47 56		
20	116 57.4		11.7	20 35.0	106		08.2	52	10		53 28	33 47	37 57		
21	131 57.5		10.8	35 04.5	105		07.7	54	4 02		48 25	44 47	26 57		
22	146 57.6		09.8	49 34.1	106		07.1	56	3 54		42 22	14 57 46	22 13 58		
23	161 57.8		08.9	64 03.6	105		06.4	58	43		36 18	15 12 45	21 58 60		
24	176 57.9	− 7 07.9		78 33.1	105	+ 22 05.6	8	60 S	3 31	4 29	5 13	15 29 45	21 41 60		
UT	ARIES PMG: 13 ^h 21 ^m 0			VENUS Mag.: −4.2 PMG: 14 ^h 55 ^m			MARTE Mag.: −1.2 PMG: 0 ^h 34 ^m			JÚPITER Mag.: −2.2 PMG: 15 ^h 41 ^m			SATURNO Mag.: +0.4 PMG: 3 ^h 15 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "		
^h	° ' "	° ' "		° ' "	° ' "			° ' "	° ' "			° ' "	° ' "		
0	159 12.2	136 21.6	+ 10 39.3	351 34.7	+ 9 52.2	124 11.5	+ 12 57.0	311 13.0	− 8 38.4						
1	174 14.7	151 21.5	40.6	6 38.0	52.6	139 13.5	57.1	326 15.5	38.4						
2	189 17.1	166 21.3	41.8	21 41.4	52.9	154 15.5	57.3	341 18.1	38.4						
3	204 19.6	181 21.2	43.0	36 44.8	53.3	169 17.6	57.4	356 20.6	38.3						
4	219 22.1	196 21.1	44.2	51 48.2	53.7	184 19.6	57.6	11 23.2	38.3						
5	234 24.5	211 21.0	+ 10 45.4	66 51.6	+ 9 54.0	199 21.6	+ 12 57.7	26 25.7	− 8 38.2						
6	249 27.0	226 20.9	+ 10 46.6	81 55.0	+ 9 54.4	214 23.7	+ 12 57.9	41 28.3	− 8 38.2						
7	264 29.5	241 20.8	47.8	96 58.3	54.7	229 25.7	58.1	56 30.8	38.1						
8	279 31.9	256 20.6	49.0	112 01.7	55.1	244 27.7	58.2	71 33.4	38.1						
9	294 34.4	271 20.5	50.2	127 05.1	55.5	259 29.7	58.4	86 35.9	38.1						
10	309 36.8	286 20.4	51.4	142 08.5	55.8	274 31.8	58.5	101 38.5	38.0						
11	324 39.3	301 20.3	+ 10 52.6	157 11.9	+ 9 56.2	289 33.8	+ 12 58.7	116 41.1	− 8 38.0						
12	339 41.8	316 20.2	+ 10 53.8	172 15.3	+ 9 56.6	304 35.8	+ 12 58.8	131 43.6	− 8 37.9						
13	354 44.2	331 20.1	55.0	187 18.7	56.9	319 37.8	59.0	146 46.2	37.9						
14	9 46.7	346 20.0	56.2	202 22.1	57.3	334 39.9	59.1	161 48.7	37.9						
15	24 49.2	1 19.8	57.4	217 25.4	57.6	349 41.9	59.3	176 51.3	37.8						
16	39 51.6	16 19.7	58.6	232 28.8	58.0	4 43.9	59.5	191 53.8	37.8						
17	54 54.1	31 19.6	+ 10 59.9	247 32.2	+ 9 58.4	19 45.9	+ 12 59.6	206 56.4	− 8 37.7						
18	69 56.6	46 19.5	+ 11 01.1	262 35.6	+ 9 58.7	34 48.0	+ 12 59.8	221 58.9	− 8 37.7						
19	84 59.0	61 19.4	02.3	277 39.0	59.1	49 50.0	+ 12 59.9	237 01.5	37.6						
20	100 01.5	76 19.3	03.5	292 42.4	59.5	64 52.0	+ 13 00.1	252 04.0	37.6						
21	115 04.0	91 19.2	04.7	307 45.8	+ 9 59.8	79 54.0	00.2	267 06.6	37.6						
22	130 06.4	106 19.0	05.9	322 49.2	+ 10 00.2	94 56.1	00.4	282 09.1	37.5						
23	145 08.9	121 18.9	07.1	337 52.6	00.5	109 58.1	00.5	297 11.7	37.5						
24	160 11.3	136 18.8	+ 11 08.3	352 56.0	+ 10 00.9	125 00.1	+ 13 00.7	312 14.2	− 8 37.4						
Dif	—	−1	+12	+34	+4	+20	+2	+26	0						

VIERNES 2 DE MARZO DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1			SD: 15 ^h 0 Edad: 9 ^d 1												
	PMG: 12 ^h 12 ^m 0			PMG: 19 ^h 26 ^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		
0	176	57.9	− 7 07.9	78	33.1	+ 22 05.6	9	60 N	17 31	18 13	19 01	10 12 67		3 50 39		
1	191	58.0	07.0	93	02.5	04.7	10	58	34	14	18 59	29 65		33 41		
2	206	58.1	06.0	107	32.0	03.7	12	56	37	14	57	43 64		19 42		
3	221	58.3	05.0	122	01.4	02.5	12	54	40	15	56	10 55 63		3 07 42		
4	236	58.4	04.1	136	30.8	+ 22 01.3	12	52	42	16	55	11 06 62		2 56 43		
5	251	58.5	− 7 03.1	151	00.2	+ 21 59.9	14	50	17 44	18 17	18 54	11 16 60		2 46 44		
6	266	58.7	− 7 02.2	165	29.6	+ 21 58.5	14	45	17 49	18 19	18 53	11 36 59		2 26 45		
7	281	58.8	01.2	179	58.9	56.9	16	40	53	20	52	11 52 58		2 09 47		
8	296	58.9	− 7 00.3	194	28.2	55.2	17	35	17 57	22	52	12 06 57		1 55 47		
9	311	59.0	− 6 59.3	208	57.5	53.4	18	30	18 00	24	52	18 56		43 48		
10	326	59.2	58.3	223	26.8	51.5	19	20	06	28	53	39 54		22 49		
11	341	59.3	− 6 57.4	237	56.1	+ 21 49.4	21	10 N	18 11	18 32	18 56	12 57 52		1 04 50		
12	356	59.4	− 6 56.4	252	25.3	+ 21 47.3	21	0	18 15	18 36	19 00	13 13 52		0 47 51		
13	11	59.6	55.5	266	54.5	45.0	23	10 S	20	41	06	30 50		30 52		
14	26	59.7	54.5	281	23.8	42.7	23	20	26	48	14	13 48 48		0 12 52		
15	41	59.8	53.6	295	53.0	40.2	25	30	32	18 56	24	14 08 47		*** **		
16	56	59.9	52.6	310	22.1	37.6	26	35	35	19 01	31	20 46		*** **		
17	72	00.1	− 6 51.6	324	51.3	+ 21 34.9	27	40	18 39	19 07	19 40	14 34 45		*** **		
18	87	00.2	− 6 50.7	339	20.5	+ 21 32.0	29	45	18 44	19 14	19 50	14 51 43		*** **		
19	102	00.3	49.7	353	49.6	29.1	29	50	50	23	20 04	15 11 41		23 43 65		
20	117	00.5	48.8	8	18.7	26.1	30	52	53	28	10	20 40		34 65		
21	132	00.6	47.8	22	47.8	22.9	32	54	56	32	17	31 39		23 67		
22	147	00.7	46.9	37	16.9	19.6	33	56	18 59	38	26	43 37		23 11 69		
23	162	00.9	45.9	51	46.0	16.2	34	58	19 03	44	35	15 57 36		22 58 70		
24	177	01.0	− 6 44.9	66	15.1	+ 21 12.7	35	60 S	19 07	19 51	20 47	16 14 33		22 41 73		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG		Mag.: −4.2			Mag.: −1.2			Mag.: −2.2			Mag.: +0.4				
	13 ^h 17 ^m 1		PMG: 14 ^h 55 ^m			PMG: 0 ^h 28 ^m			PMG: 15 ^h 38 ^m			PMG: 3 ^h 11 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	°	'	°	°	'	°	'	°	'		
0	160	11.3	136	18.8	+ 11 08.3	352	56.0	+ 10 00.9	125	00.1	+ 13 00.7	312	14.2	− 8 37.4		
1	175	13.8	151	18.7	09.5	7	59.3	01.3	140	02.1	00.9	327	16.8	37.4		
2	190	16.3	166	18.6	10.7	23	02.7	01.6	155	04.2	01.0	342	19.3	37.3		
3	205	18.7	181	18.5	11.9	38	06.1	02.0	170	06.2	01.2	357	21.9	37.3		
4	220	21.2	196	18.4	13.1	53	09.5	02.3	185	08.2	01.3	12	24.5	37.3		
5	235	23.7	211	18.2	+ 11 14.3	68	12.9	+ 10 02.7	200	10.2	+ 13 01.5	27	27.0	− 8 37.2		
6	250	26.1	226	18.1	+ 11 15.5	83	16.3	+ 10 03.1	215	12.3	+ 13 01.6	42	29.6	− 8 37.2		
7	265	28.6	241	18.0	16.6	98	19.7	03.4	230	14.3	01.8	57	32.1	37.1		
8	280	31.1	256	17.9	17.8	113	23.1	03.8	245	16.3	02.0	72	34.7	37.1		
9	295	33.5	271	17.8	19.0	128	26.5	04.1	260	18.3	02.1	87	37.2	37.0		
10	310	36.0	286	17.7	20.2	143	29.9	04.5	275	20.4	02.3	102	39.8	37.0		
11	325	38.5	301	17.6	+ 11 21.4	158	33.3	+ 10 04.9	290	22.4	+ 13 02.4	117	42.3	− 8 36.9		
12	340	40.9	316	17.4	+ 11 22.6	173	36.7	+ 10 05.2	305	24.4	+ 13 02.6	132	44.9	− 8 36.9		
13	355	43.4	331	17.3	23.8	188	40.1	05.6	320	26.4	02.7	147	47.4	36.9		
14	10	45.8	346	17.2	25.0	203	43.5	05.9	335	28.4	02.9	162	50.0	36.8		
15	25	48.3	1	17.1	26.2	218	46.9	06.3	350	30.5	03.1	177	52.6	36.8		
16	40	50.8	16	17.0	27.4	233	50.2	06.7	5	32.5	03.2	192	55.1	36.7		
17	55	53.2	31	16.9	+ 11 28.6	248	53.6	+ 10 07.0	20	34.5	+ 13 03.4	207	57.7	− 8 36.7		
18	70	55.7	46	16.8	+ 11 29.8	263	57.0	+ 10 07.4	35	36.5	+ 13 03.5	223	00.2	− 8 36.6		
19	85	58.2	61	16.7	31.0	279	00.4	07.7	50	38.5	03.7	238	02.8	36.6		
20	101	00.6	76	16.5	32.2	294	03.8	08.1	65	40.6	03.8	253	05.3	36.6		
21	116	03.1	91	16.4	33.4	309	07.2	08.5	80	42.6	04.0	268	07.9	36.5		
22	131	05.6	106	16.3	34.5	324	10.6	08.8	95	44.6	04.2	283	10.5	36.5		
23	146	08.0	121	16.2	35.7	339	14.0	09.2	110	46.6	04.3	298	13.0	36.4		
24	161	10.5	136	16.1	+ 11 36.9	354	17.4	+ 10 09.5	125	48.6	+ 13 04.5	313	15.6	− 8 36.4		
Dif	—		−1	+12		+34	+4		+20	+2		+26	0			

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SÁBADO 3 DE MARZO DE 2012

UT	SOL			☾ LUNA						Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 12 ^h 11 ^m 8			SD: 15 ^h 2 Edad: 10 ^d 1 PHE $\begin{cases} 4^h: 55^m/9 \\ 12^h: 56^m/2 \\ 20^h: 56^m/4 \end{cases}$ PMG: 20 ^h 17 ^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	177	01.0	− 6	66	15.1	+ 21	12.7	60 N	5	22	6	10	6	52	11	19		
1	192	01.1		80	44.2		09.1	58		24	09	48		34	75	14		
2	207	01.3		95	13.2		05.4	56		25	08	46		47	72	4		
3	222	01.4		109	42.3	+ 21	01.5	54		27	08	43	11	58	70	3		
4	237	01.5		124	11.3	+ 20	57.6	52		28	07	41	12	08	69	39		
5	252	01.7	− 6	138	40.3	+ 20	53.5	50	5	29	6	06	6	39	12	16		
6	267	01.8	− 6	153	09.3	+ 20	49.3	45	5	31	6	04	6	34	12	35		
7	282	01.9		167	38.4		45.0	40		32	03	30	12	50	62	2		
8	297	02.1		182	07.4		40.6	35		32	6	01	26	13	03	60		
9	312	02.2		196	36.4		36.1	30		32	5	59	23	14	58			
10	327	02.3		211	05.3		31.5	20		30	56	18	33	56		2		
11	342	02.5	− 6	225	34.3	+ 20	26.7	10 N	5	28	5	52	6	13	13	49		
12	357	02.6	− 6	240	03.3	+ 20	21.9	0	5	24	5	48	6	09	14	05		
13	12	02.7		254	32.3		16.9	10 S		18	43	6	04	20	49			
14	27	02.9		269	01.2		11.8	20		10	36	5	59	36	47			
15	42	03.0		283	30.2		06.6	30	5	00	28	53	14	55	44			
16	57	03.1		297	59.2	+ 20	01.3	35	4	53	23	49	15	06	43			
17	72	03.3	− 6	312	28.1	+ 19	55.9	40	4	45	5	17	5	45	15	19		
18	87	03.4	− 6	326	57.1	+ 19	50.4	45	4	34	5	10	5	40	15	34		
19	102	03.5		341	26.0		44.7	50		21	5	01	35	15	52			
20	117	03.7		355	55.0		39.0	52		15	4	57	32	16	00			
21	132	03.8		10	23.9		33.1	54	4	07	52	29		10	31			
22	147	04.0		24	52.9		27.2	56	3	59	47	26	20	30				
23	162	04.1		39	21.8		21.1	58		49	41	22	33	27				
24	177	04.2	− 6	53	50.7	+ 19	14.9	60 S	3	38	4	34	5	18	16	47		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 13 ^h 13 ^m 1			Mag.: −4.2 PMG: 14 ^h 55 ^m			Mag.: −1.2 PMG: 0 ^h 23 ^m			Mag.: −2.2 PMG: 15 ^h 35 ^m			Mag.: +0.4 PMG: 3 ^h 06 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'		°	'		°	'		°	'		°	'		°	'	
0	161	10.5		136	16.1	+ 11	36.9	354	17.4	+ 10	09.5	125	48.6	+ 13	04.5	313	15.6	
1	176	13.0		151	16.0		38.1	9	20.8		09.9	140	50.7		04.6	328	18.1	
2	191	15.4		166	15.9		39.3	24	24.2		10.3	155	52.7		04.8	343	20.7	
3	206	17.9		181	15.7		40.5	39	27.6		10.6	170	54.7		04.9	358	23.2	
4	221	20.3		196	15.6		41.7	54	31.0		11.0	185	56.7		05.1	13	25.8	
5	236	22.8		211	15.5	+ 11	42.9	69	34.4	+ 10	11.3	200	58.7	+ 13	05.3	28	28.4	
6	251	25.3		226	15.4	+ 11	44.1	84	37.8	+ 10	11.7	216	00.8	+ 13	05.4	43	30.9	
7	266	27.7		241	15.3		45.2	99	41.2		12.0	231	02.8		05.6	58	33.5	
8	281	30.2		256	15.2		46.4	114	44.6		12.4	246	04.8		05.7	73	36.0	
9	296	32.7		271	15.1		47.6	129	48.0		12.8	261	06.8		05.9	88	38.6	
10	311	35.1		286	15.0		48.8	144	51.4		13.1	276	08.8		06.0	103	41.1	
11	326	37.6		301	14.8	+ 11	50.0	159	54.8	+ 10	13.5	291	10.9	+ 13	06.2	118	43.7	
12	341	40.1		316	14.7	+ 11	51.2	174	58.2	+ 10	13.8	306	12.9	+ 13	06.4	133	46.3	
13	356	42.5		331	14.6		52.4	190	01.6		14.2	321	14.9		06.5	148	48.8	
14	11	45.0		346	14.5		53.5	205	05.0		14.5	336	16.9		06.7	163	51.4	
15	26	47.4		1	14.4		54.7	220	08.4		14.9	351	18.9		06.8	178	53.9	
16	41	49.9		16	14.3		55.9	235	11.8		15.2	6	20.9		07.0	193	56.5	
17	56	52.4		31	14.2	+ 11	57.1	250	15.2	+ 10	15.6	21	23.0	+ 13	07.1	208	59.1	
18	71	54.8		46	14.1	+ 11	58.3	265	18.6	+ 10	16.0	36	25.0	+ 13	07.3	224	01.6	
19	86	57.3		61	13.9	+ 11	59.4	280	22.0		16.3	51	27.0		07.5	239	04.2	
20	101	59.8		76	13.8	+ 12	00.6	295	25.4		16.7	66	29.0		07.6	254	06.7	
21	117	02.2		91	13.7		01.8	310	28.8		17.0	81	31.0		07.8	269	09.3	
22	132	04.7		106	13.6		03.0	325	32.2		17.4	96	33.0		07.9	284	11.9	
23	147	07.2		121	13.5		04.2	340	35.6		17.7	111	35.1		08.1	299	14.4	
24	162	09.6		136	13.4	+ 12	05.3	355	39.0	+ 10	18.1	126	37.1	+ 13	08.3	314	17.0	
Dif	—			−1			+12	+34			+4	+20			+2	+26		
																0		

DOMINGO 4 DE MARZO DE 2012

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UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1 PMG: 12 ^h 11 ^m 6			SD: 15 ^h 4 Edad: 11 ^d 1 PHE { 4 ^h : 56 ^m 7 12 ^h : 57 ^m 0 20 ^h : 57 ^m 3 PMG: 21 ^h 08 ^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			
0	177	04.2	− 6	53	50.7	100	+ 19	14.9	63	60 N	17 36	18 18	19 06	12 37	85	4 57	21		
1	192	04.4		68	19.7	100		08.6	63	58	39	18	03		49	82	45	24	
2	207	04.5		82	48.6	99	+ 19	02.2	64	56	41	18	02	12 59	79	34	27		
3	222	04.6		97	17.6	100	+ 18	55.7	65	54	44	19	00	13 08	77	24	29		
4	237	04.8		111	46.5	99		49.0	67	52	46	19	18 59	17 74		16	30		
5	252	04.9	− 6	126	15.4	99	+ 18	42.3	67	50	17 48	18 20	18 57	13 24	73	4 08	32		
6	267	05.1	− 6	140	44.4	100	+ 18	35.5	68	45	17 52	18 21	18 55	13 39	69	3 52	35		
7	282	05.2		155	13.3	99		28.5	70	40	55	23	54	13 52	66	38	39		
8	297	05.3		169	42.3	100		21.4	71	35	17 59	24	53	14 03	63	27	40		
9	312	05.5		184	11.2	99		14.3	71	30	18 01	25	53	12 62		3 16	43		
10	327	05.6		198	40.2	100	+ 18	07.0	73	20	06	28	54	29 57		2 59	46		
11	342	05.7	− 6	213	09.1	99	+ 17	59.6	74	10 N	18 11	18 32	18 56	14 43	54	2 44	48		
12	357	05.9	− 6	227	38.1	100	+ 17	52.1	75	0	18 15	18 36	19 00	14 56	51	2 29	52		
13	12	06.0		242	07.0	99		44.6	75	10 S	19	40	05	15 09	49	2 15	54		
14	27	06.2		256	36.0	100		36.9	77	20	24	46	12	23 46		1 59	57		
15	42	06.3		271	04.9	99		29.1	78	30	30	54	22	39 42		41	60		
16	57	06.4		285	33.9	100		21.2	79	35	33	18 58	28	49 39		31	62		
17	72	06.6	− 6	300	02.9	100	+ 17	13.2	80	40	18 36	19 04	19 36	15 59	37	1 19	64		
18	87	06.7	− 6	314	31.8	99	+ 17	05.1	81	45	18 41	19 11	19 46	16 12	34	1 05	67		
19	102	06.9		329	00.8	100	+ 16	56.9	82	50	46	19	19 59	27 30		0 48	70		
20	117	07.0		343	29.8	100		48.5	84	52	48	23	20 05	34 28		39	72		
21	132	07.2		357	58.8	100		40.1	84	54	51	27	12	41 27		30	74		
22	147	07.3	− 6	12	27.8	100		31.6	85	56	54	32	20	16 50	24	20	76		
23	162	07.4	− 5	26	56.8	100		23.0	86	58	18 57	38	29	17 00	21	0 08	79		
24	177	07.6	− 5	41	25.8	100	+ 16	14.3	87	60 S	19 01	19 44	20 39	17 11	18	** ** *	** ** *		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 13 ^h 09 ^m 2			Mag.: −4.2 PMG: 14 ^h 55 ^m			Mag.: −1.2 PMG: 0 ^h 17 ^m			Mag.: −2.2 PMG: 15 ^h 31 ^m			Mag.: +0.4 PMG: 3 ^h 02 ^m						
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
^h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	162	09.6		136	13.4	+ 12	355	39.0	+ 10	126	37.1	+ 13	314	17.0	− 8	314	17.0	− 8	
1	177	12.1		151	13.3		10	42.4		141	39.1		329	19.5		329	19.5		
2	192	14.6		166	13.2		25	45.8		156	41.1		344	22.1		344	22.1		
3	207	17.0		181	13.0		40	49.2		171	43.1		359	24.7		359	24.7		
4	222	19.5		196	12.9		55	52.6		186	45.1		14	27.2		14	27.2		
5	237	21.9		211	12.8	+ 12	70	56.0	+ 10	201	47.2	+ 13	29	29.8	− 8	29	29.8	− 8	
6	252	24.4		226	12.7	+ 12	85	59.4	+ 10	216	49.2	+ 13	44	32.4	− 8	44	32.4	− 8	
7	267	26.9		241	12.6		101	02.8		231	51.2		59	34.9		59	34.9		
8	282	29.3		256	12.5		116	06.2		246	53.2		74	37.5		74	37.5		
9	297	31.8		271	12.4		131	09.6		261	55.2		89	40.0		89	40.0		
10	312	34.3		286	12.3		146	13.0		276	57.2		104	42.6		104	42.6		
11	327	36.7		301	12.1	+ 12	161	16.4	+ 10	291	59.2	+ 13	119	45.2	− 8	119	45.2	− 8	
12	342	39.2		316	12.0	+ 12	176	19.8	+ 10	307	01.3	+ 13	134	47.7	− 8	134	47.7	− 8	
13	357	41.7		331	11.9		191	23.2		322	03.3		149	50.3		149	50.3		
14	12	44.1		346	11.8		206	26.6		337	05.3		164	52.9		164	52.9		
15	27	46.6		1	11.7		221	30.0		352	07.3		179	55.4		179	55.4		
16	42	49.1		16	11.6		236	33.4		7	09.3		194	58.0		194	58.0		
17	57	51.5		31	11.5	+ 12	251	36.8	+ 10	22	11.3	+ 13	210	00.5	− 8	210	00.5	− 8	
18	72	54.0		46	11.4	+ 12	266	40.2	+ 10	37	13.3	+ 13	225	03.1	− 8	225	03.1	− 8	
19	87	56.4		61	11.3		281	43.6		52	15.3		240	05.7		240	05.7		
20	102	58.9		76	11.1		296	47.0		67	17.4		255	08.2		255	08.2		
21	118	01.4		91	11.0		311	50.4		82	19.4		270	10.8		270	10.8		
22	133	03.8		106	10.9		326	53.8		97	21.4		285	13.4		285	13.4		
23	148	06.3		121	10.8		341	57.2		112	23.4		300	15.9		300	15.9		
24	163	08.8		136	10.7	+ 12	357	00.6	+ 10	127	25.4	+ 13	315	18.5	− 8	315	18.5	− 8	
Dif	—			−1			+12			+34			+20			+26			0

MARTES 6 DE MARZO DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		SD: 15 ^h 9		Edad: 13 ^d 1									
	PMG: 12 ^h 11 ^m 1	PMG: 22 ^h 51 ^m	R°: 51 ^m	4 ^h : 58/4	12 ^h : 58/7	20 ^h : 59/0								
	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	11.0	− 5 35.5	29	03.1	+ 12 17.1	60 N	17 41	18 22	19 11	15 31 92		5 35 13	
1	192	11.2	34.5	43	32.2	+ 12 06.1	58	43	23	08	36 89		28 17	
2	207	11.3	33.6	58	01.3	+ 11 55.0	56	45	23	06	41 86		23 19	
3	222	11.5	32.6	72	30.4	43.9	54	47	23	04	45 83		18 21	
4	237	11.6	31.6	86	59.5	32.7	52	49	23	02	49 81		13 24	
5	252	11.8	− 5 30.7	101	28.6	+ 11 21.4	50	17 51	18 23	19 01	15 53 78		5 09 25	
6	267	11.9	− 5 29.7	115	57.7	+ 11 10.0	45	17 55	18 24	18 58	16 00 74		5 00 29	
7	282	12.1	28.7	130	26.8	+ 10 58.6	40	17 58	25	56	07 70		4 52 33	
8	297	12.2	27.7	144	56.0	47.1	35	18 00	26	55	12 67		45 37	
9	312	12.4	26.8	159	25.1	35.5	30	03	27	54	17 64		40 38	
10	327	12.5	25.8	173	54.2	23.8	20	07	29	55	25 59		29 44	
11	342	12.7	− 5 24.8	188	23.3	+ 10 12.1	10 N	18 11	18 32	18 56	16 32 55		4 20 48	
12	357	12.8	− 5 23.9	202	52.5	+ 10 00.3	0	18 14	18 35	18 59	16 39 51		4 12 51	
13	12	13.0	22.9	217	21.6	+ 9 48.4	10 S	18	39	19 04	45 48		4 03 55	
14	27	13.1	21.9	231	50.7	36.5	20	22	45	10	16 52 44		3 54 59	
15	42	13.2	20.9	246	19.8	24.4	30	27	51	20	17 00 39		44 63	
16	57	13.4	20.0	260	48.9	12.4	35	30	18 56	26	05 36		37 67	
17	72	13.5	− 5 19.0	275	18.1	+ 9 00.2	40	18 33	19 01	19 33	17 10 33		3 30 70	
18	87	13.7	− 5 18.0	289	47.2	+ 8 48.0	45	18 37	19 07	19 42	17 16 30		3 22 73	
19	102	13.8	17.1	304	16.3	35.8	50	42	15	19 54	24 25		12 78	
20	117	14.0	16.1	318	45.4	23.4	52	44	18	20 00	27 23		08 79	
21	132	14.1	15.1	333	14.5	+ 8 11.0	54	46	22	06	31 20		3 03 81	
22	147	14.3	14.1	347	43.6	+ 7 58.6	56	49	27	14	35 18		2 57 84	
23	162	14.4	13.2	2	12.7	46.1	58	52	32	22	39 16		51 87	
24	177	14.6	− 5 12.2	16	41.8	+ 7 33.5	60 S	18 55	19 38	20 32	17 44 13		2 43 91	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 13 ^h 01 ^m 3		Mag.: −4.2 PMG: 14 ^h 56 ^m		Mag.: −1.2 PMG: 0 ^h 06 ^m		Mag.: −2.2 PMG: 15 ^h 25 ^m		Mag.: +0.4 PMG: 2 ^h 54 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	°	°	'	°	°	°	'				
0	164	07.9	136 08.0	+ 13 01.4	358 22.3	+ 10 34.9	128 13.6	+ 13 15.9	316 20.1	− 8 33.1				
1	179	10.4	151 07.9	02.5	13 25.7	35.2	143 15.6	16.0	331 22.6	33.0				
2	194	12.8	166 07.8	03.7	28 29.1	35.5	158 17.6	16.2	346 25.2	33.0				
3	209	15.3	181 07.7	04.8	43 32.5	35.9	173 19.7	16.4	1 27.8	32.9				
4	224	17.8	196 07.6	06.0	58 35.9	36.2	188 21.7	16.5	16 30.3	32.9				
5	239	20.2	211 07.5	+ 13 07.1	73 39.3	+ 10 36.6	203 23.7	+ 13 16.7	31 32.9	− 8 32.8				
6	254	22.7	226 07.4	+ 13 08.3	88 42.7	+ 10 36.9	218 25.7	+ 13 16.8	46 35.5	− 8 32.8				
7	269	25.2	241 07.3	09.4	103 46.1	37.3	233 27.7	17.0	61 38.0	32.7				
8	284	27.6	256 07.2	10.6	118 49.5	37.6	248 29.7	17.2	76 40.6	32.7				
9	299	30.1	271 07.1	11.7	133 52.9	37.9	263 31.7	17.3	91 43.2	32.6				
10	314	32.5	286 06.9	12.9	148 56.3	38.3	278 33.7	17.5	106 45.8	32.6				
11	329	35.0	301 06.8	+ 13 14.0	163 59.7	+ 10 38.6	293 35.7	+ 13 17.6	121 48.3	− 8 32.5				
12	344	37.5	316 06.7	+ 13 15.2	179 03.1	+ 10 39.0	308 37.7	+ 13 17.8	136 50.9	− 8 32.5				
13	359	39.9	331 06.6	16.3	194 06.5	39.3	323 39.7	18.0	151 53.5	32.4				
14	14	42.4	346 06.5	17.5	209 09.9	39.7	338 41.7	18.1	166 56.0	32.4				
15	29	44.9	1 06.4	18.6	224 13.3	40.0	353 43.7	18.3	181 58.6	32.3				
16	44	47.3	16 06.3	19.8	239 16.7	40.3	8 45.7	18.4	197 01.2	32.3				
17	59	49.8	31 06.2	+ 13 20.9	254 20.1	+ 10 40.7	23 47.7	+ 13 18.6	212 03.7	− 8 32.2				
18	74	52.3	46 06.1	+ 13 22.1	269 23.5	+ 10 41.0	38 49.7	+ 13 18.8	227 06.3	− 8 32.2				
19	89	54.7	61 06.0	23.2	284 26.9	41.4	53 51.7	18.9	242 08.9	32.1				
20	104	57.2	76 05.9	24.4	299 30.3	41.7	68 53.8	19.1	257 11.5	32.1				
21	119	59.6	91 05.7	25.5	314 33.7	42.0	83 55.8	19.2	272 14.0	32.0				
22	135	02.1	106 05.6	26.7	329 37.1	42.4	98 57.8	19.4	287 16.6	32.0				
23	150	04.6	121 05.5	27.8	344 40.5	42.7	113 59.8	19.6	302 19.2	31.9				
24	165	07.0	136 05.4	+ 13 29.0	359 43.9	+ 10 43.1	129 01.8	+ 13 19.7	317 21.7	− 8 31.9				
Dif	—	−1	+11		+34	+3	+20	+2	+26	0				

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MIÉRCOL 7 DE MARZO DE 2012

UT	SOL			☾ LUNA			Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1 PMG: 12 ^h 10 ^m 9			SD: 16 ^h 1 Edad: 14 ^d 1 PMG: 23 ^h 42 ^m R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°		
^h 0	177	14.6	− 5	16	41.8	101	+ 7	33.5	126	58 N	5 10	5 58	6 40	17 03	94	5 48	13
1	192	14.7		31	10.9	101		20.9	127	58	13	58	37	05	90	45	15
2	207	14.9		45	40.0	101	+ 7	08.2	127	56	15	58	35	07	87	42	18
3	222	15.0		60	09.1	101	+ 6	55.5	127	54	17	58	33	08	85	39	20
4	237	15.2		74	38.1	100		42.7	128	52	19	58	32	10	83	37	22
5	252	15.4	− 5	89	07.2	101	+ 6	29.9	128	50	5 21	5 58	6 30	17 11	81	5 34	25
6	267	15.5	− 5	103	36.3	101	+ 6	17.0	129	45	5 23	5 57	6 27	17 14	76	5 29	29
7	282	15.7		118	05.3	100	+ 6	04.1	129	40	25	57	24	17	72	25	33
8	297	15.8		132	34.3	100	+ 5	51.1	130	35	27	56	21	19	69	22	35
9	312	16.0		147	03.4	101		38.1	130	30	27	55	19	21	66	18	39
10	327	16.1		161	32.4	100		25.0	131	20	27	53	15	24	61	13	43
11	342	16.3	− 5	176	01.4	100	+ 5	11.9	131	10 N	5 26	5 50	6 11	17 27	56	5 08	47
12	357	16.4	− 5	190	30.4	100	+ 4	58.7	132	0	5 23	5 47	6 08	17 30	52	5 03	51
13	12	16.6	− 4	204	59.4	100		45.5	132	10 S	18	43	04	33	48	4 58	56
14	27	16.7		219	28.4	100		32.3	132	20	12	38	6 00	36	43	53	60
15	42	16.9		233	57.4	100		19.0	133	30	5 03	31	5 55	39	38	47	65
16	57	17.0		248	26.3	99	+ 4	05.7	133	35	4 57	27	53	41	36	44	68
17	72	17.2	− 4	262	55.3	100	+ 3	52.4	133	40	4 50	5 22	5 49	17 43	33	4 40	71
18	87	17.3	− 4	277	24.2	99	+ 3	39.0	134	45	4 40	5 16	5 46	17 46	28	4 35	75
19	102	17.5		291	53.1	99		25.6	134	50	29	08	41	49	24	30	79
20	117	17.6		306	22.0	99	+ 3	12.1	135	52	23	05	39	50	22	27	82
21	132	17.8		320	50.9	99	+ 2	58.7	134	54	17	5 01	37	51	21	24	84
22	147	17.9		335	19.8	99		45.2	135	56	09	4 56	34	53	18	21	87
23	162	18.1		349	48.7	99		31.7	135	58	4 01	51	32	55	15	18	89
24	177	18.3	− 4	4	17.5	98	+ 2	18.1	136	60 S	3 51	4 45	5 29	17 57	12	4 14	93
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 57 ^m 4			Mag.: −4.2 PMG: 14 ^h 56 ^m			Mag.: −1.2 PMG: 0 ^h 01 ^m			Mag.: −2.1 PMG: 15 ^h 22 ^m			Mag.: +0.4 PMG: 2 ^h 50 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
^h 0	165	07.0		136	05.4	+ 13	359	43.9	+ 10	129	01.8	+ 13	317	21.7	− 8		
1	180	09.5		151	05.3		14	47.3		144	03.8		332	24.3			
2	195	12.0		166	05.2		29	50.8		159	05.8		347	26.9			
3	210	14.4		181	05.1		44	54.2		174	07.8		2	29.5			
4	225	16.9		196	05.0		59	57.6		189	09.8		17	32.0			
5	240	19.4		211	04.9	+ 13	75	01.0	+ 10	204	11.8	+ 13	32	34.6	− 8		
6	255	21.8		226	04.8	+ 13	90	04.4	+ 10	219	13.8	+ 13	47	37.2	− 8		
7	270	24.3		241	04.7		105	07.8		234	15.8		62	39.7			
8	285	26.8		256	04.5		120	11.2		249	17.8		77	42.3			
9	300	29.2		271	04.4		135	14.6		264	19.8		92	44.9			
10	315	31.7		286	04.3		150	18.0		279	21.8		107	47.5			
11	330	34.1		301	04.2	+ 13	165	21.4	+ 10	294	23.8	+ 13	122	50.0	− 8		
12	345	36.6		316	04.1	+ 13	180	24.8	+ 10	309	25.8	+ 13	137	52.6	− 8		
13	0	39.1		331	04.0		195	28.2		324	27.8		152	55.2			
14	15	41.5		346	03.9		210	31.6		339	29.8		167	57.7			
15	30	44.0		1	03.8		225	35.0		354	31.8		183	00.3			
16	45	46.5		16	03.7		240	38.4		9	33.8		198	02.9			
17	60	48.9		31	03.6	+ 13	255	41.8	+ 10	24	35.8	+ 13	213	05.5	− 8		
18	75	51.4		46	03.5	+ 13	270	45.2	+ 10	39	37.8	+ 13	228	08.0	− 8		
19	90	53.9		61	03.4		285	48.6		54	39.8		243	10.6			
20	105	56.3		76	03.3		300	52.0		69	41.8		258	13.2			
21	120	58.8		91	03.1		315	55.4		84	43.8		273	15.8			
22	136	01.2		106	03.0		330	58.7		99	45.8		288	18.3			
23	151	03.7		121	02.9		346	02.1		114	47.8		303	20.9			
24	166	06.2		136	02.8	+ 13	1	05.5	+ 10	129	49.8	+ 13	318	23.5	− 8		
Dif	—			−1		+11	+34		+3	+20		+2	+26		0		

JUEVES 8 DE MARZO DE 2012

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UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 10 ^m 7			SD: 16'3 Edad: 15 ^d 1 PHE { 4 ^h : 59'9 12 ^h : 60'0 20 ^h : 60'2 PMG: **h **m R°: ***m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	177	18.3	−4	48.8	4	17.5	+2	18.1	60 N	17 46	18 27	19 16	18 37	95	6 01	12
1	192	18.4		47.8	18	46.3	98	+2	04.5	58	48	27	13	35	93	00
2	207	18.6		46.9	33	15.1	98	+1	50.9	56	50	27	10	34	89	6 00
3	222	18.7		45.9	47	43.9	98		37.3	54	51	27	08	33	87	5 59
4	237	18.9		44.9	62	12.7	98		23.7	52	53	26	06	33	84	59
5	252	19.0	−4	43.9	76	41.4	97	+1	10.0	50	17 54	18 26	19 04	18 32	82	5 59
6	267	19.2	−4	43.0	91	10.1	97	+0	56.3	45	17 57	18 26	19 01	18 30	77	5 58
7	282	19.3		42.0	105	38.8	97		42.6	40	18 00	27	18 58	29	73	58
8	297	19.5		41.0	120	07.5	97		28.9	35	02	27	57	28	69	57
9	312	19.7		40.0	134	36.2	97		15.2	30	04	28	56	27	66	57
10	327	19.8		39.1	149	04.8	96	+0	01.5	20	08	30	55	25	62	56
11	342	20.0	−4	38.1	163	33.4	96	−0	12.2	10 N	18 11	18 32	18 56	18 23	58	5 55
12	357	20.1	−4	37.1	178	02.0	96	−0	26.0	0	18 14	18 35	18 59	18 22	53	5 54
13	12	20.3		36.1	192	30.6	96		39.7	10 S	17	38	19 03	21	48	54
14	27	20.4		35.2	206	59.1	95	−0	53.5	20	21	43	09	19	45	53
15	42	20.6		34.2	221	27.6	95	−1	07.2	30	25	49	17	17	40	52
16	57	20.8		33.2	235	56.1	95		21.0	35	27	53	23	17	36	52
17	72	20.9	−4	32.2	250	24.6	95	−1	34.8	40	18 30	18 57	19 30	18 16	33	5 51
18	87	21.1	−4	31.3	264	53.0	94	−1	48.5	45	18 33	19 03	19 38	18 14	30	5 50
19	102	21.2		30.3	279	21.4	94	−2	02.3	50	37	10	49	13	26	49
20	117	21.4		29.3	293	49.8	94		16.0	52	39	13	19 55	12	24	49
21	132	21.5		28.3	308	18.2	94		29.8	54	41	17	20 01	12	21	48
22	147	21.7		27.3	322	46.5	93		43.5	56	43	21	08	11	19	48
23	162	21.9		26.4	337	14.8	93	−2	57.2	58	46	26	16	10	16	47
24	177	22.0	−4	25.4	351	43.0	92	−3	10.9	60 S	18 49	19 32	20 25	18 09	13	5 47
UT	ARIES PMG 12 ^h 53 ^m 5			VENUS Mag.: −4.2 PMG: 14 ^h 56 ^m			MARTE Mag.: −1.2 PMG: 23 ^h 50 ^m			JÚPITER Mag.: −2.1 PMG: 15 ^h 19 ^m			SATURNO Mag.: +0.4 PMG: 2 ^h 46 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
	°	'		°	'		°	'		°	'		°	'		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	166	06.2	136	02.8	+13	56.2	1	05.5	+10	51.1	129	49.8	+13	23.6	318	23.5
1	181	08.6	151	02.7		57.4	16	08.9		51.4	144	51.8		23.8	333	26.1
2	196	11.1	166	02.6		58.5	31	12.3		51.8	159	53.8		23.9	348	28.6
3	211	13.6	181	02.5	+13	59.6	46	15.7		52.1	174	55.8	24.1	3	31.2	30.6
4	226	16.0	196	02.4	+14	00.8	61	19.1		52.4	189	57.8	24.2		18	33.8
5	241	18.5	211	02.3	+14	01.9	76	22.5	+10	52.8	204	59.8	+13	24.4	33	36.4
6	256	21.0	226	02.2	+14	03.0	91	25.9	+10	53.1	220	01.8	+13	24.6	48	38.9
7	271	23.4	241	02.1		04.1	106	29.3		53.4	235	03.8		24.7	63	41.5
8	286	25.9	256	02.0		05.3	121	32.7		53.7	250	05.8		24.9	78	44.1
9	301	28.4	271	01.9		06.4	136	36.1		54.1	265	07.8		25.0	93	46.7
10	316	30.8	286	01.7		07.5	151	39.5		54.4	280	09.8		25.2	108	49.2
11	331	33.3	301	01.6	+14	08.6	166	42.9	+10	54.7	295	11.8	+13	25.4	123	51.8
12	346	35.7	316	01.5	+14	09.8	181	46.3	+10	55.1	310	13.8	+13	25.5	138	54.4
13	1	38.2	331	01.4		10.9	196	49.7		55.4	325	15.8		25.7	153	57.0
14	16	40.7	346	01.3		12.0	211	53.1		55.7	340	17.8		25.9	168	59.5
15	31	43.1	1	01.2		13.1	226	56.5		56.0	355	19.8		26.0	184	02.1
16	46	45.6	16	01.1		14.3	241	59.9		56.4	10	21.8		26.2	199	04.7
17	61	48.1	31	01.0	+14	15.4	257	03.3	+10	56.7	25	23.8	+13	26.3	214	07.3
18	76	50.5	46	00.9	+14	16.5	272	06.7	+10	57.0	40	25.8	+13	26.5	229	09.8
19	91	53.0	61	00.8		17.6	287	10.1		57.4	55	27.8		26.7	244	12.4
20	106	55.5	76	00.7		18.8	302	13.5		57.7	70	29.8		26.8	259	15.0
21	121	57.9	91	00.6		19.9	317	16.9		58.0	85	31.8		27.0	274	17.6
22	137	00.4	106	00.5		21.0	332	20.3		58.3	100	33.8		27.2	289	20.2
23	152	02.9	121	00.4		22.1	347	23.7		58.7	115	35.8		27.3	304	22.7
24	167	05.3	136	00.2	+14	23.2	2	27.1	+10	59.0	130	37.7	+13	27.5	319	25.3
Dif	—		−1		+11		+34		+3		+20		+2		+26	

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VIERNES 9 DE MARZO DE 2012

UT	SOL			☾ LUNA					Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1 PMG: 12 ^h 10 ^m 4			SD: 16 ^h 4 Edad: 16 ^d 1 PHE { 4 ^h : 60 ^h 3 12 ^h : 60 ^h 4 20 ^h : 60 ^h 5 PMG: 0 ^h 34 ^m R°: 54 ^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	22.0	−4	25.4	351	43.0	92	−3	10.9	137	5 04	5 52	6 34	20 12	97	6 13	14	
1	192	22.2		24.4	6	11.2			24.6	137	07	53	32	08	92	16	17	
2	207	22.3		23.4	20	39.4	92		38.3	137	10	53	30	03	90	18	20	
3	222	22.5		22.5	35	07.6	92	−3	52.0	137	12	53	29	20 00	87	20	22	
4	237	22.6		21.5	49	35.7	91	−4	05.6	136	15	54	27	19 57	84	22	24	
5	252	22.8	−4	20.5	64	03.8	91	−4	19.3	137	5 16	5 54	6 26	19 54	82	6 23	27	
6	267	23.0	−4	19.5	78	31.9	91	−4	32.9	136	5 20	5 54	6 23	19 47	78	6 27	31	
7	282	23.1		18.5	92	59.9	90	−4	46.5	136	22	54	21	42	74	30	35	
8	297	23.3		17.6	107	27.9	90	−5	00.1	136	24	53	19	37	71	33	38	
9	312	23.4		16.6	121	55.8	89		13.6	135	25	53	17	33	68	36	40	
10	327	23.6		15.6	136	23.7	89		27.1	135	26	51	13	27	63	40	45	
11	342	23.8	−4	14.6	150	51.6	89	−5	40.6	135	5 25	5 49	6 10	19 21	58	6 43	50	
12	357	23.9	−4	13.6	165	19.4	88	−5	54.0	134	5 22	5 46	6 07	19 15	55	6 47	54	
13	12	24.1		12.7	179	47.2	88	−6	07.5	135	18	43	04	09	51	50	58	
14	27	24.2		11.7	194	15.0	88		20.9	134	13	38	6 01	19 04	46	54	62	
15	42	24.4		10.7	208	42.7	87		34.2	133	5 04	33	5 57	18 57	42	6 58	68	
16	57	24.6		09.7	223	10.4	87	−6	47.5	133	4 59	29	54	53	40	7 01	70	
17	72	24.7	−4	08.8	237	38.0	86	−7	00.8	133	4 52	5 24	5 52	18 49	36	7 03	74	
18	87	24.9	−4	07.8	252	05.6	86	−7	14.0	132	4 43	5 19	5 48	18 44	33	7 07	77	
19	102	25.0		06.8	266	33.2	86		27.2	132	32	12	45	39	28	10	83	
20	117	25.2		05.8	281	00.7	85		40.4	132	27	08	43	36	26	12	85	
21	132	25.4		04.8	295	28.2	85	−7	53.5	131	21	05	41	33	24	14	87	
22	147	25.5		03.9	309	55.6	84	−8	06.5	130	14	5 01	39	30	21	16	90	
23	162	25.7		02.9	324	23.0	84		19.5	130	4 06	4 56	36	26	19	19	92	
24	177	25.9	−4	01.9	338	50.4	84	−8	32.5	130	3 57	4 51	5 34	18 22	16	7 21	96	
UT	ARIES PMG 12 ^h 49 ^m 5		VENUS Mag.: −4.3 PMG: 14 ^h 56 ^m			MARTE Mag.: −1.2 PMG: 23 ^h 45 ^m			JÚPITER Mag.: −2.1 PMG: 15 ^h 15 ^m			SATURNO Mag.: +0.4 PMG: 2 ^h 42 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	167	05.3	136	00.2	+14	23.2	2	27.1	+10	59.0	130	37.7	+13	27.5	319	25.3	−8	29.5
1	182	07.8	151	00.1		24.3	17	30.4		59.3	145	39.7		27.6	334	27.9		29.4
2	197	10.2	166	00.0		25.5	32	33.8	+10	59.6	160	41.7		27.8	349	30.5		29.4
3	212	12.7	180	59.9		26.6	47	37.2	+11	00.0	175	43.7		28.0	4	33.0		29.3
4	227	15.2	195	59.8		27.7	62	40.6		00.3	190	45.7		28.1	19	35.6		29.3
5	242	17.6	210	59.7	+14	28.8	77	44.0	+11	00.6	205	47.7	+13	28.3	34	38.2	−8	29.2
6	257	20.1	225	59.6	+14	29.9	92	47.4	+11	00.9	220	49.7	+13	28.4	49	40.8	−8	29.2
7	272	22.6	240	59.5		31.0	107	50.8		01.2	235	51.7		28.6	64	43.4		29.1
8	287	25.0	255	59.4		32.2	122	54.2		01.6	250	53.7		28.8	79	45.9		29.1
9	302	27.5	270	59.3		33.3	137	57.6		01.9	265	55.7		28.9	94	48.5		29.0
10	317	30.0	285	59.2		34.4	153	01.0		02.2	280	57.7		29.1	109	51.1		29.0
11	332	32.4	300	59.1	+14	35.5	168	04.4	+11	02.5	295	59.7	+13	29.3	124	53.7	−8	28.9
12	347	34.9	315	59.0	+14	36.6	183	07.8	+11	02.9	311	01.7	+13	29.4	139	56.2	−8	28.9
13	2	37.3	330	58.9		37.7	198	11.1		03.2	326	03.7		29.6	154	58.8		28.8
14	17	39.8	345	58.8		38.8	213	14.5		03.5	341	05.7		29.7	170	01.4		28.8
15	32	42.3	0	58.7		39.9	228	17.9		03.8	356	07.7		29.9	185	04.0		28.7
16	47	44.7	15	58.5		41.0	243	21.3		04.1	11	09.7		30.1	200	06.6		28.7
17	62	47.2	30	58.4	+14	42.1	258	24.7	+11	04.5	26	11.7	+13	30.2	215	09.1	−8	28.6
18	77	49.7	45	58.3	+14	43.3	273	28.1	+11	04.8	41	13.6	+13	30.4	230	11.7	−8	28.6
19	92	52.1	60	58.2		44.4	288	31.5		05.1	56	15.6		30.6	245	14.3		28.5
20	107	54.6	75	58.1		45.5	303	34.9		05.4	71	17.6		30.7	260	16.9		28.5
21	122	57.1	90	58.0		46.6	318	38.3		05.7	86	19.6		30.9	275	19.5		28.4
22	137	59.5	105	57.9		47.7	333	41.6		06.1	101	21.6		31.0	290	22.0		28.4
23	153	02.0	120	57.8		48.8	348	45.0		06.4	116	23.6		31.2	305	24.6		28.3
24	168	04.5	135	57.7	+14	49.9	3	48.4	+11	06.7	131	25.6	+13	31.4	320	27.2	−8	28.3
Dif	—		−1		+11		+34		+3		+20		+2		+26		+1	

SÁBADO 10 DE MARZO DE 2012

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 16'1 PMG: 12 ^h 10 ^m 1			SD: 16'5 Edad: 17 ^d 1 PHE $\begin{cases} 4^h: 60'5 \\ 12^h: 60'5 \\ 20^h: 60'5 \end{cases}$ PMG: 1 ^h 28 ^m R°: 55 ^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	25.9	− 4	338	50.4	83	− 8	32.5	60 N	17 51	18 32	19 21	21 49	95	6 27	17
1	192	26.0	− 4	353	17.7	83	− 8	45.4	58	52	32	17	40	92	33	20
2	207	26.2	− 3	7	45.0	83	− 8	58.3	56	54	31	14	33	89	38	23
3	222	26.3		22	12.2	82	− 9	11.1	54	55	30	12	27	86	42	26
4	237	26.5		36	39.4	82		23.8	52	56	30	09	21	84	46	28
5	252	26.7	− 3	51	06.5	81	− 9	36.5	50	17 57	18 30	19 07	21 16	81	6 50	30
6	267	26.8	− 3	65	33.6	81	− 9	49.1	45	18 00	18 29	19 03	21 05	77	6 58	35
7	282	27.0		80	00.6	80	− 10	01.7	40	02	29	19 00	20 56	73	7 05	38
8	297	27.2		94	27.6	80		14.2	35	04	29	18 58	48	71	11	41
9	312	27.3		108	54.6	80		26.6	30	05	29	57	41	68	16	44
10	327	27.5		123	21.5	79		39.0	20	08	30	56	30	63	25	48
11	342	27.6	− 3	137	48.3	78	− 10	51.3	10 N	18 11	18 32	18 56	20 19	61	7 33	52
12	357	27.8	− 3	152	15.1	78	− 11	03.5	0	18 13	18 34	18 58	20 10	57	7 41	56
13	12	28.0		166	41.9	78		15.7	10 S	16	37	19 02	20 00	54	48	60
14	27	28.1		181	08.6	77		27.7	20	19	41	07	19 50	50	7 56	64
15	42	28.3		195	35.3	77		39.8	30	23	47	15	39	46	8 06	68
16	57	28.5		210	01.9	76	− 11	51.7	35	25	50	20	33	43	11	71
17	72	28.6	− 3	224	28.5	76	− 12	03.5	40	18 27	18 54	19 26	19 25	41	8 17	74
18	87	28.8	− 3	238	55.0	75	− 12	15.3	45	18 30	18 59	19 34	19 17	37	8 24	78
19	102	29.0		253	21.5	75		27.0	50	33	19 06	45	07	33	33	82
20	117	29.1		267	48.0	75		38.6	52	35	09	50	19 02	31	37	84
21	132	29.3		282	14.4	74	− 12	50.2	54	36	12	19 55	18 57	29	41	86
22	147	29.4		296	40.7	73	− 13	01.6	56	38	16	20 02	51	26	46	89
23	162	29.6		311	07.0	73		13.0	58	40	20	09	45	23	51	92
24	177	29.8	− 3	325	33.3	73	− 13	24.3	60 S	18 43	19 25	20 18	18 38	20	8 57	96
UT	ARIES PMG: 12 ^h 45 ^m 6			VENUS Mag.: −4.3 PMG: 14 ^h 56 ^m			MARTE Mag.: −1.2 PMG: 23 ^h 39 ^m			JÚPITER Mag.: −2.1 PMG: 15 ^h 12 ^m			SATURNO Mag.: +0.4 PMG: 2 ^h 38 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°
0	168	04.5		135	57.7	+ 14	3	48.4	+ 11	131	25.6	+ 13	320	27.2	− 8	28.3
1	183	06.9		150	57.6			51.0		146	27.6		335	29.8		28.2
2	198	09.4		165	57.5			52.1		161	29.6		350	32.4		28.2
3	213	11.8		180	57.4			53.2		176	31.6		5	35.0		28.1
4	228	14.3		195	57.3			54.3		191	33.6		20	37.5		28.0
5	243	16.8		210	57.2	+ 14	55.4		+ 11	206	35.6	+ 13	35	40.1	− 8	28.0
6	258	19.2		225	57.1	+ 14	56.5		+ 11	221	37.5	+ 13	50	42.7	− 8	27.9
7	273	21.7		240	57.0		57.6		08.9	236	39.5		65	45.3		27.9
8	288	24.2		255	56.9		58.7		09.2	251	41.5		80	47.9		27.8
9	303	26.6		270	56.8	+ 14	59.8		09.5	266	43.5		95	50.4		27.8
10	318	29.1		285	56.7	+ 15	00.9		09.8	281	45.5		110	53.0		27.7
11	333	31.6		300	56.6	+ 15	02.0		+ 11	296	47.5	+ 13	125	55.6	− 8	27.7
12	348	34.0		315	56.4	+ 15	03.1		+ 11	311	49.5	+ 13	140	58.2	− 8	27.6
13	3	36.5		330	56.3		04.2		10.8	326	51.5		156	00.8		27.6
14	18	38.9		345	56.2		05.3		11.1	341	53.5		171	03.4		27.5
15	33	41.4		0	56.1		06.4		11.4	356	55.5		186	05.9		27.5
16	48	43.9		15	56.0		07.5		11.7	11	57.4		201	08.5		27.4
17	63	46.3		30	55.9	+ 15	08.6		+ 11	26	59.4	+ 13	216	11.1	− 8	27.4
18	78	48.8		45	55.8	+ 15	09.7		+ 11	42	01.4	+ 13	231	13.7	− 8	27.3
19	93	51.3		60	55.7		10.8		12.7	57	03.4		246	16.3		27.3
20	108	53.7		75	55.6		11.9		13.0	72	05.4		261	18.9		27.2
21	123	56.2		90	55.5		13.0		13.3	87	07.4		276	21.4		27.2
22	138	58.7		105	55.4		14.1		13.6	102	09.4		291	24.0		27.1
23	154	01.1		120	55.3		15.1		13.9	117	11.4		306	26.6		27.0
24	169	03.6		135	55.2	+ 15	16.2		+ 11	132	13.4	+ 13	321	29.2	− 8	27.0
Dif	—			− 1	+ 11			+ 34	+ 3	+ 20	+ 2		+ 26	+ 1		

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DOMINGO 11 DE MARZO DE 2012

UT	SOL			☾ LUNA						Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 12 ^h 09 ^m 9			SD: 16 ^h 5 Edad: 18 ^d 1 PMG: 2 ^h 23 ^m R°: 57 ^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	177	29.8	− 3	325	33.3	72	− 13	24.3	60 N	4 58	5 46	6 28	23 24	89	6 44	23		
1	192	29.9		339	59.5			35.4	58	5 02	47	26		12 86	6 53	26		
2	207	30.1		354	25.6	71		46.5	56	05	48	25	23 02	83	7 01	29		
3	222	30.3		8	51.7	71	− 13	57.5	54	08	49	24	22 53	80	08	32		
4	237	30.4		23	17.8	71	− 14	08.4	52	10	49	23	45	78	14	34		
5	252	30.6	− 3	37	43.8	70	− 14	19.2	50	5 12	5 49	6 22	22 37	77	7 20	36		
6	267	30.8	− 3	52	09.8	70	− 14	30.0	45	5 16	5 50	6 19	22 22	74	7 33	39		
7	282	30.9		66	35.7	69		40.6	40	19	51	17	22 09	71	43	43		
8	297	31.1		81	01.6	69	− 14	51.1	35	21	51	16	21 59	69	7 52	45		
9	312	31.3		95	27.4	68	− 15	01.5	30	23	50	14	49	67	8 00	48		
10	327	31.4		109	53.2	68		11.8	20	24	50	12	33	64	13	52		
11	342	31.6	− 3	124	18.9	67	− 15	22.0	10 N	5 24	5 48	6 09	21 20	61	8 25	55		
12	357	31.8	− 3	138	44.6	67	− 15	32.1	0	5 22	5 46	6 07	21 07	58	8 37	57		
13	12	31.9		153	10.3	67		42.1	10 S	19	43	04	20 54	56	8 48	61		
14	27	32.1		167	35.9	66	− 15	52.0	20	13	39	6 01	40	53	9 00	64		
15	42	32.3		182	01.4	65	− 16	01.8	30	06	34	5 58	25	50	14	67		
16	57	32.4		196	27.0	66		11.5	35	5 01	31	56	16	48	22	70		
17	72	32.6	− 3	210	52.4	64	− 16	21.1	40	4 54	5 26	5 54	20 06	46	9 31	72		
18	87	32.8	− 3	225	17.9	65	− 16	30.5	45	4 46	5 21	5 51	19 54	43	9 42	75		
19	102	32.9		239	43.3	64		39.9	50	36	15	48	40	39	9 55	79		
20	117	33.1		254	08.6	63		49.1	52	31	12	46	33	38	10 01	81		
21	132	33.3		268	33.9	63	− 16	58.2	54	25	09	45	26	36	07	84		
22	147	33.4		282	59.2	63	− 17	07.2	56	19	05	43	17	34	15	86		
23	162	33.6		297	24.4	62		16.0	58	12	5 01	41	19 08	31	23	90		
24	177	33.8	− 3	311	49.6	62	− 17	24.8	60 S	4 03	4 56	5 39	18 58	27	10 33	93		
UT	ARIES PMG 12 ^h 41 ^m 7			VENUS Mag.: −4.3 PMG: 14 ^h 56 ^m			MARTE Mag.: −1.2 PMG: 23 ^h 34 ^m			JÚPITER Mag.: −2.1 PMG: 15 ^h 09 ^m			SATURNO Mag.: +0.4 PMG: 2 ^h 34 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	169	03.6		135	55.2	+ 15	5	09.6	+ 11	14.2	132	13.4	+ 13	35.3	321	29.2	− 8	27.0
1	184	06.1		150	55.1			17.3		14.5	147	15.3		35.5	336	31.8		26.9
2	199	08.5		165	55.0			18.4		14.8	162	17.3		35.6	351	34.4		26.9
3	214	11.0		180	54.9			19.5		15.1	177	19.3		35.8	6	36.9		26.8
4	229	13.4		195	54.8			20.6		15.4	192	21.3		35.9	21	39.5		26.8
5	244	15.9		210	54.7	+ 15	21.7		80	26.5	+ 11	15.7		36.1	36	42.1	− 8	26.7
6	259	18.4		225	54.6	+ 15	22.8		95	29.9	+ 11	16.0		36.3	51	44.7	− 8	26.7
7	274	20.8		240	54.5		23.9		110	33.3		16.4		36.4	66	47.3		26.6
8	289	23.3		255	54.4		24.9		125	36.6		16.7		36.6	81	49.9		26.6
9	304	25.8		270	54.3		26.0		140	40.0		17.0		36.8	96	52.4		26.5
10	319	28.2		285	54.2		27.1		155	43.4		17.3		36.9	111	55.0		26.5
11	334	30.7		300	54.1	+ 15	28.2		170	46.8	+ 11	17.6		37.1	126	57.6	− 8	26.4
12	349	33.2		315	54.0	+ 15	29.3		185	50.1	+ 11	17.9		37.3	142	00.2	− 8	26.4
13	4	35.6		330	53.8		30.4		200	53.5		18.2		37.4	157	02.8		26.3
14	19	38.1		345	53.7		31.4		215	56.9		18.5		37.6	172	05.4		26.2
15	34	40.5		0	53.6		32.5		231	00.3		18.8		37.7	187	08.0		26.2
16	49	43.0		15	53.5		33.6		246	03.6		19.1		37.9	202	10.5		26.1
17	64	45.5		30	53.4	+ 15	34.7		261	07.0	+ 11	19.4		38.1	217	13.1	− 8	26.1
18	79	47.9		45	53.3	+ 15	35.8		276	10.4	+ 11	19.7		38.2	232	15.7	− 8	26.0
19	94	50.4		60	53.2		36.9		291	13.7		20.0		38.4	247	18.3		26.0
20	109	52.9		75	53.1		37.9		306	17.1		20.3		38.6	262	20.9		25.9
21	124	55.3		90	53.0		39.0		321	20.5		20.6		38.7	277	23.5		25.9
22	139	57.8		105	52.9		40.1		336	23.9		20.9		38.9	292	26.1		25.8
23	155	00.3		120	52.8		41.2		351	27.2		21.2		39.1	307	28.7		25.8
24	170	02.7		135	52.7	+ 15	42.2		6	30.6	+ 11	21.5		39.2	322	31.2	− 8	25.7
Dif	—			−1		+11		+34		+3	+20		+2		+26		+1	

LUNES 12 DE MARZO DE 2012

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UT	SOL		LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 12 ^h 09 ^m 6		SD: 16'4 Edad: 19 ^d 1		PHE { 4 ^h : 60'2 12 ^h : 60'0 20 ^h : 59'9										
	PMG: 3 ^h 20 ^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
0	177	33.8	−3	14.8	311	49.6	62	−17	24.8	86	60 N	17	56	18	37
1	192	33.9		13.8	326	14.8	61		33.4	85	58	57	36	22	22
2	207	34.1		12.8	340	39.9	61		41.9	84	56	58	35	19	19
3	222	34.3		11.8	355	05.0	60		50.3	83	54	17	59	34	15
4	237	34.5		10.8	9	30.0	60	−17	58.6	81	52	18	00	33	13
5	252	34.6	−3	09.8	23	55.0	60	−18	06.7	80	50	18	01	18	33
6	267	34.8	−3	08.9	38	20.0	60	−18	14.7	79	45	18	02	18	32
7	282	35.0		07.9	52	44.9	59		22.6	78	40	04	31	02	20
8	297	35.1		06.9	67	09.8	59		30.4	76	35	05	31	19	00
9	312	35.3		05.9	81	34.7	59		38.0	75	30	07	30	18	58
10	327	35.5		04.9	95	59.6	59		45.5	74	20	09	31	56	37
11	342	35.6	−3	03.9	110	24.4	58	−18	52.9	72	10 N	18	11	18	32
12	357	35.8	−3	03.0	124	49.1	57	−19	00.1	71	0	18	13	18	34
13	12	36.0		02.0	139	13.9	58		07.2	70	10 S	15	36	19	00
14	27	36.1		01.0	153	38.6	57		14.2	68	20	17	39	05	33
15	42	36.3	−3	00.0	168	03.3	57		21.0	67	30	20	44	12	15
16	57	36.5	−2	59.0	182	28.0	57		27.7	66	35	22	47	17	21
17	72	36.7	−2	58.0	196	52.6	56	−19	34.3	64	40	18	24	18	51
18	87	36.8	−2	57.0	211	17.2	56	−19	40.7	63	45	18	26	18	56
19	102	37.0		56.1	225	41.8	56		47.0	61	50	29	19	01	40
20	117	37.2		55.1	240	06.4	56		53.1	61	52	30	04	45	11
21	132	37.3		54.1	254	31.0	56	−19	59.2	58	54	31	07	50	20
22	147	37.5		53.1	268	55.5	55	−20	05.0	58	56	33	11	19	56
23	162	37.7		52.1	283	20.0	55		10.8	56	58	35	14	20	03
24	177	37.8	−2	51.1	297	44.5	55	−20	16.4	56	60 S	18	37	19	19
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG		Mag.: −4.3		Mag.: −1.1		Mag.: −2.1		Mag.: +0.4						
	12 ^h 37 ^m 7		PMG: 14 ^h 57 ^m		PMG: 23 ^h 29 ^m		PMG: 15 ^h 06 ^m		PMG: 2 ^h 29 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	170	02.7	135	52.7	+15	42.2	6	30.6	+11	21.5	133	01.0	+13	39.2	
1	185	05.2	150	52.6		43.3	21	34.0		21.8	148	03.0		39.4	
2	200	07.7	165	52.5		44.4	36	37.3		22.1	163	05.0		39.5	
3	215	10.1	180	52.4		45.5	51	40.7		22.4	178	07.0		39.7	
4	230	12.6	195	52.3		46.5	66	44.1		22.7	193	09.0		39.9	
5	245	15.0	210	52.2	+15	47.6	81	47.4	+11	23.0	208	10.9	+13	40.0	
6	260	17.5	225	52.1	+15	48.7	96	50.8	+11	23.3	223	12.9	+13	40.2	
7	275	20.0	240	52.0		49.8	111	54.2		23.6	238	14.9		40.4	
8	290	22.4	255	51.9		50.8	126	57.5		23.9	253	16.9		40.5	
9	305	24.9	270	51.8		51.9	142	00.9		24.2	268	18.9		40.7	
10	320	27.4	285	51.7		53.0	157	04.3		24.5	283	20.9		40.9	
11	335	29.8	300	51.6	+15	54.0	172	07.6	+11	24.8	298	22.8	+13	41.0	
12	350	32.3	315	51.5	+15	55.1	187	11.0	+11	25.1	313	24.8	+13	41.2	
13	5	34.8	330	51.4		56.2	202	14.4		25.4	328	26.8		41.4	
14	20	37.2	345	51.3		57.3	217	17.7		25.7	343	28.8		41.5	
15	35	39.7	0	51.2		58.3	232	21.1		26.0	358	30.8		41.7	
16	50	42.2	15	51.1	+15	59.4	247	24.4		26.3	13	32.8		41.9	
17	65	44.6	30	51.0	+16	00.5	262	27.8	+11	26.5	28	34.7	+13	42.0	
18	80	47.1	45	50.9	+16	01.5	277	31.2	+11	26.8	43	36.7	+13	42.2	
19	95	49.5	60	50.8		02.6	292	34.5		27.1	58	38.7		42.3	
20	110	52.0	75	50.7		03.7	307	37.9		27.4	73	40.7		42.5	
21	125	54.5	90	50.6		04.7	322	41.2		27.7	88	42.7		42.7	
22	140	56.9	105	50.5		05.8	337	44.6		28.0	103	44.6		42.8	
23	155	59.4	120	50.4		06.8	352	48.0		28.3	118	46.6		43.0	
24	171	01.9	135	50.3	+16	07.9	7	51.3	+11	28.6	133	48.6	+13	43.2	
Dif	—		−1		+11		+34		+3		+20		+2		+26

MIÉRCOL 14 DE MARZO DE 2012

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 09 ^m 1			SD: 16 ^h 1 Edad: 21 ^d 1 PHE { 4 ^h : 59 ^h 1 12 ^h : 58 ^h 9 20 ^h : 58 ^h 7 PMG: 5 ^h 19 ^m R°: 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif					Civil	Náutico	Hora	R°	Hora
h	°	'	°	°	'	°	'	° N	h m	h m	h m	h m	m	h m	m	
0	177	42.0	-2	27.5	283	30.4	-21	47.6	18 01	18 42	19 31	2 09	58	8 27	62	
1	192	42.1		26.5	297	54.9	55	49.6	01	41	27	1 52	58	44	62	
2	207	42.3		25.5	312	19.4	55	51.4	02	39	23	37	59	8 59	62	
3	222	42.5		24.5	326	43.9	55	53.1	03	38	19	25	58	9 11	62	
4	237	42.7		23.5	341	08.4	55	54.6	03	37	16	14	58	22	62	
5	252	42.8	-2	22.5	355	33.0	56	-21	18 04	18 36	19 14	1 04	58	9 32	61	
6	267	43.0	-2	21.6	9	57.5	55	-21	18 05	18 34	19 09	0 43	59	9 53	61	
7	282	43.2		20.6	24	22.1	56	58.3	06	33	05	26	59	10 10	60	
8	297	43.4		19.6	38	46.7	56	-21	07	32	19 02	12	59	24	60	
9	312	43.5		18.6	53	11.4	57	-22	08	32	18 59	0 00	59	36	60	
10	327	43.7		17.6	67	36.0	56	00.8	09	31	57	** ** *	** *	10 57	59	
11	342	43.9	-2	16.6	82	00.7	57	-22	10 N	18 11	18 32	18 56	** ** *	** *	11 16	58
12	357	44.1	-2	15.6	96	25.5	58	-22	0	18 12	18 33	18 57	** ** *	** *	11 33	57
13	12	44.2		14.6	110	50.2	57	01.9	10 S	14	35	18 59	23	46	58	57
14	27	44.4		13.7	125	15.0	58	02.0	1	16	38	19 03	28	59	12 08	57
15	42	44.6		12.7	139	39.8	58	01.9	1	18	42	10	23	07	61	56
16	57	44.8		11.7	154	04.7	59	01.7	2	19	44	14	22	55	61	49
17	72	44.9	-2	10.7	168	29.6	59	-22	18 21	18 48	19 20	22	41	62	12 55	55
18	87	45.1	-2	09.7	182	54.5	59	-22	18 22	18 52	19 26	22	25	63	13 12	54
19	102	45.3		08.7	197	19.5	60	-22	24	57	35	22	04	65	32	53
20	117	45.5		07.7	211	44.5	60	-21	25	18 59	40	21	54	66	42	53
21	132	45.6		06.7	226	09.5	60	58.5	27	19 02	45	43	66	13 53	52	
22	147	45.8		05.8	240	34.6	61	57.5	28	05	50	31	67	14 05	52	
23	162	46.0		04.8	254	59.7	61	56.3	29	09	19 56	17	68	20	50	
24	177	46.2	-2	03.8	269	24.9	62	-21	18 31	19 13	20 04	21	00	69	14 37	49
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 29 ^m 9			Mag.: -4.3 PMG: 14 ^h 57 ^m			Mag.: -1.1 PMG: 23 ^h 18 ^m			Mag.: -2.1 PMG: 15 ^h 00 ^m			Mag.: +0.4 PMG: 2 ^h 21 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	172	01.0		135	47.9	+16	9	11.8	+11	134	36.1	+13	324	35.6	-8	
1	187	03.5		150	47.8		24	15.1		149	38.1		339	38.2	23.0	
2	202	05.9		165	47.7		39	18.4		164	40.1		354	40.7	22.9	
3	217	08.4		180	47.6		54	21.8		179	42.0		9	43.3	22.9	
4	232	10.9		195	47.5		69	25.1		194	44.0		24	45.9	22.8	
5	247	13.3		210	47.4	+16	84	28.5	+11	209	46.0	+13	39	48.5	-8	
6	262	15.8		225	47.3	+16	99	31.8	+11	224	48.0	+13	54	51.1	-8	
7	277	18.3		240	47.2		114	35.2		239	49.9		69	53.7	22.7	
8	292	20.7		255	47.1		129	38.5		254	51.9		84	56.3	22.6	
9	307	23.2		270	47.0		144	41.8		269	53.9		99	58.9	22.6	
10	322	25.6		285	46.9		159	45.2		284	55.9		115	01.5	22.5	
11	337	28.1		300	46.8	+16	174	48.5	+11	299	57.8	+13	130	04.1	-8	
12	352	30.6		315	46.7	+16	189	51.9	+11	314	59.8	+13	145	06.7	-8	
13	7	33.0		330	46.6		204	55.2		330	01.8		160	09.3	22.3	
14	22	35.5		345	46.5		219	58.5		345	03.8		175	11.9	22.3	
15	37	38.0		0	46.4		235	01.9		0	05.7		190	14.5	22.2	
16	52	40.4		15	46.3		250	05.2		15	07.7		205	17.1	22.2	
17	67	42.9		30	46.2	+16	265	08.5	+11	30	09.7	+13	220	19.7	-8	
18	82	45.4		45	46.1	+16	280	11.9	+11	45	11.7	+13	235	22.3	-8	
19	97	47.8		60	46.0		295	15.2		60	13.6		250	24.9	22.0	
20	112	50.3		75	45.9		310	18.5		75	15.6		265	27.4	21.9	
21	127	52.8		90	45.8		325	21.9		90	17.6		280	30.0	21.9	
22	142	55.2		105	45.7		340	25.2		105	19.6		295	32.6	21.8	
23	157	57.7		120	45.6		355	28.5		120	21.5		310	35.2	21.8	
24	173	00.1		135	45.5	+16	10	31.9	+11	135	23.5	+13	325	37.8	-8	
Dif	—			-1		+10	+33		+3	+20		+2	+26		+1	

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UT	SOL			<div><div><div><div><div></div><div>LUNA</div></div><div><div>SD: 16'0</div><div>Edad: 22^d1</div><div>PMG: 6^h 17^m</div></div><div><div>PHE</div><div><div>4^h: 58'5</div><div>12^h: 58'3</div><div>20^h: 58'1</div></div></div></div></div></div>				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 12 ^h 08 ^m 8			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	177	46.2	- 2	269	24.9	- 21	55.0	60 N	4 45	5 34	6 16	3 07	41	9 29	76		
1	192	46.3		283	50.2		53.5	58		50	36	2 50	43	9 46	73		
2	207	46.5		298	15.4		51.9	56		54	38	36	44	10 01	71		
3	222	46.7	- 2	312	40.7		50.2	54	4 58	39	14	23	46	13	70		
4	237	46.9	- 1	327	06.1		48.3	52	5 01	40	13	12	47	24	68		
5	252	47.0	- 1	341	31.5		46.3	50	5 03	5 41	6 13	2 02	48	10 33	68		
6	267	47.2	- 1	355	57.0		44.1	45	5 09	5 43	6 12	1 42	49	10 54	65		
7	282	47.4		10	22.5		41.8	40		13	44	11	25	51	11 10	63	
8	297	47.6		24	48.1		39.4	35		16	45	10	1 11	52	24	62	
9	312	47.7		39	13.7		36.8	30		18	46	10	0 59	53	36	61	
10	327	47.9		53	39.4		34.1	20		21	46	08	38	54	11 56	59	
11	342	48.1	- 1	68	05.2		31.3	10 N	5 22	5 46	6 07	0 20	56	12 14	57		
12	357	48.3	- 1	82	30.9		28.4	0	5 21	5 45	6 06	0 03	57	12 30	56		
13	12	48.5		96	56.8		25.3	10 S		19	43	04	***	***	12 47	54	
14	27	48.6		111	22.7		22.1	20		15	40	02	***	***	13 05	52	
15	42	48.8		125	48.7		18.7	30		09	37	6 00	***	***	25	50	
16	57	49.0		140	14.7		15.3	35	5 04	34	5 59	23	56	62	37	48	
17	72	49.2	- 1	154	40.8		11.7	40	4 59	5 31	5 58	23	43	64	13 50	47	
18	87	49.3	- 1	169	07.0		08.0	45	4 52	5 27	5 56	23	28	66	14 06	45	
19	102	49.5		183	33.2		04.1	50		43	22	54	09	69	25	43	
20	117	49.7		197	59.5		00.1	52		39	19	53	23	00	70	35	41
21	132	49.9		212	25.8		56.1	54		34	17	52	22	49	72	45	40
22	147	50.0		226	52.2		51.8	56		29	14	51	38	74	14 57	38	
23	162	50.2		241	18.7		47.5	58		22	10	50	25	76	15 10	37	
24	177	50.4	- 1	255	45.3		43.0	60 S	4 15	5 06	5 49	22	09	79	15 26	34	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 25 ^m 9			Mag.: -4.3 PMG: 14 ^h 57 ^m			Mag.: -1.1 PMG: 23 ^h 13 ^m			Mag.: -2.1 PMG: 14 ^h 56 ^m			Mag.: +0.4 PMG: 2 ^h 17 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'		°	'	°	'	°	'	°	'	°	'	°	'		
0	173	00.1		135	45.5	+ 16	10	31.9	+ 11	135	23.5	+ 13	325	37.8	- 8	21.7	
1	188	02.6		150	45.4	+ 16	25	35.2		150	25.5		340	40.4		21.6	
2	203	05.1		165	45.3	+ 17	40	38.5		165	27.5		355	43.0		21.6	
3	218	07.5		180	45.2		55	41.9		180	29.4		10	45.6		21.5	
4	233	10.0		195	45.1		70	45.2		195	31.4		25	48.2		21.5	
5	248	12.5		210	45.0	+ 17	85	48.5	+ 11	210	33.4	+ 13	40	50.8	- 8	21.4	
6	263	14.9		225	44.9	+ 17	100	51.8	+ 11	225	35.3	+ 13	55	53.4	- 8	21.4	
7	278	17.4		240	44.8		115	55.2		240	37.3		70	56.0		21.3	
8	293	19.9		255	44.7		130	58.5		255	39.3		85	58.6		21.2	
9	308	22.3		270	44.6		146	01.8		270	41.3		101	01.2		21.2	
10	323	24.8		285	44.5		161	05.1		285	43.2		116	03.8		21.1	
11	338	27.3		300	44.4	+ 17	176	08.5	+ 11	300	45.2	+ 13	131	06.4	- 8	21.1	
12	353	29.7		315	44.3	+ 17	191	11.8	+ 11	315	47.2	+ 13	146	09.0	- 8	21.0	
13	8	32.2		330	44.2		206	15.1		330	49.1		161	11.6		21.0	
14	23	34.6		345	44.2		221	18.4		345	51.1		176	14.2		20.9	
15	38	37.1		0	44.1		236	21.8		0	53.1		191	16.8		20.8	
16	53	39.6		15	44.0		251	25.1		15	55.1		206	19.4		20.8	
17	68	42.0		30	43.9	+ 17	266	28.4	+ 11	30	57.0	+ 13	221	22.0	- 8	20.7	
18	83	44.5		45	43.8	+ 17	281	31.7	+ 11	45	59.0	+ 13	236	24.6	- 8	20.7	
19	98	47.0		60	43.7		296	35.0		61	01.0		251	27.2		20.6	
20	113	49.4		75	43.6		311	38.4		76	02.9		266	29.8		20.6	
21	128	51.9		90	43.5		326	41.7		91	04.9		281	32.4		20.5	
22	143	54.4		105	43.4		341	45.0		106	06.9		296	35.0		20.4	
23	158	56.8		120	43.3		356	48.3		121	08.9		311	37.6		20.4	
24	173	59.3		135	43.2	+ 17	11	51.6	+ 11	136	10.8	+ 13	326	40.2	- 8	20.3	
Dif	—			-1 +10			+33 +3			+20 +2			+26 +1				


VIERNES 16 DE MARZO DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 08 ^m 5			SD: 15 ^h 8 Edad: 23 ^d 1 PHE { 4 ^h : 57/9 12 ^h : 57/7 20 ^h : 57/5 PMG: 7 ^h 13 ^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	^h ^m	^h ^m	^h ^m	
0	177	50.4	− 1 40.1	255	45.3	76 − 20 43.0	45	60 N	18 06	18 47	19 37	3 48	27	10 45	82	
1	192	50.6	39.1	270	11.9	77 38.5	45	58	06	45	32	33	30	10 59	79	
2	207	50.8	38.1	284	38.6	77 33.8	47	56	06	43	27	20	33	11 12	76	
3	222	50.9	37.1	299	05.3	77 29.0	48	54	07	42	23	3 09	35	23	73	
4	237	51.1	36.1	313	32.1	78 24.0	50	52	07	40	20	2 59	37	32	72	
5	252	51.3	− 1 35.1	327	59.0	79 − 20 19.0	50	50	18 07	18 39	19 17	2 50	38	11 41	70	
6	267	51.5	− 1 34.1	342	26.0	80 − 20 13.8	52	45	18 08	18 37	19 11	2 31	41	11 59	67	
7	282	51.6	33.2	356	53.0	80 08.5	53	40	08	35	07	16	43	12 13	65	
8	297	51.8	32.2	11 20.1	81 − 20 03.1	54 54	54	35	09	34	03	2 03	45	26	62	
9	312	52.0	31.2	25 47.3	82 − 19 57.6	55 55	55	30	09	33	19 01	1 52	47	37	60	
10	327	52.2	30.2	40 14.5	82 52.0	56 56	56	20	10	32	18 58	32	50	12 55	57	
11	342	52.4	− 1 29.2	54 41.8	83 − 19 46.3	57 57	57	10 N	18 11	18 32	18 56	1 16	51	13 11	55	
12	357	52.5	− 1 28.2	69 09.2	84 − 19 40.5	58 58	58	0	18 12	18 32	18 56	1 00	54	13 26	52	
13	12 52.7	27.2	83 36.7	85 34.5	60 60	10 S	60	10 S	13	34	18 58	0 44	56	41	50	
14	27 52.9	26.2	98 04.2	85 28.5	60 60	20	60	20	14	36	19 02	27	58	13 57	47	
15	42 53.1	25.3	112 31.8	86 22.3	62 62	30	62	30	15	39	07	0 08	60	14 15	44	
16	57 53.3	24.3	126 59.5	87 16.1	62 62	35	62	35	16	42	11	** ** *	** ** *	25	42	
17	72 53.4	− 1 23.3	141 27.2	87 − 19 09.7	64 64	40	64	40	18 17	18 44	19 16	** ** *	** ** *	14 37	40	
18	87 53.6	− 1 22.3	155 55.0	88 − 19 03.2	65 65	45	65	45	18 19	18 48	19 22	** ** *	** ** *	14 51	38	
19	102 53.8	21.3	170 22.9	89 − 18 56.6	66 66	50	66	50	20	52	31	** ** *	** ** *	15 08	35	
20	117 54.0	20.3	184 50.9	90 50.0	66 66	52	66	52	21	55	35	** ** *	** ** *	16 33		
21	132 54.1	19.3	199 18.9	90 43.2	68 68	54	68	54	22	18 57	39	** ** *	** ** *	25	31	
22	147 54.3	18.3	213 47.1	92 36.3	69 69	56	69	56	22	19 00	44	23 52	76	35	29	
23	162 54.5	17.3	228 15.3	92 29.4	69 69	58	69	58	23	03	50	41	79	15 47	26	
24	177 54.7	− 1 16.4	242 43.5	92 − 18 22.3	71 71	60 S	71	60 S	18 25	19 06	19 57	23 28	83	16 00	23	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 12 ^h 22 ^m 0			Mag.: −4.3 PMG: 14 ^h 57 ^m			Mag.: −1.1 PMG: 23 ^h 07 ^m			Mag.: −2.1 PMG: 14 ^h 53 ^m			Mag.: +0.4 PMG: 2 ^h 13 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
^h	°	'	°	°	'	°	'	°	^h ^m	^h ^m	^h ^m	^h ^m	^h ^m	^h ^m	^h ^m	
0	173	59.3	135 43.2	+ 17 22.7	11 51.6	+ 11 48.4	136 10.8	+ 13 55.1	326 40.2	− 8 20.3						
1	189	01.7	150 43.1	23.8	26 54.9	48.7	151 12.8	55.3	341 42.8	20.3						
2	204	04.2	165 43.0	24.8	41 58.2	48.9	166 14.8	55.4	356 45.4	20.2						
3	219	06.7	180 42.9	25.8	57 01.6	49.2	181 16.7	55.6	11 48.0	20.2						
4	234	09.1	195 42.8	26.8	72 04.9	49.5	196 18.7	55.8	26 50.6	20.1						
5	249	11.6	210 42.7	+ 17 27.8	87 08.2	+ 11 49.7	211 20.7	+ 13 55.9	41 53.2	− 8 20.0						
6	264	14.1	225 42.6	+ 17 28.8	102 11.5	+ 11 50.0	226 22.6	+ 13 56.1	56 55.8	− 8 20.0						
7	279	16.5	240 42.5	29.8	117 14.8	50.2	241 24.6	56.3	71 58.4	19.9						
8	294	19.0	255 42.4	30.9	132 18.1	50.5	256 26.6	56.4	87 01.0	19.9						
9	309	21.5	270 42.3	31.9	147 21.4	50.8	271 28.5	56.6	102 03.6	19.8						
10	324	23.9	285 42.2	32.9	162 24.7	51.0	286 30.5	56.8	117 06.2	19.7						
11	339	26.4	300 42.2	+ 17 33.9	177 28.0	+ 11 51.3	301 32.5	+ 13 56.9	132 08.8	− 8 19.7						
12	354	28.9	315 42.1	+ 17 34.9	192 31.3	+ 11 51.5	316 34.5	+ 13 57.1	147 11.4	− 8 19.6						
13	9 31.3	330 42.0	35.9	207 34.6	51.8		331 36.4	57.3	162 14.0	19.6						
14	24 33.8	345 41.9	36.9	222 37.9	52.0		346 38.4	57.4	177 16.6	19.5						
15	39 36.2	0 41.8	37.9	237 41.3	52.3		1 40.4	57.6	192 19.2	19.5						
16	54 38.7	15 41.7	38.9	252 44.6	52.5		16 42.3	57.8	207 21.8	19.4						
17	69 41.2	30 41.6	+ 17 39.9	267 47.9	+ 11 52.8		31 44.3	+ 13 57.9	222 24.4	− 8 19.3						
18	84 43.6	45 41.5	+ 17 40.9	282 51.2	+ 11 53.0		46 46.3	+ 13 58.1	237 27.0	− 8 19.3						
19	99 46.1	60 41.4	41.9	297 54.5	53.3		61 48.2	58.3	252 29.6	19.2						
20	114 48.6	75 41.3	42.9	312 57.8	53.5		76 50.2	58.4	267 32.2	19.2						
21	129 51.0	90 41.2	43.9	328 01.1	53.8		91 52.2	58.6	282 34.8	19.1						
22	144 53.5	105 41.1	44.9	343 04.4	54.0		106 54.1	58.8	297 37.4	19.0						
23	159 56.0	120 41.0	45.9	358 07.7	54.3		121 56.1	58.9	312 40.0	19.0						
24	174 58.4	135 40.9	+ 17 46.9	13 11.0	+ 11 54.5		136 58.1	+ 13 59.1	327 42.6	− 8 18.9						
Dif	—	−1	+10	+33	+3		+20	+2	+26	+1						


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SÁBADO 17 DE MARZO DE 2012

UT	SOL			 LUNA						Latitud	Crepúsculos		Salida de Sol	Salida		Puesta	
	SD: 16 ^h 1 PMG: 12 ^h 08 ^m 2			SD: 15 ^h 6 Edad: 24 ^d 1 PHE $\begin{cases} 4^h: 57/3 \\ 12^h: 57/1 \\ 20^h: 56/9 \end{cases}$ PMG: 8 ^h 06 ^m R°: 50 ^m										de Luna		de Luna	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil		Hora	R°	Hora	R°	
^h 0	177 54.7	- 1 16.4		242 43.5		- 18 22.3		60 N	4 39	5 28	6 10	4 15	19	12 07	83		
1	192 54.9		15.4	257 11.9	94	15.2	71	58	44	30	09	4 03	22	18 80			
2	207 55.0		14.4	271 40.3	94	07.9	73	56	49	32	09	3 53	25	28 77			
3	222 55.2		13.4	286 08.8	95	- 18 00.6	73	54	52	34	09	44	27	36 75			
4	237 55.4		12.4	300 37.3	95	- 17 53.1	75	52	56	35	09	36	29	44 73			
5	252 55.6	- 1 11.4		315 06.0	97	- 17 45.6	75	50	4 59	5 37	6 09	3 28	31	12 51	71		
6	267 55.8	- 1 10.4		329 34.7	97	- 17 38.0	76	45	5 05	5 39	6 08	3 12	35	13 06	67		
7	282 55.9		09.4	344 03.5	98	30.3	77	40	09	41	08	2 59	38	18 64			
8	297 56.1		08.4	358 32.4	99	22.5	78	35	13	42	07	48	40	28 62			
9	312 56.3		07.5	13 01.3	99	14.6	79	30	16	43	07	39	41	37 59			
10	327 56.5		06.5	27 30.3	100	- 17 06.6	80	20	19	44	06	22	45	13 52	56		
11	342 56.7	- 1 05.5		41 59.4	101	- 16 58.5	81	10 N	5 20	5 45	6 06	2 07	48	14 06	52		
12	357 56.8	- 1 04.5		56 28.6	102	- 16 50.4	81	0	5 20	5 44	6 05	1 54	50	14 18	50		
13	12 57.0		03.5	70 57.8	102	42.2	82	10 S	19	43	04	40	53	31 46			
14	27 57.2		02.5	85 27.1	103	33.9	83	20	15	41	03	25	57	44 43			
15	42 57.4		01.5	99 56.5	104	25.5	84	30	10	38	02	1 08	60	14 59	39		
16	57 57.6	- 1 00.5		114 26.0	105	17.0	85	35	06	36	01	0 58	62	15 07	38		
17	72 57.8	- 0 59.5		128 55.5	105	- 16 08.5	85	40	5 01	5 33	6 00	0 47	64	15 17	35		
18	87 57.9	- 0 58.6		143 25.1	106	- 15 59.9	86	45	4 55	5 29	5 59	0 34	67	15 29	31		
19	102 58.1		57.6	157 54.8	107	51.2	87	50	47	25	57	18	70	43 28			
20	117 58.3		56.6	172 24.5	107	42.4	88	52	43	23	57	10	72	49 26			
21	132 58.5		55.6	186 54.3	108	33.6	88	54	38	21	56	0 01	75	15 56	25		
22	147 58.7		54.6	201 24.2	109	24.6	89	56	33	18	55	** **	***	16 04	22		
23	162 58.8		53.6	215 54.2	110	15.7	90	58	27	15	54	** **	***	13 20			
24	177 59.0	- 0 52.6		230 24.2	110	- 15 06.6	91	60 S	4 21	5 12	5 53	** **	***	16 23	17		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 12 ^h 18 ^m 1		Mag.: -4.3 PMG: 14 ^h 57 ^m			Mag.: -1.1 PMG: 23 ^h 02 ^m			Mag.: -2.1 PMG: 14 ^h 50 ^m			Mag.: +0.4 PMG: 2 ^h 09 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
^h 0	174 58.4		135 40.9	+ 17 46.9		13 11.0	+ 11 54.5		136 58.1	+ 13 59.1		327 42.6	- 8 18.9				
1	190 00.9		150 40.8		47.9	28 14.3	54.8		152 00.0		59.3	342 45.2	18.9				
2	205 03.4		165 40.8		48.9	43 17.6	55.0		167 02.0		59.4	357 47.8	18.8				
3	220 05.8		180 40.7		49.9	58 20.8	55.3		182 04.0		59.6	12 50.4	18.7				
4	235 08.3		195 40.6		50.9	73 24.1	55.5		197 05.9		59.8	27 53.0	18.7				
5	250 10.7		210 40.5	+ 17 51.9		88 27.4	+ 11 55.8		212 07.9	+ 13 59.9		42 55.6	- 8 18.6				
6	265 13.2		225 40.4	+ 17 52.9		103 30.7	+ 11 56.0		227 09.9	+ 14 00.1		57 58.2	- 8 18.6				
7	280 15.7		240 40.3		53.9	118 34.0	56.3		242 11.8		00.3	73 00.8	18.5				
8	295 18.1		255 40.2		54.9	133 37.3	56.5		257 13.8		00.4	88 03.4	18.5				
9	310 20.6		270 40.1		55.9	148 40.6	56.8		272 15.8		00.6	103 06.0	18.4				
10	325 23.1		285 40.0		56.9	163 43.9	57.0		287 17.7		00.8	118 08.6	18.3				
11	340 25.5		300 39.9	+ 17 57.9		178 47.2	+ 11 57.2		302 19.7	+ 14 00.9		133 11.2	- 8 18.3				
12	355 28.0		315 39.8	+ 17 58.9		193 50.5	+ 11 57.5		317 21.7	+ 14 01.1		148 13.8	- 8 18.2				
13	10 30.5		330 39.7	+ 17 59.9		208 53.8	57.7		332 23.6		01.3	163 16.4	18.2				
14	25 32.9		345 39.6	+ 18 00.9		223 57.0	58.0		347 25.6		01.4	178 19.0	18.1				
15	40 35.4		0 39.6		01.9	239 00.3	58.2		2 27.5		01.6	193 21.6	18.0				
16	55 37.8		15 39.5		02.9	254 03.6	58.4		17 29.5		01.8	208 24.2	18.0				
17	70 40.3		30 39.4	+ 18 03.8		269 06.9	+ 11 58.7		32 31.5	+ 14 01.9		223 26.8	- 8 17.9				
18	85 42.8		45 39.3	+ 18 04.8		284 10.2	+ 11 58.9		47 33.4	+ 14 02.1		238 29.4	- 8 17.9				
19	100 45.2		60 39.2		05.8	299 13.5	59.2		62 35.4		02.3	253 32.0	17.8				
20	115 47.7		75 39.1		06.8	314 16.7	59.4		77 37.4		02.4	268 34.6	17.7				
21	130 50.2		90 39.0		07.8	329 20.0	59.6		92 39.3		02.6	283 37.2	17.7				
22	145 52.6		105 38.9		08.8	344 23.3	+ 11 59.9		107 41.3		02.8	298 39.8	17.6				
23	160 55.1		120 38.8		09.8	359 26.6	+ 12 00.1		122 43.3		02.9	313 42.4	17.6				
24	175 57.6		135 38.7	+ 18 10.7		14 29.9	+ 12 00.4		137 45.2	+ 14 03.1		328 45.0	- 8 17.5				
Dif	—		-1	+10		+33	+2		+20	+2		+26	+1				

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UT	SOL		 LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		SD: 15 ^h 5		PHE $\left\{ \begin{array}{l} 4^h: 56/7 \\ 12^h: 56/5 \\ 20^h: 56/3 \end{array} \right.$										
	PMG: 12 ^h 07 ^m 9		Edad: 25 ^d 1												
	PMG: 8 ^h 56 ^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 59.0	− 0 52.6	230 24.2		− 15 06.6	91	60 N	18 11	18 52	19 42	4 34 15		13 30 82		
1	192 59.2	51.6	244 54.3	111	− 14 57.5	91	58	10	50	36	25 18		38 79		
2	207 59.4	50.6	259 24.5	112	48.3	92	56	10	48	32	18 19		45 76		
3	222 59.6	49.7	273 54.7	112	39.0	93	54	10	46	27	11 22		51 74		
4	237 59.7	48.7	288 25.0	113	29.7	93	52	10	44	24	4 05 23		13 57 72		
5	252 59.9	− 0 47.7	302 55.4	114	− 14 20.3	94	50	18 10	18 43	19 21	3 59 26		14 02 70		
6	268 00.1	− 0 46.7	317 25.8	114	− 14 10.8	95	45	18 10	18 40	19 14	3 47 29		14 13 66		
7	283 00.3	45.7	331 56.4	116	− 14 01.3	95	40	10	37	09	37 32		22 63		
8	298 00.5	44.7	346 26.9	115	− 13 51.7	96	35	10	36	05	28 35		30 60		
9	313 00.7	43.7	0 57.6	117	42.0	97	30	10	34	19 02	20 38		36 58		
10	328 00.8	42.7	15 28.3	117	32.3	97	20	11	33	18 58	3 07 41		48 54		
11	343 01.0	− 0 41.7	29 59.1	118	− 13 22.6	97	10 N	18 11	18 32	18 56	2 55 45		14 58 50		
12	358 01.2	− 0 40.8	44 29.9	118	− 13 12.7	99	0	18 11	18 32	18 56	2 44 48		15 08 46		
13	13 01.4	39.8	59 00.8	119	− 13 02.8	99	10 S	12	33	18 57	33 51		17 43		
14	28 01.6	38.8	73 31.8	120	− 12 52.9	99	20	12	34	19 00	22 54		27 40		
15	43 01.7	37.8	88 02.9	121	42.9	100	30	13	37	05	08 59		38 36		
16	58 01.9	36.8	102 34.0	121	32.9	100	35	14	39	08	2 00 61		45 33		
17	73 02.1	− 0 35.8	117 05.1	121	− 12 22.8	101	40	18 14	18 41	19 13	1 51 64		15 52 31		
18	88 02.3	− 0 34.8	131 36.4	123	− 12 12.6	102	45	18 15	18 44	19 19	1 41 66		16 00 28		
19	103 02.5	33.8	146 07.6	122	− 12 02.4	102	50	16	48	26	28 71		11 24		
20	118 02.7	32.8	160 39.0	124	− 11 52.1	103	52	16	50	30	22 73		15 23		
21	133 02.8	31.9	175 10.4	124	41.8	103	54	17	52	34	16 74		21 20		
22	148 03.0	30.9	189 41.9	125	31.5	103	56	17	54	39	08 77		26 18		
23	163 03.2	29.9	204 13.4	125	21.1	104	58	18	57	44	1 00 79		33 15		
24	178 03.4	− 0 28.9	218 45.0	126	− 11 10.6	105	60 S	18 19	19 00	19 50	0 51 82		16 40 13		
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG 12 ^h 14 ^m 2		Mag.: −4.3 PMG: 14 ^h 58 ^m		Mag.: −1.0 PMG: 22 ^h 57 ^m		Mag.: −2.1 PMG: 14 ^h 47 ^m			Mag.: +0.4 PMG: 2 ^h 05 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
^h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
0	175 57.6	135 38.7	+ 18 10.7	14 29.9	+ 12 00.4	137 45.2	+ 14 03.1	328 45.0	− 8 17.5						
1	191 00.0	150 38.7	11.7	29 33.1	00.6	152 47.2	03.3	343 47.6	17.4						
2	206 02.5	165 38.6	12.7	44 36.4	00.8	167 49.1	03.4	358 50.3	17.4						
3	221 05.0	180 38.5	13.7	59 39.7	01.1	182 51.1	03.6	13 52.9	17.3						
4	236 07.4	195 38.4	14.7	74 43.0	01.3	197 53.1	03.8	28 55.5	17.3						
5	251 09.9	210 38.3	+ 18 15.7	89 46.2	+ 12 01.5	212 55.0	+ 14 03.9	43 58.1	− 8 17.2						
6	266 12.3	225 38.2	+ 18 16.6	104 49.5	+ 12 01.8	227 57.0	+ 14 04.1	59 00.7	− 8 17.1						
7	281 14.8	240 38.1	17.6	119 52.8	02.0	242 59.0	04.3	74 03.3	17.1						
8	296 17.3	255 38.0	18.6	134 56.1	02.2	258 00.9	04.4	89 05.9	17.0						
9	311 19.7	270 37.9	19.6	149 59.3	02.5	273 02.9	04.6	104 08.5	17.0						
10	326 22.2	285 37.8	20.6	165 02.6	02.7	288 04.8	04.8	119 11.1	16.9						
11	341 24.7	300 37.8	+ 18 21.5	180 05.9	+ 12 02.9	303 06.8	+ 14 04.9	134 13.7	− 8 16.8						
12	356 27.1	315 37.7	+ 18 22.5	195 09.1	+ 12 03.2	318 08.8	+ 14 05.1	149 16.3	− 8 16.8						
13	11 29.6	330 37.6	23.5	210 12.4	03.4	333 10.7	05.3	164 18.9	16.7						
14	26 32.1	345 37.5	24.5	225 15.7	03.6	348 12.7	05.5	179 21.5	16.7						
15	41 34.5	0 37.4	25.4	240 18.9	03.9	3 14.6	05.6	194 24.1	16.6						
16	56 37.0	15 37.3	26.4	255 22.2	04.1	18 16.6	05.8	209 26.7	16.5						
17	71 39.5	30 37.2	+ 18 27.4	270 25.5	+ 12 04.3	33 18.6	+ 14 06.0	224 29.3	− 8 16.5						
18	86 41.9	45 37.1	+ 18 28.3	285 28.7	+ 12 04.6	48 20.5	+ 14 06.1	239 31.9	− 8 16.4						
19	101 44.4	60 37.0	29.3	300 32.0	04.8	63 22.5	06.3	254 34.5	16.4						
20	116 46.8	75 37.0	30.3	315 35.3	05.0	78 24.5	06.5	269 37.2	16.3						
21	131 49.3	90 36.9	31.3	330 38.5	05.2	93 26.4	06.6	284 39.8	16.2						
22	146 51.8	105 36.8	32.2	345 41.8	05.5	108 28.4	06.8	299 42.4	16.2						
23	161 54.2	120 36.7	33.2	0 45.0	05.7	123 30.3	07.0	314 45.0	16.1						
24	176 56.7	135 36.6	+ 18 34.2	15 48.3	+ 12 05.9	138 32.3	+ 14 07.1	329 47.6	− 8 16.1						
Dif	—	−1	+10	+33	+2	+20	+2	+26	+1						


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LUNES 19 DE MARZO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 12 ^h 07 ^m 6		SD: 15 ^h 3 Edad: 26 ^d 1 PHE { 4 ^h : 56 ^m /2 12 ^h : 56 ^m /0 20 ^h : 55 ^m /8 PMG: 9 ^h 43 ^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	h m	h m	h m
0	178 03.4	− 0 28.9	218 45.0		− 11 10.6	105	60 N	4 33	5 22	6 04	4 49 11		14 52 80	
1	193 03.6	27.9	233 16.6	126	− 11 00.1	105	58	38	25	04	43 14		14 57 77	
2	208 03.8	26.9	247 48.3	127	− 10 49.6	105	56	43	27	04	37 17		15 01 75	
3	223 03.9	25.9	262 20.1	128	39.0	106	54	47	29	04	33 19		05 72	
4	238 04.1	24.9	276 51.9	128	28.4	106	52	51	31	04	28 21		09 70	
5	253 04.3	− 0 24.0	291 23.8	129	− 10 17.7	107	50	4 54	5 32	6 04	4 25 22		15 12 68	
6	268 04.5	− 0 23.0	305 55.7	129	− 10 07.0	107	45	5 01	5 35	6 05	4 16 26		15 19 64	
7	283 04.7	22.0	320 27.7	130	− 9 56.3	107	40	06	38	05	09 29		25 61	
8	298 04.9	21.0	334 59.7	130	45.5	108	35	10	39	05	4 03 32		30 58	
9	313 05.0	20.0	349 31.8	131	34.7	108	30	13	41	05	3 58 34		34 56	
10	328 05.2	19.0	4 03.9	131	23.8	109	20	17	43	05	48 39		42 51	
11	343 05.4	− 0 18.0	18 36.1	132	− 9 12.9	109	10 N	5 19	5 44	6 05	3 40 42		15 48 48	
12	358 05.6	− 0 17.0	33 08.4	133	− 9 02.0	109	0	5 20	5 44	6 04	3 32 46		15 54 45	
13	13 05.8	16.0	47 40.7	133	− 8 51.0	110	10 S	19	43	04	24 49		16 00 41	
14	28 06.0	15.1	62 13.0	133	40.0	110	20	16	42	04	16 53		07 37	
15	43 06.1	14.1	76 45.4	134	29.0	110	30	11	39	03	07 56		14 33	
16	58 06.3	13.1	91 17.8	134	17.9	111	35	08	37	03	3 01 59		18 31	
17	73 06.5	− 0 12.1	105 50.3	135	− 8 06.8	111	40	5 03	5 35	6 02	2 55 62		16 23 28	
18	88 06.7	− 0 11.1	120 22.9	136	− 7 55.7	111	45	4 58	5 32	6 01	2 47 66		16 28 25	
19	103 06.9	10.1	134 55.4	135	44.6	111	50	50	28	01	39 69		35 21	
20	118 07.1	09.1	149 28.1	137	33.4	112	52	47	27	00	35 70		38 19	
21	133 07.2	08.1	164 00.7	136	22.2	112	54	42	25	6 00	30 73		41 18	
22	148 07.4	07.1	178 33.4	137	− 7 11.0	112	56	38	22	5 59	25 75		44 16	
23	163 07.6	06.2	193 06.2	138	− 6 59.8	113	58	32	20	59	19 78		48 14	
24	178 07.8	− 0 05.2	207 39.0	138	− 6 48.5	113	60 S	4 26	5 17	5 58	2 13 81		16 53 11	
UT	ARIES PMG 12 ^h 10 ^m 2		VENUS Mag.: −4.3 PMG: 14 ^h 58 ^m		MARTE Mag.: −1.0 PMG: 22 ^h 52 ^m		JÚPITER Mag.: −2.1 PMG: 14 ^h 44 ^m		SATURNO Mag.: +0.4 PMG: 2 ^h 00 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec					
	° /	° /	° /	° /	° /	° /	° /	° /	° /					
h	176 56.7	135 36.6	+ 18 34.2	15 48.3	+ 12 05.9	138 32.3	+ 14 07.1	329 47.6	− 8 16.1					
1	191 59.2	150 36.5	35.1	30 51.6	06.1	153 34.3	07.3	344 50.2	16.0					
2	207 01.6	165 36.4	36.1	45 54.8	06.4	168 36.2	07.5	359 52.8	15.9					
3	222 04.1	180 36.4	37.1	60 58.1	06.6	183 38.2	07.6	14 55.4	15.9					
4	237 06.6	195 36.3	38.0	76 01.3	06.8	198 40.1	07.8	29 58.0	15.8					
5	252 09.0	210 36.2	+ 18 39.0	91 04.6	+ 12 07.0	213 42.1	+ 14 08.0	45 00.6	− 8 15.8					
6	267 11.5	225 36.1	+ 18 39.9	106 07.8	+ 12 07.3	228 44.1	+ 14 08.1	60 03.2	− 8 15.7					
7	282 13.9	240 36.0	40.9	121 11.1	07.5	243 46.0	08.3	75 05.8	15.6					
8	297 16.4	255 35.9	41.9	136 14.3	07.7	258 48.0	08.5	90 08.4	15.6					
9	312 18.9	270 35.8	42.8	151 17.6	07.9	273 49.9	08.6	105 11.0	15.5					
10	327 21.3	285 35.7	43.8	166 20.8	08.1	288 51.9	08.8	120 13.7	15.5					
11	342 23.8	300 35.7	+ 18 44.8	181 24.1	+ 12 08.4	303 53.8	+ 14 09.0	135 16.3	− 8 15.4					
12	357 26.3	315 35.6	+ 18 45.7	196 27.3	+ 12 08.6	318 55.8	+ 14 09.1	150 18.9	− 8 15.3					
13	12 28.7	330 35.5	46.7	211 30.6	08.8	333 57.8	09.3	165 21.5	15.3					
14	27 31.2	345 35.4	47.6	226 33.8	09.0	348 59.7	09.5	180 24.1	15.2					
15	42 33.7	0 35.3	48.6	241 37.1	09.2	4 01.7	09.6	195 26.7	15.2					
16	57 36.1	15 35.2	49.5	256 40.3	09.5	19 03.6	09.8	210 29.3	15.1					
17	72 38.6	30 35.2	+ 18 50.5	271 43.6	+ 12 09.7	34 05.6	+ 14 10.0	225 31.9	− 8 15.0					
18	87 41.1	45 35.1	+ 18 51.4	286 46.8	+ 12 09.9	49 07.5	+ 14 10.2	240 34.5	− 8 15.0					
19	102 43.5	60 35.0	52.4	301 50.0	10.1	64 09.5	10.3	255 37.1	14.9					
20	117 46.0	75 34.9	53.4	316 53.3	10.3	79 11.5	10.5	270 39.7	14.8					
21	132 48.4	90 34.8	54.3	331 56.5	10.5	94 13.4	10.7	285 42.3	14.8					
22	147 50.9	105 34.7	55.3	346 59.8	10.7	109 15.4	10.8	300 45.0	14.7					
23	162 53.4	120 34.6	56.2	2 03.0	11.0	124 17.3	11.0	315 47.6	14.7					
24	177 55.8	135 34.6	+ 18 57.2	17 06.2	+ 12 11.2	139 19.3	+ 14 11.2	330 50.2	− 8 14.6					
Dif	—	−1	+10	+32	+2	+20	+2	+26	+1					

MARTES 20 DE MARZO DE 2012

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UT	SOL		 LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1		SD: 15 ^h 2		Edad: 27 ^d 1													
	PMG: 12 ^h 07 ^m 3	PMG: 10 ^h 28 ^m	R°: 44 ^m	PHE { 4 ^h : 55 ^m /7 12 ^h : 55 ^m /5 20 ^h : 55 ^m /4					Civil	Náutico	Hora	R°	Hora	R°				
	hG ☉	Dec	hG ☾	Dif	Dec	Dif												
h	°	'	°		°	'	°	h	m	h	m	h	m	h	m	m	m	
0	178	07.8	− 0 05.2		207	39.0	− 6 48.5	113	60 N	18 15	18 57	19 47	5 00 11	16 12 78				
1	193	08.0	04.2		222	11.8	37.2	113	58	15	54	41	4 57 13	14 75				
2	208	08.2	03.2		236	44.7	25.9	113	56	14	52	36	54 15	16 73				
3	223	08.3	02.2		251	17.6	14.5	114	54	14	49	31	52 17	17 71				
4	238	08.5	01.2		265	50.6	− 6 03.2	113	52	14	48	27	49 19	19 69				
5	253	08.7	− 0 00.2		280	23.6	− 5 51.8	114	50	18 13	18 46	19 24	4 47 21	16 20 68				
6	268	08.9	+ 0 00.8		294	56.6	− 5 40.4	114	45	18 13	18 42	19 17	4 42 25	16 23 64				
7	283	09.1	01.7		309	29.7	29.0	114	40	12	39	11	38 28	26 60				
8	298	09.3	02.7		324	02.8	17.6	114	35	12	37	07	35 30	28 57				
9	313	09.4	03.7		338	35.9	− 5 06.1	115	30	12	35	19 03	32 32	30 55				
10	328	09.6	04.7		353	09.1	− 4 54.7	114	20	11	33	18 59	27 36	33 51				
11	343	09.8	+ 0 05.7		7	42.3	− 4 43.2	115	10 N	18 11	18 32	18 56	4 22 40	16 36 47				
12	358	10.0	+ 0 06.7		22	15.6	− 4 31.7	115	0	18 11	18 31	18 55	4 18 43	16 39 43				
13	13	10.2	07.7		36	48.8	20.2	115	10 S	10	31	56	13 48	41 40				
14	28	10.4	08.7		51	22.2	− 4 08.7	115	20	10	32	18 58	09 51	44 36				
15	43	10.6	09.7		65	55.5	− 3 57.2	115	30	11	34	19 02	03 56	47 32				
16	58	10.7	10.6		80	28.9	45.7	115	35	11	36	05	4 00 58	49 30				
17	73	10.9	+ 0 11.6		95	02.3	− 3 34.1	116	40	18 11	18 38	19 09	3 57 60	16 51 27				
18	88	11.1	+ 0 12.6		109	35.7	− 3 22.6	115	45	18 11	18 40	19 15	3 53 63	16 53 24				
19	103	11.3	13.6		124	09.2	− 3 11.0	116	50	11	44	22	48 67	56 20				
20	118	11.5	14.6		138	42.7	− 2 59.5	115	52	12	45	25	45 70	57 19				
21	133	11.7	15.6		153	16.2	47.9	116	54	12	47	29	43 72	16 59 17				
22	148	11.9	16.6		167	49.7	36.3	116	56	12	49	33	40 74	17 00 15				
23	163	12.0	17.6		182	23.3	24.8	115	58	12	51	38	37 76	02 13				
24	178	12.2	+ 0 18.5		196	56.9	− 2 13.2	116	60 S	18 12	18 54	19 44	3 34 79	17 04 10				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG		Mag.: −4.3		Mag.: −1.0		Mag.: −2.1		Mag.: +0.3									
	12 ^h 06 ^m 3		PMG: 14 ^h 58 ^m		PMG: 22 ^h 47 ^m		PMG: 14 ^h 41 ^m		PMG: 1 ^h 56 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec			hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	177	55.8	135	34.6	+ 18	57.2	17	06.2	+ 12	11.2	139	19.3	+ 14	11.2	330	50.2	− 8	14.6
1	192	58.3	150	34.5		58.1	32	09.5		11.4	154	21.2		11.3	345	52.8		14.5
2	208	00.8	165	34.4	+ 18	59.1	47	12.7		11.6	169	23.2		11.5	0	55.4		14.5
3	223	03.2	180	34.3	+ 19	00.0	62	15.9		11.8	184	25.2		11.7	15	58.0		14.4
4	238	05.7	195	34.2		01.0	77	19.2		12.0	199	27.1		11.8	31	00.6		14.4
5	253	08.2	210	34.1	+ 19	01.9	92	22.4	+ 12	12.2	214	29.1	+ 14	12.0	46	03.2	− 8	14.3
6	268	10.6	225	34.1	+ 19	02.8	107	25.6	+ 12	12.4	229	31.0	+ 14	12.2	61	05.8	− 8	14.2
7	283	13.1	240	34.0		03.8	122	28.9		12.7	244	33.0		12.3	76	08.4		14.2
8	298	15.6	255	33.9		04.7	137	32.1		12.9	259	34.9		12.5	91	11.1		14.1
9	313	18.0	270	33.8		05.7	152	35.3		13.1	274	36.9		12.7	106	13.7		14.1
10	328	20.5	285	33.7		06.6	167	38.6		13.3	289	38.8		12.8	121	16.3		14.0
11	343	22.9	300	33.7	+ 19	07.6	182	41.8	+ 12	13.5	304	40.8	+ 14	13.0	136	18.9	− 8	13.9
12	358	25.4	315	33.6	+ 19	08.5	197	45.0	+ 12	13.7	319	42.8	+ 14	13.2	151	21.5	− 8	13.9
13	13	27.9	330	33.5		09.4	212	48.2		13.9	334	44.7		13.3	166	24.1		13.8
14	28	30.3	345	33.4		10.4	227	51.5		14.1	349	46.7		13.5	181	26.7		13.7
15	43	32.8	0	33.3		11.3	242	54.7		14.3	4	48.6		13.7	196	29.3		13.7
16	58	35.3	15	33.2		12.3	257	57.9		14.5	19	50.6		13.9	211	31.9		13.6
17	73	37.7	30	33.2	+ 19	13.2	273	01.1	+ 12	14.7	34	52.5	+ 14	14.0	226	34.6	− 8	13.6
18	88	40.2	45	33.1	+ 19	14.1	288	04.3	+ 12	14.9	49	54.5	+ 14	14.2	241	37.2	− 8	13.5
19	103	42.7	60	33.0		15.1	303	07.6		15.1	64	56.4		14.4	256	39.8		13.4
20	118	45.1	75	32.9		16.0	318	10.8		15.3	79	58.4		14.5	271	42.4		13.4
21	133	47.6	90	32.8		16.9	333	14.0		15.5	95	00.3		14.7	286	45.0		13.3
22	148	50.0	105	32.8		17.9	348	17.2		15.7	110	02.3		14.9	301	47.6		13.2
23	163	52.5	120	32.7		18.8	3	20.4		15.9	125	04.3		15.0	316	50.2		13.2
24	178	55.0	135	32.6	+ 19	19.8	18	23.6	+ 12	16.1	140	06.2	+ 14	15.2	331	52.8	− 8	13.1
Dif	—		−1		+9		+32		+2		+20		+2		+26		+1	

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MIÉRCOL 21 DE MARZO DE 2012


UT	SOL			● LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 12 ^h 07 ^m 0			SD: 15 ^h 1 Edad: 28 ^d 1 PHE { 4 ^h : 55 ^m /2 12 ^h : 55 ^m /1 20 ^h : 55 ^m /0 PMG: 11 ^h 12 ^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	12.2	+ 0	18.5	196	56.9	− 2	13.2	60 N	4 26	5 16	5 58	5 11	9	17 30	77
1	193	12.4		19.5	211	30.5	− 2	01.6	58	32	19	58	10	12	29	75
2	208	12.6		20.5	226	04.1	− 1	50.0	56	37	22	59	09	15	29	72
3	223	12.8		21.5	240	37.8		38.4	54	42	24	5 59	09	16	28	70
4	238	13.0		22.5	255	11.5		26.9	52	46	26	6 00	08	19	28	68
5	253	13.1	+ 0	23.5	269	45.2	− 1	15.3	50	4 50	5 28	6 00	5 08	20	17 28	66
6	268	13.3	+ 0	24.5	284	18.9	− 1	03.7	45	4 57	5 31	6 01	5 07	23	17 27	62
7	283	13.5		25.5	298	52.7	− 0	52.1	40	5 03	34	01	06	27	26	59
8	298	13.7		26.4	313	26.4		40.5	35	07	37	02	05	30	25	57
9	313	13.9		27.4	328	00.2		29.0	30	11	38	02	04	32	25	54
10	328	14.1		28.4	342	34.0		17.4	20	15	41	03	03	36	24	50
11	343	14.3	+ 0	29.4	357	07.8	− 0	05.9	10 N	5 18	5 42	6 03	5 02	40	17 23	46
12	358	14.4	+ 0	30.4	11	41.7	+ 0	05.7	0	5 19	5 43	6 04	5 01	43	17 22	43
13	13	14.6		31.4	26	15.5		17.2	10 S	19	43	04	01	46	21	40
14	28	14.8		32.4	40	49.4		28.8	20	17	42	04	5 00	50	20	36
15	43	15.0		33.4	55	23.3		40.3	30	12	40	04	4 59	54	19	32
16	58	15.2		34.3	69	57.2	+ 0	51.8	35	09	39	04	58	57	19	29
17	73	15.4	+ 0	35.3	84	31.1	+ 1	03.3	40	5 05	5 37	6 04	4 57	60	17 18	27
18	88	15.6	+ 0	36.3	99	05.0	+ 1	14.8	45	5 00	5 35	6 04	4 56	63	17 17	24
19	103	15.7		37.3	113	38.9		26.3	50	4 54	32	04	55	67	16	21
20	118	15.9		38.3	128	12.9		37.8	52	50	30	04	55	68	16	19
21	133	16.1		39.3	142	46.8	+ 1	49.2	54	47	28	04	55	70	16	16
22	148	16.3		40.3	157	20.8	+ 2	00.7	56	42	26	04	54	72	15	15
23	163	16.5		41.3	171	54.7		12.1	58	37	24	03	53	75	15	12
24	178	16.7	+ 0	42.2	186	28.7	+ 2	23.5	60 S	4 32	5 22	6 03	4 53	77	17 14	10
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 12 ^h 02 ^m 4		Mag.: −4.3 PMG: 14 ^h 58 ^m			Mag.: −1.0 PMG: 22 ^h 42 ^m			Mag.: −2.1 PMG: 14 ^h 38 ^m			Mag.: +0.3 PMG: 1 ^h 52 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	178	55.0	135	32.6	+ 19	18	23.6	+ 12	140	06.2	+ 14	331	52.8	− 8		
1	193	57.4	150	32.5		33	26.9		155	08.2		346	55.4			
2	208	59.9	165	32.4		48	30.1		170	10.1		1	58.1			
3	224	02.4	180	32.4		63	33.3		185	12.1		17	00.7			
4	239	04.8	195	32.3		78	36.5		200	14.0		32	03.3			
5	254	07.3	210	32.2	+ 19	93	39.7	+ 12	215	16.0	+ 14	47	05.9	− 8		
6	269	09.8	225	32.1	+ 19	108	42.9	+ 12	230	17.9	+ 14	62	08.5	− 8		
7	284	12.2	240	32.1		123	46.1		245	19.9		77	11.1			
8	299	14.7	255	32.0		138	49.3		260	21.8		92	13.7			
9	314	17.2	270	31.9		153	52.5		275	23.8		107	16.3			
10	329	19.6	285	31.8		168	55.7		290	25.7		122	19.0			
11	344	22.1	300	31.7	+ 19	183	58.9	+ 12	305	27.7	+ 14	137	21.6	− 8		
12	359	24.5	315	31.7	+ 19	199	02.1	+ 12	320	29.6	+ 14	152	24.2	− 8		
13	14	27.0	330	31.6		214	05.3		335	31.6		167	26.8			
14	29	29.5	345	31.5		229	08.5		350	33.5		182	29.4			
15	44	31.9	0	31.4		244	11.7	19.1	5	35.5	17.7	197	32.0	12.2		
16	59	34.4	15	31.4		259	14.9	19.3	20	37.4	17.9	212	34.6	12.1		
17	74	36.9	30	31.3	+ 19	274	18.1	+ 12	35	39.4	+ 14	227	37.2	− 8		
18	89	39.3	45	31.2	+ 19	289	21.3	+ 12	50	41.3	+ 14	242	39.9	− 8		
19	104	41.8	60	31.1		304	24.5		65	43.3		257	42.5			
20	119	44.3	75	31.1		319	27.7		80	45.2		272	45.1			
21	134	46.7	90	31.0		334	30.9		95	47.2		287	47.7			
22	149	49.2	105	30.9		349	34.1		110	49.1		302	50.3			
23	164	51.6	120	30.8		4	37.3		125	51.1		317	52.9			
24	179	54.1	135	30.8	+ 19	19	40.5	+ 12	140	53.0	+ 14	332	55.5	− 8		
Dif	—		−1		+9	+32		+2	+20		+2	+26		+1		

JUEVES 22 DE MARZO DE 2012

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UT	SOL			● LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1 PMG: 12 ^h 06 ^m 7			SD: 15 ^h 0 Edad: 29 ^d 1		PHE $\begin{cases} 4^h: 54^m/9 \\ 12^h: 54^m/7 \\ 20^h: 54^m/6 \end{cases}$													
	PMG: 11 ^h 55 ^m R°: 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	^h ^m ^m	^h ^m ^m	^h ^m ^m			
0	178	16.7	+ 0	186	28.7	+ 2	23.5	114	60 N	18 20	19 02	19 53	5 20	11	18 47	77			
1	193	16.9		201	02.7		34.9	114	58	19	18 59	46	22	13	44	73			
2	208	17.1		215	36.7		46.3	114	56	19	56	41	24	15	41	71			
3	223	17.2		230	10.7	+ 2	57.7	114	54	18	53	36	25	17	38	69			
4	238	17.4		244	44.7	+ 3	09.0	113	52	17	51	31	27	19	36	67			
5	253	17.6	+ 0	259	18.7	+ 3	20.3	113	50	18 17	18 49	19 27	5 28	20	18 34	65			
6	268	17.8	+ 0	273	52.7	+ 3	31.7	114	45	18 15	18 45	19 19	5 30	25	18 29	62			
7	283	18.0		288	26.7		42.9	112	40	14	41	13	33	27	25	59			
8	298	18.2		303	00.7	+ 3	54.2	113	35	14	39	08	35	29	22	56			
9	313	18.4		317	34.7	+ 4	05.4	112	30	13	37	19 05	36	32	19	54			
10	328	18.5		332	08.7		16.7	113	20	12	34	18 59	39	36	14	49			
11	343	18.7	+ 0	346	42.7	+ 4	27.9	112	10 N	18 11	18 32	18 56	5 42	39	18 09	47			
12	358	18.9	+ 0	1 16.8	151	+ 4	39.0	111	0	18 10	18 31	18 55	5 44	43	18 05	43			
13	13	19.1		15 50.8	150	+ 4	50.2	112	10 S	09	30	55	47	46	18 01	40			
14	28	19.3		30 24.8	150	+ 5	01.3	111	20	09	31	18 56	50	49	17 56	37			
15	43	19.5		44 58.8	150		12.4	111	30	08	32	19 00	53	54	51	33			
16	58	19.7		59 32.8	150		23.4	110	35	08	33	03	55	56	48	31			
17	73	19.8	+ 0	74 06.8	150	+ 5	34.5	111	40	18 08	18 35	19 06	5 57	59	17 45	28			
18	88	20.0	+ 1	88 40.8	150	+ 5	45.5	110	45	18 07	18 37	19 11	5 59	62	17 41	25			
19	103	20.2		103 14.8	150	+ 5	56.5	110	50	07	39	17	6 02	66	37	21			
20	118	20.4		117 48.8	150	+ 6	07.4	109	52	07	41	20	03	68	35	19			
21	133	20.6		132 22.8	150		18.3	109	54	07	42	24	05	69	32	18			
22	148	20.8		146 56.8	150		29.2	109	56	07	44	27	06	72	30	16			
23	163	21.0		161 30.8	150		40.1	109	58	07	46	32	08	74	27	14			
24	178	21.2	+ 1	176 04.7	149	+ 6	50.9	108	60 S	18 06	18 48	19 37	6 10	77	17 24	11			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG 11 ^h 58 ^m 4			Mag.: -4.3 PMG: 14 ^h 58 ^m			Mag.: -1.0 PMG: 22 ^h 37 ^m			Mag.: -2.1 PMG: 14 ^h 35 ^m			Mag.: +0.3 PMG: 1 ^h 48 ^m						
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
^h	[°]	[']	[°]	[°]	[']	[°]	[°]	[']	[°]	[°]	[']	[°]	[°]	[']	[°]	[°]	[']		
0	179	54.1		135	30.8	+ 19	40.5	+ 12	20.8	140	53.0	+ 14	19.3	332	55.5	- 8	11.6		
1	194	56.6		150	30.7		34	43.7	21.0	155	55.0		19.4	347	58.2		11.6		
2	209	59.0		165	30.6		49	46.9	21.2	170	56.9		19.6	3	00.8		11.5		
3	225	01.5		180	30.5		64	50.0	21.4	185	58.9		19.8	18	03.4		11.4		
4	240	04.0		195	30.5		79	53.2	21.6	201	00.8		19.9	33	06.0		11.4		
5	255	06.4		210	30.4	+ 19	94	56.4	+ 12	216	02.8	+ 14	20.1	48	08.6	- 8	11.3		
6	270	08.9		225	30.3	+ 19	109	59.6	+ 12	231	04.7	+ 14	20.3	63	11.2	- 8	11.3		
7	285	11.4		240	30.2		125	02.8	22.1	246	06.7		20.4	78	13.8		11.2		
8	300	13.8		255	30.2		140	06.0	22.3	261	08.6		20.6	93	16.5		11.1		
9	315	16.3		270	30.1		155	09.1	22.5	276	10.6		20.8	108	19.1		11.1		
10	330	18.8		285	30.0		170	12.3	22.7	291	12.5		20.9	123	21.7		11.0		
11	345	21.2		300	29.9	+ 19	185	15.5	+ 12	306	14.5	+ 14	21.1	138	24.3	- 8	10.9		
12	0	23.7		315	29.9	+ 19	200	18.7	+ 12	321	16.4	+ 14	21.3	153	26.9	- 8	10.9		
13	15	26.1		330	29.8		215	21.9	23.2	336	18.4		21.4	168	29.5		10.8		
14	30	28.6		345	29.7		230	25.0	23.4	351	20.3		21.6	183	32.2		10.7		
15	45	31.1		0	29.6		245	28.2	23.6	6	22.3		21.8	198	34.8		10.7		
16	60	33.5		15	29.6		260	31.4	23.7	21	24.2		22.0	213	37.4		10.6		
17	75	36.0		30	29.5	+ 19	275	34.6	+ 12	36	26.2	+ 14	22.1	228	40.0	- 8	10.6		
18	90	38.5		45	29.4	+ 19	290	37.7	+ 12	51	28.1	+ 14	22.3	243	42.6	- 8	10.5		
19	105	40.9		60	29.4	+ 19	305	40.9	24.3	66	30.1		22.5	258	45.2		10.4		
20	120	43.4		75	29.3	+ 20	320	44.1	24.5	81	32.0		22.6	273	47.9		10.4		
21	135	45.9		90	29.2		335	47.2	24.6	96	34.0		22.8	288	50.5		10.3		
22	150	48.3		105	29.1		350	50.4	24.8	111	35.9		23.0	303	53.1		10.2		
23	165	50.8		120	29.1		5	53.6	25.0	126	37.9		23.1	318	55.7		10.2		
24	180	53.2		135	29.0	+ 20	20	56.7	+ 12	141	39.8	+ 14	23.3	333	58.3	- 8	10.1		
Dif	—			-1			+9			+32			+2			+19			+2

SÁBADO 24 DE MARZO DE 2012

UT	SOL		 LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 06 ^m 1		SD: 14 ^h 8 Edad: 1 ^d 4 PHE $\begin{cases} 4^h: 54/3 \\ 12^h: 54/2 \\ 20^h: 54/2 \end{cases}$ PMG: 13 ^h 21 ^m R°: 45 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	178 25.7	+ 1 29.6	165 36.3		+ 10 59.0	98	60 N	18 25	19 07	19 58	5 43 14	21 19 74		
1	193 25.8		180 09.9	146	+ 11 08.8	98	58	24	03	51	50 17	10 71		
2	208 26.0		194 43.4	145		97	56	23	19 00	45	5 56 19	21 03 68		
3	223 26.2		209 17.0	146		97	54	22	18 57	40	6 01 22	20 56 66		
4	238 26.4		223 50.5	145		96	52	21	55	35	06 23	49 65		
5	253 26.6	+ 1 34.5	238 24.1	146	+ 11 47.4	96	50	18 20	18 52	19 31	6 10 25	20 44 63		
6	268 26.8	+ 1 35.5	252 57.6	145	+ 11 56.9	95	45	18 18	18 47	19 22	6 20 28	20 32 60		
7	283 27.0		267 31.0	144	+ 12 06.4	94	40	16	44	15	28 31	22 58		
8	298 27.2		282 04.5	145		94	35	15	40	10	35 33	14 55		
9	313 27.3		296 37.9	144		93	30	14	38	06	41 36	20 06 54		
10	328 27.5		311 11.3	144		92	20	12	34	19 00	6 52 39	19 53 51		
11	343 27.7	+ 1 40.4	325 44.7	144	+ 12 43.7	92	10 N	18 11	18 32	18 56	7 02 41	19 42 48		
12	358 27.9	+ 1 41.4	340 18.0	143	+ 12 52.9	92	0	18 09	18 30	18 54	7 11 44	19 32 45		
13	13 28.1		354 51.3	143	+ 13 02.1	92	10 S	08	29	54	20 47	21 43		
14	28 28.3		9 24.6	143		91	20	07	29	55	29 50	19 10 40		
15	43 28.5		23 57.9	143		89	30	06	30	18 57	40 54	18 58 36		
16	58 28.7		38 31.2	143		89	35	05	30	19 00	47 55	51 34		
17	73 28.8	+ 1 46.3	53 04.4	142	+ 13 38.0	89	40	18 04	18 31	19 03	7 54 58	18 42 33		
18	88 29.0	+ 1 47.3	67 37.6	142	+ 13 46.9	87	45	18 04	18 33	19 07	8 03 60	18 33 30		
19	103 29.2		82 10.7	141	+ 13 55.6	88	50	03	35	13	13 64	21 27		
20	118 29.4		96 43.9	142	+ 14 04.4	88	52	02	36	15	18 66	16 25		
21	133 29.6		111 17.0	141		86	54	02	37	18	23 68	10 23		
22	148 29.8		125 50.1	141		86	56	01	38	22	29 70	18 04 21		
23	163 30.0		140 23.1	140		85	58	01	40	26	36 72	17 56 19		
24	178 30.2	+ 1 53.2	154 56.1	140	+ 14 38.6	85	60 S	18 00	18 42	19 31	8 43 75	17 48 16		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 11 ^h 50 ^m 6		Mag.: -4.3 PMG: 14 ^h 58 ^m		Mag.: -0.9 PMG: 22 ^h 26 ^m		Mag.: -2.1 PMG: 14 ^h 28 ^m		Mag.: +0.3 PMG: 1 ^h 40 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h 0	181 52.4		135 27.4	+ 20 24.9	22 12.4	+ 12 29.2	142 26.5	+ 14 27.4	335 01.1	- 8 08.6				
1	196 54.8		150 27.3		37 15.5	29.4	157 28.5		350 03.8	08.5				
2	211 57.3		165 27.3		52 18.7	29.5	172 30.4		5 06.4	08.5				
3	226 59.8		180 27.2		67 21.8	29.7	187 32.3		20 09.0	08.4				
4	242 02.2		195 27.1		82 24.9	29.9	202 34.3		35 11.6	08.3				
5	257 04.7		210 27.1	+ 20 29.3	97 28.1	+ 12 30.0	217 36.2	+ 14 28.2	50 14.2	- 8 08.3				
6	272 07.2		225 27.0	+ 20 30.2	112 31.2	+ 12 30.2	232 38.2	+ 14 28.4	65 16.9	- 8 08.2				
7	287 09.6		240 27.0		127 34.3	30.3	247 40.1		80 19.5	08.1				
8	302 12.1		255 26.9		142 37.5	30.5	262 42.1		95 22.1	08.1				
9	317 14.6		270 26.8		157 40.6	30.7	277 44.0		110 24.7	08.0				
10	332 17.0		285 26.8		172 43.7	30.8	292 45.9		125 27.3	07.9				
11	347 19.5		300 26.7	+ 20 34.6	187 46.8	+ 12 31.0	307 47.9	+ 14 29.1	140 30.0	- 8 07.9				
12	2 22.0		315 26.6	+ 20 35.4	202 50.0	+ 12 31.1	322 49.8	+ 14 29.4	155 32.6	- 8 07.8				
13	17 24.4		330 26.6		217 53.1	31.3	337 51.8		170 35.2	07.8				
14	32 26.9		345 26.5		232 56.2	31.4	352 53.7		185 37.8	07.7				
15	47 29.3		0 26.5		247 59.3	31.6	7 55.7		200 40.4	07.6				
16	62 31.8		15 26.4		263 02.5	31.7	22 57.6		215 43.1	07.6				
17	77 34.3		30 26.3	+ 20 39.8	278 05.6	+ 12 31.9	37 59.5	+ 14 30.3	230 45.7	- 8 07.5				
18	92 36.7		45 26.3	+ 20 40.6	293 08.7	+ 12 32.1	53 01.5	+ 14 30.4	245 48.3	- 8 07.4				
19	107 39.2		60 26.2		308 11.8	32.2	68 03.4		260 50.9	07.4				
20	122 41.7		75 26.2		323 14.9	32.4	83 05.4		275 53.5	07.3				
21	137 44.1		90 26.1		338 18.0	32.5	98 07.3		290 56.2	07.2				
22	152 46.6		105 26.0		353 21.2	32.7	113 09.2		305 58.8	07.2				
23	167 49.1		120 26.0		8 24.3	32.8	128 11.2		321 01.4	07.1				
24	182 51.5		135 25.9	+ 20 45.8	23 27.4	+ 12 33.0	143 13.1	+ 14 31.4	336 04.0	- 8 07.0				
Dif	—		-1 +9		+31 +2		+19 +2		+26 +1					

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DOMINGO 25 DE MARZO DE 2012

UT	SOL			☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 05 ^m 8			SD: 14 ^h 7 Edad: 2 ^d 4 PHE { 4 ^h : 54 ^m 1 12 ^h : 54 ^m 1 20 ^h : 54 ^m 0 PMG: 14 ^h 06 ^m R°: 46 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	h	m	h	m
0	178	30.2	+ 1	154	56.1	140	+ 14	38.6	4 12	5 04	5 45	5 57	19	22	33
1	193	30.3		169	29.1	140		47.0	20	07	47	6 07	21	21	68
2	208	30.5		184	02.1	140	+ 14	55.3	26	11	48	15	24	11	66
3	223	30.7		198	35.0	139	+ 15	03.6	31	14	49	23	25	22	02
4	238	30.9		213	07.9	139		11.8	36	17	50	29	28	21	54
5	253	31.1	+ 1	227	40.8	139	+ 15	20.0	4 40	5 19	5 51	6 35	29	21	47
6	268	31.3	+ 1	242	13.6	138	+ 15	28.0	4 49	5 24	5 53	6 48	32	21	32
7	283	31.5	+ 2	256	46.4	138		36.0	4 56	28	55	6 59	34	20	56
8	298	31.7		271	19.2	138		44.0	5 01	31	56	7 08	37	09	54
9	313	31.9		285	52.0	138		51.8	06	34	57	17	38	21	00
10	328	32.0		300	24.7	137	+ 15	59.6	12	37	5 59	31	41	20	44
11	343	32.2	+ 2	314	57.4	137	+ 16	07.3	5 16	5 40	6 01	7 43	44	20	30
12	358	32.4	+ 2	329	30.0	136	+ 16	15.0	5 18	5 42	6 03	7 55	46	20	17
13	13	32.6		344	02.6	136		22.6	19	43	04	8 07	48	20	04
14	28	32.8		358	35.2	136		30.1	18	43	05	19	51	19	50
15	43	33.0		13	07.8	136		37.5	15	43	07	34	53	34	40
16	58	33.2		27	40.3	135		44.9	13	42	07	42	55	25	38
17	73	33.4	+ 2	42	12.8	135	+ 16	52.2	5 10	5 41	6 08	8 52	57	19	15
18	88	33.5	+ 2	56	45.2	134	+ 16	59.4	5 06	5 40	6 09	9 03	60	19	03
19	103	33.7		71	17.7	135	+ 17	06.5	5 00	38	10	17	62	18	48
20	118	33.9		85	50.1	134		13.6	4 58	37	11	24	63	41	30
21	133	34.1		100	22.4	133		20.6	54	36	11	31	65	33	29
22	148	34.3		114	54.7	133		27.5	51	35	12	39	67	25	26
23	163	34.5		129	27.0	133		34.3	47	33	12	48	70	15	25
24	178	34.7	+ 2	143	59.3	133	+ 17	41.1	4 42	5 32	6 13	9 58	73	18	04
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 11 ^h 46 ^m 6			Mag.: -4.3 PMG: 14 ^h 58 ^m			Mag.: -0.9 PMG: 22 ^h 22 ^m			Mag.: -2.1 PMG: 14 ^h 25 ^m			Mag.: +0.3 PMG: 1 ^h 35 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	182	51.5		135	25.9	+ 20	23	27.4	+ 12	143	13.1	+ 14	336	04.0	- 8
1	197	54.0		150	25.9		38	30.5		158	15.1		351	06.6	07.0
2	212	56.5		165	25.8		53	33.6		173	17.0		6	09.3	06.9
3	227	58.9		180	25.8		68	36.7		188	19.0		21	11.9	06.9
4	243	01.4		195	25.7		83	39.8		203	20.9		36	14.5	06.8
5	258	03.8		210	25.6	+ 20	98	42.9	+ 12	218	22.8	+ 14	51	17.1	- 8
6	273	06.3		225	25.6	+ 20	113	46.0	+ 12	233	24.8	+ 14	66	19.7	- 8
7	288	08.8		240	25.5		128	49.1		248	26.7		81	22.4	06.6
8	303	11.2		255	25.5		143	52.2		263	28.7		96	25.0	06.5
9	318	13.7		270	25.4		158	55.3		278	30.6		111	27.6	06.5
10	333	16.2		285	25.4		173	58.5		293	32.5		126	30.2	06.4
11	348	18.6		300	25.3	+ 20	189	01.6	+ 12	308	34.5	+ 14	141	32.9	- 8
12	3	21.1		315	25.2	+ 20	204	04.6	+ 12	323	36.4	+ 14	156	35.5	- 8
13	18	23.6		330	25.2		219	07.7		338	38.4		171	38.1	06.2
14	33	26.0		345	25.1		234	10.8		353	40.3		186	40.7	06.1
15	48	28.5		0	25.1		249	13.9		8	42.2		201	43.3	06.1
16	63	30.9		15	25.0	+ 20	264	17.0		23	44.2		216	46.0	06.0
17	78	33.4		30	25.0	+ 21	279	20.1	+ 12	38	46.1	+ 14	231	48.6	- 8
18	93	35.9		45	24.9	+ 21	294	23.2	+ 12	53	48.0	+ 14	246	51.2	- 8
19	108	38.3		60	24.9		309	26.3		68	50.0		261	53.8	05.8
20	123	40.8		75	24.8		324	29.4		83	51.9		276	56.5	05.7
21	138	43.3		90	24.8		339	32.5		98	53.9		291	59.1	05.7
22	153	45.7		105	24.7		354	35.6		113	55.8		307	01.7	05.6
23	168	48.2		120	24.7		9	38.7		128	57.7		322	04.3	05.6
24	183	50.7		135	24.6	+ 21	24	41.7	+ 12	143	59.7	+ 14	337	06.9	- 8
Dif	—			-1		+8	+31		+1	+19		+2	+26		+1

LUNES 26 DE MARZO DE 2012

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UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 05 ^m 5			SD: 14 ^h 7 Edad: 3 ^d 4 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'1 PMG: 14 ^h 52 ^m R°: 47 ^m										
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	Civil	Náutico	Hora	R°	Hora
^h 0	178 34.7	+ 2 16.7		143 59.3		+ 17 41.1	60 N	18 30	19 12	20 04	6 16 26		23 43 64	
1	193 34.9	17.7		158 31.5	132	47.8	58	28	08	19 56	28 28		29 62	
2	208 35.1	18.7		173 03.7	132	+ 17 54.4	56	27	04	50	39 30		17 60	
3	223 35.2	19.7		187 35.8	131	+ 18 00.9	54	25	19 01	44	48 32		23 06 59	
4	238 35.4	20.6		202 08.0	132	07.3	52	24	18 58	39	6 57 33		22 57 58	
5	253 35.6	+ 2 21.6		216 40.1	131	+ 18 13.7	50	18 23	18 55	19 34	7 04 34		22 48 58	
6	268 35.8	+ 2 22.6		231 12.1	130	+ 18 20.0	45	18 21	18 50	19 25	7 20 37		22 30 56	
7	283 36.0	23.6		245 44.1	130	26.2	40	18	46	18	33 39		16 54	
8	298 36.2	24.6		260 16.1	130	32.3	35	17	42	12	45 40		22 03 53	
9	313 36.4	25.5		274 48.1	130	38.3	30	15	39	07	7 55 41		21 53 52	
10	328 36.6	26.5		289 20.0	129	44.3	20	13	35	19 01	8 12 43		34 51	
11	343 36.7	+ 2 27.5		303 51.9	129	+ 18 50.2	10 N	18 11	18 32	18 56	8 27 45		21 18 49	
12	358 36.9	+ 2 28.5		318 23.7	128	+ 18 55.9	0	18 09	18 29	18 54	8 41 47		21 03 48	
13	13 37.1	29.5		332 55.5	128	+ 19 01.6	10 S	07	28	52	8 55 48		20 48 47	
14	28 37.3	30.4		347 27.3	128	07.3	20	05	27	53	9 10 50		32 45	
15	43 37.5	31.4		1 59.1	128	12.8	30	03	27	55	27 53		14 43	
16	58 37.7	32.4		16 30.8	127	18.2	35	02	28	18 57	37 54		20 03 42	
17	73 37.9	+ 2 33.4		31 02.4	126	+ 19 23.6	40	18 01	18 28	19 00	9 49 55		19 51 41	
18	88 38.1	+ 2 34.4		45 34.1	127	+ 19 28.9	45	18 00	18 29	19 03	10 03 57		19 37 39	
19	103 38.3	35.3		60 05.7	126	34.1	50	17 58	31	08	19 60		19 38	
20	118 38.4	36.3		74 37.3	126	39.2	52	58	31	11	27 61		11 36	
21	133 38.6	37.3		89 08.8	125	44.2	54	57	32	13	36 62		19 02 35	
22	148 38.8	38.3		103 40.3	125	49.1	56	56	33	16	46 64		18 51 34	
23	163 39.0	39.3		118 11.8	125	53.9	58	55	34	20	10 58 65		40 32	
24	178 39.2	+ 2 40.2		132 43.3	125	+ 19 58.7	60 S	17 54	18 36	19 24	11 11 68		18 26 30	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 11 ^h 42 ^m 7		Mag.: -4.4 PMG: 14 ^h 58 ^m			Mag.: -0.9 PMG: 22 ^h 17 ^m			Mag.: -2.1 PMG: 14 ^h 22 ^m			Mag.: +0.3 PMG: 1 ^h 31 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
^h 0	183 50.7		135 24.6	+ 21 06.2		24 41.7	+ 12 36.4		143 59.7	+ 14 35.5		337 06.9	- 8 05.5	
1	198 53.1		150 24.6	07.0		39 44.8	36.5		159 01.6	35.7		352 09.6	05.4	
2	213 55.6		165 24.5	07.9		54 47.9	36.7		174 03.6	35.9		7 12.2	05.4	
3	228 58.1		180 24.5	08.7		69 51.0	36.8		189 05.5	36.0		22 14.8	05.3	
4	244 00.5		195 24.4	09.5		84 54.1	36.9		204 07.4	36.2		37 17.4	05.2	
5	259 03.0		210 24.4	+ 21 10.4		99 57.1	+ 12 37.1		219 09.4	+ 14 36.4		52 20.1	- 8 05.2	
6	274 05.4		225 24.3	+ 21 11.2		115 00.2	+ 12 37.2		234 11.3	+ 14 36.5		67 22.7	- 8 05.1	
7	289 07.9		240 24.3	12.1		130 03.3	37.3		249 13.2	36.7		82 25.3	05.0	
8	304 10.4		255 24.2	12.9		145 06.4	37.5		264 15.2	36.9		97 27.9	05.0	
9	319 12.8		270 24.2	13.7		160 09.5	37.6		279 17.1	37.0		112 30.6	04.9	
10	334 15.3		285 24.1	14.6		175 12.5	37.7		294 19.1	37.2		127 33.2	04.8	
11	349 17.8		300 24.1	+ 21 15.4		190 15.6	+ 12 37.8		309 21.0	+ 14 37.4		142 35.8	- 8 04.8	
12	4 20.2		315 24.0	+ 21 16.2		205 18.7	+ 12 38.0		324 22.9	+ 14 37.6		157 38.4	- 8 04.7	
13	19 22.7		330 24.0	17.1		220 21.7	38.1		339 24.9	37.7		172 41.1	04.6	
14	34 25.2		345 23.9	17.9		235 24.8	38.2		354 26.8	37.9		187 43.7	04.6	
15	49 27.6		0 23.9	18.7		250 27.9	38.4		9 28.7	38.1		202 46.3	04.5	
16	64 30.1		15 23.8	19.5		265 30.9	38.5		24 30.7	38.2		217 48.9	04.4	
17	79 32.5		30 23.8	+ 21 20.4		280 34.0	+ 12 38.6		39 32.6	+ 14 38.4		232 51.6	- 8 04.4	
18	94 35.0		45 23.7	+ 21 21.2		295 37.1	+ 12 38.7		54 34.5	+ 14 38.6		247 54.2	- 8 04.3	
19	109 37.5		60 23.7	22.0		310 40.1	38.9		69 36.5	38.7		262 56.8	04.2	
20	124 39.9		75 23.7	22.8		325 43.2	39.0		84 38.4	38.9		277 59.4	04.2	
21	139 42.4		90 23.6	23.7		340 46.3	39.1		99 40.4	39.1		293 02.0	04.1	
22	154 44.9		105 23.6	24.5		355 49.3	39.2		114 42.3	39.3		308 04.7	04.0	
23	169 47.3		120 23.5	25.3		10 52.4	39.4		129 44.2	39.4		323 07.3	04.0	
24	184 49.8		135 23.5	+ 21 26.1		25 55.4	+ 12 39.5		144 46.2	+ 14 39.6		338 09.9	- 8 03.9	
Dif	—		0	+8		+31	+1		+19	+2		+26	+1	

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MARTES 27 DE MARZO DE 2012

UT	SOL			☾ LUNA			Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna							
	SD: 16'0 PMG: 12 ^h 05 ^m 2			SD: 14'7 Edad: 4 ^d 4 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2 PMG: 15 ^h 39 ^m R°: 49 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora	R°					
	°	'	°	'	°	'		°	'		h	m	h	m	h	m				
0	178	39.2	+ 2	40.2	132	43.3	+ 19	58.7	60 N	4	06	4	57	5	39	6	42	35	** ** *	
1	193	39.4		41.2	147	14.7	+ 20	03.3	58	13	5	02	41			6	56	37	** ** *	
2	208	39.6		42.2	161	46.1		07.9	56	20		05	43			7	09	38	** ** *	
3	223	39.8		43.2	176	17.4		12.4	54	26		09	44			20	39		** ** *	
4	238	39.9		44.1	190	48.7		16.7	52	31		12	46			30	40		** ** *	
5	253	40.1	+ 2	45.1	205	20.0	+ 20	21.0	50	4	36	5	14	5	47	7	38	41	23 46 52	
6	268	40.3	+ 2	46.1	219	51.3	+ 20	25.2	45	4	45	5	20	5	50	7	57	42	23 26 51	
7	283	40.5		47.1	234	22.5		29.3	40		53		25		52	8	12	43	23 10 51	
8	298	40.7		48.1	248	53.7		33.3	35	4	58	28	53			25	44		22 56 51	
9	313	40.9		49.0	263	24.8		37.2	30	5	03	31	55			36	45		45 50	
10	328	41.1		50.0	277	56.0		41.1	20	10		36	5	58		8	55	47	25 49	
11	343	41.3	+ 2	51.0	292	27.1	+ 20	44.8	10 N	5	15	5	39	6	00	9	12	47	22 07 49	
12	358	41.5	+ 2	52.0	306	58.1	+ 20	48.4	0	5	17	5	41	6	02	9	28	48	21 51 49	
13	13	41.6		52.9	321	29.2		52.0	10 S		19		43		04	9	43	50	35 48	
14	28	41.8		53.9	336	00.2		55.4	34		18		44		06	10	00	51	21 17 48	
15	43	42.0		54.9	350	31.1	+ 20	58.8	30		16		44		08	20	51		20 57 47	
16	58	42.2		55.9	5	02.1	+ 21	02.0	32		14		44		09	31	52		45 47	
17	73	42.4	+ 2	56.9	19	33.0	+ 21	05.2	32	40	5	12	5	43	6	10	10	44	53	20 32 46
18	88	42.6	+ 2	57.8	34	03.9	+ 21	08.2	30	45	5	08	5	42	6	12	11	00	54	20 16 45
19	103	42.8		58.8	48	34.7		11.2	29	50		03		41		13	19	55		19 57 44
20	118	43.0	+ 2	59.8	63	05.6		14.1	30	52	5	01		40		14	28	56		47 44
21	133	43.1	+ 3	00.8	77	36.4		16.8	27	54	4	58	40	15		38	56		37 43	
22	148	43.3		01.7	92	07.1		19.5	27	56		55		39		16	11	50	57	25 43
23	163	43.5		02.7	106	37.9		22.1	26	58		52		38		17	12	03	58	19 12 42
24	178	43.7	+ 3	03.7	121	08.6	+ 21	24.6	25	60 S	4	47	5	36	6	18	12	19	59	18 56 41
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO								
	PMG 11 ^h 38 ^m 8		Mag.: -4.4 PMG: 14 ^h 58 ^m			Mag.: -0.8 PMG: 22 ^h 12 ^m			Mag.: -2.1 PMG: 14 ^h 19 ^m			Mag.: +0.3 PMG: 1 ^h 27 ^m								
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'						
0	184	49.8	135	23.5	+ 21	25	55.4	+ 12	39.5	144	46.2	+ 14	39.6	338	09.9	- 8	03.9			
1	199	52.3	150	23.4		40	58.5		39.6	159	48.1		39.8	353	12.5		03.9			
2	214	54.7	165	23.4		56	01.5		39.7	174	50.0		39.9	8	15.2		03.8			
3	229	57.2	180	23.4		71	04.6		39.9	189	52.0		40.1	23	17.8		03.7			
4	244	59.7	195	23.3		86	07.6		40.0	204	53.9		40.3	38	20.4		03.7			
5	260	02.1	210	23.3	+ 21	101	10.7	+ 12	40.1	219	55.8	+ 14	40.4	53	23.1	- 8	03.6			
6	275	04.6	225	23.2	+ 21	116	13.7	+ 12	40.2	234	57.8	+ 14	40.6	68	25.7	- 8	03.5			
7	290	07.0	240	23.2		131	16.8		40.3	249	59.7		40.8	83	28.3		03.5			
8	305	09.5	255	23.1		146	19.8		40.5	265	01.6		41.0	98	30.9		03.4			
9	320	12.0	270	23.1		161	22.9		40.6	280	03.6		41.1	113	33.6		03.3			
10	335	14.4	285	23.1		176	25.9		40.7	295	05.5		41.3	128	36.2		03.3			
11	350	16.9	300	23.0	+ 21	191	29.0	+ 12	40.8	310	07.4	+ 14	41.5	143	38.8	- 8	03.2			
12	5	19.4	315	23.0	+ 21	206	32.0	+ 12	40.9	325	09.4	+ 14	41.6	158	41.4	- 8	03.1			
13	20	21.8	330	22.9		221	35.0		41.0	340	11.3		41.8	173	44.1		03.1			
14	35	24.3	345	22.9		236	38.1		41.2	355	13.2		42.0	188	46.7		03.0			
15	50	26.8	0	22.9		251	41.1		41.3	10	15.2		42.1	203	49.3		02.9			
16	65	29.2	15	22.8		266	44.2		41.4	25	17.1		42.3	218	51.9		02.9			
17	80	31.7	30	22.8	+ 21	281	47.2	+ 12	41.5	40	19.0	+ 14	42.5	233	54.6	- 8	02.8			
18	95	34.2	45	22.8	+ 21	296	50.2	+ 12	41.6	55	21.0	+ 14	42.7	248	57.2	- 8	02.7			
19	110	36.6	60	22.7		311	53.3		41.7	70	22.9		42.8	263	59.8		02.7			
20	125	39.1	75	22.7		326	56.3		41.8	85	24.8		43.0	279	02.4		02.6			
21	140	41.5	90	22.7		341	59.3		41.9	100	26.8		43.2	294	05.1		02.5			
22	155	44.0	105	22.6		357	02.4		42.1	115	28.7		43.3	309	07.7		02.5			
23	170	46.5	120	22.6		12	05.4		42.2	130	30.6		43.5	324	10.3		02.4			
24	185	48.9	135	22.5	+ 21	27	08.4	+ 12	42.3	145	32.6	+ 14	43.7	339	12.9	- 8	02.3			
Dif	—		0		+8	+30		+1		+19		+2		+26		+1				

MIÉRCOL 28 DE MARZO DE 2012

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0 PMG: 12 ^h 04 ^m 9			SD: 14 ^h 8 Edad: 5 ^d 4 PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /4 20 ^h : 54 ^h /5 PMG: 16 ^h 28 ^m R°: 49 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°			
^h 0	178	43.7	+ 3	03.7	121	08.6	+ 21	24.6	60 N	18 35	19 17	20 10	7 17	47	0 47	54		
1	193	43.9		04.7	135	39.3		26.9	58	33	13	20 02	33	48	31	54		
2	208	44.1		05.6	150	10.0		29.2	56	31	09	19 54	47	48	17	53		
3	223	44.3		06.6	164	40.6		31.4	54	29	05	48	7 59	48	0 05	53		
4	238	44.5		07.6	179	11.2		33.4	52	28	19 02	43	8 10	48	** *	** **		
5	253	44.7	+ 3	08.6	193	41.8	+ 21	35.4	50	18 26	18 59	19 38	8 19	49	** *	** **		
6	268	44.8	+ 3	09.5	208	12.4	+ 21	37.3	45	18 23	18 53	19 28	8 39	49	** *	** **		
7	283	45.0		10.5	222	42.9		39.1	40	21	48	20	8 55	49	** *	** **		
8	298	45.2		11.5	237	13.4		40.7	35	18	44	14	9 09	49	23 47	48		
9	313	45.4		12.5	251	43.9		42.3	30	16	40	09	21	49	35	48		
10	328	45.6		13.4	266	14.4		43.8	20	13	35	19 01	42	49	23 14	49		
11	343	45.8	+ 3	14.4	280	44.8	+ 21	45.1	10 N	18 11	18 32	18 56	9 59	50	22 56	50		
12	358	46.0	+ 3	15.4	295	15.2	+ 21	46.4	0	18 08	18 29	18 53	10 16	49	22 40	49		
13	13	46.2		16.4	309	45.6		47.5	10 S	06	27	51	33	49	23	50		
14	28	46.3		17.3	324	16.0		48.6	20	04	26	51	10 51	49	22 05	50		
15	43	46.5		18.3	338	46.4		49.6	30	01	25	53	11 11	50	21 44	51		
16	58	46.7		19.3	353	16.7		50.4	35	18 00	25	54	23	50	32	51		
17	73	46.9	+ 3	20.3	7	47.0	+ 21	51.2	40	17 58	18 25	18 56	11 37	49	21 18	52		
18	88	47.1	+ 3	21.2	22	17.3	+ 21	51.8	45	17 56	18 25	18 59	11 54	49	21 01	52		
19	103	47.3		22.2	36	47.6		52.3	50	54	26	19 04	12 14	49	20 41	52		
20	118	47.5		23.2	51	17.8		52.8	52	53	27	06	24	49	31	53		
21	133	47.7		24.2	65	48.0		53.1	54	52	27	08	34	49	20	53		
22	148	47.9		25.1	80	18.3		53.3	56	51	28	11	12 47	49	20 08	53		
23	163	48.0		26.1	94	48.4		53.4	58	50	29	14	13 01	49	19 54	53		
24	178	48.2	+ 3	27.1	109	18.6	+ 21	53.5	60 S	17 48	18 30	19 18	13 18	48	19 37	53		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 11 ^h 34 ^m 8			Mag.: -4.4 PMG: 14 ^h 59 ^m			Mag.: -0.8 PMG: 22 ^h 07 ^m			Mag.: -2.1 PMG: 14 ^h 16 ^m			Mag.: +0.3 PMG: 1 ^h 23 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
^h 0	185	48.9	135	22.5	+ 21	45.6	27	08.4	+ 12	42.3	145	32.6	+ 14	43.7	339	12.9	- 8	02.3
1	200	51.4	150	22.5		46.4	42	11.4		42.4	160	34.5		43.9	354	15.6		02.3
2	215	53.9	165	22.5		47.2	57	14.5		42.5	175	36.4		44.0	9	18.2		02.2
3	230	56.3	180	22.4		48.0	72	17.5		42.6	190	38.4		44.2	24	20.8		02.1
4	245	58.8	195	22.4		48.8	87	20.5		42.7	205	40.3		44.4	39	23.5		02.1
5	261	01.3	210	22.4	+ 21	49.6	102	23.5	+ 12	42.8	220	42.2	+ 14	44.5	54	26.1	- 8	02.0
6	276	03.7	225	22.3	+ 21	50.4	117	26.6	+ 12	42.9	235	44.2	+ 14	44.7	69	28.7	- 8	01.9
7	291	06.2	240	22.3		51.2	132	29.6		43.0	250	46.1		44.9	84	31.3		01.9
8	306	08.6	255	22.3		52.0	147	32.6		43.1	265	48.0		45.0	99	34.0		01.8
9	321	11.1	270	22.3		52.8	162	35.6		43.2	280	50.0		45.2	114	36.6		01.7
10	336	13.6	285	22.2		53.6	177	38.6		43.4	295	51.9		45.4	129	39.2		01.7
11	351	16.0	300	22.2	+ 21	54.4	192	41.6	+ 12	43.5	310	53.8	+ 14	45.6	144	41.8	- 8	01.6
12	6	18.5	315	22.2	+ 21	55.2	207	44.6	+ 12	43.6	325	55.8	+ 14	45.7	159	44.5	- 8	01.5
13	21	21.0	330	22.1		56.0	222	47.7		43.7	340	57.7		45.9	174	47.1		01.5
14	36	23.4	345	22.1		56.7	237	50.7		43.8	355	59.6		46.1	189	49.7		01.4
15	51	25.9	0	22.1		57.5	252	53.7		43.9	11	01.6		46.2	204	52.4		01.3
16	66	28.4	15	22.0		58.3	267	56.7		44.0	26	03.5		46.4	219	55.0		01.3
17	81	30.8	30	22.0	+ 21	59.1	282	59.7	+ 12	44.1	41	05.4	+ 14	46.6	234	57.6	- 8	01.2
18	96	33.3	45	22.0	+ 21	59.9	298	02.7	+ 12	44.2	56	07.3	+ 14	46.7	250	00.2	- 8	01.1
19	111	35.8	60	22.0	+ 22	00.7	313	05.7		44.3	71	09.3		46.9	265	02.9		01.1
20	126	38.2	75	21.9		01.5	328	08.7		44.4	86	11.2		47.1	280	05.5		01.0
21	141	40.7	90	21.9		02.3	343	11.7		44.5	101	13.1		47.3	295	08.1		00.9
22	156	43.1	105	21.9		03.0	358	14.7		44.6	116	15.1		47.4	310	10.8		00.9
23	171	45.6	120	21.9		03.8	13	17.7		44.7	131	17.0		47.6	325	13.4		00.8
24	186	48.1	135	21.8	+ 22	04.6	28	20.7	+ 12	44.8	146	18.9	+ 14	47.8	340	16.0	- 8	00.7
Dif	—		0		+8		+30		+1		+19		+2		+26		+1	

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JUEVES 29 DE MARZO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 0 PMG: 12 ^h 04 ^m 6		SD: 14 ^h 9 Edad: 6 ^d 4 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 8 20 ^h : 55 ^m 0 PMG: 17 ^h 17 ^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	178	48.2	+ 3	27.1	109	18.6	+ 21	53.5	1	60 N	3 59	4 51	5 33	8 04	61	1 41	43	
1	193	48.4		28.1	123	48.8		53.4	2	58	4 07	4 56	36	21	59	25	43	
2	208	48.6		29.0	138	18.9		53.2	3	56	14	5 00	38	35	58	1 10	45	
3	223	48.8		30.0	152	49.0		52.9	2	54	21	04	39	47	58	0 58	45	
4	238	49.0		31.0	167	19.2		52.5	4	52	26	07	41	8 58	57	47	46	
5	253	49.2	+ 3	32.0	181	49.2	+ 21	52.0	5	50	4 31	5 10	5 43	9 08	56	0 38	46	
6	268	49.4	+ 3	32.9	196	19.3	+ 21	51.3	7	45	4 41	5 16	5 46	9 28	55	0 17	47	
7	283	49.5		33.9	210	49.4		50.6	7	40	49	21	48	44	54	0 01	47	
8	298	49.7		34.9	225	19.4		49.8	8	35	4 55	25	51	9 58	53	** ** *	** ** *	
9	313	49.9		35.8	239	49.5		48.8	10	30	5 01	29	53	10 10	53	** ** *	** ** *	
10	328	50.1		36.8	254	19.5		47.8	10	20	08	34	56	31	51	** ** *	** ** *	
11	343	50.3	+ 3	37.8	268	49.5	+ 21	46.7	11	10 N	5 13	5 38	5 59	10 49	50	23 46	48	
12	358	50.5	+ 3	38.8	283	19.5	+ 21	45.4	13	0	5 17	5 41	6 01	11 05	50	23 29	50	
13	13	50.7		39.7	297	49.5		44.0	14	10 S	18	43	04	22	49	23 13	51	
14	28	50.9		40.7	312	19.4		42.6	16	20	19	44	06	11 40	48	22 55	53	
15	43	51.0		41.7	326	49.4		41.0	17	30	17	45	09	12 01	46	35	54	
16	58	51.2		42.6	341	19.3		39.3	17	35	16	45	11	13	46	23	55	
17	73	51.4	+ 3	43.6	355	49.3	+ 21	37.5	18	40	5 14	5 45	6 12	12 26	46	22 10	56	
18	88	51.6	+ 3	44.6	10	19.2	+ 21	35.6	19	45	5 11	5 45	6 14	12 43	44	21 53	58	
19	103	51.8		45.6	24	49.1		33.6	20	50	07	44	16	13 03	43	33	60	
20	118	52.0		46.5	39	19.0		31.5	21	52	05	44	18	13	42	24	60	
21	133	52.2		47.5	53	48.9		29.3	22	54	5 02	43	19	23	41	13	62	
22	148	52.4		48.5	68	18.8		27.0	23	56	4 59	43	20	36	40	21 01	63	
23	163	52.5		49.4	82	48.7		24.5	25	58	56	42	21	13 50	38	20 47	64	
24	178	52.7	+ 3	50.4	97	18.5	+ 21	22.0	25	60 S	4 53	5 41	6 23	14 06	37	20 30	67	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 11 ^h 30 ^m 9		Mag.: -4.4 PMG: 14 ^h 59 ^m		Mag.: -0.8 PMG: 22 ^h 02 ^m		Mag.: -2.1 PMG: 14 ^h 13 ^m		Mag.: +0.3 PMG: 1 ^h 19 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	186	48.1	135	21.8	+ 22	04.6	28	20.7	+ 12	44.8	146	18.9	+ 14	47.8	340	16.0	- 8	00.7
1	201	50.5	150	21.8		05.4	43	23.7		44.9	161	20.9		47.9	355	18.6		00.7
2	216	53.0	165	21.8		06.2	58	26.7		44.9	176	22.8		48.1	10	21.3		00.6
3	231	55.5	180	21.8		06.9	73	29.7		45.0	191	24.7		48.3	25	23.9		00.5
4	246	57.9	195	21.7		07.7	88	32.7		45.1	206	26.6		48.4	40	26.5		00.5
5	262	00.4	210	21.7	+ 22	08.5	103	35.7	+ 12	45.2	221	28.6	+ 14	48.6	55	29.2	- 8	00.4
6	277	02.9	225	21.7	+ 22	09.3	118	38.7	+ 12	45.3	236	30.5	+ 14	48.8	70	31.8	- 8	00.3
7	292	05.3	240	21.7		10.1	133	41.7		45.4	251	32.4		49.0	85	34.4		00.3
8	307	07.8	255	21.6		10.8	148	44.6		45.5	266	34.4		49.1	100	37.0		00.2
9	322	10.3	270	21.6		11.6	163	47.6		45.6	281	36.3		49.3	115	39.7		00.1
10	337	12.7	285	21.6		12.4	178	50.6		45.7	296	38.2		49.5	130	42.3		00.1
11	352	15.2	300	21.6	+ 22	13.1	193	53.6	+ 12	45.8	311	40.2	+ 14	49.6	145	44.9	- 8	00.0
12	7	17.6	315	21.6	+ 22	13.9	208	56.6	+ 12	45.9	326	42.1	+ 14	49.8	160	47.6	- 7	59.9
13	22	20.1	330	21.5		14.7	223	59.6		46.0	341	44.0		50.0	175	50.2		59.9
14	37	22.6	345	21.5		15.5	239	02.5		46.1	356	45.9		50.2	190	52.8		59.8
15	52	25.0	0	21.5		16.2	254	05.5		46.1	11	47.9		50.3	205	55.4		59.7
16	67	27.5	15	21.5		17.0	269	08.5		46.2	26	49.8		50.5	220	58.1		59.7
17	82	30.0	30	21.5	+ 22	17.8	284	11.5	+ 12	46.3	41	51.7	+ 14	50.7	236	00.7	- 7	59.6
18	97	32.4	45	21.4	+ 22	18.5	299	14.5	+ 12	46.4	56	53.6	+ 14	50.8	251	03.3	- 7	59.5
19	112	34.9	60	21.4		19.3	314	17.4		46.5	71	55.6		51.0	266	06.0		59.5
20	127	37.4	75	21.4		20.1	329	20.4		46.6	86	57.5		51.2	281	08.6		59.4
21	142	39.8	90	21.4		20.8	344	23.4		46.7	101	59.4		51.3	296	11.2		59.3
22	157	42.3	105	21.4		21.6	359	26.3		46.8	117	01.4		51.5	311	13.9		59.3
23	172	44.8	120	21.4		22.4	14	29.3		46.8	132	03.3		51.7	326	16.5		59.2
24	187	47.2	135	21.3	+ 22	23.1	29	32.3	+ 12	46.9	147	05.2	+ 14	51.9	341	19.1	- 7	59.1
Dif	—		0		+8		+30		+1		+19		+2		+26		+1	

VIERNES 30 DE MARZO DE 2012

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UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 04 ^m 3			SD: 15 ^h 0 Edad: 7 ^d 4 PHE { 4 ^h : 55 ^h /1 12 ^h : 55 ^h /3 20 ^h : 55 ^h /6 PMG: 18 ^h 07 ^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	
0	178 52.7	+ 3 50.4		97 18.5	109	+ 21 22.0	26	60 N	18 40	19 23	20 16	9 05 71	2 24 32	
1	193 52.9	51.4		111 48.4	109	19.4	28	58	37	17	20 07	20 69	2 08 34	
2	208 53.1	52.4		126 18.3	109	16.6	28	56	35	13	19 59	33 67	1 55 36	
3	223 53.3	53.3		140 48.1	108	13.7	29	54	33	09	52	45 65	43 37	
4	238 53.5	54.3		155 18.0	109	10.8	29	52	31	05	47	9 55 64	33 38	
5	253 53.7	+ 3 55.3		169 47.8	108	+ 21 07.7	31	50	18 29	19 02	19 41	10 04 63	1 24 39	
6	268 53.9	+ 3 56.2		184 17.6	108	+ 21 04.5	32	45	18 26	18 55	19 30	10 23 60	1 04 42	
7	283 54.0	57.2		198 47.4	108	+ 21 01.2	33	40	23	50	22	38 59	0 48 43	
8	298 54.2	58.2		213 17.3	109	+ 20 57.8	34	35	20	45	15	10 51 58	35 44	
9	313 54.4	+ 3 59.1		227 47.1	108	54.3	35	30	18	42	10	11 03 56	23 46	
10	328 54.6	+ 4 00.1		242 16.9	108	50.7	36	20	14	36	19 02	22 54	0 03 47	
11	343 54.8	+ 4 01.1		256 46.7	108	+ 20 47.0	37	10 N	18 11	18 32	18 56	11 39 52	*** **	
12	358 55.0	+ 4 02.1		271 16.5	108	+ 20 43.2	38	0	18 08	18 28	18 52	11 55 50	*** **	
13	13 55.2	03.0		285 46.3	108	39.3	39	10 S	05	26	50	12 11 48	*** **	
14	28 55.4	04.0		300 16.1	108	35.2	41	20	18 02	24	49	28 46	23 48 54	
15	43 55.5	05.0		314 45.9	108	31.1	41	30	17 59	22	50	47 44	29 57	
16	58 55.7	05.9		329 15.7	108	26.9	42	35	57	22	51	12 59 42	18 59	
17	73 55.9	+ 4 06.9		343 45.5	108	+ 20 22.5	44	40	17 55	18 22	18 53	13 12 41	23 06 60	
18	88 56.1	+ 4 07.9		358 15.3	108	+ 20 18.0	45	45	17 52	18 22	18 56	13 27 39	22 51 63	
19	103 56.3	08.8		12 45.1	108	13.5	45	50	50	22	18 59	46 36	33 66	
20	118 56.5	09.8		27 14.9	108	08.8	47	52	49	22	19 01	13 55 35	24 67	
21	133 56.7	10.8		41 44.6	107	+ 20 04.0	48	54	47	22	03	14 04 34	15 68	
22	148 56.8	11.7		56 14.4	108	+ 19 59.2	48	56	46	23	06	16 32	22 04 70	
23	163 57.0	12.7		70 44.2	108	54.2	50	58	44	23	09	28 30	21 51 73	
24	178 57.2	+ 4 13.7		85 14.0	108	+ 19 49.1	51	60 S	17 42	18 24	19 12	14 43 28	21 37 75	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 11 ^h 27 ^m 0		Mag.: -4.4 PMG: 14 ^h 59 ^m		Mag.: -0.8 PMG: 21 ^h 58 ^m		Mag.: -2.1 PMG: 14 ^h 10 ^m		Mag.: +0.3 PMG: 1 ^h 15 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	187 47.2	135 21.3	+ 22 23.1		29 32.3	+ 12 46.9	147 05.2	+ 14 51.9	341 19.1	- 7 59.1				
1	202 49.7	150 21.3	23.9		44 35.2	47.0	162 07.1	52.0	356 21.7	59.1				
2	217 52.1	165 21.3	24.6		59 38.2	47.1	177 09.1	52.2	11 24.4	59.0				
3	232 54.6	180 21.3	25.4		74 41.2	47.2	192 11.0	52.4	26 27.0	58.9				
4	247 57.1	195 21.3	26.2		89 44.1	47.2	207 12.9	52.5	41 29.6	58.9				
5	262 59.5	210 21.3	+ 22 26.9		104 47.1	+ 12 47.3	222 14.9	+ 14 52.7	56 32.3	- 7 58.8				
6	278 02.0	225 21.3	+ 22 27.7		119 50.1	+ 12 47.4	237 16.8	+ 14 52.9	71 34.9	- 7 58.7				
7	293 04.5	240 21.3	28.4		134 53.0	47.5	252 18.7	53.1	86 37.5	58.7				
8	308 06.9	255 21.2	29.2		149 56.0	47.6	267 20.6	53.2	101 40.2	58.6				
9	323 09.4	270 21.2	29.9		164 58.9	47.6	282 22.6	53.4	116 42.8	58.5				
10	338 11.9	285 21.2	30.7		180 01.9	47.7	297 24.5	53.6	131 45.4	58.5				
11	353 14.3	300 21.2	+ 22 31.4		195 04.8	+ 12 47.8	312 26.4	+ 14 53.7	146 48.1	- 7 58.4				
12	8 16.8	315 21.2	+ 22 32.2		210 07.8	+ 12 47.9	327 28.3	+ 14 53.9	161 50.7	- 7 58.3				
13	23 19.2	330 21.2	32.9		225 10.7	48.0	342 30.3	54.1	176 53.3	58.3				
14	38 21.7	345 21.2	33.7		240 13.7	48.0	357 32.2	54.2	191 55.9	58.2				
15	53 24.2	0 21.2	34.4		255 16.6	48.1	12 34.1	54.4	206 58.6	58.1				
16	68 26.6	15 21.2	35.2		270 19.6	48.2	27 36.0	54.6	222 01.2	58.1				
17	83 29.1	30 21.2	+ 22 35.9		285 22.5	+ 12 48.3	42 38.0	+ 14 54.8	237 03.8	- 7 58.0				
18	98 31.6	45 21.2	+ 22 36.7		300 25.5	+ 12 48.3	57 39.9	+ 14 54.9	252 06.5	- 7 57.9				
19	113 34.0	60 21.1	37.4		315 28.4	48.4	72 41.8	55.1	267 09.1	57.9				
20	128 36.5	75 21.1	38.2		330 31.4	48.5	87 43.7	55.3	282 11.7	57.8				
21	143 39.0	90 21.1	38.9		345 34.3	48.6	102 45.7	55.4	297 14.4	57.7				
22	158 41.4	105 21.1	39.7		0 37.2	48.6	117 47.6	55.6	312 17.0	57.7				
23	173 43.9	120 21.1	40.4		15 40.2	48.7	132 49.5	55.8	327 19.6	57.6				
24	188 46.4	135 21.1	+ 22 41.2		30 43.1	+ 12 48.8	147 51.4	+ 14 56.0	342 22.3	- 7 57.5				
Dif	—	0	+8		+30	+1	+19	+2		+26	+1			

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SÁBADO 31 DE MARZO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 12 ^h 04 ^m 0		SD: 15 ^h 2 Edad: 8 ^d 4 PHE { 4 ^h : 55 ^m 8 12 ^h : 56 ^m 1 20 ^h : 56 ^m 3 PMG: 18 ^h 57 ^m R°: 50 ^m					Náutico	Civil		Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	57.2	+ 4	13.7	85	14.0	+ 19	49.1	52	60 N	3 52	4 45	5 27	10 16	79
1	193	57.4		14.6	99	43.8	108	43.9	52	58	4 01		50	30	29 76
2	208	57.6		15.6	114	13.6	108	38.6	53	56		08	55	32	40 74
3	223	57.8		16.6	128	43.4	108	33.2	54	54	15	4 59	35	50	72
4	238	58.0		17.5	143	13.2	108	27.7	55	52	21	5 02	36	10 59	70
5	253	58.2	+ 4	18.5	157	42.9	107	+ 19	22.1	56	50	4 26	5 06	5 38	11 07
6	268	58.3	+ 4	19.5	172	12.7	108	+ 19	16.4	57	45	4 37	5 12	5 42	11 23
7	283	58.5		20.4	186	42.5	108	10.5	58	40		46	18	45	37 63
8	298	58.7		21.4	201	12.3	108	+ 19	04.6	59	35		53	22	48
9	313	58.9		22.4	215	42.1	108	+ 18	58.6	60	30	4 58	26	50	11 59
10	328	59.1		23.3	230	11.9	108	52.5	61	20		5 06	32	54	12 16
11	343	59.3	+ 4	24.3	244	41.7	108	+ 18	46.3	62	10 N	5 12	5 37	5 58	12 31
12	358	59.5	+ 4	25.3	259	11.5	108	+ 18	39.9	64	0	5 16	5 40	6 01	12 45
13	13	59.6		26.2	273	41.3	108	33.5	64	10 S		18	43	04	12 59
14	28	59.8		27.2	288	11.1	108	27.0	65	20		19	45	07	13 14
15	44	00.0		28.2	302	40.9	108	20.3	67	30		19	46	10	31 42
16	59	00.2		29.1	317	10.7	108	13.6	67	35		18	47	12	41 40
17	74	00.4	+ 4	30.1	331	40.5	108	+ 18	06.8	68	40	5 16	5 47	6 14	13 53
18	89	00.6	+ 4	31.1	346	10.3	108	+ 17	59.8	70	45	5 13	5 47	6 17	14 06
19	104	00.8		32.0	0	40.2	109	52.8	70	50		10	47	20	22 32
20	119	00.9		33.0	15	10.0	108	45.7	71	52		08	47	21	30 30
21	134	01.1		34.0	29	39.8	108	38.4	73	54		06	47	22	38 28
22	149	01.3		34.9	44	09.6	108	31.1	73	56		04	47	24	48 26
23	164	01.5		35.9	58	39.5	109	23.7	74	58		5 01	46	26	14 58
24	179	01.7	+ 4	36.9	73	09.3	108	+ 17	16.2	75	60 S	4 58	5 46	6 28	15 11
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 23 ^m 0		Mag.: -4.4 PMG: 14 ^h 59 ^m			Mag.: -0.7 PMG: 21 ^h 53 ^m			Mag.: -2.1 PMG: 14 ^h 07 ^m			Mag.: +0.3 PMG: 1 ^h 10 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	188	46.4	135	21.1	+ 22	41.2	30	43.1	+ 12	48.8	147	51.4	+ 14	56.0	
1	203	48.8	150	21.1		41.9	45	46.1		48.8	162	53.4		56.1	
2	218	51.3	165	21.1		42.6	60	49.0		48.9	177	55.3		56.3	
3	233	53.7	180	21.1		43.4	75	51.9		49.0	192	57.2		56.5	
4	248	56.2	195	21.1		44.1	90	54.9		49.0	207	59.1		56.6	
5	263	58.7	210	21.1	+ 22	44.8	105	57.8	+ 12	49.1	223	01.1	+ 14	56.8	
6	279	01.1	225	21.1	+ 22	45.6	121	00.7	+ 12	49.2	238	03.0	+ 14	57.0	
7	294	03.6	240	21.1		46.3	136	03.7		49.2	253	04.9		57.1	
8	309	06.1	255	21.1		47.1	151	06.6		49.3	268	06.8		57.3	
9	324	08.5	270	21.1		47.8	166	09.5		49.4	283	08.8		57.5	
10	339	11.0	285	21.1		48.5	181	12.4		49.4	298	10.7		57.7	
11	354	13.5	300	21.1	+ 22	49.3	196	15.4	+ 12	49.5	313	12.6	+ 14	57.8	
12	9	15.9	315	21.1	+ 22	50.0	211	18.3	+ 12	49.6	328	14.5	+ 14	58.0	
13	24	18.4	330	21.1		50.7	226	21.2		49.6	343	16.5		58.2	
14	39	20.9	345	21.1		51.4	241	24.1		49.7	358	18.4		58.3	
15	54	23.3	0	21.1		52.2	256	27.0		49.8	13	20.3		58.5	
16	69	25.8	15	21.1		52.9	271	30.0		49.8	28	22.2		58.7	
17	84	28.2	30	21.1	+ 22	53.6	286	32.9	+ 12	49.9	43	24.1	+ 14	58.9	
18	99	30.7	45	21.1	+ 22	54.4	301	35.8	+ 12	49.9	58	26.1	+ 14	59.0	
19	114	33.2	60	21.1		55.1	316	38.7		50.0	73	28.0		59.2	
20	129	35.6	75	21.2		55.8	331	41.6		50.1	88	29.9		59.4	
21	144	38.1	90	21.2		56.5	346	44.5		50.1	103	31.8		59.5	
22	159	40.6	105	21.2		57.3	1	47.4		50.2	118	33.8		59.7	
23	174	43.0	120	21.2		58.0	16	50.3		50.2	133	35.7	+ 14	59.9	
24	189	45.5	135	21.2	+ 22	58.7	31	53.2	+ 12	50.3	148	37.6	+ 15	00.0	
Dif	—		0		+7		+29		+1		+19		+2		+26

DOMINGO 1 DE ABRIL DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 03 ^m 7		SD: 15 ^h 4 Edad: 9 ^d 4		PHE { 4 ^h : 56 ^m /6 12 ^h : 56 ^m /9 20 ^h : 57 ^m /2									
	hG ☉	Dec	hG ☾	Dif		Dec			Dif	Civil	Náutico	Hora	R°	Hora
^h 0	179 01.7	+ 4 36.9	73 09.3		+ 17 16.2	77	60 N	18 45	19 28	20 22	11 35	85	3 19	19
1	194 01.9		87 39.1	108	08.5	77	58	42	22	12	45	82	3 09	21
2	209 02.1		102 09.0	109	+ 17 00.8	77	56	39	17	20 04	11 54	79	2 59	24
3	224 02.3		116 38.8	108	+ 16 53.0	78	54	37	13	19 57	12 02	76	51	26
4	239 02.4		131 08.6	108	45.1	79	52	34	09	50	09 74	44	27	
5	254 02.6	+ 4 41.7	145 38.5	109	+ 16 37.1	80	50	18 32	19 05	19 45	12 15	73	2 37	29
6	269 02.8	+ 4 42.6	160 08.3	108	+ 16 29.0	81	45	18 28	18 58	19 33	12 28	69	2 22	33
7	284 03.0		174 38.2	109	20.8	82	40	25	52	24	40 65		11	35
8	299 03.2		189 08.0	108	12.5	83	35	22	47	17	49 63		2 00	39
9	314 03.4		203 37.9	109	+ 16 04.1	84	30	19	43	11	12 57	61	1 51	41
10	329 03.6		218 07.7	108	+ 15 55.6	85	20	14	37	19 02	13 11	57	36	44
11	344 03.7	+ 4 47.4	232 37.6	109	+ 15 47.0	86	10 N	18 11	18 32	18 56	13 24	53	1 22	47
12	359 03.9	+ 4 48.4	247 07.5	109	+ 15 38.4	86	0	18 07	18 28	18 52	13 35	50	1 09	50
13	14 04.1		261 37.3	108	29.6	88	10 S	04	25	49	47 46		0 56	53
14	29 04.3		276 07.2	109	20.8	88	20	18 00	22	48	13 59	43	42	56
15	44 04.5		290 37.1	109	11.8	90	30	17 56	20	48	14 13	39	26	60
16	59 04.7		305 06.9	108	+ 15 02.8	90	35	54	19	49	21 37	17	62	
17	74 04.8	+ 4 53.2	319 36.8	109	+ 14 53.7	91	40	17 52	18 19	18 50	14 30	35	0 06	64
18	89 05.0	+ 4 54.2	334 06.7	109	+ 14 44.4	93	45	17 49	18 18	18 52	14 41	31	** ** *	** ** *
19	104 05.2		348 36.5	108	35.1	93	50	45	18	55	14 54	28	** ** *	** ** *
20	119 05.4		3 06.4	109	25.8	93	52	44	18	57	15 00	26	** ** *	** ** *
21	134 05.6		17 36.3	109	16.3	95	54	42	17	18 58	06 24		** ** *	** ** *
22	149 05.8		32 06.1	108	+ 14 06.7	96	56	40	17	19 01	14 22		** ** *	** ** *
23	164 06.0		46 36.0	109	+ 13 57.1	96	58	39	18	03	22 19		** ** *	** ** *
24	179 06.1	+ 4 59.9	61 05.9	109	+ 13 47.3	98	60 S	17 36	18 18	19 06	15 31	17	** ** *	** ** *
UT	ARIES PMG 11 ^h 19 ^m 1		VENUS Mag.: -4.4 PMG: 14 ^h 59 ^m		MARTE Mag.: -0.7 PMG: 21 ^h 48 ^m		JÚPITER Mag.: -2.1 PMG: 14 ^h 04 ^m		SATURNO Mag.: +0.3 PMG: 1 ^h 06 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	^h	°	'	°	'	°	'	°	'	°	'			
0	189 45.5		135 21.2	+ 22 58.7	31 53.2	+ 12 50.3	148 37.6	+ 15 00.0	343 25.4	- 7 55.9				
1	204 48.0		150 21.2	+ 22 59.4	46 56.1	50.4	163 39.5	00.2	358 28.1	55.8				
2	219 50.4		165 21.2	+ 23 00.1	61 59.1	50.4	178 41.4	00.4	13 30.7	55.8				
3	234 52.9		180 21.2	00.9	77 02.0	50.5	193 43.4	00.6	28 33.3	55.7				
4	249 55.3		195 21.2	01.6	92 04.9	50.5	208 45.3	00.7	43 36.0	55.6				
5	264 57.8		210 21.2	+ 23 02.3	107 07.8	+ 12 50.6	223 47.2	+ 15 00.9	58 38.6	- 7 55.6				
6	280 00.3		225 21.2	+ 23 03.0	122 10.7	+ 12 50.6	238 49.1	+ 15 01.1	73 41.2	- 7 55.5				
7	295 02.7		240 21.3	03.7	137 13.6	50.7	253 51.1	01.2	88 43.9	55.4				
8	310 05.2		255 21.3	04.4	152 16.4	50.7	268 53.0	01.4	103 46.5	55.4				
9	325 07.7		270 21.3	05.2	167 19.3	50.8	283 54.9	01.6	118 49.1	55.3				
10	340 10.1		285 21.3	05.9	182 22.2	50.9	298 56.8	01.8	133 51.8	55.2				
11	355 12.6		300 21.3	+ 23 06.6	197 25.1	+ 12 50.9	313 58.7	+ 15 01.9	148 54.4	- 7 55.1				
12	10 15.1		315 21.3	+ 23 07.3	212 28.0	+ 12 51.0	329 00.7	+ 15 02.1	163 57.0	- 7 55.1				
13	25 17.5		330 21.3	08.0	227 30.9	51.0	344 02.6	02.3	178 59.7	55.0				
14	40 20.0		345 21.4	08.7	242 33.8	51.1	359 04.5	02.4	194 02.3	54.9				
15	55 22.5		0 21.4	09.4	257 36.7	51.1	14 06.4	02.6	209 04.9	54.9				
16	70 24.9		15 21.4	10.1	272 39.6	51.2	29 08.3	02.8	224 07.6	54.8				
17	85 27.4		30 21.4	+ 23 10.8	287 42.5	+ 12 51.2	44 10.3	+ 15 02.9	239 10.2	- 7 54.7				
18	100 29.8		45 21.4	+ 23 11.5	302 45.3	+ 12 51.3	59 12.2	+ 15 03.1	254 12.9	- 7 54.7				
19	115 32.3		60 21.4	12.2	317 48.2	51.3	74 14.1	03.3	269 15.5	54.6				
20	130 34.8		75 21.5	12.9	332 51.1	51.3	89 16.0	03.5	284 18.1	54.5				
21	145 37.2		90 21.5	13.6	347 54.0	51.4	104 17.9	03.6	299 20.8	54.5				
22	160 39.7		105 21.5	14.3	2 56.9	51.4	119 19.9	03.8	314 23.4	54.4				
23	175 42.2		120 21.5	15.0	17 59.7	51.5	134 21.8	04.0	329 26.0	54.3				
24	190 44.6		135 21.6	+ 23 15.7	33 02.6	+ 12 51.5	149 23.7	+ 15 04.1	344 28.7	- 7 54.3				
Dif	—		0	+7	+29	+1	+19	+2	+26	+1				

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LUNES 2 DE ABRIL DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 03 ^m 4			SD: 15'6 Edad: 10 ^d 4 PHE $\begin{cases} 4^h: 57/5 \\ 12^h: 57/8 \\ 20^h: 58/1 \end{cases}$ PMG: 20 ^h 37 ^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	06.1	+ 4	61	05.9	+ 13	47.3	60 N	3	44	4	38	5	21	13	00
1	194	06.3	+ 5	75	35.7	108	37.5	58	3	54	4	44	24	07	85	3
2	209	06.5		90	05.6	109	27.6	56	4	02		49	27	13	82	30
3	224	06.7		104	35.5	109	17.6	54		10		54	30	18	80	23
4	239	06.9		119	05.3	108	+ 13	07.5	52	16	4	57	32	23	78	17
5	254	07.1	+ 5	133	35.2	109	+ 12	57.4	50	4	22	5	01	5	34	11
6	269	07.2	+ 5	148	05.1	109	+ 12	47.2	45	4	33	5	09	5	38	27
7	284	07.4		162	34.9	108		36.8	40		42		15	42	45	68
8	299	07.6		177	04.8	109		26.4	35		50		20	45	52	46
9	314	07.8		191	34.6	108		16.0	30	4	56		24	48	62	39
10	329	08.0		206	04.5	109	+ 12	05.4	20	5	05		30	53	58	32
11	344	08.2	+ 5	220	34.3	108	+ 11	54.8	10 N	5	11	5	35	5	57	20
12	359	08.4	+ 5	235	04.2	109	+ 11	44.0	0	5	15	5	39	6	00	2
13	14	08.5		249	34.0	108		33.3	10 S		18		43	04	50	59
14	29	08.7		264	03.8	108		22.4	20		20		45	07	47	53
15	44	08.9		278	33.7	109		11.4	20		20		48	11	43	57
16	59	09.1		293	03.5	108	+ 11	00.4	30		20		48	11	39	26
17	74	09.3	+ 5	307	33.3	108	+ 10	49.3	35	19	48	14	14	58	36	19
18	89	09.5	+ 5	322	03.1	108	+ 10	38.2	40	5	18	5	49	6	16	67
19	104	09.6		336	32.9	108		26.9	45	5	16	5	50	6	19	1
20	119	09.8		351	02.7	108		15.6	50		13		50	23	30	01
21	134	10.0		5	32.4	107	+ 10	04.2	52	11	51	24	26	23	25	49
22	149	10.2		20	02.2	108	+ 9	52.8	54	10	51	26	30	22	38	74
23	164	10.4		34	32.0	108		41.3	56	08	51	28	36	19	31	80
24	179	10.6	+ 5	49	01.7	107	+ 9	29.7	58	05	51	30	41	17	23	84
									60 S	5	02	5	51	6	32	0

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 11 ^h 15 ^m 2		Mag.: -4.4 PMG: 14 ^h 59 ^m		Mag.: -0.7 PMG: 21 ^h 44 ^m		Mag.: -2.1 PMG: 14 ^h 01 ^m		Mag.: +0.3 PMG: 1 ^h 02 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	'	°	'	°	'	°	'
0	190	44.6	135	21.6	+ 23	15.7	149	23.7	+ 15	04.1
1	205	47.1	150	21.6		16.4	164	25.6		04.3
2	220	49.6	165	21.6		17.1	179	27.5		04.5
3	235	52.0	180	21.6		17.8	194	29.5		04.6
4	250	54.5	195	21.6		18.5	209	31.4		04.8
5	265	57.0	210	21.7	+ 23	19.2	224	33.3	+ 15	05.0
6	280	59.4	225	21.7	+ 23	19.9	239	35.2	+ 15	05.2
7	296	01.9	240	21.7		20.6	254	37.1		05.3
8	311	04.3	255	21.7		21.3	269	39.1		05.5
9	326	06.8	270	21.8		22.0	284	41.0		05.7
10	341	09.3	285	21.8		22.7	299	42.9		05.8
11	356	11.7	300	21.8	+ 23	23.4	314	44.8	+ 15	06.0
12	11	14.2	315	21.9	+ 23	24.1	329	46.7	+ 15	06.2
13	26	16.7	330	21.9		24.8	344	48.7		06.4
14	41	19.1	345	21.9		25.5	359	50.6		06.5
15	56	21.6	0	22.0		26.2	14	52.5		06.7
16	71	24.1	15	22.0		26.8	29	54.4		06.9
17	86	26.5	30	22.0	+ 23	27.5	44	56.3	+ 15	07.0
18	101	29.0	45	22.0	+ 23	28.2	59	58.2	+ 15	07.2
19	116	31.4	60	22.1		28.9	75	00.2		07.4
20	131	33.9	75	22.1		29.6	90	02.1		07.5
21	146	36.4	90	22.1		30.3	105	04.0		07.7
22	161	38.8	105	22.2		30.9	120	05.9		07.9
23	176	41.3	120	22.2		31.6	135	07.8		08.1
24	191	43.8	135	22.3	+ 23	32.3	150	09.8	+ 15	08.2
Dif	—		0	+7		+29	0	+19		+2

MARTES 3 DE ABRIL DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 03 ^m 1			SD: 15 ^h 9 Edad: 11 ^d 4 PHE { 4 ^h : 58 ^s /5 12 ^h : 58 ^s /8 20 ^h : 59 ^s /1											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	179 10.6	+ 5 22.9		49 01.7		+ 9 29.7	117	60 N	^h 18 50	^h 19 33	^h 20 28	^h 14 28	^m 92	^h 3 52	^m 13
1	194 10.7	23.9		63 31.5	108	18.0	117	58	46	27	18	32	88	47	16
2	209 10.9	24.9		78 01.2	107	+ 9 06.3	117	56	43	21	09	35	86	43	19
3	224 11.1	25.8		92 30.9	107	+ 8 54.5	118	54	40	17	20 01	38	83	39	2
4	239 11.3	26.8		107 00.6	107	42.7	118	52	38	12	19 54	41	80	36	23
5	254 11.5	+ 5 27.7		121 30.3	107	+ 8 30.8	119	50	18 36	19 09	19 48	14 43	79	3 33	24
6	269 11.7	+ 5 28.7		136 00.0	107	+ 8 18.8	120	45	18 31	19 01	19 36	14 48	74	3 26	29
7	284 11.8	29.6		150 29.7	107	+ 8 06.8	120	40	27	18 54	27	53	70	20	32
8	299 12.0	30.6		164 59.3	106	+ 7 54.7	121	35	23	49	19	14 57	67	15	35
9	314 12.2	31.6		179 29.0	107	42.5	122	30	20	44	13	15 00	64	10	38
10	329 12.4	32.5		193 58.6	106	30.3	122	20	15	37	19 03	06	59	3 02	43
11	344 12.6	+ 5 33.5		208 28.2	106	+ 7 18.0	123	10 N	18 10	18 32	18 56	15 11	55	2 56	46
12	359 12.8	+ 5 34.4		222 57.8	106	+ 7 05.7	123	0	18 06	18 27	18 51	15 15	51	2 49	50
13	14 12.9	35.4		237 27.4	106	+ 6 53.3	124	10 S	18 02	24	48	20	47	42	55
14	29 13.1	36.3		251 56.9	105	40.8	125	20	17 58	20	46	25	43	35	59
15	44 13.3	37.3		266 26.5	106	28.3	125	30	54	18	45	31	38	27	63
16	59 13.5	38.2		280 56.0	105	15.8	125	35	51	17	46	34	35	22	66
17	74 13.7	+ 5 39.2		295 25.5	105	+ 6 03.2	126	40	17 48	18 15	18 47	15 38	32	2 17	69
18	89 13.9	+ 5 40.1		309 54.9	104	+ 5 50.5	127	45	17 45	18 14	18 48	15 42	29	2 11	72
19	104 14.0	41.1		324 24.4	105	37.8	127	50	41	13	51	47	25	03	77
20	119 14.2	42.0		338 53.8	104	25.1	127	52	39	13	52	49	23	2 00	79
21	134 14.4	43.0		353 23.3	105	+ 5 12.3	128	54	37	13	54	52	20	1 56	81
22	149 14.6	44.0		7 52.6	103	+ 4 59.5	128	56	35	12	55	55	18	51	84
23	164 14.8	44.9		22 22.0	104	46.6	129	58	33	12	18 57	15 58	15	47	86
24	179 14.9	+ 5 45.9		36 51.4	104	+ 4 33.6	130	60 S	17 30	18 12	19 00	16 01	13	1 41	90

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 11 ^h 11 ^m 2		Mag.: -4.4 PMG: 14 ^h 58 ^m		Mag.: -0.7 PMG: 21 ^h 39 ^m		Mag.: -2.1 PMG: 13 ^h 58 ^m		Mag.: +0.3 PMG: 0 ^h 58 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
^h 0	191 43.8		135 22.3	+ 23 32.3	34 11.3	+ 12 52.5	150 09.8	+ 15 08.2	345 31.9	- 7 52.6
1	206 46.2		150 22.3	33.0	49 14.1	52.5	165 11.7	08.4	0 34.5	52.6
2	221 48.7		165 22.3	33.7	64 16.9	52.5	180 13.6	08.6	15 37.2	52.5
3	236 51.2		180 22.4	34.3	79 19.8	52.5	195 15.5	08.7	30 39.8	52.4
4	251 53.6		195 22.4	35.0	94 22.6	52.6	210 17.4	08.9	45 42.5	52.3
5	266 56.1		210 22.4	+ 23 35.7	109 25.5	+ 12 52.6	225 19.3	+ 15 09.1	60 45.1	- 7 52.3
6	281 58.6		225 22.5	+ 23 36.4	124 28.3	+ 12 52.6	240 21.3	+ 15 09.3	75 47.7	- 7 52.2
7	297 01.0		240 22.5	37.0	139 31.1	52.7	255 23.2	09.4	90 50.4	52.1
8	312 03.5		255 22.6	37.7	154 34.0	52.7	270 25.1	09.6	105 53.0	52.1
9	327 05.9		270 22.6	38.4	169 36.8	52.7	285 27.0	09.8	120 55.6	52.0
10	342 08.4		285 22.7	39.0	184 39.6	52.7	300 28.9	09.9	135 58.3	51.9
11	357 10.9		300 22.7	+ 23 39.7	199 42.5	+ 12 52.8	315 30.8	+ 15 10.1	151 00.9	- 7 51.9
12	12 13.3		315 22.7	+ 23 40.4	214 45.3	+ 12 52.8	330 32.8	+ 15 10.3	166 03.5	- 7 51.8
13	27 15.8		330 22.8	41.1	229 48.1	52.8	345 34.7	10.4	181 06.2	51.7
14	42 18.3		345 22.8	41.7	244 50.9	52.9	0 36.6	10.6	196 08.8	51.7
15	57 20.7		0 22.9	42.4	259 53.8	52.9	15 38.5	10.8	211 11.5	51.6
16	72 23.2		15 22.9	43.1	274 56.6	52.9	30 40.4	11.0	226 14.1	51.5
17	87 25.7		30 23.0	+ 23 43.7	289 59.4	+ 12 52.9	45 42.3	+ 15 11.1	241 16.7	- 7 51.5
18	102 28.1		45 23.0	+ 23 44.4	305 02.2	+ 12 52.9	60 44.2	+ 15 11.3	256 19.4	- 7 51.4
19	117 30.6		60 23.1	45.0	320 05.1	53.0	75 46.2	11.5	271 22.0	51.3
20	132 33.1		75 23.1	45.7	335 07.9	53.0	90 48.1	11.6	286 24.6	51.3
21	147 35.5		90 23.2	46.4	350 10.7	53.0	105 50.0	11.8	301 27.3	51.2
22	162 38.0		105 23.2	47.0	5 13.5	53.0	120 51.9	12.0	316 29.9	51.1
23	177 40.4		120 23.3	47.7	20 16.3	53.1	135 53.8	12.2	331 32.5	51.0
24	192 42.9		135 23.3	+ 23 48.3	35 19.1	+ 12 53.1	150 55.7	+ 15 12.3	346 35.2	- 7 51.0
Dif	—		0	+7	+28	0	+19	+2	+26	+1

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MIÉRCOL 4 DE ABRIL DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 12 ^h 02 ^m 9			SD: 16 ^h 1 Edad: 12 ^d 4 PHE { 4 ^h : 59 ^m /4 12 ^h : 59 ^m /7 20 ^h : 60 ^m /0 PMG: 22 ^h 19 ^m R°: 53 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
^h 0	179	14.9	+ 5	36	51.4	+ 4	33.6	129	60 N	3 37	4 32	5 15	16 00	94	4 05	13
1	194	15.1		51	20.7		20.7	130	58	47	38	19	00	91	03	16
2	209	15.3		65	50.0	+ 4	07.7	131	56	3 56	44	22	01	88	02	18
3	224	15.5		80	19.2	+ 3	54.6	131	54	4 04	48	25	01	86	4 00	21
4	239	15.7		94	48.5		41.5	131	52	11	53	27	01	84	3 59	22
5	254	15.9	+ 5	109	17.7	+ 3	28.4	131	50	4 17	4 57	5 30	16 02	81	3 57	25
6	269	16.0	+ 5	123	46.9	+ 3	15.2	132	45	4 29	5 05	5 35	16 02	77	3 55	28
7	284	16.2		138	16.0	+ 3	02.0	132	40	39	11	39	03	73	52	33
8	299	16.4		152	45.2	+ 2	48.8	132	35	47	17	42	04	69	50	36
9	314	16.6		167	14.3		35.5	133	30	4 53	21	45	04	66	48	39
10	329	16.8		181	43.3		22.2	133	20	5 03	29	51	05	61	45	43
11	344	16.9	+ 5	196	12.4	+ 2	08.9	133	10 N	5 10	5 34	5 55	16 06	56	3 42	48
12	359	17.1	+ 5	210	41.4	+ 1	55.5	134	0	5 15	5 39	6 00	16 06	53	3 39	52
13	14	17.3		225	10.3		42.1	134	10 S	18	43	04	07	49	37	55
14	29	17.5	+ 5	239	39.3		28.7	134	20	20	46	08	08	44	34	60
15	44	17.7	+ 6	254	08.2		15.3	134	30	21	49	13	09	39	30	65
16	59	17.8		268	37.0	+ 1	01.8	135	35	21	50	15	09	37	28	68
17	74	18.0	+ 6	283	05.9	+ 0	48.3	135	40	5 20	5 51	6 18	16 10	33	3 26	71
18	89	18.2	+ 6	297	34.7	+ 0	34.8	135	45	5 18	5 52	6 22	16 11	29	3 23	75
19	104	18.4		312	03.4		21.3	135	50	16	53	26	12	25	20	80
20	119	18.6		326	32.1	+ 0	07.8	135	52	15	54	28	12	23	19	81
21	134	18.8		341	00.8	- 0	05.8	136	54	13	54	30	12	21	17	84
22	149	18.9		355	29.5		19.3	135	56	12	55	32	13	19	15	87
23	164	19.1		9	58.1		32.9	136	58	10	55	34	13	16	13	90
24	179	19.3	+ 6	24	26.6	- 0	46.5	136	60 S	5 07	5 55	6 37	16 14	13	3 11	93
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 11 ^h 07 ^m 3		Mag.: -4.4 PMG: 14 ^h 58 ^m			Mag.: -0.7 PMG: 21 ^h 35 ^m			Mag.: -2.0 PMG: 13 ^h 55 ^m			Mag.: +0.3 PMG: 0 ^h 53 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
^h 0	192	42.9	135	23.3	+ 23	35	19.1	+ 12	150	55.7	+ 15	346	35.2	- 7	51.0	
1	207	45.4		150	23.4		50	22.0		165	57.7		1	37.8		50.9
2	222	47.8		165	23.4		65	24.8		180	59.6		16	40.5		50.8
3	237	50.3		180	23.5		80	27.6		196	01.5		31	43.1		50.8
4	252	52.8		195	23.5		95	30.4		211	03.4		46	45.7		50.7
5	267	55.2		210	23.6	+ 23	110	33.2	+ 12	226	05.3	+ 15	61	48.4	- 7	50.6
6	282	57.7		225	23.6	+ 23	125	36.0	+ 12	241	07.2	+ 15	76	51.0	- 7	50.6
7	298	00.2		240	23.7		140	38.8		256	09.1		91	53.6		50.5
8	313	02.6		255	23.8		155	41.6		271	11.1		106	56.3		50.4
9	328	05.1		270	23.8		170	44.4		286	13.0		121	58.9		50.4
10	343	07.5		285	23.9		185	47.2		301	14.9		137	01.6		50.3
11	358	10.0		300	23.9	+ 23	200	50.0	+ 12	316	16.8	+ 15	152	04.2	- 7	50.2
12	13	12.5		315	24.0	+ 23	215	52.8	+ 12	331	18.7	+ 15	167	06.8	- 7	50.1
13	28	14.9		330	24.1		230	55.6		346	20.6		182	09.5		50.1
14	43	17.4		345	24.1		245	58.4		1	22.5		197	12.1		50.0
15	58	19.9	0	24.2			261	01.2		16	24.5		212	14.7		49.9
16	73	22.3	15	24.2			276	04.0		31	26.4		227	17.4		49.9
17	88	24.8	30	24.3	+ 23	59.4	291	06.8	+ 12	46	28.3	+ 15	242	20.0	- 7	49.8
18	103	27.3	45	24.4	+ 24	00.0	306	09.6	+ 12	61	30.2	+ 15	257	22.7	- 7	49.7
19	118	29.7	60	24.4		00.7	321	12.4		76	32.1		272	25.3		49.7
20	133	32.2	75	24.5		01.3	336	15.1		91	34.0		287	27.9		49.6
21	148	34.7	90	24.6		02.0	351	17.9		106	35.9		302	30.6		49.5
22	163	37.1	105	24.6		02.6	6	20.7		121	37.8		317	33.2		49.5
23	178	39.6	120	24.7		03.2	21	23.5		136	39.8		332	35.9		49.4
24	193	42.0	135	24.8	+ 24	03.9	36	26.3	+ 12	151	41.7	+ 15	347	38.5	- 7	49.3
Dif	—		+1		+6	+28		0	+19		+2		+26		+1	

JUEVES 5 DE ABRIL DE 2012

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UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 02 ^m 6			SD: 16'4 Edad: 13 ^d 4 PHE { 4 ^h : 60'2 12 ^h : 60'4 20 ^h : 60'6 PMG: 23 ^h 12 ^m R°: 55 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
^h 0	179 194	19.3 19.5	+ 6 08.7 09.6	24 38	26.6 55.1	95 95	− 0 46.5 − 1 00.1	136 136	60 N 58	18 54 51	19 38 32	20 34 23	17 34 31	97 94	4 18 19	13 16
1	209	19.7	10.6	53	23.6	95	13.7	136	56	47	26	14	29	90	20	19
2	224	19.8	11.5	67	52.0	94	27.3	136	54	44	21	20 06	27	88	21	21
3	239	20.0	12.5	82	20.4	94	41.0	137	52	41	16	19 58	25	85	21	24
4	254	20.2	+ 6 13.4	96	48.8	94	− 1 54.6	136	50	18 39	19 12	19 52	17 23	83	4 22	26
5	269	20.4	+ 6 14.3	111	17.1	93	− 2 08.2	136	45	18 33	19 03	19 39	17 19	78	4 23	31
6	284	20.6	15.3	125	45.3	92	21.9	137	40	29	18 56	29	16	74	25	34
7	299	20.7	16.2	140	13.6	93	35.5	136	35	25	50	21	13	71	26	37
8	314	20.9	17.2	154	41.7	91	− 2 49.1	136	30	21	46	14	10	69	27	40
9	329	21.1	18.1	169	09.8	91	− 3 02.8	137	20	15	38	19 04	06	63	28	45
10	344	21.3	+ 6 19.1	183	37.9	91	− 3 16.4	136	10 N	18 10	18 32	18 56	17 02	59	4 30	49
11	359	21.5	+ 6 20.0	198	05.9	90	− 3 30.0	136	0	18 06	18 27	18 51	16 59	55	4 31	54
12	14	21.6	21.0	212	33.9	90	43.6	136	10 S	18 01	22	47	56	50	32	58
13	29	21.8	21.9	227	01.8	89	− 3 57.2	136	20	17 57	19	44	52	46	34	62
14	44	22.0	22.9	241	29.7	89	− 4 10.8	136	30	51	15	43	48	42	35	68
15	59	22.2	23.8	255	57.5	88	24.3	135	35	49	14	43	46	38	36	70
16	74	22.3	+ 6 24.8	270	25.3	88	− 4 37.9	136	40	17 45	18 12	18 44	16 43	36	4 37	74
17	89	22.5	+ 6 25.7	284	53.0	87	− 4 51.4	135	45	17 41	18 11	18 45	16 40	32	4 38	78
18	104	22.7	26.6	299	20.7	87	− 5 05.0	136	50	37	09	47	37	27	40	82
19	119	22.9	27.6	313	48.3	86	18.5	135	52	35	09	48	35	26	40	85
20	134	23.1	28.5	328	15.8	85	31.9	134	54	33	08	49	33	24	41	87
21	149	23.2	29.5	342	43.3	85	45.4	135	56	30	07	50	32	20	42	89
22	164	23.4	30.4	357	10.8	85	− 5 58.8	134	58	27	07	52	29	18	43	92
23	179	23.6	+ 6 31.4	11	38.2	84	− 6 12.2	134	60 S	17 24	18 06	18 54	16 27	15	4 44	95
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 11 ^h 03 ^m 4			Mag.: −4.4 PMG: 14 ^h 58 ^m			Mag.: −0.6 PMG: 21 ^h 30 ^m			Mag.: −2.0 PMG: 13 ^h 51 ^m			Mag.: +0.3 PMG: 0 ^h 49 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
^h 0	193 208	42.0 44.5	135 24.8 150 24.8	+ 24 03.9 04.5	36 26.3 51 29.1	+ 12 53.4 53.4	151 41.7 166 43.6	+ 15 16.4 16.6	347 38.5 2 41.1	− 7 49.3 49.3						
1	223	47.0	165 24.9	05.2	66 31.8	53.4	181 45.5	16.8	17 43.8	49.2						
2	238	49.4	180 25.0	05.8	81 34.6	53.4	196 47.4	16.9	32 46.4	49.1						
3	253	51.9	195 25.1	06.4	96 37.4	53.4	211 49.3	17.1	47 49.0	49.0						
4	268	54.4	210 25.1	+ 24 07.1	111 40.2	+ 12 53.4	226 51.2	+ 15 17.3	62 51.7	− 7 49.0						
5	283	56.8	225 25.2	+ 24 07.7	126 43.0	+ 12 53.4	241 53.1	+ 15 17.4	77 54.3	− 7 48.9						
6	298	59.3	240 25.3	08.3	141 45.7	53.4	256 55.1	17.6	92 57.0	48.8						
7	314	01.8	255 25.4	08.9	156 48.5	53.4	271 57.0	17.8	107 59.6	48.8						
8	329	04.2	270 25.4	09.6	171 51.3	53.4	286 58.9	17.9	123 02.2	48.7						
9	344	06.7	285 25.5	10.2	186 54.0	53.4	302 00.8	18.1	138 04.9	48.6						
10	359	09.1	300 25.6	+ 24 10.8	201 56.8	+ 12 53.4	317 02.7	+ 15 18.3	153 07.5	− 7 48.6						
11	14	11.6	315 25.7	+ 24 11.5	216 59.6	+ 12 53.4	332 04.6	+ 15 18.5	168 10.2	− 7 48.5						
12	29	14.1	330 25.7	12.1	232 02.3	53.4	347 06.5	18.6	183 12.8	48.4						
13	44	16.5	345 25.8	12.7	247 05.1	53.4	2 08.4	18.8	198 15.4	48.4						
14	59	19.0	0 25.9	13.3	262 07.9	53.4	17 10.4	19.0	213 18.1	48.3						
15	74	21.5	15 26.0	14.0	277 10.6	53.4	32 12.3	19.1	228 20.7	48.2						
16	89	23.9	30 26.1	+ 24 14.6	292 13.4	+ 12 53.4	47 14.2	+ 15 19.3	243 23.3	− 7 48.1						
17	104	26.4	45 26.1	+ 24 15.2	307 16.2	+ 12 53.4	62 16.1	+ 15 19.5	258 26.0	− 7 48.1						
18	119	28.9	60 26.2	15.8	322 18.9	53.4	77 18.0	19.7	273 28.6	48.0						
19	134	31.3	75 26.3	16.4	337 21.7	53.4	92 19.9	19.8	288 31.3	47.9						
20	149	33.8	90 26.4	17.1	352 24.4	53.4	107 21.8	20.0	303 33.9	47.9						
21	164	36.3	105 26.5	17.7	7 27.2	53.4	122 23.7	20.2	318 36.5	47.8						
22	179	38.7	120 26.6	18.3	22 29.9	53.4	137 25.6	20.3	333 39.2	47.7						
23	194	41.2	135 26.6	+ 24 18.9	37 32.7	+ 12 53.4	152 27.6	+ 15 20.5	348 41.8	− 7 47.7						
Dif	—		+1	+6	+28	0	+19	+2	+26	+1						

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VIERNES 6 DE ABRIL DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 0 PMG: 12 ^h 02 ^m 3		SD: 16 ^h 5 Edad: 14 ^d 4 PHE { 4 ^h : 60 ^h /8 12 ^h : 61 ^h /0 20 ^h : 61 ^h /1 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	23.6	+ 6	11	38.2	83	— 6	12.2	60 N	3	30	4	25	5	09	19	11	
1	194	23.8		26	05.5	83		25.6	58	41	32	13	19	05	95	35	20	
2	209	24.0		40	32.8	83		38.9	56	50	38	17	18	59	92	39	22	
3	224	24.1		55	00.0	82	— 6	52.2	54	3	58	43	20	55	88	42	25	
4	239	24.3		69	27.2	82	— 7	05.5	52	4	06	48	23	50	86	45	27	
5	254	24.5	+ 6	83	54.3	81	— 7	18.8	50	4	12	4	52	5	25	18	46	
6	269	24.7	+ 6	98	21.3	80	— 7	32.0	45	4	25	5	01	5	31	18	37	
7	284	24.8		112	48.3	80		45.1	40	35	08	36	30	76	4	59		
8	299	25.0		127	15.2	79	— 7	58.2	35	44	14	40	24	73	5	03		
9	314	25.2		141	42.1	79	— 8	11.3	30	4	51	19	43	19	69	07	43	
10	329	25.4		156	08.9	78		24.4	20	5	01	27	49	09	65	13	48	
11	344	25.6	+ 6	170	35.7	78	— 8	37.3	10 N	5	08	5	33	5	54	18	01	
12	359	25.7	+ 6	185	02.3	76	— 8	50.3	0	5	14	5	38	5	59	17	54	
13	14	25.9		199	29.0	77	— 9	03.2	10 S	18	43	6	04	46	54	30	60	
14	29	26.1		213	55.5	75		16.0	20	21	46	08	38	50	36	64		
15	44	26.3		228	22.0	75		28.8	30	22	50	14	30	45	43	69		
16	59	26.4		242	48.5	75		41.5	35	22	52	17	24	43	46	72		
17	74	26.6	+ 6	257	14.9	74	— 9	54.2	40	5	22	5	53	6	20	17	19	
18	89	26.8	+ 6	271	41.2	73	— 10	06.8	45	5	21	5	55	6	24	17	12	
19	104	27.0		286	07.4	72		19.3	50	19	57	29	04	32	6	02		
20	119	27.1		300	33.6	72		31.8	52	18	57	31	17	01	29	05		
21	134	27.3		314	59.8	72		44.3	54	17	58	33	16	57	27	08		
22	149	27.5		329	25.8	70	— 10	56.6	56	16	59	36	52	25	11	91		
23	164	27.7		343	51.8	70	— 11	08.9	58	14	5	59	39	47	22	15		
24	179	27.8	+ 6	358	17.8	70	— 11	21.1	60 S	5	12	6	00	6	42	16	42	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 59 ^m 4		Mag.: -4.4 PMG: 14 ^h 58 ^m		Mag.: -0.6 PMG: 21 ^h 26 ^m		Mag.: -2.0 PMG: 13 ^h 48 ^m		Mag.: +0.3 PMG: 0 ^h 45 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec	hG ♁	Dec	hG ♂	Dec
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	194	41.2	135	26.6	+ 24	18.9	37	32.7	+ 12	53.4	152	27.6	+ 15	20.5	348	41.8	— 7	47.7
1	209	43.6	150	26.7		19.5	52	35.4		53.4	167	29.5		20.7	3	44.5		47.6
2	224	46.1	165	26.8		20.1	67	38.2		53.4	182	31.4		20.8	18	47.1		47.5
3	239	48.6	180	26.9		20.8	82	40.9		53.4	197	33.3		21.0	33	49.7		47.5
4	254	51.0	195	27.0		21.4	97	43.7		53.4	212	35.2		21.2	48	52.4		47.4
5	269	53.5	210	27.1	+ 24	22.0	112	46.4	+ 12	53.4	227	37.1	+ 15	21.4	63	55.0	— 7	47.3
6	284	56.0	225	27.2	+ 24	22.6	127	49.2	+ 12	53.4	242	39.0	+ 15	21.5	78	57.7	— 7	47.2
7	299	58.4	240	27.3		23.2	142	51.9		53.4	257	40.9		21.7	94	00.3		47.2
8	315	00.9	255	27.4		23.8	157	54.7		53.4	272	42.8		21.9	109	02.9		47.1
9	330	03.4	270	27.5		24.4	172	57.4		53.4	287	44.7		22.0	124	05.6		47.0
10	345	05.8	285	27.6		25.0	188	00.1		53.3	302	46.7		22.2	139	08.2		47.0
11	0	08.3	300	27.7	+ 24	25.6	203	02.9	+ 12	53.3	317	48.6	+ 15	22.4	154	10.9	— 7	46.9
12	15	10.7	315	27.8	+ 24	26.2	218	05.6	+ 12	53.3	332	50.5	+ 15	22.5	169	13.5	— 7	46.8
13	30	13.2	330	27.8		26.8	233	08.3		53.3	347	52.4		22.7	184	16.1		46.8
14	45	15.7	345	27.9		27.4	248	11.1		53.3	2	54.3		22.9	199	18.8		46.7
15	60	18.1	0	28.0		28.0	263	13.8		53.3	17	56.2		23.1	214	21.4		46.6
16	75	20.6	15	28.1		28.6	278	16.5		53.3	32	58.1		23.2	229	24.1		46.6
17	90	23.1	30	28.2	+ 24	29.2	293	19.3	+ 12	53.3	48	00.0	+ 15	23.4	244	26.7	— 7	46.5
18	105	25.5	45	28.3	+ 24	29.8	308	22.0	+ 12	53.2	63	01.9	+ 15	23.6	259	29.3	— 7	46.4
19	120	28.0	60	28.4		30.4	323	24.7		53.2	78	03.8		23.7	274	32.0		46.3
20	135	30.5	75	28.6		31.0	338	27.5		53.2	93	05.7		23.9	289	34.6		46.3
21	150	32.9	90	28.7		31.6	353	30.2		53.2	108	07.7		24.1	304	37.3		46.2
22	165	35.4	105	28.8		32.2	8	32.9		53.2	123	09.6		24.2	319	39.9		46.1
23	180	37.9	120	28.9		32.8	23	35.6		53.2	138	11.5		24.4	334	42.5		46.1
24	195	40.3	135	29.0	+ 24	33.4	38	38.3	+ 12	53.2	153	13.4	+ 15	24.6	349	45.2	— 7	46.0
Dif	—		+1		+6		+27		0		+19		+2		+26		+1	

SÁBADO 7 DE ABRIL DE 2012

UT	SOL			LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 12 ^h 02 ^m 0			SD: 16 ^h 7 Edad: 15 ^d 4 PHE $\begin{cases} 4^h: 61/1 \\ 12^h: 61/2 \\ 20^h: 61/2 \end{cases}$ PMG: 0 ^h 07 ^m R°: 58 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'		°	'	°	'	°	h	m	h	m	h	m	h	m
0	179	27.8	+ 6 53.9	358	17.8	— 11 21.1	122	60 N	18 59	19 44	20 41	20 50	95	4 47	21	
1	194	28.0	54.9	12	43.7	69 33.3	120	58	55	37	29	40	91	4 55	24	
2	209	28.2	55.8	27	09.5	68 45.3	120	56	51	30	19	31	89	5 01	28	
3	224	28.4	56.8	41	35.2	67 — 11 57.3	120	54	48	25	10	23	86	07	30	
4	239	28.6	57.7	56	00.9	67 — 12 09.3	120	52	45	20	20 03	16	84	12	32	
5	254	28.7	+ 6 58.6	70	26.5	66 — 12 21.1	118	50	18 42	19 15	19 56	20 10	82	5 17	34	
6	269	28.9	+ 6 59.6	84	52.1	66 — 12 32.9	118	45	18 36	19 06	19 42	19 57	78	5 27	39	
7	284	29.1	+ 7 00.5	99	17.6	65 44.6	117	40	31	18 58	31	46	75	36	42	
8	299	29.3	01.5	113	43.0	64 — 12 56.1	115	35	26	52	22	37	72	43	45	
9	314	29.4	02.4	128	08.4	64 — 13 07.7	116	30	23	47	15	28	70	5 50	47	
10	329	29.6	03.3	142	33.7	63 19.1	114	20	16	38	19 04	14	67	6 01	52	
11	344	29.8	+ 7 04.3	156	59.0	63 — 13 30.4	113	10 N	18 10	18 32	18 56	19 02	63	6 11	55	
12	359	30.0	+ 7 05.2	171	24.2	62 — 13 41.7	113	0	18 05	18 26	18 50	18 51	60	6 21	58	
13	14	30.1	06.1	185	49.3	61 — 13 52.8	111	10 S	18 00	21	46	40	57	30	62	
14	29	30.3	07.1	200	14.4	61 — 14 03.9	111	20	17 55	17	43	28	54	40	66	
15	44	30.5	08.0	214	39.4	60 14.8	109	30	49	13	41	15	49	52	70	
16	59	30.7	08.9	229	04.3	59 25.7	109	35	46	11	40	18 07	47	6 58	73	
17	74	30.8	+ 7 09.9	243	29.2	59 — 14 36.4	107	40	17 42	18 09	18 41	17 58	45	7 06	75	
18	89	31.0	+ 7 10.8	257	54.0	58 — 14 47.1	107	45	17 38	18 07	18 41	17 48	42	7 15	79	
19	104	31.2	11.7	272	18.8	58 — 14 57.7	106	50	33	05	42	36	38	26	83	
20	119	31.4	12.7	286	43.5	57 — 15 08.1	104	52	30	04	43	30	36	31	85	
21	134	31.5	13.6	301	08.1	56 18.5	104	54	28	03	44	24	34	36	88	
22	149	31.7	14.6	315	32.7	56 28.7	102	56	25	02	45	17	31	42	91	
23	164	31.9	15.5	329	57.2	55 38.8	101	58	22	01	47	09	29	49	94	
24	179	32.0	+ 7 16.4	344	21.7	55 — 15 48.9	101	60 S	17 18	18 00	18 48	17 00	25	7 57	97	
UT	ARIES PMG: 10 ^h 55 ^m 5			VENUS Mag.: -4.4 PMG: 14 ^h 58 ^m			MARTE Mag.: -0.6 PMG: 21 ^h 22 ^m			JÚPITER Mag.: -2.0 PMG: 13 ^h 45 ^m			SATURNO Mag.: +0.3 PMG: 0 ^h 41 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
	h	°	'	°	'		°	'		°	'		°	'		
0	195	40.3	135 29.0	+ 24 33.4	38 38.3	+ 12 53.2	153 13.4	+ 15 24.6	349 45.2	— 7 46.0						
1	210	42.8	150 29.1	34.0	53 41.1	53.1	168 15.3	24.8	4 47.8	45.9						
2	225	45.2	165 29.2	34.6	68 43.8	53.1	183 17.2	24.9	19 50.5	45.9						
3	240	47.7	180 29.3	35.2	83 46.5	53.1	198 19.1	25.1	34 53.1	45.8						
4	255	50.2	195 29.4	35.8	98 49.2	53.1	213 21.0	25.3	49 55.7	45.7						
5	270	52.6	210 29.5	+ 24 36.4	113 51.9	+ 12 53.1	228 22.9	+ 15 25.4	64 58.4	— 7 45.7						
6	285	55.1	225 29.6	+ 24 37.0	128 54.6	+ 12 53.0	243 24.8	+ 15 25.6	80 01.0	— 7 45.6						
7	300	57.6	240 29.7	37.6	143 57.4	53.0	258 26.7	25.8	95 03.7	45.5						
8	316	00.0	255 29.8	38.1	159 00.1	53.0	273 28.6	26.0	110 06.3	45.4						
9	331	02.5	270 30.0	38.7	174 02.8	53.0	288 30.6	26.1	125 08.9	45.4						
10	346	05.0	285 30.1	39.3	189 05.5	53.0	303 32.5	26.3	140 11.6	45.3						
11	1	07.4	300 30.2	+ 24 39.9	204 08.2	+ 12 52.9	318 34.4	+ 15 26.5	155 14.2	— 7 45.2						
12	16	09.9	315 30.3	+ 24 40.5	219 10.9	+ 12 52.9	333 36.3	+ 15 26.6	170 16.9	— 7 45.2						
13	31	12.3	330 30.4	41.1	234 13.6	52.9	348 38.2	26.8	185 19.5	45.1						
14	46	14.8	345 30.5	41.6	249 16.3	52.9	3 40.1	27.0	200 22.1	45.0						
15	61	17.3	0 30.7	42.2	264 19.0	52.8	18 42.0	27.1	215 24.8	45.0						
16	76	19.7	15 30.8	42.8	279 21.7	52.8	33 43.9	27.3	230 27.4	44.9						
17	91	22.2	30 30.9	+ 24 43.4	294 24.4	+ 12 52.8	48 45.8	+ 15 27.5	245 30.1	— 7 44.8						
18	106	24.7	45 31.0	+ 24 44.0	309 27.1	+ 12 52.8	63 47.7	+ 15 27.7	260 32.7	— 7 44.8						
19	121	27.1	60 31.1	44.5	324 29.8	52.7	78 49.6	27.8	275 35.4	44.7						
20	136	29.6	75 31.3	45.1	339 32.5	52.7	93 51.5	28.0	290 38.0	44.6						
21	151	32.1	90 31.4	45.7	354 35.2	52.7	108 53.4	28.2	305 40.6	44.5						
22	166	34.5	105 31.5	46.3	9 37.9	52.7	123 55.3	28.3	320 43.3	44.5						
23	181	37.0	120 31.6	46.8	24 40.6	52.6	138 57.2	28.5	335 45.9	44.4						
24	196	39.5	135 31.8	+ 24 47.4	39 43.3	+ 12 52.6	153 59.2	+ 15 28.7	350 48.6	— 7 44.3						
Dif	—	+1	+6	+27	0		+19	+2	+26	+1						

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DOMINGO 8 DE ABRIL DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 0 PMG: 12 ^h 01 ^m 7			SD: 16 ^h 7 Edad: 16 ^d 4 PHE { 4 ^h : 61 ^m /2 12 ^h : 61 ^m /1 20 ^h : 61 ^m /0 PMG: 1 ^h 05 ^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	h	m
0	179	32.0	+ 7	344	21.7	— 15	48.9	99	60 N	3 22	4 19	5 03	22 25	85	5 08	30	30	
1	194	32.2		358	46.1	54	— 15	58.8	58	34	26	08	11	83	19	33	30	
2	209	32.4		13	10.5	54	— 16	08.6	56	44	33	12	22 00	80	29	35	30	
3	224	32.6		27	34.8	53		18.2	54	3 53	38	15	21 49	79	37	38	30	
4	239	32.7		41	59.0	52		27.8	52	4 00	43	18	40 77	44	40	40	30	
5	254	32.9	+ 7	56	23.2	52	— 16	37.3	50	4 07	4 48	5 21	21 32	76	5 51	42	30	
6	269	33.1	+ 7	70	47.4	52	— 16	46.6	45	4 21	4 57	5 27	21 15	73	6 06	45	30	
7	284	33.3		85	11.4	50	— 16	55.8	40	32	5 05	32	21 01	71	18	48	30	
8	299	33.4		99	35.5	51	— 17	04.9	35	41	11	37	20 49	69	28	50	30	
9	314	33.6		113	59.5	50		13.8	30	48	17	41	38	68	37	52	30	
10	329	33.8		128	23.4	49		22.7	20	4 59	25	47	21	65	6 53	55	30	
11	344	33.9	+ 7	142	47.3	49	— 17	31.4	10 N	5 07	5 32	5 53	20 05	64	7 06	59	30	
12	359	34.1	+ 7	157	11.2	49	— 17	39.9	0	5 13	5 38	5 58	19 51	61	7 19	61	30	
13	14	34.3		171	35.0	48		48.4	10 S	18	42	6 04	37	59	32	64	30	
14	29	34.5		185	58.7	47	— 17	56.7	20	21	47	09	22	57	7 46	66	30	
15	44	34.6		200	22.4	47	— 18	04.9	30	23	51	15	19 04	55	8 02	69	30	
16	59	34.8		214	46.1	47		12.9	35	24	53	18	18 54	54	11	71	30	
17	74	35.0	+ 7	229	09.7	46	— 18	20.9	40	5 24	5 55	6 22	18 43	51	8 21	74	30	
18	89	35.2	+ 7	243	33.3	46	— 18	28.6	45	5 23	5 57	6 27	18 30	49	8 34	76	30	
19	104	35.3		257	56.9	46		36.3	50	22	6 00	32	14	46	49	79	30	
20	119	35.5		272	20.4	45		43.8	52	21	00	34	18 06	45	8 56	81	30	
21	134	35.7		286	43.8	44		51.2	54	21	01	37	17 58	43	9 04	83	30	
22	149	35.8		301	07.3	45	— 18	58.4	56	20	03	40	48	41	13	85	30	
23	164	36.0		315	30.7	44	— 19	05.5	58	18	04	43	38	38	23	88	30	
24	179	36.2	+ 7	329	54.1	44	— 19	12.4	60 S	5 17	6 05	6 47	17 25	36	9 34	91	30	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 51 ^m 6		Mag.: -4.4 PMG: 14 ^h 58 ^m		Mag.: -0.6 PMG: 21 ^h 17 ^m		Mag.: -2.0 PMG: 13 ^h 42 ^m		Mag.: +0.3 PMG: 0 ^h 37 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	196	39.5	135	31.8	+ 24	47.4	39	43.3	+ 12	52.6	153	59.2	+ 15	28.7	350	48.6	— 7	44.3
1	211	41.9		48.0			54	45.9		52.6	169	01.1		28.8	5	51.2		44.3
2	226	44.4		48.6			69	48.6		52.5	184	03.0		29.0	20	53.8		44.2
3	241	46.8		49.1			84	51.3		52.5	199	04.9		29.2	35	56.5		44.1
4	256	49.3		49.7			99	54.0		52.5	214	06.8		29.4	50	59.1		44.1
5	271	51.8	+ 24	50.3	114	56.7	+ 12	52.5	229	08.7	+ 15	29.5	66	01.8	— 7	44.0		
6	286	54.2	+ 24	50.8	129	59.4	+ 12	52.4	244	10.6	+ 15	29.7	81	04.4	— 7	43.9		
7	301	56.7		51.4	145	02.1		52.4	259	12.5		29.9	96	07.0		43.8		
8	316	59.2		52.0	160	04.7		52.4	274	14.4		30.0	111	09.7		43.8		
9	332	01.6		52.5	175	07.4		52.3	289	16.3		30.2	126	12.3		43.7		
10	347	04.1		53.1	190	10.1		52.3	304	18.2		30.4	141	15.0		43.6		
11	2	06.6	+ 24	53.7	205	12.8	+ 12	52.3	319	20.1	+ 15	30.5	156	17.6	— 7	43.6		
12	17	09.0	+ 24	54.2	220	15.4	+ 12	52.2	334	22.0	+ 15	30.7	171	20.3	— 7	43.5		
13	32	11.5		54.8	235	18.1		52.2	349	23.9		30.9	186	22.9		43.4		
14	47	14.0		55.3	250	20.8		52.1	4	25.8		31.1	201	25.5		43.4		
15	62	16.4	0	55.9	265	23.5		52.1	19	27.7		31.2	216	28.2		43.3		
16	77	18.9	15	56.5	280	26.1		52.1	34	29.6		31.4	231	30.8		43.2		
17	92	21.3	30	57.0	295	28.8	+ 12	52.0	49	31.5	+ 15	31.6	246	33.5	— 7	43.2		
18	107	23.8	45	57.6	310	31.5	+ 12	52.0	64	33.4	+ 15	31.7	261	36.1	— 7	43.1		
19	122	26.3	60	58.1	325	34.1		52.0	79	35.4		31.9	276	38.7		43.0		
20	137	28.7	75	58.7	340	36.8		51.9	94	37.3		32.1	291	41.4		42.9		
21	152	31.2	90	59.2	355	39.5		51.9	109	39.2		32.2	306	44.0		42.9		
22	167	33.7	105	59.8	10	42.1		51.8	124	41.1		32.4	321	46.7		42.8		
23	182	36.1	120	59.3	25	44.8		51.8	139	43.0		32.6	336	49.3		42.7		
24	197	38.6	135	59.1	40	47.4	+ 12	51.8	154	44.9	+ 15	32.8	351	52.0	— 7	42.7		
Dif	—		+1		+6		+27		0		+19		+2		+26		+1	

LUNES 9 DE ABRIL DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 01 ^m 5			SD: 16'6 Edad: 17 ^d 4 PHE { 4 ^h : 60'9 12 ^h : 60'7 20 ^h : 60'5 PMG: 2 ^h 06 ^m R°: 61 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
^h 0	179	36.2	+ 7	329	54.1	43	− 19	12.4	60 N	^h ^m 19 04	^h ^m 19 49	^h ^m 20 47	^h ^m 23 50	^h ^m 68	^h ^m 5 38	^h ^m 43	
1	194	36.4		344	17.4	43		19.3	58	18 59	41	35	34	67	5 52	45	
2	209	36.5		358	40.7	43		25.9	56	55	35	24	20	66	6 04	47	
3	224	36.7		13	04.0	43		32.4	54	51	29	15	23	08	66	15	49
4	239	36.9		27	27.2	42		38.8	52	48	23	07	22	57	66	24	50
5	254	37.0	+ 7	41	50.5	43	− 19	45.0	50	18 45	19 19	20 00	22	48	65	6 33	51
6	269	37.2	+ 7	56	13.7	42	− 19	51.1	45	18 38	19 09	19 45	22	28	64	6 51	53
7	284	37.4		70	36.8	41	− 19	57.1	40	33	19 00	33	22	12	64	7 06	55
8	299	37.5		85	00.0	42	− 20	02.8	35	28	18 54	24	21	58	64	18	56
9	314	37.7		99	23.1	41		08.5	30	24	48	17	46	64		29	57
10	329	37.9		113	46.3	42		14.0	20	17	39	19 05	26	63		7 48	59
11	344	38.1	+ 7	128	09.4	41	− 20	19.3	10 N	18 10	18 32	18 56	21	09	62	8 05	60
12	359	38.2	+ 7	142	32.5	41	− 20	24.5	0	18 05	18 26	18 50	20	52	62	8 20	62
13	14	38.4		156	55.5	40		29.5	10 S	17 59	20	45	36	61		36	62
14	29	38.6		171	18.6	41		34.4	20	53	16	41	20	19	60	8 52	64
15	44	38.7		185	41.7	41		39.1	30	47	11	39	19	59	59	9 11	66
16	59	38.9		200	04.7	40		43.7	35	43	09	38	48	58		22	67
17	74	39.1	+ 7	214	27.8	41	− 20	48.1	40	17 39	18 06	18 38	19	34	58	9 35	68
18	89	39.2	+ 7	228	50.8	40	− 20	52.4	45	17 34	18 04	18 38	19	19	57	9 50	69
19	104	39.4		243	13.8	40	− 20	56.5	50	29	01	38	19	00	55	10 08	71
20	119	39.6		257	36.9	41	− 21	00.5	52	26	18 00	39	18	51	55	17	72
21	134	39.7		271	59.9	40		04.3	54	23	17 59	39	41	54		27	72
22	149	39.9	+ 7	286	22.9	40		07.9	56	20	57	40	29	54		38	74
23	164	40.1	+ 8	300	46.0	41		11.4	58	16	56	41	16	53		10 51	75
24	179	40.3	+ 8	315	09.0	40	− 21	14.7	60 S	17 13	17 55	18 42	18	01	51	11 05	77
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 10 ^h 47 ^m 7			Mag.: −4.4 PMG: 14 ^h 58 ^m			Mag.: −0.5 PMG: 21 ^h 13 ^m			Mag.: −2.0 PMG: 13 ^h 39 ^m			Mag.: +0.3 PMG: 0 ^h 32 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
^h 0	197	38.6		135	35.1	+ 25	40	47.4	+ 12	154	44.9	+ 15	351	52.0	− 7	42.7	
1	212	41.1		150	35.2		55	50.1		169	46.8		6	54.6		42.6	
2	227	43.5		165	35.4		70	52.8		184	48.7		21	57.2		42.5	
3	242	46.0		180	35.5		85	55.4		199	50.6		36	59.9		42.5	
4	257	48.5		195	35.7		100	58.1		214	52.5		52	02.5		42.4	
5	272	50.9		210	35.8	+ 25	116	00.7	+ 12	229	54.4	+ 15	67	05.2	− 7	42.3	
6	287	53.4		225	36.0	+ 25	131	03.4	+ 12	244	56.3	+ 15	82	07.8	− 7	42.2	
7	302	55.8		240	36.1		146	06.0		259	58.2		97	10.4		42.2	
8	317	58.3		255	36.3		161	08.7		275	00.1		112	13.1		42.1	
9	333	00.8		270	36.5		176	11.3		290	02.0		127	15.7		42.0	
10	348	03.2		285	36.6		191	14.0		305	03.9		142	18.4		42.0	
11	3	05.7		300	36.8	+ 25	206	16.6	+ 12	320	05.8	+ 15	157	21.0	− 7	41.9	
12	18	08.2		315	36.9	+ 25	221	19.3	+ 12	335	07.7	+ 15	172	23.7	− 7	41.8	
13	33	10.6		330	37.1		236	21.9		350	09.6		187	26.3		41.8	
14	48	13.1		345	37.3		251	24.5		5	11.5		202	28.9		41.7	
15	63	15.6		0	37.4		266	27.2		20	13.4		217	31.6		41.6	
16	78	18.0		15	37.6		281	29.8		35	15.3		232	34.2		41.6	
17	93	20.5		30	37.7	+ 25	296	32.5	+ 12	50	17.2	+ 15	247	36.9	− 7	41.5	
18	108	22.9		45	37.9	+ 25	311	35.1	+ 12	65	19.1	+ 15	262	39.5	− 7	41.4	
19	123	25.4		60	38.1		326	37.7		80	21.0		277	42.2		41.3	
20	138	27.9		75	38.2		341	40.4		95	22.9		292	44.8		41.3	
21	153	30.3		90	38.4		356	43.0		110	24.8		307	47.4		41.2	
22	168	32.8		105	38.6		11	45.6		125	26.7		322	50.1		41.1	
23	183	35.3		120	38.8		26	48.3		140	28.6		337	52.7		41.1	
24	198	37.7		135	38.9	+ 25	41	50.9	+ 12	155	30.5	+ 15	352	55.4	− 7	41.0	
Dif	—			+2		+5		+26	0	+19		+2		+26		+1	

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MARTES 10 DE ABRIL DE 2012

UT	SOL			LUNA					Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 12 ^h 01 ^m 2			SD: 16 ^h 5 Edad: 18 ^d 4 PHE { 4 ^h : 60 ^h /3 12 ^h : 60 ^h /1 20 ^h : 59 ^h /9 PMG: 3 ^h 07 ^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	179	40.3	+ 8	01.0	315	09.0	41	- 21	14.7	32	60 N	3	14	4	12	4	57
1	194	40.4		01.9	329	32.1	41		17.9	30	58	27	20	5	02		
2	209	40.6		02.8	343	55.1	40		20.9	29	56	38	27	06			
3	224	40.8		03.8	358	18.2	41		23.8	27	54	47	33	10			
4	239	40.9		04.7	12	41.3	41		26.5	27	52	3	55	38	14		
5	254	41.1	+ 8	05.6	27	04.4	41	- 21	29.1	26	50	4	02	4	43	5	17
6	269	41.3	+ 8	06.5	41	27.5	41	- 21	31.5	24	45	4	17	4	53	5	24
7	284	41.4		07.4	55	50.6	41		33.7	22	40	29	5	02	29	16	55
8	299	41.6		08.4	70	13.8	42		35.8	21	35	38	08	34	23	02	56
9	314	41.8		09.3	84	36.9	41		37.7	19	30	46	14	38	22	50	56
10	329	41.9		10.2	99	00.1	42		39.5	18	20	4	57	23	46	29	57
11	344	42.1	+ 8	11.1	113	23.4	43	- 21	41.1	16	10 N	5	06	5	31	5	52
12	359	42.3	+ 8	12.1	127	46.6	42	- 21	42.6	15	0	5	13	5	37	5	58
13	14	42.4		13.0	142	09.9	43		43.9	13	10 S	18	42	6	04	21	54
14	29	42.6		13.9	156	33.2	43		45.1	12	20	22	47	10	21	19	59
15	44	42.8		14.8	170	56.5	43		46.1	10	30	24	52	16	20	58	62
16	59	42.9		15.7	185	19.9	44		46.9	8	35	25	55	20	46	62	63
17	74	43.1	+ 8	16.6	199	43.3	44	- 21	47.6	7	40	5	26	5	57	6	24
18	89	43.3	+ 8	17.6	214	06.8	45	- 21	48.1	5	45	5	26	6	00	6	29
19	104	43.4		18.5	228	30.3	45		48.5	4	50	25	03	35	19	55	65
20	119	43.6		19.4	242	53.8	45		48.8	3	52	25	04	38	46	64	66
21	134	43.7		20.3	257	17.3	45		48.8	0	54	24	05	41	35	65	67
22	149	43.9		21.2	271	41.0	47		48.8	0	56	23	06	44	23	65	68
23	164	44.1		22.2	286	04.6	46		48.5	3	58	22	08	48	19	09	69
24	179	44.2	+ 8	23.1	300	28.3	47	- 21	48.2	3	60 S	5	21	6	09	6	52
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 10 ^h 43 ^m 7		Mag.: -4.4 PMG: 14 ^h 57 ^m			Mag.: -0.5 PMG: 21 ^h 09 ^m			Mag.: -2.0 PMG: 13 ^h 36 ^m			Mag.: +0.3 PMG: 0 ^h 28 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'			
0	198	37.7	135	38.9	+ 25	41	50.9	+ 12	50.7	155	30.5	+ 15	36.8	352	55.4	- 7	41.0
1	213	40.2	150	39.1		56	53.5		50.6	170	32.4		37.0	7	58.0		40.9
2	228	42.7	165	39.3		71	56.1		50.5	185	34.4		37.2	23	00.7		40.9
3	243	45.1	180	39.4		86	58.8		50.5	200	36.3		37.3	38	03.3		40.8
4	258	47.6	195	39.6		102	01.4		50.4	215	38.2		37.5	53	05.9		40.7
5	273	50.1	210	39.8	+ 25	117	04.0	+ 12	50.4	230	40.1	+ 15	37.7	68	08.6	- 7	40.6
6	288	52.5	225	40.0	+ 25	132	06.6	+ 12	50.3	245	42.0	+ 15	37.8	83	11.2	- 7	40.6
7	303	55.0	240	40.2		147	09.3		50.3	260	43.9		38.0	98	13.9		40.5
8	318	57.4	255	40.3		162	11.9		50.2	275	45.8		38.2	113	16.5		40.4
9	333	59.9	270	40.5		177	14.5		50.2	290	47.7		38.4	128	19.2		40.4
10	349	02.4	285	40.7		192	17.1		50.1	305	49.6		38.5	143	21.8		40.3
11	4	04.8	300	40.9	+ 25	207	19.7	+ 12	50.1	320	51.5	+ 15	38.7	158	24.4	- 7	40.2
12	19	07.3	315	41.1	+ 25	222	22.3	+ 12	50.0	335	53.4	+ 15	38.9	173	27.1	- 7	40.2
13	34	09.8	330	41.2		237	24.9		49.9	350	55.3		39.0	188	29.7		40.1
14	49	12.2	345	41.4		252	27.6		49.9	5	57.2		39.2	203	32.4		40.0
15	64	14.7	0	41.6		267	30.2		49.8	20	59.1		39.4	218	35.0		40.0
16	79	17.2	15	41.8		282	32.8		49.8	36	01.0		39.5	233	37.7		39.9
17	94	19.6	30	42.0	+ 25	297	35.4	+ 12	49.7	51	02.9	+ 15	39.7	248	40.3	- 7	39.8
18	109	22.1	45	42.2	+ 25	312	38.0	+ 12	49.6	66	04.8	+ 15	39.9	263	42.9	- 7	39.7
19	124	24.6	60	42.4		327	40.6		49.6	81	06.7		40.1	278	45.6		39.7
20	139	27.0	75	42.6		342	43.2		49.5	96	08.6		40.2	293	48.2		39.6
21	154	29.5	90	42.8		357	45.8		49.5	111	10.5		40.4	308	50.9		39.5
22	169	31.9	105	43.0		12	48.4		49.4	126	12.4		40.6	323	53.5		39.5
23	184	34.4	120	43.2		27	51.0		49.3	141	14.3		40.7	338	56.2		39.4
24	199	36.9	135	43.3	+ 25	42	53.6	+ 12	49.3	156	16.2	+ 15	40.9	353	58.8	- 7	39.3
Dif	—		+2		+5	+26		-1		+19		+2		+26		+1	

MIÉRCOL 11 DE ABRIL DE 2012

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JUEVES 12 DE ABRIL DE 2012

UT	SOL			LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 12 ^h 00 ^m 7			SD: 16'1 Edad: 20 ^d 4 PMG: 5 ^h 07 ^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
0	179	48.2	+ 8	286	14.8	− 20	55.8	60 N	3 07	4 06	4 51	1 45	33	8 34	81	
1	194	48.3		300	40.1		51.9	58	20	14	4 57	30	35	8 49	78	
2	209	48.5		315	05.5		47.9	56	32	22	5 01	17	37	9 02	76	
3	224	48.6		329	31.0		43.7	54	41	28	05	1 05	39	13	74	
4	239	48.8		343	56.5		39.4	52	50	34	09	0 55	41	23	72	
5	254	49.0	+ 8	358	22.2	− 20	35.0	50	3 58	4 39	5 13	0 46	42	9 32	71	
6	269	49.1	+ 8	12	47.9	− 20	30.5	45	4 13	4 50	5 20	0 27	45	9 50	68	
7	284	49.3		27	13.6		25.9	40	25	4 58	26	0 11	47	10 05	66	
8	299	49.5		41	39.5		21.1	35	35	5 06	32	** **	** **	18	64	
9	314	49.6		56	05.5		16.2	30	43	12	36	** **	** **	29	62	
10	329	49.8		70	31.5		11.2	20	4 56	22	44	** **	** **	10 48	59	
11	344	49.9	+ 8	84	57.6	− 20	06.1	10 N	5 05	5 30	5 51	** **	** **	11 05	57	
12	359	50.1	+ 8	99	23.8	− 20	00.8	0	5 12	5 36	5 57	23 49	53	11 20	55	
13	14	50.3		113	50.1	− 19	55.4	10 S	18	42	6 04	35	55	36	52	
14	29	50.4		128	16.5		50.0	20	22	48	10	20	57	11 52	50	
15	44	50.6		142	43.0		44.4	30	25	53	17	23 02	61	12 11	46	
16	59	50.7	+ 8	157	09.5		38.7	35	27	56	22	22 52	63	21	46	
17	74	50.9	+ 9	171	36.2	− 19	32.8	40	5 28	5 59	6 26	22 40	65	12 34	43	
18	89	51.0	+ 9	186	02.9	− 19	26.9	45	5 28	6 02	6 32	22 26	68	12 48	41	
19	104	51.2		200	29.7		20.9	50	28	05	38	09	71	13 06	38	
20	119	51.4		214	56.6		14.7	52	28	07	41	22 01	73	15	36	
21	134	51.5		229	23.6		08.5	54	28	09	44	21 52	75	24	34	
22	149	51.7		243	50.7	− 19	02.1	56	27	10	48	42	77	34	33	
23	164	51.8		258	17.8	− 18	55.7	58	27	12	52	30	80	13 46	30	
24	179	52.0	+ 9	272	45.1	− 18	49.1	60 S	5 26	6 14	6 56	21 17	83	14 00	27	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 10 ^h 35 ^m 9		Mag.: −4.4 PMG: 14 ^h 57 ^m			Mag.: −0.5 PMG: 21 ^h 01 ^m			Mag.: −2.0 PMG: 13 ^h 30 ^m			Mag.: +0.2 PMG: 0 ^h 20 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	200	36.0	135	48.4	+ 25	55.6	+ 12	47.6	157	01.7	+ 15	45.0	355	02.2	− 7	
1	215	38.5	150	48.6		58	58.2	47.5	172	03.6		45.1	10	04.9	37.6	
2	230	40.9	165	48.8		74	00.7	47.5	187	05.5		45.3	25	07.5	37.5	
3	245	43.4	180	49.1		89	03.3	47.4	202	07.4		45.5	40	10.2	37.4	
4	260	45.9	195	49.3		104	05.9	47.3	217	09.3		45.6	55	12.8	37.4	
5	275	48.3	210	49.5	+ 25	119	08.4	+ 12	232	11.2	+ 15	45.8	70	15.5	− 7	
6	290	50.8	225	49.7	+ 25	134	11.0	+ 12	247	13.1	+ 15	46.0	85	18.1	− 7	
7	305	53.3	240	50.0		149	13.5	47.1	262	15.0		46.1	100	20.7	37.2	
8	320	55.7	255	50.2		164	16.1	47.0	277	16.9		46.3	115	23.4	37.1	
9	335	58.2	270	50.4		179	18.7	46.9	292	18.8		46.5	130	26.0	37.0	
10	351	00.7	285	50.7		194	21.2	46.8	307	20.7		46.7	145	28.7	37.0	
11	6	03.1	300	50.9	+ 25	209	23.8	+ 12	322	22.6	+ 15	46.8	160	31.3	− 7	
12	21	05.6	315	51.1	+ 25	224	26.3	+ 12	337	24.5	+ 15	47.0	175	34.0	− 7	
13	36	08.0	330	51.4		239	28.9	46.6	352	26.4		47.2	190	36.6	36.8	
14	51	10.5	345	51.6		254	31.4	46.5	7	28.3		47.3	205	39.3	36.7	
15	66	13.0	0	51.9		269	34.0	46.4	22	30.2		47.5	220	41.9	36.6	
16	81	15.4	15	52.1		284	36.5	46.4	37	32.1		47.7	235	44.5	36.5	
17	96	17.9	30	52.3	+ 25	299	39.1	+ 12	52	34.0	+ 15	47.8	250	47.2	− 7	
18	111	20.4	45	52.6	+ 25	314	41.6	+ 12	67	35.9	+ 15	48.0	265	49.8	− 7	
19	126	22.8	60	52.8		329	44.2	46.1	82	37.8		48.2	280	52.5	36.3	
20	141	25.3	75	53.1		344	46.7	46.0	97	39.7		48.3	295	55.1	36.3	
21	156	27.8	90	53.3		359	49.2	45.9	112	41.6		48.5	310	57.8	36.2	
22	171	30.2	105	53.6		14	51.8	45.8	127	43.5		48.7	326	00.4	36.1	
23	186	32.7	120	53.8		29	54.3	45.8	142	45.4		48.9	341	03.1	36.1	
24	201	35.2	135	54.1	+ 25	44	56.9	+ 12	157	47.3	+ 15	49.0	356	05.7	− 7	
Dif	—		+2		+5	+26	−1		+19		+2		+26		+1	

VIERNES 13 DE ABRIL DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 12 ^h 00 ^m 4			SD: 15 ^h 8 Edad: 21 ^d 4 PHE { 4 ^h : 57 ^m 9 12 ^h : 57 ^m 7 20 ^h : 57 ^m 4 PMG: 6 ^h 02 ^m R°: 52 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	179 52.0	+ 9 06.8		272 45.1		− 18 49.1		60 N	19 14	20 00	21 01	2 18	22	9 55	84
1	194 52.2		07.7	287 12.4	83	42.4	67	58	08	19 51	20 47	2 05	25	10 07	81
2	209 52.3		08.6	301 39.9	85	35.7	67	56	19 03	44	34	1 54	28	18 77	
3	224 52.5		09.5	316 07.4	85	28.8	69	54	18 59	37	24	44	30	27 75	
4	239 52.6		10.5	330 35.0	86	21.8	70	52	55	31	15	36	32	35 73	
5	254 52.8	+ 9	11.4	345 02.7	87	− 18 14.8	70	50	18 51	19 25	20 07	1 28	33	10 43	71
6	269 52.9	+ 9	12.3	359 30.5	88	− 18 07.6	72	45	18 43	19 14	19 51	1 12	36	10 58	68
7	284 53.1		13.2	13 58.4	89	− 18 00.4	72	40	37	19 05	38	0 58	39	11 11	65
8	299 53.3		14.1	28 26.3	89	− 17 53.0	74	35	31	18 57	28	46	42	22 62	
9	314 53.4		15.0	42 54.4	91	45.6	74	30	26	51	20	36	44	31 60	
10	329 53.6		15.9	57 22.5	91	38.0	76	20	18	40	19 06	19	47	11 47	57
11	344 53.7	+ 9	16.8	71 50.8	93	− 17 30.4	76	10 N	18 10	18 32	18 57	0 03	50	12 02	53
12	359 53.9	+ 9	17.7	86 19.1	93	− 17 22.7	77	0	18 04	18 25	18 49	***	***	12 15	50
13	14 54.0		18.6	100 47.5	94	14.9	78	10 S	17 57	18	43	***	***	28 48	
14	29 54.2		19.5	115 16.0	95	− 17 07.0	79	20	50	12	38	***	***	42 44	
15	44 54.4		20.4	129 44.6	96	− 16 59.1	79	30	42	07	34	***	***	12 57	42
16	59 54.5		21.3	144 13.3	97	51.0	81	35	38	03	33	23 55	61	13 07	39
17	74 54.7	+ 9	22.2	158 42.0	97	− 16 42.9	81	40	17 33	18 00	18 32	23 45	64	13 17	37
18	89 54.8	+ 9	23.1	173 10.9	99	− 16 34.7	82	45	17 27	17 57	18 31	23 34	67	13 29	34
19	104 55.0		24.0	187 39.8	99	26.4	83	50	20	53	30	20 71		44 30	
20	119 55.1		24.9	202 08.8	100	18.0	84	52	17	51	30	14 72		51 28	
21	134 55.3		25.8	216 37.9	101	09.6	84	54	14	50	30	23 07	74	13 58	27
22	149 55.4		26.7	231 07.1	102	− 16 01.0	86	56	10	48	31	22 59	77	14 07	24
23	164 55.6		27.6	245 36.4	103	− 15 52.4	86	58	06	46	31	50 79		16 22	
24	179 55.8	+ 9	28.5	260 05.8	104	− 15 43.8	86	60 S	17 01	17 43	18 31	22 40	82	14 27	19
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 10 ^h 31 ^m 9		Mag.: −4.5 PMG: 14 ^h 56 ^m		Mag.: −0.4 PMG: 20 ^h 57 ^m		Mag.: −2.0 PMG: 13 ^h 27 ^m		Mag.: +0.2 PMG: 0 ^h 16 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
^h 0	201 35.2		135 54.1	+ 25 49.6	44 56.9	+ 12 45.7	157 47.3	+ 15 49.0	356 05.7	− 7 36.0					
1	216 37.6		150 54.3	50.1	59 59.4	45.6	172 49.2	49.2	11 08.3	35.9					
2	231 40.1		165 54.6	50.5	75 01.9	45.5	187 51.1	49.4	26 11.0	35.9					
3	246 42.5		180 54.8	51.0	90 04.5	45.4	202 53.0	49.5	41 13.6	35.8					
4	261 45.0		195 55.1	51.4	105 07.0	45.3	217 54.9	49.7	56 16.3	35.7					
5	276 47.5		210 55.3	+ 25 51.9	120 09.5	+ 12 45.2	232 56.8	+ 15 49.9	71 18.9	− 7 35.6					
6	291 49.9		225 55.6	+ 25 52.4	135 12.1	+ 12 45.2	247 58.6	+ 15 50.0	86 21.6	− 7 35.6					
7	306 52.4		240 55.8	52.8	150 14.6	45.1	263 00.5	50.2	101 24.2	35.5					
8	321 54.9		255 56.1	53.3	165 17.1	45.0	278 02.4	50.4	116 26.8	35.4					
9	336 57.3		270 56.4	53.7	180 19.7	44.9	293 04.3	50.5	131 29.5	35.4					
10	351 59.8		285 56.6	54.2	195 22.2	44.8	308 06.2	50.7	146 32.1	35.3					
11	7 02.3		300 56.9	+ 25 54.6	210 24.7	+ 12 44.7	323 08.1	+ 15 50.9	161 34.8	− 7 35.2					
12	22 04.7		315 57.2	+ 25 55.1	225 27.2	+ 12 44.6	338 10.0	+ 15 51.1	176 37.4	− 7 35.2					
13	37 07.2		330 57.4	55.5	240 29.8	44.5	353 11.9	51.2	191 40.1	35.1					
14	52 09.7		345 57.7	56.0	255 32.3	44.4	8 13.8	51.4	206 42.7	35.0					
15	67 12.1		0 58.0	56.4	270 34.8	44.3	23 15.7	51.6	221 45.4	34.9					
16	82 14.6		15 58.2	56.9	285 37.3	44.2	38 17.6	51.7	236 48.0	34.9					
17	97 17.0		30 58.5	+ 25 57.3	300 39.8	+ 12 44.2	53 19.5	+ 15 51.9	251 50.6	− 7 34.8					
18	112 19.5		45 58.8	+ 25 57.8	315 42.4	+ 12 44.1	68 21.4	+ 15 52.1	266 53.3	− 7 34.7					
19	127 22.0		60 59.0	58.2	330 44.9	44.0	83 23.3	52.2	281 55.9	34.7					
20	142 24.4		75 59.3	58.7	345 47.4	43.9	98 25.2	52.4	296 58.6	34.6					
21	157 26.9		90 59.6	59.1	0 49.9	43.8	113 27.1	52.6	312 01.2	34.5					
22	172 29.4		105 59.9	+ 25 59.6	15 52.4	43.7	128 29.0	52.7	327 03.9	34.5					
23	187 31.8		121 00.1	+ 26 00.0	30 54.9	43.6	143 30.9	52.9	342 06.5	34.4					
24	202 34.3		136 00.4	+ 26 00.5	45 57.4	+ 12 43.5	158 32.8	+ 15 53.1	357 09.2	− 7 34.3					
Dif	—		+3	+5	+25	−1	+19	+2	+26	+1					

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SÁBADO 14 DE ABRIL DE 2012

UT	SOL			<div><div><div><div><div></div><div>LUNA</div></div><div><div>SD: 15°6</div><div>Edad: 22^d4</div><div>PMG: 6^h 54^m</div></div><div><div>PHE</div><div><div>4^h: 57/1</div><div>12^h: 56/9</div><div>20^h: 56/6</div></div></div></div><div>R°: 48^m</div></div></div>				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 12 ^h 00 ^m 2		hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°		
	hG ☉	Dec														
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m
0	179	55.8	+ 9	28.5	260	05.8	— 15	43.8	60 N	2 59	3 59	4 45	2 40	16	11 19	82
1	194	55.9		29.4	274	35.2		35.0	58	3 13	4 08	51	30	19	28	79
2	209	56.1		30.3	289	04.7		26.2	56	25	16	4 56	22	21	35	77
3	224	56.2		31.2	303	34.4		17.3	54	36	23	5 01	14	24	42	74
4	239	56.4		32.1	318	04.1	— 15	08.3	52	45	29	05	08	25	48	72
5	254	56.5	+ 9	33.0	332	33.8	— 14	59.3	50	3 53	4 35	5 09	2 01	28	11 54	70
6	269	56.7	+ 9	33.9	347	03.7	— 14	50.2	45	4 09	4 46	5 17	1 48	31	12 06	66
7	284	56.8		34.8	1	33.6		41.1	40	22	4 55	23	37	34	16	63
8	299	57.0		35.7	16	03.7		31.8	35	32	5 03	29	28	37	24	61
9	314	57.1		36.6	30	33.8		22.5	30	41	09	34	20	39	31	59
10	329	57.3		37.5	45	03.9		13.2	20	4 54	20	43	1 06	42	44	54
11	344	57.4	+ 9	38.4	59	34.2	— 14	03.8	10 N	5 04	5 29	5 50	0 53	46	12 55	51
12	359	57.6	+ 9	39.3	74	04.5	— 13	54.3	0	5 12	5 36	5 57	0 42	48	13 05	48
13	14	57.7		40.2	88	35.0		44.7	10 S	18	42	6 04	30	52	16	44
14	29	57.9		41.0	103	05.5		35.1	20	23	48	11	17	56	26	41
15	44	58.1		41.9	117	36.0		25.5	30	27	54	19	0 03	59	39	36
16	59	58.2		42.8	132	06.7		15.8	35	28	5 58	23	** ** *	** ** *	46	34
17	74	58.4	+ 9	43.7	146	37.4	— 13	06.0	40	5 29	6 01	6 28	** ** *	** ** *	13 54	32
18	89	58.5	+ 9	44.6	161	08.2	— 12	56.2	45	5 30	6 04	6 34	** ** *	** ** *	14 03	29
19	104	58.7		45.5	175	39.1		46.3	50	31	08	41	** ** *	** ** *	14	25
20	119	58.8		46.4	190	10.0		36.4	52	31	10	44	** ** *	** ** *	19	24
21	134	59.0		47.3	204	41.0		26.4	54	31	12	48	** ** *	** ** *	25	22
22	149	59.1		48.2	219	12.1		16.4	56	31	14	52	** ** *	** ** *	31	20
23	164	59.3		49.1	233	43.3	— 12	06.3	58	31	16	6 56	** ** *	** ** *	38	17
24	179	59.4	+ 9	50.0	248	14.5	— 11	56.2	60 S	5 30	6 19	7 01	** ** *	** ** *	14 46	14
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 10 ^h 28 ^m 0		Mag.: -4.5 PMG: 14 ^h 56 ^m			Mag.: -0.4 PMG: 20 ^h 53 ^m			Mag.: -2.0 PMG: 13 ^h 24 ^m			Mag.: +0.2 PMG: 0 ^h 11 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	202	34.3	136	00.4	+ 26	45	57.4	+ 12	158	32.8	+ 15	357	09.2	— 7	34.3	
1	217	36.8	151	00.7		60	59.9		173	34.7		12	11.8		34.3	
2	232	39.2	166	01.0		76	02.4		188	36.5		27	14.4		34.2	
3	247	41.7	181	01.3		91	04.9		203	38.4		42	17.1		34.1	
4	262	44.1	196	01.6		106	07.4		218	40.3		57	19.7		34.0	
5	277	46.6	211	01.8	+ 26	121	10.0	+ 12	233	42.2	+ 15	72	22.4	— 7	34.0	
6	292	49.1	226	02.1	+ 26	136	12.5	+ 12	248	44.1	+ 15	87	25.0	— 7	33.9	
7	307	51.5	241	02.4		151	15.0		263	46.0		102	27.7		33.8	
8	322	54.0	256	02.7		166	17.5		278	47.9		117	30.3		33.8	
9	337	56.5	271	03.0		181	20.0		293	49.8		132	33.0		33.7	
10	352	58.9	286	03.3		196	22.4		308	51.7		147	35.6		33.6	
11	8	01.4	301	03.6	+ 26	211	24.9	+ 12	323	53.6	+ 15	162	38.2	— 7	33.6	
12	23	03.9	316	03.9	+ 26	226	27.4	+ 12	338	55.5	+ 15	177	40.9	— 7	33.5	
13	38	06.3	331	04.2		241	29.9		353	57.4		192	43.5		33.4	
14	53	08.8	346	04.5		256	32.4		8	59.3		207	46.2		33.4	
15	68	11.3	1	04.8		271	34.9		24	01.2		222	48.8		33.3	
16	83	13.7	16	05.1		286	37.4		39	03.1		237	51.5		33.2	
17	98	16.2	31	05.4	+ 26	301	39.9	+ 12	54	04.9	+ 15	252	54.1	— 7	33.1	
18	113	18.6	46	05.7	+ 26	316	42.4	+ 12	69	06.8	+ 15	267	56.8	— 7	33.1	
19	128	21.1	61	06.0		331	44.9		84	08.7		282	59.4		33.0	
20	143	23.6	76	06.3		346	47.3		99	10.6		298	02.0		32.9	
21	158	26.0	91	06.6		1	49.8		114	12.5		313	04.7		32.9	
22	173	28.5	106	06.9		16	52.3		129	14.4		328	07.3		32.8	
23	188	31.0	121	07.2		31	54.8		144	16.3		343	10.0		32.7	
24	203	33.4	136	07.5	+ 26	46	57.3	+ 12	159	18.2	+ 15	358	12.6	— 7	32.7	
Dif	—		+3		+4	+25		-1	+19		+2	+26		+1		


DOMINGO 15 DE ABRIL DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 9		SD: 15 ^h 4 Edad: 23 ^d 4 PHE { 4 ^h : 56 ^h 4 12 ^h : 56 ^h 2 20 ^h : 56 ^h 0 PMG: 7 ^h 42 ^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 ^s	^h ^m ^s	^h ^m ^s	^h ^m ^s	
0	179 59.4	+ 9 50.0	248 14.5	123	- 11 56.2	102	60 N	19 19	20 06	21 08	2 56 12	12 41 80		
1	194 59.6	50.9	262 45.8	124	46.0	102	58	13	19 56	20 53	49 15	47 77		
2	209 59.7	51.8	277 17.2	124	35.8	103	56	08	48	40	43 18	52 74		
3	224 59.9	52.7	291 48.6	124	25.5	103	54	19 03	41	29	38 20	12 56 72		
4	240 00.0	53.6	306 20.1	125	15.2	103	52	18 58	34	19	33 22	13 00 71		
5	255 00.2	+ 9 54.4	320 51.7	126	- 11 04.9	103	50	18 54	19 29	20 11	2 29 23	13 04 69		
6	270 00.3	+ 9 55.3	335 23.3	126	- 10 54.5	104	45	18 46	19 17	19 54	2 19 27	13 12 65		
7	285 00.5	56.2	349 55.0	127	44.0	105	40	39	19 07	41	11 31	19 61		
8	300 00.6	57.1	4 26.8	128	33.5	105	35	33	18 59	30	2 05 32	25 58		
9	315 00.8	58.0	18 58.6	128	23.0	105	30	27	52	21	1 59 35	30 56		
10	330 00.9	58.9	33 30.5	129	12.5	105	20	18	41	19 07	48 39	38 52		
11	345 01.1	+ 9 59.8	48 02.5	130	- 10 01.9	106	10 N	18 11	18 32	18 57	1 39 43	13 46 48		
12	0 01.2	+ 10 00.7	62 34.5	130	- 9 51.3	106	0	18 03	18 24	18 49	1 30 46	13 53 45		
13	15 01.4	01.6	77 06.6	131	40.6	107	10 S	17 56	17	42	22 49	14 00 41		
14	30 01.5	02.5	91 38.7	131	29.9	107	20	49	11	37	13 52	07 38		
15	45 01.7	03.3	106 10.9	132	19.2	107	30	40	04	32	1 02 57	15 34		
16	60 01.8	04.2	120 43.1	132	- 9 08.4	108	35	35	18 01	30	0 56 59	20 32		
17	75 02.0	+ 10 05.1	135 15.4	133	- 8 57.6	108	40	17 30	17 57	18 29	0 49 62	14 26 29		
18	90 02.1	+ 10 06.0	149 47.8	134	- 8 46.8	108	45	17 24	17 53	18 28	0 41 65	14 32 26		
19	105 02.2	06.9	164 20.2	134	35.9	109	50	16	49	27	31 69	39 23		
20	120 02.4	07.8	178 52.7	135	25.0	109	52	13	47	26	26 71	43 20		
21	135 02.5	08.7	193 25.2	135	14.1	109	54	09	45	26	21 73	47 18		
22	150 02.7	09.6	207 57.8	136	- 8 03.2	109	56	05	43	26	16 75	51 16		
23	165 02.8	10.4	222 30.4	136	- 7 52.2	110	58	17 00	40	26	09 78	14 55 15		
24	180 03.0	+ 10 11.3	237 03.1	137	- 7 41.2	110	60 S	16 55	17 38	18 26	0 02 81	15 00 12		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 10 ^h 24 ^m 1		Mag.: -4.5 PMG: 14 ^h 55 ^m		Mag.: -0.4 PMG: 20 ^h 49 ^m		Mag.: -2.0 PMG: 13 ^h 21 ^m		Mag.: +0.2 PMG: 0 ^h 07 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec
^h	[°] ['] ^{''}	[°] ['] ^{''}	[°] ['] ^{''}	[°] ['] ^{''}	[°] ['] ^{''}	[°] ['] ^{''}	[°] ['] ^{''}	[°] ['] ^{''}	[°] ['] ^{''}	[°] ['] ^{''}	[°] ['] ^{''}	[°] ['] ^{''}	[°] ['] ^{''}	
0	203 33.4	136 07.5	+ 26 10.8	46 57.3	+ 12 41.0	159 18.2	+ 15 57.1	358 12.6	- 7 32.7					
1	218 35.9	151 07.8	11.2	61 59.8	40.9	174 20.1	57.3	13 15.3	32.6					
2	233 38.4	166 08.1	11.6	77 02.2	40.8	189 22.0	57.5	28 17.9	32.5					
3	248 40.8	181 08.5	12.0	92 04.7	40.7	204 23.9	57.6	43 20.6	32.5					
4	263 43.3	196 08.8	12.5	107 07.2	40.6	219 25.8	57.8	58 23.2	32.4					
5	278 45.8	211 09.1	+ 26 12.9	122 09.7	+ 12 40.5	234 27.7	+ 15 58.0	73 25.8	- 7 32.3					
6	293 48.2	226 09.4	+ 26 13.3	137 12.1	+ 12 40.4	249 29.5	+ 15 58.1	88 28.5	- 7 32.2					
7	308 50.7	241 09.7	13.7	152 14.6	40.3	264 31.4	58.3	103 31.1	32.2					
8	323 53.1	256 10.0	14.1	167 17.1	40.2	279 33.3	58.5	118 33.8	32.1					
9	338 55.6	271 10.4	14.5	182 19.5	40.1	294 35.2	58.6	133 36.4	32.0					
10	353 58.1	286 10.7	14.9	197 22.0	39.9	309 37.1	58.8	148 39.1	32.0					
11	9 00.5	301 11.0	+ 26 15.4	212 24.5	+ 12 39.8	324 39.0	+ 15 59.0	163 41.7	- 7 31.9					
12	24 03.0	316 11.3	+ 26 15.8	227 26.9	+ 12 39.7	339 40.9	+ 15 59.1	178 44.4	- 7 31.8					
13	39 05.5	331 11.7	16.2	242 29.4	39.6	354 42.8	59.3	193 47.0	31.8					
14	54 07.9	346 12.0	16.6	257 31.9	39.5	9 44.7	59.5	208 49.7	31.7					
15	69 10.4	1 12.3	17.0	272 34.3	39.4	24 46.6	59.7	223 52.3	31.6					
16	84 12.9	16 12.7	17.4	287 36.8	39.3	39 48.5	+ 15 59.8	238 54.9	31.6					
17	99 15.3	31 13.0	+ 26 17.8	302 39.2	+ 12 39.2	54 50.4	+ 16 00.0	253 57.6	- 7 31.5					
18	114 17.8	46 13.3	+ 26 18.2	317 41.7	+ 12 39.0	69 52.2	+ 16 00.2	269 00.2	- 7 31.4					
19	129 20.2	61 13.7	18.6	332 44.2	38.9	84 54.1	00.3	284 02.9	31.3					
20	144 22.7	76 14.0	19.0	347 46.6	38.8	99 56.0	00.5	299 05.5	31.3					
21	159 25.2	91 14.3	19.4	2 49.1	38.7	114 57.9	00.7	314 08.2	31.2					
22	174 27.6	106 14.7	19.8	17 51.5	38.6	129 59.8	00.8	329 10.8	31.1					
23	189 30.1	121 15.0	20.2	32 54.0	38.5	145 01.7	01.0	344 13.5	31.1					
24	204 32.6	136 15.4	+ 26 20.6	47 56.4	+ 12 38.3	160 03.6	+ 16 01.2	359 16.1	- 7 31.0					
Dif	—	+3	+4	+25	-1	+19	+2	+26	+1					


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LUNES 16 DE ABRIL DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 59 ^m 7		SD: 15°2 Edad: 24 ^d 4		PHE $\begin{cases} 4^h: 55:8 \\ 12^h: 55:6 \\ 20^h: 55:4 \end{cases}$			R°: 44 ^m			Hora		R°	Hora		R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
^h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	03.0	+ 10	11.3	237	03.1	60 N	2 50	3 53	4 40	3 08	11	14 01	77		
1	195	03.1		12.2	251	35.8 ¹³⁷	58	3 06	4 02	46	04	14	04	75		
2	210	03.3		13.1	266	08.6 ¹³⁸	56	19	11	51	3 01	15	06	73		
3	225	03.4		14.0	280	41.5 ¹³⁹	54	30	18	4 56	2 58	17	08	71		
4	240	03.6		14.9	295	14.3 ¹³⁸	52	40	24	5 00	55	19	11	68		
5	255	03.7	+ 10	15.7	309	47.3 ¹⁴⁰	50	3 48	4 30	5 04	2 52	21	14 13	66		
6	270	03.9	+ 10	16.6	324	20.2 ¹³⁹	45	4 05	4 42	5 13	2 46	25	14 17	63		
7	285	04.0		17.5	338	53.2 ¹⁴⁰	40	19	4 52	20	42	27	20	60		
8	300	04.2		18.4	353	26.3 ¹⁴¹	35	29	5 00	26	37	31	23	57		
9	315	04.3		19.3	7	59.4 ¹⁴¹	30	38	07	32	34	33	26	54		
10	330	04.4		20.2	22	32.6 ¹⁴²	20	4 52	19	41	27	37	30	51		
11	345	04.6	+ 10	21.0	37	05.7 ¹⁴¹	10 N	5 03	5 28	5 49	2 22	40	14 34	47		
12	0	04.7	+ 10	21.9	51	39.0 ¹⁴³	0	5 11	5 35	5 56	2 16	44	14 38	43		
13	15	04.9		22.8	66	12.2 ¹⁴²	10 S	18	42	6 04	11	47	41	40		
14	30	05.0		23.7	80	45.5 ¹⁴³	20	23	49	11	2 05	51	45	36		
15	45	05.2		24.6	95	18.9 ¹⁴⁴	30	28	56	20	1 59	55	49	33		
16	60	05.3		25.5	109	52.3 ¹⁴⁴	35	30	5 59	25	55	58	52	30		
17	75	05.5	+ 10	26.3	124	25.7 ¹⁴⁴	40	5 31	6 03	6 30	1 51	60	14 55	27		
18	90	05.6	+ 10	27.2	138	59.2 ¹⁴⁵	45	5 33	6 07	6 37	1 46	64	14 58	24		
19	105	05.7		28.1	153	32.6 ¹⁴⁴	50	34	11	44	40	67	15 02	20		
20	120	05.9		29.0	168	06.2 ¹⁴⁶	52	34	13	48	37	69	03	19		
21	135	06.0		29.9	182	39.7 ¹⁴⁵	54	34	16	52	34	71	05	17		
22	150	06.2		30.7	197	13.3 ¹⁴⁶	56	35	18	6 56	31	73	07	15		
23	165	06.3		31.6	211	46.9 ¹⁴⁶	58	35	20	7 01	27	76	10	12		
24	180	06.5	+ 10	32.5	226	20.6 ¹⁴⁷	60 S	5 35	6 23	7 06	1 23	79	15 12	11		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 10 ^h 20 ^m 1		Mag.: -4.5 PMG: 14 ^h 55 ^m		Mag.: -0.4 PMG: 20 ^h 45 ^m		Mag.: -2.0 PMG: 13 ^h 18 ^m		Mag.: +0.2 PMG: 0 ^h 03 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
^h	°	'	°	'	°	'	°	'	°	'	°	'				
0	204	32.6	136	15.4	+ 26	20.6	47	56.4	+ 12	38.3	160	03.6	+ 16	01.2		
1	219	35.0	151	15.7		21.0	62	58.9		38.2	175	05.5		01.3		
2	234	37.5	166	16.1		21.4	78	01.3		38.1	190	07.4		01.5		
3	249	40.0	181	16.4		21.8	93	03.8		38.0	205	09.3		01.7		
4	264	42.4	196	16.8		22.2	108	06.2		37.9	220	11.2		01.8		
5	279	44.9	211	17.1	+ 26	22.6	123	08.7	+ 12	37.7	235	13.0	+ 16	02.0		
6	294	47.4	226	17.5	+ 26	23.0	138	11.1	+ 12	37.6	250	14.9	+ 16	02.2		
7	309	49.8	241	17.8		23.4	153	13.5		37.5	265	16.8		02.3		
8	324	52.3	256	18.2		23.8	168	16.0		37.4	280	18.7		02.5		
9	339	54.7	271	18.5		24.2	183	18.4		37.3	295	20.6		02.7		
10	354	57.2	286	18.9		24.5	198	20.9		37.1	310	22.5		02.8		
11	9	59.7	301	19.2	+ 26	24.9	213	23.3	+ 12	37.0	325	24.4	+ 16	03.0		
12	25	02.1	316	19.6	+ 26	25.3	228	25.7	+ 12	36.9	340	26.3	+ 16	03.2		
13	40	04.6	331	20.0		25.7	243	28.2		36.8	355	28.2		03.4		
14	55	07.1	346	20.3		26.1	258	30.6		36.6	10	30.0		03.5		
15	70	09.5	1	20.7		26.5	273	33.0		36.5	25	31.9		03.7		
16	85	12.0	16	21.1		26.9	288	35.5		36.4	40	33.8		03.9		
17	100	14.5	31	21.4	+ 26	27.2	303	37.9	+ 12	36.3	55	35.7	+ 16	04.0		
18	115	16.9	46	21.8	+ 26	27.6	318	40.3	+ 12	36.1	70	37.6	+ 16	04.2		
19	130	19.4	61	22.2		28.0	333	42.8		36.0	85	39.5		04.4		
20	145	21.8	76	22.5		28.4	348	45.2		35.9	100	41.4		04.5		
21	160	24.3	91	22.9		28.8	3	47.6		35.8	115	43.3		04.7		
22	175	26.8	106	23.3		29.1	18	50.0		35.6	130	45.2		04.9		
23	190	29.2	121	23.7		29.5	33	52.5		35.5	145	47.1		05.0		
24	205	31.7	136	24.0	+ 26	29.9	48	54.9	+ 12	35.4	160	48.9	+ 16	05.2		
Dif	—		+4		+4		+24		-1		+19		+2			

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MIÉRCOL 18 DE ABRIL DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 2		SD: 14 ^h 9 Edad: 26 ^d 4		PHE { 4 ^h : 54 ^m 8 12 ^h : 54 ^m 7 20 ^h : 54 ^m 6													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	09.8	+ 10	53.5	215	55.3	+ 1	21.1	60 N	2 42	3 46	4 34	3 29	11	16 35	76		
1	195	10.0		54.4	230	29.5		32.4	58	2 59	3 57	40	30	13	33	73		
2	210	10.1		55.2	245	03.6		43.6	56	3 13	4 05	46	31	15	30	71		
3	225	10.2		56.1	259	37.8		54.9	54	24	13	51	32	17	28	69		
4	240	10.4		57.0	274	12.0		+ 2 06.2	52	34	20	4 56	33	18	27	66		
5	255	10.5	+ 10	57.8	288	46.2		+ 2 17.4	50	3 43	4 26	5 00	3 33	21	16 25	65		
6	270	10.7	+ 10	58.7	303	20.3		+ 2 28.6	45	4 01	4 39	5 10	3 35	24	16 22	61		
7	285	10.8	+ 10	59.6	317	54.5		39.8	40	15	49	17	36	27	19	58		
8	300	10.9	+ 11	00.4	332	28.8		+ 2 51.0	35	26	4 58	24	37	30	16	56		
9	315	11.1		01.3	347	03.0		+ 3 02.2	30	36	5 05	30	38	32	14	53		
10	330	11.2		02.2	1	37.2		13.3	20	4 50	17	39	40	36	10	49		
11	345	11.3	+ 11	03.1	16	11.4		+ 3 24.5	10 N	5 02	5 27	5 48	3 42	39	16 07	46		
12	0	11.5	+ 11	03.9	30	45.6		+ 3 35.6	0	5 10	5 35	5 56	3 43	43	16 04	42		
13	15	11.6		04.8	45	19.8		46.7	10 S	18	42	6 04	45	45	16 00	40		
14	30	11.7		05.7	59	54.0		+ 3 57.8	20	24	49	12	46	50	15 57	36		
15	45	11.9		06.5	74	28.3		+ 4 08.8	30	29	5 57	21	48	53	53	32		
16	60	12.0		07.4	89	02.5		19.8	35	31	6 01	26	49	56	51	30		
17	75	12.2	+ 11	08.3	103	36.7		+ 4 30.8	40	5 33	6 05	6 32	3 50	59	15 49	27		
18	90	12.3	+ 11	09.1	118	10.9		+ 4 41.8	45	5 35	6 09	6 39	3 52	61	15 46	24		
19	105	12.4		10.0	132	45.1		+ 4 52.8	50	37	14	47	54	65	42	21		
20	120	12.6		10.9	147	19.4		+ 5 03.7	52	37	17	51	54	67	41	19		
21	135	12.7		11.7	161	53.6		14.6	54	38	19	6 55	55	69	39	17		
22	150	12.8		12.6	176	27.8		25.5	56	38	22	7 00	56	71	37	16		
23	165	13.0		13.4	191	02.0		36.4	58	39	24	05	57	74	35	13		
24	180	13.1	+ 11	14.3	205	36.1		+ 5 47.2	60 S	5 39	6 28	7 11	3 58	77	15 33	11		
UT	ARIES PMG 10 ^h 12 ^m 3		VENUS Mag.: -4.5 PMG: 14 ^h 53 ^m		MARTE Mag.: -0.3 PMG: 20 ^h 37 ^m		JÚPITER Mag.: -2.0 PMG: 13 ^h 12 ^m		SATURNO Mag.: +0.2 PMG: 23 ^h 50 ^m									
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec								
	°	'	°	'	°	'	°	'	°	'								
h	°	'	°	'	°	'	°	'	°	'								
0	206	30.8	136	33.6	+ 26	38.7	49	52.6	+ 12	32.2	161	34.3	+ 16	09.2	1	23.0	- 7	27.7
1	221	33.3	151	34.0		39.0	64	55.0		32.0	176	36.1		09.4	16	25.7		27.6
2	236	35.8	166	34.4		39.4	79	57.4		31.9	191	38.0		09.6	31	28.3		27.6
3	251	38.2	181	34.8		39.7	94	59.8		31.8	206	39.9		09.7	46	31.0		27.5
4	266	40.7	196	35.2		40.1	110	02.2		31.6	221	41.8		09.9	61	33.6		27.4
5	281	43.2	211	35.7	+ 26	40.4	125	04.6	+ 12	31.5	236	43.7	+ 16	10.1	76	36.3	- 7	27.3
6	296	45.6	226	36.1	+ 26	40.8	140	07.0	+ 12	31.3	251	45.6	+ 16	10.2	91	38.9	- 7	27.3
7	311	48.1	241	36.5		41.1	155	09.4		31.2	266	47.5		10.4	106	41.6		27.2
8	326	50.6	256	36.9		41.5	170	11.7		31.1	281	49.3		10.6	121	44.2		27.1
9	341	53.0	271	37.4		41.8	185	14.1		30.9	296	51.2		10.7	136	46.8		27.1
10	356	55.5	286	37.8		42.2	200	16.5		30.8	311	53.1		10.9	151	49.5		27.0
11	11	57.9	301	38.2	+ 26	42.5	215	18.9	+ 12	30.6	326	55.0	+ 16	11.1	166	52.1	- 7	26.9
12	27	00.4	316	38.7	+ 26	42.9	230	21.3	+ 12	30.5	341	56.9	+ 16	11.2	181	54.8	- 7	26.9
13	42	02.9	331	39.1		43.2	245	23.7		30.3	356	58.8		11.4	196	57.4		26.8
14	57	05.3	346	39.5		43.5	260	26.0		30.2	12	00.7		11.6	212	00.1		26.7
15	72	07.8	1	40.0		43.9	275	28.4		30.0	27	02.6		11.7	227	02.7		26.7
16	87	10.3	16	40.4		44.2	290	30.8		29.9	42	04.4		11.9	242	05.4		26.6
17	102	12.7	31	40.9	+ 26	44.6	305	33.2	+ 12	29.8	57	06.3	+ 16	12.1	257	08.0	- 7	26.5
18	117	15.2	46	41.3	+ 26	44.9	320	35.5	+ 12	29.6	72	08.2	+ 16	12.2	272	10.6	- 7	26.5
19	132	17.7	61	41.8		45.2	335	37.9		29.5	87	10.1		12.4	287	13.3		26.4
20	147	20.1	76	42.2		45.6	350	40.3		29.3	102	12.0		12.6	302	15.9		26.3
21	162	22.6	91	42.6		45.9	5	42.6		29.2	117	13.9		12.7	317	18.6		26.2
22	177	25.1	106	43.1		46.3	20	45.0		29.0	132	15.8		12.9	332	21.2		26.2
23	192	27.5	121	43.5		46.6	35	47.4		28.9	147	17.6		13.1	347	23.9		26.1
24	207	30.0	136	44.0	+ 26	46.9	50	49.7	+ 12	28.7	162	19.5	+ 16	13.2	2	26.5	- 7	26.0
Dif	—	+4	+3		+24		-1		+19		+2		+26		+1			

JUEVES 19 DE ABRIL DE 2012

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UT	SOL			<div><div><div>☾</div><div>LUNA</div></div><div><div>SD: 14^h9</div><div>Edad: 27^d4</div><div>PMG: 10^h 36^m</div></div><div><div>PHE</div><div><div>4^h: 54^h/5</div><div>12^h: 54^h/4</div><div>20^h: 54^h/3</div></div><div>R°: 43^m</div></div></div>				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 59 ^m 0														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora R°	Hora R°		
<div>h</div> <div>0</div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div> <div>8</div> <div>9</div> <div>10</div> <div>11</div> <div>12</div> <div>13</div> <div>14</div> <div>15</div> <div>16</div> <div>17</div> <div>18</div> <div>19</div> <div>20</div> <div>21</div> <div>22</div> <div>23</div> <div>24</div>	<div>180</div> <div>195</div> <div>210</div> <div>225</div> <div>240</div> <div>255</div> <div>270</div> <div>285</div> <div>300</div> <div>315</div> <div>330</div> <div>345</div> <div>0</div> <div>15</div> <div>30</div> <div>45</div> <div>60</div> <div>75</div> <div>90</div> <div>105</div> <div>120</div> <div>135</div> <div>150</div> <div>165</div> <div>180</div>	<div>13.1</div> <div>13.2</div> <div>13.4</div> <div>13.5</div> <div>13.6</div> <div>13.8</div> <div>13.9</div> <div>14.0</div> <div>14.2</div> <div>14.3</div> <div>14.4</div> <div>14.6</div> <div>14.7</div> <div>14.8</div> <div>15.0</div> <div>15.1</div> <div>15.2</div> <div>15.3</div> <div>15.5</div> <div>15.6</div> <div>15.7</div> <div>15.9</div> <div>16.0</div> <div>16.1</div> <div>16.3</div>	<div>+ 11</div> <div></div> <div></div> <div></div> <div></div> <div>+ 11</div> <div>+ 11</div> <div></div> <div></div> <div></div> <div></div> <div>+ 11</div> <div>+ 11</div> <div></div> <div></div> <div></div> <div></div> <div>+ 11</div> <div>+ 11</div> <div></div> <div></div> <div></div> <div></div> <div></div> <div>+ 11</div>	<div>205</div> <div>220</div> <div>234</div> <div>249</div> <div>263</div> <div>278</div> <div>293</div> <div>307</div> <div>322</div> <div>336</div> <div>351</div> <div>5</div> <div>20</div> <div>34</div> <div>49</div> <div>64</div> <div>78</div> <div>93</div> <div>107</div> <div>122</div> <div>136</div> <div>151</div> <div>166</div> <div>180</div> <div>195</div>	<div>36.1</div> <div>10.3</div> <div>44.5</div> <div>18.7</div> <div>52.8</div> <div>27.0</div> <div>01.1</div> <div>35.3</div> <div>09.4</div> <div>43.5</div> <div>17.6</div> <div>5 51.7</div> <div>25 57.7</div> <div>59.8</div> <div>33.8</div> <div>07.9</div> <div>41.9</div> <div>15.9</div> <div>49.8</div> <div>23.8</div> <div>57.7</div> <div>31.7</div> <div>05.6</div> <div>39.4</div> <div>13.3</div>	<div>+ 5</div> <div>+ 5</div> <div>+ 6</div> <div></div> <div></div> <div>+ 6</div> <div>+ 6</div> <div>+ 7</div> <div></div> <div></div> <div></div> <div>+ 7</div> <div>+ 7</div> <div>+ 8</div> <div></div> <div></div> <div>+ 8</div> <div>+ 8</div> <div>+ 9</div> <div></div> <div></div> <div></div> <div></div> <div></div> <div>+ 9</div>	<div>47.2</div> <div>58.0</div> <div>08.8</div> <div>19.5</div> <div>30.3</div> <div>40.9</div> <div>51.6</div> <div>02.2</div> <div>12.8</div> <div>23.4</div> <div>33.9</div> <div>44.4</div> <div>54.8</div> <div>05.2</div> <div>15.6</div> <div>26.0</div> <div>36.3</div> <div>46.5</div> <div>56.8</div> <div>07.0</div> <div>17.1</div> <div>27.2</div> <div>37.3</div> <div>47.3</div> <div>57.3</div>	<div>108</div> <div>108</div> <div>107</div> <div>108</div> <div>106</div> <div>107</div> <div>106</div> <div>106</div> <div>106</div> <div>105</div> <div>105</div> <div>104</div> <div>104</div> <div>104</div> <div>103</div> <div>102</div> <div>103</div> <div>102</div> <div>101</div> <div>101</div> <div>101</div> <div>100</div> <div>100</div> <div></div>	<div>60 N</div> <div>58</div> <div>56</div> <div>54</div> <div>52</div> <div>50</div> <div>45</div> <div>40</div> <div>35</div> <div>30</div> <div>20</div> <div>10 N</div> <div>0</div> <div>10 S</div> <div>20</div> <div>30</div> <div>35</div> <div>40</div> <div>45</div> <div>50</div> <div>52</div> <div>54</div> <div>56</div> <div>58</div> <div>60 S</div>	<div>19 29</div> <div>22</div> <div>16</div> <div>10</div> <div>05</div> <div>19 01</div> <div>18 51</div> <div>43</div> <div>36</div> <div>30</div> <div>20</div> <div>18 11</div> <div>18 02</div> <div>17 54</div> <div>46</div> <div>36</div> <div>30</div> <div>17 24</div> <div>17 17</div> <div>08</div> <div>04</div> <div>17 00</div> <div>16 55</div> <div>50</div> <div>16 44</div>	<div>20 17</div> <div>20 06</div> <div>19 57</div> <div>49</div> <div>42</div> <div>19 35</div> <div>19 22</div> <div>11</div> <div>19 02</div> <div>18 55</div> <div>42</div> <div>18 32</div> <div>18 23</div> <div>16</div> <div>08</div> <div>18 00</div> <div>17 56</div> <div>17 52</div> <div>17 47</div> <div>41</div> <div>39</div> <div>36</div> <div>34</div> <div>30</div> <div>17 27</div>	<div>21 23</div> <div>21 06</div> <div>20 51</div> <div>39</div> <div>28</div> <div>20 19</div> <div>20 00</div> <div>19 45</div> <div>19 02</div> <div>24</div> <div>19 09</div> <div>18 57</div> <div>18 48</div> <div>40</div> <div>34</div> <div>28</div> <div>18</div> <div>18 23</div> <div>18 21</div> <div>19</div> <div>18</div> <div>18</div> <div>17</div> <div>16</div> <div>18 15</div>	<div>3 40 11</div> <div>43 14</div> <div>46 16</div> <div>49 18</div> <div>51 20</div> <div>3 54 21</div> <div>3 59 25</div> <div>4 03 28</div> <div>07 30</div> <div>10 33</div> <div>16 36</div> <div>4 21 40</div> <div>4 26 42</div> <div>30 46</div> <div>36 49</div> <div>41 54</div> <div>45 55</div> <div>4 49 58</div> <div>4 53 61</div> <div>4 59 65</div> <div>5 01 67</div> <div>04 69</div> <div>07 71</div> <div>11 73</div> <div>5 15 75</div>	<div>17 51 75</div> <div>46 72</div> <div>41 70</div> <div>37 68</div> <div>33 67</div> <div>17 30 65</div> <div>17 23 61</div> <div>12 58</div> <div>12 55</div> <div>17 07 54</div> <div>16 59 50</div> <div>16 53 46</div> <div>16 46 43</div> <div>40 40</div> <div>33 37</div> <div>25 34</div> <div>21 31</div> <div>16 16 29</div> <div>16 10 26</div> <div>03 23</div> <div>16 00 21</div> <div>15 56 20</div> <div>53 17</div> <div>48 15</div> <div>15 44 12</div>	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 10 ^h 08 ^m 3		Mag.: -4.5 PMG: 14 ^h 53 ^m		Mag.: -0.3 PMG: 20 ^h 33 ^m		Mag.: -2.0 PMG: 13 ^h 09 ^m		Mag.: +0.3 PMG: 23 ^h 46 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
<div>h</div> <div>0</div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div> <div>8</div> <div>9</div> <div>10</div> <div>11</div> <div>12</div> <div>13</div> <div>14</div> <div>15</div> <div>16</div> <div>17</div> <div>18</div> <div>19</div> <div>20</div> <div>21</div> <div>22</div> <div>23</div> <div>24</div>	<div>207</div> <div>222</div> <div>237</div> <div>252</div> <div>267</div> <div>282</div> <div>297</div> <div>312</div> <div>327</div> <div>342</div> <div>357</div> <div>12</div> <div>27</div> <div>43</div> <div>58</div> <div>73</div> <div>88</div> <div>103</div> <div>118</div> <div>133</div> <div>148</div> <div>163</div> <div>178</div> <div>193</div> <div>208</div>	<div>30.0</div> <div>32.4</div> <div>34.9</div> <div>37.4</div> <div>39.8</div> <div>42.3</div> <div>44.8</div> <div>47.2</div> <div>49.7</div> <div>52.2</div> <div>54.6</div> <div>57.1</div> <div>59.5</div> <div>02.0</div> <div>04.5</div> <div>06.9</div> <div>09.4</div> <div>11.9</div> <div>14.3</div> <div>16.8</div> <div>19.3</div> <div>21.7</div> <div>24.2</div> <div>26.7</div> <div>29.1</div>	<div>+ 26</div> <div></div> <div></div> <div></div> <div></div> <div>+ 26</div> <div>+ 26</div> <div></div> <div></div> <div></div> <div></div> <div>+ 26</div> <div>+ 26</div> <div></div> <div></div> <div></div> <div></div> <div>+ 26</div> <div>+ 26</div> <div></div> <div></div> <div></div> <div></div> <div></div> <div>+ 26</div>	<div>136</div> <div>151</div> <div>166</div> <div>181</div> <div>196</div> <div>211</div> <div>226</div> <div>241</div> <div>256</div> <div>271</div> <div>286</div> <div>301</div> <div>316</div> <div>331</div> <div>346</div> <div>1</div> <div>16</div> <div>31</div> <div>46</div> <div>61</div> <div>76</div> <div>91</div> <div>106</div> <div>121</div> <div>136</div>	<div>44.0</div> <div>44.5</div> <div>44.9</div> <div>45.4</div> <div>45.8</div> <div>46.3</div> <div>46.8</div> <div>47.2</div> <div>47.7</div> <div>48.2</div> <div>48.6</div> <div>49.1</div> <div>49.6</div> <div>49.9</div> <div>50.2</div> <div>50.5</div> <div>50.8</div> <div>51.2</div> <div>51.5</div> <div>51.8</div> <div>52.1</div> <div>52.4</div> <div>52.8</div> <div>53.1</div> <div>53.4</div>	<div>+ 26</div> <div></div> <div></div> <div></div> <div></div> <div>+ 26</div> <div>+ 26</div> <div></div> <div></div> <div></div> <div></div> <div>+ 26</div> <div>+ 26</div> <div></div> <div></div> <div></div> <div></div> <div>+ 26</div> <div>+ 26</div> <div></div> <div></div> <div></div> <div></div> <div></div> <div>+ 26</div>	<div>50</div> <div>65</div> <div>80</div> <div>95</div> <div>110</div> <div>126</div> <div>141</div> <div>156</div> <div>171</div> <div>186</div> <div>201</div> <div>216</div> <div>231</div> <div>246</div> <div>261</div> <div>276</div> <div>291</div> <div>306</div> <div>321</div> <div>336</div> <div>351</div> <div>6</div> <div>21</div> <div>36</div> <div>51</div>	<div>49.7</div> <div>52.1</div> <div>54.5</div> <div>56.8</div> <div>59.2</div> <div>01.5</div> <div>03.9</div> <div>06.3</div> <div>08.6</div> <div>11.0</div> <div>13.3</div> <div>15.7</div> <div>18.0</div> <div>20.4</div> <div>22.7</div> <div>25.1</div> <div>27.4</div> <div>29.8</div> <div>32.1</div> <div>34.5</div> <div>36.8</div> <div>39.1</div> <div>41.5</div> <div>43.8</div> <div>46.2</div>	<div>+ 12</div> <div></div> <div></div> <div></div> <div></div> <div>+ 12</div> <div>+ 12</div> <div></div> <div></div> <div></div> <div></div> <div>+ 12</div> <div>+ 12</div> <div></div> <div></div> <div></div> <div></div> <div>+ 12</div> <div>+ 12</div> <div></div> <div></div> <div></div> <div></div> <div></div> <div>+ 12</div>	<div>162</div> <div>177</div> <div>192</div> <div>207</div> <div>222</div> <div>237</div> <div>252</div> <div>267</div> <div>282</div> <div>297</div> <div>312</div> <div>327</div> <div>342</div> <div>357</div> <div>12</div> <div>27</div> <div>42</div> <div>57</div> <div>72</div> <div>87</div> <div>102</div> <div>117</div> <div>133</div> <div>148</div> <div>163</div>	<div>19.5</div> <div>21.4</div> <div>23.3</div> <div>25.2</div> <div>27.1</div> <div>29.0</div> <div>30.8</div> <div>32.7</div> <div>34.6</div> <div>36.5</div> <div>38.4</div> <div>40.3</div> <div>42.1</div> <div>44.0</div> <div>45.9</div> <div>47.8</div> <div>49.7</div> <div>51.6</div> <div>53.5</div> <div>55.3</div> <div>57.2</div> <div>59.1</div> <div>01.0</div> <div>02.9</div> <div>04.8</div>	<div>+ 16</div> <div></div> <div></div> <div></div> <div></div> <div>+ 16</div> <div>+ 16</div> <div></div> <div></div> <div></div> <div></div> <div>+ 16</div> <div>+ 16</div> <div></div> <div></div> <div></div> <div></div> <div>+ 16</div> <div>+ 16</div> <div></div> <div></div> <div></div> <div></div> <div></div> <div>+ 16</div>	<div>2 26.5</div> <div>17 29.2</div> <div>32 31.8</div> <div>47 34.5</div> <div>62 37.1</div> <div>77 39.7</div> <div>92 42.4</div> <div>107 45.0</div> <div>122 47.7</div> <div>137 50.3</div> <div>152 53.0</div> <div>167 55.6</div> <div>182 58.3</div> <div>198 00.9</div> <div>213 03.5</div> <div>228 06.2</div> <div>243 08.8</div> <div>258 11.5</div> <div>273 14.1</div> <div>288 16.8</div> <div>303 19.4</div> <div>318 22.0</div> <div>333 24.7</div> <div>348 27.3</div> <div>3 30.0</div>	<div>- 7</div> <div></div> <div></div> <div></div> <div></div> <div>- 7</div> <div>- 7</div> <div></div> <div></div> <div></div> <div></div> <div>- 7</div> <div>- 7</div> <div></div> <div></div> <div></div> <div></div> <div>- 7</div> <div>- 7</div> <div></div> <div></div> <div></div> <div></div> <div></div> <div>- 7</div>	<div>26.0</div> <div>25.9</div> <div>25.8</div> <div>25.8</div> <div>25.8</div> <div>25.7</div> <div>25.6</div> <div>25.5</div> <div>25.4</div> <div>25.4</div> <div>25.3</div> <div>25.2</div> <div>25.2</div> <div>25.1</div> <div>25.1</div> <div>25.0</div> <div>24.9</div> <div>24.9</div> <div>24.7</div> <div>24.7</div> <div>24.6</div> <div>24.5</div> <div>24.5</div> <div>24.4</div>
Dif	—	+5	+3		+24	-2	+19	+2	+26	+1					

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VIERNES 20 DE ABRIL DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 58 ^m 8		SD: 14°8 Edad: 28 ^d 4		PHE { 4 ^h : 54'2 12 ^h : 54'1 20 ^h : 54'1			R°: 44 ^m			Hora R°		Hora R°					
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	16.3	+ 11	34.9	195	13.3	+ 9 57.3	60 N	2 34	3 40	4 28	3 51	14	19 06	74			
1	195	16.4		35.8	209	47.1	+ 10 07.2	58	2 51	3 51	35	3 57	16	18 58	72			
2	210	16.5		36.6	224	21.0	149 17.1	56	3 06	4 00	41	4 02	19	51	69			
3	225	16.6		37.5	238	54.8	148 26.9	54	18	08	47	07	21	45	67			
4	240	16.8		38.4	253	28.5	147 36.7	52	29	15	52	11	23	40	65			
5	255	16.9	+ 11	39.2	268	02.3	148 + 10 46.5	50	3 38	4 22	4 56	4 15	24	18 35	63			
6	270	17.0	+ 11	40.1	282	36.0	147 + 10 56.2	45	3 57	4 35	5 06	4 24	27	18 24	60			
7	285	17.2		40.9	297	09.7	147 + 11 05.9	40	4 12	46	14	31	30	15	57			
8	300	17.3		41.8	311	43.4	147 15.5	35	24	4 55	21	37	33	07	56			
9	315	17.4		42.6	326	17.1	147 25.0	30	33	5 03	28	43	34	18 01	53			
10	330	17.5		43.5	340	50.7	146 34.5	20	4 49	15	38	4 52	38	17 49	50			
11	345	17.7	+ 11	44.3	355	24.3	146 + 11 44.0	10 N	5 01	5 26	5 47	5 01	41	17 39	47			
12	0	17.8	+ 11	45.2	9	57.9	146 + 11 53.4	0	5 10	5 34	5 55	5 08	44	17 29	45			
13	15	17.9		46.0	24	31.5	146 + 12 02.8	10 S	18	42	6 04	16	47	20	42			
14	30	18.1		46.9	39	05.0	145 12.1	20	24	50	12	25	50	17 10	39			
15	45	18.2		47.7	53	38.5	145 21.3	30	30	5 58	22	35	53	16 59	35			
16	60	18.3		48.6	68	12.0	145 30.5	35	33	6 02	28	40	56	52	34			
17	75	18.4	+ 11	49.4	82	45.4	144 + 12 39.7	40	5 35	6 07	6 34	5 47	58	16 45	31			
18	90	18.6	+ 11	50.3	97	18.9	145 + 12 48.8	45	5 37	6 12	6 42	5 54	61	16 36	29			
19	105	18.7		51.1	111	52.3	144 + 12 57.8	50	40	17	50	6 04	64	26	25			
20	120	18.8		52.0	126	25.6	143 + 13 06.8	59	40	20	55	08	66	21	24			
21	135	18.9		52.8	140	59.0	144 15.7	54	41	22	6 59	13	67	16	22			
22	150	19.1		53.7	155	32.3	143 24.6	56	42	25	7 04	18	69	10	20			
23	165	19.2		54.5	170	05.5	142 33.4	58	43	29	09	24	72	16 03	18			
24	180	19.3	+ 11	55.4	184	38.8	143 + 13 42.1	60 S	5 43	6 32	7 16	6 30	75	15 56	15			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 10 ^h 04 ^m 4		Mag.: -4.5 PMG: 14 ^h 52 ^m		Mag.: -0.3 PMG: 20 ^h 30 ^m		Mag.: -2.0 PMG: 13 ^h 06 ^m		Mag.: +0.3 PMG: 23 ^h 42 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	208	29.1	136	55.4	+ 26	54.6	51	46.2	+ 12	25.0	163	04.8	+ 16	17.2	3	30.0	- 7	24.4
1	223	31.6	151	55.9		55.0	66	48.5		24.9	178	06.6		17.4	18	32.6		24.3
2	238	34.0	166	56.4		55.3	81	50.8		24.7	193	08.5		17.6	33	35.3		24.3
3	253	36.5	181	56.9		55.6	96	53.2		24.6	208	10.4		17.7	48	37.9		24.2
4	268	39.0	196	57.4		55.9	111	55.5		24.4	223	12.3		17.9	63	40.6		24.1
5	283	41.4	211	57.9	+ 26	56.2	126	57.8	+ 12	24.2	238	14.2	+ 16	18.1	78	43.2	- 7	24.1
6	298	43.9	226	58.4	+ 26	56.5	142	00.2	+ 12	24.1	253	16.1	+ 16	18.2	93	45.8	- 7	24.0
7	313	46.4	241	58.9		56.8	157	02.5		23.9	268	17.9		18.4	108	48.5		23.9
8	328	48.8	256	59.4		57.1	172	04.8		23.8	283	19.8		18.6	123	51.1		23.9
9	343	51.3	271	59.9		57.4	187	07.1		23.6	298	21.7		18.7	138	53.8		23.8
10	358	53.8	287	00.4		57.7	202	09.5		23.4	313	23.6		18.9	153	56.4		23.7
11	13	56.2	302	00.9	+ 26	58.0	217	11.8	+ 12	23.3	328	25.5	+ 16	19.1	168	59.1	- 7	23.7
12	28	58.7	317	01.5	+ 26	58.3	232	14.1	+ 12	23.1	343	27.4	+ 16	19.2	184	01.7	- 7	23.6
13	44	01.1	332	02.0		58.6	247	16.4		22.9	358	29.2		19.4	199	04.4		23.5
14	59	03.6	347	02.5		58.9	262	18.8		22.8	13	31.1		19.6	214	07.0		23.5
15	74	06.1	2	03.0		59.2	277	21.1		22.6	28	33.0		19.7	229	09.6		23.4
16	89	08.5	17	03.5		59.5	292	23.4		22.4	43	34.9		19.9	244	12.3		23.3
17	104	11.0	32	04.1	+ 26	59.8	307	25.7	+ 12	22.3	58	36.8	+ 16	20.1	259	14.9	- 7	23.2
18	119	13.5	47	04.6	+ 27	00.1	322	28.0	+ 12	22.1	73	38.7	+ 16	20.2	274	17.6	- 7	23.2
19	134	15.9	62	05.1		00.4	337	30.3		21.9	88	40.5		20.4	289	20.2		23.1
20	149	18.4	77	05.7		00.7	352	32.7		21.8	103	42.4		20.6	304	22.9		23.0
21	164	20.9	92	06.2		01.0	7	35.0		21.6	118	44.3		20.7	319	25.5		23.0
22	179	23.3	107	06.7		01.3	22	37.3		21.4	133	46.2		20.9	334	28.2		22.9
23	194	25.8	122	07.3		01.6	37	39.6		21.3	148	48.1		21.1	349	30.8		22.8
24	209	28.3	137	07.8	+ 27	01.9	52	41.9	+ 12	21.1	163	50.0	+ 16	21.2	4	33.4	- 7	22.8
Dif	—		+5		+3		+23		-2		+19		+2		+26		+1	

SÁBADO 21 DE ABRIL DE 2012

UT	SOL			● LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 58 ^m 6			SD: 14°7 Edad: 29 ^d 4 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 12 ^h 03 ^m R°: 46 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
^h	°	'	°	°	'	°	'	°	^h ^m	^h ^m	^h ^m ^m	^h ^m ^m	^h ^m ^m	^h ^m ^m	^h ^m ^m	^h ^m ^m
0	180	19.3	+ 11 55.4	184	38.8	+ 13 42.1	87	60 N	19 34	20 23	21 31	4 05	17	20 20	72	
1	195	19.4	56.2	199	12.0	50.8	87	58	26	11	21 12	13	21	10	68	
2	210	19.6	57.1	213	45.2	+ 13 59.5	87	56	20	20 02	20 57	21	22	20 00	67	
3	225	19.7	57.9	228	18.3	+ 14 08.0	85	54	14	19 53	44	28	24	19 52	65	
4	240	19.8	58.8	242	51.5	16.5	85	52	09	46	33	34	26	45	63	
5	255	19.9	+ 11 59.6	257	24.6	+ 14 25.0	85	50	19 04	19 39	20 23	4 39	28	19 38	62	
6	270	20.1	+ 12 00.5	271	57.6	+ 14 33.4	84	45	18 53	19 25	20 03	4 51	31	19 24	59	
7	285	20.2	01.3	286	30.7	41.7	83	40	45	13	19 48	5 01	33	12	57	
8	300	20.3	02.2	301	03.6	50.0	83	35	38	19 04	36	10	35	19 03	54	
9	315	20.4	03.0	315	36.6	+ 14 58.1	81	30	31	18 56	26	17	37	18 54	53	
10	330	20.6	03.8	330	09.5	+ 15 06.3	82	20	20	43	19 10	30	40	39	50	
11	345	20.7	+ 12 04.7	344	42.4	+ 15 14.3	80	10 N	18 11	18 32	18 57	5 42	42	18 26	48	
12	0	20.8	+ 12 05.5	359	15.3	+ 15 22.3	80	0	18 02	18 23	18 48	5 52	45	18 14	46	
13	15	20.9	06.4	13	48.1	30.3	80	10 S	17 53	15	40	6 03	48	18 02	44	
14	30	21.0	07.2	28	20.9	38.1	78	20	44	18 07	33	15	50	17 49	41	
15	45	21.2	08.1	42	53.7	45.9	78	30	34	17 58	26	28	53	34	39	
16	60	21.3	08.9	57	26.4	+ 15 53.7	78	35	28	54	23	36	55	26	37	
17	75	21.4	+ 12 09.7	71	59.1	+ 16 01.3	76	40	17 21	17 49	18 21	6 45	57	17 16	35	
18	90	21.5	+ 12 10.6	86	31.8	+ 16 08.9	76	45	17 14	17 44	18 18	6 55	60	17 05	33	
19	105	21.7	11.4	101	04.4	16.4	75	50	05	38	15	7 08	63	16 51	30	
20	120	21.8	12.3	115	37.0	23.9	75	52	17 00	35	14	14	64	45	28	
21	135	21.9	13.1	130	09.6	31.2	73	54	16 56	32	13	20	66	38	27	
22	150	22.0	13.9	144	42.1	38.5	73	56	50	29	12	27	69	30	25	
23	165	22.1	14.8	159	14.6	45.8	73	58	45	26	11	36	70	21	23	
24	180	22.3	+ 12 15.6	173	47.1	+ 16 52.9	71	60 S	16 38	17 22	18 10	7 45	73	16 11	20	
UT	ARIES		VENUS		MARTE			JÚPITER			SATURNO					
	PMG		Mag.: -4.5		Mag.: -0.2			Mag.: -2.0			Mag.: +0.3					
	10 ^h 00 ^m 5		PMG: 14 ^h 51 ^m		PMG: 20 ^h 26 ^m			PMG: 13 ^h 03 ^m			PMG: 23 ^h 38 ^m					
	hG ♂		hG ♀	Dec	hG ♂	Dec		hG ♀	Dec		hG ♀	Dec				
^h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	209	28.3	137 07.8	+ 27 01.9	52 41.9	+ 12 21.1	163 50.0	+ 16 21.2	4 33.4	- 7 22.8						
1	224	30.7	152 08.3	02.1	67 44.2	20.9	178 51.8	21.4	19 36.1	22.7						
2	239	33.2	167 08.9	02.4	82 46.5	20.8	193 53.7	21.6	34 38.7	22.6						
3	254	35.6	182 09.4	02.7	97 48.8	20.6	208 55.6	21.7	49 41.4	22.6						
4	269	38.1	197 10.0	03.0	112 51.1	20.4	223 57.5	21.9	64 44.0	22.5						
5	284	40.6	212 10.5	+ 27 03.3	127 53.4	+ 12 20.3	238 59.4	+ 16 22.1	79 46.7	- 7 22.4						
6	299	43.0	227 11.1	+ 27 03.6	142 55.7	+ 12 20.1	254 01.2	+ 16 22.2	94 49.3	- 7 22.4						
7	314	45.5	242 11.6	03.9	157 58.0	19.9	269 03.1	22.4	109 51.9	22.3						
8	329	48.0	257 12.2	04.1	173 00.3	19.8	284 05.0	22.6	124 54.6	22.2						
9	344	50.4	272 12.7	04.4	188 02.6	19.6	299 06.9	22.7	139 57.2	22.2						
10	359	52.9	287 13.3	04.7	203 04.9	19.4	314 08.8	22.9	154 59.9	22.1						
11	14	55.4	302 13.8	+ 27 05.0	218 07.2	+ 12 19.2	329 10.7	+ 16 23.1	170 02.5	- 7 22.0						
12	29	57.8	317 14.4	+ 27 05.3	233 09.5	+ 12 19.1	344 12.5	+ 16 23.2	185 05.2	- 7 22.0						
13	45	00.3	332 15.0	05.5	248 11.8	18.9	359 14.4	23.4	200 07.8	21.9						
14	60	02.8	347 15.5	05.8	263 14.1	18.7	14 16.3	23.6	215 10.4	21.8						
15	75	05.2	2 16.1	06.1	278 16.4	18.5	29 18.2	23.7	230 13.1	21.8						
16	90	07.7	17 16.7	06.4	293 18.7	18.4	44 20.1	23.9	245 15.7	21.7						
17	105	10.1	32 17.2	+ 27 06.7	308 21.0	+ 12 18.2	59 21.9	+ 16 24.1	260 18.4	- 7 21.6						
18	120	12.6	47 17.8	+ 27 06.9	323 23.3	+ 12 18.0	74 23.8	+ 16 24.2	275 21.0	- 7 21.6						
19	135	15.1	62 18.4	07.2	338 25.6	17.8	89 25.7	24.4	290 23.7	21.5						
20	150	17.5	77 18.9	07.5	353 27.9	17.7	104 27.6	24.5	305 26.3	21.4						
21	165	20.0	92 19.5	07.7	8 30.2	17.5	119 29.5	24.7	320 29.0	21.4						
22	180	22.5	107 20.1	08.0	23 32.4	17.3	134 31.4	24.9	335 31.6	21.3						
23	195	24.9	122 20.7	08.3	38 34.7	17.1	149 33.2	25.0	350 34.2	21.2						
24	210	27.4	137 21.3	+ 27 08.5	53 37.0	+ 12 17.0	164 35.1	+ 16 25.2	5 36.9	- 7 21.2						
Dif	—		+6	+3	+23	-2	+19	+2	+26	+1						

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DOMINGO 22 DE ABRIL DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 4		SD: 14 ^h 7 Edad: 0 ^d 7		PHE { 4 ^h : 54 ^h 0 12 ^h : 54 ^h 0 20 ^h : 54 ^h 0						Hora R°		Hora R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil					
h	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m	h m m
0	180 22.3	+ 12 15.6	173 47.1		+ 16 52.9	71	60 N	2 25	3 33	4 22	4 22 24	21 32 66		
1	195 22.4		188 19.5	134	+ 17 00.0	70	58	2 44		45	30	34 26	18 64	
2	210 22.5		202 51.9	134		70	56	3 00	3 54		36	43 28	21 07 62	
3	225 22.6		217 24.2	133		70	54		13	4 03	42	4 52 30	20 57 61	
4	240 22.7		231 56.5	133		68	52		24		11	48	5 00 31	48 60
5	255 22.9	+ 12 19.8	246 28.8	133	+ 17 27.6	68	50	3 34	4 17	4 53	5 07 32	20 40 59		
6	270 23.0	+ 12 20.7	261 01.1	133	+ 17 34.3	67	45	3 53	4 32	5 03	5 22 35	20 23 56		
7	285 23.1		275 33.3	132		66	40	4 09		43	12	34 37	20 09 55	
8	300 23.2		290 05.5	132		66	35		21	4 53	19	45 39	19 57 54	
9	315 23.3		304 37.6	131	+ 17 54.0	65	30		31	5 01	25	5 54 40	47 52	
10	330 23.5		319 09.7	131	+ 18 00.3	63	20		47		14	37	6 10 43	29 51
11	345 23.6	+ 12 24.8	333 41.8	131	+ 18 06.7	64	10 N	4 59	5 25	5 46	6 24 45	19 14 49		
12	0 23.7	+ 12 25.7	348 13.8	130	+ 18 12.9	62	0	5 09	5 34	5 55	6 37 47	19 00 47		
13	15 23.8		2 45.8	130		61	10 S		18	42	6 04	6 51 48	18 46 45	
14	30 23.9		17 17.8	130		61	20		25	51	13	7 05 51	30 44	
15	45 24.0		31 49.7	129		60	30		31	5 59	24	21 53	13 42	
16	60 24.2		46 21.6	129		59	35		34	6 04	30	31 54	18 03 41	
17	75 24.3	+ 12 29.8	60 53.5	129	+ 18 42.8	58	40	5 37	6 09	6 36	7 42 56	17 51 40		
18	90 24.4	+ 12 30.7	75 25.3	128	+ 18 48.6	58	45	5 40	6 14	6 44	7 55 58	17 38 37		
19	105 24.5		89 57.1	128		56	50		42	20	54	8 11 60	21 35	
20	120 24.6		104 28.9	128	+ 18 59.8	56	52		43	23	6 58	18 62	13 35	
21	135 24.7		119 00.6	127	+ 19 05.3	55	54		44	26	7 03	26 63	17 05 33	
22	150 24.9		133 32.3	127		54	56		46	29	08	36 64	16 55 31	
23	165 25.0		148 04.0	127		53	58		47	33	14	46 67	44 30	
24	180 25.1	+ 12 35.7	162 35.6	126	+ 19 21.3	53	60 S	5 48	6 37	7 20	8 58 70	16 31 27		
UT	ARIES PMG 9 ^h 56 ^m 5		VENUS Mag.: -4.5 PMG: 14 ^h 50 ^m		MARTE Mag.: -0.2 PMG: 20 ^h 22 ^m		JÚPITER Mag.: -2.0 PMG: 13 ^h 00 ^m		SATURNO Mag.: +0.3 PMG: 23 ^h 33 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
h														
0	210 27.4	137 21.3	+ 27 08.5	53 37.0	+ 12 17.0	164 35.1	+ 16 25.2	5 36.9	- 7 21.2					
1	225 29.9	152 21.8		68 39.3	16.8	179 37.0	25.4	20 39.5	21.1					
2	240 32.3	167 22.4		83 41.6	16.6	194 38.9	25.5	35 42.2	21.0					
3	255 34.8	182 23.0		98 43.9	16.4	209 40.8	25.7	50 44.8	21.0					
4	270 37.2	197 23.6		113 46.1	16.2	224 42.6	25.9	65 47.5	20.9					
5	285 39.7	212 24.2	+ 27 09.9	128 48.4	+ 12 16.1	239 44.5	+ 16 26.0	80 50.1	- 7 20.8					
6	300 42.2	227 24.8	+ 27 10.1	143 50.7	+ 12 15.9	254 46.4	+ 16 26.2	95 52.7	- 7 20.8					
7	315 44.6	242 25.4		158 53.0	15.7	269 48.3	26.4	110 55.4	20.7					
8	330 47.1	257 26.0		173 55.2	15.5	284 50.2	26.5	125 58.0	20.6					
9	345 49.6	272 26.6		188 57.5	15.3	299 52.0	26.7	141 00.7	20.5					
10	0 52.0	287 27.2		203 59.8	15.2	314 53.9	26.9	156 03.3	20.5					
11	15 54.5	302 27.8	+ 27 11.4	219 02.1	+ 12 15.0	329 55.8	+ 16 27.0	171 06.0	- 7 20.4					
12	30 57.0	317 28.4	+ 27 11.7	234 04.3	+ 12 14.8	344 57.7	+ 16 27.2	186 08.6	- 7 20.3					
13	45 59.4	332 29.0		249 06.6	14.6	359 59.6	27.4	201 11.2	20.3					
14	61 01.9	347 29.6		264 08.9	14.4	15 01.4	27.5	216 13.9	20.2					
15	76 04.4	2 30.2		279 11.1	14.2	30 03.3	27.7	231 16.5	20.1					
16	91 06.8	17 30.9		294 13.4	14.1	45 05.2	27.9	246 19.2	20.1					
17	106 09.3	32 31.5	+ 27 13.0	309 15.7	+ 12 13.9	60 07.1	+ 16 28.0	261 21.8	- 7 20.0					
18	121 11.7	47 32.1	+ 27 13.2	324 17.9	+ 12 13.7	75 09.0	+ 16 28.2	276 24.5	- 7 19.9					
19	136 14.2	62 32.7		339 20.2	13.5	90 10.8	28.4	291 27.1	19.9					
20	151 16.7	77 33.3		354 22.4	13.3	105 12.7	28.5	306 29.7	19.8					
21	166 19.1	92 34.0		9 24.7	13.1	120 14.6	28.7	321 32.4	19.7					
22	181 21.6	107 34.6		24 27.0	12.9	135 16.5	28.9	336 35.0	19.7					
23	196 24.1	122 35.2		39 29.2	12.8	150 18.4	29.0	351 37.7	19.6					
24	211 26.5	137 35.8	+ 27 14.7	54 31.5	+ 12 12.6	165 20.2	+ 16 29.2	6 40.3	- 7 19.5					
Dif	—	+6	+3	+23	-2	+19	+2	+26	+1					


LUNES 23 DE ABRIL DE 2012

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UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 2			SD: 14 ^h 7 Edad: 1 ^d 7 PHE { 4 ^h : 54 ^h 0 12 ^h : 54 ^h 0 20 ^h : 54 ^h 0 PMG: 13 ^h 36 ^m R°: 48 ^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	180	25.1	+ 12 35.7	162	35.6	+ 19 21.3	51	60 N	19 39	20 29	21 40	4 46 32	22 38 57		
1	195	25.2	36.5	177	07.2	26.4	51	58	31	17	19	5 00 33	22 57		
2	210	25.3	37.3	191	38.8	31.5	49	56	24	20 06	21 03	11 36	22 09 56		
3	225	25.4	38.2	206	10.3	36.4	49	54	18	19 57	20 49	22 36	21 58 54		
4	240	25.6	39.0	220	41.8	41.3	49	52	12	49	37	31 38	48 54		
5	255	25.7	+ 12 39.8	235	13.3	+ 19 46.1	48	50	19 07	19 42	20 27	5 39 39	21 39 53		
6	270	25.8	+ 12 40.6	249	44.7	+ 19 50.8	47	45	18 56	19 28	20 06	5 57 40	21 19 53		
7	285	25.9	41.5	264	16.1	+ 19 55.4	46	40	47	16	19 50	6 11 42	21 04 52		
8	300	26.0	42.3	278	47.5	+ 20 00.0	46	35	39	19 06	38	24 43	20 51 51		
9	315	26.1	43.1	293	18.8	04.4	44	30	32	18 57	27	34 44	39 51		
10	330	26.2	44.0	307	50.1	08.7	43	20	21	44	19 10	6 53 45	20 50		
11	345	26.4	+ 12 44.8	322	21.4	+ 20 13.0	43	10 N	18 11	18 32	18 58	7 09 47	20 03 49		
12	0	26.5	+ 12 45.6	336	52.7	+ 20 17.1	41	0	18 02	18 23	18 47	7 24 48	19 47 49		
13	15	26.6	46.4	351	23.9	21.2	41	10 S	17 52	14	39	39 49	31 48		
14	30	26.7	47.3	5	55.1	25.2	40	20	43	18 05	31	7 56 50	19 14 47		
15	45	26.8	48.1	20	26.2	29.1	39	30	32	17 56	24	8 14 52	18 55 46		
16	60	26.9	48.9	34	57.4	32.9	38	35	26	52	21	25 53	44 45		
17	75	27.0	+ 12 49.7	49	28.5	+ 20 36.6	37	40	17 19	17 46	18 18	8 38 53	18 31 44		
18	90	27.1	+ 12 50.6	63	59.5	+ 20 40.2	36	45	17 10	17 41	18 15	8 53 55	18 15 44		
19	105	27.3	51.4	78	30.6	43.7	35	50	17 01	34	12	9 11 57	17 56 43		
20	120	27.4	52.2	93	01.6	47.1	34	52	16 56	31	11	20 57	48 41		
21	135	27.5	53.0	107	32.6	50.4	33	54	51	28	09	29 59	38 40		
22	150	27.6	53.9	122	03.6	53.6	32	56	46	25	08	40 60	26 40		
23	165	27.7	54.7	136	34.5	56.7	31	58	40	21	07	9 53 61	17 14 38		
24	180	27.8	+ 12 55.5	151	05.4	+ 20 59.8	31	60 S	16 33	17 17	18 05	10 08 62	16 58 38		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 9 ^h 52 ^m 6			Mag.: -4.5 PMG: 14 ^h 49 ^m			Mag.: -0.2 PMG: 20 ^h 19 ^m			Mag.: -2.0 PMG: 12 ^h 57 ^m			Mag.: +0.3 PMG: 23 ^h 29 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	211	26.5	137 35.8	+ 27 14.7	54 31.5	+ 12 12.6	165 20.2	+ 16 29.2	6 40.3	- 7 19.5					
1	226	29.0	152 36.5	15.0	69 33.7	12.4	180 22.1	29.3	21 43.0	19.5					
2	241	31.5	167 37.1	15.2	84 36.0	12.2	195 24.0	29.5	36 45.6	19.4					
3	256	33.9	182 37.8	15.5	99 38.2	12.0	210 25.9	29.7	51 48.2	19.3					
4	271	36.4	197 38.4	15.7	114 40.5	11.8	225 27.8	29.8	66 50.9	19.3					
5	286	38.9	212 39.0	+ 27 16.0	129 42.7	+ 12 11.6	240 29.6	+ 16 30.0	81 53.5	- 7 19.2					
6	301	41.3	227 39.7	+ 27 16.2	144 45.0	+ 12 11.4	255 31.5	+ 16 30.2	96 56.2	- 7 19.1					
7	316	43.8	242 40.3	16.4	159 47.2	11.2	270 33.4	30.3	111 58.8	19.1					
8	331	46.2	257 41.0	16.7	174 49.5	11.1	285 35.3	30.5	127 01.5	19.0					
9	346	48.7	272 41.6	16.9	189 51.7	10.9	300 37.2	30.7	142 04.1	18.9					
10	1	51.2	287 42.3	17.2	204 54.0	10.7	315 39.0	30.8	157 06.7	18.9					
11	16	53.6	302 42.9	+ 27 17.4	219 56.2	+ 12 10.5	330 40.9	+ 16 31.0	172 09.4	- 7 18.8					
12	31	56.1	317 43.6	+ 27 17.6	234 58.5	+ 12 10.3	345 42.8	+ 16 31.2	187 12.0	- 7 18.7					
13	46	58.6	332 44.2	17.9	250 00.7	10.1	0 44.7	31.3	202 14.7	18.7					
14	62	01.0	347 44.9	18.1	265 03.0	09.9	15 46.6	31.5	217 17.3	18.6					
15	77	03.5	2 45.6	18.3	280 05.2	09.7	30 48.4	31.7	232 20.0	18.5					
16	92	06.0	17 46.2	18.6	295 07.4	09.5	45 50.3	31.8	247 22.6	18.5					
17	107	08.4	32 46.9	+ 27 18.8	310 09.7	+ 12 09.3	60 52.2	+ 16 32.0	262 25.2	- 7 18.4					
18	122	10.9	47 47.6	+ 27 19.0	325 11.9	+ 12 09.1	75 54.1	+ 16 32.2	277 27.9	- 7 18.3					
19	137	13.3	62 48.2	19.3	340 14.1	08.9	90 55.9	32.3	292 30.5	18.3					
20	152	15.8	77 48.9	19.5	355 16.4	08.7	105 57.8	32.5	307 33.2	18.2					
21	167	18.3	92 49.6	19.7	10 18.6	08.5	120 59.7	32.6	322 35.8	18.1					
22	182	20.7	107 50.3	19.9	25 20.8	08.4	136 01.6	32.8	337 38.5	18.1					
23	197	23.2	122 50.9	20.2	40 23.1	08.2	151 03.5	33.0	352 41.1	18.0					
24	212	25.7	137 51.6	+ 27 20.4	55 25.3	+ 12 08.0	166 05.3	+ 16 33.1	7 43.7	- 7 17.9					
Dif	—		+7	+2	+22	-2	+19	+2	+26	+1					

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MARTES 24 DE ABRIL DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 1		SD: 14 ^h 7 Edad: 2 ^d 7 PHE $\begin{cases} 4^h: 54^h1 \\ 12^h: 54^h1 \\ 20^h: 54^h2 \end{cases}$ PMG: 14 ^h 24 ^m R°: 49 ^m								de Luna		de Luna					
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°				
^h	[°]	[']	[°]	[']	[°]	[']	[°]	^h	^m	^h	^m	^h	^m	^h	^m			
0	180	27.8	+ 12	55.5	151	05.4	+ 20	59.8	29	60 N	2 16	3 27	4 16	5 18	43	23 35	46	
1	195	27.9		56.3	165	36.3	+ 21	02.7	29	58	36	39	24	33	44	19	46	
2	210	28.0		57.1	180	07.2		05.5	28	56	2 53	49	32	47	44	23 05	46	
3	225	28.1		58.0	194	38.0		08.3	28	54	3 07	3 58	38	5 58	46	22 52	48	
4	240	28.3		58.8	209	08.8		10.9	26	52	19	4 06	44	6 09	45	42	47	
5	255	28.4	+ 12	59.6	223	39.6	+ 21	13.5	26	50	3 29	4 13	4 49	6 18	46	22 32	48	
6	270	28.5	+ 13	00.4	238	10.4	+ 21	15.9	24	45	3 50	4 28	5 00	6 37	47	22 12	48	
7	285	28.6		01.2	252	41.1		18.2	23	40	4 05	40	09	6 53	47	21 56	48	
8	300	28.7		02.1	267	11.8		20.5	23	35	18	50	17	7 07	47	42	49	
9	315	28.8		02.9	281	42.5		22.6	21	30	29	4 59	23	18	48	30	49	
10	330	28.9		03.7	296	13.2		24.7	21	20	46	5 12	35	38	48	21 10	49	
11	345	29.0	+ 13	04.5	310	43.8	+ 21	26.6	19	10 N	4 58	5 24	5 45	7 56	48	20 52	49	
12	0	29.1	+ 13	05.3	325	14.5	+ 21	28.5	19	0	5 09	5 33	5 55	8 12	49	20 36	49	
13	15	29.2		06.2	339	45.1		30.2	17	10 S	18	42	6 04	28	50	19	49	
14	30	29.3		07.0	354	15.7		31.9	17	20	25	5 51	14	8 46	49	20 01	49	
15	45	29.5		07.8	8	46.3		33.4	15	30	32	6 00	25	9 06	50	19 41	49	
16	60	29.6		08.6	23	16.8		34.9	15	35	35	05	31	18	50	29	49	
17	75	29.7	+ 13	09.4	37	47.4	+ 21	36.2	13	40	5 39	6 10	6 38	9 31	51	19 15	49	
18	90	29.8	+ 13	10.2	52	17.9	+ 21	37.4	12	45	5 42	6 16	6 47	9 48	50	18 59	49	
19	105	29.9		11.1	66	48.4		38.6	12	50	45	23	6 57	10 08	50	39	49	
20	120	30.0		11.9	81	18.9		39.6	10	52	46	26	7 01	17	51	29	49	
21	135	30.1		12.7	95	49.3		40.6	10	54	48	29	06	28	51	18	50	
22	150	30.2		13.5	110	19.8		41.4	8	56	49	33	12	40	51	18 06	50	
23	165	30.3		14.3	124	50.2		42.1	7	58	51	37	18	10 54	51	17 52	49	
24	180	30.4	+ 13	15.1	139	20.7	+ 21	42.8	7	60 S	5 52	6 41	7 25	11 10	52	17 36	49	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 9 ^h 48 ^m 7		Mag.: -4.5 PMG: 14 ^h 48 ^m		Mag.: -0.2 PMG: 20 ^h 15 ^m		Mag.: -2.0 PMG: 12 ^h 54 ^m		Mag.: +0.3 PMG: 23 ^h 25 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
^h	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']				
0	212	25.7	137	51.6	+ 27	20.4	55	25.3	+ 12	08.0	166	05.3	+ 16	33.1	7	43.7	- 7	17.9
1	227	28.1	152	52.3		20.6	70	27.5		07.8	181	07.2		33.3	22	46.4		17.9
2	242	30.6	167	53.0		20.8	85	29.8		07.6	196	09.1		33.5	37	49.0		17.8
3	257	33.1	182	53.7		21.1	100	32.0		07.4	211	11.0		33.6	52	51.7		17.7
4	272	35.5	197	54.4		21.3	115	34.2		07.2	226	12.9		33.8	67	54.3		17.7
5	287	38.0	212	55.1	+ 27	21.5	130	36.4	+ 12	07.0	241	14.7	+ 16	34.0	82	56.9	- 7	17.6
6	302	40.5	227	55.7	+ 27	21.7	145	38.7	+ 12	06.8	256	16.6	+ 16	34.1	97	59.6	- 7	17.5
7	317	42.9	242	56.4		22.0	160	40.9		06.6	271	18.5		34.3	113	02.2		17.5
8	332	45.4	257	57.1		22.2	175	43.1		06.4	286	20.4		34.5	128	04.9		17.4
9	347	47.8	272	57.8		22.4	190	45.3		06.2	301	22.2		34.6	143	07.5		17.3
10	2 50.3		287	58.5		22.6	205	47.6		06.0	316	24.1		34.8	158	10.2		17.3
11	17	52.8	302	59.2	+ 27	22.8	220	49.8	+ 12	05.8	331	26.0	+ 16	35.0	173	12.8	- 7	17.2
12	32	55.2	318	00.0	+ 27	23.0	235	52.0	+ 12	05.6	346	27.9	+ 16	35.1	188	15.4	- 7	17.1
13	47	57.7	333	00.7		23.2	250	54.2		05.4	1	29.8		35.3	203	18.1		17.1
14	63	00.2	348	01.4		23.5	265	56.4		05.2	16	31.6		35.4	218	20.7		17.0
15	78	02.6	3 02.1			23.7	280	58.6		05.0	31	33.5		35.6	233	23.4		17.0
16	93	05.1	18	02.8		23.9	296	00.8		04.8	46	35.4		35.8	248	26.0		16.9
17	108	07.6	33	03.5	+ 27	24.1	311	03.1	+ 12	04.6	61	37.3	+ 16	35.9	263	28.6	- 7	16.8
18	123	10.0	48	04.2	+ 27	24.3	326	05.3	+ 12	04.4	76	39.1	+ 16	36.1	278	31.3	- 7	16.8
19	138	12.5	63	05.0		24.5	341	07.5		04.2	91	41.0		36.3	293	33.9		16.7
20	153	15.0	78	05.7		24.7	356	09.7		04.0	106	42.9		36.4	308	36.6		16.6
21	168	17.4	93	06.4		24.9	11	11.9		03.7	121	44.8		36.6	323	39.2		16.6
22	183	19.9	108	07.2		25.1	26	14.1		03.5	136	46.6		36.8	338	41.9		16.5
23	198	22.3	123	07.9		25.3	41	16.3		03.3	151	48.5		36.9	353	44.5		16.4
24	213	24.8	138	08.6	+ 27	25.5	56	18.5	+ 12	03.1	166	50.4	+ 16	37.1	8	47.1	- 7	16.4
Dif	—		+7		+2		+22		-2		+19		+2		+26		+1	

MIÉRCOL 25 DE ABRIL DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 9		SD: 14 ^h 8 Edad: 3 ^d 7		PHE $\begin{cases} 4^h: 54/3 \\ 12^h: 54/4 \\ 20^h: 54/5 \end{cases}$													
	PMG: 15 ^h 13 ^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	h m m				
0	180	30.4	+13	15.1	139	20.7	+21	42.8	5	60 N	19 44	20 35	21 49	6 01 55	** ** *	** ** *		
1	195	30.5		15.9	153	51.1	114	43.3	4	58	35	22	26	17 55	** ** *	** ** *		
2	210	30.6		16.7	168	21.5	114	43.7	3	56	28	11	21 09	31 55	23 51	39		
3	225	30.7		17.6	182	51.8	113	44.0	2	54	21	20 02	20 54	44 53	40	39		
4	240	30.8		18.4	197	22.2	114	44.2	2	52	15	19 53	42	6 54 54	29	40		
5	255	30.9	+13	19.2	211	52.6	114	+21	44.4	2	50	19 10	19 46	20 31	7 04 53	23 20	41	
6	270	31.1	+13	20.0	226	22.9	113	+21	44.4	0	45	18 58	19 30	20 09	7 24 52	23 00	43	
7	285	31.2		20.8	240	53.3	114	44.3	1	40	49	18	19 53	40 52	22 44	44	44	
8	300	31.3		21.6	255	23.6	113	44.1	2	35	41	19 08	40	7 54 51	31	45	51	
9	315	31.4		22.4	269	53.9	113	43.8	3	30	34	18 59	29	8 06 51	22 19	46	46	
10	330	31.5		23.2	284	24.2	113	43.4	4	20	22	44	19 11	26 51	21 59	47	47	
11	345	31.6	+13	24.0	298	54.5	113	+21	42.9	5	10 N	18 11	18 33	18 58	8 44 50	21 41	48	
12	0	31.7	+13	24.9	313	24.8	113	+21	42.3	6	0	18 01	18 23	18 47	9 01 49	21 25	49	
13	15	31.8		25.7	327	55.1	113	41.5	8	10 S	17 52	13	38	18 48	21 08	50	50	
14	30	31.9		26.5	342	25.3	112	40.7	8	20	41	18 04	30	35 48	20 50	52	52	
15	45	32.0		27.3	356	55.6	113	39.8	9	30	30	17 55	23	9 56 47	30	53	53	
16	60	32.1		28.1	11	25.9	113	38.8	10	35	23	49	19	10 08 47	18	53	53	
17	75	32.2	+13	28.9	25	56.1	112	+21	37.6	12	40	17 16	17 44	18 16	10 22 46	20 04	54	
18	90	32.3	+13	29.7	40	26.4	113	+21	36.4	12	45	17 07	17 38	18 12	10 38 46	19 48	55	
19	105	32.4		30.5	54	56.6	112	35.1	13	50	16 57	31	09	10 58 45	28	56	56	
20	120	32.5		31.3	69	26.9	113	33.6	15	52	52	27	07	11 08 44	18	58	58	
21	135	32.6		32.1	83	57.1	112	32.1	15	54	47	24	06	19 43	19 08	58	58	
22	150	32.7		32.9	98	27.3	112	30.4	17	56	41	20	04	31 42	18 56	58	58	
23	165	32.8		33.7	112	57.6	113	28.7	17	58	35	16	02	11 45 42	41	60	60	
24	180	32.9	+13	34.5	127	27.8	112	+21	26.8	19	60 S	16 27	17 12	18 01	12 02 40	18 25	61	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 9 ^h 44 ^m 7		Mag.: -4.5 PMG: 14 ^h 47 ^m		Mag.: -0.2 PMG: 20 ^h 12 ^m		Mag.: -2.0 PMG: 12 ^h 51 ^m		Mag.: +0.3 PMG: 23 ^h 21 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	213	24.8	138	08.6	+27	25.5	56	18.5	+12	03.1	166	50.4	+16	37.1	8 47.1	-7	16.4	
1	228	27.3	153	09.4		25.8	71	20.7		02.9	181	52.3		37.3	23 49.8		16.3	
2	243	29.7	168	10.1		26.0	86	22.9		02.7	196	54.2		37.4	38 52.4		16.2	
3	258	32.2	183	10.8		26.2	101	25.1		02.5	211	56.0		37.6	53 55.1		16.2	
4	273	34.7	198	11.6		26.4	116	27.3		02.3	226	57.9		37.7	68 57.7		16.1	
5	288	37.1	213	12.3	+27	26.6	131	29.5	+12	02.1	241	59.8	+16	37.9	84 00.3	-7	16.0	
6	303	39.6	228	13.1	+27	26.8	146	31.7	+12	01.9	257	01.7	+16	38.1	99 03.0	-7	16.0	
7	318	42.1	243	13.8		27.0	161	33.9		01.7	272	03.5		38.2	114 05.6		15.9	
8	333	44.5	258	14.6		27.2	176	36.1		01.5	287	05.4		38.4	129 08.3		15.8	
9	348	47.0	273	15.3		27.4	191	38.3		01.3	302	07.3		38.6	144 10.9		15.8	
10	3 49.4	288	16.1		27.5	206	40.5		01.1	317	09.2		38.7	159 13.5		15.7		
11	18	51.9	303	16.8	+27	27.7	221	42.7	+12	00.8	332	11.0	+16	38.9	174 16.2	-7	15.6	
12	33	54.4	318	17.6	+27	27.9	236	44.9	+12	00.6	347	12.9	+16	39.1	189 18.8	-7	15.6	
13	48	56.8	333	18.4		28.1	251	47.1		00.4	2 14.8		39.2	204 21.5		15.5		
14	63	59.3	348	19.1		28.3	266	49.3		00.2	17 16.7		39.4	219 24.1		15.4		
15	79	01.8	3 19.9		28.5	281	51.5	+12	00.0		32 18.6		39.5	234 26.8		15.4		
16	94	04.2	18	20.7		28.7	296	53.7	+11	59.8	47 20.4		39.7	249 29.4		15.3		
17	109	06.7	33	21.4	+27	28.9	311	55.8	+11	59.6	62 22.3	+16	39.9	264 32.0	-7	15.2		
18	124	09.2	48	22.2	+27	29.1	326	58.0	+11	59.4	77 24.2	+16	40.0	279 34.7	-7	15.2		
19	139	11.6	63	23.0		29.3	342	00.2		59.2	92 26.1		40.2	294 37.3		15.1		
20	154	14.1	78	23.8		29.5	357	02.4		58.9	107 27.9		40.4	309 40.0		15.0		
21	169	16.6	93	24.6		29.6	12	04.6		58.7	122 29.8		40.5	324 42.6		15.0		
22	184	19.0	108	25.3		29.8	27	06.8		58.5	137 31.7		40.7	339 45.2		14.9		
23	199	21.5	123	26.1		30.0	42	08.9		58.3	152 33.6		40.9	354 47.9		14.8		
24	214	23.9	138	26.9	+27	30.2	57	11.1	+11	58.1	167 35.4	+16	41.0	9 50.5	-7	14.8		
Dif	—		+8		+2		+22		-2		+19		+2		+26		+1	

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UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 7		SD: 14'9 Edad: 4 ^d 7 PHE { 4 ^h : 54'6 12 ^h : 54'8 20 ^h : 54'9 PMG: 16 ^h 02 ^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 ^m		^h ^m ^m	
0	180 32.9	+ 13 34.5	127 27.8		+ 21 26.8	20	60 N	2 06	3 20	4 11	6 56 67		0 21 35	
1	195 33.0		141 58.0 ¹¹²		24.8	20	58	29	33	19	7 12 65		0 05 37	
2	210 33.1		156 28.2		22.8	20	56	2 46	44	27	26 63	***	***	***
3	225 33.2		170 58.5 ¹¹³		20.6	22	54	3 01	3 53	34	37 62	***	***	***
4	240 33.3		185 28.7 ¹¹²		18.3	23	52	13	4 02	40	48 60	***	***	***
5	255 33.4	+ 13 38.5	199 58.9 ¹¹²		+ 21 16.0	23	50	3 24	4 09	4 45	7 57 60	***	***	***
6	270 33.5	+ 13 39.3	214 29.1 ¹¹²		+ 21 13.5	25	45	3 46	4 25	4 57	8 16 58		23 43 38	
7	285 33.6		228 59.3 ¹¹²		10.9	26	40	4 02	37	5 06	32 56		28 40	
8	300 33.7		243 29.6 ¹¹³		08.2	27	35	16	48	14	45 55		16 41	
9	315 33.8		257 59.8 ¹¹²		05.4	28	30	27	4 56	22	8 57 54		23 05 42	
10	330 33.9		272 30.0 ¹¹²		+ 21 02.5	29	20	44	5 11	34	9 17 52		22 46 45	
11	345 34.0	+ 13 43.3	287 00.2 ¹¹²		+ 20 59.5	30	10 N	4 57	5 23	5 44	9 34 51		22 29 47	
12	0 34.1	+ 13 44.1	301 30.5 ¹¹³		+ 20 56.4	31	0	5 08	5 33	5 54	9 50 49		22 14 49	
13	15 34.2		316 00.7 ¹¹²		53.2	32	10 S	18	43	6 04	10 06 48		21 58 51	
14	30 34.3		330 31.0 ¹¹³		49.9	33	20	26	5 52	14	23 47		42 52	
15	45 34.4		345 01.2 ¹¹²		46.5	34	30	33	6 01	26	43 44		23 55	
16	60 34.5		359 31.4 ¹¹²		43.0	35	35	37	07	33	10 55 43		21 11 57	
17	75 34.6	+ 13 48.1	14 01.7 ¹¹³		+ 20 39.4	36	40	5 40	6 12	6 40	11 08 42		20 58 58	
18	90 34.7	+ 13 48.9	28 31.9 ¹¹²		+ 20 35.6	38	45	5 44	6 19	6 49	11 24 40		20 43 60	
19	105 34.8		43 02.2 ¹¹³		31.8	38	50	48	26	7 00	43 38		24 63	
20	120 34.9		57 32.5 ¹¹³		27.9	39	52	49	29	04	11 52 37		16 63	
21	135 35.0		72 02.8 ¹¹³		23.9	40	54	51	33	10	12 02 36		20 06 65	
22	150 35.1		86 33.0 ¹¹²		19.8	41	56	53	36	16	13 35		19 54 67	
23	165 35.2		101 03.3 ¹¹³		15.5	43	58	54	41	22	27 32		41 69	
24	180 35.3	+ 13 53.7	115 33.6 ¹¹³		+ 20 11.2	43	60 S	5 56	6 45	7 30	12 42 30		19 26 71	
UT	ARIES PMG 9 ^h 40 ^m 8		VENUS Mag.: -4.5 PMG: 14 ^h 45 ^m		MARTE Mag.: -0.1 PMG: 20 ^h 08 ^m		JÚPITER Mag.: -2.0 PMG: 12 ^h 48 ^m		SATURNO Mag.: +0.3 PMG: 23 ^h 17 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	° ' /	° ' /	° ' /		° ' /		° ' /		° ' /					
^h	° ' /	° ' /	° ' /		° ' /			^h ^m	^h ^m	^h ^m	^h ^m ^m		^h ^m ^m	
0	214 23.9	138 26.9	+ 27 30.2		57 11.1	+ 11 58.1	167 35.4	+ 16 41.0	9 50.5	- 7 14.8				
1	229 26.4	153 27.7	30.4		72 13.3	57.9	182 37.3	41.2	24 53.2	14.7				
2	244 28.9	168 28.5	30.6		87 15.5	57.7	197 39.2	41.4	39 55.8	14.7				
3	259 31.3	183 29.3	30.7		102 17.7	57.4	212 41.1	41.5	54 58.4	14.6				
4	274 33.8	198 30.1	30.9		117 19.8	57.2	227 42.9	41.7	70 01.1	14.5				
5	289 36.3	213 30.9	+ 27 31.1		132 22.0	+ 11 57.0	242 44.8	+ 16 41.8	85 03.7	- 7 14.5				
6	304 38.7	228 31.7	+ 27 31.3		147 24.2	+ 11 56.8	257 46.7	+ 16 42.0	100 06.4	- 7 14.4				
7	319 41.2	243 32.5	31.5		162 26.3	56.6	272 48.6	42.2	115 09.0	14.3				
8	334 43.7	258 33.3	31.6		177 28.5	56.4	287 50.4	42.3	130 11.6	14.3				
9	349 46.1	273 34.1	31.8		192 30.7	56.1	302 52.3	42.5	145 14.3	14.2				
10	4 48.6	288 35.0	32.0		207 32.9	55.9	317 54.2	42.7	160 16.9	14.1				
11	19 51.1	303 35.8	+ 27 32.2		222 35.0	+ 11 55.7	332 56.1	+ 16 42.8	175 19.6	- 7 14.1				
12	34 53.5	318 36.6	+ 27 32.3		237 37.2	+ 11 55.5	347 57.9	+ 16 43.0	190 22.2	- 7 14.0				
13	49 56.0	333 37.4	32.5		252 39.4	55.3	2 59.8	43.1	205 24.8	13.9				
14	64 58.4	348 38.2	32.7		267 41.5	55.0	18 01.7	43.3	220 27.5	13.9				
15	80 00.9	3 39.1	32.8		282 43.7	54.8	33 03.6	43.5	235 30.1	13.8				
16	95 03.4	18 39.9	33.0		297 45.9	54.6	48 05.4	43.6	250 32.8	13.7				
17	110 05.8	33 40.7	+ 27 33.2		312 48.0	+ 11 54.4	63 07.3	+ 16 43.8	265 35.4	- 7 13.7				
18	125 08.3	48 41.5	+ 27 33.4		327 50.2	+ 11 54.2	78 09.2	+ 16 44.0	280 38.0	- 7 13.6				
19	140 10.8	63 42.4	33.5		342 52.3	53.9	93 11.1	44.1	295 40.7	13.5				
20	155 13.2	78 43.2	33.7		357 54.5	53.7	108 12.9	44.3	310 43.3	13.5				
21	170 15.7	93 44.1	33.8		12 56.7	53.5	123 14.8	44.5	325 46.0	13.4				
22	185 18.2	108 44.9	34.0		27 58.8	53.3	138 16.7	44.6	340 48.6	13.4				
23	200 20.6	123 45.8	34.2		43 01.0	53.1	153 18.6	44.8	355 51.2	13.3				
24	215 23.1	138 46.6	+ 27 34.3		58 03.1	+ 11 52.8	168 20.4	+ 16 44.9	10 53.9	- 7 13.2				
Dif	—	+8	+2		+22	-2	+19	+2	+26	+1				

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 15°9 PMG: 11 ^h 57 ^m 6		SD: 15°0 Edad: 5 ^d 7		PHE $\begin{cases} 4^h: 55'1 \\ 12^h: 55'3 \\ 20^h: 55'5 \end{cases}$										
	hG ☉	Dec	hG ☾	Dif		Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	35.3	+13	53.7	115	33.6	+20	11.2	60 N	19 49	20 41	21 58	8 03	75	0 56
1	195	35.4		54.5	130	03.9		06.8	58	40	27	34	17	72	42
2	210	35.5		55.3	144	34.2	+20	02.2	56	32	16	21 15	29	70	30
3	225	35.6		56.1	159	04.5	+19	57.6	54	25	20 06	20 59	39	68	19
4	240	35.6		56.9	173	34.9		52.9	52	19	19 57	46	48	67	09
5	255	35.7	+13	57.7	188	05.2	+19	48.1	50	19 13	19 49	20 35	8 57	64	0 01
6	270	35.8	+13	58.5	202	35.5	+19	43.1	50	19 01	19 33	20 13	9 14	62	*** **
7	285	35.9	+13	59.3	217	05.9		38.1	40	18 51	20	19 55	28	60	*** **
8	300	36.0	+14	00.0	231	36.2		33.0	35	42	09	42	40	58	23 57
9	315	36.1		00.8	246	06.6		27.8	30	35	19 00	30	9 51	56	47
10	330	36.2		01.6	260	37.0		22.4	20	22	18 45	19 12	10 09	53	31
11	345	36.3	+14	02.4	275	07.4	+19	17.0	10 N	18 11	18 33	18 58	10 25	51	23 16
12	0	36.4	+14	03.2	289	37.8	+19	11.5	0	18 01	18 22	18 47	10 39	49	23 03
13	15	36.5		04.0	304	08.2		05.9	10 S	17 51	12	37	10 54	46	22 49
14	30	36.6		04.8	318	38.6	+19	00.2	57	40	18 03	29	11 10	44	34
15	45	36.7		05.6	333	09.0	+18	54.4	30	28	17 53	21	27	42	18
16	60	36.8		06.4	347	39.4		48.5	35	21	47	17	38	40	22 08
17	75	36.9	+14	07.1	2	09.9	+18	42.5	40	17 13	17 41	18 13	11 50	38	21 56
18	90	37.0	+14	07.9	16	40.3	+18	36.4	45	17 04	17 35	18 09	12 04	35	21 43
19	105	37.1		08.7	31	10.8		30.2	50	16 53	27	05	21	32	27
20	120	37.1		09.5	45	41.3		23.9	52	48	24	03	29	31	19
21	135	37.2		10.3	60	11.8		17.5	54	43	20	02	38	29	11
22	150	37.3		11.1	74	42.3		11.0	56	37	16	18 00	48	27	21 01
23	165	37.4		11.9	89	12.8	+18	04.4	58	30	12	17 58	12 59	25	20 50
24	180	37.5	+14	12.7	103	43.3	+17	57.8	60 S	16 22	17 07	17 56	13 12	23	20 37
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 9 ^h 36 ^m 9		Mag.: -4.5 PMG: 14 ^h 44 ^m		Mag.: -0.1 PMG: 20 ^h 05 ^m		Mag.: -2.0 PMG: 12 ^h 45 ^m		Mag.: +0.3 PMG: 23 ^h 12 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	215	23.1	138	46.6	+27	58	03.1	+11	168	20.4	+16	10	53.9	-7	13.2
1	230	25.6	153	47.5		73	05.3		183	22.3		25	56.5		13.2
2	245	28.0	168	48.3		88	07.4		198	24.2		40	59.2		13.1
3	260	30.5	183	49.2		103	09.6		213	26.1		56	01.8		13.0
4	275	32.9	198	50.0		118	11.7		228	27.9		71	04.4		13.0
5	290	35.4	213	50.9	+27	133	13.9	+11	243	29.8	+16	86	07.1	-7	12.9
6	305	37.9	228	51.7	+27	148	16.0	+11	258	31.7	+16	101	09.7	-7	12.8
7	320	40.3	243	52.6		163	18.2		273	33.6		116	12.4		12.8
8	335	42.8	258	53.5		178	20.3		288	35.4		131	15.0		12.7
9	350	45.3	273	54.3		193	22.5		303	37.3		146	17.6		12.6
10	5	47.7	288	55.2		208	24.6		318	39.2		161	20.3		12.6
11	20	50.2	303	56.1	+27	223	26.8	+11	333	41.1	+16	176	22.9	-7	12.5
12	35	52.7	318	57.0	+27	238	28.9	+11	348	42.9	+16	191	25.5	-7	12.4
13	50	55.1	333	57.9		253	31.0		3	44.8		206	28.2		12.4
14	65	57.6	348	58.7		268	33.2		18	46.7		221	30.8		12.3
15	81	00.0	3	59.6		283	35.3		33	48.6		236	33.5		12.3
16	96	02.5	19	00.5		298	37.5		48	50.4		251	36.1		12.2
17	111	05.0	34	01.4	+27	313	39.6	+11	63	52.3	+16	266	38.7	-7	12.1
18	126	07.4	49	02.3	+27	328	41.7	+11	78	54.2	+16	281	41.4	-7	12.1
19	141	09.9	64	03.2		343	43.9		93	56.0		296	44.0		12.0
20	156	12.4	79	04.1		358	46.0		108	57.9		311	46.7		11.9
21	171	14.8	94	05.0		13	48.1		123	59.8		326	49.3		11.9
22	186	17.3	109	05.9		28	50.3		139	01.7		341	51.9		11.8
23	201	19.8	124	06.8		43	52.4		154	03.5		356	54.6		11.7
24	216	22.2	139	07.7	+27	58	54.5	+11	169	05.4	+16	11	57.2	-7	11.7
Dif	—		+9	+2		+21		-2	+19		+2		+26		+1

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SÁBADO 28 DE ABRIL DE 2012

UT	SOL		<div><div><div><div><div></div><div>LUNA</div></div><div><div>SD: 15^h2</div><div>Edad: 6^d7</div><div>PMG: 17^h 40^m</div></div><div><div>PHE</div><div><div>4^h: 55^m/7</div><div>12^h: 55^m/9</div><div>20^h: 56^m/2</div></div><div>R°: 48^m</div></div></div></div></div>				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 4													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	° /	° /	° /		° /		° N	h m	h m	h m	h m m		h m m	
0	180 37.5	+ 14 12.7	103 43.3		+ 17 57.8	68	60	1 56	3 14	4 05	9 18 80		1 22 20	
1	195 37.6		118 13.8	115	51.0	68	58	2 21	27	14	29 77		10 23	
2	210 37.7	14.2	132 44.4	116	44.2	70	56	40	39	22	39 74		1 00 25	
3	225 37.8	15.0	147 14.9	115	37.2	70	54	2 55	49	29	47 72		0 51 27	
4	240 37.9	15.8	161 45.5	116	30.2	72	52	3 08	3 57	36	9 55 70		43 29	
5	255 38.0	+ 14 16.6	176 16.0	115	+ 17 23.0	72	50	3 19	4 05	4 41	10 01 69		0 36 30	
6	270 38.0	+ 14 17.4	190 46.6	116	+ 17 15.8	73	45	3 42	4 21	4 53	10 16 65		0 21 33	
7	285 38.1	18.1	205 17.2	116	08.5	74	40	3 59	34	5 04	28 62		0 08 36	
8	300 38.2	18.9	219 47.8	116	+ 17 01.1	73	35	4 13	45	12	38 60		** ** *	
9	315 38.3	19.7	234 18.4	116	+ 16 53.6	75	30	25	4 54	20	10 47 58		** ** *	
10	330 38.4	20.5	248 49.0	116	46.0	76	20	43	5 10	33	11 02 55		** ** *	
11	345 38.5	+ 14 21.3	263 19.7	117	+ 16 38.4	76	10 N	4 57	5 22	5 44	11 16 51		** ** *	
12	0 38.6	+ 14 22.0	277 50.3	116	+ 16 30.6	78	0	5 08	5 33	5 54	11 28 48		23 51 49	
13	15 38.7	22.8	292 21.0	117	22.7	79	10 S	18	43	6 04	40 46		40 52	
14	30 38.8	23.6	306 51.6	116	14.8	79	20	26	5 52	15	11 54 42		28 55	
15	45 38.8	24.4	321 22.3	117	+ 16 06.8	80	30	34	6 03	27	12 09 39		15 58	
16	60 38.9	25.2	335 53.0	117	+ 15 58.7	81	35	38	08	34	18 37		23 07 60	
17	75 39.0	+ 14 25.9	350 23.7	117	+ 15 50.5	82	40	5 42	6 14	6 42	12 28 34		22 57 64	
18	90 39.1	+ 14 26.7	4 54.4	117	+ 15 42.2	83	45	5 46	6 21	6 52	12 39 32		22 47 66	
19	105 39.2	27.5	19 25.1	117	33.8	84	50	51	29	7 03	12 53 29		34 70	
20	120 39.3	28.3	33 55.8	117	25.4	84	52	52	32	08	13 00 26		28 72	
21	135 39.4	29.0	48 26.5	117	16.8	86	54	54	36	13	07 25		21 74	
22	150 39.5	29.8	62 57.2	117	+ 15 08.2	86	56	56	40	20	15 23		13 77	
23	165 39.5	30.6	77 28.0	118	+ 14 59.5	87	58	5 58	45	27	24 20		22 05 79	
24	180 39.6	+ 14 31.4	91 58.7	117	+ 14 50.7	88	60 S	6 00	6 50	7 35	13 35 17		21 55 82	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 9 ^h 32 ^m 9		Mag.: -4.5 PMG: 14 ^h 43 ^m		Mag.: -0.1 PMG: 20 ^h 02 ^m		Mag.: -2.0 PMG: 12 ^h 42 ^m		Mag.: +0.3 PMG: 23 ^h 08 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	° /	° /	° /		° /		° /		° /					
0	216 22.2	139 07.7	+ 27 38.0	58 54.5	+ 11 47.4	169 05.4	+ 16 48.9	11 57.2	- 7 11.7					
1	231 24.7	154 08.6	38.1	73 56.7	47.1	184 07.3	49.0	26 59.8	11.6					
2	246 27.2	169 09.5	38.3	88 58.8	46.9	199 09.2	49.2	42 02.5	11.5					
3	261 29.6	184 10.4	38.4	104 00.9	46.7	214 11.0	49.3	57 05.1	11.5					
4	276 32.1	199 11.4	38.5	119 03.1	46.4	229 12.9	49.5	72 07.8	11.4					
5	291 34.5	214 12.3	+ 27 38.7	134 05.2	+ 11 46.2	244 14.8	+ 16 49.7	87 10.4	- 7 11.4					
6	306 37.0	229 13.2	+ 27 38.8	149 07.3	+ 11 46.0	259 16.7	+ 16 49.8	102 13.0	- 7 11.3					
7	321 39.5	244 14.1	38.9	164 09.4	45.7	274 18.5	50.0	117 15.7	11.2					
8	336 41.9	259 15.1	39.1	179 11.6	45.5	289 20.4	50.2	132 18.3	11.2					
9	351 44.4	274 16.0	39.2	194 13.7	45.3	304 22.3	50.3	147 21.0	11.1					
10	6 46.9	289 16.9	39.3	209 15.8	45.0	319 24.2	50.5	162 23.6	11.0					
11	21 49.3	304 17.9	+ 27 39.5	224 17.9	+ 11 44.8	334 26.0	+ 16 50.6	177 26.2	- 7 11.0					
12	36 51.8	319 18.8	+ 27 39.6	239 20.0	+ 11 44.6	349 27.9	+ 16 50.8	192 28.9	- 7 10.9					
13	51 54.3	334 19.8	39.7	254 22.2	44.3	4 29.8	51.0	207 31.5	10.8					
14	66 56.7	349 20.7	39.9	269 24.3	44.1	19 31.6	51.1	222 34.1	10.8					
15	81 59.2	4 21.7	40.0	284 26.4	43.9	34 33.5	51.3	237 36.8	10.7					
16	97 01.7	19 22.6	40.1	299 28.5	43.6	49 35.4	51.5	252 39.4	10.7					
17	112 04.1	34 23.6	+ 27 40.3	314 30.6	+ 11 43.4	64 37.3	+ 16 51.6	267 42.1	- 7 10.6					
18	127 06.6	49 24.5	+ 27 40.4	329 32.7	+ 11 43.1	79 39.1	+ 16 51.8	282 44.7	- 7 10.5					
19	142 09.0	64 25.5	40.5	344 34.8	42.9	94 41.0	51.9	297 47.3	10.5					
20	157 11.5	79 26.4	40.6	359 36.9	42.7	109 42.9	52.1	312 50.0	10.4					
21	172 14.0	94 27.4	40.8	14 39.1	42.4	124 44.8	52.3	327 52.6	10.3					
22	187 16.4	109 28.4	40.9	29 41.2	42.2	139 46.6	52.4	342 55.2	10.3					
23	202 18.9	124 29.3	41.0	44 43.3	41.9	154 48.5	52.6	357 57.9	10.2					
24	217 21.4	139 30.3	+ 27 41.1	59 45.4	+ 11 41.7	169 50.4	+ 16 52.7	13 00.5	- 7 10.1					
Dif	—	+9	+1	+21	-2	+19	+2	+26	+1					

DOMINGO 29 DE ABRIL DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15°9 PMG: 11 ^h 57 ^m 3		SD: 15°3 Edad: 7 ^d 7		PHE $\begin{cases} 4^h: 56^s/5 \\ 12^h: 56^s/7 \\ 20^h: 57^s/0 \end{cases}$									
	PMG: 18 ^h 28 ^m R°: 48 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
^h 0	180 39.6	+ 14 31.4	91 58.7		+ 14 50.7	60 N	^h ^m 19 54	^h ^m 20 47	^h ^m 22 08	^h ^m ^s 10 38 84	^h ^m ^s 1 42 15			
1	195 39.7		106 29.5 ¹¹⁸		41.8 ⁸⁹	58	44	32	21 41	46 81	33 18			
2	210 39.8		121 00.2 ¹¹⁷		32.9 ⁸⁹	56	36	20	21	53 78	25 21			
3	225 39.9		135 31.0 ¹¹⁸		23.8 ⁹¹	54	29	10	21 05	10 59 76	18 23			
4	240 40.0		150 01.7 ¹¹⁷		14.7 ⁹¹	52	22	20 01	20 51	11 05 74	12 25			
5	255 40.1	+ 14 35.2	164 32.5 ¹¹⁸		05.5 ⁹²	50	19 16	19 53	20 39	11 10 72	1 06 27			
6	270 40.1	+ 14 36.0	179 03.3 ¹¹⁸		56.2 ⁹³	45	19 03	19 36	20 16	11 21 68	0 54 30			
7	285 40.2		193 34.1 ¹¹⁸		46.9 ⁹³	40	18 53	22	19 58	30 65	44 33			
8	300 40.3		208 04.9 ¹¹⁸		37.4 ⁹⁵	35	44	11	44	38 62	35 36			
9	315 40.4		222 35.7 ¹¹⁸		27.9 ⁹⁵	30	36	19 02	32	45 59	27 38			
10	330 40.5		237 06.5 ¹¹⁸		18.3 ⁹⁶	20	23	18 46	19 13	11 57 55	14 42			
11	345 40.6	+ 14 39.9	251 37.3 ¹¹⁸		08.7 ⁹⁶	10 N	18 11	18 33	18 59	12 07 52	0 02 46			
12	0 40.6	+ 14 40.6	266 08.1 ¹¹⁸		58.9 ⁹⁸	0	18 01	18 22	18 47	12 16 49	*** ** *			
13	15 40.7		280 38.9 ¹¹⁸		49.1 ⁹⁸	10 S	17 50	12	37	26 45	*** ** *			
14	30 40.8		295 09.7 ¹¹⁸		39.2 ⁹⁹	20	39	18 02	28	36 42	*** ** *			
15	45 40.9		309 40.5 ¹¹⁸		29.2 ¹⁰⁰	30	26	17 51	19	48 37	*** ** *			
16	60 41.0		324 11.3 ¹¹⁸		19.2 ¹⁰⁰	35	19	45	15	12 55 35	*** ** *			
17	75 41.0	+ 14 44.5	338 42.1 ¹¹⁸		09.1 ¹⁰¹	40	17 11	17 39	18 11	13 02 33	*** ** *			
18	90 41.1	+ 14 45.2	353 12.9 ¹¹⁸		58.9 ¹⁰²	45	17 01	17 32	18 07	13 11 29	23 53 69			
19	105 41.2		7 43.7 ¹¹⁸		48.6 ¹⁰³	50	16 50	24	02	22 25	44 73			
20	120 41.3		22 14.6 ¹¹⁹		38.3 ¹⁰³	52	44	20	18 00	26 24	40 75			
21	135 41.4		36 45.4 ¹¹⁸		27.9 ¹⁰⁴	54	39	16	17 58	32 22	35 77			
22	150 41.5		51 16.2 ¹¹⁸		17.4 ¹⁰⁵	56	32	12	56	38 19	30 79			
23	165 41.5		65 47.0 ¹¹⁸		06.8 ¹⁰⁶	58	25	07	54	44 17	24 82			
24	180 41.6	+ 14 49.8	80 17.8 ¹¹⁸		56.2 ¹⁰⁶	60 S	16 17	17 02	17 51	13 52 14	23 17 85			
UT	ARIES PMG 9 ^h 29 ^m 0		VENUS Mag.: -4.5 PMG: 14 ^h 41 ^m		MARTE Mag.: -0.1 PMG: 19 ^h 58 ^m		JÚPITER Mag.: -2.0 PMG: 12 ^h 39 ^m		SATURNO Mag.: +0.3 PMG: 23 ^h 04 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
	° /	° /	° /	° /	° /	° /	° /	° /	° /					
^h 0	217 21.4	139 30.3	+ 27 41.1	59 45.4	+ 11 41.7	169 50.4	+ 16 52.7	13 00.5	- 7 10.1					
1	232 23.8	154 31.3	41.2	74 47.5	41.5	184 52.2	52.9	28 03.2	10.1					
2	247 26.3	169 32.3	41.4	89 49.6	41.2	199 54.1	53.1	43 05.8	10.0					
3	262 28.8	184 33.2	41.5	104 51.7	41.0	214 56.0	53.2	58 08.4	10.0					
4	277 31.2	199 34.2	41.6	119 53.8	40.7	229 57.9	53.4	73 11.1	09.9					
5	292 33.7	214 35.2	+ 27 41.7	134 55.9	+ 11 40.5	244 59.7	+ 16 53.6	88 13.7	- 7 09.8					
6	307 36.2	229 36.2	+ 27 41.8	149 58.0	+ 11 40.3	260 01.6	+ 16 53.7	103 16.3	- 7 09.8					
7	322 38.6	244 37.2	41.9	165 00.1	40.0	275 03.5	53.9	118 19.0	09.7					
8	337 41.1	259 38.2	42.0	180 02.2	39.8	290 05.3	54.0	133 21.6	09.6					
9	352 43.5	274 39.2	42.2	195 04.3	39.5	305 07.2	54.2	148 24.3	09.6					
10	7 46.0	289 40.2	42.3	210 06.4	39.3	320 09.1	54.4	163 26.9	09.5					
11	22 48.5	304 41.2	+ 27 42.4	225 08.5	+ 11 39.0	335 11.0	+ 16 54.5	178 29.5	- 7 09.4					
12	37 50.9	319 42.2	+ 27 42.5	240 10.6	+ 11 38.8	350 12.8	+ 16 54.7	193 32.2	- 7 09.4					
13	52 53.4	334 43.2	42.6	255 12.7	38.6	5 14.7	54.8	208 34.8	09.3					
14	67 55.9	349 44.2	42.7	270 14.8	38.3	20 16.6	55.0	223 37.4	09.3					
15	82 58.3	4 45.2	42.8	285 16.9	38.1	35 18.5	55.2	238 40.1	09.2					
16	98 00.8	19 46.3	42.9	300 19.0	37.8	50 20.3	55.3	253 42.7	09.1					
17	113 03.3	34 47.3	+ 27 43.0	315 21.1	+ 11 37.6	65 22.2	+ 16 55.5	268 45.3	- 7 09.1					
18	128 05.7	49 48.3	+ 27 43.1	330 23.1	+ 11 37.3	80 24.1	+ 16 55.7	283 48.0	- 7 09.0					
19	143 08.2	64 49.3	43.2	345 25.2	37.1	95 25.9	55.8	298 50.6	08.9					
20	158 10.6	79 50.3	43.3	0 27.3	36.8	110 27.8	56.0	313 53.3	08.9					
21	173 13.1	94 51.4	43.4	15 29.4	36.6	125 29.7	56.1	328 55.9	08.8					
22	188 15.6	109 52.4	43.5	30 31.5	36.3	140 31.6	56.3	343 58.5	08.8					
23	203 18.0	124 53.4	43.7	45 33.6	36.1	155 33.4	56.5	359 01.2	08.7					
24	218 20.5	139 54.5	+ 27 43.8	60 35.7	+ 11 35.8	170 35.3	+ 16 56.6	14 03.8	- 7 08.6					
Dif	—	+10	+1	+21	-2	+19	+2	+26	+1					

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LUNES 30 DE ABRIL DE 2012

UT	SOL			LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 2			SD: 15'6 Edad: 8 ^d 7 PHE { 4 ^h : 57'3 12 ^h : 57'6 20 ^h : 57'9 PMG: 19 ^h 16 ^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	^h ^m	^h ^m	^h ^m	^h ^m
0	180 41.6	+ 14 49.8		80 17.8		+ 10 56.2		60 N	1 46	3 07	4 00	12 02	86	1 57	13
1	195 41.7	50.6		94 48.6	118	45.5	107	58	2 13	21	09	07 83		51	16
2	210 41.8	51.4		109 19.4	118	34.8	107	56	33	33	18	11 81		46	18
3	225 41.9	52.1		123 50.2	118	24.0	108	54	2 49	44	25	15 79		41	21
4	240 41.9	52.9		138 20.9	117	13.1	109	52	3 03	3 53	32	19 76		37	22
5	255 42.0	+ 14 53.7		152 51.7	118	+ 10 02.1	110	50	3 15	4 01	4 38	12 22	74	1 33	24
6	270 42.1	+ 14 54.4		167 22.5	118	+ 9 51.1	110	45	3 38	4 18	4 50	12 29	70	1 24	29
7	285 42.2	55.2		181 53.2	117	40.0	111	40	3 56	32	5 01	35 67		17	32
8	300 42.3	55.9		196 24.0	118	28.9	111	35	4 11	43	10	40 64		11	34
9	315 42.3	56.7		210 54.8	118	17.7	112	30	22	4 53	18	44 61		1 05	37
10	330 42.4	57.5		225 25.5	117	+ 9 06.4	113	20	41	5 08	31	52 56		0 56	41
11	345 42.5	+ 14 58.2		239 56.2	117	+ 8 55.1	113	10 N	4 56	5 21	5 43	12 59	52	0 48	44
12	0 42.6	+ 14 59.0		254 26.9	117	+ 8 43.7	114	0	5 08	5 32	5 54	13 05	49	0 40	48
13	15 42.6	+ 14 59.7		268 57.6	117	32.3	114	10 S	18	43	6 04	11 45		32	52
14	30 42.7	+ 15 00.5		283 28.3	117	20.8	115	20	27	5 53	16	18 41		23	56
15	45 42.8	01.3		297 59.0	117	+ 8 09.2	116	30	35	6 04	29	25 37		13	60
16	60 42.9	02.0		312 29.7	117	+ 7 57.6	116	35	40	10	36	30 34		07	63
17	75 43.0	+ 15 02.8		327 00.3	116	+ 7 45.9	117	40	5 44	6 16	6 44	13 35	31	0 01	65
18	90 43.0	+ 15 03.5		341 31.0	117	+ 7 34.2	117	45	5 48	6 23	6 54	13 40	28	***	***
19	105 43.1	04.3		356 01.6	116	22.4	118	50	53	31	7 06	47 24		***	***
20	120 43.2	05.0		10 32.2	116	+ 7 10.5	119	52	55	35	11	50 22		***	***
21	135 43.3	05.8		25 02.8	116	+ 6 58.6	119	54	57	39	17	54 20		***	***
22	150 43.3	06.6		39 33.4	116	46.7	119	56	5 59	44	24	13 57	18	***	***
23	165 43.4	07.3		54 04.0	116	34.7	120	58	6 02	49	31	14 01	16	***	***
24	180 43.5	+ 15 08.1		68 34.5	115	+ 6 22.6	121	60 S	6 04	6 54	7 39	14 06	13	***	***
UT	ARIES PMG: 9 ^h 25 ^m 1		VENUS Mag.: -4.5 PMG: 14 ^h 39 ^m		MARTE Mag.: -0.1 PMG: 19 ^h 55 ^m		JÚPITER Mag.: -2.0 PMG: 12 ^h 36 ^m		SATURNO Mag.: +0.3 PMG: 23 ^h 00 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec				
	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "				
^h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "				
0	218 20.5	139 54.5	+ 27 43.8	60 35.7	+ 11 35.8	170 35.3	+ 16 56.6	14 03.8	- 7 08.6						
1	233 23.0	154 55.5	43.8	75 37.7	35.6	185 37.2	56.8	29 06.4	08.6						
2	248 25.4	169 56.6	43.9	90 39.8	35.3	200 39.0	56.9	44 09.1	08.5						
3	263 27.9	184 57.6	44.0	105 41.9	35.1	215 40.9	57.1	59 11.7	08.4						
4	278 30.4	199 58.7	44.1	120 44.0	34.8	230 42.8	57.3	74 14.3	08.4						
5	293 32.8	214 59.7	+ 27 44.2	135 46.1	+ 11 34.6	245 44.7	+ 16 57.4	89 17.0	- 7 08.3						
6	308 35.3	230 00.8	+ 27 44.3	150 48.1	+ 11 34.3	260 46.5	+ 16 57.6	104 19.6	- 7 08.3						
7	323 37.8	245 01.8	44.4	165 50.2	34.1	275 48.4	57.8	119 22.2	08.2						
8	338 40.2	260 02.9	44.5	180 52.3	33.8	290 50.3	57.9	134 24.9	08.1						
9	353 42.7	275 04.0	44.6	195 54.4	33.6	305 52.1	58.1	149 27.5	08.1						
10	8 45.1	290 05.0	44.7	210 56.5	33.3	320 54.0	58.2	164 30.2	08.0						
11	23 47.6	305 06.1	+ 27 44.8	225 58.5	+ 11 33.1	335 55.9	+ 16 58.4	179 32.8	- 7 07.9						
12	38 50.1	320 07.2	+ 27 44.9	241 00.6	+ 11 32.8	350 57.8	+ 16 58.6	194 35.4	- 7 07.9						
13	53 52.5	335 08.3	45.0	256 02.7	32.6	5 59.6	58.7	209 38.1	07.8						
14	68 55.0	350 09.3	45.1	271 04.7	32.3	21 01.5	58.9	224 40.7	07.8						
15	83 57.5	5 10.4	45.1	286 06.8	32.1	36 03.4	59.0	239 43.3	07.7						
16	98 59.9	20 11.5	45.2	301 08.9	31.8	51 05.2	59.2	254 46.0	07.6						
17	114 02.4	35 12.6	+ 27 45.3	316 10.9	+ 11 31.6	66 07.1	+ 16 59.4	269 48.6	- 7 07.6						
18	129 04.9	50 13.7	+ 27 45.4	331 13.0	+ 11 31.3	81 09.0	+ 16 59.5	284 51.2	- 7 07.5						
19	144 07.3	65 14.8	45.5	346 15.1	31.1	96 10.8	59.7	299 53.9	07.4						
20	159 09.8	80 15.9	45.6	1 17.1	30.8	111 12.7	+ 16 59.8	314 56.5	07.4						
21	174 12.3	95 17.0	45.6	16 19.2	30.6	126 14.6	+ 17 00.0	329 59.1	07.3						
22	189 14.7	110 18.1	45.7	31 21.3	30.3	141 16.5	00.2	345 01.8	07.3						
23	204 17.2	125 19.2	45.8	46 23.3	30.0	156 18.3	00.3	0 04.4	07.2						
24	219 19.6	140 20.3	+ 27 45.9	61 25.4	+ 11 29.8	171 20.2	+ 17 00.5	15 07.0	- 7 07.1						
Dif	—	+11	+1	+21	-3	+19	+2	+26	+1						

MARTES 1 DE MAYO DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 57 ^m 0			SD: 15'8 Edad: 9 ^d 7 ^h PHE { 4 ^h : 58'2 12 ^h : 58'6 20 ^h : 58'9 PMG: 20 ^h 06 ^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
0	180	43.5	+ 15	68	34.5	+ 6	22.6	121	60 N	19 59	20 53	22 18	13 28	90	2 10
1	195	43.6		83	05.0	+ 6	10.5	121	58	49	38	21 49	30 87		07 15
2	210	43.6		97	35.5	+ 5	58.4	121	56	40	25	27	32 84		04 18
3	225	43.7		112	06.0		46.2	122	54	32	14	21 10	34 81	2	02 10
4	240	43.8		126	36.4		33.9	123	52	25	20 05	20 56	35 80	1	59 22
5	255	43.9	+ 15	141	06.9	+ 5	21.7	122	50	19 19	19 56	20 43	13 36	78	1 57 24
6	270	43.9	+ 15	155	37.3	+ 5	09.3	124	45	19 06	19 38	20 19	13 39	73	1 53 28
7	285	44.0		170	07.7	+ 4	56.9	124	40	18 55	24	20 00	42 69		49 31
8	300	44.1		184	38.0		44.5	124	35	46	13	19 45	44 66		45 35
9	315	44.1		199	08.4		32.1	124	30	38	19 03	33	45 64		42 37
10	330	44.2		213	38.7		19.6	125	20	24	18 47	19 14	48 59		37 42
11	345	44.3	+ 15	228	08.9	+ 4	07.0	126	10 N	18 12	18 33	18 59	13 51	54	1 32 46
12	0	44.4	+ 15	242	39.2	+ 3	54.4	126	0	18 00	18 22	18 47	13 54	50	1 28 49
13	15	44.4		257	09.4		41.8	126	10 S	17 49	11	36	56 47		24 53
14	30	44.5		271	39.6		29.1	127	20	38	18 01	27	13 59	42	19 57
15	45	44.6		286	09.8		16.4	127	30	25	17 49	18	14 02	38	13 62
16	60	44.7		300	39.9	+ 3	03.7	127	35	17	43	13	04 35		10 65
17	75	44.7	+ 15	315	10.0	+ 2	51.0	127	40	17 08	17 37	18 09	14 06	32	1 06 68
18	90	44.8	+ 15	329	40.0	+ 2	38.2	128	45	16 58	17 29	18 04	14 08	29	1 02 72
19	105	44.9		344	10.1		25.3	129	50	46	21	17 59	11 24		0 57 76
20	120	44.9		358	40.0	+ 2	12.5	128	52	41	17	57	12 23		55 77
21	135	45.0		13	10.0	+ 1	59.6	129	54	35	12	54	14 20		52 80
22	150	45.1		27	39.9		46.7	129	56	28	08	52	15 18		49 83
23	165	45.1		42	09.8		33.7	130	58	20	17 03	50	17 15		46 85
24	180	45.2	+ 15	56	39.6	+ 1	20.7	130	60 S	16 11	16 57	17 47	14 19	12	0 42 88
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 9 ^h 21 ^m 2			Mag.: -4.5 PMG: 14 ^h 38 ^m			Mag.: -0.0 PMG: 19 ^h 52 ^m			Mag.: -2.0 PMG: 12 ^h 33 ^m			Mag.: +0.3 PMG: 22 ^h 56 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	219	19.6		140	20.3	+ 27	61	25.4	+ 11	171	20.2	+ 17	15	07.0	- 7
1	234	22.1		155	21.4		76	27.5		186	22.1		30	09.7	
2	249	24.6		170	22.5		91	29.5		201	23.9		45	12.3	
3	264	27.0		185	23.7		106	31.6		216	25.8		60	15.0	
4	279	29.5		200	24.8		121	33.6		231	27.7		75	17.6	
5	294	32.0		215	25.9	+ 27	136	35.7	+ 11	246	29.6	+ 17	90	20.2	- 7
6	309	34.4		230	27.0	+ 27	151	37.7	+ 11	261	31.4	+ 17	105	22.9	- 7
7	324	36.9		245	28.2		166	39.8		276	33.3		120	25.5	
8	339	39.4		260	29.3		181	41.9		291	35.2		135	28.1	
9	354	41.8		275	30.4		196	43.9		306	37.0		150	30.8	
10	9	44.3		290	31.6		211	46.0		321	38.9		165	33.4	
11	24	46.7		305	32.7	+ 27	226	48.0	+ 11	336	40.8	+ 17	180	36.0	- 7
12	39	49.2		320	33.9	+ 27	241	50.1	+ 11	351	42.6	+ 17	195	38.7	- 7
13	54	51.7		335	35.0		256	52.1		6	44.5		210	41.3	
14	69	54.1		350	36.2		271	54.2		21	46.4		225	43.9	
15	84	56.6		5	37.3		286	56.2		36	48.3		240	46.6	
16	99	59.1		20	38.5		301	58.2		51	50.1		255	49.2	
17	115	01.5		35	39.6	+ 27	317	00.3	+ 11	66	52.0	+ 17	270	51.8	- 7
18	130	04.0		50	40.8	+ 27	332	02.3	+ 11	81	53.9	+ 17	285	54.5	- 7
19	145	06.5		65	42.0		347	04.4		96	55.7		300	57.1	
20	160	08.9		80	43.1		2	06.4		111	57.6		315	59.7	
21	175	11.4		95	44.3		17	08.5		126	59.5		331	02.4	
22	190	13.9		110	45.5		32	10.5		142	01.3		346	05.0	
23	205	16.3		125	46.7		47	12.5		157	03.2		1	07.6	
24	220	18.8		140	47.8	+ 27	62	14.6	+ 11	172	05.1	+ 17	16	10.3	- 7
Dif	—		+11		+1		+20	-3		+19		+2		+26	+1

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MIÉRCOL 2 DE MAYO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9		SD: 16 ^h 1											
	PMG: 11 ^h 56 ^m 9		Edad: 10 ^d 7											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m
0	180 45.2	+ 15 26.0	56 39.6	+ 1 20.7	130		60 N	1 35	3 00	3 54	14 58 94	2 23 12		
1	195 45.3	26.8	71 09.4	+ 1 07.7	130		58	2 04	15	4 04	57 91	22 16		
2	210 45.4	27.5	85 39.2	+ 0 54.7	130		56	26	28	13	56 88	22 18		
3	225 45.4	28.3	100 08.9	41.7	130		54	43	39	21	55 85	22 20		
4	240 45.5	29.0	114 38.6	28.6	131		52	2 58	49	28	55 82	21 23		
5	255 45.6	+ 15 29.7	129 08.2	+ 0 15.5	131		50	3 10	3 57	4 34	14 54 80	2 21 25		
6	270 45.6	+ 15 30.5	143 37.8	+ 0 02.4	131		45	3 35	4 15	4 47	14 52 76	2 21 28		
7	285 45.7	31.2	158 07.4	− 0 10.7	131		40	3 53	29	4 59	51 72	20 32		
8	300 45.8	32.0	172 36.9	23.9	132		35	4 08	41	5 08	50 68	20 35		
9	315 45.8	32.7	187 06.3	37.0	131		30	20	4 51	16	49 65	19 38		
10	330 45.9	33.4	201 35.7	− 0 50.2	132		20	40	5 07	30	47 61	19 42		
11	345 46.0	+ 15 34.2	216 05.1	− 1 03.4	132		10 N	4 55	5 20	5 42	14 45 57	2 18 47		
12	0 46.0	+ 15 34.9	230 34.4	− 1 16.6	132		0	5 07	5 32	5 53	14 44 52	2 17 51		
13	15 46.1	35.7	245 03.6	29.8	132		10 S	18	43	6 05	43 48	17 55		
14	30 46.2	36.4	259 32.9	43.0	132		20	27	5 54	16	41 44	16 59		
15	45 46.2	37.1	274 02.0	− 1 56.2	132		30	37	6 05	30	40 39	15 65		
16	60 46.3	37.9	288 31.1	− 2 09.5	133		35	41	11	37	39 36	15 67		
17	75 46.4	+ 15 38.6	303 00.2	− 2 22.7	132		40	5 46	6 18	6 46	14 38 33	2 14 71		
18	90 46.4	+ 15 39.3	317 29.2	− 2 35.9	132		45	5 51	6 25	6 56	14 37 29	2 14 74		
19	105 46.5	40.1	331 58.1	− 2 49.2	133		50	56	34	7 09	35 26	13 78		
20	120 46.6	40.8	346 27.0	− 3 02.4	132		52	5 58	38	14	35 23	12 81		
21	135 46.6	41.6	0 55.8	15.6	132		54	6 00	43	21	34 21	12 83		
22	150 46.7	42.3	15 24.6	28.9	133		56	03	47	27	33 19	12 85		
23	165 46.8	43.0	29 53.3	42.1	132		58	05	52	35	32 17	11 88		
24	180 46.8	+ 15 43.8	44 22.0	− 3 55.4	133		60 S	6 08	6 58	7 44	14 31 14	2 10 92		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG		Mag.: −4.5		Mag.: −0.0		Mag.: −2.0		Mag.: +0.3					
	9 ^h 17 ^m 2		PMG: 14 ^h 36 ^m		PMG: 19 ^h 48 ^m		PMG: 12 ^h 30 ^m		PMG: 22 ^h 51 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	220 18.8	140 47.8	+ 27 47.5	62 14.6	+ 11 23.5		172 05.1	+ 17 04.3	16 10.3	− 7 05.6				
1	235 21.2	155 49.0	47.6	77 16.6	23.3		187 07.0	04.5	31 12.9	05.6				
2	250 23.7	170 50.2	47.6	92 18.7	23.0		202 08.8	04.7	46 15.5	05.5				
3	265 26.2	185 51.4	47.7	107 20.7	22.7		217 10.7	04.8	61 18.2	05.5				
4	280 28.6	200 52.6	47.7	122 22.7	22.5		232 12.6	05.0	76 20.8	05.4				
5	295 31.1	215 53.8	+ 27 47.8	137 24.8	+ 11 22.2		247 14.4	+ 17 05.1	91 23.4	− 7 05.3				
6	310 33.6	230 55.0	+ 27 47.9	152 26.8	+ 11 21.9		262 16.3	+ 17 05.3	106 26.1	− 7 05.3				
7	325 36.0	245 56.2	47.9	167 28.8	21.7		277 18.2	05.5	121 28.7	05.2				
8	340 38.5	260 57.4	48.0	182 30.9	21.4		292 20.0	05.6	136 31.3	05.2				
9	355 41.0	275 58.6	48.0	197 32.9	21.1		307 21.9	05.8	151 34.0	05.1				
10	10 43.4	290 59.8	48.1	212 34.9	20.9		322 23.8	05.9	166 36.6	05.0				
11	25 45.9	306 01.0	+ 27 48.1	227 37.0	+ 11 20.6		337 25.6	+ 17 06.1	181 39.2	− 7 05.0				
12	40 48.3	321 02.3	+ 27 48.2	242 39.0	+ 11 20.3		352 27.5	+ 17 06.3	196 41.9	− 7 04.9				
13	55 50.8	336 03.5	48.2	257 41.0	20.1		7 29.4	06.4	211 44.5	04.9				
14	70 53.3	351 04.7	48.2	272 43.0	19.8		22 31.3	06.6	226 47.1	04.8				
15	85 55.7	6 05.9	48.3	287 45.1	19.5		37 33.1	06.7	241 49.8	04.7				
16	100 58.2	21 07.2	48.3	302 47.1	19.3		52 35.0	06.9	256 52.4	04.7				
17	116 00.7	36 08.4	+ 27 48.4	317 49.1	+ 11 19.0		67 36.9	+ 17 07.1	271 55.0	− 7 04.6				
18	131 03.1	51 09.6	+ 27 48.4	332 51.1	+ 11 18.7		82 38.7	+ 17 07.2	286 57.7	− 7 04.5				
19	146 05.6	66 10.9	48.5	347 53.2	18.5		97 40.6	07.4	302 00.3	04.5				
20	161 08.1	81 12.1	48.5	2 55.2	18.2		112 42.5	07.5	317 02.9	04.4				
21	176 10.5	96 13.4	48.5	17 57.2	17.9		127 44.3	07.7	332 05.5	04.4				
22	191 13.0	111 14.6	48.6	32 59.2	17.6		142 46.2	07.8	347 08.2	04.3				
23	206 15.5	126 15.9	48.6	48 01.2	17.4		157 48.1	08.0	2 10.8	04.2				
24	221 17.9	141 17.1	+ 27 48.7	63 03.3	+ 11 17.1		172 49.9	+ 17 08.2	17 13.4	− 7 04.2				
Dif	—	+12	0	+20	−3		+19	+2	+26	+1				

JUEVES 3 DE MAYO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 8		SD: 16 ^h 3 Edad: 11 ^d 7 PHE { 4 ^h : 60'/1 12 ^h : 60'/3 20 ^h : 60'/6 PMG: 21 ^h 49 ^m R°: 56 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	180 46.8	+ 15 43.8	44 22.0		− 3 55.4	132	60 N	20 04	20 59	22 30	16 32	97	2 35	15
1	195 46.9		58 50.5	95	− 4 08.6	132	58	19 53	43	21 57	28 93		38 17	
2	210 46.9		73 19.1	96		21.8	56	44	30	34	24 90		40 20	
3	225 47.0		87 47.5	94		35.0	54	36	18	15	20 88		42 23	
4	240 47.1		102 16.0	95	− 4 48.2	132	52	29	08	21 00	17 85		44 25	
5	255 47.1	+ 15 47.4	116 44.3	93	− 5 01.4	132	50	19 22	20 00	20 47	16 14	83	2 46	27
6	270 47.2	+ 15 48.1	131 12.6	93	− 5 14.5	131	45	19 08	19 41	20 22	16 08	78	2 49	32
7	285 47.3		145 40.8	92		27.7	40	18 57	27	20 03	16 03	74	52	35
8	300 47.3		160 08.9	91		40.8	35	47	15	19 47	15 58	71	55	38
9	315 47.4		174 37.0	91	− 5 54.0	132	30	39	19 04	35	54 69		2 57	41
10	330 47.4		189 05.1	91	− 6 07.1	131	20	24	18 48	19 15	48 63		3 01	46
11	345 47.5	+ 15 51.8	203 33.0	89	− 6 20.1	130	10 N	18 12	18 34	18 59	15 42	59	3 05	50
12	0 47.6	+ 15 52.5	218 00.9	89	− 6 33.2	131	0	18 00	18 22	18 47	15 36	56	3 08	54
13	15 47.6		232 28.7	88		46.2	10 S	17 49	18 11	36	31 52		12 58	
14	30 47.7		246 56.4	87	− 6 59.2	130	20	37	17 59	26	25 48		15 63	
15	45 47.8		261 24.1	87	− 7 12.2	130	30	23	48	16	19 43		20 67	
16	60 47.8		275 51.7	86		25.1	35	15	41	11	15 40		22 70	
17	75 47.9	+ 15 56.1	290 19.2	85	− 7 38.0	129	40	17 06	17 34	18 07	15 11	37	3 25	73
18	90 47.9	+ 15 56.9	304 46.7	85	− 7 50.9	129	45	16 56	17 26	18 01	15 06	34	3 28	77
19	105 48.0		319 14.1	84	− 8 03.8	129	50	43	17	17 56	15 01	29	31	82
20	120 48.1		333 41.4	83		16.6	52	37	13	53	14 58	27	33	84
21	135 48.1		348 08.6	82		29.3	54	31	09	51	55 25		35 86	
22	150 48.2	+ 15 59.8	2 35.8	82		42.1	56	23	17 04	48	52 23		37 89	
23	165 48.2	+ 16 00.5	17 02.9	81	− 8 54.7	126	58	15	16 58	46	49 19		39 92	
24	180 48.3	+ 16 01.2	31 29.9	80	− 9 07.4	127	60 S	16 06	16 52	17 43	14 45	16	3 42	95
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG		Mag.: −4.5		Mag.: +0.0		Mag.: −2.0		Mag.: +0.3					
	9 ^h 13 ^m 3		PMG: 14 ^h 34 ^m		PMG: 19 ^h 45 ^m		PMG: 12 ^h 27 ^m		PMG: 22 ^h 47 ^m					
	hG ♈	Dec	hG ♊	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h 0	221 17.9		141 17.1	+ 27 48.7	63 03.3	+ 11 17.1	172 49.9	+ 17 08.2	17 13.4	− 7 04.2				
1	236 20.4		156 18.4	48.7	78 05.3	16.8	187 51.8	08.3	32 16.1	04.1				
2	251 22.8		171 19.7	48.7	93 07.3	16.6	202 53.7	08.5	47 18.7	04.1				
3	266 25.3		186 20.9	48.8	108 09.3	16.3	217 55.5	08.6	62 21.3	04.0				
4	281 27.8		201 22.2	48.8	123 11.3	16.0	232 57.4	08.8	77 24.0	03.9				
5	296 30.2		216 23.5	+ 27 48.8	138 13.3	+ 11 15.7	247 59.3	+ 17 09.0	92 26.6	− 7 03.9				
6	311 32.7		231 24.8	+ 27 48.9	153 15.3	+ 11 15.5	263 01.2	+ 17 09.1	107 29.2	− 7 03.8				
7	326 35.2		246 26.0	48.9	168 17.3	15.2	278 03.0	09.3	122 31.9	03.8				
8	341 37.6		261 27.3	48.9	183 19.4	14.9	293 04.9	09.4	137 34.5	03.7				
9	356 40.1		276 28.6	49.0	198 21.4	14.6	308 06.8	09.6	152 37.1	03.6				
10	11 42.6		291 29.9	49.0	213 23.4	14.4	323 08.6	09.8	167 39.8	03.6				
11	26 45.0		306 31.2	+ 27 49.0	228 25.4	+ 11 14.1	338 10.5	+ 17 09.9	182 42.4	− 7 03.5				
12	41 47.5		321 32.5	+ 27 49.0	243 27.4	+ 11 13.8	353 12.4	+ 17 10.1	197 45.0	− 7 03.5				
13	56 49.9		336 33.8	49.1	258 29.4	13.5	8 14.2	10.2	212 47.7	03.4				
14	71 52.4		351 35.1	49.1	273 31.4	13.3	23 16.1	10.4	227 50.3	03.3				
15	86 54.9		6 36.4	49.1	288 33.4	13.0	38 18.0	10.6	242 52.9	03.3				
16	101 57.3		21 37.7	49.1	303 35.4	12.7	53 19.8	10.7	257 55.5	03.2				
17	116 59.8		36 39.0	+ 27 49.2	318 37.4	+ 11 12.4	68 21.7	+ 17 10.9	272 58.2	− 7 03.2				
18	132 02.3		51 40.3	+ 27 49.2	333 39.4	+ 11 12.2	83 23.6	+ 17 11.0	288 00.8	− 7 03.1				
19	147 04.7		66 41.7	49.2	348 41.4	11.9	98 25.4	11.2	303 03.4	03.0				
20	162 07.2		81 43.0	49.2	3 43.4	11.6	113 27.3	11.3	318 06.1	03.0				
21	177 09.7		96 44.3	49.2	18 45.4	11.3	128 29.2	11.5	333 08.7	02.9				
22	192 12.1		111 45.6	49.3	33 47.4	11.0	143 31.0	11.7	348 11.3	02.9				
23	207 14.6		126 47.0	49.3	48 49.4	10.8	158 32.9	11.8	3 14.0	02.8				
24	222 17.1		141 48.3	+ 27 49.3	63 51.4	+ 11 10.5	173 34.8	+ 17 12.0	18 16.6	− 7 02.7				
Dif	—	+13	0		+20	−3	+19	+2	+26	+1				

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VIERNES 4 DE MAYO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 56 ^m 7		SD: 16'5 Edad: 12 ^d 7		PHE { 4 ^h : 60'8 12 ^h : 61'0 20 ^h : 61'1									
	PMG: 22 ^h 45 ^m		R°: 60 ^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 48.3	+ 16 01.2	31 29.9	80	− 9 07.4	126	60 N	1 23	2 54	3 49	18 09 98		2 50 18	
1	195 48.3	01.9	45 56.9	78	20.0	125	58	1 56	3 10	4 00	18 01 94		2 55 22	
2	210 48.4	02.7	60 23.7	78	32.5	125	56	2 19	23	09	17 54 91		3 00 25	
3	225 48.5	03.4	74 50.5	78	45.0	125	54	37	35	17	48 88		05 27	
4	240 48.5	04.1	89 17.2	77	− 9 57.5	125	52	2 53	45	24	42 86		09 29	
5	255 48.6	+ 16 04.8	103 43.8	76	− 10 09.9	124	50	3 06	3 53	4 31	17 37 84		3 13 31	
6	270 48.6	+ 16 05.5	118 10.4	76	− 10 22.2	123	45	3 31	4 12	4 45	17 26 79		3 21 35	
7	285 48.7	06.3	132 36.9	75	34.5	123	40	3 50	26	4 56	17 76		27 39	
8	300 48.7	07.0	147 03.3	74	46.7	122	35	4 06	39	5 06	09 73		33 42	
9	315 48.8	07.7	161 29.6	73	− 10 58.9	122	30	18	4 49	14	17 03 70		38 45	
10	330 48.9	08.4	175 55.8	72	− 11 11.0	121	20	38	5 06	29	16 51 66		47 49	
11	345 48.9	+ 16 09.1	190 22.0	72	− 11 23.1	121	10 N	4 54	5 20	5 42	16 41 62		3 55 53	
12	0 49.0	+ 16 09.8	204 48.0	70	− 11 35.0	119	0	5 07	5 32	5 53	16 32 59		4 02 57	
13	15 49.0	10.6	219 14.0	70	47.0	120	10 S	18	43	6 05	23 55		10 60	
14	30 49.1	11.3	233 40.0	70	− 11 58.8	118	20	28	5 54	17	13 51		18 64	
15	45 49.1	12.0	248 05.8	68	− 12 10.6	118	30	38	6 06	31	16 02 47		27 69	
16	60 49.2	12.7	262 31.6	68	22.3	117	35	42	13	39	15 55 45		32 72	
17	75 49.2	+ 16 13.4	276 57.2	66	− 12 33.9	116	40	5 47	6 20	6 48	15 48 42		4 38 75	
18	90 49.3	+ 16 14.1	291 22.8	66	− 12 45.5	116	45	5 53	6 28	6 59	15 40 38		4 45 79	
19	105 49.4	14.8	305 48.3	65	− 12 56.9	114	50	5 58	37	7 12	30 34		53 83	
20	120 49.4	15.6	320 13.8	65	− 13 08.3	114	52	6 01	41	17	25 33		4 57 85	
21	135 49.5	16.3	334 39.1	63	19.6	113	54	03	46	24	20 30		5 01 88	
22	150 49.5	17.0	349 04.4	63	30.9	113	56	06	51	31	15 27		06 90	
23	165 49.6	17.7	3 29.6	62	42.0	111	58	09	6 56	40	08 25		11 94	
24	180 49.6	+ 16 18.4	17 54.7	61	− 13 53.1	111	60 S	6 12	7 02	7 49	15 01 22		5 17 97	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 9 ^h 09 ^m 4		Mag.: −4.5 PMG: 14 ^h 31 ^m		Mag.: +0.0 PMG: 19 ^h 42 ^m		Mag.: −2.0 PMG: 12 ^h 24 ^m		Mag.: +0.3 PMG: 22 ^h 43 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h	° ' /	° ' /	° ' /		° ' /		° ' /		° ' /					
0	222 17.1	141 48.3	+ 27 49.3	63 51.4	+ 11 10.5	173 34.8	+ 17 12.0	18 16.6	− 7 02.7					
1	237 19.5	156 49.7	49.3	78 53.4	10.2	188 36.7	12.1	33 19.2	02.7					
2	252 22.0	171 51.0	49.3	93 55.4	09.9	203 38.5	12.3	48 21.8	02.6					
3	267 24.4	186 52.3	49.3	108 57.4	09.6	218 40.4	12.5	63 24.5	02.6					
4	282 26.9	201 53.7	49.4	123 59.4	09.4	233 42.3	12.6	78 27.1	02.5					
5	297 29.4	216 55.0	+ 27 49.4	139 01.4	+ 11 09.1	248 44.1	+ 17 12.8	93 29.7	− 7 02.4					
6	312 31.8	231 56.4	+ 27 49.4	154 03.4	+ 11 08.8	263 46.0	+ 17 12.9	108 32.4	− 7 02.4					
7	327 34.3	246 57.8	49.4	169 05.4	08.5	278 47.9	13.1	123 35.0	02.3					
8	342 36.8	261 59.1	49.4	184 07.3	08.2	293 49.7	13.2	138 37.6	02.3					
9	357 39.2	277 00.5	49.4	199 09.3	08.0	308 51.6	13.4	153 40.3	02.2					
10	12 41.7	292 01.9	49.4	214 11.3	07.7	323 53.5	13.6	168 42.9	02.1					
11	27 44.2	307 03.2	+ 27 49.4	229 13.3	+ 11 07.4	338 55.3	+ 17 13.7	183 45.5	− 7 02.1					
12	42 46.6	322 04.6	+ 27 49.4	244 15.3	+ 11 07.1	353 57.2	+ 17 13.9	198 48.1	− 7 02.0					
13	57 49.1	337 06.0	49.4	259 17.3	06.8	8 59.1	14.0	213 50.8	02.0					
14	72 51.6	352 07.4	49.4	274 19.3	06.5	24 00.9	14.2	228 53.4	01.9					
15	87 54.0	7 08.8	49.4	289 21.2	06.3	39 02.8	14.4	243 56.0	01.8					
16	102 56.5	22 10.2	49.4	304 23.2	06.0	54 04.7	14.5	258 58.7	01.8					
17	117 58.9	37 11.6	+ 27 49.4	319 25.2	+ 11 05.7	69 06.5	+ 17 14.7	274 01.3	− 7 01.7					
18	133 01.4	52 13.0	+ 27 49.4	334 27.2	+ 11 05.4	84 08.4	+ 17 14.8	289 03.9	− 7 01.7					
19	148 03.9	67 14.4	49.4	349 29.2	05.1	99 10.3	15.0	304 06.5	01.6					
20	163 06.3	82 15.8	49.4	4 31.1	04.8	114 12.1	15.1	319 09.2	01.5					
21	178 08.8	97 17.2	49.4	19 33.1	04.5	129 14.0	15.3	334 11.8	01.5					
22	193 11.3	112 18.6	49.4	34 35.1	04.3	144 15.9	15.5	349 14.4	01.4					
23	208 13.7	127 20.0	49.4	49 37.1	04.0	159 17.7	15.6	4 17.1	01.4					
24	223 16.2	142 21.4	+ 27 49.4	64 39.1	+ 11 03.7	174 19.6	+ 17 15.8	19 19.7	− 7 01.3					
Dif	—	+14	0	+20	−3	+19	+2	+26	+1					

SÁBADO 5 DE MAYO DE 2012

UT	SOL			☉ LUNA					Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 7			SD: 16 ^h 7 Edad: 13 ^d 7 PHE { 4 ^h : 61 ^h 3 12 ^h : 61 ^h 4 20 ^h : 61 ^h 4 PMG: 23 ^h 45 ^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	
0	180	49.6	+ 16	18.4	17	54.7	60	- 13	53.1	60 N	20 09	21 05	22 43	19 47	93	3 08	25	
1	195	49.7		19.1	32	19.7	60	- 14	04.0	58	19 58	20 48	22 06	35	89	17	28	
2	210	49.7		19.8	46	44.7	60		14.9	56	48	34	21 41	25	86	25	31	
3	225	49.8		20.5	61	09.6	59		25.7	54	40	23	21	16	84	32	34	
4	240	49.8		21.2	75	34.4	58		36.4	52	32	12	21 05	08	82	38	36	
5	255	49.9	+ 16	21.9	89	59.1	57	- 14	47.0	50	19 25	20 03	20 52	19 01	80	3 44	38	
6	270	49.9	+ 16	22.7	104	23.7	56	- 14	57.5	45	19 11	19 44	20 25	18 45	78	3 56	42	
7	285	50.0		23.4	118	48.3	56	- 15	07.9	40	18 59	29	20 05	33	74	4 06	46	
8	300	50.0		24.1	133	12.8	55		18.2	35	49	16	19 49	22	73	15	48	
9	315	50.1		24.8	147	37.2	54		28.4	30	40	19 06	36	18 13	70	23	50	
10	330	50.1		25.5	162	01.5	53		38.4	20	25	18 48	16	17 57	67	36	54	
11	345	50.2	+ 16	26.2	176	25.7	52	- 15	48.4	10 N	18 12	18 34	19 00	17 43	65	4 48	58	
12	0	50.2	+ 16	26.9	190	49.9	52	- 15	58.3	0	18 00	18 22	18 47	17 31	61	4 59	61	
13	15	50.3		27.6	205	14.0	51	- 16	08.1	10 S	17 48	18 10	35	18 59	5	10	64	
14	30	50.3		28.3	219	38.0	50		17.7	20	36	17 58	25	17 04	57	22	67	
15	45	50.4		29.0	234	02.0	50		27.3	30	21	46	15	16 49	53	36	71	
16	60	50.4		29.7	248	25.9	49		36.7	35	13	40	10	40 51	44	73		
17	75	50.5	+ 16	30.4	262	49.7	48	- 16	46.0	40	17 04	17 32	18 04	16 30	49	5 53	75	
18	90	50.5	+ 16	31.1	277	13.4	47	- 16	55.2	45	16 53	17 24	17 59	16 18	47	6 04	78	
19	105	50.6		31.8	291	37.1	47	- 17	04.2	50	40	14	53	16 04	43	16	83	
20	120	50.6		32.5	306	00.7	46		13.2	52	34	10	50	15 58	41	22	85	
21	135	50.7		33.2	320	24.2	45		22.0	54	27	05	48	50 39	29	87		
22	150	50.7		33.9	334	47.7	45		30.7	56	19	17 00	45	42 37	36	90		
23	165	50.8		34.6	349	11.1	44		39.3	58	11	16 54	42	33 34	45	92		
24	180	50.8	+ 16	35.3	3 34.4	43		- 17	47.7	60 S	16 01	16 48	17 38	15 23	30	6 54	96	
UT	ARIES PMG 9 ^h 05 ^m 4			VENUS Mag.: -4.5 PMG: 14 ^h 29 ^m			MARTE Mag.: +0.1 PMG: 19 ^h 39 ^m			JÚPITER Mag.: -2.0 PMG: 12 ^h 21 ^m			SATURNO Mag.: +0.4 PMG: 22 ^h 39 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec	hG ♃	Dec			
	°	°	'	°	°	'	'	°	°	'	'	°	°	°	°	'	'	
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m	
0	223	16.2	142	21.4	+ 27	49.4	64	39.1	+ 11	03.7	174	19.6	+ 17	15.8	19	19.7	- 7	01.3
1	238	18.7		22.8		49.4	79	41.0		03.4	189	21.5		15.9	34	22.3		01.3
2	253	21.1		24.3		49.4	94	43.0		03.1	204	23.3		16.1	49	25.0		01.2
3	268	23.6		25.7		49.4	109	45.0		02.8	219	25.2		16.3	64	27.6		01.1
4	283	26.0		27.1		49.4	124	47.0		02.5	234	27.1		16.4	79	30.2		01.1
5	298	28.5	+ 27	28.6		49.4	139	48.9	+ 11	02.2	249	28.9	+ 17	16.6	94	32.8	- 7	01.0
6	313	31.0	+ 27	30.0		49.4	154	50.9	+ 11	02.0	264	30.8	+ 17	16.7	109	35.5	- 7	01.0
7	328	33.4		31.4		49.4	169	52.9		01.7	279	32.7		16.9	124	38.1		00.9
8	343	35.9		32.9		49.4	184	54.8		01.4	294	34.5		17.0	139	40.7		00.8
9	358	38.4		34.3		49.4	199	56.8		01.1	309	36.4		17.2	154	43.3		00.8
10	13	40.8		35.8		49.3	214	58.8		00.8	324	38.3		17.4	169	46.0		00.7
11	28	43.3	+ 27	37.2		49.3	230	00.7	+ 11	00.5	339	40.1	+ 17	17.5	184	48.6	- 7	00.7
12	43	45.8	+ 27	38.7		49.3	245	02.7	+ 11	00.2	354	42.0	+ 17	17.7	199	51.2	- 7	00.6
13	58	48.2		40.2		49.3	260	04.7	+ 10	59.9	9	43.9		17.8	214	53.9		00.5
14	73	50.7		41.6		49.3	275	06.6		59.6	24	45.7		18.0	229	56.5		00.5
15	88	53.2		43.1		49.3	290	08.6		59.3	39	47.6		18.1	244	59.1		00.4
16	103	55.6		44.6		49.2	305	10.6		59.1	54	49.5		18.3	260	01.7		00.4
17	118	58.1	+ 27	46.1		49.2	320	12.5	+ 10	58.8	69	51.3	+ 17	18.5	275	04.4	- 7	00.3
18	134	00.5	+ 27	47.5		49.2	335	14.5	+ 10	58.5	84	53.2	+ 17	18.6	290	07.0	- 7	00.3
19	149	03.0		49.0		49.2	350	16.4		58.2	99	55.1		18.8	305	09.6		00.2
20	164	05.5		50.5		49.2	5	18.4		57.9	114	56.9		18.9	320	12.2		00.1
21	179	07.9		52.0		49.1	20	20.4		57.6	129	58.8		19.1	335	14.9		00.1
22	194	10.4		53.5		49.1	35	22.3		57.3	145	00.7		19.2	350	17.5		00.0
23	209	12.9		55.0		49.1	50	24.3		57.0	160	02.5		19.4	5	20.1	- 7	00.0
24	224	15.3	+ 27	49.1		49.1	65	26.2	+ 10	56.7	175	04.4	+ 17	19.6	20	22.8	- 6	59.9
Dif	—	+15	0	+20	-3	+19	+2	+26	+1									

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DOMINGO 6 DE MAYO DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 6		SD: 16 ^h 7 Edad: 14 ^d 7		PHE { 4 ^h : 61/4 12 ^h : 61/4 20 ^h : 61/3									
	PMG: **h **m R°: ***m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'		h	m	h	m		h	m
0	180 50.8	+ 16 35.3	3 34.4		− 17 47.7		60 N	1 09	2 47	3 44	21 20	78	3 33	36
1	195 50.9		17 57.7	43	− 17 56.0	83	58	1 47	3 04	3 55	21 04	77	45	40
2	210 50.9		32 20.9	42	− 18 04.2	82	56	2 12		18	4 04	20 51	76	3 56
3	225 51.0		46 44.0	41		12.3	81	54	32	30	13	40 75	4 06	44
4	240 51.0		61 07.1	41		20.2	79	52	2 48	41	20	30 74	14	46
5	255 51.0	+ 16 38.8	75 30.1	40	− 18 28.0	78	50	3 01	3 50	4 27	20 21	73	4 22	47
6	270 51.1	+ 16 39.5	89 53.1	40	− 18 35.6	76	45	3 28	4 09	4 42	20 03	71	4 38	50
7	285 51.1		104 16.0	39		43.1	75	40	3 48	24	4 54	19 47	70	4 52
8	300 51.2		118 38.8	38		50.5	74	35	4 03	36	5 04	35 68	5 03	54
9	315 51.2		133 01.6	38	− 18 57.7	72	30		16	4 47	13	23 68	13	56
10	330 51.3		147 24.4	38	− 19 04.8	71	20		37	5 05	28	19 04	66	30 59
11	345 51.3	+ 16 43.0	161 47.1	37	− 19 11.7	69	10 N	4 53	5 19	5 41	18 48	64	5 46	60
12	0 51.4	+ 16 43.7	176 09.7	36	− 19 18.5	68	0	5 06	5 32	5 53	18 32	64	6 00	62
13	15 51.4		190 32.3	36		25.2	67	10 S	18	43	6 05	17 62	14	65
14	30 51.4		204 54.8	35		31.7	65	20	29	5 55	18	18 01	60	29 67
15	45 51.5		219 17.3	35		38.1	64	30	39	6 07	32	17 42	59	47 69
16	60 51.5		233 39.8	35		44.3	62	35		44	14	31 58	6 57	71
17	75 51.6	+ 16 47.1	248 02.2	34	− 19 50.3	60	40	5 49	6 22	6 50	17 19	56	7 08	73
18	90 51.6	+ 16 47.8	262 24.6	34	− 19 56.2	59	45	5 55	6 30	7 01	17 05	54	7 22	75
19	105 51.7		276 47.0	34	− 20 02.0	58	50	6 01		40	14	16 47	52	39 77
20	120 51.7		291 09.3	33		07.6	56	52	04	44	21	39 51	47	78
21	135 51.7		305 31.5	32		13.1	55	54	06	49	28	29 51	7 56	80
22	150 51.8		319 53.8	33		18.4	53	56	09	6 54	35	19 49	8 06	82
23	165 51.8		334 16.0	32		23.5	51	58	13	7 00	44	16 07	47	17 84
24	180 51.9	+ 16 52.0	348 38.2	32	− 20 28.5	50	60 S	6 16	7 07	7 54	15 53	45	8 30	87
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 9 ^h 01 ^m 5		Mag.: −4.5 PMG: 14 ^h 27 ^m		Mag.: +0.1 PMG: 19 ^h 36 ^m		Mag.: −2.0 PMG: 12 ^h 18 ^m		Mag.: +0.4 PMG: 22 ^h 35 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'		
0	224 15.3	142 56.5	+ 27 49.1		65 26.2	+ 10 56.7	175 04.4	+ 17 19.6	20 22.8		− 6 59.9			
1	239 17.8	157 58.0		49.0	80 28.2	56.4	190 06.3		19.7	35 25.4	59.8			
2	254 20.3	172 59.5		49.0	95 30.1	56.1	205 08.1		19.9	50 28.0	59.8			
3	269 22.7	188 01.0		49.0	110 32.1	55.8	220 10.0		20.0	65 30.6	59.7			
4	284 25.2	203 02.6		49.0	125 34.0	55.5	235 11.9		20.2	80 33.3	59.7			
5	299 27.7	218 04.1	+ 27 48.9		140 36.0	+ 10 55.2	250 13.7	+ 17 20.3		95 35.9	− 6 59.6			
6	314 30.1	233 05.6	+ 27 48.9		155 37.9	+ 10 54.9	265 15.6	+ 17 20.5		110 38.5	− 6 59.6			
7	329 32.6	248 07.1		48.9	170 39.9	54.6	280 17.5		20.7	125 41.1	59.5			
8	344 35.0	263 08.7		48.8	185 41.8	54.3	295 19.3		20.8	140 43.8	59.4			
9	359 37.5	278 10.2		48.8	200 43.8	54.1	310 21.2		21.0	155 46.4	59.4			
10	14 40.0	293 11.7		48.8	215 45.7	53.8	325 23.1		21.1	170 49.0	59.3			
11	29 42.4	308 13.3	+ 27 48.7		230 47.7	+ 10 53.5	340 24.9	+ 17 21.3		185 51.6	− 6 59.3			
12	44 44.9	323 14.8	+ 27 48.7		245 49.6	+ 10 53.2	355 26.8	+ 17 21.4		200 54.3	− 6 59.2			
13	59 47.4	338 16.4		48.7	260 51.6	52.9	10 28.7		21.6	215 56.9	59.2			
14	74 49.8	353 17.9		48.6	275 53.5	52.6	25 30.5		21.8	230 59.5	59.1			
15	89 52.3	8 19.5		48.6	290 55.5	52.3	40 32.4		21.9	246 02.2	59.0			
16	104 54.8	23 21.0		48.5	305 57.4	52.0	55 34.3		22.1	261 04.8	59.0			
17	119 57.2	38 22.6	+ 27 48.5		320 59.3	+ 10 51.7	70 36.1	+ 17 22.2		276 07.4	− 6 58.9			
18	134 59.7	53 24.2	+ 27 48.5		336 01.3	+ 10 51.4	85 38.0	+ 17 22.4		291 10.0	− 6 58.9			
19	150 02.1	68 25.8		48.4	351 03.2	51.1	100 39.9		22.5	306 12.7	58.8			
20	165 04.6	83 27.3		48.4	6 05.2	50.8	115 41.7		22.7	321 15.3	58.8			
21	180 07.1	98 28.9		48.3	21 07.1	50.5	130 43.6		22.9	336 17.9	58.7			
22	195 09.5	113 30.5		48.3	36 09.0	50.2	145 45.5		23.0	351 20.5	58.6			
23	210 12.0	128 32.1		48.2	51 11.0	49.9	160 47.3		23.2	6 23.2	58.6			
24	225 14.5	143 33.7	+ 27 48.2		66 12.9	+ 10 49.6	175 49.2	+ 17 23.3		21 25.8	− 6 58.5			
Dif	—	+15	0		+19	−3	+19	+2		+26	+1			

LUNES 7 DE MAYO DE 2012

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UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 5			SD: 16 ^h 7 Edad: 15 ^d 7 PHE { 4 ^h : 61 ^h 3 12 ^h : 61 ^h 1 20 ^h : 61 ^h 0 PMG: 0 ^h 47 ^m R°: 64 ^m							Civil	Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif										
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	180	51.9	+ 16	348	38.2	— 20	28.5	48	60 N	20 14	21 11	22 59	22 38	59	4 09	53	
1	195	51.9		3	00.3	31	33.3	48	58	20 02	20 54	22 15	21 60		25	54	
2	210	52.0		17	22.5	32	38.0	47	56	19 52	39	21 47	22 07	60	38	56	
3	225	52.0		31	44.6	31	42.5	45	54	43	27	21 27	21 55	60	4 50	56	
4	240	52.0		46	06.7	31	46.8	43	52	35	16	21 10	44	60	5 00	57	
5	255	52.1	+ 16	60	28.8	31	— 20	51.0	50	19 28	20 06	20 56	21 34	61	5 09	58	
6	270	52.1	+ 16	74	50.8	30	— 20	55.1	45	19 13	19 47	20 28	21 14	61	5 28	59	
7	285	52.2		89	12.9	31	— 20	58.9	40	19 01	31	20 08	20 57	62	44	60	
8	300	52.2		103	34.9	30	— 21	02.7	38	18 51	18	19 51	43	62	5 57	61	
9	315	52.2		117	56.9	30		06.2	35	41	19 07	38	31	62	6 09	61	
10	330	52.3		132	18.9	30		09.6	34	26	18 49	17	20 10	63	29	62	
11	345	52.3	+ 16	146	40.9	30	— 21	12.8	32	18 12	18 35	19 00	19 52	63	6 46	63	
12	0	52.3	+ 17	161	02.9	30	— 21	15.9	31	18 00	18 22	18 47	19 36	62	7 02	64	
13	15	52.4		175	24.9	30		18.8	29	17 48	18 10	35	19	63	19	64	
14	30	52.4		189	47.0	31		21.5	27	35	17 58	24	19 01	63	36	65	
15	45	52.5		204	09.0	30		24.1	26	30	20	45	18 41	63	7 56	65	
16	60	52.5		218	31.0	30		26.5	24	35	11	38	29	63	8 08	65	
17	75	52.5	+ 17	232	53.0	30	— 21	28.7	22	40	17 02	17 30	18 03	18 15	63	8 21	66
18	90	52.6	+ 17	247	15.0	30	— 21	30.8	21	45	16 50	17 21	17 57	17 59	63	8 37	66
19	105	52.6		261	37.1	31		32.8	20	50	37	11	50	39	63	8 56	67
20	120	52.6		275	59.1	30		34.5	17	52	30	07	47	30	63	9 05	68
21	135	52.7		290	21.2	31		36.1	16	54	23	17 02	44	20	62	16	68
22	150	52.7		304	43.3	31		37.5	14	56	15	16 56	41	17 08	62	28	68
23	165	52.7		319	05.4	31		38.8	13	58	16 06	50	38	16 54	62	41	69
24	180	52.8	+ 17	333	27.5	31	— 21	39.9	11	60 S	15 56	16 44	17 34	16 38	62	9 57	69
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 8 ^h 57 ^m 6			Mag.: −4.5 PMG: 14 ^h 24 ^m			Mag.: +0.1 PMG: 19 ^h 33 ^m			Mag.: −2.0 PMG: 12 ^h 15 ^m			Mag.: +0.4 PMG: 22 ^h 30 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	225	14.5		143	33.7	+ 27	66	12.9	+ 10	175	49.2	+ 17	21	25.8	— 6	58.5	
1	240	16.9		158	35.3		81	14.8		190	51.1		36	28.4		58.5	
2	255	19.4		173	36.9		96	16.8		205	52.9		51	31.0		58.4	
3	270	21.9		188	38.5		111	18.7		220	54.8		66	33.7		58.4	
4	285	24.3		203	40.1		126	20.6		235	56.7		81	36.3		58.3	
5	300	26.8	+ 27	218	41.7	+ 27	141	22.6	+ 10	250	58.5	+ 17	96	38.9	— 6	58.2	
6	315	29.3		233	43.3	+ 27	156	24.5	+ 10	266	00.4	+ 17	111	41.5	— 6	58.2	
7	330	31.7		248	44.9		171	26.4		281	02.3		126	44.2		58.1	
8	345	34.2		263	46.5		186	28.4		296	04.1		141	46.8		58.1	
9	0	36.6		278	48.2		201	30.3		311	06.0		156	49.4		58.0	
10	15	39.1		293	49.8		216	32.2		326	07.8		171	52.0		58.0	
11	30	41.6	+ 27	308	51.4	+ 27	231	34.1	+ 10	341	09.7	+ 17	186	54.7	— 6	57.9	
12	45	44.0		323	53.0	+ 27	246	36.1	+ 10	356	11.6	+ 17	201	57.3	— 6	57.8	
13	60	46.5		338	54.7		261	38.0		11	13.4		216	59.9		57.8	
14	75	49.0		353	56.3		276	39.9		26	15.3		232	02.5		57.7	
15	90	51.4		8	58.0		291	41.8		41	17.2		247	05.1		57.7	
16	105	53.9		23	59.6		306	43.8		56	19.0		262	07.8		57.6	
17	120	56.4	+ 27	39	01.3	+ 27	321	45.7	+ 10	71	20.9	+ 17	277	10.4	— 6	57.6	
18	135	58.8		54	02.9	+ 27	336	47.6	+ 10	86	22.8	+ 17	292	13.0	— 6	57.5	
19	151	01.3		69	04.6		351	49.5		101	24.6		307	15.6		57.4	
20	166	03.8		84	06.3		6	51.5		116	26.5		322	18.3		57.4	
21	181	06.2		99	07.9		21	53.4		131	28.4		337	20.9		57.3	
22	196	08.7		114	09.6		36	55.3		146	30.2		352	23.5		57.3	
23	211	11.1		129	11.3		51	57.2		161	32.1		7	26.1		57.2	
24	226	13.6	+ 27	144	13.0	+ 27	66	59.1	+ 10	176	34.0	+ 17	22	28.8	— 6	57.2	
Dif	—		+16	—1		+19	—3			+19		+2	+26		+1		

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MARTES 8 DE MAYO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5		SD: 16 ^h 6 Edad: 16 ^d 7 PHE { 4 ^h : 60 ^h 8 12 ^h : 60 ^h 5 20 ^h : 60 ^h 3												
	PMG: 1 ^h 51 ^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	180	52.8	+ 17	08.3	333	27.5	- 21	39.9	9	60 N	0 53	2 41	3 39	23 37	40
1	195	52.8		09.0	347	49.7		32	40.8	58	1 37	2 58	3 50	21 42	19 70
2	210	52.9		09.7	2	11.9		32	41.6	56	2 05	3 13	4 00	23 07	44
3	225	52.9		10.4	16	34.1		32	42.2	54	26	26	09	22 55	46
4	240	52.9		11.0	30	56.3		32	42.7	52	42	37	17	44	48
5	255	53.0	+ 17	11.7	45	18.6	33	- 21	42.9	50	2 57	3 46	4 24	22 35	48
6	270	53.0	+ 17	12.4	59	40.9	33	- 21	43.1	45	3 24	4 06	4 39	22 15	51
7	285	53.0		13.0	74	03.3	34		43.0	40	3 45	22	4 52	21 59	52
8	300	53.1		13.7	88	25.7	34		42.8	35	4 01	34	5 02	45	54
9	315	53.1		14.4	102	48.1	34		42.5	30	15	4 45	11	33	55
10	330	53.1		15.1	117	10.6	35		42.0	20	36	5 03	27	21 13	56
11	345	53.2	+ 17	15.7	131	33.1	35	- 21	41.3	10 N	4 52	5 18	5 40	20 55	58
12	0	53.2	+ 17	16.4	145	55.7	36	- 21	40.5	0	5 06	5 31	5 53	20 38	60
13	15	53.2		17.1	160	18.3	36		39.5	10 S	18	44	6 05	22 61	23 60
14	30	53.2		17.7	174	41.0	37		38.3	20	29	5 56	19	20 04	63
15	45	53.3		18.4	189	03.7	37		37.0	30	40	6 08	34	19 44	64
16	60	53.3		19.1	203	26.5	38		35.5	35	45	16	42	32 65	13 58
17	75	53.3	+ 17	19.7	217	49.3	38	- 21	33.9	40	5 51	6 23	6 52	19 18	67
18	90	53.4	+ 17	20.4	232	12.2	39	- 21	32.2	45	5 57	6 32	7 04	19 02	68
19	105	53.4		21.1	246	35.2	40		30.2	50	6 03	42	17	18 42	70
20	120	53.4		21.7	260	58.2	40		28.2	52	06	47	24	33 71	13 54
21	135	53.5		22.4	275	21.3	41		25.9	54	09	52	31	22 72	24 53
22	150	53.5		23.1	289	44.4	41		23.5	56	13	6 58	39	18 10	73
23	165	53.5		23.7	304	07.6	42		21.0	58	16	7 04	48	17 56	75
24	180	53.5	+ 17	24.4	318	30.9	43	- 21	18.3	60 S	6 20	7 11	7 58	17 40	77

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO		
	PMG 8 ^h 53 ^m 6		Mag.: -4.5 PMG: 14 ^h 21 ^m		Mag.: +0.1 PMG: 19 ^h 30 ^m		Mag.: -2.0 PMG: 12 ^h 12 ^m		Mag.: +0.4 PMG: 22 ^h 26 ^m		
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	
h	°	'	°	'	°	'	°	'	°	'	
0	226	13.6	144	13.0	+ 27	46.8	66	59.1	+ 10	42.2	
1	241	16.1	159	14.7		46.7	82	01.0		41.9	
2	256	18.5	174	16.3		46.7	97	03.0		41.6	
3	271	21.0	189	18.0		46.6	112	04.9		41.3	
4	286	23.5	204	19.7		46.5	127	06.8		41.0	
5	301	25.9	219	21.4	+ 27	46.5	142	08.7	+ 10	40.7	
6	316	28.4	234	23.1	+ 27	46.4	157	10.6	+ 10	40.4	
7	331	30.9	249	24.8		46.3	172	12.5		40.1	
8	346	33.3	264	26.6		46.2	187	14.4		39.8	
9	1	35.8	279	28.3		46.2	202	16.3		39.5	
10	16	38.3	294	30.0		46.1	217	18.2		39.1	
11	31	40.7	309	31.7	+ 27	46.0	232	20.2	+ 10	38.8	
12	46	43.2	324	33.4	+ 27	45.9	247	22.1	+ 10	38.5	
13	61	45.6	339	35.2		45.8	262	24.0		38.2	
14	76	48.1	354	36.9		45.8	277	25.9		37.9	
15	91	50.6	9	38.6		45.7	292	27.8		37.6	
16	106	53.0	24	40.4		45.6	307	29.7		37.3	
17	121	55.5	39	42.1	+ 27	45.5	322	31.6	+ 10	37.0	
18	136	58.0	54	43.9	+ 27	45.4	337	33.5	+ 10	36.6	
19	152	00.4	69	45.6		45.4	352	35.4		36.3	
20	167	02.9	84	47.4		45.3	7	37.3		36.0	
21	182	05.4	99	49.2		45.2	22	39.2		35.7	
22	197	07.8	114	50.9		45.1	37	41.1		35.4	
23	212	10.3	129	52.7		45.0	52	43.0		35.1	
24	227	12.8	144	54.5	+ 27	44.9	67	44.9	+ 10	34.8	
Dif	—		+17	-1		+19	-3	+19		+2	
										+26	+1

MIÉRCOL 9 DE MAYO DE 2012

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JUEVES 10 DE MAYO DE 2012

UT	SOL			LUNA					Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			SD: 16 ^h 2 Edad: 18 ^d 7 PHE { 4 ^h : 59 ^m 1 12 ^h : 58 ^m 8 20 ^h : 58 ^m 5 PMG: 3 ^h 52 ^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		
0	180	54.2	+ 17	40.2	304	13.8	− 19	32.4	60 N	0 31	2 34	3 34	0 17	26	7 35	86		
1	195	54.2		40.8	318	39.2		26.3	61	1 27	2 53	46	0 03	30	7 48	83		
2	210	54.2		41.5	333	04.8		20.2	61	1 58	3 08	3 56	** ** *	** *	8 00	80		
3	225	54.2		42.1	347	30.4		14.0	62	2 20	21	4 05	** ** *	** *	10	77		
4	240	54.3		42.8	1	56.1		07.6	64	37	33	14	** ** *	** *	19	75		
5	255	54.3	+ 17	43.4	16	21.9	− 19	01.1	65	2 52	3 43	4 21	** ** *	** *	8 27	73		
6	270	54.3	+ 17	44.1	30	47.8	− 18	54.5	66	3 21	4 03	4 37	23 47	34	8 43	71		
7	285	54.3		44.7	45	13.8		47.8	67	42	19	4 49	35	37	8 57	68		
8	300	54.3		45.4	59	39.9		41.0	68	3 59	33	5 00	25	39	9 09	65		
9	315	54.4		46.0	74	06.1		34.1	69	4 13	4 44	10	16	41	19	63		
10	330	54.4		46.7	88	32.4		27.1	70	35	5 02	26	23 00	46	36	60		
11	345	54.4	+ 17	47.3	102	58.8	− 18	20.0	71	4 52	5 18	5 40	22 47	48	9 51	57		
12	0	54.4	+ 17	48.0	117	25.3	− 18	12.7	73	5 06	5 31	5 53	22 34	52	10 05	54		
13	15	54.4		48.6	131	51.9	− 18	05.4	73	18	44	6 06	21	55	19	51		
14	30	54.5		49.3	146	18.6	− 17	58.0	74	30	5 56	19	22 08	58	34	48		
15	45	54.5		49.9	160	45.4		50.5	75	41	6 10	35	21 52	62	10 51	45		
16	60	54.5		50.6	175	12.3		42.8	77	47	17	44	43	64	11 01	43		
17	75	54.5	+ 17	51.2	189	39.3	− 17	35.1	77	5 53	6 25	6 54	21 33	66	11 12	40		
18	90	54.5	+ 17	51.8	204	06.4	− 17	27.3	78	5 59	6 34	7 06	21 20	70	11 25	38		
19	105	54.6		52.5	218	33.6		19.4	79	6 06	45	20	21 06	73	41	34		
20	120	54.6		53.1	233	00.9		11.4	80	09	50	27	20 59	75	49	32		
21	135	54.6		53.8	247	28.3	− 17	03.3	81	12	6 55	34	51	77	11 57	30		
22	150	54.6		54.4	261	55.8	− 16	55.1	82	16	7 01	43	42	80	12 06	28		
23	165	54.6		55.0	276	23.4		46.9	82	19	07	7 52	32	82	16	26		
24	180	54.6	+ 17	55.7	290	51.1	− 16	38.5	84	6 23	7 15	8 03	20 21	85	12 28	23		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 8 ^h 45 ^m 8		Mag.: −4.5 PMG: 14 ^h 16 ^m		Mag.: +0.1 PMG: 19 ^h 24 ^m		Mag.: −2.0 PMG: 12 ^h 06 ^m		Mag.: +0.4 PMG: 22 ^h 18 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	228	11.9	145	38.2	+ 27	42.5	68	30.2	+ 10	27.1	178	03.5	+ 17	34.5	24	34.6	− 6	54.5
1	243	14.4	160	40.1		42.4	83	32.1		26.8	193	05.3		34.7	39	37.2		54.4
2	258	16.8	175	42.0		42.3	98	34.0		26.5	208	07.2		34.8	54	39.8		54.4
3	273	19.3	190	43.9		42.2	113	35.8		26.1	223	09.0		35.0	69	42.4		54.3
4	288	21.8	205	45.8		42.0	128	37.7		25.8	238	10.9		35.1	84	45.1		54.3
5	303	24.2	220	47.6	+ 27	41.9	143	39.6	+ 10	25.5	253	12.8	+ 17	35.3	99	47.7	− 6	54.2
6	318	26.7	235	49.5	+ 27	41.8	158	41.5	+ 10	25.2	268	14.6	+ 17	35.4	114	50.3	− 6	54.2
7	333	29.1	250	51.4		41.7	173	43.3		24.9	283	16.5		35.6	129	52.9		54.1
8	348	31.6	265	53.3		41.6	188	45.2		24.5	298	18.4		35.7	144	55.5		54.1
9	3	34.1	280	55.2		41.5	203	47.1		24.2	313	20.2		35.9	159	58.1		54.0
10	18	36.5	295	57.2		41.3	218	48.9		23.9	328	22.1		36.0	175	00.8		54.0
11	33	39.0	310	59.1	+ 27	41.2	233	50.8	+ 10	23.6	343	24.0	+ 17	36.2	190	03.4	− 6	53.9
12	48	41.5	326	01.0	+ 27	41.1	248	52.7	+ 10	23.2	358	25.8	+ 17	36.3	205	06.0	− 6	53.9
13	63	43.9	341	02.9		41.0	263	54.6		22.9	13	27.7		36.5	220	08.6		53.8
14	78	46.4	356	04.8		40.8	278	56.4		22.6	28	29.6		36.7	235	11.2		53.7
15	93	48.9	11	06.8		40.7	293	58.3		22.2	43	31.4		36.8	250	13.9		53.7
16	108	51.3	26	08.7		40.6	309	00.2		21.9	58	33.3		37.0	265	16.5		53.6
17	123	53.8	41	10.6	+ 27	40.5	324	02.0	+ 10	21.6	73	35.1	+ 17	37.1	280	19.1	− 6	53.6
18	138	56.2	56	12.6	+ 27	40.3	339	03.9	+ 10	21.3	88	37.0	+ 17	37.3	295	21.7	− 6	53.5
19	153	58.7	71	14.5		40.2	354	05.8		20.9	103	38.9		37.4	310	24.3		53.5
20	169	01.2	86	16.5		40.1	9	07.6		20.6	118	40.7		37.6	325	26.9		53.4
21	184	03.6	101	18.4		39.9	24	09.5		20.3	133	42.6		37.7	340	29.6		53.4
22	199	06.1	116	20.4		39.8	39	11.3		20.0	148	44.5		37.9	355	32.2		53.3
23	214	08.6	131	22.4		39.7	54	13.2		19.6	163	46.3		38.0	10	34.8		53.3
24	229	11.0	146	24.3	+ 27	39.5	69	15.1	+ 10	19.3	178	48.2	+ 17	38.2	25	37.4	− 6	53.2
Dif	—	+19	−1		+19	−3					+19	+2		+26		+1		


VIERNES 11 DE MAYO DE 2012

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UT	SOL			LUNA						Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3			SD: 15 ^h 9 Edad: 19 ^d 7			PHE { 4 ^h : 58/2 12 ^h : 57/9 20 ^h : 57/6											
	PMG: 4 ^h 47 ^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
0	180	54.6	+17 55.7	290	51.1	88	-16	38.5	84	60 N	20 23	21 24	** **	0 43	19	9 01	85	
1	195	54.7	56.3	305	18.9	88		30.1	84	58	11	21 05	22 35	33	21	11	82	
2	210	54.7	57.0	319	46.8	89		21.6	85	56	20 00	20 49	22 02	23	25	20	79	
3	225	54.7	57.6	334	14.8	90		13.0	86	54	19 50	35	21 38	15	27	27	77	
4	240	54.7	58.2	348	42.9	91	-16	04.3	87	52	42	23	20	08	28	34	75	
5	255	54.7	+17 58.9	3	11.1	92	-15	55.5	88	50	19 34	20 13	21 04	0 01	30	9 40	73	
6	270	54.7	+17 59.5	17	39.4	93	-15	46.7	88	45	19 18	19 52	20 35	** **	***	9 54	68	
7	285	54.8	+18 00.1	32	07.8	94		37.8	89	40	19 05	35	20 13	** **	***	10 05	65	
8	300	54.8	00.8	46	36.3	95		28.8	90	35	18 54	22	19 55	** **	***	14	63	
9	315	54.8	01.4	61	04.9	96		19.8	90	30	44	19 10	41	23 57	37	22	60	
10	330	54.8	02.1	75	33.6	97		10.6	92	20	27	18 51	19	46	41	36	56	
11	345	54.8	+18 02.7	90	02.4	98	-15	01.4	92	10 N	18 13	18 35	19 01	23 35	45	10 48	53	
12	0	54.8	+18 03.3	104	31.2	98	-14	52.2	92	0	18 00	18 22	18 47	23 26	48	10 59	50	
13	15	54.8	04.0	119	00.2	100		42.8	94	10 S	17 47	18 09	34	16	51	11 10	47	
14	30	54.9	04.6	133	29.3	101		33.4	94	20	33	17 56	22	23 06	54	22	44	
15	45	54.9	05.2	147	58.5	102		23.9	95	30	17	42	11	22 54	59	36	39	
16	60	54.9	05.8	162	27.7	102		14.4	95	35	17 08	35	18 05	47	61	44	37	
17	75	54.9	+18 06.5	176	57.1	104	-14	04.8	96	40	16 57	17 26	17 59	22 39	64	11 52	35	
18	90	54.9	+18 07.1	191	26.5	104	-13	55.2	96	45	16 45	17 17	17 52	22 30	67	12 03	31	
19	105	54.9	07.7	205	56.0	105		45.4	98	50	31	06	45	19	71	15	28	
20	120	54.9	08.4	220	25.7	107		35.7	97	52	24	17 01	42	14	73	21	26	
21	135	54.9	09.0	234	55.4	107		25.8	99	54	16	16 55	38	08	75	27	24	
22	150	54.9	09.6	249	25.2	108		15.9	99	56	16 08	49	35	22 02	77	34	22	
23	165	55.0	10.3	263	55.1	109	-13	06.0	100	58	15 58	43	31	21 54	81	42	19	
24	180	55.0	+18 10.9	278	25.0	109	-12	56.0	100	60 S	15 47	16 35	17 27	21 46	83	12 51	16	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 8 ^h 41 ^m 8			Mag.: -4.5 PMG: 14 ^h 12 ^m			Mag.: +0.2 PMG: 19 ^h 21 ^m			Mag.: -2.0 PMG: 12 ^h 03 ^m			Mag.: +0.4 PMG: 22 ^h 14 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°			
0	229	11.0	146 24.3	+27 39.5	69 15.1	+10 19.3	178 48.2	+17 38.2	25 37.4	-6 53.2								
1	244	13.5	161 26.3	39.4	84 16.9	19.0	193 50.0	38.3	40 40.0	53.2								
2	259	16.0	176 28.3	39.3	99 18.8	18.6	208 51.9	38.5	55 42.7	53.1								
3	274	18.4	191 30.3	39.1	114 20.6	18.3	223 53.8	38.7	70 45.3	53.1								
4	289	20.9	206 32.3	39.0	129 22.5	18.0	238 55.6	38.8	85 47.9	53.0								
5	304	23.4	221 34.2	+27 38.9	144 24.4	+10 17.7	253 57.5	+17 39.0	100 50.5	-6 52.9								
6	319	25.8	236 36.2	+27 38.7	159 26.2	+10 17.3	268 59.4	+17 39.1	115 53.1	-6 52.9								
7	334	28.3	251 38.2	38.6	174 28.1	17.0	284 01.2	39.3	130 55.7	52.8								
8	349	30.7	266 40.2	38.4	189 29.9	16.7	299 03.1	39.4	145 58.4	52.8								
9	4	33.2	281 42.2	38.3	204 31.8	16.3	314 05.0	39.6	161 01.0	52.7								
10	19	35.7	296 44.2	38.2	219 33.6	16.0	329 06.8	39.7	176 03.6	52.7								
11	34	38.1	311 46.3	+27 38.0	234 35.5	+10 15.7	344 08.7	+17 39.9	191 06.2	-6 52.6								
12	49	40.6	326 48.3	+27 37.9	249 37.3	+10 15.3	359 10.5	+17 40.0	206 08.8	-6 52.6								
13	64	43.1	341 50.3	37.7	264 39.2	15.0	14 12.4	40.2	221 11.4	52.5								
14	79	45.5	356 52.3	37.6	279 41.0	14.7	29 14.3	40.3	236 14.0	52.5								
15	94	48.0	11 54.4	37.4	294 42.9	14.3	44 16.1	40.5	251 16.7	52.4								
16	109	50.5	26 56.4	37.3	309 44.7	14.0	59 18.0	40.6	266 19.3	52.4								
17	124	52.9	41 58.4	+27 37.1	324 46.6	+10 13.7	74 19.9	+17 40.8	281 21.9	-6 52.3								
18	139	55.4	57 00.5	+27 37.0	339 48.4	+10 13.3	89 21.7	+17 40.9	296 24.5	-6 52.3								
19	154	57.9	72 02.5	36.8	354 50.3	13.0	104 23.6	41.1	311 27.1	52.2								
20	170	00.3	87 04.6	36.7	9 52.1	12.7	119 25.4	41.3	326 29.7	52.2								
21	185	02.8	102 06.6	36.5	24 54.0	12.3	134 27.3	41.4	341 32.4	52.1								
22	200	05.2	117 08.7	36.4	39 55.8	12.0	149 29.2	41.6	356 35.0	52.0								
23	215	07.7	132 10.8	36.2	54 57.7	11.7	164 31.0	41.7	11 37.6	52.0								
24	230	10.2	147 12.8	+27 36.1	69 59.5	+10 11.3	179 32.9	+17 41.9	26 40.2	-6 51.9								
Dif	—		+20	-1	+19	-3	+19	+2	+26	+1								

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SÁBADO 12 DE MAYO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3		SD: 15 ^h 6 Edad: 20 ^d 7		PHE $\left\{ \begin{array}{l} 4^h: 57/3 \\ 12^h: 57/0 \\ 20^h: 56/7 \end{array} \right.$	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	180	55.0	+ 18	10.9	278	25.0	− 12	56.0	60 N	** **	2 28	3 29	1 02	14	10 26	82	
1	195	55.0		11.5	292	55.1 ¹¹¹		45.9 ¹⁰¹	58	1 17	2 47	41	0 54	17	33	79	
2	210	55.0		12.1	307	25.3 ¹¹²		35.8 ¹⁰¹	56	1 50	3 04	3 52	48	19	39	76	
3	225	55.0		12.8	321	55.5 ¹¹²		25.6 ¹⁰²	54	2 14	17	4 02	42	21	44	74	
4	240	55.0		13.4	336	25.8 ¹¹³		15.4 ¹⁰²	52		33	29	10	36	24	49	72
5	255	55.0	+ 18	14.0	350	56.2 ¹¹⁴	− 12	05.2 ¹⁰²	50	2 48	3 39	4 18	0 31	25	10 53	70	
6	270	55.0	+ 18	14.6	5	26.7 ¹¹⁵	− 11	54.9 ¹⁰³	45	3 18	4 00	4 34	0 21	29	11 02	67	
7	285	55.0		15.3	19	57.3 ¹¹⁶		44.5 ¹⁰⁴	40		40	17	47	12	32	10	63
8	300	55.0		15.9	34	28.0 ¹¹⁷		34.1 ¹⁰⁴	35	3 57	31	4 59	0 04	35	17	60	
9	315	55.1		16.5	48	58.7 ¹¹⁷		23.7 ¹⁰⁴	30	4 11	4 42	5 08	** **	***	22	58	
10	330	55.1		17.1	63	29.5 ¹¹⁸		13.2 ¹⁰⁵	20	34	5 01	25	** **	***	32	54	
11	345	55.1	+ 18	17.7	78	00.4 ¹¹⁹	− 11	02.7 ¹⁰⁵	10 N	4 51	5 17	5 39	** **	***	11 41	50	
12	0	55.1	+ 18	18.4	92	31.4 ¹²⁰	− 10	52.1 ¹⁰⁶	0	5 06	5 31	5 53	** **	***	11 49	47	
13	15	55.1		19.0	107	02.5 ¹²¹		41.5 ¹⁰⁶	10 S		19	44	6 06	** **	***	11 57	43
14	30	55.1		19.6	121	33.6 ¹²¹		30.8 ¹⁰⁷	20	30	5 57	20	** **	***	12 06	39	
15	45	55.1		20.2	136	04.8 ¹²²		20.1 ¹⁰⁷	30	42	6 11	36	23	53	56	15	36
16	60	55.1		20.8	150	36.1 ¹²³	− 10	09.4 ¹⁰⁷	35	48	18	45	48	59	21	33	
17	75	55.1	+ 18	21.5	165	07.4 ¹²³	− 9	58.7 ¹⁰⁷	40	5 54	6 27	6 56	23	43	62	12	27
18	90	55.1	+ 18	22.1	179	38.9 ¹²⁵	− 9	47.9 ¹⁰⁸	45	6 01	6 36	7 08	23	37	65	12	34
19	105	55.1		22.7	194	10.4 ¹²⁵		37.1 ¹⁰⁸	50	08	48	23	30	69	43	23	
20	120	55.1		23.3	208	41.9 ¹²⁵		26.2 ¹⁰⁹	52	12	53	30	27	70	47	22	
21	135	55.1		23.9	223	13.6 ¹²⁷		15.3 ¹⁰⁹	54	15	6 58	38	23	73	51	20	
22	150	55.1		24.5	237	45.3 ¹²⁷	− 9	04.4 ¹⁰⁹	56	19	7 04	46	19	75	12	56	18
23	165	55.1		25.2	252	17.1 ¹²⁸	− 8	53.5 ¹⁰⁹	58	23	11	7 56	15	77	13	01	16
24	180	55.1	+ 18	25.8	266	48.9 ¹²⁸	− 8	42.5 ¹¹⁰	60 S	6 27	7 19	8 07	23	09	81	13	07

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO										
	PMG 8 ^h 37 ^m 9		Mag.: −4.5 PMG: 14 ^h 09 ^m		Mag.: +0.2 PMG: 19 ^h 18 ^m		Mag.: −2.0 PMG: 12 ^h 00 ^m		Mag.: +0.4 PMG: 22 ^h 09 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
^h	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']									
0	230	10.2	147	12.8	+ 27	36.1	69	59.5	+ 10	11.3	179	32.9	+ 17	41.9	26	40.2	− 6	51.9	
1	245	12.6	162	14.9		35.9	85	01.4		11.0	194	34.8		42.0	41	42.8		51.9	
2	260	15.1	177	17.0		35.7	100	03.2		10.7	209	36.6		42.2	56	45.4		51.8	
3	275	17.6	192	19.1		35.6	115	05.0		10.3	224	38.5		42.3	71	48.0		51.8	
4	290	20.0	207	21.1		35.4	130	06.9		10.0	239	40.4		42.5	86	50.7		51.7	
5	305	22.5	222	23.2	+ 27	35.3	145	08.7	+ 10	09.6	254	42.2	+ 17	42.6	101	53.3	− 6	51.7	
6	320	25.0	237	25.3	+ 27	35.1	160	10.6	+ 10	09.3	269	44.1	+ 17	42.8	116	55.9	− 6	51.6	
7	335	27.4	252	27.4		34.9	175	12.4		09.0	284	45.9		42.9	131	58.5		51.6	
8	350	29.9	267	29.5		34.8	190	14.2		08.6	299	47.8		43.1	147	01.1		51.5	
9	5	32.3	282	31.6		34.6	205	16.1		08.3	314	49.7		43.2	162	03.7		51.5	
10	20	34.8	297	33.7		34.4	220	17.9		08.0	329	51.5		43.4	177	06.3		51.4	
11	35	37.3	312	35.9	+ 27	34.3	235	19.7	+ 10	07.6	344	53.4	+ 17	43.5	192	09.0	− 6	51.4	
12	50	39.7	327	38.0	+ 27	34.1	250	21.6	+ 10	07.3	359	55.3	+ 17	43.7	207	11.6	− 6	51.3	
13	65	42.2	342	40.1		33.9	265	23.4		06.9	14	57.1		43.8	222	14.2		51.3	
14	80	44.7	357	42.2		33.8	280	25.2		06.6	29	59.0		44.0	237	16.8		51.2	
15	95	47.1	12	44.4		33.6	295	27.1		06.3	45	00.8		44.1	252	19.4		51.2	
16	110	49.6	27	46.5		33.4	310	28.9		05.9	60	02.7		44.3	267	22.0		51.1	
17	125	52.1	42	48.6	+ 27	33.3	325	30.7	+ 10	05.6	75	04.6	+ 17	44.4	282	24.6	− 6	51.1	
18	140	54.5	57	50.8	+ 27	33.1	340	32.6	+ 10	05.2	90	06.4	+ 17	44.6	297	27.3	− 6	51.0	
19	155	57.0	72	52.9		32.9	355	34.4		04.9	105	08.3		44.7	312	29.9		51.0	
20	170	59.5	87	55.1		32.7	10	36.2		04.6	120	10.2		44.9	327	32.5		50.9	
21	186	01.9	102	57.3		32.6	25	38.1		04.2	135	12.0		45.1	342	35.1		50.9	
22	201	04.4	117	59.4		32.4	40	39.9		03.9	150	13.9		45.2	357	37.7		50.8	
23	216	06.8	133	01.6		32.2	55	41.7		03.5	165	15.7		45.4	12	40.3		50.7	
24	231	09.3	148	03.8	+ 27	32.0	70	43.5	+ 10	03.2	180	17.6	+ 17	45.5	27	42.9	− 6	50.7	
Dif	—		+21		−2		+18		−3		+19		+2		+26		+1		

DOMINGO 13 DE MAYO DE 2012

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UT	SOL		 LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8		SD: 15 ^h 4		PHE { 4 ^h : 56 ^m /4 12 ^h : 56 ^m /2 20 ^h : 55 ^m /9									
	PMG: 11 ^h 56 ^m 3		Edad: 21 ^d 7			R°: 44 ^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
0	180 55.1	+18 25.8	266 48.9		-8 42.5	110	60 N	20 28	21 31	** **	1 16	11	11 48	79
1	195 55.1		281 20.8	129	31.5	110	58	15	21 10	22 47	11	14	52	76
2	210 55.2		295 52.8	130	20.4	111	56	20 04	20 53	22 09	07	16	55	74
3	225 55.2		310 24.9	131	-8 09.4	110	54	19 54	39	21 44	03	19	11 58	72
4	240 55.2		324 57.0	131	-7 58.3	111	52	45	27	24	1 00	20	12 01	69
5	255 55.2	+18 28.8	339 29.1	131	-7 47.2	111	50	19 37	20 16	21 08	0 56	23	12 03	68
6	270 55.2	+18 29.4	354 01.4	133	-7 36.1	111	45	19 20	19 55	20 38	0 50	25	12 09	64
7	285 55.2	30.0	8 33.7	133	24.9	112	40	19 07	37	20 15	44	29	13 61	
8	300 55.2	30.7	23 06.0	133	13.8	111	35	18 55	23	19 57	39	31	17 58	
9	315 55.2	31.3	37 38.4	134	-7 02.6	112	30	45	19 11	43	34	34	20 56	
10	330 55.2	31.9	52 10.9	135	-6 51.4	112	20	28	18 52	20	27	38	26 51	
11	345 55.2	+18 32.5	66 43.4	135	-6 40.1	113	10 N	18 14	18 36	19 02	0 20	42	12 31	48
12	0 55.2	+18 33.1	81 16.0	136	-6 28.9	112	0	18 00	18 22	18 47	0 14	45	12 36	44
13	15 55.2	33.7	95 48.7	137	17.6	113	10 S	17 46	18 08	34	07	49	40 41	
14	30 55.2	34.3	110 21.4	137	-6 06.4	112	20	32	17 55	22	0 00	53	45 37	
15	45 55.2	34.9	124 54.1	137	-5 55.1	113	30	16	41	10	** **	***	51 33	
16	60 55.2	35.5	139 26.9	138	43.8	113	35	17 06	33	18 04	** **	***	54 30	
17	75 55.2	+18 36.1	153 59.8	139	-5 32.4	114	40	16 55	17 24	17 57	** **	***	12 57	28
18	90 55.2	+18 36.7	168 32.7	139	-5 21.1	113	45	16 43	17 15	17 50	** **	***	13 01	25
19	105 55.2	37.3	183 05.6	139	-5 09.8	113	50	28	17 03	43	** **	***	06 22	
20	120 55.2	37.9	197 38.6	140	-4 58.4	114	52	21	16 58	39	** **	***	09 19	
21	135 55.2	38.5	212 11.7	141	47.1	113	54	13	52	36	** **	***	11 18	
22	150 55.2	39.1	226 44.8	141	35.7	114	56	16 04	46	32	** **	***	14 15	
23	165 55.2	39.7	241 17.9	141	24.3	114	58	15 54	39	28	** **	***	17 13	
24	180 55.2	+18 40.3	255 51.1	142	-4 12.9	114	60 S	15 42	16 31	17 23	** **	***	13 20	11
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 8 ^h 34 ^m 0		Mag.: -4.5 PMG: 14 ^h 06 ^m		Mag.: +0.2 PMG: 19 ^h 15 ^m		Mag.: -2.0 PMG: 11 ^h 57 ^m		Mag.: +0.4 PMG: 22 ^h 05 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	231 09.3	148 03.8	+27 32.0	70 43.5	+10 03.2	180 17.6	+17 45.5	27 42.9	-6 50.7					
1	246 11.8	163 05.9	31.9	85 45.4	02.9	195 19.5	45.7	42 45.5	50.6					
2	261 14.2	178 08.1	31.7	100 47.2	02.5	210 21.3	45.8	57 48.2	50.6					
3	276 16.7	193 10.3	31.5	115 49.0	02.2	225 23.2	46.0	72 50.8	50.5					
4	291 19.2	208 12.5	31.3	130 50.8	01.8	240 25.1	46.1	87 53.4	50.5					
5	306 21.6	223 14.7	+27 31.1	145 52.7	+10 01.5	255 26.9	+17 46.3	102 56.0	-6 50.4					
6	321 24.1	238 16.9	+27 30.9	160 54.5	+10 01.1	270 28.8	+17 46.4	117 58.6	-6 50.4					
7	336 26.6	253 19.1	30.8	175 56.3	00.8	285 30.6	46.6	133 01.2	50.3					
8	351 29.0	268 21.3	30.6	190 58.1	00.5	300 32.5	46.7	148 03.8	50.3					
9	6 31.5	283 23.5	30.4	205 59.9	+10 00.1	315 34.4	46.9	163 06.4	50.2					
10	21 34.0	298 25.7	30.2	221 01.8	+9 59.8	330 36.2	47.0	178 09.1	50.2					
11	36 36.4	313 27.9	+27 30.0	236 03.6	+9 59.4	345 38.1	+17 47.2	193 11.7	-6 50.1					
12	51 38.9	328 30.2	+27 29.8	251 05.4	+9 59.1	0 40.0	+17 47.3	208 14.3	-6 50.1					
13	66 41.3	343 32.4	29.6	266 07.2	58.7	15 41.8	47.5	223 16.9	50.0					
14	81 43.8	358 34.6	29.4	281 09.0	58.4	30 43.7	47.6	238 19.5	50.0					
15	96 46.3	13 36.9	29.2	296 10.8	58.0	45 45.5	47.8	253 22.1	49.9					
16	111 48.7	28 39.1	29.0	311 12.7	57.7	60 47.4	47.9	268 24.7	49.9					
17	126 51.2	43 41.3	+27 28.8	326 14.5	+9 57.3	75 49.3	+17 48.1	283 27.3	-6 49.8					
18	141 53.7	58 43.6	+27 28.6	341 16.3	+9 57.0	90 51.1	+17 48.2	298 29.9	-6 49.8					
19	156 56.1	73 45.8	28.4	356 18.1	56.7	105 53.0	48.4	313 32.6	49.7					
20	171 58.6	88 48.1	28.2	11 19.9	56.3	120 54.9	48.5	328 35.2	49.7					
21	187 01.1	103 50.4	28.0	26 21.7	56.0	135 56.7	48.7	343 37.8	49.6					
22	202 03.5	118 52.6	27.8	41 23.5	55.6	150 58.6	48.8	358 40.4	49.6					
23	217 06.0	133 54.9	27.6	56 25.3	55.3	166 00.4	49.0	13 43.0	49.5					
24	232 08.4	148 57.2	+27 27.4	71 27.1	+9 54.9	181 02.3	+17 49.1	28 45.6	-6 49.5					
Dif	—	+22	-2	+18	-3	+19	+2	+26	+1					

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LUNES 14 DE MAYO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3		SD: 15 ^h 2 Edad: 22 ^d 7		PHE { 4 ^h : 55 ^m 7 12 ^h : 55 ^m 5 20 ^h : 55 ^m 3			PMG: 7 ^h 09 ^m R°: 43 ^m			Hora R°		Hora R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil					
h	°	'	°	'	°	'	°	h m	h m	h m	h m	m	h m	m
0	180 55.2	+ 18 40.3	255 51.1		- 4 12.9		60 N	** **	2 21	3 24	1 27	11	13 07	77
1	195 55.2		270 24.3	142	- 4 01.5	114	58	1 05	42	37	25	13	08 74	
2	210 55.2		284 57.6	143	- 3 50.1	114	56	1 43	2 59	48	23	15	09 72	
3	225 55.2		299 30.9	143		38.7	54	2 08	3 13	3 58	22	17	10 70	
4	240 55.2		314 04.3	144		27.3	52		28	25	4 07	20	19	10 68
5	255 55.2	+ 18 43.3	328 37.7	144	- 3 15.9	114	50	2 44	3 36	4 15	1 19	20	13 11	66
6	270 55.2	+ 18 43.9	343 11.1	144	- 3 04.5	114	45	3 14	3 58	4 32	1 15	25	13 13	62
7	285 55.2		357 44.6	145	- 2 53.0	115	40	37	4 15	45	13	27	14 59	
8	300 55.2		12 18.1	145		41.6	35	3 55	29	4 57	10	30	15 56	
9	315 55.1		26 51.6	145		30.2	30	4 10	4 41	5 07	08	33	16 54	
10	330 55.1		41 25.2	146		18.8	20	33	5 01	24	05	36	17 50	
11	345 55.1	+ 18 46.9	55 58.8	146	- 2 07.4	114	10 N	4 51	5 17	5 39	1 02	40	13 19	46
12	0 55.1	+ 18 47.5	70 32.5	147	- 1 55.9	115	0	5 06	5 31	5 53	0 59	43	13 20	43
13	15 55.1		85 06.2	147		44.5	10 S	19	44	6 06	56	47	21 39	
14	30 55.1		99 39.9	147		33.1	20	31	5 58	21	53	50	22 36	
15	45 55.1		114 13.6	147		21.7	30	43	6 12	37	49	55	24 32	
16	60 55.1		128 47.4	148	- 1 10.3	114	35	49	20	47	47	57	24 30	
17	75 55.1	+ 18 50.5	143 21.2	148	- 0 58.9	114	40	5 56	6 29	6 58	0 45	60	13 25	27
18	90 55.1	+ 18 51.1	157 55.0	148	- 0 47.5	114	45	6 03	6 39	7 10	0 42	63	13 26	24
19	105 55.1		172 28.9	149		36.1	50	11	50	26	39	67	28 20	
20	120 55.1		187 02.7	148		24.7	52	14	6 55	33	37	69	28 19	
21	135 55.1		201 36.6	149		13.3	54	18	7 01	41	36	70	29 17	
22	150 55.1		216 10.6	150	- 0 02.0	113	56	22	08	7 50	34	73	29 15	
23	165 55.1		230 44.5	149	+ 0 09.4	114	58	26	15	8 00	32	75	30 13	
24	180 55.1	+ 18 54.6	245 18.5	150	+ 0 20.7	113	60 S	6 30	7 22	8 12	0 30	77	13 31	10
UT	ARIES PMG 8 ^h 30 ^m 0		VENUS Mag.: -4.4 PMG: 14 ^h 02 ^m		MARTE Mag.: +0.2 PMG: 19 ^h 12 ^m		JÚPITER Mag.: -2.0 PMG: 11 ^h 54 ^m		SATURNO Mag.: +0.4 PMG: 22 ^h 01 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	°	'	°	'	°	'	°	'	°	'				
h	°	'	°	'	°	'	°	'	°	'				
0	232 08.4	148 57.2	+ 27 27.4		71 27.1	+ 9 54.9	181 02.3	+ 17 49.1	28 45.6	- 6 49.5				
1	247 10.9	163 59.5		27.2	86 29.0	54.6	196 04.2	49.3	43 48.2	49.4				
2	262 13.4	179 01.7		27.0	101 30.8	54.2	211 06.0	49.4	58 50.8	49.4				
3	277 15.8	194 04.0		26.8	116 32.6	53.9	226 07.9	49.6	73 53.4	49.3				
4	292 18.3	209 06.3		26.6	131 34.4	53.5	241 09.8	49.7	88 56.1	49.3				
5	307 20.8	224 08.6	+ 27 26.4		146 36.2	+ 9 53.2	256 11.6	+ 17 49.9	103 58.7	- 6 49.2				
6	322 23.2	239 10.9	+ 27 26.2		161 38.0	+ 9 52.8	271 13.5	+ 17 50.0	119 01.3	- 6 49.2				
7	337 25.7	254 13.2		26.0	176 39.8	52.5	286 15.3	50.2	134 03.9	49.1				
8	352 28.2	269 15.6		25.8	191 41.6	52.1	301 17.2	50.3	149 06.5	49.1				
9	7 30.6	284 17.9		25.6	206 43.4	51.8	316 19.1	50.5	164 09.1	49.0				
10	22 33.1	299 20.2		25.4	221 45.2	51.4	331 20.9	50.6	179 11.7	49.0				
11	37 35.6	314 22.5	+ 27 25.2		236 47.0	+ 9 51.1	346 22.8	+ 17 50.8	194 14.3	- 6 48.9				
12	52 38.0	329 24.8	+ 27 24.9		251 48.8	+ 9 50.7	1 24.6	+ 17 50.9	209 16.9	- 6 48.9				
13	67 40.5	344 27.2		24.7	266 50.6	50.4	16 26.5	51.1	224 19.5	48.8				
14	82 42.9	359 29.5		24.5	281 52.4	50.0	31 28.4	51.2	239 22.1	48.8				
15	97 45.4	14 31.9		24.3	296 54.2	49.7	46 30.2	51.4	254 24.8	48.7				
16	112 47.9	29 34.2		24.1	311 56.0	49.3	61 32.1	51.5	269 27.4	48.7				
17	127 50.3	44 36.6	+ 27 23.9		326 57.8	+ 9 48.9	76 34.0	+ 17 51.7	284 30.0	- 6 48.6				
18	142 52.8	59 38.9	+ 27 23.6		341 59.6	+ 9 48.6	91 35.8	+ 17 51.8	299 32.6	- 6 48.6				
19	157 55.3	74 41.3		23.4	357 01.4	48.2	106 37.7	52.0	314 35.2	48.5				
20	172 57.7	89 43.6		23.2	12 03.2	47.9	121 39.5	52.1	329 37.8	48.5				
21	188 00.2	104 46.0		23.0	27 05.0	47.5	136 41.4	52.3	344 40.4	48.4				
22	203 02.7	119 48.4		22.7	42 06.8	47.2	151 43.3	52.4	359 43.0	48.4				
23	218 05.1	134 50.8		22.5	57 08.6	46.8	166 45.1	52.6	14 45.6	48.3				
24	233 07.6	149 53.2	+ 27 22.3		72 10.3	+ 9 46.5	181 47.0	+ 17 52.7	29 48.2	- 6 48.3				
Dif	—	+23	-2		+18	-4	+19	+2	+26	0				


MARTES 15 DE MAYO DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 3			SD: 15 ^h 0 Edad: 23 ^d 7 PHE { 4 ^h : 55 ^m 1 12 ^h : 54 ^m 9 20 ^h : 54 ^m 7 PMG: 7 ^h 52 ^m R°: 43 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m
0	180	55.1	+ 18 54.6	245	18.5	+ 0 20.7	114	60 N	20 33	21 37	23 01	1 38 10	14 24 76			
1	195	55.0	55.2	259	52.5	32.1	113	58	19	21 15	23 01	38 13	22 73			
2	210	55.0	55.8	274	26.5	43.4	113	56	20 07	20 58	22 17	38 15	21 71			
3	225	55.0	56.4	289	00.5	+ 0 54.7	113	54	19 57	43	21 50	39 17	20 68			
4	240	55.0	57.0	303	34.6	+ 1 06.0	113	52	48	31	29	39 19	18 67			
5	255	55.0	+ 18 57.5	318	08.6	+ 1 17.3	113	50	19 40	20 20	21 13	1 39 20	14 17 65			
6	270	55.0	+ 18 58.1	332	42.7	+ 1 28.6	113	45	19 23	19 57	20 41	1 40 23	14 15 61			
7	285	55.0	58.7	347	16.8	39.9	113	40	19 09	39	20 18	40 27	13 58			
8	300	55.0	59.3	1 50.9	151	+ 1 51.1	112	35	18 57	25	19 59	40 30	11 56			
9	315	55.0	+ 18 59.9	16 25.1	152	+ 2 02.3	112	30	47	19 13	44	41 31	10 53			
10	330	55.0	+ 19 00.5	30 59.2	151	13.6	113	20	29	18 53	21	41 36	07 49			
11	345	55.0	+ 19 01.0	45 33.4	152	+ 2 24.8	112	10 N	18 14	18 36	19 02	1 42 39	14 05 46			
12	0 54.9	+ 19 01.6	60 07.5	151	+ 2 35.9	111	0	0	18 00	18 22	18 47	1 42 43	14 03 42			
13	15 54.9	02.2	74 41.7	152	47.1	112	10 S	10 S	17 46	18 08	34	43 45	14 00 40			
14	30 54.9	02.8	89 15.9	152	+ 2 58.2	111	20	20	31	17 54	21	43 50	13 58 36			
15	45 54.9	03.4	103 50.1	152	+ 3 09.4	112	30	30	14	40	09	44 53	56 31			
16	60 54.9	03.9	118 24.3	152	20.5	111	35	35	17 05	32	18 02	44 56	54 30			
17	75 54.9	+ 19 04.5	132 58.5	152	+ 3 31.6	111	40	40	16 54	17 23	17 56	1 45 58	13 52 27			
18	90 54.9	+ 19 05.1	147 32.7	152	+ 3 42.6	110	45	45	16 41	17 13	17 48	1 45 62	13 50 24			
19	105 54.9	05.7	162 07.0	153	+ 3 53.7	111	50	50	25	17 01	40	46 65	48 21			
20	120 54.8	06.2	176 41.2	152	+ 4 04.7	110	52	52	18	16 55	37	46 67	47 19			
21	135 54.8	06.8	191 15.4	152	15.7	110	54	54	09	49	33	46 69	46 17			
22	150 54.8	07.4	205 49.7	153	26.7	110	56	56	16 00	43	29	47 71	44 16			
23	165 54.8	08.0	220 23.9	152	37.6	109	58	58	15 50	36	25	47 74	43 13			
24	180 54.8	+ 19 08.5	234 58.1	152	+ 4 48.5	109	60 S	60 S	15 38	16 28	17 20	1 47 77	13 41 11			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 8 ^h 26 ^m 1		Mag.: -4.4 PMG: 13 ^h 58 ^m		Mag.: +0.2 PMG: 19 ^h 09 ^m		Mag.: -2.0 PMG: 11 ^h 51 ^m		Mag.: +0.4 PMG: 21 ^h 57 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	233	07.6	149 53.2	+ 27 22.3	72 10.3	+ 9 46.5	181 47.0	+ 17 52.7	29 48.2	- 6 48.3						
1	248	10.1	164 55.5	22.1	87 12.1	46.1	196 48.9	52.9	44 50.8	48.2						
2	263	12.5	179 57.9	21.8	102 13.9	45.8	211 50.7	53.0	59 53.5	48.2						
3	278	15.0	195 00.3	21.6	117 15.7	45.4	226 52.6	53.2	74 56.1	48.1						
4	293	17.4	210 02.7	21.4	132 17.5	45.1	241 54.4	53.3	89 58.7	48.1						
5	308	19.9	225 05.1	+ 27 21.1	147 19.3	+ 9 44.7	256 56.3	+ 17 53.5	105 01.3	- 6 48.0						
6	323	22.4	240 07.6	+ 27 20.9	162 21.1	+ 9 44.3	271 58.2	+ 17 53.6	120 03.9	- 6 48.0						
7	338	24.8	255 10.0	20.7	177 22.9	44.0	287 00.0	53.8	135 06.5	47.9						
8	353	27.3	270 12.4	20.4	192 24.7	43.6	302 01.9	53.9	150 09.1	47.9						
9	8 29.8	285 14.8	20.2	207 26.4	43.3	317 03.7	54.1	165 11.7	47.8							
10	23 32.2	300 17.2	20.0	222 28.2	42.9	332 05.6	54.2	180 14.3	47.8							
11	38 34.7	315 19.7	+ 27 19.7	237 30.0	+ 9 42.6	347 07.5	+ 17 54.4	195 16.9	- 6 47.7							
12	53 37.2	330 22.1	+ 27 19.5	252 31.8	+ 9 42.2	2 09.3	+ 17 54.5	210 19.5	- 6 47.7							
13	68 39.6	345 24.5	19.3	267 33.6	41.8	17 11.2	54.7	225 22.1	47.6							
14	83 42.1	0 27.0	19.0	282 35.4	41.5	32 13.1	54.8	240 24.7	47.6							
15	98 44.5	15 29.4	18.8	297 37.1	41.1	47 14.9	55.0	255 27.3	47.6							
16	113 47.0	30 31.9	18.5	312 38.9	40.8	62 16.8	55.1	270 30.0	47.5							
17	128 49.5	45 34.4	+ 27 18.3	327 40.7	+ 9 40.4	77 18.6	+ 17 55.3	285 32.6	- 6 47.5							
18	143 51.9	60 36.8	+ 27 18.0	342 42.5	+ 9 40.0	92 20.5	+ 17 55.4	300 35.2	- 6 47.4							
19	158 54.4	75 39.3	17.8	357 44.3	39.7	107 22.4	55.6	315 37.8	47.4							
20	173 56.9	90 41.8	17.5	12 46.0	39.3	122 24.2	55.7	330 40.4	47.3							
21	188 59.3	105 44.2	17.3	27 47.8	39.0	137 26.1	55.9	345 43.0	47.3							
22	204 01.8	120 46.7	17.1	42 49.6	38.6	152 27.9	56.0	0 45.6	47.2							
23	219 04.3	135 49.2	16.8	57 51.4	38.2	167 29.8	56.2	15 48.2	47.2							
24	234 06.7	150 51.7	+ 27 16.6	72 53.2	+ 9 37.9	182 31.7	+ 17 56.3	30 50.8	- 6 47.1							
Dif	—	+24	-2	+18	-4	+19	+1	+26	0							


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MIÉRCOL 16 DE MAYO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 11 ^h 56 ^m 4		SD: 14'9 Edad: 24 ^d 7		PHE $\left\{ \begin{array}{l} 4^h: 54'6 \\ 12^h: 54'5 \\ 20^h: 54'4 \end{array} \right.$										
	PMG: 8 ^h 35 ^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	m	h m	m	
0	180 54.8	+ 19 08.5	234 58.1		+ 4 48.5		60 N	** **	2 15	3 19	1 48	11	15 40	75	
1	195 54.8	09.1	249 32.4	153	+ 4 59.4	109	58	0 52	37	33	51	13	35	73	
2	210 54.8	09.7	264 06.6	152	+ 5 10.3	109	56	1 35	2 54	45	53	16	32	70	
3	225 54.8	10.3	278 40.9	153	21.1	108	54	2 02	3 09	3 55	56	17	28	68	
4	240 54.7	10.8	293 15.1	152	32.0	109	52	23	22	4 04	58	19	25	66	
5	255 54.7	+ 19 11.4	307 49.3	152	+ 5 42.8	108	50	2 40	3 33	4 12	1 59	21	15 22	65	
6	270 54.7	+ 19 12.0	322 23.6	153	+ 5 53.5	107	45	3 11	3 55	4 30	2 03	25	15 16	61	
7	285 54.7	12.6	336 57.8	152	+ 6 04.2	107	40	35	4 13	44	07	27	11	58	
8	300 54.7	13.1	351 32.0	152	14.9	107	35	3 53	27	4 55	10	30	07	55	
9	315 54.7	13.7	6 06.2	152	25.6	107	30	4 08	4 40	5 06	12	32	15 03	53	
10	330 54.6	14.3	20 40.5	153	36.3	107	20	32	5 00	23	17	36	14 56	50	
11	345 54.6	+ 19 14.8	35 14.7	152	+ 6 46.9	106	10 N	4 50	5 16	5 39	2 21	39	14 51	46	
12	0 54.6	+ 19 15.4	49 48.9	152	+ 6 57.4	105	0	5 05	5 31	5 53	2 25	42	14 45	43	
13	15 54.6	16.0	64 23.1	152	+ 7 08.0	106	10 S	19	45	6 07	28	46	40	39	
14	30 54.6	16.5	78 57.2	151	18.5	105	20	32	5 58	22	33	49	34	36	
15	45 54.6	17.1	93 31.4	152	29.0	105	30	44	6 13	39	37	53	27	33	
16	60 54.5	17.7	108 05.6	152	39.4	104	35	51	21	6 48	40	55	24	30	
17	75 54.5	+ 19 18.2	122 39.7	151	+ 7 49.8	104	40	5 57	6 30	7 00	2 43	58	14 19	29	
18	90 54.5	+ 19 18.8	137 13.9	152	+ 8 00.2	104	45	6 05	6 41	7 13	2 47	61	14 14	26	
19	105 54.5	19.4	151 48.0	151	10.5	103	50	13	53	29	51	65	09	21	
20	120 54.5	19.9	166 22.1	151	20.8	103	52	17	6 58	36	53	66	06	20	
21	135 54.4	20.5	180 56.2	151	31.1	103	54	20	7 04	44	55	69	03	18	
22	150 54.4	21.0	195 30.3	151	41.3	102	56	25	11	7 54	2 58	70	14 00	16	
23	165 54.4	21.6	210 04.4	151	+ 8 51.5	102	58	29	18	8 04	3 01	72	13 56	14	
24	180 54.4	+ 19 22.2	224 38.4	150	+ 9 01.6	101	60 S	6 34	7 26	8 16	3 04	75	13 52	12	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 8 ^h 22 ^m 2		Mag.: -4.4 PMG: 13 ^h 54 ^m		Mag.: +0.3 PMG: 19 ^h 06 ^m		Mag.: -2.0 PMG: 11 ^h 48 ^m		Mag.: +0.4 PMG: 21 ^h 53 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	° ' "	° ' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "					
0	234 06.7	150 51.7	+ 27 16.6	72 53.2	+ 9 37.9	182 31.7	+ 17 56.3	30 50.8	- 6 47.1						
1	249 09.2	165 54.2	16.3	87 54.9	37.5	197 33.5	56.5	45 53.4	47.1						
2	264 11.7	180 56.7	16.0	102 56.7	37.2	212 35.4	56.6	60 56.0	47.0						
3	279 14.1	195 59.2	15.8	117 58.5	36.8	227 37.3	56.8	75 58.6	47.0						
4	294 16.6	211 01.7	15.5	133 00.3	36.4	242 39.1	56.9	91 01.2	46.9						
5	309 19.0	226 04.2	+ 27 15.3	148 02.0	+ 9 36.1	257 41.0	+ 17 57.1	106 03.8	- 6 46.9						
6	324 21.5	241 06.8	+ 27 15.0	163 03.8	+ 9 35.7	272 42.8	+ 17 57.2	121 06.4	- 6 46.8						
7	339 24.0	256 09.3	14.8	178 05.6	35.3	287 44.7	57.4	136 09.0	46.8						
8	354 26.4	271 11.8	14.5	193 07.3	35.0	302 46.6	57.5	151 11.6	46.7						
9	9 28.9	286 14.3	14.2	208 09.1	34.6	317 48.4	57.7	166 14.2	46.7						
10	24 31.4	301 16.9	14.0	223 10.9	34.3	332 50.3	57.8	181 16.8	46.6						
11	39 33.8	316 19.4	+ 27 13.7	238 12.6	+ 9 33.9	347 52.1	+ 17 58.0	196 19.5	- 6 46.6						
12	54 36.3	331 22.0	+ 27 13.5	253 14.4	+ 9 33.5	2 54.0	+ 17 58.1	211 22.1	- 6 46.5						
13	69 38.8	346 24.5	13.2	268 16.2	33.2	17 55.9	58.3	226 24.7	46.5						
14	84 41.2	1 27.1	12.9	283 17.9	32.8	32 57.7	58.4	241 27.3	46.5						
15	99 43.7	16 29.6	12.7	298 19.7	32.4	47 59.6	58.6	256 29.9	46.4						
16	114 46.1	31 32.2	12.4	313 21.5	32.1	63 01.5	58.7	271 32.5	46.4						
17	129 48.6	46 34.8	+ 27 12.1	328 23.2	+ 9 31.7	78 03.3	+ 17 58.9	286 35.1	- 6 46.3						
18	144 51.1	61 37.3	+ 27 11.9	343 25.0	+ 9 31.3	93 05.2	+ 17 59.0	301 37.7	- 6 46.3						
19	159 53.5	76 39.9	11.6	358 26.8	31.0	108 07.0	59.2	316 40.3	46.2						
20	174 56.0	91 42.5	11.3	13 28.5	30.6	123 08.9	59.3	331 42.9	46.2						
21	189 58.5	106 45.1	11.0	28 30.3	30.2	138 10.8	59.5	346 45.5	46.1						
22	205 00.9	121 47.7	10.8	43 32.1	29.9	153 12.6	59.6	1 48.1	46.1						
23	220 03.4	136 50.3	10.5	58 33.8	29.5	168 14.5	59.8	16 50.7	46.0						
24	235 05.9	151 52.9	+ 27 10.2	73 35.6	+ 9 29.1	183 16.3	+ 17 59.9	31 53.3	- 6 46.0						
Dif	—	+25	-3	+18	-4	+19	+1	+26	0						


JUEVES 17 DE MAYO DE 2012

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UT	SOL			 LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna	Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 4			SD: 14 ^h 8 Edad: 25 ^d 7 PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /2 20 ^h : 54 ^h /1										
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			R°: 43 ^m				
^h	°	'	°	°	'	°	'	°	^h ^m	^h ^m	^h ^m ^s ^{***}	^h ^m ^s	^h ^m ^s	
0	180	54.4	+ 19 22.2	224	38.4	+ 9 01.6		60 N	20 37	21 44		1 59 13	16 55 74	
1	195	54.4	22.7	239	12.4	11.7	101	58	23	21	23 18	2 04 16	48 71	
2	210	54.3	23.3	253	46.5	21.8	100	56	11	21 02	22 25	09 18	42 69	
3	225	54.3	23.8	268	20.5	31.8	100	54	20 00	20 47	21 56	13 20	36 67	
4	240	54.3	24.4	282	54.5	41.8	100	52	19 51	34	34	17 21	31 65	
5	255	54.3	+ 19 25.0	297	28.4	+ 9 51.7	99	50	19 43	20 23	21 17	2 20 24	16 27 63	
6	270	54.3	+ 19 25.5	312	02.4	+ 10 01.6	99	45	19 25	20 00	20 44	2 28 26	16 17 60	
7	285	54.2	26.1	326	36.3	11.5	99	40	19 11	19 42	20	34 29	09 57	
8	300	54.2	26.6	341	10.2	21.3	98	35	18 58	27	20 01	40 31	16 02 55	
9	315	54.2	27.2	355	44.1	31.0	97	30	48	19 14	19 46	44 34	15 56 53	
10	330	54.2	27.7	10	18.0	40.8	98	20	30	18 54	22	2 53 37	46 49	
11	345	54.2	+ 19 28.3	24	51.8	+ 10 50.4	96	10 N	18 14	18 37	19 03	3 00 41	15 37 46	
12	0	54.1	+ 19 28.9	39	25.6	+ 11 00.0	96	0	18 00	18 22	18 47	3 07 44	15 28 44	
13	15	54.1	29.4	53	59.4	09.6	96	10 S	17 46	18 08	34	14 47	19 42	
14	30	54.1	30.0	68	33.2	19.1	95	20	31	17 54	21	22 49	10 39	
15	45	54.1	30.5	83	06.9	28.6	95	30	13	39	08	30 53	15 00 35	
16	60	54.0	31.1	97	40.7	38.1	95	35	17 03	30	18 01	35 56	14 54 33	
17	75	54.0	+ 19 31.6	112	14.4	+ 11 47.4	93	40	16 52	17 21	17 54	3 41 58	14 48 30	
18	90	54.0	+ 19 32.2	126	48.0	+ 11 56.8	94	45	16 39	17 11	17 47	3 48 60	14 40 28	
19	105	54.0	32.7	141	21.7	+ 12 06.0	92	50	22	16 58	38	56 64	30 25	
20	120	53.9	33.3	155	55.3	15.3	93	52	15	53	34	3 59 66	26 23	
21	135	53.9	33.8	170	28.9	24.4	91	54	16 06	47	30	4 04 67	21 22	
22	150	53.9	34.4	185	02.4	33.6	92	56	15 57	40	26	08 70	16 19	
23	165	53.9	34.9	199	36.0	42.6	90	58	46	32	22	13 72	10 17	
24	180	53.8	+ 19 35.5	214	09.5	+ 12 51.6	90	60 S	15 34	16 24	17 17	4 19 75	14 04 14	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG 8 ^h 18 ^m 2		Mag.: -4.4 PMG: 13 ^h 50 ^m			Mag.: +0.3 PMG: 19 ^h 03 ^m			Mag.: -2.0 PMG: 11 ^h 45 ^m			Mag.: +0.4 PMG: 21 ^h 49 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
^h	°	'	°	°	'	°	°	'	°	°	'	°	°	'
0	235	05.9	151 52.9	+ 27 10.2		73 35.6	+ 9 29.1		183 16.3	+ 17 59.9		31 53.3	- 6 46.0	
1	250	08.3	166 55.5	09.9		88 37.3	28.8		198 18.2	+ 18 00.1		46 55.9	45.9	
2	265	10.8	181 58.1	09.7		103 39.1	28.4		213 20.1	00.2		61 58.5	45.9	
3	280	13.3	197 00.7	09.4		118 40.8	28.0		228 21.9	00.4		77 01.1	45.8	
4	295	15.7	212 03.3	09.1		133 42.6	27.7		243 23.8	00.5		92 03.7	45.8	
5	310	18.2	227 06.0	+ 27 08.8		148 44.4	+ 9 27.3		258 25.6	+ 18 00.6		107 06.3	- 6 45.7	
6	325	20.6	242 08.6	+ 27 08.5		163 46.1	+ 9 26.9		273 27.5	+ 18 00.8		122 08.9	- 6 45.7	
7	340	23.1	257 11.2	08.3		178 47.9	26.6		288 29.4	00.9		137 11.5	45.7	
8	355	25.6	272 13.9	08.0		193 49.6	26.2		303 31.2	01.1		152 14.1	45.6	
9	10	28.0	287 16.5	07.7		208 51.4	25.8		318 33.1	01.2		167 16.7	45.6	
10	25	30.5	302 19.2	07.4		223 53.1	25.5		333 35.0	01.4		182 19.3	45.5	
11	40	33.0	317 21.8	+ 27 07.1		238 54.9	+ 9 25.1		348 36.8	+ 18 01.5		197 21.9	- 6 45.5	
12	55	35.4	332 24.5	+ 27 06.8		253 56.6	+ 9 24.7		3 38.7	+ 18 01.7		212 24.5	- 6 45.4	
13	70	37.9	347 27.1	06.5		268 58.4	24.3		18 40.5	01.8		227 27.1	45.4	
14	85	40.4	2 29.8	06.2		284 00.1	24.0		33 42.4	02.0		242 29.7	45.3	
15	100	42.8	17 32.5	06.0		299 01.9	23.6		48 44.3	02.1		257 32.3	45.3	
16	115	45.3	32 35.1	05.7		314 03.6	23.2		63 46.1	02.3		272 34.9	45.2	
17	130	47.8	47 37.8	+ 27 05.4		329 05.4	+ 9 22.9		78 48.0	+ 18 02.4		287 37.5	- 6 45.2	
18	145	50.2	62 40.5	+ 27 05.1		344 07.1	+ 9 22.5		93 49.8	+ 18 02.6		302 40.1	- 6 45.1	
19	160	52.7	77 43.2	04.8		359 08.9	22.1		108 51.7	02.7		317 42.7	45.1	
20	175	55.1	92 45.9	04.5		14 10.6	21.7		123 53.6	02.9		332 45.3	45.1	
21	190	57.6	107 48.6	04.2		29 12.4	21.4		138 55.4	03.0		347 47.9	45.0	
22	206	00.1	122 51.3	03.9		44 14.1	21.0		153 57.3	03.2		2 50.5	45.0	
23	221	02.5	137 54.0	03.6		59 15.9	20.6		168 59.1	03.3		17 53.1	44.9	
24	236	05.0	152 56.7	+ 27 03.3		74 17.6	+ 9 20.3		184 01.0	+ 18 03.5		32 55.7	- 6 44.9	
Dif	—		+27		-3	+18		-4	+19		+1	+26		0

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VIERNES 18 DE MAYO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 11 ^h 56 ^m 4		SD: 14'7 Edad: 26 ^d 7		PHE $\left\{ \begin{array}{l} 4^{\text{h}}: 54'1 \\ 12^{\text{h}}: 54'0 \\ 20^{\text{h}}: 54'0 \end{array} \right.$			R°: 45 ^m			Hora		R°	Hora		R°
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	' /	°	' /	°	' /	°	h	m	h	m	h	m	h	m	
0	180	53.8	+ 19	35.5	214	09.5	+ 12	51.6	60 N	**	**	2	08	3	15	
1	195	53.8		36.0	228	43.0	+ 13	00.6	58	0	35	31	29	20	19	
2	210	53.8		36.6	243	16.4		09.5	56	1	27	2	50	41	27	
3	225	53.8		37.1	257	49.8		18.3	54	1	56	3	05	3	52	
4	240	53.7		37.6	272	23.2		27.1	52	2	18	18	4	01	38	
5	255	53.7	+ 19	38.2	286	56.6	+ 13	35.9	50	2	36	3	30	4	10	
6	270	53.7	+ 19	38.7	301	29.9	+ 13	44.5	45	3	09	3	53	4	27	
7	285	53.7		39.3	316	03.2	+ 13	53.2	40	3	31	4	11	42	3	
8	300	53.6		39.8	330	36.4	+ 14	01.7	35	3	51	26	4	54	11	
9	315	53.6		40.4	345	09.7		10.2	30	4	07	38	5	05	18	
10	330	53.6		40.9	359	42.9		18.6	20	31	4	59	23	30	39	
11	345	53.5	+ 19	41.4	14	16.0	+ 14	27.0	10 N	4	50	5	16	5	38	
12	0	53.5	+ 19	42.0	28	49.2	+ 14	35.3	0	5	05	5	31	5	53	
13	15	53.5		42.5	43	22.3		43.6	10 S	19	45	6	07	4	01	
14	30	53.5		43.1	57	55.3		51.8	20	32	5	59	22	11	50	
15	45	53.4		43.6	72	28.3	+ 14	59.9	30	45	6	14	40	23	54	
16	60	53.4		44.1	87	01.3	+ 15	08.0	35	52	23	6	50	31	55	
17	75	53.4	+ 19	44.7	101	34.3	+ 15	16.0	40	5	59	6	32	7	01	
18	90	53.3	+ 19	45.2	116	07.2	+ 15	23.9	45	6	07	6	43	7	15	
19	105	53.3		45.7	130	40.1		31.8	50	15	6	55	31	5	00	
20	120	53.3		46.3	145	13.0		39.6	52	19	7	01	39	05	65	
21	135	53.2		46.8	159	45.8		47.3	54	23	07	47	11	67	43	
22	150	53.2		47.3	174	18.6	+ 15	55.0	56	27	14	7	57	18	68	
23	165	53.2		47.9	188	51.3	+ 16	02.6	58	32	21	8	08	25	71	
24	180	53.1	+ 19	48.4	203	24.0	+ 16	10.1	60 S	6	37	7	30	5	34	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 8 ^h 14 ^m 3		Mag.: -4.4 PMG: 13 ^h 46 ^m		Mag.: +0.3 PMG: 19 ^h 01 ^m		Mag.: -2.0 PMG: 11 ^h 42 ^m		Mag.: +0.4 PMG: 21 ^h 45 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	' /	°	' /	°	' /	°	' /	°	' /	°	' /	°	' /		
0	236	05.0	152	56.7	+ 27	03.3	74	17.6	+ 9	20.3	184	01.0	+ 18	03.5		
1	251	07.5	167	59.4		03.0	89	19.4		19.9	199	02.9		03.6		
2	266	09.9	183	02.1		02.7	104	21.1		19.5	214	04.7		03.7		
3	281	12.4	198	04.9		02.4	119	22.8		19.1	229	06.6		03.9		
4	296	14.9	213	07.6		02.1	134	24.6		18.8	244	08.5		04.0		
5	311	17.3	228	10.3	+ 27	01.8	149	26.3	+ 9	18.4	259	10.3	+ 18	04.2		
6	326	19.8	243	13.1	+ 27	01.5	164	28.1	+ 9	18.0	274	12.2	+ 18	04.3		
7	341	22.2	258	15.8		01.1	179	29.8		17.6	289	14.0		04.5		
8	356	24.7	273	18.6		00.8	194	31.5		17.3	304	15.9		04.6		
9	11	27.2	288	21.3		00.5	209	33.3		16.9	319	17.8		04.8		
10	26	29.6	303	24.1	+ 27	00.2	224	35.0		16.5	334	19.6		04.9		
11	41	32.1	318	26.8	+ 26	59.9	239	36.8	+ 9	16.1	349	21.5	+ 18	05.1		
12	56	34.6	333	29.6	+ 26	59.6	254	38.5	+ 9	15.8	4	23.3	+ 18	05.2		
13	71	37.0	348	32.4		59.3	269	40.2		15.4	19	25.2		05.4		
14	86	39.5	3	35.2		59.0	284	42.0		15.0	34	27.1		05.5		
15	101	42.0	18	37.9		58.6	299	43.7		14.6	49	28.9		05.7		
16	116	44.4	33	40.7		58.3	314	45.4		14.2	64	30.8		05.8		
17	131	46.9	48	43.5	+ 26	58.0	329	47.2	+ 9	13.9	79	32.6	+ 18	06.0		
18	146	49.4	63	46.3	+ 26	57.7	344	48.9	+ 9	13.5	94	34.5	+ 18	06.1		
19	161	51.8	78	49.1		57.4	359	50.6		13.1	109	36.4		06.2		
20	176	54.3	93	51.9		57.0	14	52.4		12.7	124	38.2		06.4		
21	191	56.7	108	54.7		56.7	29	54.1		12.4	139	40.1		06.5		
22	206	59.2	123	57.5		56.4	44	55.8		12.0	154	42.0		06.7		
23	222	01.7	139	00.3		56.1	59	57.5		11.6	169	43.8		06.8		
24	237	04.1	154	03.2	+ 26	55.7	74	59.3	+ 9	11.2	184	45.7	+ 18	07.0		
Dif	—	+28		-3		+17		-4		+19		+1		+26	0	

SÁBADO 19 DE MAYO DE 2012

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 5		SD: 14 ^h 7 Edad: 27 ^d 7 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 53 ⁹ PMG: 10 ^h 46 ^m R°: 47 ^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	180	53.1	+ 19	48.4	203	24.0	+ 16	10.1	60 N	20 42	21 51	** **	2 29	21	19 22	68		
1	195	53.1		48.9	217	56.7		17.6	58	27	26	** **	39	24	19 09	66		
2	210	53.1		49.5	232	29.3		25.0	56	15	21 07	22 34	48	26	18 58	64		
3	225	53.1		50.0	247	01.9		32.3	54	20 04	20 51	22 02	2 56	28	49	62		
4	240	53.0		50.5	261	34.5		39.5	52	19 54	38	21 39	3 03	30	40	61		
5	255	53.0	+ 19	51.1	276	07.0	+ 16	46.7	50	19 45	20 26	21 21	3 10	31	18 33	59		
6	270	53.0	+ 19	51.6	290	39.5	+ 16	53.8	45	19 27	20 02	20 47	3 24	33	18 17	57		
7	285	52.9		52.1	305	12.0	+ 17	00.9	40	12	19 44	22	35	36	18 03	56		
8	300	52.9		52.7	319	44.4		07.8	35	19 00	28	20 03	45	38	17 52	54		
9	315	52.9		53.2	334	16.8		14.7	30	18 49	19 16	19 47	3 54	39	42	53		
10	330	52.8		53.7	348	49.1		21.5	20	31	18 55	23	4 09	42	26	50		
11	345	52.8	+ 19	54.2	3 21.4		+ 17	28.2	10 N	18 15	18 37	19 04	4 23	44	17 11	49		
12	0	52.7	+ 19	54.8	17	53.7	+ 17	34.9	0	18 00	18 22	18 48	4 35	46	16 57	47		
13	15	52.7		55.3	32	25.9		41.5	10 S	17 45	18 08	33	4 48	48	44	45		
14	30	52.7		55.8	46	58.1		48.0	20	30	17 53	20	5 01	51	29	43		
15	45	52.6		56.3	61	30.2	+ 17	54.4	30	12	38	07	17	53	12	41		
16	60	52.6		56.9	76	02.4	+ 18	00.8	35	17 02	29	18 00	26	54	16 03	39		
17	75	52.6	+ 19	57.4	90	34.4	+ 18	07.0	40	16 50	17 20	17 53	5 36	56	15 52	38		
18	90	52.5	+ 19	57.9	105	06.5	+ 18	13.2	45	16 37	17 09	17 45	5 48	59	15 39	36		
19	105	52.5		58.4	119	38.5		19.3	50	20	16 56	36	6 03	61	23	34		
20	120	52.5		59.0	134	10.4		25.4	52	12	50	32	10	63	16	32		
21	135	52.4	+ 19	59.5	148	42.4		31.3	54	16 04	44	28	18	64	15 08	31		
22	150	52.4	+ 20	00.0	163	14.3		37.2	56	15 54	37	24	26	66	14 59	29		
23	165	52.4		00.5	177	46.1		43.0	58	43	29	19	36	68	48	28		
24	180	52.3	+ 20	01.0	192	17.9	+ 18	48.7	60 S	15 30	16 21	17 13	6 47	71	14 37	24		
UT	ARIES PMG 8 ^h 10 ^m 4		VENUS Mag.: -4.4 PMG: 13 ^h 41 ^m		MARTE Mag.: +0.3 PMG: 18 ^h 58 ^m		JÚPITER Mag.: -2.0 PMG: 11 ^h 40 ^m		SATURNO Mag.: +0.5 PMG: 21 ^h 40 ^m									
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	237	04.1	154	03.2	+ 26	55.7	74	59.3	+ 9	11.2	184	45.7	+ 18	07.0	33	58.1	- 6	43.8
1	252	06.6	169	06.0		55.4	90	01.0		10.8	199	47.5		07.1	49	00.7		43.7
2	267	09.1	184	08.8		55.1	105	02.7		10.5	214	49.4		07.3	64	03.3		43.7
3	282	11.5	199	11.7		54.7	120	04.5		10.1	229	51.3		07.4	79	05.9		43.7
4	297	14.0	214	14.5		54.4	135	06.2		09.7	244	53.1		07.6	94	08.5		43.6
5	312	16.5	229	17.4	+ 26	54.1	150	07.9	+ 9	09.3	259	55.0	+ 18	07.7	109	11.1	- 6	43.6
6	327	18.9	244	20.2	+ 26	53.7	165	09.6	+ 9	08.9	274	56.8	+ 18	07.9	124	13.7	- 6	43.5
7	342	21.4	259	23.1		53.4	180	11.4		08.6	289	58.7		08.0	139	16.3		43.5
8	357	23.9	274	25.9		53.1	195	13.1		08.2	305	00.6		08.1	154	18.9		43.4
9	12	26.3	289	28.8		52.7	210	14.8		07.8	320	02.4		08.3	169	21.5		43.4
10	27	28.8	304	31.7		52.4	225	16.5		07.4	335	04.3		08.4	184	24.1		43.3
11	42	31.2	319	34.5	+ 26	52.1	240	18.2	+ 9	07.0	350	06.1	+ 18	08.6	199	26.7	- 6	43.3
12	57	33.7	334	37.4	+ 26	51.7	255	20.0	+ 9	06.6	5	08.0	+ 18	08.7	214	29.3	- 6	43.3
13	72	36.2	349	40.3		51.4	270	21.7		06.3	20	09.9		08.9	229	31.9		43.2
14	87	38.6	4 43.2			51.0	285	23.4		05.9	35	11.7		09.0	244	34.5		43.2
15	102	41.1	19 46.1			50.7	300	25.1		05.5	50	13.6		09.2	259	37.1		43.1
16	117	43.6	34 49.0			50.3	315	26.8		05.1	65	15.4		09.3	274	39.7		43.1
17	132	46.0	49 51.9	+ 26	50.0		330	28.6	+ 9	04.7	80	17.3	+ 18	09.5	289	42.3	- 6	43.0
18	147	48.5	64 54.8	+ 26	49.6		345	30.3	+ 9	04.3	95	19.2	+ 18	09.6	304	44.9	- 6	43.0
19	162	51.0	79 57.7		49.3		0 32.0			04.0	110	21.0		09.8	319	47.5		43.0
20	177	53.4	95 00.6		48.9		15 33.7			03.6	125	22.9		09.9	334	50.1		42.9
21	192	55.9	110 03.5		48.6		30 35.4			03.2	140	24.8		10.0	349	52.7		42.9
22	207	58.3	125 06.4		48.2		45 37.1			02.8	155	26.6		10.2	4 55.2			42.8
23	223	00.8	140 09.4		47.9		60 38.9			02.4	170	28.5		10.3	19 57.8			42.8
24	238	03.3	155 12.3	+ 26	47.5		75 40.6	+ 9	02.0		185	30.3	+ 18	10.5	35 00.4	- 6	42.7	
Dif	—	+29	-3		+17	-4					+19	+1			+26		0	

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DOMINGO 20 DE MAYO DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56 ^m 5		SD: 14'7 Edad: 28 ^d 7		PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0									
	PMG: 11 ^h 33 ^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		h m m	
0	180 52.3	+ 20 01.0	192 17.9		+ 18 48.7		60 N	** **	2 02	3 10	2 50	29	20 30	60
1	195 52.3	01.6	206 49.7	128	54.3	56	58	** **	26	25	3 03	31	15	59
2	210 52.2	02.1	221 21.5	128	+ 18 59.9	56	56	1 19	2 46	38	14	33	20 02	58
3	225 52.2	02.6	235 53.2	127	+ 19 05.3	54	54	1 51	3 02	49	24	34	19 51	57
4	240 52.2	03.1	250 24.8	126	10.7	54	52	2 14	15	3 59	33	35	41	56
5	255 52.1	+ 20 03.6	264 56.5	127	+ 19 16.0	53	50	2 32	3 27	4 07	3 41	36	19 32	56
6	270 52.1	+ 20 04.1	279 28.1	126	+ 19 21.2	52	45	3 06	3 51	4 25	3 57	39	19 14	54
7	285 52.1	04.7	293 59.6	125	26.3	51	40	30	4 09	40	4 11	41	18 59	53
8	300 52.0	05.2	308 31.2	126	31.3	50	35	3 50	24	4 53	23	42	46	53
9	315 52.0	05.7	323 02.6	124	36.2	49	30	4 05	37	5 04	33	43	35	52
10	330 51.9	06.2	337 34.1	125	41.1	49	20	30	4 58	22	4 51	45	16	50
11	345 51.9	+ 20 06.7	352 05.5	124	+ 19 45.9	48	10 N	4 49	5 16	5 38	5 07	46	18 00	49
12	0 51.9	+ 20 07.2	6 36.9	124	+ 19 50.5	46	0	5 05	5 31	5 53	5 21	48	17 44	48
13	15 51.8	07.7	21 08.3	124	55.1	46	10 S	20	5 45	6 08	36	49	29	47
14	30 51.8	08.2	35 39.6	123	+ 19 59.6	45	20	33	6 00	23	5 52	50	17 12	46
15	45 51.7	08.7	50 10.9	123	+ 20 04.0	44	30	46	15	41	6 10	52	16 53	45
16	60 51.7	09.3	64 42.1	122	08.3	43	35	5 53	24	6 51	20	54	42	44
17	75 51.6	+ 20 09.8	79 13.3	122	+ 20 12.6	43	40	6 01	6 34	7 03	6 32	55	16 30	43
18	90 51.6	+ 20 10.3	93 44.5	122	+ 20 16.7	41	45	6 09	6 45	7 17	6 47	56	16 15	42
19	105 51.6	10.8	108 15.7	122	20.7	40	50	17	6 57	34	7 04	58	15 57	40
20	120 51.5	11.3	122 46.8	121	24.7	40	52	21	7 03	42	13	59	48	39
21	135 51.5	11.8	137 17.9	121	28.5	38	54	26	10	7 50	22	60	39	38
22	150 51.4	12.3	151 48.9	120	32.3	38	56	30	17	8 00	32	62	28	37
23	165 51.4	12.8	166 20.0	121	36.0	37	58	35	25	12	44	63	16	35
24	180 51.4	+ 20 13.3	180 51.0	120	+ 20 39.5	35	60 S	6 40	7 34	8 25	7 58	65	15 01	34
UT	ARIES PMG 8 ^h 06 ^m 4		VENUS Mag.: -4.3 PMG: 13 ^h 36 ^m		MARTE Mag.: +0.3 PMG: 18 ^h 55 ^m		JÚPITER Mag.: -2.0 PMG: 11 ^h 37 ^m		SATURNO Mag.: +0.5 PMG: 21 ^h 36 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	° ' /	° ' /	° ' /		° ' /		° ' /		° ' /					
h	238 03.3	155 12.3	+ 26 47.5	75 40.6	+ 9 02.0	185 30.3	+ 18 10.5	35 00.4	- 6 42.7					
1	253 05.7	170 15.2	47.2	90 42.3	01.7	200 32.2	10.6	50 03.0	42.7					
2	268 08.2	185 18.2	46.8	105 44.0	01.3	215 34.1	10.8	65 05.6	42.6					
3	283 10.7	200 21.1	46.5	120 45.7	00.9	230 35.9	10.9	80 08.2	42.6					
4	298 13.1	215 24.1	46.1	135 47.4	00.5	245 37.8	11.1	95 10.8	42.6					
5	313 15.6	230 27.0	+ 26 45.7	150 49.1	+ 9 00.1	260 39.6	+ 18 11.2	110 13.4	- 6 42.5					
6	328 18.1	245 30.0	+ 26 45.4	165 50.8	+ 8 59.7	275 41.5	+ 18 11.4	125 16.0	- 6 42.5					
7	343 20.5	260 33.0	45.0	180 52.5	59.3	290 43.4	11.5	140 18.6	42.4					
8	358 23.0	275 35.9	44.7	195 54.3	58.9	305 45.2	11.6	155 21.2	42.4					
9	13 25.5	290 38.9	44.3	210 56.0	58.6	320 47.1	11.8	170 23.8	42.3					
10	28 27.9	305 41.9	43.9	225 57.7	58.2	335 48.9	11.9	185 26.4	42.3					
11	43 30.4	320 44.9	+ 26 43.6	240 59.4	+ 8 57.8	350 50.8	+ 18 12.1	200 29.0	- 6 42.3					
12	58 32.8	335 47.9	+ 26 43.2	256 01.1	+ 8 57.4	5 52.7	+ 18 12.2	215 31.6	- 6 42.2					
13	73 35.3	350 50.8	42.8	271 02.8	57.0	20 54.5	12.4	230 34.2	42.2					
14	88 37.8	5 53.8	42.5	286 04.5	56.6	35 56.4	12.5	245 36.8	42.1					
15	103 40.2	20 56.8	42.1	301 06.2	56.2	50 58.2	12.7	260 39.3	42.1					
16	118 42.7	35 59.9	41.7	316 07.9	55.8	66 00.1	12.8	275 41.9	42.0					
17	133 45.2	51 02.9	+ 26 41.3	331 09.6	+ 8 55.5	81 02.0	+ 18 12.9	290 44.5	- 6 42.0					
18	148 47.6	66 05.9	+ 26 41.0	346 11.3	+ 8 55.1	96 03.8	+ 18 13.1	305 47.1	- 6 42.0					
19	163 50.1	81 08.9	40.6	1 13.0	54.7	111 05.7	13.2	320 49.7	41.9					
20	178 52.6	96 11.9	40.2	16 14.7	54.3	126 07.6	13.4	335 52.3	41.9					
21	193 55.0	111 15.0	39.8	31 16.4	53.9	141 09.4	13.5	350 54.9	41.8					
22	208 57.5	126 18.0	39.5	46 18.1	53.5	156 11.3	13.7	5 57.5	41.8					
23	224 00.0	141 21.0	39.1	61 19.8	53.1	171 13.1	13.8	21 00.1	41.8					
24	239 02.4	156 24.1	+ 26 38.7	76 21.5	+ 8 52.7	186 15.0	+ 18 14.0	36 02.7	- 6 41.7					
Dif	—	+30	-4	+17	-4	+19	+1	+26	0					

LUNES 21 DE MAYO DE 2012

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UT	SOL			● LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 6			SD: 14 ^h 7 Edad: 0 ^d 0 PHE $\begin{cases} 4^h: 54^0/0 \\ 12^h: 54^1/1 \\ 20^h: 54^2/2 \end{cases}$ PMG: 12 ^h 21 ^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	180 51.4	+ 20 13.3		180 51.0	119	+ 20 39.5	35	60 N	20 46	21 57	** **	3 19 40		21 30 50	
1	195 51.3	13.8		195 51.9	120	43.0	34	58	31	31	** **	34 41		14 50	
2	210 51.3	14.3		209 52.9	119	46.4	33	56	18	21 11	22 43	47 42		21 00 50	
3	225 51.2	14.8		224 23.8	118	49.7	32	54	20 07	20 55	22 08	3 58 43		20 48 50	
4	240 51.2	15.3		238 54.6	119	52.9	31	52	19 57	41	21 44	4 08 44		37 50	
5	255 51.1	+ 20 15.8		253 25.5	118	+ 20 56.0	30	50	19 48	20 29	21 25	4 17 44		20 28 50	
6	270 51.1	+ 20 16.3		267 56.3	118	+ 20 59.0	29	45	19 29	20 04	20 50	4 36 45		20 08 50	
7	285 51.0	16.8		282 27.1	118	+ 21 01.9	28	40	14	19 46	25	4 52 45		19 52 50	
8	300 51.0	17.3		296 57.9	117	04.7	27	35	19 01	30	20 05	5 05 46		39 49	
9	315 51.0	17.8		311 28.6	117	07.4	26	30	18 50	19 17	19 49	16 47		27 49	
10	330 50.9	18.3		325 59.3	117	10.0	25	20	32	18 55	24	36 47		19 06 50	
11	345 50.9	+ 20 18.8		340 30.0	117	+ 21 12.5	24	10 N	18 15	18 38	19 04	5 53 48		18 49 49	
12	0 50.8	+ 20 19.3		355 00.7	116	+ 21 14.9	23	0	18 00	18 22	18 48	6 09 49		18 32 50	
13	15 50.8	19.8		9 31.3	116	17.2	22	10 S	17 45	18 08	33	25 49		18 16 49	
14	30 50.7	20.3		24 02.0	117	19.4	22	20	29	17 53	20	6 42 50		17 58 49	
15	45 50.7	20.8		38 32.5	115	21.6	22	30	11	37	18 06	7 02 51		38 49	
16	60 50.6	21.3		53 03.1	116	23.6	20	35	17 01	28	17 59	14 51		26 49	
17	75 50.6	+ 20 21.8		67 33.7	116	+ 21 25.5	19	40	16 49	17 18	17 52	7 27 52		17 13 48	
18	90 50.5	+ 20 22.3		82 04.2	115	+ 21 27.3	18	45	16 35	17 07	17 43	7 43 52		16 57 47	
19	105 50.5	22.8		96 34.7	115	29.0	17	50	18	16 54	34	8 02 53		37 47	
20	120 50.4	23.3		111 05.2	115	30.6	16	52	10	48	30	12 53		27 48	
21	135 50.4	23.8		125 35.6	114	32.1	15	54	16 01	42	26	22 54		17 47	
22	150 50.4	24.3		140 06.1	115	33.6	15	56	15 51	34	21	34 54		16 05 47	
23	165 50.3	24.8		154 36.5	114	34.9	13	58	39	26	16	8 47 55		15 51 46	
24	180 50.3	+ 20 25.2		169 06.9	114	+ 21 36.1	12	60 S	15 26	16 17	17 11	9 03 56		15 35 46	
UT	ARIES PMG 8 ^h 02 ^m 5		VENUS Mag.: -4.3 PMG: 13 ^h 32 ^m		MARTE Mag.: +0.3 PMG: 18 ^h 52 ^m		JÚPITER Mag.: -2.0 PMG: 11 ^h 34 ^m		SATURNO Mag.: +0.5 PMG: 21 ^h 32 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec				
	° /	° /		° /		° /		° /		° /					
h	239 02.4	156 24.1	+ 26 38.7	76 21.5	+ 8 52.7	186 15.0	+ 18 14.0	36 02.7	- 6 41.7						
1	254 04.9	171 27.1	38.3	91 23.2	52.3	201 16.9	14.1	51 05.3	41.7						
2	269 07.3	186 30.2	37.9	106 24.9	51.9	216 18.7	14.2	66 07.9	41.6						
3	284 09.8	201 33.2	37.5	121 26.6	51.5	231 20.6	14.4	81 10.5	41.6						
4	299 12.3	216 36.3	37.2	136 28.3	51.2	246 22.4	14.5	96 13.1	41.5						
5	314 14.7	231 39.4	+ 26 36.8	151 30.0	+ 8 50.8	261 24.3	+ 18 14.7	111 15.6	- 6 41.5						
6	329 17.2	246 42.4	+ 26 36.4	166 31.7	+ 8 50.4	276 26.2	+ 18 14.8	126 18.2	- 6 41.5						
7	344 19.7	261 45.5	36.0	181 33.4	50.0	291 28.0	15.0	141 20.8	41.4						
8	359 22.1	276 48.6	35.6	196 35.1	49.6	306 29.9	15.1	156 23.4	41.4						
9	14 24.6	291 51.7	35.2	211 36.8	49.2	321 31.7	15.3	171 26.0	41.3						
10	29 27.1	306 54.8	34.8	226 38.5	48.8	336 33.6	15.4	186 28.6	41.3						
11	44 29.5	321 57.8	+ 26 34.4	241 40.2	+ 8 48.4	351 35.5	+ 18 15.5	201 31.2	- 6 41.3						
12	59 32.0	337 00.9	+ 26 34.0	256 41.9	+ 8 48.0	6 37.3	+ 18 15.7	216 33.8	- 6 41.2						
13	74 34.5	352 04.0	33.6	271 43.5	47.6	21 39.2	15.8	231 36.4	41.2						
14	89 36.9	7 07.2	33.2	286 45.2	47.2	36 41.0	16.0	246 39.0	41.1						
15	104 39.4	22 10.3	32.8	301 46.9	46.8	51 42.9	16.1	261 41.6	41.1						
16	119 41.8	37 13.4	32.4	316 48.6	46.4	66 44.8	16.3	276 44.1	41.0						
17	134 44.3	52 16.5	+ 26 32.0	331 50.3	+ 8 46.0	81 46.6	+ 18 16.4	291 46.7	- 6 41.0						
18	149 46.8	67 19.6	+ 26 31.6	346 52.0	+ 8 45.6	96 48.5	+ 18 16.6	306 49.3	- 6 41.0						
19	164 49.2	82 22.8	31.2	1 53.7	45.2	111 50.4	16.7	321 51.9	40.9						
20	179 51.7	97 25.9	30.8	16 55.4	44.8	126 52.2	16.8	336 54.5	40.9						
21	194 54.2	112 29.0	30.4	31 57.0	44.5	141 54.1	17.0	351 57.1	40.8						
22	209 56.6	127 32.2	30.0	46 58.7	44.1	156 55.9	17.1	6 59.7	40.8						
23	224 59.1	142 35.3	29.6	62 00.4	43.7	171 57.8	17.3	22 02.3	40.8						
24	240 01.6	157 38.5	+ 26 29.2	77 02.1	+ 8 43.3	186 59.7	+ 18 17.4	37 04.9	- 6 40.7						
Dif	—	+31	-4	+17	-4	+19	+1	+26	0						

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MARTES 22 DE MAYO DE 2012


UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 11 ^h 56 ^m 7		SD: 14'8 Edad: 1 ^d 0 PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4 PMG: 13 ^h 10 ^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 m		h m m	
0	180 50.3	+ 20 25.2	169 06.9		+ 21 36.1		60 N	** **	1 56	3 06	3 59 51		22 20 38	
1	195 50.2	25.7	183 37.3	114	37.2	11	58	** **	2 21	22	4 15 52		22 04 39	
2	210 50.2	26.2	198 07.7	114	38.2	10	56		1 10	42	29 51		21 50 41	
3	225 50.1	26.7	212 38.1	114	39.1	9	54		1 45	2 58	41 51		38 42	
4	240 50.1	27.2	227 08.4	113	39.9	8	52		2 09	3 12	3 56	4 52 51	27 43	
5	255 50.0	+ 20 27.7	241 38.7	113	+ 21 40.6	7	50		2 28	3 24	4 05	5 01 51	21 18 43	
6	270 50.0	+ 20 28.2	256 09.0	113	+ 21 41.2	6	45		3 03	3 48	4 24	5 21 51	20 58 44	
7	285 49.9	28.7	270 39.3	113	41.7	5	40		28	4 07	39	37 51	42 45	
8	300 49.9	29.1	285 09.6	113	42.0	3	35		3 48	23	4 52	5 51 50	28 46	
9	315 49.8	29.6	299 39.9	113	42.3	3	30		4 04	36	5 03	6 03 50	20 16 47	
10	330 49.8	30.1	314 10.2	113	42.5	2	20		29	4 58	22	23 50	19 56 48	
11	345 49.7	+ 20 30.6	328 40.4	112	+ 21 42.6	1	10 N		4 49	5 15	5 38	6 41 50	19 38 49	
12	0 49.7	+ 20 31.1	343 10.6	112	+ 21 42.6	0	0		5 05	5 31	5 53	6 58 49	19 22 49	
13	15 49.6	31.6	357 40.9	113	42.4	2	10 S		20	5 46	6 08	7 14 49	19 05 50	
14	30 49.6	32.0	12 11.1	112	42.2	2	20		34	6 01	24	32 49	18 47 51	
15	45 49.5	32.5	26 41.3	112	41.8	4	30		47	17	42	7 53 48	27 51	
16	60 49.5	33.0	41 11.5	112	41.4	4	35		5 54	25	6 53	8 05 48	15 52	
17	75 49.4	+ 20 33.5	55 41.7	112	+ 21 40.9	5	40		6 02	6 35	7 05	8 19 47	18 01 53	
18	90 49.3	+ 20 34.0	70 11.9	112	+ 21 40.2	7	45		6 10	6 46	7 19	8 35 47	17 44 54	
19	105 49.3	34.4	84 42.1	112	39.4	8	50		20	7 00	36	8 55 47	24 55	
20	120 49.2	34.9	99 12.2	111	38.6	8	52		24	06	44	9 05 46	15 55	
21	135 49.2	35.4	113 42.4	112	37.6	10	54		28	12	7 53	16 45	17 04 55	
22	150 49.1	35.9	128 12.6	112	36.5	11	56		33	20	8 04	28 45	16 52 56	
23	165 49.1	36.3	142 42.7	111	35.4	11	58		38	28	15	42 45	37 57	
24	180 49.0	+ 20 36.8	157 12.9	112	+ 21 34.1	13	60 S		6 43	7 37	8 29	9 59 44	16 21 58	
UT	ARIES PMG 7 ^h 58 ^m 6		VENUS Mag.: -4.3 PMG: 13 ^h 27 ^m		MARTE Mag.: +0.4 PMG: 18 ^h 50 ^m		JÚPITER Mag.: -2.0 PMG: 11 ^h 31 ^m		SATURNO Mag.: +0.5 PMG: 21 ^h 28 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
h	240 01.6	157 38.5	+ 26 29.2	77 02.1	+ 8 43.3	186 59.7	+ 18 17.4	37 04.9	- 6 40.7					
1	255 04.0	172 41.6	28.8	92 03.8	42.9	202 01.5	17.6	52 07.5	40.7					
2	270 06.5	187 44.8	28.4	107 05.5	42.5	217 03.4	17.7	67 10.0	40.6					
3	285 08.9	202 48.0	28.0	122 07.2	42.1	232 05.2	17.8	82 12.6	40.6					
4	300 11.4	217 51.1	27.5	137 08.8	41.7	247 07.1	18.0	97 15.2	40.6					
5	315 13.9	232 54.3	+ 26 27.1	152 10.5	+ 8 41.3	262 09.0	+ 18 18.1	112 17.8	- 6 40.5					
6	330 16.3	247 57.5	+ 26 26.7	167 12.2	+ 8 40.9	277 10.8	+ 18 18.3	127 20.4	- 6 40.5					
7	345 18.8	263 00.7	26.3	182 13.9	40.5	292 12.7	18.4	142 23.0	40.4					
8	0 21.3	278 03.8	25.9	197 15.6	40.1	307 14.5	18.6	157 25.6	40.4					
9	15 23.7	293 07.0	25.5	212 17.2	39.7	322 16.4	18.7	172 28.2	40.4					
10	30 26.2	308 10.2	25.0	227 18.9	39.3	337 18.3	18.9	187 30.8	40.3					
11	45 28.7	323 13.4	+ 26 24.6	242 20.6	+ 8 38.9	352 20.1	+ 18 19.0	202 33.3	- 6 40.3					
12	60 31.1	338 16.6	+ 26 24.2	257 22.3	+ 8 38.5	7 22.0	+ 18 19.1	217 35.9	- 6 40.2					
13	75 33.6	353 19.8	23.8	272 23.9	38.1	22 23.8	19.3	232 38.5	40.2					
14	90 36.1	8 23.1	23.3	287 25.6	37.7	37 25.7	19.4	247 41.1	40.2					
15	105 38.5	23 26.3	22.9	302 27.3	37.3	52 27.6	19.6	262 43.7	40.1					
16	120 41.0	38 29.5	22.5	317 29.0	36.9	67 29.4	19.7	277 46.3	40.1					
17	135 43.4	53 32.7	+ 26 22.1	332 30.6	+ 8 36.5	82 31.3	+ 18 19.9	292 48.9	- 6 40.0					
18	150 45.9	68 36.0	+ 26 21.6	347 32.3	+ 8 36.1	97 33.2	+ 18 20.0	307 51.5	- 6 40.0					
19	165 48.4	83 39.2	21.2	2 34.0	35.7	112 35.0	20.1	322 54.0	40.0					
20	180 50.8	98 42.4	20.8	17 35.7	35.3	127 36.9	20.3	337 56.6	39.9					
21	195 53.3	113 45.7	20.3	32 37.3	34.9	142 38.7	20.4	352 59.2	39.9					
22	210 55.8	128 48.9	19.9	47 39.0	34.5	157 40.6	20.6	8 01.8	39.8					
23	225 58.2	143 52.2	19.5	62 40.7	34.1	172 42.5	20.7	23 04.4	39.8					
24	241 00.7	158 55.4	+ 26 19.0	77 42.4	+ 8 33.7	187 44.3	+ 18 20.9	38 07.0	- 6 39.8					
Dif	—	+32	-4	+17	-4	+19	+1	+26	0					

MIÉRCOL 23 DE MAYO DE 2012

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 56 ^m 8		SD: 14 ^h 8 Edad: 2 ^d 0 PHE { 4 ^h : 54/5 12 ^h : 54/6 20 ^h : 54/7 PMG: 13 ^h 59 ^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	h m	h m	h m
0	180 49.0	+ 20 36.8	157 12.9		+ 21 34.1	14	60 N	20 51	22 04	** **	4 50	64	22 58	29
1	195 49.0	37.3	171 43.1	112	32.7	15	58	35	21 36	** **	5 07	61	43 31	
2	210 48.9	37.8	186 13.2	111	31.2	16	56	21	21 16	22 52	20 61	31 32		
3	225 48.9	38.2	200 43.4	112	29.6	17	54	10	20 59	22 14	32 60	20 34		
4	240 48.8	38.7	215 13.5	111	27.9	17	52	20 00	44	21 48	43 58	10 35		
5	255 48.8	+ 20 39.2	229 43.7	112	+ 21 26.1	18	50	19 51	20 32	21 29	5 52	58	22 01	37
6	270 48.7	+ 20 39.7	244 13.8	111	+ 21 24.2	19	45	19 31	20 07	20 53	6 12	56	21 42	39
7	285 48.6	40.1	258 44.0	112	22.2	20	40	16	19 47	27	28 55	27 41		
8	300 48.6	40.6	273 14.1	111	20.1	21	35	19 03	32	20 07	41 54	14 43		
9	315 48.5	41.1	287 44.3	112	17.9	22	30	18 52	19 18	19 50	6 53	53	21 03	44
10	330 48.5	41.5	302 14.5	112	15.6	23	20	32	18 56	25	7 13	52	20 44	45
11	345 48.4	+ 20 42.0	316 44.6	111	+ 21 13.1	25	10 N	18 16	18 38	19 05	7 31	50	20 27	47
12	0 48.4	+ 20 42.5	331 14.8	112	+ 21 10.6	26	0	18 00	18 22	18 48	7 47	49	20 11	49
13	15 48.3	43.0	345 45.0	112	08.0	27	10 S	17 45	18 08	33	8 03	48	19 55	51
14	30 48.3	43.4	0 15.1	111	05.3	29	20	29	17 52	19	21 47	38 52		
15	45 48.2	43.9	14 45.3	112	+ 21 02.4	29	30	10	36	18 05	41 45	18 55		
16	60 48.1	44.3	29 15.5	112	+ 20 59.5	31	35	17 00	27	17 58	8 53	44	19 07	55
17	75 48.1	+ 20 44.8	43 45.7	112	+ 20 56.4	31	40	16 48	17 17	17 50	9 06	43	18 54	56
18	90 48.0	+ 20 45.3	58 15.9	112	+ 20 53.3	31	45	16 33	17 06	17 42	9 22	42	18 38	58
19	105 48.0	45.7	72 46.1	112	50.0	33	50	16	16 52	33	42 40	19 60		
20	120 47.9	46.2	87 16.4	113	46.7	33	52	16 07	46	28	9 51	39	18 10	61
21	135 47.9	46.7	101 46.6	112	43.2	35	54	15 58	39	24	10 01	38	17 59	63
22	150 47.8	47.1	116 16.8	112	39.7	35	56	48	32	19	13 37	48 64		
23	165 47.7	47.6	130 47.1	113	36.0	37	58	36	24	14	27 35	34 66		
24	180 47.7	+ 20 48.1	145 17.3	112	+ 20 32.3	37	60 S	15 22	16 14	17 08	10 43	33	17 19	68
UT	ARIES PMG 7 ^h 54 ^m 7		VENUS Mag.: -4.3 PMG: 13 ^h 21 ^m		MARTE Mag.: +0.4 PMG: 18 ^h 47 ^m		JÚPITER Mag.: -2.0 PMG: 11 ^h 28 ^m		SATURNO Mag.: +0.5 PMG: 21 ^h 24 ^m					
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♄	Dec	hG ♅	Dec		
h	° /	° /	° /		° /		° /		° /		° /			
0	241 00.7	158 55.4	+ 26 19.0		77 42.4	+ 8 33.7	187 44.3	+ 18 20.9	38 07.0	- 6 39.8				
1	256 03.2	173 58.7	18.6		92 44.0	33.3	202 46.2	21.0	53 09.6	39.7				
2	271 05.6	189 02.0	18.1		107 45.7	32.9	217 48.0	21.1	68 12.1	39.7				
3	286 08.1	204 05.2	17.7		122 47.4	32.5	232 49.9	21.3	83 14.7	39.6				
4	301 10.6	219 08.5	17.3		137 49.0	32.1	247 51.8	21.4	98 17.3	39.6				
5	316 13.0	234 11.8	+ 26 16.8		152 50.7	+ 8 31.7	262 53.6	+ 18 21.6	113 19.9	- 6 39.6				
6	331 15.5	249 15.1	+ 26 16.4		167 52.4	+ 8 31.3	277 55.5	+ 18 21.7	128 22.5	- 6 39.5				
7	346 17.9	264 18.4	15.9		182 54.0	30.8	292 57.3	21.8	143 25.1	39.5				
8	1 20.4	279 21.7	15.5		197 55.7	30.4	307 59.2	22.0	158 27.7	39.4				
9	16 22.9	294 25.0	15.0		212 57.4	30.0	323 01.1	22.1	173 30.2	39.4				
10	31 25.3	309 28.3	14.6		227 59.0	29.6	338 02.9	22.3	188 32.8	39.4				
11	46 27.8	324 31.6	+ 26 14.1		243 00.7	+ 8 29.2	353 04.8	+ 18 22.4	203 35.4	- 6 39.3				
12	61 30.3	339 34.9	+ 26 13.7		258 02.4	+ 8 28.8	8 06.7	+ 18 22.6	218 38.0	- 6 39.3				
13	76 32.7	354 38.2	13.2		273 04.0	28.4	23 08.5	22.7	233 40.6	39.3				
14	91 35.2	9 41.5	12.8		288 05.7	28.0	38 10.4	22.8	248 43.2	39.2				
15	106 37.7	24 44.8	12.3		303 07.3	27.6	53 12.2	23.0	263 45.8	39.2				
16	121 40.1	39 48.2	11.9		318 09.0	27.2	68 14.1	23.1	278 48.3	39.1				
17	136 42.6	54 51.5	+ 26 11.4		333 10.7	+ 8 26.8	83 16.0	+ 18 23.3	293 50.9	- 6 39.1				
18	151 45.1	69 54.8	+ 26 11.0		348 12.3	+ 8 26.4	98 17.8	+ 18 23.4	308 53.5	- 6 39.1				
19	166 47.5	84 58.2	10.5		3 14.0	26.0	113 19.7	23.6	323 56.1	39.0				
20	181 50.0	100 01.5	10.0		18 15.6	25.6	128 21.5	23.7	338 58.7	39.0				
21	196 52.4	115 04.9	09.6		33 17.3	25.2	143 23.4	23.8	354 01.3	38.9				
22	211 54.9	130 08.2	09.1		48 19.0	24.8	158 25.3	24.0	9 03.8	38.9				
23	226 57.4	145 11.6	08.6		63 20.6	24.4	173 27.1	24.1	24 06.4	38.9				
24	241 59.8	160 14.9	+ 26 08.2		78 22.3	+ 8 23.9	188 29.0	+ 18 24.3	39 09.0	- 6 38.8				
Dif	—	+33	-5		+17	-4	+19	+1	+26	0				

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JUEVES 24 DE MAYO DE 2012

UT	SOL			 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15°8 PMG: 11 ^h 56 ^m 9			SD: 14°9 Edad: 3 ^d 0 PHE { 4 ^h : 54'8 12 ^h : 55'0 20 ^h : 55'1 PMG: 14 ^h 48 ^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	180	47.7	+ 20 48.1	145	17.3	+ 20 32.3	39	60 N	1 49	3 02	5 54	72	23 27	21	23 27	21	
1	195	47.6	48.5	159	47.6	28.4	39	58	2 17	18	6 08	70	14	24	14	24	
2	210	47.6	49.0	174	17.9	24.5	41	56	1 01	38	21	67	23 03	27	23 03	27	
3	225	47.5	49.4	188	48.2	20.4	42	54	1 39	2 55	32	66	22 54	28	22 54	28	
4	240	47.4	49.9	203	18.5	16.2	42	52	2 05	3 09	3 54	41	65	45	45	30	
5	255	47.4	+ 20 50.3	217	48.8	+ 20 12.0	42	50	2 25	3 21	4 03	6 50	63	22 38	31	22 38	31
6	270	47.3	+ 20 50.8	232	19.1	+ 20 07.6	44	45	3 01	3 46	4 22	7 08	60	22 21	35	22 21	35
7	285	47.3	51.3	246	49.4	+ 20 03.2	44	40	27	4 06	37	23	58	22 08	37	22 08	37
8	300	47.2	51.7	261	19.8	+ 19 58.6	46	35	3 47	22	4 50	35	57	21 57	38	21 57	38
9	315	47.1	52.2	275	50.2	54.0	46	30	4 03	35	5 02	7 46	55	47	40	47	40
10	330	47.1	52.6	290	20.6	49.2	48	20	29	4 57	21	8 05	53	29	44	29	44
11	345	47.0	+ 20 53.1	304	50.9	+ 19 44.4	48	10 N	4 49	5 15	5 38	8 21	51	21 14	46	21 14	46
12	0	47.0	+ 20 53.5	319	21.4	+ 19 39.4	50	0	5 05	5 31	5 53	8 36	49	21 00	48	21 00	48
13	15	46.9	54.0	333	51.8	34.4	50	10 S	20	5 46	6 09	8 51	47	20 46	50	20 46	50
14	30	46.8	54.4	348	22.2	29.2	52	20	34	6 01	25	9 08	44	30	53	30	53
15	45	46.8	54.9	2 52.7	115	24.0	52	30	48	18	43	26	42	13	56	13	56
16	60	46.7	55.3	17	23.2	18.6	54	35	5 56	27	6 54	37	41	20 02	58	20 02	58
17	75	46.6	+ 20 55.8	31	53.6	+ 19 13.2	54	40	6 04	6 37	7 07	9 49	39	19 50	60	19 50	60
18	90	46.6	+ 20 56.2	46	24.2	+ 19 07.7	55	45	6 12	6 48	7 21	10 04	37	19 36	63	19 36	63
19	105	46.5	56.7	60	54.7	+ 19 02.1	56	50	22	7 02	39	22	34	19	65	19	65
20	120	46.5	57.1	75	25.2	+ 18 56.3	58	52	26	08	47	30	33	11	67	11	67
21	135	46.4	57.6	89	55.8	50.5	58	54	30	15	7 56	39	31	19 02	68	19 02	68
22	150	46.3	58.0	104	26.3	44.6	59	56	35	22	8 07	10 50	29	18 52	70	18 52	70
23	165	46.3	58.5	118	56.9	38.6	60	58	41	31	19	11 02	27	40	73	40	73
24	180	46.2	+ 20 58.9	133	27.5	+ 18 32.5	61	60 S	6 46	7 40	8 33	11 16	24	18 27	75	18 27	75
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG 7 ^h 50 ^m 7			Mag.: -4.2 PMG: 13 ^h 16 ^m			Mag.: +0.4 PMG: 18 ^h 44 ^m			Mag.: -2.0 PMG: 11 ^h 25 ^m			Mag.: +0.5 PMG: 21 ^h 20 ^m				
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	'	°	°	'	°	'	°	°	'	°	'
0	241	59.8	160 14.9	+ 26 08.2	78 22.3	+ 8 23.9		188 29.0	+ 18 24.3		39 09.0	- 6 38.8					
1	257	02.3	175 18.3	07.7	93 23.9	23.5		203 30.8	24.4		54 11.6	38.8					
2	272	04.8	190 21.7	07.2	108 25.6	23.1		218 32.7	24.5		69 14.2	38.8					
3	287	07.2	205 25.1	06.8	123 27.2	22.7		233 34.6	24.7		84 16.8	38.7					
4	302	09.7	220 28.4	06.3	138 28.9	22.3		248 36.4	24.8		99 19.3	38.7					
5	317	12.2	235 31.8	+ 26 05.8	153 30.5	+ 8 21.9		263 38.3	+ 18 25.0		114 21.9	- 6 38.6					
6	332	14.6	250 35.2	+ 26 05.4	168 32.2	+ 8 21.5		278 40.2	+ 18 25.1		129 24.5	- 6 38.6					
7	347	17.1	265 38.6	04.9	183 33.8	21.1		293 42.0	25.3		144 27.1	38.6					
8	2	19.5	280 42.0	04.4	198 35.5	20.7		308 43.9	25.4		159 29.7	38.5					
9	17	22.0	295 45.4	03.9	213 37.1	20.3		323 45.7	25.5		174 32.3	38.5					
10	32	24.5	310 48.8	03.5	228 38.8	19.9		338 47.6	25.7		189 34.8	38.5					
11	47	26.9	325 52.2	+ 26 03.0	243 40.4	+ 8 19.4		353 49.5	+ 18 25.8		204 37.4	- 6 38.4					
12	62	29.4	340 55.6	+ 26 02.5	258 42.1	+ 8 19.0		8 51.3	+ 18 26.0		219 40.0	- 6 38.4					
13	77	31.9	355 59.0	02.0	273 43.7	18.6		23 53.2	26.1		234 42.6	38.3					
14	92	34.3	11 02.5	01.5	288 45.4	18.2		38 55.0	26.2		249 45.2	38.3					
15	107	36.8	26 05.9	01.1	303 47.0	17.8		53 56.9	26.4		264 47.8	38.3					
16	122	39.3	41 09.3	00.6	318 48.7	17.4		68 58.8	26.5		279 50.3	38.2					
17	137	41.7	56 12.7	+ 26 00.1	333 50.3	+ 8 17.0		84 00.6	+ 18 26.7		294 52.9	- 6 38.2					
18	152	44.2	71 16.2	+ 25 59.6	348 52.0	+ 8 16.6		99 02.5	+ 18 26.8		309 55.5	- 6 38.2					
19	167	46.7	86 19.6	59.1	3 53.6	16.1		114 04.4	26.9		324 58.1	38.1					
20	182	49.1	101 23.1	58.6	18 55.3	15.7		129 06.2	27.1		340 00.7	38.1					
21	197	51.6	116 26.5	58.1	33 56.9	15.3		144 08.1	27.2		355 03.2	38.0					
22	212	54.0	131 30.0	57.6	48 58.6	14.9		159 09.9	27.4		10 05.8	38.0					
23	227	56.5	146 33.4	57.1	64 00.2	14.5		174 11.8	27.5		25 08.4	38.0					
24	242	59.0	161 36.9	+ 25 56.6	79 01.9	+ 8 14.1		189 13.7	+ 18 27.6		40 11.0	- 6 37.9					
Dif	—	+34	-5		+16	-4		+19	+1		+26	0					


VIERNES 25 DE MAYO DE 2012

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UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 0			SD: 15 ^h 0 Edad: 4 ^d 0 PHE { 4 ^h : 55 ^s /3 12 ^h : 55 ^s /5 20 ^h : 55 ^s /6 PMG: 15 ^h 37 ^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	180	46.2	+ 20	133	27.5	+ 18	32.5	20 55	22 11	** **	7 06	78	23 48	16	
1	195	46.1		147	58.2		26.3	39	21 42	** **	18 75		38 19		
2	210	46.1	+ 20	162	28.8		20.0	25	20	23 03	28 73		30 21		
3	225	46.0	+ 21	176	59.5		13.7	13	21 02	22 20	38 70		22 24		
4	240	45.9		191	30.2		07.2	20 02	20 47	21 53	46 68		15 26		
5	255	45.9	+ 21	206	00.9	+ 18	00.7	19 53	20 35	21 32	7 53	67	23 09	27	
6	270	45.8	+ 21	220	31.6	+ 17	54.0	19 33	20 09	20 55	8 08	64	22 56	31	
7	285	45.7		235	02.3		47.3	18	19 49	29	21 61		45 33		
8	300	45.7		249	33.1		40.5	19 04	33	20 08	32 59		35 36		
9	315	45.6		264	03.9		33.5	18 53	19 20	19 52	41 57		27 38		
10	330	45.5		278	34.6		26.5	33	18 57	26	8 58	53	13 41		
11	345	45.5	+ 21	293	05.5	+ 17	19.4	18 16	18 39	19 06	9 12	50	22 00	45	
12	0	45.4	+ 21	307	36.3	+ 17	12.3	18 01	18 23	18 49	9 25	48	21 48	48	
13	15	45.3		322	07.1	+ 17	05.0	17 45	18 07	33	38 45		36 51		
14	30	45.3		336	38.0	+ 16	57.6	29	17 52	19	9 52	43	23 54		
15	45	45.2		351	08.9		50.2	30	17 10	36	18 05	39	09 57		
16	60	45.1		5	39.8		42.7	35	16 59	26	17 57	18	21 00	59	
17	75	45.1	+ 21	20	10.7	+ 16	35.1	40	16 46	17 16	17 49	10 28	20 50	62	
18	90	45.0	+ 21	34	41.7	+ 16	27.4	45	16 32	17 04	17 41	10 41	20 39	64	
19	105	44.9		49	12.6		19.6	50	14	16 51	31	10 56	29	69	
20	120	44.9		63	43.6		11.7	52	16 05	44	27	11 03	27		
21	135	44.8		78	14.6	+ 16	03.8	54	15 56	37	22	10 26	10	72	
22	150	44.7		92	45.6	+ 15	55.8	56	45	30	17	19 24	20 02	74	
23	165	44.7		107	16.6		47.6	58	33	21	11	29 21	19 53	77	
24	180	44.6	+ 21	121	47.7	+ 15	39.4	60 S	15 19	16 11	17 05	11 40	19 42	80	
UT	ARIES PMG 7 ^h 46 ^m 8		VENUS Mag.: -4.2 PMG: 13 ^h 10 ^m			MARTE Mag.: +0.4 PMG: 18 ^h 42 ^m			JÚPITER Mag.: -2.0 PMG: 11 ^h 22 ^m			SATURNO Mag.: +0.5 PMG: 21 ^h 16 ^m			
	hG ♈		hG ♀			hG ♂			hG ♃			hG ♄			
	Dec		Dec			Dec			Dec			Dec			
h	°	'	°	°	'	°	°	°	°	'	°	°	°	'	
0	242	59.0	161	36.9	+ 25	56.6	79 01.9	+ 8	14.1	189 13.7	+ 18	27.6	40 11.0	- 6	37.9
1	258	01.4	176	40.4		56.2	94 03.5		13.7	204 15.5		27.8	55 13.6		37.9
2	273	03.9	191	43.8		55.7	109 05.1		13.3	219 17.4		27.9	70 16.1		37.9
3	288	06.4	206	47.3		55.2	124 06.8		12.8	234 19.2		28.1	85 18.7		37.8
4	303	08.8	221	50.8		54.7	139 08.4		12.4	249 21.1		28.2	100 21.3		37.8
5	318	11.3	236	54.3	+ 25	54.2	154 10.1	+ 8	12.0	264 23.0	+ 18	28.4	115 23.9	- 6	37.8
6	333	13.8	251	57.8	+ 25	53.7	169 11.7	+ 8	11.6	279 24.8	+ 18	28.5	130 26.5	- 6	37.7
7	348	16.2	267	01.2		53.2	184 13.3		11.2	294 26.7		28.6	145 29.0		37.7
8	3	18.7	282	04.7		52.7	199 15.0		10.8	309 28.6		28.8	160 31.6		37.6
9	18	21.2	297	08.2		52.1	214 16.6		10.4	324 30.4		28.9	175 34.2		37.6
10	33	23.6	312	11.7		51.6	229 18.3		09.9	339 32.3		29.1	190 36.8		37.6
11	48	26.1	327	15.2	+ 25	51.1	244 19.9	+ 8	09.5	354 34.1	+ 18	29.2	205 39.4	- 6	37.5
12	63	28.5	342	18.8	+ 25	50.6	259 21.5	+ 8	09.1	9 36.0	+ 18	29.3	220 41.9	- 6	37.5
13	78	31.0	357	22.3		50.1	274 23.2		08.7	24 37.9		29.5	235 44.5		37.5
14	93	33.5	12	25.8		49.6	289 24.8		08.3	39 39.7		29.6	250 47.1		37.4
15	108	35.9	27	29.3		49.1	304 26.4		07.9	54 41.6		29.8	265 49.7		37.4
16	123	38.4	42	32.8		48.6	319 28.1		07.4	69 43.4		29.9	280 52.3		37.4
17	138	40.9	57	36.4	+ 25	48.1	334 29.7	+ 8	07.0	84 45.3	+ 18	30.0	295 54.8	- 6	37.3
18	153	43.3	72	39.9	+ 25	47.6	349 31.3	+ 8	06.6	99 47.2	+ 18	30.2	310 57.4	- 6	37.3
19	168	45.8	87	43.4		47.0	4 33.0		06.2	114 49.0		30.3	326 00.0		37.2
20	183	48.3	102	47.0		46.5	19 34.6		05.8	129 50.9		30.5	341 02.6		37.2
21	198	50.7	117	50.5		46.0	34 36.2		05.4	144 52.8		30.6	356 05.1		37.2
22	213	53.2	132	54.1		45.5	49 37.9		04.9	159 54.6		30.7	11 07.7		37.1
23	228	55.7	147	57.6		45.0	64 39.5		04.5	174 56.5		30.9	26 10.3		37.1
24	243	58.1	163	01.2	+ 25	44.4	79 41.1	+ 8	04.1	189 58.3	+ 18	31.0	41 12.9	- 6	37.1
Dif	—		+35	—	-5		+16	-4		+19	+1		+26		0


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SÁBADO 26 DE MAYO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 1		SD: 15 ^h 2 Edad: 5 ^d 0 PHE $\begin{cases} 4^h: 55^m/8 \\ 12^h: 56^m/0 \\ 20^h: 56^m/2 \end{cases}$ PMG: 16 ^h 24 ^m R°: 48 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h m	h m	h m	m m	h m	m m	
0	180 44.6	+ 21 09.4	121 47.7		+ 15 39.4	82	60 N	** **	1 43	2 59	8 24 81		** **	
1	195 44.5	09.9	136 18.8	121	31.2	82	58	** **	2 12	3 15	33 78	23 57	17	
2	210 44.5	10.3	150 49.9	121	22.8	84	56	0 51	34	29	41 75	51 19		
3	225 44.4	10.7	165 21.0	121	14.4	84	54	1 34	2 52	41	48 73	46 21		
4	240 44.3	11.1	179 52.1	121	+ 15 05.9	85	52	2 01	3 06	3 51	8 54 71	41 23		
5	255 44.3	+ 21 11.6	194 23.2	121	+ 14 57.3	86	50	2 21	3 19	4 01	9 00 69	23 36	25	
6	270 44.2	+ 21 12.0	208 54.4	122	+ 14 48.6	87	45	2 58	3 45	4 20	9 12 66	23 27	28	
7	285 44.1	12.4	223 25.5	121	39.9	87	40	3 25	4 04	36	22 63	18 32		
8	300 44.0	12.8	237 56.7	122	31.0	89	35	3 45	21	4 49	31 60	11 34		
9	315 44.0	13.3	252 27.9	122	22.1	89	30	4 02	34	5 01	38 58	23 05	36	
10	330 43.9	13.7	266 59.1	122	13.2	89	20	28	4 57	21	9 51 54	22 54	41	
11	345 43.8	+ 21 14.1	281 30.4	123	+ 14 04.1	91	10 N	4 48	5 15	5 38	10 02 51	22 45	44	
12	0 43.8	+ 21 14.5	296 01.6	122	+ 13 55.0	91	0	5 06	5 31	5 53	10 13 47	22 36	47	
13	15 43.7	15.0	310 32.9	123	45.8	92	10 S	21	5 47	6 09	23 45	27 50		
14	30 43.6	15.4	325 04.1	122	36.5	93	20	35	6 02	26	35 41	17 54		
15	45 43.5	15.8	339 35.4	123	27.1	94	30	49	19	45	47 38	22 06	58	
16	60 43.5	16.2	354 06.7	123	17.7	94	35	5 57	28	6 56	10 55 35	21 59	61	
17	75 43.4	+ 21 16.6	8 38.0	123	+ 13 08.2	95	40	6 05	6 38	7 08	11 03 33	21 52	63	
18	90 43.3	+ 21 17.1	23 09.4	124	+ 12 58.7	95	45	6 14	6 50	7 23	11 13 29	21 43	67	
19	105 43.3	17.5	37 40.7	123	49.0	97	50	24	7 04	41	25 25	33 70		
20	120 43.2	17.9	52 12.0	123	39.3	97	52	28	10	50	30 24	28 72		
21	135 43.1	18.3	66 43.4	124	29.6	97	54	33	17	7 59	36 22	22 75		
22	150 43.0	18.7	81 14.8	124	19.7	99	56	38	25	8 10	43 20	16 77		
23	165 43.0	19.2	95 46.1	123	+ 12 09.8	99	58	43	34	22	50 18	10 79		
24	180 42.9	+ 21 19.6	110 17.5	124	+ 11 59.8	100	60 S	6 49	7 44	8 37	11 59 14	21 02	82	
UT	ARIES PMG 7 ^h 42 ^m 9		VENUS Mag.: -4.2 PMG: 13 ^h 05 ^m		MARTE Mag.: +0.4 PMG: 18 ^h 39 ^m		JÚPITER Mag.: -2.0 PMG: 11 ^h 19 ^m		SATURNO Mag.: +0.5 PMG: 21 ^h 12 ^m					
	hG ♈	Dec	hG ♊	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	°	'	°	'	°	'	°	'	°	'				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	243 58.1	163 01.2	+ 25 44.4		79 41.1	+ 8 04.1	189 58.3	+ 18 31.0	41 12.9	- 6 37.1				
1	259 00.6	178 04.8	43.9		94 42.7	03.7	205 00.2	31.2	56 15.5	37.0				
2	274 03.0	193 08.3	43.4		109 44.4	03.3	220 02.1	31.3	71 18.0	37.0				
3	289 05.5	208 11.9	42.9		124 46.0	02.8	235 03.9	31.4	86 20.6	37.0				
4	304 08.0	223 15.5	42.3		139 47.6	02.4	250 05.8	31.6	101 23.2	36.9				
5	319 10.4	238 19.0	+ 25 41.8		154 49.3	+ 8 02.0	265 07.6	+ 18 31.7	116 25.8	- 6 36.9				
6	334 12.9	253 22.6	+ 25 41.3		169 50.9	+ 8 01.6	280 09.5	+ 18 31.8	131 28.3	- 6 36.9				
7	349 15.4	268 26.2	40.7		184 52.5	01.2	295 11.4	32.0	146 30.9	36.8				
8	4 17.8	283 29.8	40.2		199 54.1	00.7	310 13.2	32.1	161 33.5	36.8				
9	19 20.3	298 33.4	39.7		214 55.8	+ 8 00.3	325 15.1	32.3	176 36.1	36.8				
10	34 22.8	313 37.0	39.1		229 57.4	+ 7 59.9	340 17.0	32.4	191 38.6	36.7				
11	49 25.2	328 40.6	+ 25 38.6		244 59.0	+ 7 59.5	355 18.8	+ 18 32.5	206 41.2	- 6 36.7				
12	64 27.7	343 44.2	+ 25 38.1		260 00.6	+ 7 59.1	10 20.7	+ 18 32.7	221 43.8	- 6 36.6				
13	79 30.1	358 47.8	37.5		275 02.3	58.6	25 22.5	32.8	236 46.4	36.6				
14	94 32.6	13 51.4	37.0		290 03.9	58.2	40 24.4	33.0	251 48.9	36.6				
15	109 35.1	28 55.0	36.5		305 05.5	57.8	55 26.3	33.1	266 51.5	36.5				
16	124 37.5	43 58.6	35.9		320 07.1	57.4	70 28.1	33.2	281 54.1	36.5				
17	139 40.0	59 02.3	+ 25 35.4		335 08.7	+ 7 56.9	85 30.0	+ 18 33.4	296 56.7	- 6 36.5				
18	154 42.5	74 05.9	+ 25 34.8		350 10.4	+ 7 56.5	100 31.9	+ 18 33.5	311 59.2	- 6 36.4				
19	169 44.9	89 09.5	34.3		5 12.0	56.1	115 33.7	33.7	327 01.8	36.4				
20	184 47.4	104 13.2	33.7		20 13.6	55.7	130 35.6	33.8	342 04.4	36.4				
21	199 49.9	119 16.8	33.2		35 15.2	55.3	145 37.4	33.9	357 07.0	36.3				
22	214 52.3	134 20.4	32.6		50 16.8	54.8	160 39.3	34.1	12 09.5	36.3				
23	229 54.8	149 24.1	32.1		65 18.5	54.4	175 41.2	34.2	27 12.1	36.3				
24	244 57.3	164 27.7	+ 25 31.5		80 20.1	+ 7 54.0	190 43.0	+ 18 34.4	42 14.7	- 6 36.2				
Dif	—	+36	-5		+16	-4	+19	+1	+26	0				

DOMINGO 27 DE MAYO DE 2012

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UT	SOL		 LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 2		SD: 15 ^h 4 Edad: 6 ^d 0		PHE $\left\{ \begin{array}{l} 4^h: 56^s/5 \\ 12^h: 56^s/7 \\ 20^h: 56^s/9 \end{array} \right.$	R ^o : 47 ^m								
	hG ☉	Dec	hG ☾	Dif										
^h	° /	° /	° /		° /		°	^h ^m	^h ^m	^h ^m	^h ^m ^s	^h ^m ^s	^h ^m ^s	^h ^m ^s
0	180 42.9	+21 19.6	110 17.5		+11 59.8	100	60 N	20 59	22 17	** **	9 45 83		0 04 14	
1	195 42.8	20.0	124 48.9	124	49.8	100	58	42	21 46	** **	51 80		** ** *	
2	210 42.7	20.4	139 20.3	124	39.7	101	56	28	24	23 15	9 56 78		** ** *	
3	225 42.7	20.8	153 51.8	125	29.5	102	54	16	21 06	22 26	10 01 75		** ** *	
4	240 42.6	21.2	168 23.2	124	19.3	102	52	20 05	20 50	21 57	05 74		** ** *	
5	255 42.5	+21 21.6	182 54.6	124	+11 09.0	103	50	19 55	20 37	21 36	10 09 72		** ** *	
6	270 42.4	+21 22.0	197 26.1	125	+10 58.6	104	45	19 35	20 11	20 58	10 18 67		23 55 27	
7	285 42.4	22.5	211 57.5	124	48.2	104	40	19	19 51	31	25 64		50 30	
8	300 42.3	22.9	226 28.9	124	37.7	105	35	19 06	35	20 10	31 61		45 33	
9	315 42.2	23.3	241 00.4	125	27.1	106	30	18 54	19 21	19 53	36 59		41 36	
10	330 42.1	23.7	255 31.9	125	16.5	106	20	34	18 58	27	45 54		35 40	
11	345 42.1	+21 24.1	270 03.3	124	+10 05.9	106	10 N	18 17	18 39	19 06	10 53 51		23 29 43	
12	0 42.0	+21 24.5	284 34.8	125	+9 55.1	108	0	18 01	18 23	18 49	11 00 48		23 23 47	
13	15 41.9	24.9	299 06.2	124	44.3	108	10 S	17 45	18 07	33	08 43		17 51	
14	30 41.8	25.3	313 37.7	125	33.5	108	20	28	17 52	19	16 40		11 55	
15	45 41.8	25.7	328 09.2	125	22.6	109	30	17 09	35	18 04	25 35		04 59	
16	60 41.7	26.1	342 40.7	125	11.6	110	35	16 58	26	17 57	30 33		23 00 62	
17	75 41.6	+21 26.5	357 12.1	124	+9 00.6	110	40	16 45	17 15	17 49	11 36 30		22 55 65	
18	90 41.5	+21 26.9	11 43.6	125	+8 49.5	111	45	16 30	17 03	17 40	11 42 28		22 50 68	
19	105 41.5	27.3	26 15.1	125	38.4	111	50	12	16 49	30	50 24		43 72	
20	120 41.4	27.7	40 46.5	124	27.2	112	52	16 03	43	25	54 22		40 74	
21	135 41.3	28.1	55 18.0	125	16.0	112	54	15 54	35	20	11 58 20		37 76	
22	150 41.2	28.5	69 49.5	125	+8 04.7	113	56	43	28	15	12 03 18		33 79	
23	165 41.1	28.9	84 20.9	124	+7 53.4	113	58	30	19	09	08 15		29 81	
24	180 41.1	+21 29.3	98 52.4	125	+7 42.0	114	60 S	15 15	16 09	17 03	12 13 13		22 24 84	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 7 ^h 38 ^m 9		Mag.: -4.1 PMG: 12 ^h 59 ^m		Mag.: +0.4 PMG: 18 ^h 37 ^m		Mag.: -2.0 PMG: 11 ^h 16 ^m		Mag.: +0.5 PMG: 21 ^h 07 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h	° /	° /	° /	° /	° /	° /	°	°	°	°				
0	244 57.3	164 27.7	+25 31.5	80 20.1	+7 54.0	190 43.0	+18 34.4	42 14.7	-6 36.2					
1	259 59.7	179 31.4	31.0	95 21.7	53.6	205 44.9	34.5	57 17.3	36.2					
2	275 02.2	194 35.0	30.4	110 23.3	53.1	220 46.7	34.6	72 19.8	36.2					
3	290 04.6	209 38.7	29.9	125 24.9	52.7	235 48.6	34.8	87 22.4	36.1					
4	305 07.1	224 42.4	29.3	140 26.5	52.3	250 50.5	34.9	102 25.0	36.1					
5	320 09.6	239 46.0	+25 28.8	155 28.1	+7 51.9	265 52.3	+18 35.0	117 27.6	-6 36.1					
6	335 12.0	254 49.7	+25 28.2	170 29.8	+7 51.4	280 54.2	+18 35.2	132 30.1	-6 36.0					
7	350 14.5	269 53.4	27.6	185 31.4	51.0	295 56.1	35.3	147 32.7	36.0					
8	5 17.0	284 57.0	27.1	200 33.0	50.6	310 57.9	35.5	162 35.3	36.0					
9	20 19.4	300 00.7	26.5	215 34.6	50.2	325 59.8	35.6	177 37.9	35.9					
10	35 21.9	315 04.4	26.0	230 36.2	49.7	341 01.6	35.7	192 40.4	35.9					
11	50 24.4	330 08.1	+25 25.4	245 37.8	+7 49.3	356 03.5	+18 35.9	207 43.0	-6 35.9					
12	65 26.8	345 11.8	+25 24.8	260 39.4	+7 48.9	11 05.4	+18 36.0	222 45.6	-6 35.8					
13	80 29.3	0 15.5	24.3	275 41.0	48.5	26 07.2	36.1	237 48.1	35.8					
14	95 31.8	15 19.2	23.7	290 42.7	48.0	41 09.1	36.3	252 50.7	35.8					
15	110 34.2	30 22.9	23.1	305 44.3	47.6	56 11.0	36.4	267 53.3	35.7					
16	125 36.7	45 26.6	22.6	320 45.9	47.2	71 12.8	36.6	282 55.9	35.7					
17	140 39.1	60 30.3	+25 22.0	335 47.5	+7 46.7	86 14.7	+18 36.7	297 58.4	-6 35.7					
18	155 41.6	75 34.0	+25 21.4	350 49.1	+7 46.3	101 16.5	+18 36.8	313 01.0	-6 35.6					
19	170 44.1	90 37.7	20.9	5 50.7	45.9	116 18.4	37.0	328 03.6	35.6					
20	185 46.5	105 41.4	20.3	20 52.3	45.5	131 20.3	37.1	343 06.2	35.6					
21	200 49.0	120 45.2	19.7	35 53.9	45.0	146 22.1	37.3	358 08.7	35.5					
22	215 51.5	135 48.9	19.1	50 55.5	44.6	161 24.0	37.4	13 11.3	35.5					
23	230 53.9	150 52.6	18.5	65 57.1	44.2	176 25.9	37.5	28 13.9	35.5					
24	245 56.4	165 56.4	+25 18.0	80 58.7	+7 43.7	191 27.7	+18 37.7	43 16.4	-6 35.4					
Dif	—	+37	-6	+16	-4	+19	+1	+26	0					

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LUNES 28 DE MAYO DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 3			SD: 15 ^h 6 Edad: 7 ^d 0 PHE $\left\{ \begin{array}{l} 4^h: 57/2 \\ 12^h: 57/5 \\ 20^h: 57/7 \end{array} \right.$ PMG: 17 ^h 59 ^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	180	41.1	+ 21	29.3	98	52.4	+ 7	42.0	114	60 N	11	08	86	0	18
1	195	41.0		29.7	113	23.8		30.6	115	58		11	83	14	14
2	210	40.9		30.1	127	55.2		19.1	115	56		14	80	10	17
3	225	40.8		30.5	142	26.7		+ 7	07.6	54		16	78	07	19
4	240	40.7		30.9	156	58.1		+ 6	56.0	52		19	75	04	21
5	255	40.7	+ 21	31.3	171	29.5		+ 6	44.4	50		11	21	73	0
6	270	40.6	+ 21	31.7	186	00.9		+ 6	32.7	45		11	25	69	***
7	285	40.5		32.1	200	32.3			21.0	40		29	66	***	***
8	300	40.4		32.5	215	03.7		+ 6	09.3	35		32	63	***	***
9	315	40.4		32.9	229	35.1		+ 5	57.5	30		35	60	***	***
10	330	40.3		33.3	244	06.4			45.6	20		39	56	***	***
11	345	40.2	+ 21	33.7	258	37.8		+ 5	33.7	10 N		11	44	51	***
12	0	40.1	+ 21	34.1	273	09.1		+ 5	21.8	0		11	48	47	***
13	15	40.0		34.5	287	40.4		+ 5	09.8	10 S		51	45	***	***
14	30	39.9		34.9	302	11.7		+ 4	57.8	20		11	56	40	***
15	45	39.9		35.3	316	43.0			45.8	30		12	00	36	***
16	60	39.8		35.6	331	14.2			33.7	35		03	33	***	***
17	75	39.7	+ 21	36.0	345	45.5		+ 4	21.6	40		12	06	31	***
18	90	39.6	+ 21	36.4	0	16.7		+ 4	09.5	45		12	10	27	23
19	105	39.5		36.8	14	47.9		+ 3	57.3	50		14	23	55	75
20	120	39.5		37.2	29	19.1			45.0	52		16	21	54	77
21	135	39.4		37.6	43	50.3			32.8	54		18	20	53	79
22	150	39.3		38.0	58	21.4			20.5	56		21	17	52	81
23	165	39.2		38.4	72	52.5		+ 3	08.2	58		23	15	50	84
24	180	39.1	+ 21	38.7	87	23.6		+ 2	55.8	60 S		12	26	12	23

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 7 ^h 35 ^m 0		Mag.: -4.1 PMG: 12 ^h 53 ^m		Mag.: +0.5 PMG: 18 ^h 34 ^m		Mag.: -2.0 PMG: 11 ^h 13 ^m		Mag.: +0.5 PMG: 21 ^h 03 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']				
0	245	56.4	165	56.4	+ 25	18.0	191	27.7	+ 18	37.7				
1	260	58.9	181	00.1		17.4	206	29.6		37.8				
2	276	01.3	196	03.8		16.8	221	31.4		37.9				
3	291	03.8	211	07.6		16.2	236	33.3		38.1				
4	306	06.3	226	11.3		15.6	251	35.2		38.2				
5	321	08.7	241	15.1	+ 25	15.1	266	37.0	+ 18	38.4				
6	336	11.2	256	18.8	+ 25	14.5	281	38.9	+ 18	38.5				
7	351	13.6	271	22.6		13.9	296	40.8		38.6				
8	6	16.1	286	26.3		13.3	311	42.6		38.8				
9	21	18.6	301	30.1		12.7	326	44.5		38.9				
10	36	21.0	316	33.9		12.1	341	46.3		39.0				
11	51	23.5	331	37.6	+ 25	11.5	356	48.2	+ 18	39.2				
12	66	26.0	346	41.4	+ 25	10.9	11	50.1	+ 18	39.3				
13	81	28.4	1	45.2		10.3	26	51.9		39.4				
14	96	30.9	16	49.0		09.8	41	53.8		39.6				
15	111	33.4	31	52.7		09.2	56	55.7		39.7				
16	126	35.8	46	56.5		08.6	71	57.5		39.9				
17	141	38.3	62	00.3	+ 25	08.0	86	59.4	+ 18	40.0				
18	156	40.7	77	04.1	+ 25	07.4	102	01.2	+ 18	40.1				
19	171	43.2	92	07.9		06.8	117	03.1		40.3				
20	186	45.7	107	11.7		06.2	132	05.0		40.4				
21	201	48.1	122	15.5		05.6	147	06.8		40.5				
22	216	50.6	137	19.3		05.0	162	08.7		40.7				
23	231	53.1	152	23.1		04.4	177	10.6		40.8				
24	246	55.5	167	26.9	+ 25	03.7	192	12.4	+ 18	41.0				
Dif	—		+38		-6		+19		+1		+26		0	

MARTES 29 DE MAYO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 5		SD: 15 ^h 8 Edad: 8 ^d 0		PHE { 4 ^h : 58/0 12 ^h : 58/3 20 ^h : 58/6												
	PMG: 18 ^h 47 ^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	180 39.1	+ 21 38.7	87 23.6		+ 2 55.8	123	60 N	21 03	22 24	** **	12 34 88		0 30 12				
1	195 39.0		101 54.7	121	43.5	123	58	20 45	21 51	** **	34 85		28 15				
2	210 39.0		116 25.7	120	31.1	124	56	31	28	23 31	34 83		27 17				
3	225 38.9		130 56.7	120	18.6	125	54	18	21 09	22 32	34 80		26 19				
4	240 38.8		145 27.7	120	+ 2 06.2	124	52	20 07	20 53	22 02	34 78		25 21				
5	255 38.7	+ 21 40.7	159 58.7	120	+ 1 53.7	125	50	19 58	20 40	21 40	12 34 76		0 24 23				
6	270 38.6	+ 21 41.0	174 29.6	119	+ 1 41.2	125	45	19 37	20 13	21 00	12 34 72		0 22 27				
7	285 38.5	41.4	189 00.5	119	28.7	125	40	21	19 53	20 33	35 68		20 31				
8	300 38.5	41.8	203 31.3	118	16.1	126	35	19 07	36	20 12	35 65		18 34				
9	315 38.4	42.2	218 02.2	119	+ 1 03.5	126	30	18 55	19 22	19 55	35 62		17 36				
10	330 38.3	42.5	232 32.9	117	+ 0 50.9	126	20	35	18 59	28	35 58		15 40				
11	345 38.2	+ 21 42.9	247 03.7	118	+ 0 38.3	126	10 N	18 17	18 40	19 07	12 35 54		0 12 45				
12	0 38.1	+ 21 43.3	261 34.4	117	+ 0 25.7	126	0	18 01	18 23	18 49	12 35 50		0 10 49				
13	15 38.0	43.7	276 05.1	117	13.0	127	10 S	17 45	18 08	34	36 45		08 52				
14	30 38.0	44.0	290 35.8	117	+ 0 00.4	126	20	28	17 52	19	36 41		06 56				
15	45 37.9	44.4	305 06.4	116	- 0 12.3	127	30	17 08	34	18 04	36 37		03 61				
16	60 37.8	44.8	319 36.9	115	25.0	127	35	16 57	25	17 56	36 35		02 63				
17	75 37.7	+ 21 45.2	334 07.5	116	- 0 37.7	127	40	16 44	17 14	17 48	12 37 31		0 00 67				
18	90 37.6	+ 21 45.5	348 37.9	114	- 0 50.4	127	45	16 29	17 02	17 39	12 37 28		** ** *				
19	105 37.5	45.9	3 08.4	115	- 1 03.2	128	50	10	16 48	28	37 24		** ** *				
20	120 37.4	46.3	17 38.8	114	15.9	127	52	16 01	41	24	37 22		** ** *				
21	135 37.4	46.7	32 09.1	113	28.7	128	54	15 52	34	19	38 19		** ** *				
22	150 37.3	47.0	46 39.5	114	41.4	127	56	40	26	13	38 17		** ** *				
23	165 37.2	47.4	61 09.7	112	- 1 54.2	128	58	27	17	08	38 15		** ** *				
24	180 37.1	+ 21 47.8	75 39.9	112	- 2 07.0	128	60 S	15 12	16 06	17 01	12 38 13		** ** *				
UT	ARIES PMG 7 ^h 31 ^m 1		VENUS Mag.: -4.1 PMG: 12 ^h 47 ^m		MARTE Mag.: +0.5 PMG: 18 ^h 32 ^m		JÚPITER Mag.: -2.0 PMG: 11 ^h 10 ^m		SATURNO Mag.: +0.5 PMG: 20 ^h 59 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	°	h m	h m	h m	h m m		h m m	h m m			
0	246 55.5	167 26.9	+ 25 03.7	81 37.1	+ 7 33.4	192 12.4	+ 18 41.0	44 18.1	- 6 34.7								
1	261 58.0	182 30.7	03.1	96 38.7	32.9	207 14.3	41.1	59 20.7	34.6								
2	277 00.5	197 34.6	02.5	111 40.3	32.5	222 16.2	41.2	74 23.2	34.6								
3	292 02.9	212 38.4	01.9	126 41.8	32.1	237 18.0	41.4	89 25.8	34.6								
4	307 05.4	227 42.2	01.3	141 43.4	31.6	252 19.9	41.5	104 28.4	34.5								
5	322 07.9	242 46.0	+ 25 00.7	156 45.0	+ 7 31.2	267 21.7	+ 18 41.6	119 30.9	- 6 34.5								
6	337 10.3	257 49.8	+ 25 00.1	171 46.6	+ 7 30.8	282 23.6	+ 18 41.8	134 33.5	- 6 34.5								
7	352 12.8	272 53.7	+ 24 59.5	186 48.2	30.3	297 25.5	41.9	149 36.1	34.5								
8	7 15.2	287 57.5	58.9	201 49.8	29.9	312 27.3	42.0	164 38.6	34.4								
9	22 17.7	303 01.4	58.2	216 51.4	29.5	327 29.2	42.2	179 41.2	34.4								
10	37 20.2	318 05.2	57.6	231 53.0	29.0	342 31.1	42.3	194 43.8	34.4								
11	52 22.6	333 09.0	+ 24 57.0	246 54.6	+ 7 28.6	357 32.9	+ 18 42.5	209 46.3	- 6 34.3								
12	67 25.1	348 12.9	+ 24 56.4	261 56.1	+ 7 28.2	12 34.8	+ 18 42.6	224 48.9	- 6 34.3								
13	82 27.6	3 16.7	55.8	276 57.7	27.7	27 36.6	42.7	239 51.5	34.3								
14	97 30.0	18 20.6	55.2	291 59.3	27.3	42 38.5	42.9	254 54.0	34.2								
15	112 32.5	33 24.4	54.5	307 00.9	26.8	57 40.4	43.0	269 56.6	34.2								
16	127 35.0	48 28.3	53.9	322 02.5	26.4	72 42.2	43.1	284 59.2	34.2								
17	142 37.4	63 32.2	+ 24 53.3	337 04.1	+ 7 26.0	87 44.1	+ 18 43.3	300 01.7	- 6 34.1								
18	157 39.9	78 36.0	+ 24 52.7	352 05.6	+ 7 25.5	102 46.0	+ 18 43.4	315 04.3	- 6 34.1								
19	172 42.3	93 39.9	52.0	7 07.2	25.1	117 47.8	43.5	330 06.9	34.1								
20	187 44.8	108 43.8	51.4	22 08.8	24.7	132 49.7	43.7	345 09.4	34.1								
21	202 47.3	123 47.6	50.8	37 10.4	24.2	147 51.6	43.8	0 12.0	34.0								
22	217 49.7	138 51.5	50.1	52 12.0	23.8	162 53.4	43.9	15 14.6	34.0								
23	232 52.2	153 55.4	49.5	67 13.6	23.3	177 55.3	44.1	30 17.1	34.0								
24	247 54.7	168 59.3	+ 24 48.9	82 15.1	+ 7 22.9	192 57.1	+ 18 44.2	45 19.7	- 6 33.9								
Dif	—	+38	-6	+16	-4	+19	+1	+26	0								

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MIÉRCOL 30 DE MAYO DE 2012

UT	SOL		LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 6		SD: 16 ^h 0 Edad: 9 ^d 0		PHE { 4 ^h : 58 ^h 8 12 ^h : 59 ^h 1 20 ^h : 59 ^h 4			R°: 53 ^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	
0	180 37.1	+ 21 47.8	75 39.9		- 2 07.0	128	60 N	** ** 1 31	2 52	14 02	93	0 42	13	
1	195 37.0		90 10.1	112	19.8	128	58	** ** 2 03	3 09	13 59	89	43 16	43 16	
2	210 36.9		104 40.2	111	32.5	127	56	0 24	27	57 86		44 19	44 19	
3	225 36.8		119 10.3	111	45.3	128	54	1 23	2 46	54 84		45 21	45 21	
4	240 36.7		133 40.3	110	- 2 58.1	128	52	1 53	3 01	52 81		46 23	46 23	
5	255 36.7	+ 21 49.6	148 10.3	110	- 3 10.9	128	50	2 15	3 15	3 57	13 50	79	0 47 25	
6	270 36.6	+ 21 50.0	162 40.2	109	- 3 23.7	128	45	2 54	3 41	4 18	13 46	75	0 49 29	
7	285 36.5		177 10.0	108	36.5	128	40	3 22	4 02	34	43 70	51 32	51 32	
8	300 36.4		191 39.8	108	- 3 49.2	127	35	3 43	19	4 48	40 67	52 35	52 35	
9	315 36.3		206 09.6	108	- 4 02.0	128	30	4 00	33	5 00	37 65	53 38	53 38	
10	330 36.2		220 39.3	107	14.8	128	20	27	4 56	20	33 60	55 43	55 43	
11	345 36.1	+ 21 51.8	235 08.9	106	- 4 27.5	127	10 N	4 48	5 15	5 38	13 29	56	0 57 47	
12	0 36.0	+ 21 52.1	249 38.5	106	- 4 40.3	128	0	5 06	5 32	5 54	13 25	52	0 59 50	
13	15 35.9		264 08.0	105	- 4 53.0	127	10 S	21	5 48	6 10	21 49	1 00 55	1 00 55	
14	30 35.9		278 37.4	104	- 5 05.7	127	20	36	6 04	27	17 45	02 59	02 59	
15	45 35.8		293 06.8	104	18.5	128	30	51	21	47	13 40	04 64	04 64	
16	60 35.7		307 36.2	104	31.2	127	35	5 59	30	6 58	11 37	05 67	05 67	
17	75 35.6	+ 21 53.9	322 05.4	102	- 5 43.8	126	40	6 08	6 41	7 11	13 08	34	1 07 69	
18	90 35.5	+ 21 54.3	336 34.6	102	- 5 56.5	127	45	6 17	6 53	7 27	13 05	30	1 08 73	
19	105 35.4		351 03.8	102	- 6 09.2	127	50	27	7 08	45	13 01	26	10 77	
20	120 35.3		5 32.8	100	21.8	126	52	32	15	7 54	12 59	25	11 79	
21	135 35.2		20 01.8	100	34.4	126	54	37	22	8 04	57 23	12 81	12 81	
22	150 35.1		34 30.8	100	47.0	126	56	42	30	16	55 20	13 84	13 84	
23	165 35.0		48 59.7	99	- 6 59.5	125	58	48	39	29	53 17	14 87	14 87	
24	180 35.0	+ 21 56.4	63 28.5	98	- 7 12.1	126	60 S	6 55	7 49	8 44	12 51	14	1 15 90	
UT	ARIES PMG 7 ^h 27 ^m 1		VENUS Mag.: -4.0 PMG: 12 ^h 41 ^m		MARTE Mag.: +0.5 PMG: 18 ^h 29 ^m		JÚPITER Mag.: -2.0 PMG: 11 ^h 07 ^m		SATURNO Mag.: +0.5 PMG: 20 ^h 55 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	′	°	′	°	′	°	′	°	′				
0	247 54.7	168 59.3	+ 24 48.9		82 15.1	+ 7 22.9	192 57.1	+ 18 44.2	45 19.7	- 6 33.9	45 19.7	- 6 33.9		
1	262 57.1	184 03.1		48.3	97 16.7	22.5	207 59.0		44.4	60 22.3		33.9		
2	277 59.6	199 07.0		47.6	112 18.3	22.0	223 00.9		44.5	75 24.8		33.9		
3	293 02.1	214 10.9		47.0	127 19.9	21.6	238 02.7		44.6	90 27.4		33.8		
4	308 04.5	229 14.8		46.3	142 21.4	21.1	253 04.6		44.8	105 29.9		33.8		
5	323 07.0	244 18.7	+ 24 45.7		157 23.0	+ 7 20.7	268 06.5	+ 18 44.9		120 32.5	- 6 33.8			
6	338 09.5	259 22.6	+ 24 45.1		172 24.6	+ 7 20.3	283 08.3	+ 18 45.0		135 35.1	- 6 33.8			
7	353 11.9	274 26.5		44.4	187 26.2	19.8	298 10.2		45.2	150 37.6		33.7		
8	8 14.4	289 30.4		43.8	202 27.8	19.4	313 12.0		45.3	165 40.2		33.7		
9	23 16.8	304 34.3		43.2	217 29.3	18.9	328 13.9		45.4	180 42.8		33.7		
10	38 19.3	319 38.2		42.5	232 30.9	18.5	343 15.8		45.6	195 45.3		33.6		
11	53 21.8	334 42.1	+ 24 41.9		247 32.5	+ 7 18.1	358 17.6	+ 18 45.7		210 47.9	- 6 33.6			
12	68 24.2	349 46.0	+ 24 41.2		262 34.1	+ 7 17.6	13 19.5	+ 18 45.8		225 50.5	- 6 33.6			
13	83 26.7	4 49.9		40.6	277 35.6	17.2	28 21.4		46.0	240 53.0		33.6		
14	98 29.2	19 53.9		39.9	292 37.2	16.7	43 23.2		46.1	255 55.6		33.5		
15	113 31.6	34 57.8		39.3	307 38.8	16.3	58 25.1		46.2	270 58.1		33.5		
16	128 34.1	50 01.7		38.6	322 40.4	15.8	73 27.0		46.4	286 00.7		33.5		
17	143 36.6	65 05.6	+ 24 38.0		337 41.9	+ 7 15.4	88 28.8	+ 18 46.5		301 03.3	- 6 33.4			
18	158 39.0	80 09.5	+ 24 37.3		352 43.5	+ 7 15.0	103 30.7	+ 18 46.6		316 05.8	- 6 33.4			
19	173 41.5	95 13.5		36.7	7 45.1	14.5	118 32.6		46.8	331 08.4		33.4		
20	188 44.0	110 17.4		36.0	22 46.6	14.1	133 34.4		46.9	346 11.0		33.3		
21	203 46.4	125 21.3		35.4	37 48.2	13.6	148 36.3		47.1	1 13.5		33.3		
22	218 48.9	140 25.3		34.7	52 49.8	13.2	163 38.1		47.2	16 16.1		33.3		
23	233 51.3	155 29.2		34.1	67 51.3	12.7	178 40.0		47.3	31 18.6		33.3		
24	248 53.8	170 33.2	+ 24 33.4		82 52.9	+ 7 12.3	193 41.9	+ 18 47.5		46 21.2	- 6 33.2			
Dif	—	+39	-6		+16	-4	+19	+1		+26		0		

JUEVES 31 DE MAYO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 7		SD: 16 ^h 2 Edad: 10 ^d 0 PHE { 4 ^h : 59 ^m 6 12 ^h : 59 ^m 9 20 ^h : 60 ^m 1											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora R°	Hora R°		
^h 0	180 35.0	+ 21 56.4	63 28.5	97	— 7 12.1	125	60 N	21 06	22 30	15 35 94	0 55 15			
1	195 34.9	56.8	77 57.2	96	— 7 24.6	125	58	20 49	21 56	28 92	0 59 19			
2	210 34.8	57.1	92 25.8	96	— 7 37.1	124	56	34	31	23 88	1 03 22			
3	225 34.7	57.5	106 54.4	95	— 7 49.5	125	54	21	21 12	18 85	06 24			
4	240 34.6	57.8	121 22.9	95	— 8 02.0	123	52	10	20 56	13 84	09 26			
5	255 34.5	+ 21 58.2	135 51.4	93	— 8 14.3	123	50	20 00	20 43	15 09 81	1 12 28			
6	270 34.4	+ 21 58.5	150 19.7	93	— 8 26.7	124	45	19 39	20 15	15 01 76	1 18 32			
7	285 34.3	58.9	164 48.0	93	— 8 39.0	123	40	22	19 54	14 53 74	23 35			
8	300 34.2	59.2	179 16.3	93	— 8 51.3	123	35	19 08	37 20	47 70	27 39			
9	315 34.1	59.5	193 44.4	91	— 9 03.6	123	30	18 56	23 19	56 42	67 31			
10	330 34.0	+ 21 59.9	208 12.5	91	— 9 15.8	122	20	36	19 00	29 33	63 38			
11	345 33.9	+ 22 00.2	222 40.4	89	— 9 27.9	121	10 N	18 18	18 41	19 07	14 25 59			
12	0 33.8	+ 22 00.6	237 08.3	89	— 9 40.0	121	0	18 01	18 24	18 50	14 17 55			
13	15 33.8	00.9	251 36.2	89	— 9 52.1	121	10 S	17 45	18 08	34 10	51 1 55			
14	30 33.7	01.3	266 03.9	87	— 10 04.2	121	20	28	17 52	19 14	02 48			
15	45 33.6	01.6	280 31.6	87	— 10 16.1	119	30	17 08	34 18	04 13	53 43			
16	60 33.5	02.0	294 59.2	86	— 10 28.1	120	35	16 56	24 17	56 48	41 12			
17	75 33.4	+ 22 02.3	309 26.7	85	— 10 40.0	119	40	16 43	17 13	17 47	13 42 38			
18	90 33.3	+ 22 02.6	323 54.1	84	— 10 51.8	118	45	16 28	17 01	17 38	13 35 35			
19	105 33.2	03.0	338 21.4	83	— 11 03.6	118	50	09	16 46	27 27	31 27			
20	120 33.1	03.3	352 48.7	83	— 11 15.3	117	52	16 00	40 22	24 24	28 30			
21	135 33.0	03.7	7 15.9	82	— 11 27.0	117	54	15 50	32 17	20 20	26 33			
22	150 32.9	04.0	21 43.0	81	— 11 38.6	116	56	38	24 12	15 15	24 37			
23	165 32.8	04.3	36 10.0	80	— 11 50.1	115	58	25	15 17	06 10	22 41			
24	180 32.7	+ 22 04.7	50 36.9	79	— 12 01.6	115	60 S	15 10	16 04	16 59	13 05 18			

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 7 ^h 23 ^m 2		Mag.: −4.0 PMG: 12 ^h 34 ^m		Mag.: +0.5 PMG: 18 ^h 27 ^m		Mag.: −2.0 PMG: 11 ^h 04 ^m		Mag.: +0.5 PMG: 20 ^h 51 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
^h 0	248 53.8	170 33.2	+ 24 33.4	82 52.9	+ 7 12.3	193 41.9	+ 18 47.5	46 21.2	— 6 33.2	
1	263 56.3	185 37.1	32.8	97 54.5	11.9	208 43.7	47.6	61 23.8	33.2	
2	278 58.7	200 41.0	32.1	112 56.0	11.4	223 45.6	47.7	76 26.3	33.2	
3	294 01.2	215 45.0	31.4	127 57.6	11.0	238 47.5	47.9	91 28.9	33.1	
4	309 03.7	230 48.9	30.8	142 59.2	10.5	253 49.3	48.0	106 31.4	33.1	
5	324 06.1	245 52.9	+ 24 30.1	158 00.7	+ 7 10.1	268 51.2	+ 18 48.1	121 34.0	— 6 33.1	
6	339 08.6	260 56.9	+ 24 29.5	173 02.3	+ 7 09.6	283 53.1	+ 18 48.3	136 36.6	— 6 33.1	
7	354 11.1	276 00.8	28.8	188 03.9	09.2	298 54.9	48.4	151 39.1	33.0	
8	9 13.5	291 04.8	28.1	203 05.4	08.7	313 56.8	48.5	166 41.7	33.0	
9	24 16.0	306 08.7	27.5	218 07.0	08.3	328 58.6	48.7	181 44.2	33.0	
10	39 18.4	321 12.7	26.8	233 08.6	07.8	344 00.5	48.8	196 46.8	33.0	
11	54 20.9	336 16.7	+ 24 26.1	248 10.1	+ 7 07.4	359 02.4	+ 18 48.9	211 49.4	— 6 32.9	
12	69 23.4	351 20.6	+ 24 25.5	263 11.7	+ 7 07.0	14 04.2	+ 18 49.1	226 51.9	— 6 32.9	
13	84 25.8	6 24.6	24.8	278 13.3	06.5	29 06.1	49.2	241 54.5	32.9	
14	99 28.3	21 28.6	24.1	293 14.8	06.1	44 08.0	49.3	256 57.0	32.8	
15	114 30.8	36 32.5	23.5	308 16.4	05.6	59 09.8	49.5	271 59.6	32.8	
16	129 33.2	51 36.5	22.8	323 17.9	05.2	74 11.7	49.6	287 02.2	32.8	
17	144 35.7	66 40.5	+ 24 22.1	338 19.5	+ 7 04.7	89 13.6	+ 18 49.7	302 04.7	— 6 32.8	
18	159 38.2	81 44.5	+ 24 21.4	353 21.1	+ 7 04.3	104 15.4	+ 18 49.9	317 07.3	— 6 32.7	
19	174 40.6	96 48.5	20.8	8 22.6	03.8	119 17.3	50.0	332 09.8	32.7	
20	189 43.1	111 52.4	20.1	23 24.2	03.4	134 19.2	50.1	347 12.4	32.7	
21	204 45.6	126 56.4	19.4	38 25.7	02.9	149 21.0	50.3	2 15.0	32.7	
22	219 48.0	142 00.4	18.7	53 27.3	02.5	164 22.9	50.4	17 17.5	32.6	
23	234 50.5	157 04.4	18.1	68 28.9	02.0	179 24.7	50.5	32 20.1	32.6	
24	249 52.9	172 08.4	+ 24 17.4	83 30.4	+ 7 01.6	194 26.6	+ 18 50.7	47 22.6	— 6 32.6	
Dif	—	+40	−7	+16	−4	+19	+1	+26	0	

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VIERNES 1 DE JUNIO DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 57 ^m 9			SD: 16 ^h 4 Edad: 11 ^d 0 PHE { 4 ^h : 60 ^h 4 12 ^h : 60 ^h 6 20 ^h : 60 ^h 7														
	PMG: 21 ^h 26 ^m R°: 60 ^m																	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	180	32.7	+ 22	04.7	50	36.9	- 12	01.6	60 N	** **	1 25	2 49	17 09	95	1 10	21		
1	195	32.6		05.0	65	03.7	78	13.0	58	** **	2 00	3 07	17 00	90	18	23		
2	210	32.5		05.3	79	30.5	78	24.4	56	** **	24	22	16 51	88	24	27		
3	225	32.4		05.7	93	57.1	76	35.6	54	1 17	43	34	43	86	30	29		
4	240	32.3		06.0	108	23.7	76	46.9	52	1 49	2 59	46	37	83	35	31		
5	255	32.2	+ 22	06.3	122	50.2	75	- 12	50	2 12	3 13	3 56	16 30	82	1 40	33		
6	270	32.1	+ 22	06.7	137	16.6	74	- 13	45	2 53	3 40	4 16	16 17	78	1 50	37		
7	285	32.0		07.0	151	42.9	73	20.1	40	3 21	4 01	33	16 07	74	1 58	41		
8	300	32.0		07.3	166	09.2	73	31.0	35	3 42	18	47	15 57	72	2 06	44		
9	315	31.9		07.7	180	35.3	71	41.9	30	4 00	32	4 59	49	70	12	46		
10	330	31.8		08.0	195	01.3	70	- 13	20	27	4 56	5 20	36	65	24	50		
11	345	31.7	+ 22	08.3	209	27.3	70	- 14	10 N	4 48	5 15	5 38	15 24	62	2 34	53		
12	0	31.6	+ 22	08.7	223	53.2	69	- 14	0	5 06	5 32	5 54	15 12	60	2 43	57		
13	15	31.5		09.0	238	19.0	68	24.4	10 S	22	5 48	6 11	15 01	57	2 52	61		
14	30	31.4		09.3	252	44.7	67	34.9	20	37	6 04	28	14 50	53	3 02	64		
15	45	31.3		09.6	267	10.3	66	45.2	30	5 52	22	48	36	50	14	68		
16	60	31.2		10.0	281	35.8	65	- 14	35	6 00	32	6 59	29	47	20	71		
17	75	31.1	+ 22	10.3	296	01.3	65	- 15	40	6 09	6 43	7 13	14 20	44	3 28	74		
18	90	31.0	+ 22	10.6	310	26.6	63	- 15	45	6 18	6 55	7 28	14 10	41	3 37	77		
19	105	30.9		10.9	324	51.9	63	25.7	50	29	7 10	47	13 58	37	47	82		
20	120	30.8		11.3	339	17.0	61	35.6	52	34	17	7 56	52	36	52	84		
21	135	30.7		11.6	353	42.1	61	45.4	54	39	24	8 07	46	34	3 58	86		
22	150	30.6		11.9	8	07.1	60	- 15	56	44	32	18	39	31	4 04	88		
23	165	30.5		12.2	22	32.0	59	- 16	58	50	42	31	32	28	11	91		
24	180	30.4	+ 22	12.5	36	56.9	59	- 16	60 S	6 57	7 52	8 47	13 23	25	4 19	95		
UT	ARIES PMG 7 ^h 19 ^m 3		VENUS Mag.: -3.9 PMG: 12 ^h 28 ^m		MARTE Mag.: +0.5 PMG: 18 ^h 24 ^m		JÚPITER Mag.: -2.0 PMG: 11 ^h 01 ^m		SATURNO Mag.: +0.5 PMG: 20 ^h 47 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec									
	°	°	'	°	'	°	'	°	'									
h	249	52.9	172	08.4	+ 24	17.4	83	30.4	+ 7	01.6	194	26.6	+ 18	50.7	47	22.6	- 6	32.6
1	264	55.4	187	12.4		16.7	98	32.0		01.1	209	28.5		50.8	62	25.2		32.5
2	279	57.9	202	16.4		16.0	113	33.5		00.7	224	30.3		50.9	77	27.7		32.5
3	295	00.3	217	20.4		15.3	128	35.1	+ 7	00.2	239	32.2		51.1	92	30.3		32.5
4	310	02.8	232	24.4		14.7	143	36.6	+ 6	59.8	254	34.1		51.2	107	32.9		32.5
5	325	05.3	247	28.4	+ 24	14.0	158	38.2	+ 6	59.3	269	35.9	+ 18	51.3	122	35.4	- 6	32.4
6	340	07.7	262	32.4	+ 24	13.3	173	39.7	+ 6	58.9	284	37.8	+ 18	51.5	137	38.0	- 6	32.4
7	355	10.2	277	36.4		12.6	188	41.3		58.4	299	39.7		51.6	152	40.5		32.4
8	10	12.7	292	40.4		11.9	203	42.9		58.0	314	41.5		51.7	167	43.1		32.4
9	25	15.1	307	44.4		11.2	218	44.4		57.5	329	43.4		51.9	182	45.6		32.3
10	40	17.6	322	48.4		10.5	233	46.0		57.1	344	45.3		52.0	197	48.2		32.3
11	55	20.1	337	52.5	+ 24	09.9	248	47.5	+ 6	56.6	359	47.1	+ 18	52.1	212	50.8	- 6	32.3
12	70	22.5	352	56.5	+ 24	09.2	263	49.1	+ 6	56.2	14	49.0	+ 18	52.3	227	53.3	- 6	32.2
13	85	25.0	8	00.5		08.5	278	50.6		55.7	29	50.9		52.4	242	55.9		32.2
14	100	27.4	23	04.5		07.8	293	52.2		55.3	44	52.7		52.5	257	58.4		32.2
15	115	29.9	38	08.5		07.1	308	53.7		54.8	59	54.6		52.7	273	01.0		32.2
16	130	32.4	53	12.5		06.4	323	55.3		54.4	74	56.4		52.8	288	03.5		32.1
17	145	34.8	68	16.6	+ 24	05.7	338	56.8	+ 6	53.9	89	58.3	+ 18	52.9	303	06.1	- 6	32.1
18	160	37.3	83	20.6	+ 24	05.0	353	58.4	+ 6	53.5	105	00.2	+ 18	53.1	318	08.6	- 6	32.1
19	175	39.8	98	24.6		04.3	8	59.9		53.0	120	02.0		53.2	333	11.2		32.1
20	190	42.2	113	28.7		03.6	24	01.5		52.6	135	03.9		53.3	348	13.8		32.0
21	205	44.7	128	32.7		02.9	39	03.0		52.1	150	05.8		53.5	3	16.3		32.0
22	220	47.2	143	36.7		02.2	54	04.6		51.7	165	07.6		53.6	18	18.9		32.0
23	235	49.6	158	40.7		01.5	69	06.1		51.2	180	09.5		53.7	33	21.4		32.0
24	250	52.1	173	44.8	+ 24	00.8	84	07.6	+ 6	50.8	195	11.4	+ 18	53.9	48	24.0	- 6	31.9
Dif	—	+40	-7		+16	-5			+19	+1			+26					0

SÁBADO 2 DE JUNIO DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 1		SD: 16 ^h 6 Edad: 12 ^d 0 PHE { 4 ^h : 60 ^h 9 12 ^h : 61 ^h 0 20 ^h : 61 ^h 1 PMG: 22 ^h 26 ^m R°: 63 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	180	30.4	+ 22	12.5	36	56.9	− 16	14.2	21 10	22 37	18 44	87	1 31	29	
1	195	30.3		12.9	51	21.6		23.5	20 52	22 00	30 84		41	33	
2	210	30.2		13.2	65	46.3		32.8	36	21 35	19 82		51	35	
3	225	30.1		13.5	80	10.8		42.0	23	21 15	22 44		09 80		
4	240	30.0		13.8	94	35.3	− 16	51.0	12	20 59	22 10	18 00	78	2 06	
5	255	29.9	+ 22	14.1	108	59.7	− 17	00.0	20 02	20 45	21 46	17 52	77	2 13	
6	270	29.8	+ 22	14.5	123	24.0	− 17	08.8	19 41	20 17	21 05	17 35	74	2 27	
7	285	29.7		14.8	137	48.3		17.5	24	19 56	20 37	21 72		39	
8	300	29.6		15.1	152	12.4		26.1	19 09	39	20 15	17 09	70	50	
9	315	29.5		15.4	166	36.5		34.6	18 57	24	19 57	16 59	69	2 58	
10	330	29.4		15.7	181	00.5		43.0	36	19 01	30	41 67		3 14	
11	345	29.3	+ 22	16.0	195	24.4	− 17	51.2	18 18	18 41	19 08	16 26	64	3 27	
12	0	29.2	+ 22	16.3	209	48.3	− 17	59.4	18 02	18 24	18 50	16 12	62	3 40	
13	15	29.1		16.6	224	12.0	− 18	07.4	17 45	18 08	34	15 58	60	3 53	
14	30	29.0		17.0	238	35.7		15.2	28	17 51	19	43 58		4 06	
15	45	28.9		17.3	252	59.3		23.0	17 08	34	18 03	26 55		22 69	
16	60	28.8		17.6	267	22.8		30.6	16 56	24	17 55	16 54		31 71	
17	75	28.7	+ 22	17.9	281	46.3	− 18	38.1	16 43	17 13	17 46	15 04	52	4 42	
18	90	28.6	+ 22	18.2	296	09.7	− 18	45.5	16 27	17 00	17 37	14 51	50	4 54	
19	105	28.5		18.5	310	33.0		52.7	16 07	16 45	26	35 47		5 09	
20	120	28.4		18.8	324	56.2	− 18	59.8	15 58	38	21	28 45		16 81	
21	135	28.3		19.1	339	19.4	− 19	06.7	48	31	16	20 43		24 83	
22	150	28.2		19.4	353	42.5		13.6	36	22	11	10 42		32 86	
23	165	28.1		19.7	8	05.6		20.2	23	13	17 04	14 00	39	42 88	
24	180	28.0	+ 22	20.0	22	28.5	− 19	26.8	15 07	16 02	16 58	13 48	36	5 54	
UT	ARIES PMG 7 ^h 15 ^m 3		VENUS Mag.: −3.9 PMG: 12 ^h 22 ^m		MARTE Mag.: +0.5 PMG: 18 ^h 22 ^m		JÚPITER Mag.: −2.0 PMG: 10 ^h 58 ^m		SATURNO Mag.: +0.5 PMG: 20 ^h 43 ^m						
	hG ♈		hG ♀ Dec		hG ♂ Dec		hG ♃ Dec		hG ♄ Dec						
	h	°	°	'	°	'	°	h m	h m	h m	h m	h m	m	h m	m
0	250	52.1	173	44.8	+ 24	00.8	84	07.6	+ 6	50.8	195	11.4	+ 18	53.9	
1	265	54.5	188	48.8	+ 24	00.1	99	09.2		50.3	210	13.2		54.0	
2	280	57.0	203	52.9	+ 23	59.4	114	10.7		49.8	225	15.1		54.1	
3	295	59.5	218	56.9		58.7	129	12.3		49.4	240	17.0		54.2	
4	311	01.9	234	00.9		58.0	144	13.8		48.9	255	18.8		54.4	
5	326	04.4	249	05.0	+ 23	57.3	159	15.4	+ 6	48.5	270	20.7	+ 18	54.5	
6	341	06.9	264	09.0	+ 23	56.6	174	16.9	+ 6	48.0	285	22.6	+ 18	54.6	
7	356	09.3	279	13.1		55.9	189	18.5		47.6	300	24.4		54.8	
8	11	11.8	294	17.1		55.2	204	20.0		47.1	315	26.3		54.9	
9	26	14.3	309	21.2		54.5	219	21.5		46.7	330	28.2		55.0	
10	41	16.7	324	25.2		53.8	234	23.1		46.2	345	30.0		55.2	
11	56	19.2	339	29.3	+ 23	53.1	249	24.6	+ 6	45.8	0	31.9	+ 18	55.3	
12	71	21.7	354	33.3	+ 23	52.4	264	26.2	+ 6	45.3	15	33.8	+ 18	55.4	
13	86	24.1	9	37.4		51.7	279	27.7		44.8	30	35.6		55.6	
14	101	26.6	24	41.4		51.0	294	29.2		44.4	45	37.5		55.7	
15	116	29.0	39	45.5		50.2	309	30.8		43.9	60	39.4		55.8	
16	131	31.5	54	49.5		49.5	324	32.3		43.5	75	41.2		56.0	
17	146	34.0	69	53.6	+ 23	48.8	339	33.9	+ 6	43.0	90	43.1	+ 18	56.1	
18	161	36.4	84	57.6	+ 23	48.1	354	35.4	+ 6	42.6	105	44.9	+ 18	56.2	
19	176	38.9	100	01.7		47.4	9	36.9		42.1	120	46.8		56.4	
20	191	41.4	115	05.8		46.7	24	38.5		41.6	135	48.7		56.5	
21	206	43.8	130	09.8		46.0	39	40.0		41.2	150	50.5		56.6	
22	221	46.3	145	13.9		45.2	54	41.5		40.7	165	52.4		56.8	
23	236	48.8	160	18.0		44.5	69	43.1		40.3	180	54.3		56.9	
24	251	51.2	175	22.0	+ 23	43.8	84	44.6	+ 6	39.8	195	56.1	+ 18	57.0	
Dif	—		+41		−7		+15		−5		+19		+1		
											+26		0		

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DOMINGO 3 DE JUNIO DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 2			SD: 16 ^h 7 Edad: 13 ^d 0 PHE { 4 ^h : 61 ^h 1 12 ^h : 61 ^h 2 20 ^h : 61 ^h 2 PMG: 23 ^h 29 ^m R°: 64 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
^h 0	180 28.0	+ 22 20.0		22 28.5		− 19 26.8		60 N	1 19	2 46	20 11	70	2 00	44	
1	195 27.9		20.3	36 51.4	39	33.2	64	58	1 56	3 04	19 54	70	14	46	
2	210 27.8		20.6	51 14.3	39	39.4	62	56	2 21		41 68		26	48	
3	225 27.7		20.9	65 37.1	38	45.6	62	54	1 12	41	29 68		37	50	
4	240 27.6		21.2	79 59.8	37	51.5	59	52	1 46	2 57	18 68		46	51	
5	255 27.5	+ 22 21.5		94 22.5	37	− 19 57.4	59	50	2 10	3 11	19 09	67	2 55	52	
6	270 27.3	+ 22 21.8		108 45.1	36	− 20 03.0	56	45	2 51	3 39	18 49	67	3 13	54	
7	285 27.2		22.1	123 07.7	36	08.6	56	40	3 19	4 00		33 66	27 56		
8	300 27.1		22.4	137 30.2	35	14.0	54	35	41		17 47	19 66	40 57		
9	315 27.0		22.7	151 52.6	34	19.2	52	30	3 59	32	4 59	18 08	65 31	58	
10	330 26.9		23.0	166 15.0	34	24.3	51	20	4 27	4 56	5 20	17 48	64 40	61	
11	345 26.8	+ 22 23.3		180 37.4	34	− 20 29.2	49	10 N	4 48	5 15	5 38	17 30	64 40	62	
12	0 26.7	+ 22 23.6		194 59.7	33	− 20 34.0	48	0	5 06	5 32	5 55	17 14	64 40	63	
13	15 26.6		23.9	209 22.0	33	38.6	46	10 S	22	5 48	6 11	16 58	63 40	65	
14	30 26.5		24.2	223 44.2	32	43.1	45	20	38	6 05	29	41 62	5 13	66	
15	45 26.4		24.5	238 06.4	32	47.4	43	30	5 53	23	6 49	21 61	31 68		
16	60 26.3		24.8	252 28.6	32	51.5	41	35	6 01	33	7 01	16 10	60 42	69	
17	75 26.2	+ 22 25.1		266 50.7	31	− 20 55.5	40	40	6 10	6 44	7 14	15 56	60 55	70	
18	90 26.1	+ 22 25.4		281 12.8	31	− 20 59.4	39	45	6 20	6 56	7 30	15 41	59 60	71	
19	105 26.0		25.7	295 34.9	31	− 21 03.0	36	50	31	7 12	49	22 58	28 73		
20	120 25.9		26.0	309 56.9	30	06.6	36	52	35	18	7 59	13 57	37 74		
21	135 25.8		26.3	324 18.9	30	09.9	33	54	41	26	8 09	15 03	57 47	74	
22	150 25.7		26.6	338 40.9	30	13.1	32	56	46	35	21	14 52	55 60	75	
23	165 25.6		26.8	353 02.8	29	16.2	31	58	52	44	34	39 54	7 10	77	
24	180 25.5	+ 22 27.1		7 24.7	29	− 21 19.0	28	60 S	6 59	7 55	8 50	14 24	53 70	79	
UT	ARIES PMG 7 ^h 11 ^m 4		VENUS Mag.: −3.8 PMG: 12 ^h 15 ^m		MARTE Mag.: +0.5 PMG: 18 ^h 19 ^m		JÚPITER Mag.: −2.0 PMG: 10 ^h 55 ^m		SATURNO Mag.: +0.6 PMG: 20 ^h 39 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
	° /		° /		° /		° /		° /						
^h 0	251 51.2		175 22.0	+ 23 43.8	84 44.6	+ 6 39.8	195 56.1	+ 18 57.0	49 25.2	− 6 31.3					
1	266 53.7		190 26.1	43.1	99 46.1	39.4	210 58.0	57.1	64 27.8	31.3					
2	281 56.2		205 30.2	42.4	114 47.7	38.9	225 59.9	57.3	79 30.3	31.3					
3	296 58.6		220 34.2	41.7	129 49.2	38.4	241 01.7	57.4	94 32.9	31.3					
4	312 01.1		235 38.3	40.9	144 50.8	38.0	256 03.6	57.5	109 35.4	31.2					
5	327 03.5		250 42.4	+ 23 40.2	159 52.3	+ 6 37.5	271 05.5	+ 18 57.7	124 38.0	− 6 31.2					
6	342 06.0		265 46.4	+ 23 39.5	174 53.8	+ 6 37.1	286 07.3	+ 18 57.8	139 40.5	− 6 31.2					
7	357 08.5		280 50.5	38.8	189 55.3	36.6	301 09.2	57.9	154 43.1	31.2					
8	12 10.9		295 54.6	38.0	204 56.9	36.1	316 11.1	58.1	169 45.6	31.2					
9	27 13.4		310 58.7	37.3	219 58.4	35.7	331 12.9	58.2	184 48.2	31.1					
10	42 15.9		326 02.7	36.6	234 59.9	35.2	346 14.8	58.3	199 50.7	31.1					
11	57 18.3		341 06.8	+ 23 35.9	250 01.5	+ 6 34.8	1 16.7	+ 18 58.5	214 53.3	− 6 31.1					
12	72 20.8		356 10.9	+ 23 35.1	265 03.0	+ 6 34.3	16 18.5	+ 18 58.6	229 55.8	− 6 31.1					
13	87 23.3		11 15.0	34.4	280 04.5	33.8	31 20.4	58.7	244 58.4	31.0					
14	102 25.7		26 19.1	33.7	295 06.1	33.4	46 22.3	58.8	260 00.9	31.0					
15	117 28.2		41 23.1	33.0	310 07.6	32.9	61 24.1	59.0	275 03.5	31.0					
16	132 30.7		56 27.2	32.2	325 09.1	32.5	76 26.0	59.1	290 06.0	31.0					
17	147 33.1		71 31.3	+ 23 31.5	340 10.6	+ 6 32.0	91 27.9	+ 18 59.2	305 08.6	− 6 30.9					
18	162 35.6		86 35.4	+ 23 30.8	355 12.2	+ 6 31.5	106 29.7	+ 18 59.4	320 11.1	− 6 30.9					
19	177 38.0		101 39.5	30.0	10 13.7	31.1	121 31.6	59.5	335 13.7	30.9					
20	192 40.5		116 43.6	29.3	25 15.2	30.6	136 33.5	59.6	350 16.2	30.9					
21	207 43.0		131 47.6	28.6	40 16.8	30.1	151 35.3	59.8	5 18.8	30.9					
22	222 45.4		146 51.7	27.8	55 18.3	29.7	166 37.2	+ 18 59.9	20 21.3	30.8					
23	237 47.9		161 55.8	27.1	70 19.8	29.2	181 39.1	+ 19 00.0	35 23.9	30.8					
24	252 50.4		176 59.9	+ 23 26.4	85 21.3	+ 6 28.8	196 40.9	+ 19 00.1	50 26.4	− 6 30.8					
Dif	—		+41	−7	+15	−5	+19	+1	+25	0					

LUNES 4 DE JUNIO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna	Puesta de Luna				
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 4		SD: 16 ^h 7 Edad: 14 ^d 0 PHE { 4 ^h : 61 ^m 1 12 ^h : 61 ^m 0 20 ^h : 60 ^m 9 PMG: **h **m R°: ***m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora R°	Hora R°				
^h 0	180 25.5	+ 22 27.1	7 24.7		− 21 19.0		60 N	^h 21 13	^h m 22 43	^h m 22 43	^h m 21 21	^h m 50	^h m 2 44	^h m 62		
1	195 25.4		21 46.7	30	21.7	27	58	20 54	22 04	** **	21 04	51	3 00	63		
2	210 25.2		36 08.6	29	24.3	26	56	39	21 38	** **	20 49	53	14	63		
3	225 25.1		50 30.4	28	26.7	24	54	25	18	22 49	37	54	27	63		
4	240 25.0		64 52.3	29	28.9	22	52	14	21 01	22 14	26	55	37	63		
5	255 24.9	+ 22 28.6	79 14.2	29	− 21 31.0	21	50	20 04	20 47	21 49	20 16	56	3 47	63		
6	270 24.8	+ 22 28.8	93 36.0	28	− 21 32.9	19	45	19 42	20 19	21 07	19 56	57	4 07	63		
7	285 24.7		107 57.9	29	34.6	17	40	25	19 57	20 38	39	59	23	64		
8	300 24.6		122 19.7	28	36.2	16	35	19 11	40	20 16	25	59	37	64		
9	315 24.5		136 41.6	29	37.6	14	30	18 58	25	19 58	19 13	60	4 49	64		
10	330 24.4		151 03.4	28	38.8	12	20	37	19 01	30	18 52	61	5 10	63		
11	345 24.3	+ 22 30.3	165 25.3	29	− 21 39.9	11	10 N	18 19	18 42	19 09	18 34	62	5 28	63		
12	0 24.2	+ 22 30.5	179 47.1	28	− 21 40.8	9	0	18 02	18 24	18 50	18 18	62	5 44	64		
13	15 24.1		194 09.0	29	41.5	7	10 S	17 45	18 08	34	18 01	63	6 01	63		
14	30 24.0		208 30.9	29	42.1	6	20	28	17 51	19	17 43	64	19	63		
15	45 23.8		222 52.8	29	42.5	4	30	17 07	33	18 03	22	65	39	63		
16	60 23.7		237 14.7	29	42.8	3	35	16 55	23	17 55	17 10	66	6 51	63		
17	75 23.6	+ 22 31.9	251 36.6	29	− 21 42.9	1	40	16 42	17 12	17 46	16 56	67	7 05	63		
18	90 23.5	+ 22 32.2	265 58.5	29	− 21 42.8	1	45	16 26	16 59	17 36	16 40	67	7 21	63		
19	105 23.4		280 20.5	30	42.5	3	50	16 06	44	25	20	68	41	62		
20	120 23.3		294 42.5	30	42.1	4	52	15 57	37	20	10	69	7 51	61		
21	135 23.2		309 04.5	30	41.6	5	54	47	29	15	16 00	68	8 01	62		
22	150 23.1		323 26.6	31	40.8	8	56	35	21	09	15 47	70	13	62		
23	165 23.0		337 48.6	30	39.9	9	58	21	11	17 03	33	70	27	61		
24	180 22.9	+ 22 33.8	352 10.8	32	− 21 38.9	10	60 S	15 05	16 01	16 56	15 17	71	8 44	60		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 7 ^h 07 ^m 5		Mag.: −3.8 PMG: 12 ^h 09 ^m		Mag.: +0.6 PMG: 18 ^h 17 ^m		Mag.: −2.0 PMG: 10 ^h 52 ^m		Mag.: +0.6 PMG: 20 ^h 35 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
^h 0	252 50.4		176 59.9	+ 23 26.4	85 21.3	+ 6 28.8	196 40.9	+ 19 00.1	50 26.4	− 6 30.8						
1	267 52.8		192 04.0	25.6	100 22.9	28.3	211 42.8	00.3	65 29.0	30.8						
2	282 55.3		207 08.1	24.9	115 24.4	27.8	226 44.7	00.4	80 31.5	30.7						
3	297 57.8		222 12.2	24.2	130 25.9	27.4	241 46.5	00.5	95 34.1	30.7						
4	313 00.2		237 16.2	23.4	145 27.4	26.9	256 48.4	00.7	110 36.6	30.7						
5	328 02.7		252 20.3	+ 23 22.7	160 28.9	+ 6 26.4	271 50.3	+ 19 00.8	125 39.2	− 6 30.7						
6	343 05.2		267 24.4	+ 23 22.0	175 30.5	+ 6 26.0	286 52.1	+ 19 00.9	140 41.7	− 6 30.6						
7	358 07.6		282 28.5	21.2	190 32.0	25.5	301 54.0	01.1	155 44.3	30.6						
8	13 10.1		297 32.6	20.5	205 33.5	25.1	316 55.9	01.2	170 46.8	30.6						
9	28 12.5		312 36.7	19.8	220 35.0	24.6	331 57.7	01.3	185 49.4	30.6						
10	43 15.0		327 40.8	19.0	235 36.5	24.1	346 59.6	01.4	200 51.9	30.6						
11	58 17.5		342 44.9	+ 23 18.3	250 38.1	+ 6 23.7	2 01.5	+ 19 01.6	215 54.4	− 6 30.5						
12	73 19.9		357 49.0	+ 23 17.5	265 39.6	+ 6 23.2	17 03.3	+ 19 01.7	230 57.0	− 6 30.5						
13	88 22.4		12 53.1	16.8	280 41.1	22.7	32 05.2	01.8	245 59.5	30.5						
14	103 24.9		27 57.2	16.1	295 42.6	22.3	47 07.1	02.0	261 02.1	30.5						
15	118 27.3		43 01.3	15.3	310 44.1	21.8	62 08.9	02.1	276 04.6	30.5						
16	133 29.8		58 05.4	14.6	325 45.7	21.3	77 10.8	02.2	291 07.2	30.4						
17	148 32.3		73 09.4	+ 23 13.8	340 47.2	+ 6 20.9	92 12.7	+ 19 02.4	306 09.7	− 6 30.4						
18	163 34.7		88 13.5	+ 23 13.1	355 48.7	+ 6 20.4	107 14.5	+ 19 02.5	321 12.3	− 6 30.4						
19	178 37.2		103 17.6	12.3	10 50.2	19.9	122 16.4	02.6	336 14.8	30.4						
20	193 39.6		118 21.7	11.6	25 51.7	19.5	137 18.3	02.7	351 17.4	30.3						
21	208 42.1		133 25.8	10.9	40 53.2	19.0	152 20.1	02.9	6 19.9	30.3						
22	223 44.6		148 29.9	10.1	55 54.8	18.5	167 22.0	03.0	21 22.4	30.3						
23	238 47.0		163 34.0	09.4	70 56.3	18.1	182 23.9	03.1	36 25.0	30.3						
24	253 49.5		178 38.1	+ 23 08.6	85 57.8	+ 6 17.6	197 25.7	+ 19 03.3	51 27.5	− 6 30.3						
Dif	—	+41	−7		+15	−5	+19	+1	+25	0						

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MARTES 5 DE JUNIO DE 2012

UT	SOL			☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 6			SD: 16 ^h 6 Edad: 15 ^d 0 PHE { 4 ^h : 60 ^h 8 12 ^h : 60 ^h 6 20 ^h : 60 ^h 4 PMG: 0 ^h 33 ^m R°: 62 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	° /	° /		° /		° /		° N	h m	h m	h m	h m m	h m m	h m m	h m m
0	180 22.9	+ 22 33.8		352 10.8		− 21 38.9	12	60	*** **	1 14	2 44	22 11 33	3 46 79		
1	195 22.8		34.1	6 32.9	31	37.7	14	58	*** **	1 52	3 02	21 55 37	4 03 77		
2	210 22.6		34.4	20 55.1	32	36.3	16	56	*** **	2 19	18	42 39	17 75		
3	225 22.5		34.6	35 17.3	32	34.7	16	54		1 07	39	31 41	30 73		
4	240 22.4		34.9	49 39.6	33	33.0	17	52		1 43	2 56	21 43	40 73		
5	255 22.3	+ 22 35.2		64 01.9	33	− 21 31.2	18	50		2 07	3 10	3 53	21 12 44	4 50 72	
6	270 22.2	+ 22 35.5		78 24.3	34	− 21 29.2	20	45		2 50	3 38	4 15	20 53 47	5 10 70	
7	285 22.1		35.7	92 46.7	34	27.0	22	40		3 18	3 59	32	38 49	27 68	
8	300 22.0		36.0	107 09.1	34	24.7	23	35		41	4 17	46	24 51	41 67	
9	315 21.9		36.2	121 31.7	36	22.2	25	30		3 58	31	4 59	20 13 53	5 53 66	
10	330 21.8		36.5	135 54.2	35	19.5	27	20		4 26	4 55	5 20	19 53 56	6 13 65	
11	345 21.7	+ 22 36.8		150 16.8	36	− 21 16.7	28	10 N		4 48	5 15	5 38	19 36 58	6 31 63	
12	0 21.5	+ 22 37.0		164 39.5	37	− 21 13.8	29	0		5 06	5 33	5 55	19 20 60	6 48 61	
13	15 21.4		37.3	179 02.3	38	10.7	31	10 S		23	5 49	6 12	19 04 62	7 04 60	
14	30 21.3		37.6	193 25.1	38	07.4	33	20		38	6 06	29	18 47 64	22 58	
15	45 21.2		37.8	207 47.9	38	04.0	34	30		5 54	24	6 50	27 67	42 57	
16	60 21.1		38.1	222 10.9	40	− 21 00.5	35	35		6 02	34	7 02	16 68	7 54 55	
17	75 21.0	+ 22 38.3		236 33.9	40	− 20 56.8	37	40		6 11	6 45	7 15	18 03 69	8 08 53	
18	90 20.9	+ 22 38.6		250 57.0	41	− 20 52.9	39	45		6 21	6 58	7 31	17 47 72	8 24 52	
19	105 20.8		38.9	265 20.1	41	48.9	40	50		32	7 13	7 51	28 74	43 50	
20	120 20.6		39.1	279 43.3	42	44.8	41	52		37	20	8 00	19 75	8 52 49	
21	135 20.5		39.4	294 06.6	43	40.5	43	54		42	28	11	17 08 77	9 03 47	
22	150 20.4		39.6	308 30.0	44	36.0	45	56		48	37	23	16 57 79	15 45	
23	165 20.3		39.9	322 53.4	44	31.5	45	58		6 54	46	37	43 82	28 44	
24	180 20.2	+ 22 40.1		337 16.9	45	− 20 26.8	47	60 S		7 01	7 57	8 53	16 28 84	9 44 41	
UT	ARIES PMG 7 ^h 03 ^m 5		VENUS Mag.: −3.7 PMG: 12 ^h 02 ^m		MARTE Mag.: +0.6 PMG: 18 ^h 14 ^m		JÚPITER Mag.: −2.0 PMG: 10 ^h 49 ^m		SATURNO Mag.: +0.6 PMG: 20 ^h 31 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
	° /		° /	° /	° /	° /	° /	° /	° /	° /	° /	° /			
h	253 49.5		178 38.1	+ 23 08.6	85 57.8	+ 6 17.6	197 25.7	+ 19 03.3	51 27.5	− 6 30.3					
1	268 52.0		193 42.2	07.9	100 59.3	17.1	212 27.6	03.4	66 30.1	30.2					
2	283 54.4		208 46.3	07.1	116 00.8	16.7	227 29.5	03.5	81 32.6	30.2					
3	298 56.9		223 50.4	06.4	131 02.3	16.2	242 31.3	03.6	96 35.2	30.2					
4	313 59.4		238 54.5	05.6	146 03.8	15.7	257 33.2	03.8	111 37.7	30.2					
5	329 01.8		253 58.6	+ 23 04.9	161 05.4	+ 6 15.3	272 35.1	+ 19 03.9	126 40.2	− 6 30.2					
6	344 04.3		269 02.7	+ 23 04.1	176 06.9	+ 6 14.8	287 36.9	+ 19 04.0	141 42.8	− 6 30.1					
7	359 06.8		284 06.8	03.4	191 08.4	14.3	302 38.8	04.2	156 45.3	30.1					
8	14 09.2		299 10.9	02.6	206 09.9	13.9	317 40.7	04.3	171 47.9	30.1					
9	29 11.7		314 15.0	01.9	221 11.4	13.4	332 42.5	04.4	186 50.4	30.1					
10	44 14.1		329 19.1	01.1	236 12.9	12.9	347 44.4	04.5	201 53.0	30.0					
11	59 16.6		344 23.2	+ 23 00.4	251 14.4	+ 6 12.5	2 46.3	+ 19 04.7	216 55.5	− 6 30.0					
12	74 19.1		359 27.3	+ 22 59.6	266 15.9	+ 6 12.0	17 48.1	+ 19 04.8	231 58.0	− 6 30.0					
13	89 21.5		14 31.4	58.9	281 17.4	11.5	32 50.0	04.9	247 00.6	30.0					
14	104 24.0		29 35.5	58.1	296 18.9	11.0	47 51.9	05.1	262 03.1	30.0					
15	119 26.5		44 39.6	57.4	311 20.4	10.6	62 53.8	05.2	277 05.7	29.9					
16	134 28.9		59 43.7	56.6	326 22.0	10.1	77 55.6	05.3	292 08.2	29.9					
17	149 31.4		74 47.8	+ 22 55.9	341 23.5	+ 6 09.6	92 57.5	+ 19 05.4	307 10.8	− 6 29.9					
18	164 33.9		89 51.9	+ 22 55.1	356 25.0	+ 6 09.2	107 59.4	+ 19 05.6	322 13.3	− 6 29.9					
19	179 36.3		104 56.0	54.4	11 26.5	08.7	123 01.2	05.7	337 15.8	29.9					
20	194 38.8		120 00.0	53.6	26 28.0	08.2	138 03.1	05.8	352 18.4	29.8					
21	209 41.3		135 04.1	52.9	41 29.5	07.8	153 05.0	06.0	7 20.9	29.8					
22	224 43.7		150 08.2	52.1	56 31.0	07.3	168 06.8	06.1	22 23.5	29.8					
23	239 46.2		165 12.3	51.4	71 32.5	06.8	183 08.7	06.2	37 26.0	29.8					
24	254 48.6		180 16.4	+ 22 50.6	86 34.0	+ 6 06.3	198 10.6	+ 19 06.3	52 28.5	− 6 29.8					
Dif	—		+41	−8	+15	−5	+19	+1	+25	0					

MIÉRCOL 6 DE JUNIO DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna	Puesta de Luna
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 7		SD: 16 ^h 4 Edad: 16 ^d 0 PHE $\begin{cases} 4^h: 60^l/1 \\ 12^h: 59^l/9 \\ 20^h: 59^l/6 \end{cases}$ PMG: 1 ^h 35 ^m R ^o : 58 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora R ^o	Hora R ^o
^h	[°] / [°]	[°] / [°]	[°] / [°]		[°] / [°]		[°]	^h ^m	^h ^m	^h ^m ^s	^h ^m ^s	^h ^m ^s
0	180 20.2	+ 22 40.1	337 16.9		− 20 26.8	49	60 N	21 16	22 49	** **	22 44 22	5 05 88
1	195 20.1	40.4	351 40.5	46	21.9 50		58	20 57	22 08	** **	32 26	20 84
2	210 20.0	40.7	6 04.2	47	16.9 51		56	41	21 41	** **	21 29	32 82
3	225 19.9	40.9	20 27.9	47	11.8 51		54	27	20 22	55	12 31	43 80
4	240 19.7	41.2	34 51.8	49	06.5 53		52	16	21 03	22 17	22 04 32	5 53 78
5	255 19.6	+ 22 41.4	49 15.7	49	− 20 01.1	54	50	20 05	20 49	21 52	21 56 35	6 02 76
6	270 19.5	+ 22 41.7	63 39.7	50	− 19 55.6	55	45	19 44	20 21	21 09	21 40 38	6 20 73
7	285 19.4	41.9	78 03.8	51	50.0 56		40	26	19 59	20 40	27 41	35 70
8	300 19.3	42.2	92 28.0	52	44.2 58		35	19 12	41	20 18	15 44	48 68
9	315 19.2	42.4	106 52.3	53	38.3 59		30	18 59	26	19 59	21 06 45	6 59 66
10	330 19.1	42.7	121 16.7	54	32.2 61		20	38	19 02	31	20 49 49	7 18 62
11	345 18.9	+ 22 42.9	135 41.1	54	− 19 26.0	62	10 N	18 19	18 42	19 09	20 34 52	7 34 60
12	0 18.8	+ 22 43.2	150 05.7	56	− 19 19.7	63	0	18 02	18 25	18 51	20 20 55	7 49 58
13	15 18.7	43.4	164 30.3	56	13.3 64		10 S	17 46	18 08	34	20 06 58	8 04 55
14	30 18.6	43.6	178 55.1	58	06.8 65		20	28	17 51	19	19 51 61	20 53
15	45 18.5	43.9	193 19.9	58	− 19 00.1	67	30	17 07	33	18 03	34 64	39 49
16	60 18.4	44.1	207 44.8	59	− 18 53.3	68	35	16 55	23	17 55	24 67	8 49 48
17	75 18.3	+ 22 44.4	222 09.8	60	− 18 46.5	68	40	16 41	17 12	17 46	19 12 69	9 01 45
18	90 18.1	+ 22 44.6	236 35.0	62	− 18 39.4	71	45	16 25	16 59	17 36	18 59 72	9 16 42
19	105 18.0	44.9	251 00.2	62	32.3 71		50	16 05	43	25	42 76	33 39
20	120 17.9	45.1	265 25.5	63	25.1 72		52	15 56	36	20	34 78	41 38
21	135 17.8	45.3	279 50.9	64	17.7 74		54	45	28	14	25 80	9 50 36
22	150 17.7	45.6	294 16.4	65	10.3 74		56	33	20	08	16 82	10 00 34
23	165 17.6	45.8	308 42.1	67	− 18 02.7	76	58	19	16 10	17 02	18 05 85	12 31
24	180 17.4	+ 22 46.1	323 07.8	67	− 17 55.0	77	60 S	15 03	15 59	16 55	17 52 88	10 25 28
UT	ARIES PMG 6 ^h 59 ^m 6		VENUS Mag.: −3.7 PMG: 11 ^h 56 ^m		MARTE Mag.: +0.6 PMG: 18 ^h 12 ^m		JÚPITER Mag.: −2.0 PMG: 10 ^h 46 ^m		SATURNO Mag.: +0.6 PMG: 20 ^h 27 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec		
^h	[°] / [°]	[°] / [°]	[°] / [°]		[°] / [°]		[°] / [°]		[°] / [°]		[°] / [°]	
0	254 48.6	180 16.4	+ 22 50.6		86 34.0	+ 6 06.3	198 10.6	+ 19 06.3	52 28.5	− 6 29.8		
1	269 51.1	195 20.5	49.8		101 35.5	05.9	213 12.4	06.5	67 31.1	29.7		
2	284 53.6	210 24.6	49.1		116 37.0	05.4	228 14.3	06.6	82 33.6	29.7		
3	299 56.0	225 28.7	48.3		131 38.5	04.9	243 16.2	06.7	97 36.2	29.7		
4	314 58.5	240 32.8	47.6		146 40.0	04.5	258 18.0	06.9	112 38.7	29.7		
5	330 01.0	255 36.9	+ 22 46.8		161 41.5	+ 6 04.0	273 19.9	+ 19 07.0	127 41.2	− 6 29.7		
6	345 03.4	270 41.0	+ 22 46.1		176 43.0	+ 6 03.5	288 21.8	+ 19 07.1	142 43.8	− 6 29.7		
7	0 05.9	285 45.1	45.3		191 44.5	03.0	303 23.6	07.2	157 46.3	29.6		
8	15 08.4	300 49.2	44.5		206 46.0	02.6	318 25.5	07.4	172 48.9	29.6		
9	30 10.8	315 53.3	43.8		221 47.5	02.1	333 27.4	07.5	187 51.4	29.6		
10	45 13.3	330 57.4	43.0		236 49.0	01.6	348 29.2	07.6	202 53.9	29.6		
11	60 15.8	346 01.4	+ 22 42.3		251 50.5	+ 6 01.1	3 31.1	+ 19 07.7	217 56.5	− 6 29.6		
12	75 18.2	1 05.5	+ 22 41.5		266 52.0	+ 6 00.7	18 33.0	+ 19 07.9	232 59.0	− 6 29.5		
13	90 20.7	16 09.6	40.8		281 53.5	+ 6 00.2	33 34.9	08.0	248 01.6	29.5		
14	105 23.1	31 13.7	40.0		296 55.0	+ 5 59.7	48 36.7	08.1	263 04.1	29.5		
15	120 25.6	46 17.8	39.2		311 56.5	59.2	63 38.6	08.3	278 06.6	29.5		
16	135 28.1	61 21.9	38.5		326 58.0	58.8	78 40.5	08.4	293 09.2	29.5		
17	150 30.5	76 26.0	+ 22 37.7		341 59.5	+ 5 58.3	93 42.3	+ 19 08.5	308 11.7	− 6 29.4		
18	165 33.0	91 30.1	+ 22 37.0		357 01.0	+ 5 57.8	108 44.2	+ 19 08.6	323 14.3	− 6 29.4		
19	180 35.5	106 34.1	36.2		12 02.5	57.3	123 46.1	08.8	338 16.8	29.4		
20	195 37.9	121 38.2	35.4		27 04.0	56.9	138 47.9	08.9	353 19.3	29.4		
21	210 40.4	136 42.3	34.7		42 05.5	56.4	153 49.8	09.0	8 21.9	29.4		
22	225 42.9	151 46.4	33.9		57 07.0	55.9	168 51.7	09.1	23 24.4	29.4		
23	240 45.3	166 50.5	33.2		72 08.5	55.4	183 53.5	09.3	38 26.9	29.3		
24	255 47.8	181 54.6	+ 22 32.4		87 10.0	+ 5 55.0	198 55.4	+ 19 09.4	53 29.5	− 6 29.3		
Dif	—	+41	−8		+15	−5	+19	+1	+25	0		

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JUEVES 7 DE JUNIO DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 11 ^h 58 ^m 9			SD: 16 ^h 2 Edad: 17 ^d 0 PHE { 4 ^h : 59 ^h 3 12 ^h : 59 ^h 0 20 ^h : 58 ^h 7 PMG: 2 ^h 33 ^m R°: 55 ^m								Hora R°		Hora R°	
	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 17.4	+ 22 46.1		323 07.8		− 17 55.0		60 N	***	1 09	2 41	23 06 17	6 33 88		
1	195 17.3		46.3	337 33.6	68	47.3	77	58	***	1 49	3 01	22 58 19	44 85		
2	210 17.2		46.5	351 59.5	69	39.4	79	56	***	2 16	16	50 22	6 54 83		
3	225 17.1		46.8	6 25.5	70	31.4	80	54	1 03	37	30	43 24	7 03 80		
4	240 17.0		47.0	20 51.6	71	23.3	81	52	1 40	2 54	42	36 27	11 78		
5	255 16.9	+ 22 47.2		35 17.8	72	− 17 15.2	81	50	2 05	3 08	3 52	22 31 28	7 18 76		
6	270 16.7	+ 22 47.5		49 44.2	74	− 17 06.9	83	45	2 48	3 37	4 14	22 18 32	7 33 72		
7	285 16.6		47.7	64 10.6	74	− 16 58.5	84	40	3 18	3 59	31	22 08 35	45 69		
8	300 16.5		47.9	78 37.1	75	50.0	85	35	40	4 16	46	21 59 38	7 56 66		
9	315 16.4		48.2	93 03.7	76	41.5	85	30	3 58	31	4 58	51 41	8 05 63		
10	330 16.3		48.4	107 30.5	78	32.8	87	20	4 26	4 55	5 20	38 44	20 60		
11	345 16.2	+ 22 48.6		121 57.3	78	− 16 24.1	87	10 N	4 48	5 15	5 38	21 26 48	8 34 56		
12	0 16.0	+ 22 48.9		136 24.2	79	− 16 15.3	88	0	5 07	5 33	5 55	21 15 51	8 47 53		
13	15 15.9		49.1	150 51.3	81	− 16 06.4	89	10 S	23	5 49	6 12	21 04 54	8 59 50		
14	30 15.8		49.3	165 18.4	81	− 15 57.4	90	20	39	6 06	30	20 52 58	9 13 46		
15	45 15.7		49.6	179 45.6	82	48.3	91	30	5 55	25	6 51	38 63	28 43		
16	60 15.6		49.8	194 13.0	84	39.1	92	35	6 03	35	7 03	31 64	37 40		
17	75 15.4	+ 22 50.0		208 40.4	84	− 15 29.9	92	40	6 12	6 46	7 16	20 21 68	9 46 39		
18	90 15.3	+ 22 50.2		223 07.9	85	− 15 20.6	93	45	6 22	6 59	7 33	20 11 70	9 58 35		
19	105 15.2		50.5	237 35.6	87	11.2	94	50	33	7 15	7 53	19 58 75	10 12 31		
20	120 15.1		50.7	252 03.3	87	− 15 01.7	95	52	38	22	8 02	52 77	19 29		
21	135 15.0		50.9	266 31.2	89	− 14 52.2	95	54	44	30	13	45 79	26 27		
22	150 14.9		51.1	280 59.1	89	42.5	96	56	50	38	25	38 81	34 25		
23	165 14.7		51.4	295 27.2	91	32.9	97	58	6 56	48	39	30 83	43 22		
24	180 14.6	+ 22 51.6		309 55.3	91	− 14 23.1	98	60 S	7 03	7 59	8 56	19 20 87	10 53 20		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 6 ^h 55 ^m 7		Mag.: −3.7 PMG: 11 ^h 49 ^m		Mag.: +0.6 PMG: 18 ^h 10 ^m		Mag.: −2.0 PMG: 10 ^h 43 ^m		Mag.: +0.6 PMG: 20 ^h 23 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /					
0	255 47.8		181 54.6	+ 22 32.4	87 10.0	+ 5 55.0	198 55.4	+ 19 09.4	53 29.5	− 6 29.3					
1	270 50.3		196 58.6	31.6	102 11.5	54.5	213 57.3	09.5	68 32.0	29.3					
2	285 52.7		212 02.7	30.9	117 13.0	54.0	228 59.1	09.6	83 34.6	29.3					
3	300 55.2		227 06.8	30.1	132 14.5	53.5	244 01.0	09.8	98 37.1	29.3					
4	315 57.6		242 10.9	29.4	147 15.9	53.1	259 02.9	09.9	113 39.6	29.2					
5	331 00.1		257 15.0	+ 22 28.6	162 17.4	+ 5 52.6	274 04.8	+ 19 10.0	128 42.2	− 6 29.2					
6	346 02.6		272 19.0	+ 22 27.8	177 18.9	+ 5 52.1	289 06.6	+ 19 10.2	143 44.7	− 6 29.2					
7	1 05.0		287 23.1	27.1	192 20.4	51.6	304 08.5	10.3	158 47.2	29.2					
8	16 07.5		302 27.2	26.3	207 21.9	51.2	319 10.4	10.4	173 49.8	29.2					
9	31 10.0		317 31.3	25.5	222 23.4	50.7	334 12.2	10.5	188 52.3	29.2					
10	46 12.4		332 35.3	24.8	237 24.9	50.2	349 14.1	10.7	203 54.8	29.1					
11	61 14.9		347 39.4	+ 22 24.0	252 26.4	+ 5 49.7	4 16.0	+ 19 10.8	218 57.4	− 6 29.1					
12	76 17.4		2 43.5	+ 22 23.3	267 27.9	+ 5 49.2	19 17.8	+ 19 10.9	233 59.9	− 6 29.1					
13	91 19.8		17 47.6	22.5	282 29.4	48.8	34 19.7	11.0	249 02.5	29.1					
14	106 22.3		32 51.6	21.7	297 30.8	48.3	49 21.6	11.2	264 05.0	29.1					
15	121 24.8		47 55.7	21.0	312 32.3	47.8	64 23.4	11.3	279 07.5	29.0					
16	136 27.2		62 59.8	20.2	327 33.8	47.3	79 25.3	11.4	294 10.1	29.0					
17	151 29.7		78 03.8	+ 22 19.4	342 35.3	+ 5 46.9	94 27.2	+ 19 11.5	309 12.6	− 6 29.0					
18	166 32.1		93 07.9	+ 22 18.7	357 36.8	+ 5 46.4	109 29.1	+ 19 11.7	324 15.1	− 6 29.0					
19	181 34.6		108 12.0	17.9	12 38.3	45.9	124 30.9	11.8	339 17.7	29.0					
20	196 37.1		123 16.0	17.2	27 39.8	45.4	139 32.8	11.9	354 20.2	29.0					
21	211 39.5		138 20.1	16.4	42 41.3	44.9	154 34.7	12.0	9 22.7	28.9					
22	226 42.0		153 24.1	15.6	57 42.7	44.5	169 36.5	12.2	24 25.3	28.9					
23	241 44.5		168 28.2	14.9	72 44.2	44.0	184 38.4	12.3	39 27.8	28.9					
24	256 46.9		183 32.3	+ 22 14.1	87 45.7	+ 5 43.5	199 40.3	+ 19 12.4	54 30.3	− 6 28.9					
Dif	—	+41	−8		+15	−5	+19	+1	+25	0					

VIERNES 8 DE JUNIO DE 2012

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UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 1			SD: 16 ^h 0 Edad: 18 ^d 0												
	hG ☉	Dec		hG ☾	Dif	Dec			Dif	R°: 50 ^m						
h	°	'		°	'		°	'	h	m	h	m	h	m	h	m
0	180	14.6	+ 22 51.6	309	55.3	− 14 23.1	98	60 N	21 19	22 54	*** **	23 23	13	8 01	86	
1	195	14.5		51.8	324	23.5	92	58	20 59	22 11	*** **	17 15		09	83	
2	210	14.4		52.0	338	51.9	94	56	43	21 44	*** **	12 18		17	80	
3	225	14.3		52.2	353	20.3	94	54	29	23	23 00	07 20		23	78	
4	240	14.1		52.5	7	48.8	95	52	17	21 05	22 20	23 03	22	29	75	
5	255	14.0	+ 22 52.7	22	17.5	− 13 33.3	97	50	20 07	20 51	21 54	22 59	24	8 34	73	
6	270	13.9	+ 22 52.9	36	46.2	− 13 23.1	98	45	19 45	20 22	21 11	22 50	28	8 45	69	
7	285	13.8		53.1	51	15.0	98	40	27	20 00	20 41	43	31	8 54	66	
8	300	13.7		53.3	65	43.9	99	35	13	19 42	19	37	34	9 02	63	
9	315	13.5		53.5	80	12.9	100	30	19 00	27	20 00	32	36	08	61	
10	330	13.4		53.8	94	42.0	101	20	18 39	19 03	19 32	22	41	20	57	
11	345	13.3	+ 22 54.0	109	11.2	− 12 31.5	102	10 N	18 20	18 43	19 10	22 14	44	9 30	53	
12	0	13.2	+ 22 54.2	123	40.5	− 12 21.1	103	0	18 03	18 25	18 51	22 06	48	9 40	49	
13	15	13.1		54.4	138	09.9	104	10 S	17 46	18 08	35	21 58	51	49	46	
14	30	12.9		54.6	152	39.4	105	20	28	17 52	19	50	55	9 59	43	
15	45	12.8		54.8	167	08.9	105	30	17 07	33	18 03	41	59	10 11	38	
16	60	12.7		55.0	181	38.6	107	35	16 55	23	17 54	35	62	17	36	
17	75	12.6	+ 22 55.2	196	08.3	− 11 27.9	107	40	16 41	17 11	17 45	21 29	64	10 25	33	
18	90	12.4	+ 22 55.4	210	38.2	− 11 17.1	108	45	16 25	16 58	17 35	21 21	68	10 33	30	
19	105	12.3		55.7	225	08.1	109	50	16 05	43	24	13	72	43	26	
20	120	12.2		55.9	239	38.1	110	52	15 55	36	19	09	73	48	24	
21	135	12.1		56.1	254	08.2	111	54	44	28	13	21 04	76	53	23	
22	150	12.0		56.3	268	38.3	111	56	32	19	08	20 59	78	10 59	20	
23	165	11.8		56.5	283	08.6	113	58	18	16 09	17 01	53	81	11 05	18	
24	180	11.7	+ 22 56.7	297	39.0	− 10 11.6	114	60 S	15 01	15 58	16 54	20 47	84	11 13	14	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 6 ^h 51 ^m 7		Mag.: −3.8 PMG: 11 ^h 43 ^m		Mag.: +0.6 PMG: 18 ^h 07 ^m		Mag.: −2.0 PMG: 10 ^h 40 ^m		Mag.: +0.6 PMG: 20 ^h 19 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'				
0	256	46.9	183	32.3	+ 22 14.1	87	45.7	+ 5 43.5	199	40.3	+ 19 12.4	54	30.3	− 6 28.9		
1	271	49.4	198	36.3		13.3	102	47.2	43.0	214	42.1	12.6	69	32.9	28.9	
2	286	51.9	213	40.4		12.6	117	48.7	42.5	229	44.0	12.7	84	35.4	28.9	
3	301	54.3	228	44.4		11.8	132	50.2	42.1	244	45.9	12.8	99	37.9	28.8	
4	316	56.8	243	48.5		11.1	147	51.6	41.6	259	47.8	12.9	114	40.5	28.8	
5	331	59.2	258	52.5	+ 22 10.3		162	53.1	+ 5 41.1	274	49.6	+ 19 13.1	129	43.0	− 6 28.8	
6	347	01.7	273	56.6	+ 22 09.5		177	54.6	+ 5 40.6	289	51.5	+ 19 13.2	144	45.5	− 6 28.8	
7	2	04.2	289	00.6		08.8	192	56.1	40.1	304	53.4	13.3	159	48.1	28.8	
8	17	06.6	304	04.7		08.0	207	57.6	39.7	319	55.2	13.4	174	50.6	28.8	
9	32	09.1	319	08.7		07.2	222	59.0	39.2	334	57.1	13.6	189	53.1	28.7	
10	47	11.6	334	12.8		06.5	238	00.5	38.7	349	59.0	13.7	204	55.7	28.7	
11	62	14.0	349	16.8	+ 22 05.7		253	02.0	+ 5 38.2	5	00.8	+ 19 13.8	219	58.2	− 6 28.7	
12	77	16.5	4	20.9	+ 22 05.0		268	03.5	+ 5 37.7	20	02.7	+ 19 13.9	235	00.7	− 6 28.7	
13	92	19.0	19	24.9		04.2	283	05.0	37.2	35	04.6	14.1	250	03.3	28.7	
14	107	21.4	34	28.9		03.4	298	06.4	36.8	50	06.5	14.2	265	05.8	28.7	
15	122	23.9	49	33.0		02.7	313	07.9	36.3	65	08.3	14.3	280	08.3	28.7	
16	137	26.4	64	37.0		01.9	328	09.4	35.8	80	10.2	14.4	295	10.8	28.6	
17	152	28.8	79	41.1	+ 22 01.2		343	10.9	+ 5 35.3	95	12.1	+ 19 14.6	310	13.4	− 6 28.6	
18	167	31.3	94	45.1	+ 22 00.4		358	12.4	+ 5 34.8	110	13.9	+ 19 14.7	325	15.9	− 6 28.6	
19	182	33.7	109	49.1	+ 21 59.6		13	13.8	34.3	125	15.8	14.8	340	18.4	28.6	
20	197	36.2	124	53.2		58.9	28	15.3	33.9	140	17.7	14.9	355	21.0	28.6	
21	212	38.7	139	57.2		58.1	43	16.8	33.4	155	19.6	15.1	10	23.5	28.6	
22	227	41.1	155	01.2		57.3	58	18.3	32.9	170	21.4	15.2	25	26.0	28.5	
23	242	43.6	170	05.2		56.6	73	19.7	32.4	185	23.3	15.3	40	28.6	28.5	
24	257	46.1	185	09.3	+ 21 55.8		88	21.2	+ 5 31.9	200	25.2	+ 19 15.4	55	31.1	− 6 28.5	
Dif	—		+40		−8		+15		−5	+19		+1	+25		0	

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SÁBADO 9 DE JUNIO DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 3			SD: 15 ^h 7 Edad: 19 ^d 0 PHE { 4 ^h : 57/5 12 ^h : 57/1 20 ^h : 56/9 PMG: 4 ^h 18 ^m R ^o : 47 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R ^o	Hora	R ^o	
h	°	'		°	'	°	'	°	h m	h m	h m	h m	m	h m	m	
0	180	11.7	+ 22	56.7	297	39.0	— 10	11.6	60 N	** ** 1 04	2 40	23 36	11	9 27	83	
1	195	11.6		56.9	312	09.4	114	— 10	00.5	** ** 1 47	2 59	32 14		32 80		
2	210	11.5		57.1	326	39.9	115	— 9	49.4	** ** 2 14	3 15	30 15		37 77		
3	225	11.4		57.3	341	10.5	116		38.3	0 58	36	29	27 18	41 74		
4	240	11.2		57.5	355	41.1	116		27.1	1 38	2 53	41	25 20	44 73		
5	255	11.1	+ 22	57.7	10	11.9	118	— 9	15.9	2 04	3 07	3 51	23 23	21	9 47	
6	270	11.0	+ 22	57.9	24	42.7	118	— 9	04.7	2 47	3 36	4 13	23 18	25	9 54	
7	285	10.9		58.1	39	13.6	119	— 8	53.5	3 17	3 58	31	14 29	10 00	63	
8	300	10.7		58.3	53	44.6	120		42.2	40	4 16	46	11 31	05 60		
9	315	10.6		58.5	68	15.7	121		30.9	3 58	31	4 58	08 33	09 58		
10	330	10.5		58.7	82	46.8	121		19.6	4 26	4 55	5 20	23 03	37	17 53	
11	345	10.4	+ 22	58.9	97	18.0	122	— 8	08.2	4 48	5 15	5 38	22 58	42	10 23	
12	0	10.2	+ 22	59.1	111	49.3	123	— 7	56.8	5 07	5 33	5 56	22 54	45	10 29	
13	15	10.1		59.3	126	20.6	123		45.4	24	5 50	6 13	49 49	35 43		
14	30	10.0		59.5	140	52.0	124		34.0	40	6 07	31	45 52	42 39		
15	45	09.9		59.7	155	23.5	125		22.6	5 56	25	6 52	40 56	49 35		
16	60	09.8	+ 22	59.9	169	55.1	126	— 7	11.1	6 04	36	7 04	37 59	53 32		
17	75	09.6	+ 23	00.1	184	26.7	126	— 6	59.6	6 13	6 47	7 18	22 33	62	10 58	
18	90	09.5	+ 23	00.3	198	58.4	127	— 6	48.1	6 23	7 00	7 34	22 29	66	11 03	
19	105	09.4		00.5	213	30.2	128		36.6	35	16	7 54	25 69	09 23		
20	120	09.3		00.6	228	02.0	128		25.1	40	23	8 04	22 71	12 21		
21	135	09.1		00.8	242	33.9	129		13.5	45	31	15	20 73	16 19		
22	150	09.0		01.0	257	05.8	129	— 6	01.9	51	40	27	17 76	19 17		
23	165	08.9		01.2	271	37.9	131	— 5	50.4	6 58	7 50	41	14 78	23 15		
24	180	08.8	+ 23	01.4	286	09.9	130	— 5	38.8	7 05	8 01	8 58	22 11	81	11 27	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 6 ^h 47 ^m 8		Mag.: -3.8 PMG: 11 ^h 36 ^m		Mag.: +0.6 PMG: 18 ^h 05 ^m		Mag.: -2.0 PMG: 10 ^h 37 ^m		Mag.: +0.6 PMG: 20 ^h 15 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	257	46.1	185	09.3	+ 21	55.8	88	21.2	+ 5	31.9	200	25.2	+ 19	15.4	55	31.1
1	272	48.5	200	13.3		55.1	103	22.7		31.4	215	27.0		15.6	70	33.6
2	287	51.0	215	17.3		54.3	118	24.2		31.0	230	28.9		15.7	85	36.2
3	302	53.5	230	21.3		53.5	133	25.6		30.5	245	30.8		15.8	100	38.7
4	317	55.9	245	25.4		52.8	148	27.1		30.0	260	32.6		15.9	115	41.2
5	332	58.4	260	29.4	+ 21	52.0	163	28.6	+ 5	29.5	275	34.5	+ 19	16.0	130	43.7
6	348	00.9	275	33.4	+ 21	51.3	178	30.0	+ 5	29.0	290	36.4	+ 19	16.2	145	46.3
7	3	03.3	290	37.4		50.5	193	31.5		28.5	305	38.3		16.3	160	48.8
8	18	05.8	305	41.4		49.7	208	33.0		28.0	320	40.1		16.4	175	51.3
9	33	08.2	320	45.4		49.0	223	34.5		27.6	335	42.0		16.5	190	53.9
10	48	10.7	335	49.4		48.2	238	35.9		27.1	350	43.9		16.7	205	56.4
11	63	13.2	350	53.4	+ 21	47.5	253	37.4	+ 5	26.6	5	45.7	+ 19	16.8	220	58.9
12	78	15.6	5	57.4	+ 21	46.7	268	38.9	+ 5	26.1	20	47.6	+ 19	16.9	236	01.4
13	93	18.1	21	01.4		45.9	283	40.3		25.6	35	49.5		17.0	251	04.0
14	108	20.6	36	05.4		45.2	298	41.8		25.1	50	51.4		17.2	266	06.5
15	123	23.0	51	09.4		44.4	313	43.3		24.6	65	53.2		17.3	281	09.0
16	138	25.5	66	13.4		43.7	328	44.7		24.2	80	55.1		17.4	296	11.6
17	153	28.0	81	17.4	+ 21	42.9	343	46.2	+ 5	23.7	95	57.0	+ 19	17.5	311	14.1
18	168	30.4	96	21.4	+ 21	42.2	358	47.7	+ 5	23.2	110	58.8	+ 19	17.7	326	16.6
19	183	32.9	111	25.4		41.4	13	49.1		22.7	126	00.7		17.8	341	19.1
20	198	35.3	126	29.4		40.6	28	50.6		22.2	141	02.6		17.9	356	21.7
21	213	37.8	141	33.4		39.9	43	52.1		21.7	156	04.5		18.0	11	24.2
22	228	40.3	156	37.4		39.1	58	53.5		21.2	171	06.3		18.2	26	26.7
23	243	42.7	171	41.4		38.4	73	55.0		20.7	186	08.2		18.3	41	29.2
24	258	45.2	186	45.4	+ 21	37.6	88	56.5	+ 5	20.3	201	10.1	+ 19	18.4	56	31.8
Dif	—		+40		-8		+15		-5		+19		+1		+25	
															0	

DOMINGO 10 DE JUNIO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 15/8 PMG: 11 ^h 59 ^m 5		SD: 15/5 Edad: 20 ^d 0 PHE { 4 ^h : 56/6 12 ^h : 56/3 20 ^h : 56/0 PMG: 5 ^h 05 ^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			
0	180	08.8	+ 23	01.4	286	09.9	− 5	38.8	60 N	21 21	22 59	23 47	10	10 50	79			
1	195	08.6		01.6	300	42.1		27.2	58	21 01	22 15	46 13		52 76				
2	210	08.5		01.8	315	14.3		15.6	56	20 45	21 46	45 16		54 74				
3	225	08.4		02.0	329	46.5	− 5	04.0	54	31	25	23 05	45	55 72				
4	240	08.3		02.1	344	18.8	− 4	52.3	52	19	21 07	22 23	45	57 70				
5	255	08.1	+ 23	02.3	358	51.2	− 4	40.7	50	20 08	20 52	21 57	23 44	21	10 58 68			
6	270	08.0	+ 23	02.5	13	23.6	− 4	29.1	45	19 46	20 23	21 13	23 43	25	11 01 64			
7	285	07.9		02.7	27	56.1		17.4	40	28	20 01	20 43	43 27		03 61			
8	300	07.8		02.9	42	28.6	− 4	05.8	35	14	19 43	20	42 30		05 58			
9	315	07.6		03.1	57	01.2	− 3	54.1	30	19 01	28	20 01	41 33		07 56			
10	330	07.5		03.2	71	33.9		42.5	20	18 39	19 04	19 33	40 37		10 52			
11	345	07.4	+ 23	03.4	86	06.5	− 3	30.8	10 N	18 20	18 44	19 11	23 40	40	11 13 48			
12	0	07.3	+ 23	03.6	100	39.3	− 3	19.1	0	18 03	18 26	18 52	23 39	43	11 16 44			
13	15	07.1		03.8	115	12.1	− 3	07.5	10 S	17 46	18 09	35	38 47		18 41			
14	30	07.0		04.0	129	44.9	− 2	55.8	20	28	17 52	19	37 51		21 37			
15	45	06.9		04.1	144	17.8		44.2	30	17 07	33	18 03	36 55		24 33			
16	60	06.7		04.3	158	50.7		32.5	35	16 55	23	17 54	36 57		25 31			
17	75	06.6	+ 23	04.5	173	23.7	− 2	20.9	40	16 41	17 11	17 45	23 35	60	11 27 28			
18	90	06.5	+ 23	04.7	187	56.7	− 2	09.2	45	16 24	16 58	17 35	23 35	63	11 29 25			
19	105	06.4		04.8	202	29.7	− 1	57.6	50	16 04	42	24	34 67		32 21			
20	120	06.2		05.0	217	02.8		45.9	52	15 54	35	18	33 69		33 20			
21	135	06.1		05.2	231	36.0		34.3	54	44	27	13	33 71		35 17			
22	150	06.0		05.4	246	09.1		22.7	56	31	18	07	33 72		36 16			
23	165	05.9		05.5	260	42.3	− 1	11.0	58	17	16 08	17 00	32 75		38 13			
24	180	05.7	+ 23	05.7	275	15.6	− 0	59.4	60 S	15 00	15 57	16 53	23 32	77	11 39 11			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 6 ^h 43 ^m 9		Mag.: −3.9 PMG: 11 ^h 30 ^m			Mag.: +0.6 PMG: 18 ^h 02 ^m			Mag.: −2.0 PMG: 10 ^h 34 ^m			Mag.: +0.6 PMG: 20 ^h 10 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	258	45.2	186	45.4	+ 21	37.6	88	56.5	+ 5	20.3	201	10.1	+ 19	18.4	56	31.8	− 6	28.2
1	273	47.7	201	49.3		36.9	103	57.9		19.8	216	12.0		18.5	71	34.3		28.2
2	288	50.1	216	53.3		36.1	118	59.4		19.3	231	13.8		18.6	86	36.8		28.1
3	303	52.6	231	57.3		35.4	134	00.9		18.8	246	15.7		18.8	101	39.3		28.1
4	318	55.1	247	01.3		34.6	149	02.3		18.3	261	17.6		18.9	116	41.9		28.1
5	333	57.5	262	05.2	+ 21	33.8	164	03.8	+ 5	17.8	276	19.4	+ 19	19.0	131	44.4	− 6	28.1
6	349	00.0	277	09.2	+ 21	33.1	179	05.3	+ 5	17.3	291	21.3	+ 19	19.1	146	46.9	− 6	28.1
7	4	02.5	292	13.2		32.3	194	06.7		16.8	306	23.2		19.3	161	49.5		28.1
8	19	04.9	307	17.1		31.6	209	08.2		16.3	321	25.1		19.4	176	52.0		28.1
9	34	07.4	322	21.1		30.8	224	09.6		15.9	336	26.9		19.5	191	54.5		28.0
10	49	09.8	337	25.1		30.1	239	11.1		15.4	351	28.8		19.6	206	57.0		28.0
11	64	12.3	352	29.0	+ 21	29.3	254	12.6	+ 5	14.9	6	30.7	+ 19	19.8	221	59.6	− 6	28.0
12	79	14.8	7	33.0	+ 21	28.6	269	14.0	+ 5	14.4	21	32.5	+ 19	19.9	237	02.1	− 6	28.0
13	94	17.2	22	36.9		27.8	284	15.5		13.9	36	34.4		20.0	252	04.6		28.0
14	109	19.7	37	40.9		27.1	299	16.9		13.4	51	36.3		20.1	267	07.1		28.0
15	124	22.2	52	44.8		26.3	314	18.4		12.9	66	38.2		20.2	282	09.6		28.0
16	139	24.6	67	48.8		25.6	329	19.9		12.4	81	40.0		20.4	297	12.2		28.0
17	154	27.1	82	52.7	+ 21	24.8	344	21.3	+ 5	11.9	96	41.9	+ 19	20.5	312	14.7	− 6	27.9
18	169	29.6	97	56.7	+ 21	24.1	359	22.8	+ 5	11.4	111	43.8	+ 19	20.6	327	17.2	− 6	27.9
19	184	32.0	113	00.6		23.3	14	24.2		10.9	126	45.7		20.7	342	19.7		27.9
20	199	34.5	128	04.5		22.6	29	25.7		10.5	141	47.5		20.9	357	22.3		27.9
21	214	37.0	143	08.5		21.8	44	27.2		10.0	156	49.4		21.0	12	24.8		27.9
22	229	39.4	158	12.4		21.1	59	28.6		09.5	171	51.3		21.1	27	27.3		27.9
23	244	41.9	173	16.4		20.3	74	30.1		09.0	186	53.1		21.2	42	29.8		27.9
24	259	44.3	188	20.3	+ 21	19.6	89	31.5	+ 5	08.5	201	55.0	+ 19	21.3	57	32.4	− 6	27.9
Dif	—		+40		−8		+15		−5		+19		+1		+25		0	


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LUNES 11 DE JUNIO DE 2012

UT	SOL			<div><div><div><div></div><div>LUNA</div></div><div><div>SD: 15/2</div><div>Edad: 21^d0</div><div>PMG: 5^h 49^m</div></div><div><div>PHE</div><div><div>4^h: 55/8</div><div>12^h: 55/5</div><div>20^h: 55/3</div></div><div>R°: 44^m</div></div></div></div>				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 11 ^h 59 ^m 7														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
<div>h</div> <div>0</div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> <div>7</div> <div>8</div> <div>9</div> <div>10</div> <div>11</div> <div>12</div> <div>13</div> <div>14</div> <div>15</div> <div>16</div> <div>17</div> <div>18</div> <div>19</div> <div>20</div> <div>21</div> <div>22</div> <div>23</div> <div>24</div>	<div><div>180</div><div>05.7</div></div> <div><div>195</div><div>05.6</div></div> <div><div>210</div><div>05.5</div></div> <div><div>225</div><div>05.4</div></div> <div><div>240</div><div>05.2</div></div> <div><div>255</div><div>05.1</div></div> <div><div>270</div><div>05.0</div></div> <div><div>285</div><div>04.8</div></div> <div><div>300</div><div>04.7</div></div> <div><div>315</div><div>04.6</div></div> <div><div>330</div><div>04.5</div></div> <div><div>345</div><div>04.3</div></div> <div><div>0</div><div>04.2</div></div> <div><div>15</div><div>04.1</div></div> <div><div>30</div><div>03.9</div></div> <div><div>45</div><div>03.8</div></div> <div><div>60</div><div>03.7</div></div> <div><div>75</div><div>03.6</div></div> <div><div>90</div><div>03.4</div></div> <div><div>105</div><div>03.3</div></div> <div><div>120</div><div>03.2</div></div> <div><div>135</div><div>03.0</div></div> <div><div>150</div><div>02.9</div></div> <div><div>165</div><div>02.8</div></div> <div><div>180</div><div>02.7</div></div>	<div><div>+ 23</div><div>05.7</div></div> <div><div></div><div>05.9</div></div> <div><div></div><div>06.0</div></div> <div><div></div><div>06.2</div></div> <div><div></div><div>06.4</div></div> <div><div>+ 23</div><div>06.5</div></div> <div><div>+ 23</div><div>06.7</div></div> <div><div></div><div>06.9</div></div> <div><div></div><div>07.0</div></div> <div><div></div><div>07.2</div></div> <div><div></div><div>07.4</div></div> <div><div>+ 23</div><div>07.5</div></div> <div><div>+ 23</div><div>07.7</div></div> <div><div></div><div>07.9</div></div> <div><div></div><div>08.0</div></div> <div><div></div><div>08.2</div></div> <div><div></div><div>08.3</div></div> <div><div>+ 23</div><div>08.5</div></div> <div><div>+ 23</div><div>08.7</div></div> <div><div></div><div>08.8</div></div> <div><div></div><div>09.0</div></div> <div><div></div><div>09.1</div></div> <div><div></div><div>09.3</div></div> <div><div></div><div>09.4</div></div> <div><div>+ 23</div><div>09.6</div></div>	<div><div>275</div><div>15.6</div></div> <div><div>289</div><div>48.9</div></div> <div><div>304</div><div>22.2</div></div> <div><div>318</div><div>55.6</div></div> <div><div>333</div><div>28.9</div></div> <div><div>348</div><div>02.4</div></div> <div><div>2</div><div>35.8</div></div> <div><div>17</div><div>09.3</div></div> <div><div>31</div><div>42.8</div></div> <div><div>46</div><div>16.4</div></div> <div><div>60</div><div>49.9</div></div> <div><div>75</div><div>23.5</div></div> <div><div>89</div><div>57.1</div></div> <div><div>104</div><div>30.8</div></div> <div><div>119</div><div>04.5</div></div> <div><div>133</div><div>38.2</div></div> <div><div>148</div><div>11.9</div></div> <div><div>162</div><div>45.6</div></div> <div><div>177</div><div>19.4</div></div> <div><div>191</div><div>53.1</div></div> <div><div>206</div><div>26.9</div></div> <div><div>221</div><div>00.8</div></div> <div><div>235</div><div>34.6</div></div> <div><div>250</div><div>08.4</div></div> <div><div>264</div><div>42.3</div></div>	<div><div>− 0</div><div>59.4</div></div> <div><div></div><div>47.8</div></div> <div><div></div><div>36.2</div></div> <div><div></div><div>24.6</div></div> <div><div></div><div>13.1</div></div> <div><div>− 0</div><div>01.5</div></div> <div><div>+ 0</div><div>10.0</div></div> <div><div></div><div>21.6</div></div> <div><div></div><div>33.1</div></div> <div><div></div><div>44.6</div></div> <div><div>+ 0</div><div>56.1</div></div> <div><div>+ 1</div><div>07.6</div></div> <div><div>+ 1</div><div>19.0</div></div> <div><div></div><div>30.5</div></div> <div><div></div><div>41.9</div></div> <div><div>+ 1</div><div>53.3</div></div> <div><div>+ 2</div><div>04.7</div></div> <div><div>+ 2</div><div>16.0</div></div> <div><div>+ 2</div><div>27.4</div></div> <div><div></div><div>38.7</div></div> <div><div>+ 2</div><div>50.0</div></div> <div><div>+ 3</div><div>01.3</div></div> <div><div></div><div>12.6</div></div> <div><div></div><div>23.8</div></div> <div><div>+ 3</div><div>35.0</div></div>	<div><div>60 N</div></div> <div><div>58</div></div> <div><div>56</div></div> <div><div>54</div></div> <div><div>52</div></div> <div><div>50</div></div> <div><div>45</div></div> <div><div>40</div></div> <div><div>35</div></div> <div><div>30</div></div> <div><div>20</div></div> <div><div>10 N</div></div> <div><div>0</div></div> <div><div>10 S</div></div> <div><div>20</div></div> <div><div>30</div></div> <div><div>35</div></div> <div><div>40</div></div> <div><div>45</div></div> <div><div>50</div></div> <div><div>52</div></div> <div><div>54</div></div> <div><div>56</div></div> <div><div>58</div></div> <div><div>60 S</div></div>	<div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>0 54</div><div>34</div></div> <div><div>1 36</div><div>23</div></div> <div><div>2 02</div><div>07</div></div> <div><div>2 47</div><div>36</div></div> <div><div>3 17</div><div>58</div></div> <div><div>39</div><div>46</div></div> <div><div>3 58</div><div>31</div></div> <div><div>4 26</div><div>56</div></div> <div><div>4 49</div><div>51</div></div> <div><div>5 07</div><div>34</div></div> <div><div>24</div><div>50</div></div> <div><div>40</div><div>08</div></div> <div><div>5 56</div><div>32</div></div> <div><div>6 05</div><div>37</div></div> <div><div>6 14</div><div>48</div></div> <div><div>6 24</div><div>01</div></div> <div><div>36</div><div>17</div></div> <div><div>41</div><div>25</div></div> <div><div>46</div><div>33</div></div> <div><div>53</div><div>41</div></div> <div><div>6 59</div><div>51</div></div> <div><div>7 06</div><div>03</div></div>	<div><div>h m</div><div>2 38</div></div> <div><div>h m</div><div>2 58</div></div> <div><div>h m</div><div>3 14</div></div> <div><div>h m</div><div>3 28</div></div> <div><div>h m</div><div>40</div></div> <div><div>h m</div><div>3 51</div></div> <div><div>h m</div><div>4 13</div></div> <div><div>h m</div><div>31</div></div> <div><div>h m</div><div>45</div></div> <div><div>h m</div><div>4 58</div></div> <div><div>h m</div><div>5 20</div></div> <div><div>h m</div><div>5 39</div></div> <div><div>h m</div><div>5 56</div></div> <div><div>h m</div><div>6 13</div></div> <div><div>h m</div><div>6 32</div></div> <div><div>h m</div><div>6 52</div></div> <div><div>h m</div><div>7 05</div></div> <div><div>h m</div><div>7 19</div></div> <div><div>h m</div><div>7 35</div></div> <div><div>h m</div><div>7 56</div></div> <div><div>h m</div><div>8 05</div></div> <div><div>h m</div><div>16</div></div> <div><div>h m</div><div>29</div></div> <div><div>h m</div><div>8 43</div></div> <div><div>h m</div><div>9 00</div></div>	<div><div>h m</div><div>23 57</div></div> <div><div>h m</div><div>23 59</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** **</div></div> <div><div>h m</div><div>** 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MARTES 12 DE JUNIO DE 2012

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UT	SOL		 LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 9		SD: 15 ^h 0 Edad: 22 ^d 0		PHE $\left\{ \begin{array}{l} 4^h: 55/1 \\ 12^h: 54/9 \\ 20^h: 54/8 \end{array} \right.$	PMG: 6 ^h 33 ^m R°: 42 ^m												
	hG ☉	Dec	hG ☾	Dif					Dec	Dif	Civil	Náutico	Hora	R°	Hora	R°		
^h	°	'	°	'	°	'	°	^h ^m	^h ^m	^h ^m ^s	^h ^m ^s	^h ^m ^s	^h ^m ^s	^h ^m ^s	^h ^m ^s			
0	180	02.7	+23	09.6	264	42.3	+3 35.0	112	60 N	21 23	23 04	** ** *	** ** *	13 26	76			
1	195	02.5		09.8	279	16.2	149 46.2	112	58	21 03	22 17	** ** *	** ** *	23 73	73			
2	210	02.4		09.9	293	50.1	149 +3 57.4	112	56	20 46	21 48	** ** *	0 01	15	20 70			
3	225	02.3		10.1	308	24.0	149 +4 08.5	111	54	32	26	23 09	02 18	17	69			
4	240	02.1		10.2	322	57.9	149 19.6	111	52	20	21 09	22 26	04 19	15	66			
5	255	02.0	+23	10.4	337	31.8	149 +4 30.7	111	50	20 10	20 54	21 59	0 05	21	13 12 65			
6	270	01.9	+23	10.5	352	05.7	149 +4 41.7	110	45	19 47	20 25	21 14	0 08	24	13 08 61			
7	285	01.8		10.7	6	39.7	150 +4 52.7	110	40	29	20 02	20 44	10 27		04 58			
8	300	01.6		10.8	21	13.6	149 +5 03.7	110	35	15	19 44	21	12 30		13 00 56			
9	315	01.5		11.0	35	47.6	150 14.7	110	30	19 02	29	20 02	14 32		12 57 54			
10	330	01.4		11.1	50	21.5	149 25.6	109	20	18 40	19 04	19 34	17 36		52 49			
11	345	01.2	+23	11.2	64	55.5	150 +5 36.5	109	10 N	18 21	18 44	19 11	0 20	39	12 47 46			
12	0	01.1	+23	11.4	79	29.4	149 +5 47.4	109	0	18 04	18 26	18 52	0 22	43	12 43 43			
13	15	01.0		11.5	94	03.4	150 +5 58.3	109	10 S	17 46	18 09	35	25 46		39 39			
14	30	00.8		11.7	108	37.4	150 +6 09.1	108	20	28	17 52	19	28 49		34 36			
15	45	00.7		11.8	123	11.4	150 19.8	107	30	17 07	33	18 03	31 54		29 32			
16	60	00.6		12.0	137	45.3	149 30.6	108	35	16 55	23	17 54	33 56		26 30			
17	75	00.5	+23	12.1	152	19.3	150 +6 41.3	107	40	16 41	17 11	17 45	0 35	59	12 22 28			
18	90	00.3	+23	12.3	166	53.3	150 +6 52.0	107	45	16 24	16 58	17 35	0 38	61	12 18 26			
19	105	00.2		12.4	181	27.3	150 +7 02.6	106	50	16 04	42	23	41 65		14 21			
20	120	00.1		12.5	196	01.3	150 13.2	106	52	15 54	35	18	42 67		12 20			
21	134	59.9		12.7	210	35.2	149 23.8	106	54	43	27	13	44 69		09 18			
22	149	59.8		12.8	225	09.2	150 34.3	105	56	30	18	07	45 72		07 16			
23	164	59.7		12.9	239	43.2	150 44.8	105	58	15 16	16 07	17 00	47 74		04 14			
24	179	59.5	+23	13.1	254	17.1	149 +7 55.2	104	60 S	14 59	15 56	16 53	0 49	77	12 01 11			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 6 ^h 36 ^m 0		Mag.: -4.0 PMG: 11 ^h 18 ^m			Mag.: +0.7 PMG: 17 ^h 58 ^m			Mag.: -2.0 PMG: 10 ^h 28 ^m			Mag.: +0.6 PMG: 20 ^h 02 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
^h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	260	43.5	189	53.9	+21	01.8	90	06.3	+4	56.6	202	40.0	+19	24.3	58	32.9	-6	27.6
1	275	45.9	204	57.7		01.1	105	07.8		56.1	217	41.9		24.4	73	35.4		27.6
2	290	48.4	220	01.6	+21	00.4	120	09.2		55.6	232	43.7		24.5	88	37.9		27.6
3	305	50.9	235	05.4	+20	59.7	135	10.7		55.1	247	45.6		24.6	103	40.4		27.6
4	320	53.3	250	09.3		58.9	150	12.1		54.6	262	47.5		24.8	118	42.9		27.5
5	335	55.8	265	13.2	+20	58.2	165	13.6	+4	54.1	277	49.3	+19	24.9	133	45.5	-6	27.5
6	350	58.3	280	17.0	+20	57.5	180	15.0	+4	53.6	292	51.2	+19	25.0	148	48.0	-6	27.5
7	6	00.7	295	20.9		56.7	195	16.5		53.1	307	53.1		25.1	163	50.5		27.5
8	21	03.2	310	24.7		56.0	210	17.9		52.6	322	55.0		25.2	178	53.0		27.5
9	36	05.7	325	28.6		55.3	225	19.3		52.1	337	56.8		25.4	193	55.5		27.5
10	51	08.1	340	32.4		54.6	240	20.8		51.6	352	58.7		25.5	208	58.0		27.5
11	66	10.6	355	36.2	+20	53.8	255	22.2	+4	51.1	8	00.6	+19	25.6	224	00.6	-6	27.5
12	81	13.1	10	40.1	+20	53.1	270	23.7	+4	50.6	23	02.5	+19	25.7	239	03.1	-6	27.5
13	96	15.5	25	43.9		52.4	285	25.1		50.1	38	04.3		25.8	254	05.6		27.5
14	111	18.0	40	47.7		51.7	300	26.6		49.6	53	06.2		26.0	269	08.1		27.4
15	126	20.4	55	51.6		50.9	315	28.0		49.1	68	08.1		26.1	284	10.6		27.4
16	141	22.9	70	55.4		50.2	330	29.4		48.6	83	10.0		26.2	299	13.1		27.4
17	156	25.4	85	59.2	+20	49.5	345	30.9	+4	48.1	98	11.8	+19	26.3	314	15.7	-6	27.4
18	171	27.8	101	03.0	+20	48.8	0	32.3	+4	47.6	113	13.7	+19	26.4	329	18.2	-6	27.4
19	186	30.3	116	06.8		48.0	15	33.8		47.1	128	15.6		26.6	344	20.7		27.4
20	201	32.8	131	10.6		47.3	30	35.2		46.6	143	17.5		26.7	359	23.2		27.4
21	216	35.2	146	14.5		46.6	45	36.6		46.1	158	19.3		26.8	14	25.7		27.4
22	231	37.7	161	18.3		45.9	60	38.1		45.6	173	21.2		26.9	29	28.2		27.4
23	246	40.2	176	22.1		45.2	75	39.5		45.1	188	23.1		27.0	44	30.8		27.4
24	261	42.6	191	25.9	+20	44.5	90	40.9	+4	44.6	203	25.0	+19	27.2	59	33.3	-6	27.3
Dif	—		+38		-7		+14		-5		+19		+1		+25			0

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MIÉRCOL 13 DE JUNIO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7		SD: 14 ^h 9		PHE	Edad: 23 ^d 0		R°: 44 ^m			de Luna		de Luna		
	PMG: 12 ^h 00 ^m 1		PMG: 7 ^h 15 ^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	179 59.5	+ 23 13.1	254 17.1	150	+ 7 55.2	104	60 N	** **	0 56	2 37	0 08	12	14 42	75	
1	194 59.4	13.2	268 51.1	149	+ 8 05.6	104	58	** **	1 43	2 57	12 15		36 72		
2	209 59.3	13.4	283 25.0	149	16.0	104	56	** **	2 12	3 13	16 17		30 70		
3	224 59.1	13.5	297 58.9	149	26.4	102	54	0 51	33	28	20 19		26 67		
4	239 59.0	13.6	312 32.9	150	36.6	102	52	1 34	2 51	40	23 21		21 66		
5	254 58.9	+ 23 13.8	327 06.8	149	+ 8 46.9	103	50	2 01	3 06	3 50	0 26	22	14 17	64	
6	269 58.7	+ 23 13.9	341 40.7	149	+ 8 57.1	102	45	2 46	3 35	4 13	0 32	26	14 09	60	
7	284 58.6	14.0	356 14.6	149	+ 9 07.3	102	40	3 16	3 58	31	37 29		14 02	58	
8	299 58.5	14.2	10 48.5	149	17.4	101	35	39	4 16	45	42 31		13 56	55	
9	314 58.4	14.3	25 22.4	149	27.5	101	30	3 58	31	4 58	46 33		51 53		
10	329 58.2	14.4	39 56.2	148	37.5	100	20	4 27	4 56	5 20	53 37		41 50		
11	344 58.1	+ 23 14.5	54 30.1	149	+ 9 47.5	100	10 N	4 49	5 16	5 39	0 59	40	13 33	47	
12	359 58.0	+ 23 14.7	69 03.9	148	+ 9 57.5	100	0	5 08	5 34	5 56	1 05	43	13 26	43	
13	14 57.8	14.8	83 37.7	148	+ 10 07.4	99	10 S	25	5 51	6 14	11 46		18 41		
14	29 57.7	14.9	98 11.5	148	17.2	98	20	41	6 08	32	17 50		10 38		
15	44 57.6	15.1	112 45.3	148	27.0	98	30	5 57	27	6 53	25 53		13 01	34	
16	59 57.4	15.2	127 19.1	148	36.8	98	35	6 06	37	7 05	29 55		12 56	32	
17	74 57.3	+ 23 15.3	141 52.9	148	+ 10 46.5	97	40	6 15	6 49	7 19	1 34	58	12 50	30	
18	89 57.2	+ 23 15.4	156 26.6	147	+ 10 56.2	97	45	6 25	7 02	7 36	1 39	61	12 44	26	
19	104 57.0	15.6	171 00.3	147	+ 11 05.8	96	50	37	18	7 57	46 65		35 24		
20	119 56.9	15.7	185 34.0	147	15.4	96	52	42	26	8 06	49 67		32 22		
21	134 56.8	15.8	200 07.7	147	24.9	95	54	48	34	17	53 68		27 21		
22	149 56.6	15.9	214 41.4	147	34.3	94	56	6 54	43	30	1 57	70	23 18		
23	164 56.5	16.0	229 15.0	146	43.8	95	58	7 00	7 53	8 44	2 01	72	18 16		
24	179 56.4	+ 23 16.2	243 48.6	146	+ 11 53.1	93	60 S	7 08	8 04	9 02	2 06	75	12 12	14	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 6 ^h 32 ^m 1		Mag.: -4.0 PMG: 11 ^h 11 ^m		Mag.: +0.7 PMG: 17 ^h 56 ^m		Mag.: -2.0 PMG: 10 ^h 25 ^m		Mag.: +0.6 PMG: 19 ^h 58 ^m						
	hG ♊	Dec	hG ♊	Dec	hG ♂	Dec	hG ♊	Dec	hG ♊	Dec					
h	° ' "	° ' "	° ' "	' "	° ' "	' "	° ' "	' "	° ' "	' "					
0	261 42.6	191 25.9	+ 20 44.5	90 40.9	+ 4 44.6	203 25.0	+ 19 27.2	59 33.3	- 6 27.3						
1	276 45.1	206 29.7	43.7	105 42.4	44.1	218 26.8	27.3	74 35.8	27.3						
2	291 47.5	221 33.5	43.0	120 43.8	43.6	233 28.7	27.4	89 38.3	27.3						
3	306 50.0	236 37.3	42.3	135 45.3	43.1	248 30.6	27.5	104 40.8	27.3						
4	321 52.5	251 41.0	41.6	150 46.7	42.6	263 32.5	27.6	119 43.3	27.3						
5	336 54.9	266 44.8	+ 20 40.9	165 48.1	+ 4 42.1	278 34.3	+ 19 27.8	134 45.8	- 6 27.3						
6	351 57.4	281 48.6	+ 20 40.2	180 49.6	+ 4 41.6	293 36.2	+ 19 27.9	149 48.4	- 6 27.3						
7	6 59.9	296 52.4	39.5	195 51.0	41.1	308 38.1	28.0	164 50.9	27.3						
8	22 02.3	311 56.2	38.7	210 52.4	40.6	323 40.0	28.1	179 53.4	27.3						
9	37 04.8	326 59.9	38.0	225 53.9	40.1	338 41.8	28.2	194 55.9	27.3						
10	52 07.3	342 03.7	37.3	240 55.3	39.6	353 43.7	28.4	209 58.4	27.3						
11	67 09.7	357 07.5	+ 20 36.6	255 56.7	+ 4 39.1	8 45.6	+ 19 28.5	225 00.9	- 6 27.3						
12	82 12.2	12 11.2	+ 20 35.9	270 58.2	+ 4 38.6	23 47.5	+ 19 28.6	240 03.4	- 6 27.2						
13	97 14.7	27 15.0	35.2	285 59.6	38.1	38 49.4	28.7	255 06.0	27.2						
14	112 17.1	42 18.8	34.5	301 01.0	37.6	53 51.2	28.8	270 08.5	27.2						
15	127 19.6	57 22.5	33.8	316 02.5	37.1	68 53.1	29.0	285 11.0	27.2						
16	142 22.0	72 26.3	33.1	331 03.9	36.6	83 55.0	29.1	300 13.5	27.2						
17	157 24.5	87 30.0	+ 20 32.4	346 05.3	+ 4 36.1	98 56.9	+ 19 29.2	315 16.0	- 6 27.2						
18	172 27.0	102 33.8	+ 20 31.7	1 06.7	+ 4 35.6	113 58.7	+ 19 29.3	330 18.5	- 6 27.2						
19	187 29.4	117 37.5	31.0	16 08.2	35.1	129 00.6	29.4	345 21.0	27.2						
20	202 31.9	132 41.2	30.3	31 09.6	34.6	144 02.5	29.5	0 23.5	27.2						
21	217 34.4	147 45.0	29.6	46 11.0	34.1	159 04.4	29.7	15 26.1	27.2						
22	232 36.8	162 48.7	28.9	61 12.5	33.6	174 06.2	29.8	30 28.6	27.2						
23	247 39.3	177 52.4	28.2	76 13.9	33.1	189 08.1	29.9	45 31.1	27.2						
24	262 41.8	192 56.2	+ 20 27.5	91 15.3	+ 4 32.6	204 10.0	+ 19 30.0	60 33.6	- 6 27.1						
Dif	—	+38	-7	+14	-5	+19	+1	+25	0						

JUEVES 14 DE JUNIO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 3		SD: 14 ^h 8 Edad: 24 ^d 0 PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /2 20 ^h : 54 ^h /1 PMG: 7 ^h 59 ^m R°: 44 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora R°	Hora R°		
^h	° ' "	° ' "	° ' "		° ' "		°	^h ^m	^h ^m	^h ^m ^s	^h ^m ^s	^h ^m ^s	^h ^m ^s	
0	179 56.4	+ 23 16.2	243 48.6		+ 11 53.1		60 N	21 25	23 08	** ** *	0 20 15	15 57 73		
1	194 56.2		258 22.2 ¹⁴⁶		+ 12 02.4 ⁹³		58	21 04	22 19	** ** *	27 18	48 70		
2	209 56.1		272 55.8 ¹⁴⁶		11.7 ⁹²		56	20 48	21 50	** ** *	33 20	40 68		
3	224 56.0		287 29.3 ¹⁴⁵		20.9 ⁹³		54	34	28	23 13	39 21	33 66		
4	239 55.8		302 02.9 ¹⁴⁶		30.1 ⁹²		52	21	21 10	22 28	44 23	27 64		
5	254 55.7	+ 23 16.8	316 36.4 ¹⁴⁵		+ 12 39.2 ⁹¹		50	20 11	20 55	22 00	0 48 25	15 21 63		
6	269 55.6	+ 23 16.9	331 09.8 ¹⁴⁴		+ 12 48.2 ⁹⁰		45	19 48	20 26	21 15	0 58 28	15 09 60		
7	284 55.4	17.0	345 43.3 ¹⁴⁵		+ 12 57.2 ⁹⁰		40	30	20 03	20 45	1 06 31	15 00 57		
8	299 55.3	17.1	0 16.7 ¹⁴⁴		+ 13 06.1 ⁸⁹		35	15	19 45	22	13 33	14 51 55		
9	314 55.2	17.2	14 50.1 ¹⁴⁴		15.0 ⁸⁹		30	19 02	30	20 03	19 35	44 53		
10	329 55.0	17.3	29 23.5 ¹⁴⁴		23.8 ⁸⁸		20	18 40	19 05	19 34	30 38	31 50		
11	344 54.9	+ 23 17.4	43 56.8 ¹⁴³		+ 13 32.6 ⁸⁸		10 N	18 22	18 45	19 12	1 39 42	14 20 47		
12	359 54.8	+ 23 17.5	58 30.1 ¹⁴³		+ 13 41.3 ⁸⁷		0	18 04	18 27	18 53	1 48 44	14 09 45		
13	14 54.6	17.7	73 03.4 ¹⁴³		49.9 ⁸⁶		10 S	17 47	18 09	36	1 57 47	13 59 42		
14	29 54.5	17.8	87 36.7 ¹⁴³		+ 13 58.5 ⁸⁶		20	28	17 52	20	2 07 50	48 40		
15	44 54.4	17.9	102 09.9 ¹⁴²		+ 14 07.0 ⁸⁵		30	17 07	33	18 03	18 53	35 37		
16	59 54.2	18.0	116 43.1 ¹⁴²		15.5 ⁸⁵		35	16 55	23	17 55	24 56	28 35		
17	74 54.1	+ 23 18.1	131 16.3 ¹⁴²		+ 14 23.9 ⁸⁴		40	16 41	17 11	17 45	2 32 57	13 20 33		
18	89 54.0	+ 23 18.2	145 49.4 ¹⁴¹		+ 14 32.2 ⁸³		45	16 24	16 58	17 35	2 40 61	13 10 30		
19	104 53.8	18.3	160 22.5 ¹⁴¹		40.5 ⁸³		50	16 03	42	23	51 63	12 59 27		
20	119 53.7	18.4	174 55.6 ¹⁴¹		48.7 ⁸²		52	15 54	34	18	2 56 65	54 25		
21	134 53.6	18.5	189 28.6 ¹⁴⁰		+ 14 56.9 ⁸²		54	43	26	12	3 01 67	48 23		
22	149 53.4	18.6	204 01.6 ¹⁴⁰		+ 15 05.0 ⁸¹		56	30	17	06	07 69	41 22		
23	164 53.3	18.7	218 34.6 ¹⁴⁰		13.0 ⁸⁰		58	15 15	16 07	17 00	13 72	34 19		
24	179 53.2	+ 23 18.8	233 07.5 ¹³⁹		+ 15 20.9 ⁷⁹		60 S	14 58	15 56	16 52	3 21 74	12 26 16		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 6 ^h 28 ^m 2		Mag.: -4.0 PMG: 11 ^h 06 ^m		Mag.: +0.7 PMG: 17 ^h 53 ^m		Mag.: -2.0 PMG: 10 ^h 22 ^m		Mag.: +0.6 PMG: 19 ^h 54 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h	° ' "	° ' "	° ' "		° ' "		°	^h ^m	° ' "		° ' "		° ' "	
0	262 41.8	192 56.2	+ 20 27.5		91 15.3	+ 4 32.6	204 10.0	+ 19 30.0	60 33.6	- 6 27.1				
1	277 44.2	207 59.9	26.8		106 16.8	32.1	219 11.9	30.1	75 36.1	27.1				
2	292 46.7	223 03.6	26.1		121 18.2	31.6	234 13.7	30.3	90 38.6	27.1				
3	307 49.2	238 07.3	25.4		136 19.6	31.1	249 15.6	30.4	105 41.1	27.1				
4	322 51.6	253 11.0	24.7		151 21.0	30.6	264 17.5	30.5	120 43.6	27.1				
5	337 54.1	268 14.8	+ 20 24.0		166 22.5	+ 4 30.1	279 19.4	+ 19 30.6	135 46.2	- 6 27.1				
6	352 56.5	283 18.5	+ 20 23.3		181 23.9	+ 4 29.6	294 21.2	+ 19 30.7	150 48.7	- 6 27.1				
7	7 59.0	298 22.2	22.6		196 25.3	29.0	309 23.1	30.9	165 51.2	27.1				
8	23 01.5	313 25.9	21.9		211 26.7	28.5	324 25.0	31.0	180 53.7	27.1				
9	38 03.9	328 29.6	21.3		226 28.2	28.0	339 26.9	31.1	195 56.2	27.1				
10	53 06.4	343 33.2	20.6		241 29.6	27.5	354 28.8	31.2	210 58.7	27.1				
11	68 08.9	358 36.9	+ 20 19.9		256 31.0	+ 4 27.0	9 30.6	+ 19 31.3	226 01.2	- 6 27.1				
12	83 11.3	13 40.6	+ 20 19.2		271 32.4	+ 4 26.5	24 32.5	+ 19 31.4	241 03.7	- 6 27.1				
13	98 13.8	28 44.3	18.5		286 33.9	26.0	39 34.4	31.6	256 06.2	27.1				
14	113 16.3	43 48.0	17.8		301 35.3	25.5	54 36.3	31.7	271 08.7	27.0				
15	128 18.7	58 51.7	17.1		316 36.7	25.0	69 38.1	31.8	286 11.3	27.0				
16	143 21.2	73 55.3	16.5		331 38.1	24.5	84 40.0	31.9	301 13.8	27.0				
17	158 23.6	88 59.0	+ 20 15.8		346 39.5	+ 4 24.0	99 41.9	+ 19 32.0	316 16.3	- 6 27.0				
18	173 26.1	104 02.7	+ 20 15.1		1 41.0	+ 4 23.5	114 43.8	+ 19 32.2	331 18.8	- 6 27.0				
19	188 28.6	119 06.3	14.4		16 42.4	23.0	129 45.6	32.3	346 21.3	27.0				
20	203 31.0	134 10.0	13.7		31 43.8	22.5	144 47.5	32.4	1 23.8	27.0				
21	218 33.5	149 13.6	13.1		46 45.2	22.0	159 49.4	32.5	16 26.3	27.0				
22	233 36.0	164 17.3	12.4		61 46.7	21.4	174 51.3	32.6	31 28.8	27.0				
23	248 38.4	179 20.9	11.7		76 48.1	20.9	189 53.2	32.7	46 31.3	27.0				
24	263 40.9	194 24.6	+ 20 11.0		91 49.5	+ 4 20.4	204 55.0	+ 19 32.9	61 33.8	- 6 27.0				
Dif	—	+37	-7		+14	-5	+19	+1	+25	0				

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VIERNES 15 DE JUNIO DE 2012


UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7			SD: 14 ^h 7														
	PMG: 12 ^h 00 ^m 6			Edad: 25 ^d 0														
				PMG: 8 ^h 43 ^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	h m	m	h m	m			
0	179	53.2	+ 23	18.8	233	07.5	+ 15	20.9	60 N	0 53	2 36	0 35	20	17 10	70			
1	194	53.0		18.9	247	40.5		28.8	58	1 41	2 56	45	22	16 58	68			
2	209	52.9		19.0	262	13.3		36.7	56	2 11	3 13	0 53	24	48	66			
3	224	52.8		19.1	276	46.2		44.4	54	0 48	33	27	1 00	26	39			
4	239	52.6		19.2	291	19.0		52.1	52	1 33	2 51		07	28	31			
5	254	52.5	+ 23	19.3	305	51.8	+ 15	59.7	50	2 01	3 06	3 50	1 13	29	16			
6	269	52.4	+ 23	19.4	320	24.5	+ 16	07.3	45	2 46	3 35	4 13	1 26	32	16			
7	284	52.2		19.5	334	57.2		14.8	40	3 16	3 58	31	37	34	15			
8	299	52.1		19.6	349	29.9		22.2	35	39	4 16	46	46	36	46			
9	314	52.0		19.7	4	02.5		29.5	30	3 58	31	4 59	1 54	38	37			
10	329	51.8		19.8	18	35.1		36.8	20	4 27	4 56	5 20	2 08	41	21			
11	344	51.7	+ 23	19.9	33	07.6	+ 16	44.0	10 N	4 49	5 16	5 39	2 21	43	15			
12	359	51.5	+ 23	20.0	47	40.2	+ 16	51.1	0	5 08	5 34	5 57	2 32	46	14			
13	14	51.4		20.1	62	12.7	+ 16	58.2	10 S	25	5 51	6 14	44	48	41			
14	29	51.3		20.2	76	45.1	+ 17	05.2	20	41	6 09	33	2 57	50	28			
15	44	51.1		20.3	91	17.5		12.1	30	5 58	28	6 54	3 11	53	12			
16	59	51.0		20.4	105	49.9		18.9	35	6 06	38	7 06	20	54	14			
17	74	50.9	+ 23	20.5	120	22.2	+ 17	25.7	40	6 16	6 50	7 20	3 29	57	13			
18	89	50.7	+ 23	20.6	134	54.5	+ 17	32.4	45	6 26	7 03	7 37	3 41	59	13			
19	104	50.6		20.6	149	26.8		39.0	50	38	19	7 58	3 54	62	26			
20	119	50.5		20.7	163	59.0		45.5	52	43	27	8 08	4 01	63	19			
21	134	50.3		20.8	178	31.2		52.0	54	49	35	19	08	65	11			
22	149	50.2		20.9	193	03.3	+ 17	58.4	56	6 55	44	31	16	67	13			
23	164	50.1		21.0	207	35.5	+ 18	04.7	58	7 01	7 54	8 46	25	69	12			
24	179	49.9	+ 23	21.1	222	07.5	+ 18	10.9	60 S	7 09	8 06	9 03	4 35	72	12			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 6 ^h 24 ^m 2		Mag.: -4.1 PMG: 11 ^h 00 ^m		Mag.: +0.7 PMG: 17 ^h 51 ^m		Mag.: -2.0 PMG: 10 ^h 19 ^m		Mag.: +0.6 PMG: 19 ^h 50 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	263	40.9	194	24.6	+ 20	11.0	91	49.5	+ 4	20.4	204	55.0	+ 19	32.9	61	33.8	- 6	27.0
1	278	43.4	209	28.2		10.4	106	50.9		19.9	219	56.9		33.0	76	36.3		27.0
2	293	45.8	224	31.9		09.7	121	52.3		19.4	234	58.8		33.1	91	38.8		27.0
3	308	48.3	239	35.5		09.0	136	53.7		18.9	250	00.7		33.2	106	41.4		27.0
4	323	50.8	254	39.1		08.4	151	55.2		18.4	265	02.5		33.3	121	43.9		27.0
5	338	53.2	269	42.8	+ 20	07.7	166	56.6	+ 4	17.9	280	04.4	+ 19	33.4	136	46.4	- 6	27.0
6	353	55.7	284	46.4	+ 20	07.0	181	58.0	+ 4	17.4	295	06.3	+ 19	33.6	151	48.9	- 6	27.0
7	8	58.1	299	50.0		06.3	196	59.4		16.9	310	08.2		33.7	166	51.4		26.9
8	24	00.6	314	53.6		05.7	212	00.8		16.4	325	10.1		33.8	181	53.9		26.9
9	39	03.1	329	57.2		05.0	227	02.2		15.8	340	11.9		33.9	196	56.4		26.9
10	54	05.5	345	00.9		04.4	242	03.7		15.3	355	13.8		34.0	211	58.9		26.9
11	69	08.0	0	04.5	+ 20	03.7	257	05.1	+ 4	14.8	10	15.7	+ 19	34.1	227	01.4	- 6	26.9
12	84	10.5	15	08.1	+ 20	03.0	272	06.5	+ 4	14.3	25	17.6	+ 19	34.3	242	03.9	- 6	26.9
13	99	12.9	30	11.7		02.4	287	07.9		13.8	40	19.5		34.4	257	06.4		26.9
14	114	15.4	45	15.3		01.7	302	09.3		13.3	55	21.3		34.5	272	08.9		26.9
15	129	17.9	60	18.8		01.0	317	10.7		12.8	70	23.2		34.6	287	11.4		26.9
16	144	20.3	75	22.4	+ 20	00.4	332	12.2		12.3	85	25.1		34.7	302	13.9		26.9
17	159	22.8	90	26.0	+ 19	59.7	347	13.6	+ 4	11.8	100	27.0	+ 19	34.9	317	16.4	- 6	26.9
18	174	25.3	105	29.6	+ 19	59.1	2	15.0	+ 4	11.3	115	28.8	+ 19	35.0	332	18.9	- 6	26.9
19	189	27.7	120	33.2		58.4	17	16.4		10.7	130	30.7		35.1	347	21.5		26.9
20	204	30.2	135	36.8		57.8	32	17.8		10.2	145	32.6		35.2	2	24.0		26.9
21	219	32.6	150	40.3		57.1	47	19.2		09.7	160	34.5		35.3	17	26.5		26.9
22	234	35.1	165	43.9		56.5	62	20.6		09.2	175	36.4		35.4	32	29.0		26.9
23	249	37.6	180	47.5		55.8	77	22.0		08.7	190	38.2		35.6	47	31.5		26.9
24	264	40.0	195	51.0	+ 19	55.2	92	23.4	+ 4	08.2	205	40.1	+ 19	35.7	62	34.0	- 6	26.9
Dif	—		+36		-7		+14		-5		+19		+1		+25		0	

SÁBADO 16 DE JUNIO DE 2012

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 00 ^m 8		SD: 14 ^h 7 Edad: 26 ^d 0 PHE { 4 ^h : 54 ^h /0 12 ^h : 54 ^h /0 20 ^h : 54 ^h /1 PMG: 9 ^h 29 ^m R°: 48 ^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	179 49.9	+ 23 21.1	222 07.5		+ 18 10.9		60 N	21 26	23 11	** **	0 55 26		18 20 63	
1	194 49.8	21.2	236 39.6	131	17.0	61	58	21 06	22 21	** **	1 07 28		18 06 61	
2	209 49.7	21.3	251 11.6	130	23.1	61	56	20 49	21 51	** **	17 31		17 54 60	
3	224 49.5	21.3	265 43.5	129	29.1	60	54	35	29	23 15	26 32		43 59	
4	239 49.4	21.4	280 15.4	129	35.0	59	52	22	21 11	22 29	35 33		34 58	
5	254 49.3	+ 23 21.5	294 47.3	129	+ 18 40.8	58	50	20 12	20 56	22 02	1 42 35		17 25 57	
6	269 49.1	+ 23 21.6	309 19.2	129	+ 18 46.5	57	45	19 49	20 26	21 16	1 58 37		17 07 56	
7	284 49.0	21.7	323 51.0	128	52.2	57	40	31	20 04	20 46	2 11 39		16 53 54	
8	299 48.8	21.7	338 22.7	127	+ 18 57.8	56	35	16	19 46	22	22 41		41 53	
9	314 48.7	21.8	352 54.5	128	+ 19 03.3	55	30	19 03	30	20 04	32 42		30 52	
10	329 48.6	21.9	7 26.2	127	08.7	54	20	18 41	19 06	19 35	2 49 44		16 11 51	
11	344 48.4	+ 23 22.0	21 57.8	126	+ 19 14.0	53	10 N	18 22	18 45	19 12	3 04 46		15 56 49	
12	359 48.3	+ 23 22.1	36 29.4	126	+ 19 19.2	52	0	18 04	18 27	18 53	3 18 47		15 41 48	
13	14 48.2	22.1	51 01.0	126	24.4	52	10 S	17 47	18 10	36	32 49		26 46	
14	29 48.0	22.2	65 32.5	125	29.4	50	20	29	17 53	20	3 47 51		15 10 45	
15	44 47.9	22.3	80 04.0	125	34.4	50	30	17 07	34	18 04	4 04 53		14 52 43	
16	59 47.8	22.4	94 35.5	125	39.3	49	35	16 55	23	17 55	14 54		41 43	
17	74 47.6	+ 23 22.4	109 06.9	124	+ 19 44.1	48	40	16 41	17 11	17 45	4 26 55		14 29 41	
18	89 47.5	+ 23 22.5	123 38.3	124	+ 19 48.8	47	45	16 24	16 58	17 35	4 40 57		14 15 39	
19	104 47.3	22.6	138 09.7	124	53.5	47	50	16 03	42	23	4 56 60		13 57 38	
20	119 47.2	22.7	152 41.0	123	+ 19 58.0	45	52	15 53	34	18	5 04 61		49 37	
21	134 47.1	22.7	167 12.3	123	+ 20 02.5	45	54	42	26	12	13 62		40 36	
22	149 46.9	22.8	181 43.5	122	06.8	43	56	30	17	06	23 63		30 34	
23	164 46.8	22.9	196 14.7	122	11.1	43	58	15 15	16 07	17 00	34 65		18 33	
24	179 46.7	+ 23 22.9	210 45.9	122	+ 20 15.3	42	60 S	14 58	15 55	16 52	5 47 68		13 05 30	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 6 ^h 20 ^m 3		Mag.: -4.1 PMG: 10 ^h 54 ^m		Mag.: +0.7 PMG: 17 ^h 49 ^m		Mag.: -2.0 PMG: 10 ^h 16 ^m		Mag.: +0.6 PMG: 19 ^h 46 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	264 40.0	195 51.0	+ 19 55.2	92 23.4	+ 4 08.2	205 40.1	+ 19 35.7	62 34.0	- 6 26.9					
1	279 42.5	210 54.6	54.5	107 24.9	07.7	220 42.0	35.8	77 36.5	26.9					
2	294 45.0	225 58.1	53.9	122 26.3	07.2	235 43.9	35.9	92 39.0	26.9					
3	309 47.4	241 01.7	53.2	137 27.7	06.6	250 45.8	36.0	107 41.5	26.8					
4	324 49.9	256 05.2	52.6	152 29.1	06.1	265 47.6	36.1	122 44.0	26.8					
5	339 52.4	271 08.8	+ 19 51.9	167 30.5	+ 4 05.6	280 49.5	+ 19 36.2	137 46.5	- 6 26.8					
6	354 54.8	286 12.3	+ 19 51.3	182 31.9	+ 4 05.1	295 51.4	+ 19 36.4	152 49.0	- 6 26.8					
7	9 57.3	301 15.8	50.7	197 33.3	04.6	310 53.3	36.5	167 51.5	26.8					
8	24 59.7	316 19.4	50.0	212 34.7	04.1	325 55.2	36.6	182 54.0	26.8					
9	40 02.2	331 22.9	49.4	227 36.1	03.6	340 57.0	36.7	197 56.5	26.8					
10	55 04.7	346 26.4	48.7	242 37.5	03.1	355 58.9	36.8	212 59.0	26.8					
11	70 07.1	1 29.9	+ 19 48.1	257 38.9	+ 4 02.5	11 00.8	+ 19 36.9	228 01.5	- 6 26.8					
12	85 09.6	16 33.4	+ 19 47.5	272 40.3	+ 4 02.0	26 02.7	+ 19 37.1	243 04.0	- 6 26.8					
13	100 12.1	31 37.0	46.8	287 41.8	01.5	41 04.6	37.2	258 06.5	26.8					
14	115 14.5	46 40.5	46.2	302 43.2	01.0	56 06.4	37.3	273 09.0	26.8					
15	130 17.0	61 44.0	45.6	317 44.6	00.5	71 08.3	37.4	288 11.5	26.8					
16	145 19.5	76 47.5	44.9	332 46.0	+ 4 00.0	86 10.2	37.5	303 14.0	26.8					
17	160 21.9	91 51.0	+ 19 44.3	347 47.4	+ 3 59.5	101 12.1	+ 19 37.6	318 16.5	- 6 26.8					
18	175 24.4	106 54.4	+ 19 43.7	2 48.8	+ 3 58.9	116 14.0	+ 19 37.8	333 19.0	- 6 26.8					
19	190 26.9	121 57.9	43.1	17 50.2	58.4	131 15.8	37.9	348 21.5	26.8					
20	205 29.3	137 01.4	42.4	32 51.6	57.9	146 17.7	38.0	3 24.0	26.8					
21	220 31.8	152 04.9	41.8	47 53.0	57.4	161 19.6	38.1	18 26.5	26.8					
22	235 34.2	167 08.4	41.2	62 54.4	56.9	176 21.5	38.2	33 29.0	26.8					
23	250 36.7	182 11.9	40.6	77 55.8	56.4	191 23.4	38.3	48 31.5	26.8					
24	265 39.2	197 15.3	+ 19 39.9	92 57.2	+ 3 55.8	206 25.2	+ 19 38.4	63 34.0	- 6 26.8					
Dif	—	+35	-6	+14	-5	+19	+1	+25	0					

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DOMINGO 17 DE JUNIO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7		SD: 14 ^h 7		PHE	Edad: 27 ^d 0									
	PMG: 12 ^h 01 ^m 0		PMG: 10 ^h 17 ^m			R°: 49 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
^h	°	'	°	'	°	'	°	h	m	h	m		h	m	
0	179 46.7	+ 23 22.9	210 45.9		+ 20 15.3	41	60 N	0 50	2 36	1 21 35	19 23 54		19 23 54		
1	194 46.5	23.0	225 17.1	122	19.4	39	58	1 41	2 56	35 38	19 07 54		19 07 54		
2	209 46.4	23.1	239 48.2	121	23.3	40	56	2 10	3 13	48 38	18 54 53		18 54 53		
3	224 46.3	23.1	254 19.2	120	27.3	38	54	0 46	33	27	1 58 40		42 53		
4	239 46.1	23.2	268 50.3	121	31.1	37	52	1 32	2 51	39	2 08 41		32 52		
5	254 46.0	+ 23 23.3	283 21.3	120	+ 20 34.8	36	50	2 00	3 06	3 50	2 17 41		18 22 53		
6	269 45.9	+ 23 23.3	297 52.2	119	+ 20 38.4	35	45	2 46	3 35	4 13	2 35 43		18 03 52		
7	284 45.7	23.4	312 23.2	120	41.9	35	40	3 16	3 58	31	2 50 44		17 47 51		
8	299 45.6	23.5	326 54.1	119	45.4	33	35	39	4 16	46	3 03 44		34 51		
9	314 45.4	23.5	341 24.9	118	48.7	32	30	3 58	31	4 59	14 45		22 51		
10	329 45.3	23.6	355 55.8	119	51.9	32	20	4 27	4 56	5 21	33 47		17 02 50		
11	344 45.2	+ 23 23.6	10 26.6	118	+ 20 55.1	30	10 N	4 50	5 17	5 40	3 50 47		16 45 49		
12	359 45.0	+ 23 23.7	24 57.4	118	+ 20 58.1	30	0	5 09	5 35	5 57	4 05 49		16 29 49		
13	14 44.9	23.8	39 28.1	117	+ 21 01.1	30	10 S	26	5 52	6 15	21 49		16 12 49		
14	29 44.8	23.8	53 58.8	117	04.0	29	20	42	6 09	33	38 50		15 55 48		
15	44 44.6	23.9	68 29.5	117	06.7	27	30	5 58	28	6 54	4 57 52		35 48		
16	59 44.5	23.9	83 00.1	116	09.4	27	35	6 07	39	7 07	5 08 52		24 47		
17	74 44.3	+ 23 24.0	97 30.8	117	+ 21 11.9	25	40	6 16	6 50	7 21	5 21 53		15 10 47		
18	89 44.2	+ 23 24.0	112 01.4	116	+ 21 14.4	25	45	6 27	7 04	7 38	5 37 54		14 54 46		
19	104 44.1	24.1	126 31.9	115	16.8	24	50	38	20	7 59	5 56 55		35 45		
20	119 43.9	24.1	141 02.5	116	19.0	22	52	44	27	8 08	6 05 55		26 44		
21	134 43.8	24.2	155 33.0	115	21.2	22	54	49	36	20	15 56		16 44		
22	149 43.7	24.3	170 03.5	115	23.3	21	56	6 56	45	32	26 57		14 04 43		
23	164 43.5	24.3	184 33.9	114	25.2	19	58	7 02	7 55	8 47	39 58		13 51 42		
24	179 43.4	+ 23 24.4	199 04.4	115	+ 21 27.1	19	60 S	7 10	8 07	9 04	6 55 59		13 35 41		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 6 ^h 16 ^m 4		Mag.: -4.2 PMG: 10 ^h 48 ^m		Mag.: +0.7 PMG: 17 ^h 47 ^m		Mag.: -2.0 PMG: 10 ^h 13 ^m		Mag.: +0.6 PMG: 19 ^h 42 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
^h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	265 39.2	197 15.3	+ 19 39.9		92 57.2	+ 3 55.8	206 25.2	+ 19 38.4	63 34.0	- 6 26.8					
1	280 41.6	212 18.8	39.3		107 58.6	55.3	221 27.1	38.6	78 36.5	26.8					
2	295 44.1	227 22.2	38.7		123 00.0	54.8	236 29.0	38.7	93 39.0	26.8					
3	310 46.6	242 25.7	38.1		138 01.4	54.3	251 30.9	38.8	108 41.5	26.8					
4	325 49.0	257 29.2	37.5		153 02.8	53.8	266 32.8	38.9	123 44.0	26.8					
5	340 51.5	272 32.6	+ 19 36.9		168 04.2	+ 3 53.3	281 34.6	+ 19 39.0	138 46.5	- 6 26.8					
6	355 54.0	287 36.1	+ 19 36.2		183 05.6	+ 3 52.7	296 36.5	+ 19 39.1	153 49.0	- 6 26.8					
7	10 56.4	302 39.5	35.6		198 07.0	52.2	311 38.4	39.3	168 51.5	26.8					
8	25 58.9	317 42.9	35.0		213 08.4	51.7	326 40.3	39.4	183 54.0	26.8					
9	41 01.4	332 46.4	34.4		228 09.8	51.2	341 42.2	39.5	198 56.5	26.8					
10	56 03.8	347 49.8	33.8		243 11.2	50.7	356 44.0	39.6	213 59.0	26.7					
11	71 06.3	2 53.2	+ 19 33.2		258 12.6	+ 3 50.2	11 45.9	+ 19 39.7	229 01.5	- 6 26.7					
12	86 08.7	17 56.7	+ 19 32.6		273 14.0	+ 3 49.6	26 47.8	+ 19 39.8	244 04.0	- 6 26.7					
13	101 11.2	33 00.1	32.0		288 15.4	49.1	41 49.7	39.9	259 06.5	26.7					
14	116 13.7	48 03.5	31.4		303 16.8	48.6	56 51.6	40.1	274 09.0	26.7					
15	131 16.1	63 06.9	30.8		318 18.2	48.1	71 53.4	40.2	289 11.5	26.7					
16	146 18.6	78 10.3	30.2		333 19.6	47.6	86 55.3	40.3	304 14.0	26.7					
17	161 21.1	93 13.7	+ 19 29.6		348 21.0	+ 3 47.1	101 57.2	+ 19 40.4	319 16.5	- 6 26.7					
18	176 23.5	108 17.1	+ 19 29.0		3 22.4	+ 3 46.5	116 59.1	+ 19 40.5	334 19.0	- 6 26.7					
19	191 26.0	123 20.5	28.4		18 23.8	46.0	132 01.0	40.6	349 21.5	26.7					
20	206 28.5	138 23.9	27.8		33 25.2	45.5	147 02.9	40.7	4 24.0	26.7					
21	221 30.9	153 27.3	27.2		48 26.6	45.0	162 04.7	40.9	19 26.5	26.7					
22	236 33.4	168 30.7	26.6		63 28.0	44.5	177 06.6	41.0	34 29.0	26.7					
23	251 35.9	183 34.0	26.0		78 29.3	43.9	192 08.5	41.1	49 31.5	26.7					
24	266 38.3	198 37.4	+ 19 25.4		93 30.7	+ 3 43.4	207 10.4	+ 19 41.2	64 34.0	- 6 26.7					
Dif	—	+34	-6		+14	-5	+19	+1	+25	0					

LUNES 18 DE JUNIO DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 01 ^m 2			SD: 14 ^h 8 Edad: 28 ^d 0 PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /4 20 ^h : 54 ^h /4															
	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	179	43.4	+ 23	199	04.4	+ 21	27.1	60 N	21 27	23 13	*** **	1 56	48	20 17	43				
1	194	43.3		213	34.8 ¹¹⁴		28.9	58	21 07	22 22	*** **	2 13	48	20 01	43				
2	209	43.1		228	05.1 ¹¹³		30.5	56	20 50	21 52	*** **	26	49	19 47	44				
3	224	43.0		242	35.5 ¹¹⁴		32.1	54	35	30	23 17	38	49	35	45				
4	239	42.8		257	05.8 ¹¹³		33.6	52	23	21 12	22 30	49	48	24	45				
5	254	42.7	+ 23	271	36.2 ¹¹⁴	+ 21	34.9	50	20 12	20 57	22 03	2 58	49	19 15	45				
6	269	42.6	+ 23	286	06.4 ¹¹²	+ 21	36.2	45	19 50	20 27	21 17	3 18	49	18 55	46				
7	284	42.4		300	36.7 ¹¹³		37.3	40	32	20 05	20 46	34	49	38	47				
8	299	42.3		315	07.0 ¹¹³		38.4	35	17	19 46	23	47	50	25	47				
9	314	42.2		329	37.2 ¹¹²		39.4	30	19 04	31	20 04	3 59	50	18 13	48				
10	329	42.0		344	07.4 ¹¹²		40.2	20	18 41	19 06	19 35	4 20	49	17 52	49				
11	344	41.9	+ 23	358	37.6 ¹¹²	+ 21	40.9	10 N	18 22	18 46	19 13	4 37	50	17 34	50				
12	359	41.7	+ 23	13	07.8 ¹¹²	+ 21	41.6	0	18 05	18 27	18 54	4 54	49	17 18	49				
13	14	41.6		27	37.9 ¹¹¹		42.1	10 S	17 47	18 10	37	5 10	50	17 01	50				
14	29	41.5		42	08.1 ¹¹²		42.5	20	29	17 53	20	28	50	16 43	51				
15	44	41.3		56	38.2 ¹¹¹		42.9	30	17 08	34	18 04	5 49	49	23	51				
16	59	41.2		71	08.3 ¹¹¹		43.1	35	16 55	23	17 55	6 00	50	16 11	51				
17	74	41.1	+ 23	85	38.4 ¹¹¹	+ 21	43.2	40	16 41	17 12	17 46	6 14	50	15 57	51				
18	89	40.9	+ 23	100	08.4 ¹¹⁰	+ 21	43.2	45	16 24	16 58	17 35	6 31	49	15 40	52				
19	104	40.8		114	38.5 ¹¹¹		43.1	50	16 03	42	24	6 51	49	20	53				
20	119	40.7		129	08.5 ¹¹⁰		42.9	52	15 54	35	18	7 00	49	10	53				
21	134	40.5		143	38.6 ¹¹¹		42.6	54	42	26	13	11	49	15 00	53				
22	149	40.4		158	08.6 ¹¹⁰		42.2	56	30	17	06	23	49	14 47	54				
23	164	40.2		172	38.6 ¹¹⁰		41.7	58	15 15	16 07	17 00	37	49	33	54				
24	179	40.1	+ 23	187	08.6 ¹¹⁰	+ 21	41.1	60 S	14 58	15 55	16 52	7 54	48	14 16	55				
UT	ARIES PMG 6 ^h 12 ^m 4		VENUS Mag.: -4.2 PMG: 10 ^h 43 ^m		MARTE Mag.: +0.7 PMG: 17 ^h 44 ^m		JÚPITER Mag.: -2.0 PMG: 10 ^h 10 ^m		SATURNO Mag.: +0.6 PMG: 19 ^h 38 ^m										
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec							
^h	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']					
0	266	38.3	198	37.4	+ 19	25.4	93	30.7	+ 3	43.4	207	10.4	+ 19	41.2	64	34.0	- 6	26.7	
1	281	40.8		213	40.8	24.8	108	32.1		42.9	222	12.3		41.3	79	36.5		26.7	
2	296	43.2		228	44.2	24.2	123	33.5		42.4	237	14.1		41.4	94	39.0		26.7	
3	311	45.7		243	47.5	23.6	138	34.9		41.9	252	16.0		41.5	109	41.5		26.7	
4	326	48.2		258	50.9	23.1	153	36.3		41.3	267	17.9		41.7	124	44.0		26.7	
5	341	50.6		273	54.2	+ 19	22.5	168	37.7	+ 3	40.8	282	19.8	+ 19	41.8	139	46.5	- 6	26.7
6	356	53.1		288	57.6	+ 19	21.9	183	39.1	+ 3	40.3	297	21.7	+ 19	41.9	154	49.0	- 6	26.7
7	11	55.6		304	00.9	21.3	198	40.5		39.8	312	23.6		42.0	169	51.5		26.7	
8	26	58.0		319	04.3	20.7	213	41.9		39.3	327	25.4		42.1	184	54.0		26.7	
9	42	00.5		334	07.6	20.2	228	43.3		38.7	342	27.3		42.2	199	56.4		26.7	
10	57	03.0		349	11.0	19.6	243	44.7		38.2	357	29.2		42.3	214	58.9		26.7	
11	72	05.4		4	14.3	+ 19	19.0	258	46.0	+ 3	37.7	12	31.1	+ 19	42.4	230	01.4	- 6	26.7
12	87	07.9		19	17.6	+ 19	18.4	273	47.4	+ 3	37.2	27	33.0	+ 19	42.6	245	03.9	- 6	26.7
13	102	10.4		34	20.9	17.9	288	48.8		36.7	42	34.9		42.7	260	06.4		26.7	
14	117	12.8		49	24.3	17.3	303	50.2		36.1	57	36.7		42.8	275	08.9		26.7	
15	132	15.3		64	27.6	16.7	318	51.6		35.6	72	38.6		42.9	290	11.4		26.7	
16	147	17.7		79	30.9	16.1	333	53.0		35.1	87	40.5		43.0	305	13.9		26.7	
17	162	20.2		94	34.2	+ 19	15.6	348	54.4	+ 3	34.6	102	42.4	+ 19	43.1	320	16.4	- 6	26.7
18	177	22.7		109	37.5	+ 19	15.0	3	55.8	+ 3	34.0	117	44.3	+ 19	43.2	335	18.9	- 6	26.7
19	192	25.1		124	40.8	14.4	18	57.2		33.5	132	46.2		43.4	350	21.4		26.7	
20	207	27.6		139	44.1	13.9	33	58.5		33.0	147	48.0		43.5	5	23.9		26.7	
21	222	30.1		154	47.4	13.3	48	59.9		32.5	162	49.9		43.6	20	26.4		26.7	
22	237	32.5		169	50.7	12.7	64	01.3		32.0	177	51.8		43.7	35	28.9		26.7	
23	252	35.0		184	54.0	12.2	79	02.7		31.4	192	53.7		43.8	50	31.4		26.7	
24	267	37.5		199	57.2	+ 19	11.6	94	04.1	+ 3	30.9	207	55.6	+ 19	43.9	65	33.9	- 6	26.7
Dif	—		+33		-6		+14		-5		+19		+1		+25		0		

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MARTES 19 DE JUNIO DE 2012


UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7		SD: 14 ^h 8		Edad: 29 ^d 0			PHE { 4 ^h : 54/5 12 ^h : 54/6 20 ^h : 54/8			R°: 50 ^m					
	PMG: 12 ^h 01 ^m 4		PMG: 11 ^h 55 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m		h	m		
0	179 40.1	+ 23 25.4	187 08.6		+ 21 41.1	7	60 N	** **	0 49	2 36	2 44 61		21 00 31			
1	194 40.0	25.4	201 38.6	110	40.4	8	58	** **	1 40	2 56	3 01 59		20 44 34			
2	209 39.8	25.4	216 08.6	110	39.6	10	56	** **	2 10	3 13	15 58		31 36			
3	224 39.7	25.5	230 38.5	109	38.6	10	54	0 45	33	27	27 57		20 37			
4	239 39.6	25.5	245 08.5	110	37.6	10	52	1 32	2 51	39	37 57		09 39			
5	254 39.4	+ 23 25.5	259 38.5	110	+ 21 36.4	12	50	2 00	3 06	3 50	3 47 56		20 00 40			
6	269 39.3	+ 23 25.6	274 08.4	109	+ 21 35.2	12	45	2 46	3 35	4 13	4 07 55		19 41 41			
7	284 39.1	25.6	288 38.4	110	33.8	14	40	3 16	3 58	31	23 54		25 43			
8	299 39.0	25.6	303 08.3	109	32.4	14	35	40	4 16	46	37 53		12 44			
9	314 38.9	25.7	317 38.2	109	30.8	16	30	3 58	32	4 59	4 49 52		19 01 45			
10	329 38.7	25.7	332 08.2	110	29.1	17	20	4 27	4 57	5 21	5 09 52		18 41 47			
11	344 38.6	+ 23 25.7	346 38.1	109	+ 21 27.4	17	10 N	4 50	5 17	5 40	5 27 50		18 24 48			
12	359 38.5	+ 23 25.7	1 08.0	109	+ 21 25.5	19	0	5 09	5 35	5 58	5 43 50		18 07 50			
13	14 38.3	25.8	15 38.0	110	23.5	20	10 S	26	5 52	6 15	6 00 49		17 51 51			
14	29 38.2	25.8	30 07.9	109	21.4	21	20	42	6 10	34	18 47		34 52			
15	44 38.0	25.8	44 37.8	109	19.2	22	30	5 59	29	6 55	38 47		14 54			
16	59 37.9	25.8	59 07.7	109	16.9	23	35	6 08	39	7 07	6 50 46		17 02 55			
17	74 37.8	+ 23 25.8	73 37.6	109	+ 21 14.5	24	40	6 17	6 51	7 22	7 04 45		16 48 56			
18	89 37.6	+ 23 25.9	88 07.6	110	+ 21 12.0	25	45	6 27	7 05	7 38	7 20 44		16 32 58			
19	104 37.5	25.9	102 37.5	109	09.3	27	50	39	21	7 59	40 42		13 59			
20	119 37.4	25.9	117 07.4	109	06.6	27	52	44	28	8 09	7 49 42		16 03 60			
21	134 37.2	25.9	131 37.4	110	03.8	28	54	50	36	20	8 00 41		15 53 61			
22	149 37.1	25.9	146 07.3	109	+ 21 00.9	29	56	6 56	45	33	12 40		41 62			
23	164 36.9	26.0	160 37.2	109	+ 20 57.8	31	58	7 03	7 56	8 48	26 38		27 64			
24	179 36.8	+ 23 26.0	175 07.2	110	+ 20 54.7	31	60 S	7 11	8 07	9 05	8 42 37		15 11 65			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 6 ^h 08 ^m 5		Mag.: -4.2 PMG: 10 ^h 38 ^m		Mag.: +0.7 PMG: 17 ^h 42 ^m		Mag.: -2.0 PMG: 10 ^h 07 ^m		Mag.: +0.6 PMG: 19 ^h 34 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	267 37.5	199 57.2	+ 19 11.6	94 04.1	+ 3 30.9	207 55.6	+ 19 43.9	65 33.9	- 6 26.7							
1	282 39.9	215 00.5	11.1	109 05.5	30.4	222 57.5	44.0	80 36.3	26.7							
2	297 42.4	230 03.8	10.5	124 06.9	29.9	237 59.3	44.1	95 38.8	26.7							
3	312 44.8	245 07.1	10.0	139 08.2	29.3	253 01.2	44.3	110 41.3	26.7							
4	327 47.3	260 10.3	09.4	154 09.6	28.8	268 03.1	44.4	125 43.8	26.7							
5	342 49.8	275 13.6	+ 19 08.9	169 11.0	+ 3 28.3	283 05.0	+ 19 44.5	140 46.3	- 6 26.7							
6	357 52.2	290 16.8	+ 19 08.3	184 12.4	+ 3 27.8	298 06.9	+ 19 44.6	155 48.8	- 6 26.7							
7	12 54.7	305 20.1	07.8	199 13.8	27.2	313 08.8	44.7	170 51.3	26.7							
8	27 57.2	320 23.3	07.2	214 15.2	26.7	328 10.6	44.8	185 53.8	26.7							
9	42 59.6	335 26.6	06.7	229 16.5	26.2	343 12.5	44.9	200 56.3	26.7							
10	58 02.1	350 29.8	06.1	244 17.9	25.7	358 14.4	45.0	215 58.8	26.7							
11	73 04.6	5 33.0	+ 19 05.6	259 19.3	+ 3 25.1	13 16.3	+ 19 45.2	231 01.3	- 6 26.7							
12	88 07.0	20 36.3	+ 19 05.0	274 20.7	+ 3 24.6	28 18.2	+ 19 45.3	246 03.8	- 6 26.7							
13	103 09.5	35 39.5	04.5	289 22.1	24.1	43 20.1	45.4	261 06.2	26.7							
14	118 12.0	50 42.7	03.9	304 23.4	23.6	58 21.9	45.5	276 08.7	26.7							
15	133 14.4	65 45.9	03.4	319 24.8	23.0	73 23.8	45.6	291 11.2	26.7							
16	148 16.9	80 49.2	02.9	334 26.2	22.5	88 25.7	45.7	306 13.7	26.7							
17	163 19.3	95 52.4	+ 19 02.3	349 27.6	+ 3 22.0	103 27.6	+ 19 45.8	321 16.2	- 6 26.7							
18	178 21.8	110 55.6	+ 19 01.8	4 29.0	+ 3 21.5	118 29.5	+ 19 45.9	336 18.7	- 6 26.7							
19	193 24.3	125 58.8	01.3	19 30.3	20.9	133 31.4	46.1	351 21.2	26.7							
20	208 26.7	141 02.0	00.7	34 31.7	20.4	148 33.3	46.2	6 23.7	26.7							
21	223 29.2	156 05.2	+ 19 00.2	49 33.1	19.9	163 35.1	46.3	21 26.2	26.7							
22	238 31.7	171 08.4	+ 18 59.7	64 34.5	19.4	178 37.0	46.4	36 28.7	26.7							
23	253 34.1	186 11.5	59.2	79 35.8	18.8	193 38.9	46.5	51 31.1	26.7							
24	268 36.6	201 14.7	+ 18 58.6	94 37.2	+ 3 18.3	208 40.8	+ 19 46.6	66 33.6	- 6 26.7							
Dif	—	+32	-5	+14	-5	+19	+1	+25	0							

MIÉRCOL 20 DE JUNIO DE 2012

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 7 PMG: 12 ^h 01 ^m 7		SD: 14 ^h 9 Edad: 0 ^d 4 PHE { 4 ^h : 54 ^m /9 12 ^h : 55 ^m /0 20 ^h : 55 ^m /1 PMG: 12 ^h 45 ^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	h m	m	h m	m			
0	179	36.8	+ 23	26.0	175	07.2	+ 20	54.7	33	60 N	21 28	23 14	** **	3 45	70	21 31	24	
1	194	36.7		26.0	189	37.1		51.4	33	58	21 07	22 23	** **	4 00	68	18	26	
2	209	36.5		26.0	204	07.1		48.1	33	56	20 50	21 53	** **	13	66	21 07	28	
3	224	36.4		26.0	218	37.1		44.6	35	54	36	31	23 18	24	65	20 57	30	
4	239	36.3		26.0	233	07.0		41.1	35	52	24	21 13	22 31	34	63	48	32	
5	254	36.1	+ 23	26.1	247	37.0	+ 20	37.4	37	50	20 13	20 57	22 03	4 43	62	20 40	33	
6	269	36.0	+ 23	26.1	262	07.0	+ 20	33.6	38	45	19 50	20 28	21 17	5 02	60	20 22	37	
7	284	35.8		26.1	276	37.0		29.8	38	40	32	20 05	20 47	17	58	20 08	39	
8	299	35.7		26.1	291	07.0		25.8	40	35	17	19 47	24	30	56	19 56	41	
9	314	35.6		26.1	305	37.1		21.7	41	30	19 04	32	20 05	5 41	55	46	42	
10	329	35.4		26.1	320	07.1		17.6	41	20	18 42	19 07	19 36	6 01	53	28	44	
11	344	35.3	+ 23	26.1	334	37.1	+ 20	13.3	43	10 N	18 23	18 46	19 13	6 17	52	19 12	47	
12	359	35.2	+ 23	26.1	349	07.2	+ 20	08.9	44	0	18 05	18 28	18 54	6 33	49	18 57	49	
13	14	35.0		26.1	3 37.3		+ 20	04.4	45	10 S	17 48	18 11	37	6 49	47	42	51	
14	29	34.9		26.1	18 07.3		+ 19	59.9	45	20	29	17 53	21	7 05	46	26	53	
15	44	34.8		26.1	32 37.4			55.2	47	30	17 08	34	18 04	25	43	18 08	56	
16	59	34.6		26.2	47 07.5			50.4	48	35	16 56	24	17 56	36	42	17 57	57	
17	74	34.5	+ 23	26.2	61 37.7		+ 19	45.5	49	40	16 41	17 12	17 46	7 49	40	17 44	60	
18	89	34.3	+ 23	26.2	76 07.8		+ 19	40.5	50	45	16 25	16 58	17 36	8 04	38	17 30	61	
19	104	34.2		26.2	90 38.0			35.5	50	50	16 04	42	24	22	36	12	64	
20	119	34.1		26.2	105 08.1			30.3	52	52	15 54	35	19	31	35	17 03	66	
21	134	33.9		26.2	119 38.3			25.0	53	54	43	27	13	41	33	16 54	67	
22	149	33.8		26.2	134 08.5			19.6	54	56	30	18	07	8 52	32	43	69	
23	164	33.7		26.2	148 38.7			14.2	54	58	15 15	16 07	17 00	9 04	30	31	71	
24	179	33.5	+ 23	26.2	163 09.0		+ 19	08.6	56	60 S	14 58	15 56	16 52	9 19	27	16 16	75	
UT	ARIES PMG 6 ^h 04 ^m 6		VENUS Mag.: -4.2 PMG: 10 ^h 33 ^m		MARTE Mag.: +0.7 PMG: 17 ^h 40 ^m		JÚPITER Mag.: -2.0 PMG: 10 ^h 04 ^m		SATURNO Mag.: +0.7 PMG: 19 ^h 31 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	268	36.6	201	14.7	+ 18	58.6	94	37.2	+ 3	18.3	208	40.8	+ 19	46.6	66	33.6	- 6	26.7
1	283	39.1	216	17.9		58.1	109	38.6		17.8	223	42.7		46.7	81	36.1		26.7
2	298	41.5	231	21.1		57.6	124	40.0		17.3	238	44.6		46.8	96	38.6		26.7
3	313	44.0	246	24.2		57.1	139	41.4		16.7	253	46.4		46.9	111	41.1		26.7
4	328	46.5	261	27.4		56.5	154	42.7		16.2	268	48.3		47.1	126	43.6		26.7
5	343	48.9	276	30.6	+ 18	56.0	169	44.1	+ 3	15.7	283	50.2	+ 19	47.2	141	46.1	- 6	26.8
6	358	51.4	291	33.7	+ 18	55.5	184	45.5	+ 3	15.1	298	52.1	+ 19	47.3	156	48.6	- 6	26.8
7	13	53.8	306	36.9		55.0	199	46.9		14.6	313	54.0		47.4	171	51.1		26.8
8	28	56.3	321	40.0		54.5	214	48.2		14.1	328	55.9		47.5	186	53.5		26.8
9	43	58.8	336	43.2		54.0	229	49.6		13.6	343	57.8		47.6	201	56.0		26.8
10	59	01.2	351	46.3		53.4	244	51.0		13.0	358	59.6		47.7	216	58.5		26.8
11	74	03.7	6 49.4	+ 18	52.9		259	52.4	+ 3	12.5	14 01.5	+ 19	47.8		232	01.0	- 6	26.8
12	89	06.2	21 52.6	+ 18	52.4		274	53.7	+ 3	12.0	29 03.4	+ 19	47.9		247	03.5	- 6	26.8
13	104	08.6	36 55.7		51.9		289	55.1		11.5	44 05.3		48.1		262	06.0		26.8
14	119	11.1	51 58.8		51.4		304	56.5		10.9	59 07.2		48.2		277	08.5		26.8
15	134	13.6	67 01.9		50.9		319	57.8		10.4	74 09.1		48.3		292	10.9		26.8
16	149	16.0	82 05.1		50.4		334	59.2		09.9	89 11.0		48.4		307	13.4		26.8
17	164	18.5	97 08.2	+ 18	49.9		350	00.6	+ 3	09.3	104 12.8	+ 19	48.5		322	15.9	- 6	26.8
18	179	21.0	112 11.3	+ 18	49.4		5 02.0	+ 3	08.8		119 14.7	+ 19	48.6		337	18.4	- 6	26.8
19	194	23.4	127 14.4		48.9		20 03.3		08.3		134 16.6		48.7		352	20.9		26.8
20	209	25.9	142 17.5		48.4		35 04.7		07.8		149 18.5		48.8		7 23.4			26.8
21	224	28.3	157 20.6		47.9		50 06.1		07.2		164 20.4		48.9		22 25.9			26.8
22	239	30.8	172 23.7		47.4		65 07.4		06.7		179 22.3		49.1		37 28.3			26.8
23	254	33.3	187 26.7		46.9		80 08.8		06.2		194 24.2		49.2		52 30.8			26.8
24	269	35.7	202 29.8	+ 18	46.4		95 10.2	+ 3	05.6		209 26.1	+ 19	49.3		67 33.3	- 6	26.8	
Dif	—		+31		-5		+14		-5		+19		+1		+25		0	

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JUEVES 21 DE JUNIO DE 2012

UT	SOL			 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15°7 PMG: 12 ^h 01 ^m 9			SD: 15°0 Edad: 1 ^d 4 PHE { 4 ^h : 55°3 12 ^h : 55°4 20 ^h : 55°6 PMG: 13 ^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	h	m
0	179	33.5	+ 23	26.2	163	09.0	+ 19 08.6	60 N	** **	0 49	2 36	4 55	77	21	55	18
1	194	33.4		26.2	177	39.2	+ 19 02.9	58	** **	1 40	2 56	5 08	74	44	21	
2	209	33.2		26.2	192	09.5	+ 18 57.2	56	** **	2 10	3 13	19	72	35	23	
3	224	33.1		26.2	206	39.8	51.3	54		0 45	33	27	29	69	27	25
4	239	33.0		26.2	221	10.1	45.4	52		1 32	2 51	40	37	68	20	26
5	254	32.8	+ 23	26.2	235	40.4	+ 18 39.3	50		2 00	3 06	3 51	5 45	66	21	13
6	269	32.7	+ 23	26.2	250	10.8	+ 18 33.2	45	2 46	3 36	4 13	6 02	63	20	59	31
7	284	32.6		26.1	264	41.2	27.0	40	3 17	3 58	31	15	61	47	34	
8	299	32.4		26.1	279	11.6	20.6	35	40	4 17	46	26	59	37	37	
9	314	32.3		26.1	293	42.0	14.2	30	3 59	32	4 59	36	57	28	39	
10	329	32.2		26.1	308	12.4	07.7	20	4 28	4 57	5 22	6 54	53	20	12	43
11	344	32.0	+ 23	26.1	322	42.8	+ 18 01.1	10 N	4 50	5 18	5 41	7 09	51	19	59	45
12	359	31.9	+ 23	26.1	337	13.3	+ 17 54.4	0	5 09	5 36	5 58	7 22	49	19	46	48
13	14	31.7		26.1	351	43.8	47.6	10 S	26	5 53	6 16	36	46	33	51	
14	29	31.6		26.1	6	14.3	40.8	20	43	6 10	34	7 51	44	19	54	
15	44	31.5		26.1	20	44.9	33.8	30	5 59	29	6 55	8 08	41	19	04	57
16	59	31.3		26.1	35	15.4	26.7	35	6 08	40	7 08	18	39	18	54	60
17	74	31.2	+ 23	26.1	49	46.0	+ 17 19.6	40	6 17	6 51	7 22	8 29	37	18	44	61
18	89	31.1	+ 23	26.0	64	16.6	+ 17 12.4	45	6 28	7 05	7 39	8 42	34	18	31	65
19	104	30.9		26.0	78	47.2	+ 17 05.0	50	40	21	8 00	8 58	31	16	68	
20	119	30.8		26.0	93	17.9	+ 16 57.6	52	45	29	10	9 06	29	09	70	
21	134	30.6		26.0	107	48.5	50.1	54	51	37	21	14	28	18	01	71
22	149	30.5		26.0	122	19.2	42.6	56	6 57	46	33	24	25	17	52	74
23	164	30.4		26.0	136	49.9	34.9	58	7 04	56	8 48	34	23	42	76	
24	179	30.2	+ 23	25.9	151	20.7	+ 16 27.1	60 S	7 11	8 08	9 06	9 46	20	17	31	79
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 6 ^h 00 ^m 6		Mag.: -4.3 PMG: 10 ^h 28 ^m		Mag.: +0.8 PMG: 17 ^h 38 ^m		Mag.: -2.0 PMG: 10 ^h 01 ^m		Mag.: +0.7 PMG: 19 ^h 27 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'				
0	269	35.7	202	29.8	+ 18 46.4	95 10.2	+ 3 05.6	209 26.1	+ 19 49.3	67 33.3	- 6 26.8					
1	284	38.2	217	32.9	45.9	110 11.5	05.1	224 27.9	49.4	82 35.8	26.8					
2	299	40.7	232	36.0	45.5	125 12.9	04.6	239 29.8	49.5	97 38.3	26.8					
3	314	43.1	247	39.0	45.0	140 14.3	04.0	254 31.7	49.6	112 40.8	26.8					
4	329	45.6	262	42.1	44.5	155 15.6	03.5	269 33.6	49.7	127 43.3	26.8					
5	344	48.1	277	45.2	+ 18 44.0	170 17.0	+ 3 03.0	284 35.5	+ 19 49.8	142 45.7	- 6 26.8					
6	359	50.5	292	48.2	+ 18 43.5	185 18.4	+ 3 02.4	299 37.4	+ 19 49.9	157 48.2	- 6 26.8					
7	14	53.0	307	51.3	43.0	200 19.7	01.9	314 39.3	50.0	172 50.7	26.8					
8	29	55.5	322	54.3	42.6	215 21.1	01.4	329 41.2	50.2	187 53.2	26.8					
9	44	57.9	337	57.4	42.1	230 22.5	00.9	344 43.0	50.3	202 55.7	26.8					
10	60	00.4	353	00.4	41.6	245 23.8	+ 3 00.3	359 44.9	50.4	217 58.2	26.8					
11	75	02.8	8	03.5	+ 18 41.1	260 25.2	+ 2 59.8	14 46.8	+ 19 50.5	233 00.6	- 6 26.8					
12	90	05.3	23	06.5	+ 18 40.7	275 26.6	+ 2 59.3	29 48.7	+ 19 50.6	248 03.1	- 6 26.8					
13	105	07.8	38	09.5	40.2	290 27.9	58.7	44 50.6	50.7	263 05.6	26.9					
14	120	10.2	53	12.5	39.7	305 29.3	58.2	59 52.5	50.8	278 08.1	26.9					
15	135	12.7	68	15.6	39.2	320 30.7	57.7	74 54.4	50.9	293 10.6	26.9					
16	150	15.2	83	18.6	38.8	335 32.0	57.1	89 56.3	51.0	308 13.1	26.9					
17	165	17.6	98	21.6	+ 18 38.3	350 33.4	+ 2 56.6	104 58.1	+ 19 51.1	323 15.5	- 6 26.9					
18	180	20.1	113	24.6	+ 18 37.8	5 34.8	+ 2 56.1	120 00.0	+ 19 51.3	338 18.0	- 6 26.9					
19	195	22.6	128	27.6	37.4	20 36.1	55.5	135 01.9	51.4	353 20.5	26.9					
20	210	25.0	143	30.6	36.9	35 37.5	55.0	150 03.8	51.5	8 23.0	26.9					
21	225	27.5	158	33.6	36.5	50 38.8	54.5	165 05.7	51.6	23 25.5	26.9					
22	240	29.9	173	36.6	36.0	65 40.2	53.9	180 07.6	51.7	38 27.9	26.9					
23	255	32.4	188	39.6	35.5	80 41.6	53.4	195 09.5	51.8	53 30.4	26.9					
24	270	34.9	203	42.5	+ 18 35.1	95 42.9	+ 2 52.9	210 11.4	+ 19 51.9	68 32.9	- 6 26.9					
Dif	—		+30		-5	+14		-5	+19		+1	+25		0		

VIERNES 22 DE JUNIO DE 2012

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UT	SOL			☉ LUNA			Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 15/7 PMG: 12 ^h 02 ^m 1			SD: 15/2 Edad: 2 ^d 4 PHE { 4 ^h : 55/7 12 ^h : 55/9 20 ^h : 56/0 PMG: 14 ^h 23 ^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	179	30.2	+ 23 25.9	151	20.7	+ 16 27.1	78	60 N	21 28	23 14	** **	6 12 80	22 13 14		
1	194	30.1	25.9	165	51.4	19.3	79	58	21 07	22 23	** **	22 77	22 05 17		
2	209	30.0	25.9	180	22.2	11.4	80	56	20 51	21 53	** **	31 74	21 58 20		
3	224	29.8	25.9	194	53.0	+ 16 03.4	81	54	36	31	23 18	38 73	52 22		
4	239	29.7	25.9	209	23.8	+ 15 55.3	82	52	24	21 13	22 31	45 71	46 24		
5	254	29.6	+ 23 25.8	223	54.7	+ 15 47.1	82	50	20 13	20 58	22 03	6 51 69	21 41 26		
6	269	29.4	+ 23 25.8	238	25.5	+ 15 38.9	82	45	19 51	20 28	21 18	7 05 65	21 30 29		
7	284	29.3	25.8	252	56.4	30.6	83	40	33	20 05	20 47	16 62	21 32		
8	299	29.1	25.8	267	27.3	22.2	84	35	17	19 47	24	25 60	14 34		
9	314	29.0	25.8	281	58.3	13.7	85	30	19 04	32	20 05	33 58	21 07 36		
10	329	28.9	25.7	296	29.2	+ 15 05.1	86	20	18 42	19 07	19 36	7 47 54	20 55 40		
11	344	28.7	+ 23 25.7	311	00.2	+ 14 56.5	86	10 N	18 23	18 46	19 14	8 00 50	20 44 44		
12	359	28.6	+ 23 25.7	325	31.2	+ 14 47.7	88	0	18 06	18 28	18 55	8 11 48	20 34 47		
13	14	28.5	25.7	340	02.2	38.9	88	10 S	17 48	18 11	38	22 45	24 50		
14	29	28.3	25.6	354	33.3	30.1	88	20	30	17 54	21	35 41	13 54		
15	44	28.2	25.6	9	04.3	21.1	90	30	17 09	35	18 05	49 37	20 01 58		
16	59	28.1	25.6	23	35.4	12.1	90	35	16 56	24	17 56	8 57 35	19 54 60		
17	74	27.9	+ 23 25.5	38	06.5	+ 14 03.0	91	40	16 42	17 13	17 47	9 06 33	19 45 63		
18	89	27.8	+ 23 25.5	52	37.6	+ 13 53.8	92	45	16 25	16 59	17 36	9 16 31	19 36 66		
19	104	27.7	25.5	67	08.8	44.6	92	50	16 04	43	24	29 27	24 70		
20	119	27.5	25.4	81	40.0	35.3	93	52	15 54	35	19	35 25	19 71		
21	134	27.4	25.4	96	11.2	25.9	94	54	43	27	13	42 23	12 74		
22	149	27.2	25.4	110	42.4	16.4	95	56	31	18	07	49 21	19 06 76		
23	164	27.1	25.3	125	13.6	+ 13 06.9	95	58	15 16	16 08	17 00	9 57 19	18 58 79		
24	179	27.0	+ 23 25.3	139	44.8	+ 12 57.3	96	60 S	14 58	15 56	16 53	10 06 16	18 50 81		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 5 ^h 56 ^m 7			Mag.: -4.3 PMG: 10 ^h 23 ^m			Mag.: +0.8 PMG: 17 ^h 36 ^m			Mag.: -2.0 PMG: 9 ^h 58 ^m			Mag.: +0.7 PMG: 19 ^h 23 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	270	34.9		203	42.5	+ 18 35.1	95	42.9	+ 2 52.9	210	11.4	+ 19 51.9	68	32.9	- 6 26.9
1	285	37.3		218	45.5	34.6	110	44.3	52.3	225	13.2	52.0	83	35.4	26.9
2	300	39.8		233	48.5	34.2	125	45.6	51.8	240	15.1	52.1	98	37.9	26.9
3	315	42.3		248	51.5	33.7	140	47.0	51.3	255	17.0	52.2	113	40.4	26.9
4	330	44.7		263	54.4	33.3	155	48.4	50.7	270	18.9	52.4	128	42.8	26.9
5	345	47.2		278	57.4	+ 18 32.8	170	49.7	+ 2 50.2	285	20.8	+ 19 52.5	143	45.3	- 6 26.9
6	0	49.7		294	00.3	+ 18 32.4	185	51.1	+ 2 49.7	300	22.7	+ 19 52.6	158	47.8	- 6 26.9
7	15	52.1		309	03.3	31.9	200	52.4	49.1	315	24.6	52.7	173	50.3	26.9
8	30	54.6		324	06.2	31.5	215	53.8	48.6	330	26.5	52.8	188	52.8	26.9
9	45	57.1		339	09.2	31.0	230	55.2	48.1	345	28.4	52.9	203	55.2	27.0
10	60	59.5		354	12.1	30.6	245	56.5	47.5	0	30.2	53.0	218	57.7	27.0
11	76	02.0		9	15.0	+ 18 30.2	260	57.9	+ 2 47.0	15	32.1	+ 19 53.1	234	00.2	- 6 27.0
12	91	04.4		24	18.0	+ 18 29.7	275	59.2	+ 2 46.5	30	34.0	+ 19 53.2	249	02.7	- 6 27.0
13	106	06.9		39	20.9	29.3	291	00.6	45.9	45	35.9	53.3	264	05.2	27.0
14	121	09.4		54	23.8	28.9	306	01.9	45.4	60	37.8	53.4	279	07.6	27.0
15	136	11.8		69	26.7	28.4	321	03.3	44.9	75	39.7	53.5	294	10.1	27.0
16	151	14.3		84	29.7	28.0	336	04.7	44.3	90	41.6	53.7	309	12.6	27.0
17	166	16.8		99	32.6	+ 18 27.6	351	06.0	+ 2 43.8	105	43.5	+ 19 53.8	324	15.1	- 6 27.0
18	181	19.2		114	35.5	+ 18 27.1	6	07.4	+ 2 43.2	120	45.4	+ 19 53.9	339	17.5	- 6 27.0
19	196	21.7		129	38.4	26.7	21	08.7	42.7	135	47.3	54.0	354	20.0	27.0
20	211	24.2		144	41.3	26.3	36	10.1	42.2	150	49.1	54.1	9	22.5	27.0
21	226	26.6		159	44.2	25.9	51	11.4	41.6	165	51.0	54.2	24	25.0	27.0
22	241	29.1		174	47.1	25.4	66	12.8	41.1	180	52.9	54.3	39	27.5	27.0
23	256	31.6		189	49.9	25.0	81	14.1	40.6	195	54.8	54.4	54	29.9	27.0
24	271	34.0		204	52.8	+ 18 24.6	96	15.5	+ 2 40.0	210	56.7	+ 19 54.5	69	32.4	- 6 27.0
Dif	—		+29	—	-4		+14		-5	+19		+1	+25		0

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SÁBADO 23 DE JUNIO DE 2012

UT	SOL			☾ LUNA			Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 02 ^m 3			SD: 15 ^h 3 Edad: 3 ^d 4 PHE { 4 ^h : 56 ^h /2 12 ^h : 56 ^h /4 20 ^h : 56 ^h /6 PMG: 15 ^h 10 ^m R°: 47 ^m							Hora R°		Hora R°	
	hG ☉	Dec		hG ☾	Dif	Dec		Dif	Náutico		Civil	Hora	R°	Hora
h	° /	° /		° /		° /		h m	h m	h m	h m m	h m m	h m m	
0	179 27.0	+ 23 25.3		139 44.8		+ 12 57.3		60 N	** **	0 50	2 36	7 32 83	22 27 12	
1	194 26.8		25.3	154 16.1	123	47.6	97	58	** **	1 41	2 57	39 80	22 15	
2	209 26.7		25.2	168 47.4	123	37.9	97	56	** **	2 11	3 14	45 77	18 17	
3	224 26.6		25.2	183 18.7	123	28.1	98	54		0 46	33	51 74	14 19	
4	239 26.4		25.2	197 50.0	123	18.2	99	52		1 33	2 51	40	10 21	
5	254 26.3	+ 23 25.1		212 21.3	123	+ 12 08.3	99	50		2 01	3 07	3 51	22 07 23	
6	269 26.2	+ 23 25.1		226 52.7	124	+ 11 58.3	100	45		2 47	3 36	4 14	21 59 27	
7	284 26.0		25.0	241 24.0	123	48.3	100	40		3 17	3 59	32	53 31	
8	299 25.9		25.0	255 55.4	124	38.1	102	35		40	4 17	4 47	25 60	
9	314 25.8		25.0	270 26.8	124	28.0	101	30		3 59	33	5 00	31 58	
10	329 25.6		24.9	284 58.2	124	17.7	103	20		4 28	4 57	22	41 54	
11	344 25.5	+ 23 24.9		299 29.7	125	+ 11 07.4	103	10 N		4 51	5 18	5 41	21 28 43	
12	359 25.4	+ 23 24.8		314 01.1	124	+ 10 57.0	104	0		5 10	5 36	5 59	8 59 47	
13	14 25.2		24.8	328 32.6	125	46.6	104	10 S		27	5 53	6 16	9 07 44	
14	29 25.1		24.8	343 04.1	125	36.1	105	20		5 43	6 11	35	16 40	
15	44 24.9		24.7	357 35.5	124	25.6	105	30		6 00	29	6 56	26 36	
16	59 24.8		24.7	12 07.0	125	15.0	106	35		08	40	7 08	32 34	
17	74 24.7	+ 23 24.6		26 38.5	125	+ 10 04.3	107	40		6 18	6 52	7 22	9 39 31	
18	89 24.5	+ 23 24.6		41 10.1	126	+ 9 53.6	107	45		6 28	7 05	7 39	9 47 27	
19	104 24.4		24.5	55 41.6	125	42.8	108	50		40	22	8 00	9 56 24	
20	119 24.3		24.5	70 13.1	125	32.0	108	52		45	29	10	10 00 23	
21	134 24.1		24.4	84 44.7	126	21.1	109	54		51	37	21	05 20	
22	149 24.0		24.4	99 16.3	126	+ 9 10.2	109	56		6 57	46	34	10 18	
23	164 23.9		24.3	113 47.8	125	+ 8 59.2	110	58		7 04	7 57	8 48	16 16	
24	179 23.7	+ 23 24.3		128 19.4	126	+ 8 48.2	110	60 S		7 11	8 08	9 06	10 22 14	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG		Mag.: -4.3		Mag.: +0.8		Mag.: -2.0		Mag.: +0.7					
	5 ^h 52 ^m 8		PMG: 10 ^h 19 ^m		PMG: 17 ^h 33 ^m		PMG: 9 ^h 55 ^m		PMG: 19 ^h 19 ^m					
h	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	° /	° /	° /	° /	° /	° /	° /	° /	° /					
0	271 34.0	204 52.8	+ 18 24.6	96 15.5	+ 2 40.0	210 56.7	+ 19 54.5	69 32.4	- 6 27.0					
1	286 36.5	219 55.7	24.2	111 16.8	39.5	225 58.6	54.6	84 34.9	27.1					
2	301 38.9	234 58.6	23.8	126 18.2	39.0	241 00.5	54.7	99 37.4	27.1					
3	316 41.4	250 01.4	23.3	141 19.5	38.4	256 02.4	54.8	114 39.8	27.1					
4	331 43.9	265 04.3	22.9	156 20.9	37.9	271 04.3	55.0	129 42.3	27.1					
5	346 46.3	280 07.2	+ 18 22.5	171 22.3	+ 2 37.3	286 06.2	+ 19 55.1	144 44.8	- 6 27.1					
6	1 48.8	295 10.0	+ 18 22.1	186 23.6	+ 2 36.8	301 08.1	+ 19 55.2	159 47.3	- 6 27.1					
7	16 51.3	310 12.9	21.7	201 25.0	36.3	316 09.9	55.3	174 49.7	27.1					
8	31 53.7	325 15.7	21.3	216 26.3	35.7	331 11.8	55.4	189 52.2	27.1					
9	46 56.2	340 18.6	20.9	231 27.7	35.2	346 13.7	55.5	204 54.7	27.1					
10	61 58.7	355 21.4	20.5	246 29.0	34.7	1 15.6	55.6	219 57.2	27.1					
11	77 01.1	10 24.2	+ 18 20.1	261 30.4	+ 2 34.1	16 17.5	+ 19 55.7	234 59.7	- 6 27.1					
12	92 03.6	25 27.1	+ 18 19.7	276 31.7	+ 2 33.6	31 19.4	+ 19 55.8	250 02.1	- 6 27.1					
13	107 06.1	40 29.9	19.3	291 33.1	33.0	46 21.3	55.9	265 04.6	27.1					
14	122 08.5	55 32.7	18.9	306 34.4	32.5	61 23.2	56.0	280 07.1	27.1					
15	137 11.0	70 35.5	18.5	321 35.7	32.0	76 25.1	56.1	295 09.6	27.1					
16	152 13.4	85 38.3	18.1	336 37.1	31.4	91 27.0	56.2	310 12.0	27.2					
17	167 15.9	100 41.2	+ 18 17.7	351 38.4	+ 2 30.9	106 28.9	+ 19 56.4	325 14.5	- 6 27.2					
18	182 18.4	115 44.0	+ 18 17.3	6 39.8	+ 2 30.3	121 30.7	+ 19 56.5	340 17.0	- 6 27.2					
19	197 20.8	130 46.8	16.9	21 41.1	29.8	136 32.6	56.6	355 19.4	27.2					
20	212 23.3	145 49.6	16.5	36 42.5	29.3	151 34.5	56.7	10 21.9	27.2					
21	227 25.8	160 52.3	16.1	51 43.8	28.7	166 36.4	56.8	25 24.4	27.2					
22	242 28.2	175 55.1	15.7	66 45.2	28.2	181 38.3	56.9	40 26.9	27.2					
23	257 30.7	190 57.9	15.3	81 46.5	27.6	196 40.2	57.0	55 29.3	27.2					
24	272 33.2	206 00.7	+ 18 15.0	96 47.9	+ 2 27.1	211 42.1	+ 19 57.1	70 31.8	- 6 27.2					
Dif	—	+28	-4	+13	-5	+19	+1	+25	0					

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LUNES 25 DE JUNIO DE 2012

UT	SOL			 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 7			SD: 15 ^h 6														
	PMG: 12 ^h 02 ^m 7			Edad: 5 ^d 4					PHE $\begin{cases} 4^{\text{h}}: 57/4 \\ 12^{\text{h}}: 57/6 \\ 20^{\text{h}}: 57/8 \end{cases}$			PMG: 16 ^h 44 ^m		R°: 48 ^m				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
^h	[°]	[°]	[°]	[°]	[°]	[°]	[°]	[°]	^h	^h	^h	^h	^m	^m	^m			
0	179	20.5	+ 23	22.8	116	58.0	+ 4	10.3	60 N	** **	0 52	2 37	10 18	86	22 51	12		
1	194	20.4		22.7	131	29.6	+ 3	58.3	58	** **	1 42	2 58	19 83		51 15			
2	209	20.3		22.7	146	01.1		46.2	56	** **	2 12	3 15	20 80		52 17			
3	224	20.1		22.6	160	32.7		34.1	54		0 48	34	29 21	78	52 20			
4	239	20.0		22.5	175	04.2		22.0	52		1 34	2 52	41	22 76	52 22			
5	254	19.9	+ 23	22.4	189	35.7	+ 3	09.9	50		2 02	3 07	3 52	10 23	73	22 52	24	
6	269	19.7	+ 23	22.4	204	07.2	+ 2	57.7	45		2 47	3 37	4 15	10 24	70	22 53	27	
7	284	19.6		22.3	218	38.7		45.5	40		3 18	4 00	33	26 66		53 31		
8	299	19.5		22.2	233	10.2		33.3	35		3 41	18	4 48	27 63		54 33		
9	314	19.3		22.2	247	41.7		21.0	30		4 00	33	5 01	28 60		54 36		
10	329	19.2		22.1	262	13.1	+ 2	08.8	20		29	4 58	23	30 55		55 40		
11	344	19.1	+ 23	22.0	276	44.5	+ 1	56.5	10 N		4 51	5 18	5 41	10 31	52	22 55	45	
12	359	18.9	+ 23	21.9	291	15.9	+ 1	44.2	0		5 10	5 37	5 59	10 33	47	22 55	49	
13	14	18.8		21.8	305	47.3		31.9	10 S		27	5 54	6 16	34 44		56 52		
14	29	18.7		21.8	320	18.7		19.5	20		5 43	6 11	35	36 40		56 56		
15	44	18.5		21.7	334	50.0	+ 1	07.2	30		6 00	30	6 56	38 35		56 61		
16	59	18.4		21.6	349	21.3	+ 0	54.8	35		09	40	7 09	39 33		57 63		
17	74	18.3	+ 23	21.5	3 52.6		+ 0	42.4	40		6 18	6 52	7 23	10 40	30	22 57	67	
18	89	18.1	+ 23	21.4	18 23.9		+ 0	30.0	45		6 28	7 06	7 39	10 41	27	22 57	70	
19	104	18.0		21.4	32 55.1			17.6	50		40	22	8 00	43 23		58 74		
20	119	17.9		21.3	47 26.4		+ 0	05.1	52		45	29	10	44 21		58 76		
21	134	17.7		21.2	61 57.6		- 0	07.3	54		51	37	21	44 20		58 79		
22	149	17.6		21.1	76 28.7			19.7	56		6 57	46	34	45 17		58 81		
23	164	17.5		21.0	90 59.9			32.2	58		7 04	7 57	8 48	46 15		58 84		
24	179	17.3	+ 23	20.9	105 31.0		- 0	44.7	60 S		7 11	8 08	9 06	10 47	12	22 59	86	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 5 ^h 44 ^m 9		Mag.: -4.4 PMG: 10 ^h 10 ^m			Mag.: +0.8 PMG: 17 ^h 29 ^m			Mag.: -2.0 PMG: 9 ^h 49 ^m			Mag.: +0.7 PMG: 19 ^h 11 ^m						
	hG ♈	hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
^h	[°]	[°]	[°]	[°]	[°]	[°]	[°]	[°]	[°]	[°]	[°]	[°]	[°]	[°]	[°]	[°]		
0	273	32.3	207	06.2	+ 18	06.2	97	20.1	+ 2	14.1	212	27.5	+ 19	59.6	71	31.1	- 6	27.4
1	288	34.8	222	08.9		05.8	112	21.4		13.6	227	29.4		59.8	86	33.6		27.4
2	303	37.2	237	11.5		05.5	127	22.7		13.0	242	31.3	+ 19	59.9	101	36.1		27.5
3	318	39.7	252	14.2		05.1	142	24.1		12.5	257	33.2	+ 20	00.0	116	38.5		27.5
4	333	42.2	267	16.9		04.8	157	25.4		11.9	272	35.1		00.1	131	41.0		27.5
5	348	44.6	282	19.5	+ 18	04.5	172	26.7	+ 2	11.4	287	37.0	+ 20	00.2	146	43.5	- 6	27.5
6	3 47.1	297	22.2	+ 18	04.1		187	28.1	+ 2	10.9	302	38.9	+ 20	00.3	161	45.9	- 6	27.5
7	18 49.5	312	24.8		03.8		202	29.4		10.3	317	40.8		00.4	176	48.4		27.5
8	33 52.0	327	27.5		03.5		217	30.8		09.8	332	42.7		00.5	191	50.9		27.5
9	48 54.5	342	30.1		03.1		232	32.1		09.2	347	44.6		00.6	206	53.3		27.5
10	63 56.9	357	32.8		02.8		247	33.4		08.7	2 46.5			00.7	221	55.8		27.5
11	78 59.4	12 35.4	+ 18	02.5			262	34.8	+ 2	08.1	17 48.4	+ 20	00.8		236	58.3	- 6	27.5
12	94 01.9	27 38.0	+ 18	02.1			277	36.1	+ 2	07.6	32 50.3	+ 20	00.9		252	00.8	- 6	27.6
13	109 04.3	42 40.6		01.8			292	37.4		07.0	47 52.2		01.0		267	03.2		27.6
14	124 06.8	57 43.3		01.5			307	38.8		06.5	62 54.1		01.1		282	05.7		27.6
15	139 09.3	72 45.9		01.1			322	40.1		06.0	77 56.0		01.2		297	08.2		27.6
16	154 11.7	87 48.5		00.8			337	41.4		05.4	92 57.9		01.3		312	10.6		27.6
17	169 14.2	102 51.1	+ 18	00.5			352	42.8	+ 2	04.9	107 59.8	+ 20	01.4		327	13.1	- 6	27.6
18	184 16.6	117 53.7	+ 18	00.2			7 44.1	+ 2	04.3		123 01.6	+ 20	01.5		342	15.6	- 6	27.6
19	199 19.1	132 56.3	+ 17	59.9			22 45.4		03.8		138 03.5		01.6		357	18.0		27.6
20	214 21.6	147 58.9		59.5			37 46.8		03.2		153 05.4		01.7		12 20.5			27.6
21	229 24.0	163 01.5		59.2			52 48.1		02.7		168 07.3		01.9		27 23.0			27.7
22	244 26.5	178 04.1		58.9			67 49.4		02.1		183 09.2		02.0		42 25.4			27.7
23	259 29.0	193 06.7		58.6			82 50.7		01.6		198 11.1		02.1		57 27.9			27.7
24	274 31.4	208 09.3	+ 17	58.3			97 52.1	+ 2	01.0		213 13.0	+ 20	02.2		72 30.4	- 6		27.7
Dif	—	+26		-3			+13		-5		+19		+1		+25			0

MARTES 26 DE JUNIO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 15'7 PMG: 12 ^h 02 ^m 9		SD: 15'8 Edad: 6 ^d 4		PHE $\left\{ \begin{array}{l} 4^h: 58/0 \\ 12^h: 58/2 \\ 20^h: 58/4 \end{array} \right.$													
	PMG: 17 ^h 32 ^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	179	17.3	+23	20.9	105	31.0	0	21 27	23 11	** **	11 44	88	23 03	14	17			
1	194	17.2		20.8	120	02.0	120	21 07	22 22	** **	42 85		06 17					
2	209	17.1		20.8	134	33.1	121	20 50	21 53	** **	40 83		09 19					
3	224	17.0		20.7	149	04.1	120		36	31	23 15		12 21					
4	239	16.8		20.6	163	35.1	120	24 13	24 13	22 30	38 77		14 23					
5	254	16.7	+23	20.5	178	06.0	119	20 13	20 58	22 03	11 36	76	23 16	25				
6	269	16.6	+23	20.4	192	36.9	119	19 51	20 28	21 18	11 34	71	23 20	30				
7	284	16.4		20.3	207	07.8	119	33	20 06	20 47	32 67		24 33					
8	299	16.3		20.2	221	38.7	119	18	19 48	24	30 64		27 36					
9	314	16.2		20.1	236	09.5	118	19 05	32	20 06	28 62		30 39					
10	329	16.0		20.0	250	40.2	117	18 43	19 08	19 37	25 58		35 43					
11	344	15.9	+23	19.9	265	10.9	117	18 24	18 47	19 14	11 23	53	23 40	47				
12	359	15.8	+23	19.8	279	41.6	117	18 07	18 29	18 55	11 20	50	23 44	50				
13	14	15.6		19.7	294	12.3	117	17 49	18 12	38	18 46		48 54					
14	29	15.5		19.7	308	42.9	116	31	17 55	22	16 42		52 59					
15	44	15.4		19.6	323	13.4	115	30	17 10	36	13 38		23 57	63				
16	59	15.3		19.5	337	43.9	115	16 57	25	17 57	12 34		** **	** **				
17	74	15.1	+23	19.4	352	14.4	115	16 43	17 14	17 48	11 10	32	** **	** **				
18	89	15.0	+23	19.3	6	44.8	114	16 26	17 00	17 38	11 08	28	** **	** **				
19	104	14.9		19.2	21	15.2	114	16 06	16 44	26	06 24		** **	** **				
20	119	14.7		19.1	35	45.5	113	15 56	37	21	05 22		** **	** **				
21	134	14.6		19.0	50	15.8	113	45	29	15	04 20		** **	** **				
22	149	14.5		18.9	64	46.0	112	32	20	09	02 19		** **	** **				
23	164	14.3		18.8	79	16.2	112	18	16 09	17 02	11 01	16	** **	** **				
24	179	14.2	+23	18.7	93	46.3	111	15 00	15 58	16 55	10 59	13	** **	** **				
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 5 ^h 41 ^m 0		Mag.: -4.4 PMG: 10 ^h 06 ^m			Mag.: +0.8 PMG: 17 ^h 27 ^m			Mag.: -2.0 PMG: 9 ^h 46 ^m			Mag.: +0.7 PMG: 19 ^h 07 ^m						
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♏	Dec	hG ♐	Dec	hG ♑	Dec	hG ♒	Dec					
^h	°	'	°	'	°	'	°	°	'	°	'	°	'					
0	274	31.4	208	09.3	+17	58.3	97	52.1	+2	01.0	213	13.0	+20	02.2	72	30.4	-6	27.7
1	289	33.9	223	11.8		58.0	112	53.4		00.5	228	14.9		02.3	87	32.8		27.7
2	304	36.4	238	14.4		57.7	127	54.7	+2	00.0	243	16.8		02.4	102	35.3		27.7
3	319	38.8	253	17.0		57.4	142	56.1	+1	59.4	258	18.7		02.5	117	37.7		27.7
4	334	41.3	268	19.5		57.0	157	57.4		58.9	273	20.6		02.6	132	40.2		27.7
5	349	43.8	283	22.1	+17	56.7	172	58.7	+1	58.3	288	22.5	+20	02.7	147	42.7	-6	27.7
6	4	46.2	298	24.7	+17	56.4	188	00.0	+1	57.8	303	24.4	+20	02.8	162	45.1	-6	27.8
7	19	48.7	313	27.2		56.1	203	01.4		57.2	318	26.3		02.9	177	47.6		27.8
8	34	51.1	328	29.8		55.8	218	02.7		56.7	333	28.2		03.0	192	50.1		27.8
9	49	53.6	343	32.3		55.5	233	04.0		56.1	348	30.1		03.1	207	52.5		27.8
10	64	56.1	358	34.9		55.2	248	05.4		55.6	3	32.0		03.2	222	55.0		27.8
11	79	58.5	13	37.4	+17	54.9	263	06.7	+1	55.0	18	33.9	+20	03.3	237	57.5	-6	27.8
12	95	01.0	28	39.9	+17	54.6	278	08.0	+1	54.5	33	35.8	+20	03.4	252	59.9	-6	27.8
13	110	03.5	43	42.4		54.4	293	09.3		53.9	48	37.7		03.5	268	02.4		27.8
14	125	05.9	58	45.0		54.1	308	10.7		53.4	63	39.6		03.6	283	04.9		27.8
15	140	08.4	73	47.5		53.8	323	12.0		52.8	78	41.5		03.7	298	07.3		27.9
16	155	10.9	88	50.0		53.5	338	13.3		52.3	93	43.4		03.8	313	09.8		27.9
17	170	13.3	103	52.5	+17	53.2	353	14.6	+1	51.7	108	45.3	+20	03.9	328	12.2	-6	27.9
18	185	15.8	118	55.0	+17	52.9	8	16.0	+1	51.2	123	47.2	+20	04.0	343	14.7	-6	27.9
19	200	18.2	133	57.5		52.6	23	17.3		50.6	138	49.1		04.1	358	17.2		27.9
20	215	20.7	149	00.0		52.3	38	18.6		50.1	153	51.0		04.2	13	19.6		27.9
21	230	23.2	164	02.5		52.1	53	19.9		49.5	168	52.9		04.3	28	22.1		27.9
22	245	25.6	179	05.0		51.8	68	21.3		49.0	183	54.8		04.4	43	24.6		27.9
23	260	28.1	194	07.5		51.5	83	22.6		48.5	198	56.7		04.6	58	27.0		28.0
24	275	30.6	209	10.0	+17	51.2	98	23.9	+1	47.9	213	58.6	+20	04.7	73	29.5	-6	28.0
Dif	—	+25	-3		+13	-5					+19	+1			+25	0		

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MIÉRCOL 27 DE JUNIO DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15'7 PMG: 12 ^h 03 ^m 2			SD: 15'9 Edad: 7. ^d 4 PHE $\begin{cases} 4^h: 58'6 \\ 12^h: 58'8 \\ 20^h: 59'0 \end{cases}$ PMG: 18 ^h 22 ^m R°: 53 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
^h	[°]	[']	[°]	[°]	[']	[°]	[']	[°]	^h	^m	^h	^m	^h	^m	^h	^m		
0	179	14.2	+ 23	93	46.3	— 5	43.6	60 N	0 56	2 39	13 12	91	23 17	18				
1	194	14.1		108	16.4	— 5	55.9	58	1 44	2 59		07 88	23 21	21				
2	209	14.0		122	46.4	— 6	08.2	56	2 14	3 16	13 03	84	28 24	24				
3	224	13.8		137	16.4		20.5	54	0 51	36 30	12 59	82	33 26	23				
4	239	13.7		151	46.3		32.8	52	1 36	2 53		55 80	37 28	28				
5	254	13.6	+ 23	166	16.1	— 6	45.0	50	2 03	3 08	3 53	12 52	78	23 41	30			
6	269	13.4	+ 23	180	45.9	— 6	57.2	45	2 48	3 38	4 15	12 45	73	23 50	34			
7	284	13.3		195	15.7	— 7	09.4	40	3 19	4 00	33		39 70	23 57	37			
8	299	13.2		209	45.3		21.6	35	3 42	19 48	4 48		34 67	***	***	***		
9	314	13.1		224	14.9		33.7	30	4 00	34 51	5 01		30 64	***	***	***		
10	329	12.9		238	44.5		45.8	20	29 45	59 23		23 59	***	***	***	***		
11	344	12.8	+ 23	253	14.0	— 7	57.9	10 N	4 52	5 19	5 42	12 16	56	***	***	***		
12	359	12.7	+ 23	267	43.4	— 8	09.9	0	5 11	5 37	5 59	12 10	52	***	***	***		
13	14	12.5		282	12.8		21.9	10 S	28 54	6 17		12 04	49	***	***	***		
14	29	12.4		296	42.1		33.9	20	5 44	6 11	35	11 58	44	***	***	***		
15	44	12.3		311	11.4		45.8	30	6 00	30 65	6 56		51 40	***	***	***		
16	59	12.2		325	40.5	— 8	57.7	35	09 41	7 09		46 38	0 00	66				
17	74	12.0	+ 23	340	09.6	— 9	09.5	40	6 18	6 52	7 23	11 42	35	0 04	68			
18	89	11.9	+ 23	354	38.7	— 9	21.3	45	6 28	7 06	7 39	11 36	32	0 07	73			
19	104	11.8		9	07.7		33.1	50	40 22	8 00		30 28	12 77					
20	119	11.6		23	36.6		44.8	52	45 29	10		27 26	14 79					
21	134	11.5		38	05.4	— 9	56.5	54	51 37	21		24 24	17 80					
22	149	11.4		52	34.2	— 10	08.2	56	6 57	46 33		21 21	19 83					
23	164	11.3		67	02.9		19.8	58	7 04 75	8 48		17 18	22 86					
24	179	11.1	+ 23	81	31.5	— 10	31.3	60 S	7 11 8	08 05		11 12	16	0 25	89			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG 5 ^h 37 ^m 0		Mag.: -4.4 PMG: 10 ^h 02 ^m			Mag.: +0.8 PMG: 17 ^h 25 ^m			Mag.: -2.0 PMG: 9 ^h 43 ^m			Mag.: +0.7 PMG: 19 ^h 03 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
^h	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']								
0	275	30.6	209	10.0	+ 17	51.2	98	23.9	+ 1	47.9	213	58.6	+ 20	04.7	73	29.5	- 6	28.0
1	290	33.0	224	12.5		51.0	113	25.2		47.4	229	00.5		04.8	88	31.9		28.0
2	305	35.5	239	14.9		50.7	128	26.6		46.8	244	02.4		04.9	103	34.4		28.0
3	320	38.0	254	17.4		50.4	143	27.9		46.3	259	04.3		05.0	118	36.9		28.0
4	335	40.4	269	19.9		50.1	158	29.2		45.7	274	06.1		05.1	133	39.3		28.0
5	350	42.9	284	22.3	+ 17	49.9	173	30.5	+ 1	45.2	289	08.0	+ 20	05.2	148	41.8	- 6	28.0
6	5	45.4	299	24.8	+ 17	49.6	188	31.8	+ 1	44.6	304	09.9	+ 20	05.3	163	44.2	- 6	28.0
7	20	47.8	314	27.3		49.3	203	33.2		44.1	319	11.8		05.4	178	46.7		28.1
8	35	50.3	329	29.7		49.1	218	34.5		43.5	334	13.7		05.5	193	49.2		28.1
9	50	52.7	344	32.2		48.8	233	35.8		43.0	349	15.6		05.6	208	51.6		28.1
10	65	55.2	359	34.6		48.5	248	37.1		42.4	4	17.5		05.7	223	54.1		28.1
11	80	57.7	14	37.0	+ 17	48.3	263	38.4	+ 1	41.9	19	19.4	+ 20	05.8	238	56.5	- 6	28.1
12	96	00.1	29	39.5	+ 17	48.0	278	39.8	+ 1	41.3	34	21.3	+ 20	05.9	253	59.0	- 6	28.1
13	111	02.6	44	41.9		47.8	293	41.1		40.8	49	23.2		06.0	269	01.5		28.1
14	126	05.1	59	44.3		47.5	308	42.4		40.2	64	25.1		06.1	284	03.9		28.2
15	141	07.5	74	46.8		47.3	323	43.7		39.7	79	27.0		06.2	299	06.4		28.2
16	156	10.0	89	49.2		47.0	338	45.0		39.1	94	28.9		06.3	314	08.8		28.2
17	171	12.5	104	51.6	+ 17	46.7	353	46.4	+ 1	38.6	109	30.8	+ 20	06.4	329	11.3	- 6	28.2
18	186	14.9	119	54.0	+ 17	46.5	8	47.7	+ 1	38.0	124	32.7	+ 20	06.5	344	13.8	- 6	28.2
19	201	17.4	134	56.4		46.2	23	49.0		37.4	139	34.6		06.6	359	16.2		28.2
20	216	19.9	149	58.8		46.0	38	50.3		36.9	154	36.5		06.7	14	18.7		28.2
21	231	22.3	165	01.2		45.8	53	51.6		36.3	169	38.4		06.8	29	21.1		28.3
22	246	24.8	180	03.6		45.5	68	52.9		35.8	184	40.3		06.9	44	23.6		28.3
23	261	27.2	195	06.0		45.3	83	54.3		35.2	199	42.2		07.0	59	26.1		28.3
24	276	29.7	210	08.4	+ 17	45.0	98	55.6	+ 1	34.7	214	44.1	+ 20	07.1	74	28.5	- 6	28.3
Dif	—		+24		-3		+13		-6		+19		+1		+25		0	

JUEVES 28 DE JUNIO DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna	Puesta de Luna				
	SD: 15 ^h 7 PMG: 12 ^h 03 ^m 4			SD: 16 ^h 1 Edad: 8 ^d 4 PHE $\left\{ \begin{array}{l} 4^{\text{h}}: 59^{\text{m}}/2 \\ 12^{\text{h}}: 59^{\text{m}}/4 \\ 20^{\text{h}}: 59^{\text{m}}/6 \end{array} \right.$ PMG: 19 ^h 15 ^m R ^o : 57 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
^h	[°]	[']	[°]	[°]	[']	[°]	[']	^h	^m	^h	^m	^h	^m	^h	^m		
0	179	11.1	+ 23	81	31.5	− 10	31.3	60 N	21 27	23 08	** **	14 43	92	23 35	24		
1	194	11.0		96	00.1	96	42.8	58	21 06	22 21	** **	35	88	44	27		
2	209	10.9		110	28.6	95	− 10	54.2	56	20 50	21 52	** **	27	86	52		
3	224	10.8		124	57.0	94	− 11	05.6	54		36	30	23	21	83		
4	239	10.6		139	25.3	93	17.0	52	24	21 12	22 29	15	81	** **	***		
5	254	10.5	+ 23	153	53.6	93	− 11	28.2	50	20 13	20 57	22 02	14 10	78	** **	***	
6	269	10.4	+ 23	168	21.8	92	− 11	39.5	45	19 51	20 28	21 17	13 58	75	** **	***	
7	284	10.2		182	49.9	91	− 11	50.6	40		33	20 06	20 47	49	71	** **	***
8	299	10.1		197	17.9	90	− 12	01.7	35	18	19 48	24	41	69	0 03	40	
9	314	10.0		211	45.9	90	12.8	30	19 05	33	20 06	34	66	09	42		
10	329	09.9		226	13.7	88	23.8	20	18 43	19 08	19 37	22	63	18	47		
11	344	09.7	+ 23	240	41.5	88	− 12	34.7	10 N	18 24	18 48	19 15	13 12	59	0 27	50	
12	359	09.6	+ 23	255	09.3	88	− 12	45.5	0	18 07	18 30	18 56	13 02	56	0 34	54	
13	14	09.5		269	36.9	86	− 12	56.3	10 S	17 50	18 13	39	12 53	52	42	58	
14	29	09.4		284	04.5	86	− 13	07.0	20	31	17 55	23	42	49	0 51	61	
15	44	09.2		298	32.0	85	17.7	30	17 10	37	18 06	31	45	1	00	66	
16	59	09.1		312	59.4	84	28.3	35	16 58	26	17 58	24	43	06	68		
17	74	09.0	+ 23	327	26.7	83	− 13	38.8	40	16 44	17 15	17 49	12 17	40	1 12	71	
18	89	08.9	+ 23	341	54.0	83	− 13	49.2	45	16 27	17 01	17 38	12 08	37	1 20	74	
19	104	08.7		356	21.1	81	− 13	59.6	50	16 07	16 45	27	11 58	33	29	78	
20	119	08.6		10	48.2	81	− 14	09.8	52	15 57	38	21	53	31	33	80	
21	134	08.5		25	15.2	80	20.0	54	46	30	16	48	29	37	83		
22	149	08.4		39	42.1	79	30.2	56	34	21	10	42	26	42	85		
23	164	08.2		54	09.0	79	40.2	58	19	16 11	17 03	35	24	48	88		
24	179	08.1	+ 23	68	35.7	77	− 14	50.2	60 S	15 02	15 59	16 56	11 28	21	1 54	92	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 5 ^h 33 ^m 1		Mag.: −4.4 PMG: 9 ^h 58 ^m			Mag.: +0.8 PMG: 17 ^h 23 ^m			Mag.: −2.0 PMG: 9 ^h 40 ^m			Mag.: +0.7 PMG: 18 ^h 59 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃		Dec		hG ♄		Dec		
^h	[°]	[']	[°]	[°]	[']	[°]	[°]	[']	[°]	[°]	[']	[°]	[°]	[']	[°]	[']	
0	276	29.7	210	08.4	+ 17	98	55.6	+ 1	214	44.1	+ 20	74	28.5	− 6	28.3		
1	291	32.2	225	10.8		113	56.9		229	46.0		89	31.0		28.3		
2	306	34.6	240	13.2		128	58.2		244	47.9		104	33.4		28.3		
3	321	37.1	255	15.5		143	59.5		259	49.8		119	35.9		28.3		
4	336	39.6	270	17.9		159	00.8		274	51.7		134	38.3		28.4		
5	351	42.0	285	20.3	+ 17	174	02.1	+ 1	289	53.6	+ 20	149	40.8	− 6	28.4		
6	6	44.5	300	22.6	+ 17	189	03.5	+ 1	304	55.5	+ 20	164	43.3	− 6	28.4		
7	21	47.0	315	25.0		204	04.8		319	57.4		179	45.7		28.4		
8	36	49.4	330	27.3		219	06.1		334	59.3		194	48.2		28.4		
9	51	51.9	345	29.7		234	07.4		350	01.2		209	50.6		28.4		
10	66	54.3	0	32.0		249	08.7		5	03.1		224	53.1		28.4		
11	81	56.8	15	34.4	+ 17	264	10.0	+ 1	20	05.0	+ 20	239	55.5	− 6	28.5		
12	96	59.3	30	36.7	+ 17	279	11.3	+ 1	35	06.9	+ 20	254	58.0	− 6	28.5		
13	112	01.7	45	39.1		294	12.6		50	08.9		270	00.4		28.5		
14	127	04.2	60	41.4		309	14.0		65	10.8		285	02.9		28.5		
15	142	06.7	75	43.7		324	15.3		80	12.7		300	05.4		28.5		
16	157	09.1	90	46.1		339	16.6		95	14.6		315	07.8		28.5		
17	172	11.6	105	48.4	+ 17	354	17.9	+ 1	110	16.5	+ 20	330	10.3	− 6	28.5		
18	187	14.1	120	50.7	+ 17	9	19.2	+ 1	125	18.4	+ 20	345	12.7	− 6	28.6		
19	202	16.5	135	53.0		24	20.5		140	20.3		0	15.2		28.6		
20	217	19.0	150	55.3		39	21.8		155	22.2		15	17.6		28.6		
21	232	21.5	165	57.6		54	23.1		170	24.1		30	20.1		28.6		
22	247	23.9	180	59.9		69	24.4		185	26.0		45	22.5		28.6		
23	262	26.4	196	02.2		84	25.7		200	27.9		60	25.0		28.6		
24	277	28.8	211	04.5	+ 17	99	27.1	+ 1	215	29.8	+ 20	75	27.5	− 6	28.7		
Dif	—		+23	−2		+13	−6		+19		+1	+25			0		

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VIERNES 29 DE JUNIO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7		SD: 16 ^h 3 Edad: 9 ^d 4 PHE { 4 ^h : 59 ^m /8 12 ^h : 60 ^m /0 20 ^h : 60 ^m /1											
	PMG: 12 ^h 03 ^m 6		PMG: 20 ^h 12 ^m R°: 59 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
^h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "		h m	h m	h m	h m s		h m s	
0	179 08.1	+ 23 12.9	68 35.7	77	- 14 50.2	98	60 N	** **	0 59	2 41	16 15 88		23 59 35	
1	194 08.0	12.7	83 02.4	76	- 15 00.0	98	58	** **	1 46	3 01	16 03 85		** **	***
2	209 07.9	12.6	97 29.0	75	09.8	97	56	** **	2 15	17	15 53 82		** **	***
3	224 07.7	12.4	111 55.5	74	19.5	96	54	0 55	37	31	44 80		** **	***
4	239 07.6	12.3	126 21.9	74	29.1	95	52	1 38	2 55	43	36 78		0 05	35
5	254 07.5	+ 23 12.2	140 48.3	72	- 15 38.6	95	50	2 05	3 10	3 54	15 28 77		0 11	36
6	269 07.4	+ 23 12.0	155 14.5	72	- 15 48.1	95	45	2 50	3 39	4 16	15 13 74		0 24	40
7	284 07.2	11.9	169 40.7	71	- 15 57.4	93	40	3 20	4 01	34	15 00 72		34	43
8	299 07.1	11.7	184 06.8	70	- 16 06.7	91	35	3 43	19	4 49	14 50 69		43	46
9	314 07.0	11.6	198 32.8	69	15.8	91	30	4 01	34	5 02	40 68		0 51	48
10	329 06.9	11.5	212 58.7	69	24.9	89	20	30	4 59	24	25 64		1 05	51
11	344 06.7	+ 23 11.3	227 24.6	68	- 16 33.8	89	10 N	4 52	5 19	5 42	14 11 61		1 17	54
12	359 06.6	+ 23 11.2	241 50.4	66	- 16 42.7	89	0	5 11	5 37	6 00	13 58 59		1 28	57
13	14 06.5	11.0	256 16.0	66	- 16 51.4	87	10 S	28	5 54	17	45 57		40	60
14	29 06.4	10.9	270 41.6	66	- 17 00.0	86	20	5 44	6 12	36	31 54		1 52	63
15	44 06.2	10.7	285 07.2	66	08.6	86	30	6 00	30	6 57	16 51		2 06	66
16	59 06.1	10.6	299 32.6	64	17.0	84	35	09	41	7 09	13 07 49		14	69
17	74 06.0	+ 23 10.4	313 58.0	64	- 17 25.3	83	40	6 18	6 52	7 23	12 57 47		2 23	71
18	89 05.9	+ 23 10.3	328 23.2	62	- 17 33.6	83	45	6 28	7 06	7 39	12 45 44		2 34	74
19	104 05.8	10.1	342 48.4	62	41.7	81	50	40	22	8 00	31 40		47	78
20	119 05.6	10.0	357 13.6	62	49.7	80	52	45	29	10	24 39		2 53	80
21	134 05.5	09.8	11 38.6	60	- 17 57.5	78	54	51	37	21	17 37		3 00	82
22	149 05.4	09.7	26 03.6	60	- 18 05.3	77	56	6 57	46	33	12 08 36		07	85
23	164 05.3	09.5	40 28.4	58	13.0	77	58	7 04	7 56	8 47	11 59 33		16	87
24	179 05.1	+ 23 09.4	54 53.2	58	- 18 20.5	75	60 S	7 11	8 07	9 05	11 49 29		3 26	90
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 5 ^h 29 ^m 2		Mag.: -4.4 PMG: 9 ^h 54 ^m		Mag.: +0.8 PMG: 17 ^h 21 ^m		Mag.: -2.0 PMG: 9 ^h 37 ^m		Mag.: +0.7 PMG: 18 ^h 55 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "		° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "
0	277 28.8	211 04.5	+ 17 39.6	99 27.1	+ 1 21.4	215 29.8	+ 20 09.5	75 27.5	- 6 28.7					
1	292 31.3	226 06.8	39.4	114 28.4	20.9	230 31.7	09.6	90 29.9	28.7					
2	307 33.8	241 09.1	39.2	129 29.7	20.3	245 33.6	09.7	105 32.4	28.7					
3	322 36.2	256 11.4	39.0	144 31.0	19.7	260 35.5	09.8	120 34.8	28.7					
4	337 38.7	271 13.6	38.8	159 32.3	19.2	275 37.4	09.9	135 37.3	28.7					
5	352 41.2	286 15.9	+ 17 38.6	174 33.6	+ 1 18.6	290 39.3	+ 20 10.0	150 39.7	- 6 28.7					
6	7 43.6	301 18.2	+ 17 38.4	189 34.9	+ 1 18.1	305 41.2	+ 20 10.1	165 42.2	- 6 28.8					
7	22 46.1	316 20.4	38.2	204 36.2	17.5	320 43.1	10.2	180 44.6	28.8					
8	37 48.6	331 22.7	38.0	219 37.5	17.0	335 45.0	10.3	195 47.1	28.8					
9	52 51.0	346 25.0	37.8	234 38.8	16.4	350 46.9	10.4	210 49.5	28.8					
10	67 53.5	1 27.2	37.6	249 40.1	15.9	5 48.8	10.5	225 52.0	28.8					
11	82 56.0	16 29.5	+ 17 37.4	264 41.4	+ 1 15.3	20 50.7	+ 20 10.6	240 54.4	- 6 28.8					
12	97 58.4	31 31.7	+ 17 37.3	279 42.7	+ 1 14.7	35 52.6	+ 20 10.7	255 56.9	- 6 28.9					
13	113 00.9	46 34.0	37.1	294 44.0	14.2	50 54.5	10.8	270 59.3	28.9					
14	128 03.3	61 36.2	36.9	309 45.3	13.6	65 56.4	10.9	286 01.8	28.9					
15	143 05.8	76 38.4	36.7	324 46.6	13.1	80 58.3	11.0	301 04.2	28.9					
16	158 08.3	91 40.7	36.5	339 48.0	12.5	96 00.2	11.1	316 06.7	28.9					
17	173 10.7	106 42.9	+ 17 36.3	354 49.3	+ 1 12.0	111 02.1	+ 20 11.2	331 09.1	- 6 28.9					
18	188 13.2	121 45.1	+ 17 36.1	9 50.6	+ 1 11.4	126 04.0	+ 20 11.3	346 11.6	- 6 29.0					
19	203 15.7	136 47.3	36.0	24 51.9	10.9	141 05.9	11.4	1 14.0	29.0					
20	218 18.1	151 49.5	35.8	39 53.2	10.3	156 07.8	11.5	16 16.5	29.0					
21	233 20.6	166 51.8	35.6	54 54.5	09.7	171 09.7	11.6	31 18.9	29.0					
22	248 23.1	181 54.0	35.4	69 55.8	09.2	186 11.6	11.7	46 21.4	29.0					
23	263 25.5	196 56.2	35.2	84 57.1	08.6	201 13.6	11.8	61 23.8	29.0					
24	278 28.0	211 58.4	+ 17 35.1	99 58.4	+ 1 08.1	216 15.5	+ 20 11.9	76 26.3	- 6 29.1					
Dif	—	+22	-2	+13	-6	+19	+1	+25	0					

SÁBADO 30 DE JUNIO DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 03 ^m 8		SD: 16 ^h 4 Edad: 10 ^d 4 PHE $\begin{cases} 4^h: 60/2 \\ 12^h: 60/3 \\ 20^h: 60/4 \end{cases}$ PMG: 21 ^h 11 ^m R°: 62 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	179 05.1	+23 09.4	54 53.2	58	-18 20.5	74	60 N	21 25	23 04	** **	17 43 77	** **	0 11 38	
1	194 05.0		69 18.0	56	27.9	73	58	21 06	22 19	** **	28 76		22 40	
2	209 04.9		83 42.6	56	35.2	72	56	20 49	21 51	** **	15 74		31 43	
3	224 04.8		98 07.2	55	42.4	70	54	35	29	23 09	17 04 73		40 44	
4	239 04.6		112 31.7	54	49.4	69	52	23	21 12	22 28	16 54 72		0 47 46	
5	254 04.5	+23 08.6	126 56.1	54	-18 56.3	68	50	20 13	20 57	22 01	16 45 71		1 04 48	
6	269 04.4	+23 08.4	141 20.5	53	-19 03.1	67	45	19 51	20 28	21 17	16 27 69		17 51	
7	284 04.3		155 44.8	52	09.8	66	40	33	20 05	20 47	16 12 67		29 52	
8	299 04.2		170 09.0	51	16.4	64	35	18	19 48	24	15 59 67		39 54	
9	314 04.0		184 33.1	51	22.8	63	30	19 05	33	20 06	48 66		1 56 56	
10	329 03.9		198 57.2	50	29.1	61	20	18 43	19 08	19 37	29 64		2 11 59	
11	344 03.8	+23 07.6	213 21.2	50	-19 35.2	60	10 N	18 25	18 48	19 15	15 12 63		2 25 61	
12	359 03.7	+23 07.5	227 45.2	49	-19 41.2	59	0	18 07	18 30	18 56	14 57 61		40 62	
13	14 03.6		242 09.1	48	47.1	58	10 S	17 50	18 13	39	42 60		2 55 64	
14	29 03.4		256 32.9	47	52.9	56	20	32	17 56	23	25 59		3 12 67	
15	44 03.3		270 56.6	47	-19 58.5	54	30	17 11	37	18 07	14 07 57		23 68	
16	59 03.2		285 20.3	46	-20 03.9	54	35	16 59	27	17 59	13 56 56		3 34 70	
17	74 03.1	+23 06.6	299 43.9	46	-20 09.3	52	40	16 45	17 15	17 49	13 44 54		3 48 72	
18	89 03.0	+23 06.5	314 07.5	45	-20 14.5	50	45	16 28	17 02	17 39	13 29 53		4 05 74	
19	104 02.8		328 31.0	45	19.5	49	50	16 08	16 46	28	11 51		13 75	
20	119 02.7		342 54.5	44	24.4	48	52	15 58	39	23	13 03 50		22 77	
21	134 02.6		357 17.9	44	29.2	47	54	47	31	17	12 54 49		32 78	
22	149 02.5		11 41.2	43	33.8	46	56	35	22	11	44 47		43 81	
23	164 02.4		26 04.5	43	38.3	45	58	21	12	17 04	32 45		4 56 84	
24	179 02.2	+23 05.5	40 27.7	42	-20 42.7	44	60 S	15 04	16 01	16 57	12 18 43			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 5 ^h 25 ^m 2		Mag.: -4.4 PMG: 9 ^h 51 ^m		Mag.: +0.8 PMG: 17 ^h 19 ^m		Mag.: -2.0 PMG: 9 ^h 34 ^m		Mag.: +0.7 PMG: 18 ^h 51 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec
^h 0	278 28.0	211 58.4	+17 35.1	99 58.4	+1 08.1	216 15.5	+20 11.9	76 26.3	-6 29.1					
1	293 30.5	227 00.6	34.9	114 59.7	07.5	231 17.4	12.0	91 28.7	29.1					
2	308 32.9	242 02.8	34.7	130 01.0	06.9	246 19.3	12.1	106 31.2	29.1					
3	323 35.4	257 04.9	34.5	145 02.3	06.4	261 21.2	12.2	121 33.6	29.1					
4	338 37.8	272 07.1	34.4	160 03.6	05.8	276 23.1	12.3	136 36.1	29.1					
5	353 40.3	287 09.3	+17 34.2	175 04.9	+1 05.3	291 25.0	+20 12.4	151 38.5	-6 29.1					
6	8 42.8	302 11.5	+17 34.0	190 06.2	+1 04.7	306 26.9	+20 12.5	166 41.0	-6 29.2					
7	23 45.2	317 13.7	33.9	205 07.5	04.2	321 28.8	12.6	181 43.4	29.2					
8	38 47.7	332 15.8	33.7	220 08.8	03.6	336 30.7	12.7	196 45.9	29.2					
9	53 50.2	347 18.0	33.5	235 10.1	03.0	351 32.6	12.8	211 48.3	29.2					
10	68 52.6	2 20.2	33.4	250 11.4	02.5	6 34.5	12.9	226 50.8	29.2					
11	83 55.1	17 22.3	+17 33.2	265 12.7	+1 01.9	21 36.4	+20 13.0	241 53.2	-6 29.3					
12	98 57.6	32 24.5	+17 33.1	280 14.0	+1 01.4	36 38.3	+20 13.1	256 55.7	-6 29.3					
13	114 00.0	47 26.6	32.9	295 15.3	00.8	51 40.2	13.2	271 58.1	29.3					
14	129 02.5	62 28.8	32.8	310 16.6	+1 00.2	66 42.1	13.3	287 00.6	29.3					
15	144 04.9	77 30.9	32.6	325 17.9	+0 59.7	81 44.0	13.4	302 03.0	29.3					
16	159 07.4	92 33.0	32.4	340 19.2	59.1	96 45.9	13.5	317 05.5	29.3					
17	174 09.9	107 35.2	+17 32.3	355 20.5	+0 58.6	111 47.9	+20 13.6	332 07.9	-6 29.4					
18	189 12.3	122 37.3	+17 32.1	10 21.8	+0 58.0	126 49.8	+20 13.7	347 10.4	-6 29.4					
19	204 14.8	137 39.4	32.0	25 23.0	57.5	141 51.7	13.8	2 12.8	29.4					
20	219 17.3	152 41.6	31.8	40 24.3	56.9	156 53.6	13.9	17 15.3	29.4					
21	234 19.7	167 43.7	31.7	55 25.6	56.3	171 55.5	14.0	32 17.7	29.4					
22	249 22.2	182 45.8	31.6	70 26.9	55.8	186 57.4	14.1	47 20.2	29.5					
23	264 24.7	197 47.9	31.4	85 28.2	55.2	201 59.3	14.2	62 22.6	29.5					
24	279 27.1	212 50.0	+17 31.3	100 29.5	+0 54.7	217 01.2	+20 14.3	77 25.1	-6 29.5					
Dif	—	+22	-2	+13	-6	+19	+1	+24	0					

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DOMINGO 1 DE JULIO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 03 ^m 9		SD: 16 ^h 5 Edad: 11 ^d 4		PHE { 4 ^h : 60 ^h 5 12 ^h : 60 ^h 5 20 ^h : 60 ^h 5									
	PMG: 22 ^h 13 ^m		R°: 63 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m		h	m
0	179 02.2	+ 23 05.5	40 27.7		− 20 42.7	42	60 N	** **	1 04	2 43	19 00	60	0 34	51
1	194 02.1		54 50.9	42	46.9	42	58	** **	1 49	3 02	18 44	59	0 49	53
2	209 02.0		69 14.1	42	50.9	40	56	** **	2 17	19	29 61		1 02	54
3	224 01.9	04.9	83 37.2	41	54.8	39	54	0 59	39	33	17 61		14 55	
4	239 01.8	04.8	98 00.2	40	− 20 58.5	37	52	1 40	2 56	45	18 06	61	24 56	
5	254 01.6	+ 23 04.6	112 23.3	41	− 21 02.1	36	50	2 07	3 11	3 55	17 56	61	1 33	56
6	269 01.5	+ 23 04.4	126 46.2	39	− 21 05.6	35	45	2 51	3 40	4 17	17 36	61	1 52	58
7	284 01.4	04.2	141 09.2	40	08.9	33	40	3 21	4 02	35	19 62		2 08	58
8	299 01.3	04.1	155 32.1	39	12.0	31	35	3 44	20	4 50	17 06	61	21 59	
9	314 01.2	03.9	169 54.9	38	15.0	30	30	4 02	4 35	5 03	16 54	62	33 60	
10	329 01.0	03.7	184 17.8	39	17.8	28	20	31	5 00	24	33 62		2 52	61
11	344 00.9	+ 23 03.5	198 40.6	38	− 21 20.5	27	10 N	4 53	5 20	5 43	16 15	62	3 10	61
12	359 00.8	+ 23 03.3	213 03.3	37	− 21 23.0	25	0	5 12	5 38	6 00	15 58	63	3 26	62
13	14 00.7	03.2	227 26.1	38	25.4	24	10 S	28	5 55	17	42 62		42 63	
14	29 00.6	03.0	241 48.8	37	27.6	22	20	5 44	6 12	36	24 62		3 59	64
15	44 00.5	02.8	256 11.5	37	29.7	21	30	6 00	30	6 57	15 04	62	4 19	64
16	59 00.3	02.6	270 34.1	36	31.6	19	35	09	41	7 09	14 52	62	31 64	
17	74 00.2	+ 23 02.4	284 56.8	37	− 21 33.3	17	40	6 18	6 52	7 23	14 38	62	4 44	65
18	89 00.1	+ 23 02.3	299 19.4	36	− 21 34.9	16	45	6 28	7 05	7 39	14 22	62	5 00	66
19	104 00.0	02.1	313 42.0	36	36.3	14	50	40	21	7 59	14 02	62	19 67	
20	118 59.9	01.9	328 04.6	36	37.6	13	52	45	28	8 09	13 53	62	28 67	
21	133 59.7	01.7	342 27.2	36	38.7	11	54	50	36	20	43 61		39 67	
22	148 59.6	01.5	356 49.8	36	39.7	10	56	6 56	45	32	31 61		5 50	68
23	163 59.5	01.3	11 12.3	35	40.5	8	58	7 03	7 55	8 47	17 61		6 04	68
24	178 59.4	+ 23 01.1	25 34.9	36	− 21 41.1	6	60 S	7 10	8 07	9 04	13 01	61	6 20	68
UT	ARIES PMG 5 ^h 21 ^m 3		VENUS Mag.: −4.4 PMG: 9 ^h 47 ^m		MARTE Mag.: +0.9 PMG: 17 ^h 17 ^m		JÚPITER Mag.: −2.0 PMG: 9 ^h 31 ^m		SATURNO Mag.: +0.7 PMG: 18 ^h 47 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
	°	'	°	'	°	'	°	'	°	'	°	'	°	'
h	279 27.1	212 50.0	+ 17 31.3		100 29.5	+ 0 54.7	217 01.2	+ 20 14.3	77 25.1	− 6 29.5				
1	294 29.6	227 52.1	31.1		115 30.8	54.1	232 03.1	14.4	92 27.5	29.5				
2	309 32.1	242 54.2	31.0		130 32.1	53.5	247 05.0	14.5	107 29.9	29.5				
3	324 34.5	257 56.3	30.8		145 33.4	53.0	262 06.9	14.6	122 32.4	29.5				
4	339 37.0	272 58.4	30.7		160 34.7	52.4	277 08.8	14.7	137 34.8	29.6				
5	354 39.4	288 00.5	+ 17 30.6		175 36.0	+ 0 51.9	292 10.7	+ 20 14.8	152 37.3	− 6 29.6				
6	9 41.9	303 02.6	+ 17 30.4		190 37.3	+ 0 51.3	307 12.6	+ 20 14.9	167 39.7	− 6 29.6				
7	24 44.4	318 04.7	30.3		205 38.6	50.7	322 14.6	15.0	182 42.2	29.6				
8	39 46.8	333 06.8	30.2		220 39.9	50.2	337 16.5	15.1	197 44.6	29.6				
9	54 49.3	348 08.8	30.0		235 41.2	49.6	352 18.4	15.2	212 47.1	29.7				
10	69 51.8	3 10.9	29.9		250 42.5	49.0	7 20.3	15.3	227 49.5	29.7				
11	84 54.2	18 13.0	+ 17 29.8		265 43.7	+ 0 48.5	22 22.2	+ 20 15.4	242 52.0	− 6 29.7				
12	99 56.7	33 15.0	+ 17 29.7		280 45.0	+ 0 47.9	37 24.1	+ 20 15.5	257 54.4	− 6 29.7				
13	114 59.2	48 17.1	29.5		295 46.3	47.4	52 26.0	15.6	272 56.8	29.7				
14	130 01.6	63 19.2	29.4		310 47.6	46.8	67 27.9	15.7	287 59.3	29.8				
15	145 04.1	78 21.2	29.3		325 48.9	46.2	82 29.8	15.8	303 01.7	29.8				
16	160 06.6	93 23.3	29.2		340 50.2	45.7	97 31.7	15.9	318 04.2	29.8				
17	175 09.0	108 25.3	+ 17 29.0		355 51.5	+ 0 45.1	112 33.6	+ 20 16.0	333 06.6	− 6 29.8				
18	190 11.5	123 27.3	+ 17 28.9		10 52.8	+ 0 44.6	127 35.5	+ 20 16.1	348 09.1	− 6 29.8				
19	205 13.9	138 29.4	28.8		25 54.1	44.0	142 37.5	16.2	3 11.5	29.9				
20	220 16.4	153 31.4	28.7		40 55.4	43.4	157 39.4	16.3	18 13.9	29.9				
21	235 18.9	168 33.5	28.6		55 56.6	42.9	172 41.3	16.4	33 16.4	29.9				
22	250 21.3	183 35.5	28.5		70 57.9	42.3	187 43.2	16.5	48 18.8	29.9				
23	265 23.8	198 37.5	28.3		85 59.2	41.7	202 45.1	16.6	63 21.3	29.9				
24	280 26.3	213 39.5	+ 17 28.2		101 00.5	+ 0 41.2	217 47.0	+ 20 16.7	78 23.7	− 6 30.0				
Dif	—	+21	−1		+13	−6	+19	+1	+24	0				

LUNES 2 DE JULIO DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 1		SD: 16 ^h 5 Edad: 12 ^d 4 PHE { 4 ^h : 60 ^h 5 12 ^h : 60 ^h 4 20 ^h : 60 ^h 4 PMG: 23 ^h 16 ^m R°: 60 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°	h m	h m	h m	m	h m	m	h m	m
0	178 59.4	+ 23 01.1	25 34.9		- 21 41.1	5	60 N	21 24	22 59	** **		20 00 41	1 25 70		
1	193 59.3	01.0	39 57.5	36	41.6	3	58	21 04	22 17	** **		19 43 44	42 69		
2	208 59.2	00.8	54 20.0	35	41.9	3	56	20 48	21 49	** **		30 45	1 56 69		
3	223 59.0	00.6	68 42.6	36	42.1	2	54	34	28	23 05		18 47	2 09 68		
4	238 58.9	00.4	83 05.1	35	42.1	0	52	23	21 11	22 25		19 07 48	20 67		
5	253 58.8	+ 23 00.2	97 27.7	36	- 21 41.9	2	50	20 12	20 56	22 00		18 57 50	2 29 67		
6	268 58.7	+ 23 00.0	111 50.3	36	- 21 41.6	3	45	19 50	20 27	21 16		18 37 52	2 50 66		
7	283 58.6	+ 22 59.8	126 12.9	36	41.1	5	40	33	20 05	20 46		21 54	3 06 66		
8	298 58.5	59.6	140 35.5	36	40.5	6	35	18	19 47	24		18 07 55	20 65		
9	313 58.4	59.4	154 58.1	36	39.7	8	30	19 05	32	20 06		17 56 56	33 64		
10	328 58.2	59.2	169 20.7	36	38.8	9	20	18 44	19 08	19 37		35 58	3 53 64		
11	343 58.1	+ 22 59.0	183 43.3	36	- 21 37.7	11	10 N	18 25	18 48	19 15		17 17 60	4 11 63		
12	358 58.0	+ 22 58.8	198 06.0	37	- 21 36.4	13	0	18 08	18 30	18 56		17 01 61	4 28 62		
13	13 57.9	58.6	212 28.6	36	35.0	14	10 S	17 51	18 13	40		16 44 63	4 45 61		
14	28 57.8	58.4	226 51.3	37	33.4	16	20	33	17 57	24		26 64	5 03 60		
15	43 57.7	58.2	241 14.1	38	31.7	17	30	12	38	18 08		16 06 66	23 60		
16	58 57.5	58.0	255 36.8	37	29.8	19	35	17 00	28	17 59		15 54 67	35 59		
17	73 57.4	+ 22 57.8	269 59.6	38	- 21 27.7	21	40	16 46	17 16	17 50		15 40 68	5 49 58		
18	88 57.3	+ 22 57.6	284 22.4	38	- 21 25.5	22	45	16 29	17 03	17 40		15 24 70	6 06 56		
19	103 57.2	57.4	298 45.3	39	23.2	23	50	09	16 47	29		15 04 71	26 55		
20	118 57.1	57.2	313 08.1	38	20.7	25	52	16 00	40	24		14 55 72	35 55		
21	133 57.0	57.0	327 31.1	40	18.0	27	54	15 49	32	18		44 73	46 54		
22	148 56.9	56.8	341 54.0	39	15.2	28	56	37	23	12		32 74	6 58 53		
23	163 56.7	56.6	356 17.0	40	12.2	30	58	22	14	17 06		18 76	7 12 52		
24	178 56.6	+ 22 56.4	10 40.0	40	- 21 09.1	31	60 S	15 06	16 02	16 59		14 02 78	7 28 51		
UT	ARIES PMG 5 ^h 17 ^m 4		VENUS Mag.: -4.4 PMG: 9 ^h 44 ^m		MARTE Mag.: +0.9 PMG: 17 ^h 14 ^m		JÚPITER Mag.: -2.0 PMG: 9 ^h 28 ^m		SATURNO Mag.: +0.7 PMG: 18 ^h 43 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
	°	'	°	'	°	'	°	'	°	'	°				
h	°	'	°	'	°	'	°	'	°	'	°				
0	280 26.3	213 39.5	+ 17 28.2	101 00.5	+ 0 41.2	217 47.0	+ 20 16.7	78 23.7	- 6 30.0						
1	295 28.7	228 41.5	28.1	116 01.8	40.6	232 48.9	16.8	93 26.2	30.0						
2	310 31.2	243 43.6	28.0	131 03.1	40.1	247 50.8	16.9	108 28.6	30.0						
3	325 33.7	258 45.6	27.9	146 04.4	39.5	262 52.7	16.9	123 31.0	30.0						
4	340 36.1	273 47.6	27.8	161 05.7	38.9	277 54.6	17.0	138 33.5	30.0						
5	355 38.6	288 49.6	+ 17 27.7	176 06.9	+ 0 38.4	292 56.5	+ 20 17.1	153 35.9	- 6 30.1						
6	10 41.1	303 51.6	+ 17 27.6	191 08.2	+ 0 37.8	307 58.5	+ 20 17.2	168 38.4	- 6 30.1						
7	25 43.5	318 53.6	27.5	206 09.5	37.2	323 00.4	17.3	183 40.8	30.1						
8	40 46.0	333 55.6	27.4	221 10.8	36.7	338 02.3	17.4	198 43.3	30.1						
9	55 48.4	348 57.5	27.3	236 12.1	36.1	353 04.2	17.5	213 45.7	30.2						
10	70 50.9	3 59.5	27.2	251 13.4	35.5	8 06.1	17.6	228 48.1	30.2						
11	85 53.4	19 01.5	+ 17 27.1	266 14.7	+ 0 35.0	23 08.0	+ 20 17.7	243 50.6	- 6 30.2						
12	100 55.8	34 03.5	+ 17 27.0	281 15.9	+ 0 34.4	38 09.9	+ 20 17.8	258 53.0	- 6 30.2						
13	115 58.3	49 05.5	26.9	296 17.2	33.9	53 11.8	17.9	273 55.5	30.2						
14	131 00.8	64 07.4	26.8	311 18.5	33.3	68 13.7	18.0	288 57.9	30.3						
15	146 03.2	79 09.4	26.7	326 19.8	32.7	83 15.6	18.1	304 00.3	30.3						
16	161 05.7	94 11.3	26.6	341 21.1	32.2	98 17.6	18.2	319 02.8	30.3						
17	176 08.2	109 13.3	+ 17 26.5	356 22.4	+ 0 31.6	113 19.5	+ 20 18.3	334 05.2	- 6 30.3						
18	191 10.6	124 15.3	+ 17 26.4	11 23.6	+ 0 31.0	128 21.4	+ 20 18.4	349 07.7	- 6 30.3						
19	206 13.1	139 17.2	26.3	26 24.9	30.5	143 23.3	18.5	4 10.1	30.4						
20	221 15.6	154 19.2	26.3	41 26.2	29.9	158 25.2	18.6	19 12.5	30.4						
21	236 18.0	169 21.1	26.2	56 27.5	29.3	173 27.1	18.7	34 15.0	30.4						
22	251 20.5	184 23.0	26.1	71 28.8	28.8	188 29.0	18.8	49 17.4	30.4						
23	266 22.9	199 25.0	26.0	86 30.1	28.2	203 30.9	18.9	64 19.8	30.5						
24	281 25.4	214 26.9	+ 17 25.9	101 31.3	+ 0 27.6	218 32.8	+ 20 19.0	79 22.3	- 6 30.5						
Dif	—	+20	-1	+13	-6	+19	+1	+24	0						

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MARTES 3 DE JULIO DE 2012

UT	SOL			☾ LUNA			Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 3			SD: 16 ^h 4 Edad: 13 ^d 4 PHE: $\begin{cases} 4^h: 60^s/3 \\ 12^h: 60^s/1 \\ 20^h: 60^s/0 \end{cases}$ 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				
0	178	56.6	+ 22	56.4	10	40.0	− 21	09.1	33	60 N	** **	1 09	2 45	20 41	28	2 35	84		
1	193	56.5		56.2	25	03.1	41	05.8	34	58	** **	1 52	3 04	27	31	2 51	81		
2	208	56.4		56.0	39	26.3	42	− 21	02.4	36	56	** **	2 20	20	15	34	3 05	79	
3	223	56.3		55.8	53	49.4	41	− 20	58.8	36	54	1 04	41	34	20	05	36	17	77
4	238	56.2		55.6	68	12.7	43	55.1	37	52	1 43	2 58	46	19	55	38	27	76	
5	253	56.1	+ 22	55.4	82	35.9	42	− 20	51.3	38	50	2 09	3 13	3 57	19	47	40	3 36	75
6	268	56.0	+ 22	55.2	96	59.3	44	− 20	47.3	40	45	2 53	3 41	4 18	19	29	43	3 56	72
7	283	55.8		55.0	111	22.7	44	43.1	42	40	3 22	4 03	36	15	45	4 12	69		
8	298	55.7		54.8	125	46.1	44	38.8	43	35	3 45	21	4 51	19	02	48	25	68	
9	313	55.6		54.6	140	09.6	45	34.4	44	30	4 03	4 36	5 03	18	52	49	37	66	
10	328	55.5		54.3	154	33.2	46	29.8	46	20	31	5 00	25	33	53	4 57	64		
11	343	55.4	+ 22	54.1	168	56.8	46	− 20	25.1	47	10 N	4 54	5 20	5 43	18	17	55	5 14	62
12	358	55.3	+ 22	53.9	183	20.5	47	− 20	20.2	49	0	5 12	5 38	6 01	18	02	58	5 30	60
13	13	55.2		53.7	197	44.2	47	15.2	50	10 S	29	5 55	18	17	47	60	5 46	58	
14	28	55.1		53.5	212	08.0	48	10.0	52	20	5 44	6 12	36	30	64	6 03	56		
15	43	54.9		53.3	226	31.9	49	− 20	04.8	52	30	6 00	30	6 56	12	66	23	53	
16	58	54.8		53.1	240	55.9	50	− 19	59.3	55	35	09	41	7 09	17	01	68	34	52
17	73	54.7	+ 22	52.8	255	19.9	50	− 19	53.8	55	40	6 18	6 52	7 22	16	48	71	6 47	50
18	88	54.6	+ 22	52.6	269	44.0	51	− 19	48.1	57	45	6 28	7 05	7 39	16	34	72	7 02	48
19	103	54.5		52.4	284	08.1	51	42.3	58	50	39	21	7 59	15	77	21	45		
20	118	54.4		52.2	298	32.4	53	36.4	59	52	44	28	8 08	16	07	78	30	43	
21	133	54.3		52.0	312	56.7	53	30.3	61	54	50	36	19	15	57	80	40	41	
22	148	54.2		51.8	327	21.1	54	24.1	62	56	6 56	45	31	46	82	7 51	39		
23	163	54.1		51.5	341	45.5	54	17.7	64	58	7 02	7 54	8 45	34	84	8 04	37		
24	178	54.0	+ 22	51.3	356	10.1	56	− 19	11.3	64	60 S	7 09	8 06	9 02	15	20	87	8 19	34
UT	ARIES PMG 5 ^h 13 ^m 4		VENUS Mag.: −4.5 PMG: 9 ^h 41 ^m			MARTE Mag.: +0.9 PMG: 17 ^h 12 ^m			JÚPITER Mag.: −2.1 PMG: 9 ^h 25 ^m			SATURNO Mag.: +0.7 PMG: 18 ^h 39 ^m							
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
	[°]	[/]	[°]	[/]	[°]	[/]	[°]	[/]	[°]	[/]	[°]	[/]	[°]	[/]	[°]	[/]	[°]	[/]	
h	281	25.4	214	26.9	+ 17	25.9	101	31.3	+ 0	27.6	218	32.8	+ 20	19.0	79	22.3	− 6	30.5	
1	296	27.9	229	28.8		25.8	116	32.6		27.1	233	34.8		19.1	94	24.7		30.5	
2	311	30.3	244	30.8		25.8	131	33.9		26.5	248	36.7		19.2	109	27.2		30.5	
3	326	32.8	259	32.7		25.7	146	35.2		26.0	263	38.6		19.3	124	29.6		30.5	
4	341	35.3	274	34.6		25.6	161	36.5		25.4	278	40.5		19.4	139	32.0		30.6	
5	356	37.7	289	36.5	+ 17	25.5	176	37.7	+ 0	24.8	293	42.4	+ 20	19.4	154	34.5	− 6	30.6	
6	11	40.2	304	38.4	+ 17	25.5	191	39.0	+ 0	24.3	308	44.3	+ 20	19.5	169	36.9	− 6	30.6	
7	26	42.7	319	40.3		25.4	206	40.3		23.7	323	46.2		19.6	184	39.4		30.6	
8	41	45.1	334	42.3		25.3	221	41.6		23.1	338	48.1		19.7	199	41.8		30.7	
9	56	47.6	349	44.2		25.2	236	42.9		22.6	353	50.1		19.8	214	44.2		30.7	
10	71	50.1	4	46.1		25.2	251	44.1		22.0	8	52.0		19.9	229	46.7		30.7	
11	86	52.5	19	47.9	+ 17	25.1	266	45.4	+ 0	21.4	23	53.9	+ 20	20.0	244	49.1	− 6	30.7	
12	101	55.0	34	49.8	+ 17	25.0	281	46.7	+ 0	20.9	38	55.8	+ 20	20.1	259	51.5	− 6	30.7	
13	116	57.4	49	51.7		25.0	296	48.0		20.3	53	57.7		20.2	274	54.0		30.8	
14	131	59.9	64	53.6		24.9	311	49.2		19.7	68	59.6		20.3	289	56.4		30.8	
15	147	02.4	79	55.5		24.8	326	50.5		19.2	84	01.5		20.4	304	58.8		30.8	
16	162	04.8	94	57.4		24.8	341	51.8		18.6	99	03.4		20.5	320	01.3		30.8	
17	177	07.3	109	59.2	+ 17	24.7	356	53.1	+ 0	18.0	114	05.4	+ 20	20.6	335	03.7	− 6	30.9	
18	192	09.8	125	01.1	+ 17	24.7	11	54.4	+ 0	17.5	129	07.3	+ 20	20.7	350	06.2	− 6	30.9	
19	207	12.2	140	03.0		24.6	26	55.6		16.9	144	09.2		20.8	5	08.6		30.9	
20	222	14.7	155	04.8		24.5	41	56.9		16.3	159	11.1		20.9	20	11.0		30.9	
21	237	17.2	170	06.7		24.5	56	58.2		15.8	174	13.0		21.0	35	13.5		31.0	
22	252	19.6	185	08.5		24.4	71	59.5		15.2	189	14.9		21.1	50	15.9		31.0	
23	267	22.1	200	10.4		24.4	87	00.7		14.6	204	16.8		21.2	65	18.3		31.0	
24	282	24.6	215	12.3	+ 17	24.3	102	02.0	+ 0	14.1	219	18.8	+ 20	21.3	80	20.8	− 6	31.0	
Dif	—		+19		−1		+13		−6		+19		+1		+24			0	

MIÉRCOL 4 DE JULIO DE 2012

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15'7 PMG: 12 ^h 04 ^m 5		SD: 16'3 Edad: 14 ^d 4 PHE { 4 ^h : 59'8 12 ^h : 59'6 20 ^h : 59'4 PMG: 0 ^h 16 ^m R°: 57 ^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 54.0	+ 22 51.3	356 10.1		− 19 11.3		60 N	21 22	22 55	*** **		21 09 19	3 59 90	
1	193 53.8		10 34.7	56	− 19 04.7	66	58	21 03	22 14	*** **		20 58 23	4 12 87	
2	208 53.7		24 59.4	57	− 18 58.0	67	56	20 47	21 47	*** **		49 25	24 83	
3	223 53.6		39 24.2	58		51.2	54		33 26	23 01		41 27	34 81	
4	238 53.5		53 49.1	59		44.2	52		22 21 09	22 23		33 30	43 79	
5	253 53.4	+ 22 50.2	68 14.0	59	− 18 37.2	70	50	20 11	20 55	21 58		20 27 31	4 51 77	
6	268 53.3	+ 22 50.0	82 39.0	60	− 18 30.0	72	45	19 50	20 26	21 15		20 12 36	5 08 73	
7	283 53.2		97 04.1	61		22.7	40		32 20 05	20 46		20 00 39	21 71	
8	298 53.1		111 29.3	62		15.3	35		18 19 47	23		19 50 42	33 68	
9	313 53.0		125 54.6	63		07.8	30	19 05		32 20 05		41 44	5 43 66	
10	328 52.9		140 20.0	64	− 18 00.1	77	20	18 44	19 08	19 37		26 47	6 01 62	
11	343 52.7	+ 22 48.8	154 45.5	65	− 17 52.4	77	10 N	18 25	18 48	19 15		19 12 51	6 16 59	
12	358 52.6	+ 22 48.6	169 11.0	65	− 17 44.5	79	0	18 08	18 31	18 57		19 00 54	6 30 56	
13	13 52.5		183 36.6	66		36.6	10 S	17 51	18 14	40		18 47 57	44 53	
14	28 52.4		198 02.4	68		28.5	20		33 17 57	25		34 60	6 59 50	
15	43 52.3		212 28.2	68		20.3	30		13 39	09		18 65	7 16 46	
16	58 52.2		226 54.1	69		12.0	35	17 01		29 18 00		18 09 67	26 44	
17	73 52.1	+ 22 47.5	241 20.1	70	− 17 03.7	83	40	16 47	17 17	17 51		17 59 69	7 37 42	
18	88 52.0	+ 22 47.2	255 46.2	71	− 16 55.2	85	45	16 31	17 04	17 41		17 46 73	7 50 39	
19	103 51.9		270 12.3	71		46.6	50		11 16 49	30		32 76	8 06 35	
20	118 51.8		284 38.6	73		38.0	52	16 01		42 25		25 78	13 34	
21	133 51.7		299 05.0	74		29.2	54	15 51		34 20		17 81	21 32	
22	148 51.6		313 31.4	74		20.3	56		38 25	14		17 08 83	30 30	
23	163 51.5		327 57.9	75		11.4	58		24 15	07		16 58 87	41 27	
24	178 51.3	+ 22 45.8	342 24.6	77	− 16 02.3	91	60 S	15 08	16 04	17 00		16 47 90	8 53 23	
UT	ARIES PMG 5 ^h 09 ^m 5		VENUS Mag.: −4.5 PMG: 9 ^h 38 ^m		MARTE Mag.: +0.9 PMG: 17 ^h 10 ^m		JÚPITER Mag.: −2.1 PMG: 9 ^h 22 ^m		SATURNO Mag.: +0.7 PMG: 18 ^h 36 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	°	'	°	'	°	'	°	'	°	'				
h	°	'	°	'	°	'	°	'	°	'				
0	282 24.6	215 12.3	+ 17 24.3		102 02.0	+ 0 14.1	219 18.8	+ 20 21.3	80 20.8	− 6 31.0				
1	297 27.0	230 14.1		24.3	117 03.3	13.5	234 20.7	21.3	95 23.2	31.0				
2	312 29.5	245 15.9		24.2	132 04.6	12.9	249 22.6	21.4	110 25.6	31.1				
3	327 31.9	260 17.8		24.2	147 05.8	12.3	264 24.5	21.5	125 28.1	31.1				
4	342 34.4	275 19.6		24.1	162 07.1	11.8	279 26.4	21.6	140 30.5	31.1				
5	357 36.9	290 21.4	+ 17 24.1		177 08.4	+ 0 11.2	294 28.3	+ 20 21.7	155 32.9	− 6 31.1				
6	12 39.3	305 23.3	+ 17 24.0		192 09.6	+ 0 10.6	309 30.2	+ 20 21.8	170 35.4	− 6 31.2				
7	27 41.8	320 25.1		24.0	207 10.9	10.1	324 32.2	21.9	185 37.8	31.2				
8	42 44.3	335 26.9		23.9	222 12.2	09.5	339 34.1	22.0	200 40.2	31.2				
9	57 46.7	350 28.7		23.9	237 13.5	08.9	354 36.0	22.1	215 42.7	31.2				
10	72 49.2	5 30.5		23.8	252 14.7	08.4	9 37.9	22.2	230 45.1	31.3				
11	87 51.7	20 32.4	+ 17 23.8		267 16.0	+ 0 07.8	24 39.8	+ 20 22.3	245 47.5	− 6 31.3				
12	102 54.1	35 34.2	+ 17 23.8		282 17.3	+ 0 07.2	39 41.7	+ 20 22.4	260 50.0	− 6 31.3				
13	117 56.6	50 36.0		23.7	297 18.5	06.7	54 43.7	22.5	275 52.4	31.3				
14	132 59.0	65 37.8		23.7	312 19.8	06.1	69 45.6	22.6	290 54.8	31.4				
15	148 01.5	80 39.6		23.7	327 21.1	05.5	84 47.5	22.7	305 57.3	31.4				
16	163 04.0	95 41.4		23.6	342 22.4	05.0	99 49.4	22.8	320 59.7	31.4				
17	178 06.4	110 43.1	+ 17 23.6		357 23.6	+ 0 04.4	114 51.3	+ 20 22.9	336 02.1	− 6 31.4				
18	193 08.9	125 44.9	+ 17 23.6		12 24.9	+ 0 03.8	129 53.2	+ 20 22.9	351 04.6	− 6 31.5				
19	208 11.4	140 46.7		23.5	27 26.2	03.3	144 55.1	23.0	6 07.0	31.5				
20	223 13.8	155 48.5		23.5	42 27.4	02.7	159 57.1	23.1	21 09.4	31.5				
21	238 16.3	170 50.3		23.5	57 28.7	02.1	174 59.0	23.2	36 11.9	31.5				
22	253 18.8	185 52.0		23.4	72 30.0	01.5	190 00.9	23.3	51 14.3	31.6				
23	268 21.2	200 53.8		23.4	87 31.2	01.0	205 02.8	23.4	66 16.7	31.6				
24	283 23.7	215 55.6	+ 17 23.4		102 32.5	+ 0 00.4	220 04.7	+ 20 23.5	81 19.2	− 6 31.6				
Dif	—	+18	0		+13	−6	+19	+1	+24	0				

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JUEVES 5 DE JULIO DE 2012

UT	SOL			☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 7			SD: 16 ^h 1 Edad: 15 ^d 4 PHE { 4 ^h : 59 ^h 1 12 ^h : 58 ^h 9 20 ^h : 58 ^h 6 PMG: 1 ^h 13 ^m R°: 53 ^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	h m m
0	178 51.3	+ 22 45.8		342 24.6	77	− 16 02.3	91	60 N	*** **	1 15	2 47	21 28 15	5 29 89		
1	193 51.2	45.6		356 51.3	78	− 15 53.2	92	58	*** **	1 56	3 07	21 17	39 86		
2	208 51.1	45.3		11 18.1	79	44.0	93	56	*** **	2 22	22	14 20	47 83		
3	223 51.0	45.1		25 45.0	80	34.7	94	54	1 09	2 43	36	08 23	5 55 80		
4	238 50.9	44.9		40 12.0	81	25.3	95	52	1 46	3 00	48	21 03 25	6 02 78		
5	253 50.8	+ 22 44.6		54 39.1	82	− 15 15.8	95	50	2 11	3 14	3 58	20 58 27	6 08 76		
6	268 50.7	+ 22 44.4		69 06.3	83	− 15 06.3	95	45	2 54	3 43	4 20	20 48 30	6 21 72		
7	283 50.6	44.1		83 33.6	83	− 14 56.6	97	40	3 24	4 05	37	39 34	32 69		
8	298 50.5	43.9		98 00.9	83	46.9	97	35	3 46	22	4 52	32 36	41 66		
9	313 50.4	43.6		112 28.4	85	37.1	98	30	4 04	4 37	5 04	25 39	6 49 64		
10	328 50.3	43.4		126 56.0	86	27.3	98	20	32	5 01	26	13 44	7 03 59		
11	343 50.2	+ 22 43.2		141 23.6	86	− 14 17.3	100	10 N	4 54	5 21	5 44	20 03 47	7 15 56		
12	358 50.1	+ 22 42.9		155 51.3	87	− 14 07.3	100	0	5 12	5 39	6 01	19 54 50	7 26 52		
13	13 50.0	42.7		170 19.2	89	− 13 57.2	101	10 S	29	5 55	18	44 54	37 49		
14	28 49.9	42.4		184 47.1	89	47.1	101	20	5 45	6 12	36	34 58	7 49 45		
15	43 49.8	42.2		199 15.1	90	36.9	102	30	6 00	30	6 56	23 62	8 02 42		
16	58 49.7	41.9		213 43.2	91	26.6	103	35	09	40	7 08	16 64	10 39		
17	73 49.6	+ 22 41.7		228 11.4	92	− 13 16.2	104	40	6 18	6 52	7 22	19 08 68	8 19 36		
18	88 49.4	+ 22 41.4		242 39.7	93	− 13 05.8	104	45	6 28	7 05	7 38	18 59 71	8 29 33		
19	103 49.3	41.2		257 08.1	94	− 12 55.3	105	50	39	20	7 58	48 75	41 29		
20	118 49.2	40.9		271 36.5	94	44.8	105	52	44	27	8 07	43 77	47 27		
21	133 49.1	40.7		286 05.1	96	34.2	106	54	49	35	18	38 79	8 53 25		
22	148 49.0	40.4		300 33.7	96	23.6	106	56	6 55	44	30	31 82	9 00 23		
23	163 48.9	40.2		315 02.4	97	12.9	107	58	7 01	7 53	8 44	25 84	08 20		
24	178 48.8	+ 22 39.9		329 31.2	98	− 12 02.1	108	60 S	7 08	8 04	9 00	18 17 87	9 16 18		
UT	ARIES PMG 5 ^h 05 ^m 6		VENUS Mag.: −4.5 PMG: 9 ^h 35 ^m		MARTE Mag.: +0.9 PMG: 17 ^h 08 ^m		JÚPITER Mag.: −2.1 PMG: 9 ^h 18 ^m		SATURNO Mag.: +0.7 PMG: 18 ^h 32 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /					
h	283 23.7	215 55.6	+ 17 23.4	102 32.5	+ 0 00.4	220 04.7	+ 20 23.5	81 19.2	− 6 31.6						
1	298 26.2	230 57.3	23.4	117 33.8	− 0 00.2	235 06.6	23.6	96 21.6	31.6						
2	313 28.6	245 59.1	23.3	132 35.0	00.7	250 08.6	23.7	111 24.0	31.7						
3	328 31.1	261 00.9	23.3	147 36.3	01.3	265 10.5	23.8	126 26.4	31.7						
4	343 33.5	276 02.6	23.3	162 37.6	01.9	280 12.4	23.9	141 28.9	31.7						
5	358 36.0	291 04.4	+ 17 23.3	177 38.8	− 0 02.4	295 14.3	+ 20 24.0	156 31.3	− 6 31.7						
6	13 38.5	306 06.1	+ 17 23.2	192 40.1	− 0 03.0	310 16.2	+ 20 24.1	171 33.7	− 6 31.8						
7	28 40.9	321 07.9	23.2	207 41.4	03.6	325 18.1	24.2	186 36.2	31.8						
8	43 43.4	336 09.6	23.2	222 42.6	04.2	340 20.1	24.3	201 38.6	31.8						
9	58 45.9	351 11.3	23.2	237 43.9	04.7	355 22.0	24.3	216 41.0	31.8						
10	73 48.3	6 13.1	23.2	252 45.2	05.3	10 23.9	24.4	231 43.5	31.9						
11	88 50.8	21 14.8	+ 17 23.2	267 46.4	− 0 05.9	25 25.8	+ 20 24.5	246 45.9	− 6 31.9						
12	103 53.3	36 16.5	+ 17 23.1	282 47.7	− 0 06.4	40 27.7	+ 20 24.6	261 48.3	− 6 31.9						
13	118 55.7	51 18.2	23.1	297 49.0	07.0	55 29.7	24.7	276 50.7	31.9						
14	133 58.2	66 20.0	23.1	312 50.2	07.6	70 31.6	24.8	291 53.2	32.0						
15	149 00.7	81 21.7	23.1	327 51.5	08.2	85 33.5	24.9	306 55.6	32.0						
16	164 03.1	96 23.4	23.1	342 52.8	08.7	100 35.4	25.0	321 58.0	32.0						
17	179 05.6	111 25.1	+ 17 23.1	357 54.0	− 0 09.3	115 37.3	+ 20 25.1	337 00.5	− 6 32.0						
18	194 08.0	126 26.8	+ 17 23.1	12 55.3	− 0 09.9	130 39.2	+ 20 25.2	352 02.9	− 6 32.1						
19	209 10.5	141 28.5	23.1	27 56.5	10.4	145 41.2	25.3	7 05.3	32.1						
20	224 13.0	156 30.2	23.1	42 57.8	11.0	160 43.1	25.4	22 07.7	32.1						
21	239 15.4	171 31.9	23.1	57 59.1	11.6	175 45.0	25.5	37 10.2	32.1						
22	254 17.9	186 33.6	23.1	73 00.3	12.2	190 46.9	25.5	52 12.6	32.2						
23	269 20.4	201 35.3	23.1	88 01.6	12.7	205 48.8	25.6	67 15.0	32.2						
24	284 22.8	216 37.0	+ 17 23.1	103 02.9	− 0 13.3	220 50.8	+ 20 25.7	82 17.5	− 6 32.2						
Dif	—	+17	0	+13	−6	+19	+1	+24	0						

VIERNES 6 DE JULIO DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 04 ^m 8		SD: 15 ^h 9 Edad: 16 ^d 4 PHE { 4 ^h : 58/3 12 ^h : 58/0 20 ^h : 57/7 PMG: 2 ^h 06 ^m R°: 50 ^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 48.8	+ 22 39.9	329 31.2	99	- 12 02.1	108	60 N	21 20	22 49	** **	21 43 12	6 58	86	
1	193 48.7		344 00.1		- 11 51.3	108	58	21 01	22 11	** **	38 15	7 05	83	
2	208 48.6		358 29.1	100	40.4	109	56	20 45	21 45	** **	34 18	10 81		
3	223 48.5		12 58.2	101	29.5	109	54	32	24	22 56	31 19	15 78		
4	238 48.4		27 27.4	102	18.5	110	52	20	21 08	22 20	28 21	20 76		
5	253 48.3	+ 22 38.6	41 56.6	102	- 11 07.5	110	50	20 10	20 54	21 56	21 25 23	7 24	74	
6	268 48.2	+ 22 38.4	56 25.9	103	- 10 56.5	110	45	19 49	20 26	21 14	21 18 27	7 33	70	
7	283 48.1		70 55.3	104	45.3	112	40	32	20 04	20 45	13 30	41 66		
8	298 48.0		85 24.8	105	34.2	111	35	17	19 47	23	08 33	47 63		
9	313 47.9		99 54.4	106	23.0	112	30	19 05	32	20 05	21 04 35	7 53	60	
10	328 47.8		114 24.1	107	11.8	112	20	18 44	19 08	19 37	20 57 40	8 02	57	
11	343 47.7	+ 22 37.1	128 53.8	107	- 10 00.5	113	10 N	18 25	18 48	19 15	20 50 44	8 11	52	
12	358 47.6	+ 22 36.8	143 23.6	108	- 9 49.2	113	0	18 08	18 31	18 57	20 44 48	8 18	49	
13	13 47.5		157 53.5	109	37.8	114	10 S	17 52	18 14	41	38 51	26 45		
14	28 47.4		172 23.5	110	26.5	113	20	34	17 58	25	32 55	34 42		
15	43 47.3		186 53.6	111	15.0	115	30	14	40	09	25 59	44 37		
16	58 47.2		201 23.7	111	- 9 03.6	114	35	17 02	30	18 01	20 62	49 35		
17	73 47.1	+ 22 35.5	215 53.9	112	- 8 52.1	115	40	16 48	17 18	17 52	20 16 64	8 55	32	
18	88 47.0	+ 22 35.2	230 24.2	113	- 8 40.6	115	45	16 32	17 06	17 42	20 10 68	9 02	28	
19	103 46.9		244 54.5	113	29.0	116	50	12	16 50	31	03 73	10 25		
20	118 46.8		259 25.0	115	17.5	115	52	16 03	43	26	20 00 74	14 23		
21	133 46.7		273 55.5	115	- 8 05.9	116	54	15 52	35	21	19 57 76	18 21		
22	148 46.6		288 26.1	116	- 7 54.3	116	56	41	27	15	53 79	23 18		
23	163 46.5		302 56.7	116	42.6	117	58	27	17	09	49 81	28 16		
24	178 46.4	+ 22 33.6	317 27.4	117	- 7 30.9	117	60 S	15 10	16 06	17 02	19 44 84	9 34	13	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 5 ^h 01 ^m 7		Mag.: -4.5 PMG: 9 ^h 32 ^m		Mag.: +0.9 PMG: 17 ^h 06 ^m		Mag.: -2.1 PMG: 9 ^h 15 ^m		Mag.: +0.7 PMG: 18 ^h 28 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	284 22.8		216 37.0		103 02.9	- 0 13.3	220 50.8	+ 20 25.7	82 17.5	- 6 32.2				
1	299 25.3		231 38.7	23.1	118 04.1	13.9	235 52.7	25.8	97 19.9	32.2				
2	314 27.8		246 40.3	23.1	133 05.4	14.4	250 54.6	25.9	112 22.3	32.3				
3	329 30.2		261 42.0	23.1	148 06.6	15.0	265 56.5	26.0	127 24.7	32.3				
4	344 32.7		276 43.7	23.1	163 07.9	15.6	280 58.4	26.1	142 27.2	32.3				
5	359 35.2		291 45.3	+ 17 23.1	178 09.2	- 0 16.2	296 00.4	+ 20 26.2	157 29.6	- 6 32.4				
6	14 37.6		306 47.0	+ 17 23.1	193 10.4	- 0 16.7	311 02.3	+ 20 26.3	172 32.0	- 6 32.4				
7	29 40.1		321 48.7	23.1	208 11.7	17.3	326 04.2	26.4	187 34.4	32.4				
8	44 42.5		336 50.3	23.1	223 12.9	17.9	341 06.1	26.5	202 36.9	32.4				
9	59 45.0		351 52.0	23.1	238 14.2	18.5	356 08.0	26.6	217 39.3	32.5				
10	74 47.5		6 53.6	23.1	253 15.5	19.0	11 10.0	26.6	232 41.7	32.5				
11	89 49.9		21 55.3	+ 17 23.1	268 16.7	- 0 19.6	26 11.9	+ 20 26.7	247 44.1	- 6 32.5				
12	104 52.4		36 56.9	+ 17 23.1	283 18.0	- 0 20.2	41 13.8	+ 20 26.8	262 46.6	- 6 32.5				
13	119 54.9		51 58.6	23.2	298 19.2	20.8	56 15.7	26.9	277 49.0	32.6				
14	134 57.3		67 00.2	23.2	313 20.5	21.3	71 17.6	27.0	292 51.4	32.6				
15	149 59.8		82 01.9	23.2	328 21.7	21.9	86 19.6	27.1	307 53.8	32.6				
16	165 02.3		97 03.5	23.2	343 23.0	22.5	101 21.5	27.2	322 56.3	32.7				
17	180 04.7		112 05.1	+ 17 23.2	358 24.3	- 0 23.0	116 23.4	+ 20 27.3	337 58.7	- 6 32.7				
18	195 07.2		127 06.8	+ 17 23.2	13 25.5	- 0 23.6	131 25.3	+ 20 27.4	353 01.1	- 6 32.7				
19	210 09.6		142 08.4	23.3	28 26.8	24.2	146 27.2	27.5	8 03.5	32.7				
20	225 12.1		157 10.0	23.3	43 28.0	24.8	161 29.2	27.6	23 06.0	32.8				
21	240 14.6		172 11.6	23.3	58 29.3	25.3	176 31.1	27.7	38 08.4	32.8				
22	255 17.0		187 13.2	23.3	73 30.5	25.9	191 33.0	27.7	53 10.8	32.8				
23	270 19.5		202 14.9	23.3	88 31.8	26.5	206 34.9	27.8	68 13.2	32.8				
24	285 22.0		217 16.5	+ 17 23.4	103 33.0	- 0 27.1	221 36.8	+ 20 27.9	83 15.7	- 6 32.9				
Dif	—	+16	0		+13	-6	+19	+1	+24	0				

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SÁBADO 7 DE JULIO DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 05 ^m 0		SD: 15 ^h 7 Edad: 17 ^d 4		PHE { 4 ^h : 57/5 12 ^h : 57/2 20 ^h : 56/9									
	PMG: 2 ^h 56 ^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	m	h m	m
0	178 46.4	+ 22 33.6	317 27.4		- 7 30.9		60 N	** **	1 21	2 50	21 55	11	8 24	83
1	193 46.3	33.3	331 58.2	118	19.2	117	58	** **	1 59	3 09	53 14		28 79	
2	208 46.2	33.1	346 29.1	119	- 7 07.5	117	56	** **	2 25	25	52 16		31 77	
3	223 46.1	32.8	1 00.0	119	- 6 55.8	117	54	1 14	2 46	38	50 18		33 75	
4	238 46.0	32.5	15 31.0	120	44.0	118	52	1 50	3 02	3 50	49 20		36 73	
5	253 45.9	+ 22 32.2	30 02.1	121	- 6 32.3	117	50	2 14	3 16	4 00	21 48	21	8 38	71
6	268 45.8	+ 22 32.0	44 33.2	121	- 6 20.5	118	45	2 56	3 44	4 21	21 45	25	8 43	67
7	283 45.7	31.7	59 04.4	122	- 6 08.7	118	40	3 25	4 06	38	43 28		47 63	
8	298 45.6	31.4	73 35.7	123	- 5 56.9	118	35	3 47	23	4 53	41 31		50 61	
9	313 45.5	31.1	88 07.0	123	45.0	119	30	4 05	4 38	5 05	39 34		53 58	
10	328 45.4	30.9	102 38.4	124	33.2	118	20	33	5 02	26	37 37		8 59	53
11	343 45.3	+ 22 30.6	117 09.9	125	- 5 21.3	119	10 N	4 55	5 22	5 44	21 34	42	9 03	50
12	358 45.2	+ 22 30.3	131 41.4	125	- 5 09.5	118	0	5 13	5 39	6 01	21 32	45	9 07	46
13	13 45.1	30.0	146 13.0	126	- 4 57.6	119	10 S	29	5 55	18	29 49		11 43	
14	28 45.0	29.7	160 44.6	126	45.7	119	20	5 45	6 12	36	27 52		16 39	
15	43 44.9	29.5	175 16.3	127	33.8	119	30	6 00	30	6 56	24 57		21 34	
16	58 44.8	29.2	189 48.0	127	21.9	119	35	09	40	7 08	22 60		24 32	
17	73 44.7	+ 22 28.9	204 19.8	128	- 4 10.0	119	40	6 17	6 51	7 21	21 20	63	9 27	29
18	88 44.6	+ 22 28.6	218 51.7	129	- 3 58.1	119	45	6 27	7 04	7 37	21 18	66	9 30	27
19	103 44.5	28.3	233 23.6	129	46.2	119	50	38	19	7 57	16 69		35 22	
20	118 44.4	28.1	247 55.6	130	34.3	119	52	43	26	8 06	14 72		37 20	
21	133 44.3	27.8	262 27.6	130	22.4	119	54	48	34	17	13 73		39 19	
22	148 44.2	27.5	276 59.7	131	- 3 10.5	119	56	6 54	42	29	12 75		41 17	
23	163 44.2	27.2	291 31.8	131	- 2 58.6	119	58	7 00	7 52	42	10 78		44 14	
24	178 44.1	+ 22 26.9	306 04.0	132	- 2 46.7	119	60 S	7 07	8 03	8 58	21 08	81	9 47	12
UT	ARIES PMG 4 ^h 57 ^m 7		VENUS Mag.: -4.5 PMG: 9 ^h 30 ^m		MARTE Mag.: +0.9 PMG: 17 ^h 04 ^m		JÚPITER Mag.: -2.1 PMG: 9 ^h 12 ^m		SATURNO Mag.: +0.7 PMG: 18 ^h 24 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	°	'	°	'	°	'	°	'	°	'				
h	°	'	°	'	°	'	°	'	°	'				
0	285 22.0	217 16.5	+ 17 23.4	103 33.0	- 0 27.1	221 36.8	+ 20 27.9	83 15.7	- 6 32.9					
1	300 24.4	232 18.1	23.4	118 34.3	27.6	236 38.8	28.0	98 18.1	32.9					
2	315 26.9	247 19.7	23.4	133 35.6	28.2	251 40.7	28.1	113 20.5	32.9					
3	330 29.4	262 21.3	23.4	148 36.8	28.8	266 42.6	28.2	128 22.9	33.0					
4	345 31.8	277 22.9	23.5	163 38.1	29.4	281 44.5	28.3	143 25.3	33.0					
5	0 34.3	292 24.5	+ 17 23.5	178 39.3	- 0 29.9	296 46.5	+ 20 28.4	158 27.8	- 6 33.0					
6	15 36.8	307 26.0	+ 17 23.5	193 40.6	- 0 30.5	311 48.4	+ 20 28.5	173 30.2	- 6 33.0					
7	30 39.2	322 27.6	23.6	208 41.8	31.1	326 50.3	28.6	188 32.6	33.1					
8	45 41.7	337 29.2	23.6	223 43.1	31.7	341 52.2	28.6	203 35.0	33.1					
9	60 44.1	352 30.8	23.6	238 44.3	32.2	356 54.1	28.7	218 37.5	33.1					
10	75 46.6	7 32.4	23.7	253 45.6	32.8	11 56.1	28.8	233 39.9	33.2					
11	90 49.1	22 33.9	+ 17 23.7	268 46.8	- 0 33.4	26 58.0	+ 20 28.9	248 42.3	- 6 33.2					
12	105 51.5	37 35.5	+ 17 23.7	283 48.1	- 0 34.0	41 59.9	+ 20 29.0	263 44.7	- 6 33.2					
13	120 54.0	52 37.1	23.8	298 49.3	34.5	57 01.8	29.1	278 47.1	33.2					
14	135 56.5	67 38.6	23.8	313 50.6	35.1	72 03.8	29.2	293 49.6	33.3					
15	150 58.9	82 40.2	23.8	328 51.8	35.7	87 05.7	29.3	308 52.0	33.3					
16	166 01.4	97 41.8	23.9	343 53.1	36.3	102 07.6	29.4	323 54.4	33.3					
17	181 03.9	112 43.3	+ 17 23.9	358 54.3	- 0 36.8	117 09.5	+ 20 29.5	338 56.8	- 6 33.4					
18	196 06.3	127 44.9	+ 17 24.0	13 55.6	- 0 37.4	132 11.5	+ 20 29.6	353 59.2	- 6 33.4					
19	211 08.8	142 46.4	24.0	28 56.8	38.0	147 13.4	29.6	9 01.7	33.4					
20	226 11.3	157 48.0	24.0	43 58.1	38.6	162 15.3	29.7	24 04.1	33.4					
21	241 13.7	172 49.5	24.1	58 59.3	39.2	177 17.2	29.8	39 06.5	33.5					
22	256 16.2	187 51.0	24.1	74 00.6	39.7	192 19.2	29.9	54 08.9	33.5					
23	271 18.6	202 52.6	24.2	89 01.8	40.3	207 21.1	30.0	69 11.3	33.5					
24	286 21.1	217 54.1	+ 17 24.2	104 03.1	- 0 40.9	222 23.0	+ 20 30.1	84 13.8	- 6 33.6					
Dif	—	+16	0	+13	-6	+19	+1	+24	0					

DOMINGO 8 DE JULIO DE 2012

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UT	SOL			LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15/7 PMG: 12 ^h 05 ^m 1			SD: 15/5 Edad: 18 ^d 4 PHE { 4 ^h : 56/6 12 ^h : 56/3 20 ^h : 56/1 PMG: 3 ^h 43 ^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	^h ^m	^h ^m
0	178	44.1	+ 22 26.9	306	04.0	- 2 46.7	119	60 N	21 17	22 44	** **	22 06	11	9 47	80
1	193	44.0	26.6	320	36.2	34.8	119	58	20 59	22 07	** **	07 13		47	77
2	208	43.9	26.3	335	08.5	22.9	119	56	44	21 42	** **	08 15		48	74
3	223	43.8	26.1	349	40.8	- 2 11.0	119	54	31	22	22 51	08 18		48	73
4	238	43.7	25.8	4	13.1	- 1 59.1	119	52	19	21 06	22 17	09 19		49	70
5	253	43.6	+ 22 25.5	18	45.6	- 1 47.2	119	50	20 09	20 52	21 54	22 09	21	9 49	69
6	268	43.5	+ 22 25.2	33	18.0	- 1 35.3	119	45	19 48	20 24	21 12	22 10	25	9 50	64
7	283	43.4	24.9	47	50.5	23.5	118	40	31	20 03	20 44	11 28		50	62
8	298	43.3	24.6	62	23.1	- 1 11.6	119	35	17	19 46	22	12 31		51	58
9	313	43.2	24.3	76	55.6	- 0 59.7	119	30	19 04	32	20 04	13 33		51	56
10	328	43.1	24.0	91	28.3	47.9	118	20	18 44	19 08	19 37	14 37		52	52
11	343	43.0	+ 22 23.7	106	00.9	- 0 36.1	118	10 N	18 25	18 48	19 15	22 16	40	9 53	48
12	358	42.9	+ 22 23.4	120	33.6	- 0 24.3	118	0	18 09	18 31	18 57	22 17	44	9 53	45
13	13	42.8	23.1	135	06.4	12.4	119	10 S	17 52	18 15	41	18 47		54	41
14	28	42.7	22.8	149	39.1	- 0 00.7	117	20	35	17 58	26	19 51		55	37
15	43	42.6	22.5	164	12.0	+ 0 11.1	118	30	14	41	10	21 55		55	33
16	58	42.5	22.2	178	44.8	22.9	118	35	17 03	31	18 02	22 57		56	30
17	73	42.5	+ 22 21.9	193	17.7	+ 0 34.6	117	40	16 49	17 20	17 53	22 23	60	9 56	28
18	88	42.4	+ 22 21.6	207	50.6	+ 0 46.4	118	45	16 34	17 07	17 44	22 24	63	9 57	25
19	103	42.3	21.3	222	23.6	+ 0 58.1	117	50	14	16 52	33	25 67		57	21
20	118	42.2	21.0	236	56.5	+ 1 09.8	117	52	16 05	45	28	26 69		57	20
21	133	42.1	20.7	251	29.6	21.4	116	54	15 55	37	23	26 72		58	17
22	148	42.0	20.4	266	02.6	33.1	117	56	43	29	17	27 73		58	16
23	163	41.9	20.1	280	35.7	44.7	116	58	29	19	11	28 76		58	14
24	178	41.8	+ 22 19.8	295	08.8	+ 1 56.3	116	60 S	15 13	16 09	17 04	22 29	78	9 59	11
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 4 ^h 53 ^m 8		Mag.: -4.5 PMG: 9 ^h 27 ^m			Mag.: +0.9 PMG: 17 ^h 02 ^m			Mag.: -2.1 PMG: 9 ^h 09 ^m			Mag.: +0.7 PMG: 18 ^h 20 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
^h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	286	21.1	217	54.1	+ 17 24.2	104	03.1	- 0 40.9	222	23.0	+ 20 30.1	84	13.8	- 6 33.6	
1	301	23.6	232	55.6	24.3	119	04.3	41.5	237	24.9	30.2	99	16.2	33.6	
2	316	26.0	247	57.2	24.3	134	05.6	42.0	252	26.9	30.3	114	18.6	33.6	
3	331	28.5	262	58.7	24.4	149	06.8	42.6	267	28.8	30.4	129	21.0	33.7	
4	346	31.0	278	00.2	24.4	164	08.1	43.2	282	30.7	30.4	144	23.4	33.7	
5	1	33.4	293	01.7	+ 17 24.5	179	09.3	- 0 43.8	297	32.6	+ 20 30.5	159	25.9	- 6 33.7	
6	16	35.9	308	03.3	+ 17 24.5	194	10.6	- 0 44.3	312	34.6	+ 20 30.6	174	28.3	- 6 33.7	
7	31	38.4	323	04.8	24.6	209	11.8	44.9	327	36.5	30.7	189	30.7	33.8	
8	46	40.8	338	06.3	24.6	224	13.0	45.5	342	38.4	30.8	204	33.1	33.8	
9	61	43.3	353	07.8	24.7	239	14.3	46.1	357	40.3	30.9	219	35.5	33.8	
10	76	45.7	8	09.3	24.7	254	15.5	46.7	12	42.3	31.0	234	38.0	33.9	
11	91	48.2	23	10.8	+ 17 24.8	269	16.8	- 0 47.2	27	44.2	+ 20 31.1	249	40.4	- 6 33.9	
12	106	50.7	38	12.3	+ 17 24.9	284	18.0	- 0 47.8	42	46.1	+ 20 31.2	264	42.8	- 6 33.9	
13	121	53.1	53	13.8	24.9	299	19.3	48.4	57	48.0	31.2	279	45.2	34.0	
14	136	55.6	68	15.3	25.0	314	20.5	49.0	72	50.0	31.3	294	47.6	34.0	
15	151	58.1	83	16.7	25.0	329	21.8	49.5	87	51.9	31.4	309	50.0	34.0	
16	167	00.5	98	18.2	25.1	344	23.0	50.1	102	53.8	31.5	324	52.5	34.0	
17	182	03.0	113	19.7	+ 17 25.2	359	24.3	- 0 50.7	117	55.7	+ 20 31.6	339	54.9	- 6 34.1	
18	197	05.5	128	21.2	+ 17 25.2	14	25.5	- 0 51.3	132	57.7	+ 20 31.7	354	57.3	- 6 34.1	
19	212	07.9	143	22.7	25.3	29	26.7	51.9	147	59.6	31.8	9	59.7	34.1	
20	227	10.4	158	24.1	25.3	44	28.0	52.4	163	01.5	31.9	25	02.1	34.2	
21	242	12.9	173	25.6	25.4	59	29.2	53.0	178	03.4	32.0	40	04.5	34.2	
22	257	15.3	188	27.1	25.5	74	30.5	53.6	193	05.4	32.0	55	07.0	34.2	
23	272	17.8	203	28.5	25.5	89	31.7	54.2	208	07.3	32.1	70	09.4	34.3	
24	287	20.2	218	30.0	+ 17 25.6	104	32.9	- 0 54.7	223	09.2	+ 20 32.2	85	11.8	- 6 34.3	
Dif	—		+15		+1	+12		-6	+19		+1	+24		0	

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LUNES 9 DE JULIO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/7 PMG: 12 ^h 05 ^m 3		SD: 15/2 Edad: 19 ^d 4		PHE { 4 ^h : 55/8 12 ^h : 55/6 20 ^h : 55/4									
	PMG: 4 ^h 27 ^m R°: 44 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m		h	m
0	178 41.8	+ 22 19.8	295 08.8		+ 1 56.3		60 N	***	1 27	2 53	22 17	12	11 07	77
1	193 41.7		309 41.9	141	+ 2 07.9	116	58	***	2 03	3 12	20 15		04 75	
2	208 41.6		324 15.0	141	19.5	116	56	***	29	27	23 17		02 73	
3	223 41.5	18.9	338 48.2	142	31.0	115	54	1 20	2 48	40	26 18		11 01	70
4	238 41.4	18.6	353 21.4	142	42.6	116	52	1 53	3 05	3 52	28 21		10 59	68
5	253 41.4	+ 22 18.3	7 54.7	143	+ 2 54.0	114	50	2 17	3 19	4 02	22 30	22	10 58	66
6	268 41.3	+ 22 18.0	22 27.9	142	+ 3 05.5	115	45	2 58	3 46	4 23	22 35	26	10 54	63
7	283 41.2	17.7	37 01.2	143	17.0	115	40	3 27	4 07	40	39 29		52 59	
8	298 41.1	17.4	51 34.5	143	28.4	114	35	3 49	25	4 54	43 31		49 57	
9	313 41.0	17.1	66 07.8	143	39.8	114	30	4 06	4 39	5 06	46 33		47 55	
10	328 40.9	16.8	80 41.1	143	+ 3 51.1	113	20	34	5 03	27	51 37		44 51	
11	343 40.8	+ 22 16.5	95 14.5	144	+ 4 02.5	114	10 N	4 55	5 22	5 45	22 56	41	10 41	47
12	358 40.7	+ 22 16.2	109 47.8	143	+ 4 13.8	113	0	5 13	5 39	6 02	23 01	43	10 38	44
13	13 40.6	15.8	124 21.2	144	25.0	112	10 S	29	5 56	18	05 47		35 40	
14	28 40.5	15.5	138 54.6	144	36.3	113	20	5 45	6 12	36	10 50		32 37	
15	43 40.5	15.2	153 28.0	144	47.5	112	30	6 00	30	6 56	16 54		28 33	
16	58 40.4	14.9	168 01.4	144	+ 4 58.7	112	35	08	40	7 07	19 57		26 31	
17	73 40.3	+ 22 14.6	182 34.9	145	+ 5 09.8	111	40	6 17	6 51	7 21	23 23	59	10 24	28
18	88 40.2	+ 22 14.3	197 08.3	144	+ 5 20.9	111	45	6 26	7 03	7 37	23 27	62	10 22	25
19	103 40.1	14.0	211 41.8	145	32.0	111	50	37	18	7 56	32 66		18 22	
20	118 40.0	13.6	226 15.3	145	43.1	111	52	42	25	8 05	35 67		17 20	
21	133 39.9	13.3	240 48.8	145	+ 5 54.1	110	54	47	33	15	38 69		15 18	
22	148 39.8	13.0	255 22.2	144	+ 6 05.0	109	56	53	41	27	40 72		14 16	
23	163 39.8	12.7	269 55.7	145	16.0	110	58	6 59	7 50	40	44 74		12 14	
24	178 39.7	+ 22 12.4	284 29.3	146	+ 6 26.9	109	60 S	7 06	8 01	8 56	23 47	77	10 10	11
UT	ARIES PMG 4 ^h 49 ^m 9		VENUS Mag.: -4.5 PMG: 9 ^h 25 ^m		MARTE Mag.: +0.9 PMG: 17 ^h 00 ^m		JÚPITER Mag.: -2.1 PMG: 9 ^h 06 ^m		SATURNO Mag.: +0.7 PMG: 18 ^h 16 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	°	'	°	'	°	'	°	'	°	'				
h	287 20.2	218 30.0	+ 17 25.6	104 32.9	- 0 54.7	223 09.2	+ 20 32.2	85 11.8	- 6 34.3					
1	302 22.7	233 31.5	25.7	119 34.2	55.3	238 11.1	32.3	100 14.2	34.3					
2	317 25.2	248 32.9	25.7	134 35.4	55.9	253 13.1	32.4	115 16.6	34.3					
3	332 27.6	263 34.4	25.8	149 36.7	56.5	268 15.0	32.5	130 19.0	34.4					
4	347 30.1	278 35.8	25.9	164 37.9	57.1	283 16.9	32.6	145 21.5	34.4					
5	2 32.6	293 37.3	+ 17 26.0	179 39.2	- 0 57.6	298 18.9	+ 20 32.7	160 23.9	- 6 34.4					
6	17 35.0	308 38.7	+ 17 26.0	194 40.4	- 0 58.2	313 20.8	+ 20 32.8	175 26.3	- 6 34.5					
7	32 37.5	323 40.1	26.1	209 41.6	58.8	328 22.7	32.8	190 28.7	34.5					
8	47 40.0	338 41.6	26.2	224 42.9	- 0 59.4	343 24.6	32.9	205 31.1	34.5					
9	62 42.4	353 43.0	26.3	239 44.1	- 1 00.0	358 26.6	33.0	220 33.5	34.6					
10	77 44.9	8 44.4	26.3	254 45.3	00.5	13 28.5	33.1	235 35.9	34.6					
11	92 47.3	23 45.9	+ 17 26.4	269 46.6	- 1 01.1	28 30.4	+ 20 33.2	250 38.4	- 6 34.6					
12	107 49.8	38 47.3	+ 17 26.5	284 47.8	- 1 01.7	43 32.4	+ 20 33.3	265 40.8	- 6 34.7					
13	122 52.3	53 48.7	26.6	299 49.1	02.3	58 34.3	33.4	280 43.2	34.7					
14	137 54.7	68 50.1	26.7	314 50.3	02.9	73 36.2	33.5	295 45.6	34.7					
15	152 57.2	83 51.5	26.7	329 51.5	03.4	88 38.1	33.5	310 48.0	34.8					
16	167 59.7	98 53.0	26.8	344 52.8	04.0	103 40.1	33.6	325 50.4	34.8					
17	183 02.1	113 54.4	+ 17 26.9	359 54.0	- 1 04.6	118 42.0	+ 20 33.7	340 52.8	- 6 34.8					
18	198 04.6	128 55.8	+ 17 27.0	14 55.3	- 1 05.2	133 43.9	+ 20 33.8	355 55.2	- 6 34.9					
19	213 07.1	143 57.2	27.1	29 56.5	05.8	148 45.9	33.9	10 57.7	34.9					
20	228 09.5	158 58.6	27.1	44 57.7	06.3	163 47.8	34.0	26 00.1	34.9					
21	243 12.0	174 00.0	27.2	59 59.0	06.9	178 49.7	34.1	41 02.5	34.9					
22	258 14.5	189 01.4	27.3	75 00.2	07.5	193 51.6	34.2	56 04.9	35.0					
23	273 16.9	204 02.8	27.4	90 01.4	08.1	208 53.6	34.2	71 07.3	35.0					
24	288 19.4	219 04.2	+ 17 27.5	105 02.7	- 1 08.7	223 55.5	+ 20 34.3	86 09.7	- 6 35.0					
Dif	—	+14	+1	+12	-6	+19	+1	+24	0					

MARTES 10 DE JULIO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7		SD: 15 ^h 1		PHE { 4 ^h : 55/2 12 ^h : 55/0 20 ^h : 54/8									
	PMG: 12 ^h 05 ^m 4		Edad: 20 ^d 4		PMG: 5 ^h 11 ^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	178 39.7	+22 12.4	284 29.3		+ 6 26.9	108	60 N	21 14	22 38	** **	22 29	14	12 24	76
1	193 39.6	12.1	299 02.8	145	37.7	108	58	20 57	22 04	** **	35 16	19 73		
2	208 39.5	11.7	313 36.3	145	48.6	109	56	42	21 39	** **	40 19	15 71		
3	223 39.4	11.4	328 09.8	145	+ 6 59.3	107	54	29	20	22 46	44 21	11 69		
4	238 39.3	11.1	342 43.3	145	+ 7 10.1	108	52	18	21 04	22 14	49 22	07 67		
5	253 39.2	+22 10.8	357 16.9	146	+ 7 20.8	107	50	20 08	20 50	21 51	22 52	25 12 04	65	
6	268 39.1	+22 10.4	11 50.4	145	+ 7 31.5	107	45	19 47	20 23	21 11	23 01	27 11 57	62	
7	283 39.1	10.1	26 24.0	146	42.1	106	40	30	20 02	20 43	08 30	51 59		
8	298 39.0	09.8	40 57.5	145	+ 7 52.7	106	35	16	19 45	21	14 32	46 57		
9	313 38.9	09.5	55 31.0	145	+ 8 03.2	105	30	19 04	31	20 04	19 35	42 54		
10	328 38.8	09.1	70 04.6	146	13.7	105	20	18 43	19 08	19 36	28 39	35 50		
11	343 38.7	+22 08.8	84 38.1	145	+ 8 24.2	105	10 N	18 26	18 48	19 15	23 37	41 11 28	47	
12	358 38.6	+22 08.5	99 11.6	145	+ 8 34.6	104	0	18 09	18 31	18 57	23 44	44 11 22	44	
13	13 38.5	08.2	113 45.2	146	44.9	103	10 S	17 53	18 15	41	23 52	47 15 41		
14	28 38.5	07.8	128 18.7	145	+ 8 55.3	104	20	35	17 59	26	** **	** **	09 37	
15	43 38.4	07.5	142 52.2	145	+ 9 05.5	102	30	15	42	11	** **	** **	11 01	34
16	58 38.3	07.2	157 25.7	145	15.8	103	35	17 04	32	18 03	** **	** **	10 57	32
17	73 38.2	+22 06.9	171 59.3	146	+ 9 26.0	102	40	16 51	17 21	17 54	** **	** **	10 52	30
18	88 38.1	+22 06.5	186 32.8	145	+ 9 36.1	101	45	16 35	17 08	17 45	** **	** **	10 47	26
19	103 38.0	06.2	201 06.3	145	46.2	101	50	16	16 54	34	** **	** **	40 23	
20	118 38.0	05.9	215 39.8	145	+ 9 56.2	100	52	16 07	47	30	** **	** **	37 21	
21	133 37.9	05.5	230 13.2	144	+10 06.2	100	54	15 57	39	25	** **	** **	33 20	
22	148 37.8	05.2	244 46.7	145	16.2	100	56	45	31	19	** **	** **	30 17	
23	163 37.7	04.9	259 20.2	145	26.1	99	58	32	22	13	** **	** **	26 15	
24	178 37.6	+22 04.5	273 53.6	144	+10 35.9	98	60 S	15 16	16 11	17 06	** **	** **	10 21	13
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 4 ^h 45 ^m 9		Mag.: -4.5 PMG: 9 ^h 23 ^m		Mag.: +0.9 PMG: 16 ^h 58 ^m		Mag.: -2.1 PMG: 9 ^h 03 ^m		Mag.: +0.7 PMG: 18 ^h 12 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	° /	° /	° /		° /		° /		° /		° /			
0	288 19.4	219 04.2	+ 17 27.5	105 02.7	- 1 08.7	223 55.5	+ 20 34.3	86 09.7	- 6 35.0					
1	303 21.8	234 05.5	27.6	120 03.9	09.2	238 57.4	34.4	101 12.1	35.1					
2	318 24.3	249 06.9	27.7	135 05.1	09.8	253 59.4	34.5	116 14.5	35.1					
3	333 26.8	264 08.3	27.8	150 06.4	10.4	269 01.3	34.6	131 17.0	35.1					
4	348 29.2	279 09.7	27.9	165 07.6	11.0	284 03.2	34.7	146 19.4	35.2					
5	3 31.7	294 11.1	+ 17 27.9	180 08.8	- 1 11.6	299 05.2	+ 20 34.8	161 21.8	- 6 35.2					
6	18 34.2	309 12.4	+ 17 28.0	195 10.1	- 1 12.1	314 07.1	+ 20 34.8	176 24.2	- 6 35.2					
7	33 36.6	324 13.8	28.1	210 11.3	12.7	329 09.0	34.9	191 26.6	35.3					
8	48 39.1	339 15.2	28.2	225 12.5	13.3	344 11.0	35.0	206 29.0	35.3					
9	63 41.6	354 16.5	28.3	240 13.8	13.9	359 12.9	35.1	221 31.4	35.3					
10	78 44.0	9 17.9	28.4	255 15.0	14.5	14 14.8	35.2	236 33.8	35.4					
11	93 46.5	24 19.2	+ 17 28.5	270 16.2	- 1 15.1	29 16.7	+ 20 35.3	251 36.2	- 6 35.4					
12	108 49.0	39 20.6	+ 17 28.6	285 17.5	- 1 15.6	44 18.7	+ 20 35.4	266 38.7	- 6 35.4					
13	123 51.4	54 22.0	28.7	300 18.7	16.2	59 20.6	35.5	281 41.1	35.5					
14	138 53.9	69 23.3	28.8	315 19.9	16.8	74 22.5	35.5	296 43.5	35.5					
15	153 56.3	84 24.6	28.9	330 21.2	17.4	89 24.5	35.6	311 45.9	35.5					
16	168 58.8	99 26.0	29.0	345 22.4	18.0	104 26.4	35.7	326 48.3	35.6					
17	184 01.3	114 27.3	+ 17 29.1	0 23.6	- 1 18.5	119 28.3	+ 20 35.8	341 50.7	- 6 35.6					
18	199 03.7	129 28.7	+ 17 29.2	15 24.9	- 1 19.1	134 30.3	+ 20 35.9	356 53.1	- 6 35.6					
19	214 06.2	144 30.0	29.3	30 26.1	19.7	149 32.2	36.0	11 55.5	35.7					
20	229 08.7	159 31.3	29.4	45 27.3	20.3	164 34.1	36.1	26 57.9	35.7					
21	244 11.1	174 32.7	29.5	60 28.5	20.9	179 36.1	36.1	42 00.3	35.7					
22	259 13.6	189 34.0	29.6	75 29.8	21.5	194 38.0	36.2	57 02.7	35.8					
23	274 16.1	204 35.3	29.7	90 31.0	22.0	209 39.9	36.3	72 05.2	35.8					
24	289 18.5	219 36.6	+ 17 29.8	105 32.2	- 1 22.6	224 41.9	+ 20 36.4	87 07.6	- 6 35.8					
Dif	—	+14	+1	+12	-6	+19	+1	+24	0					

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MIÉRCOL 11 DE JULIO DE 2012

UT	SOL		<div><div><div><div><div></div><div>LUNA</div></div><div><div>SD: 14'9</div><div>Edad: 21^d4</div><div>PMG: 5^h 55^m</div></div><div><div>PHE</div><div><div><div>4^h: 54'7</div><div>12^h: 54'6</div><div>20^h: 54'5</div></div></div></div></div></div></div>				Latitud	Crepúsculos		Salida de Sol	Salida		Puesta		
	SD: 15'7 PMG: 12 ^h 05 ^m 6		R°: 44 ^m		de Luna			de Luna							
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Hora	R°		Hora	R°			
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m
0	178	37.6	+ 22	04.5	273	53.6	+ 10	35.9	98	60 N	22	43	17	13	40
1	193	37.5		04.2	288	27.1 ¹⁴⁵		45.7	98	58	51	20		32	72
2	208	37.5		03.9	303	00.5 ¹⁴⁴	+ 10	55.4	97	56	22	59	22		26
3	223	37.4		03.5	317	33.9 ¹⁴⁴	+ 11	05.1	97	54	23	05	24		20
4	238	37.3		03.2	332	07.3 ¹⁴⁴		14.8	97	52	11	26		14	66
5	253	37.2	+ 22	02.8	346	40.7 ¹⁴⁴	+ 11	24.3	95	50	23	17	27	13	09
6	268	37.1	+ 22	02.5	1	14.1 ¹⁴⁴	+ 11	33.9	96	45	23	28	31	12	59
7	283	37.1		02.2	15	47.5 ¹⁴⁴		43.3	94	40	38	33		50	58
8	298	37.0		01.8	30	20.8 ¹⁴³	+ 11	52.8	95	35	46	36		43	55
9	313	36.9		01.5	44	54.1 ¹⁴³	+ 12	02.1	93	30	23	54	37		36
10	328	36.8		01.1	59	27.5 ¹⁴⁴		11.4	93	20	***	***	***		25
11	343	36.7	+ 22	00.8	74	00.7 ¹⁴²	+ 12	20.7	93	10 N	***	***	***		12
12	358	36.6	+ 22	00.5	88	34.0 ¹⁴³	+ 12	29.9	92	0	***	***	***		12
13	13	36.6	+ 22	00.1	103	07.3 ¹⁴³		39.0	91	10 S	***	***	***		11
14	28	36.5	+ 21	59.8	117	40.5 ¹⁴²		48.1	91	20	0	00	51		46
15	43	36.4		59.4	132	13.7 ¹⁴²	+ 12	57.1	90	30	10	54		35	36
16	58	36.3		59.1	146	46.9 ¹⁴²	+ 13	06.1	90	35	16	55		29	34
17	73	36.2	+ 21	58.7	161	20.1 ¹⁴²	+ 13	15.0	89	40	0	22	58	11	22
18	88	36.2	+ 21	58.4	175	53.3 ¹⁴²	+ 13	23.8	88	45	0	29	61	11	13
19	103	36.1		58.0	190	26.4 ¹⁴¹		32.6	88	50	38	65		11	03
20	118	36.0		57.7	204	59.5 ¹⁴¹		41.3	87	52	42	67		10	58
21	133	35.9		57.3	219	32.6 ¹⁴¹		50.0	87	54	47	68		53	22
22	148	35.8		57.0	234	05.7 ¹⁴¹	+ 13	58.6	86	56	52	70		47	21
23	163	35.8		56.6	248	38.7 ¹⁴⁰	+ 14	07.1	85	58	0	58	72		41
24	178	35.7	+ 21	56.3	263	11.7 ¹⁴⁰	+ 14	15.6	85	60 S	1	04	75	10	34
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 4 ^h 42 ^m 0		Mag.: -4.5 PMG: 9 ^h 21 ^m		Mag.: +0.9 PMG: 16 ^h 56 ^m		Mag.: -2.1 PMG: 9 ^h 00 ^m		Mag.: +0.7 PMG: 18 ^h 09 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	289	18.5	219	36.6	105	32.2	224	41.9	87	07.6					
1	304	21.0	234	38.0	120	33.5	239	43.8	102	10.0					
2	319	23.4	249	39.3	135	34.7	254	45.7	117	12.4					
3	334	25.9	264	40.6	150	35.9	269	47.7	132	14.8					
4	349	28.4	279	41.9	165	37.1	284	49.6	147	17.2					
5	4	30.8	294	43.2	180	38.4	299	51.5	162	19.6					
6	19	33.3	309	44.5	195	39.6	314	53.5	177	22.0					
7	34	35.8	324	45.8	210	40.8	329	55.4	192	24.4					
8	49	38.2	339	47.1	225	42.0	344	57.3	207	26.8					
9	64	40.7	354	48.4	240	43.3	359	59.3	222	29.2					
10	79	43.2	9	49.7	255	44.5	15	01.2	237	31.6					
11	94	45.6	24	51.0	270	45.7	30	03.1	252	34.0					
12	109	48.1	39	52.3	285	47.0	45	05.1	267	36.4					
13	124	50.6	54	53.6	300	48.2	60	07.0	282	38.9					
14	139	53.0	69	54.8	315	49.4	75	08.9	297	41.3					
15	154	55.5	84	56.1	330	50.6	90	10.9	312	43.7					
16	169	57.9	99	57.4	345	51.8	105	12.8	327	46.1					
17	185	00.4	114	58.7	0	53.1	120	14.7	342	48.5					
18	200	02.9	129	59.9	15	54.3	135	16.7	357	50.9					
19	215	05.3	145	01.2	30	55.5	150	18.6	12	53.3					
20	230	07.8	160	02.5	45	56.7	165	20.5	27	55.7					
21	245	10.3	175	03.7	60	58.0	180	22.5	42	58.1					
22	260	12.7	190	05.0	75	59.2	195	24.4	58	00.5					
23	275	15.2	205	06.3	91	00.4	210	26.3	73	02.9					
24	290	17.7	220	07.5	106	01.6	225	28.3	88	05.3					
Dif	—	+13	+1		+12	-6	+19	+1	+24	0					

JUEVES 12 DE JULIO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7		SD: 14 ^h 8		PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/2											
	PMG: 12 ^h 05 ^m 7		Edad: 22 ^d 4		PMG: 6 ^h 39 ^m R°: 46 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°		
h	° /	° /	° /		° /		°	h m	h m	h m	m	h m	m	h m	m	
0	178 35.7	+21 56.3	263 11.7		+14 15.6	84	60 N	21 11	22 32	** **	23 00	24	14 55	71		
1	193 35.6	55.9	277 44.7	140	24.0	84	58	20 54	22 00	** **	11 26	44	69			
2	208 35.5	55.6	292 17.7	140	32.4	84	56	39	21 36	23 39	21 28	35	67			
3	223 35.5	55.2	306 50.6	139	40.6	84	54	27	17	22 40	29 30	27	65			
4	238 35.4	54.9	321 23.5	139	48.9	83	52	16	21 02	22 10	37 31	20	63			
5	253 35.3	+21 54.5	335 56.4	139	+14 57.0	81	50	20 06	20 49	21 48	23 44	32	14 13	62		
6	268 35.2	+21 54.2	350 29.3	139	+15 05.1	81	45	19 46	20 22	21 09	23 59	35	13 59	59		
7	283 35.2	53.8	5 02.1	138	13.1	80	40	29	20 01	20 41	** **	***	48	56		
8	298 35.1	53.5	19 34.9	138	21.1	80	35	15	19 45	20	** **	***	38	55		
9	313 35.0	53.1	34 07.7	138	29.0	79	30	19 03	30	20 03	** **	***	29	54		
10	328 34.9	52.8	48 40.4	137	36.8	78	20	18 43	19 07	19 36	0 07	40	15	50		
11	343 34.8	+21 52.4	63 13.1	137	+15 44.5	77	10 N	18 26	18 48	19 15	0 18	43	13 02	48		
12	358 34.8	+21 52.0	77 45.8	137	+15 52.2	77	0	18 09	18 32	18 57	0 28	46	12 50	46		
13	13 34.7	51.7	92 18.5	137	+15 59.8	76	10 S	17 53	16	42	39	48	38	44		
14	28 34.6	51.3	106 51.1	136	+16 07.3	75	20	36	18 00	27	0 51	50	25	42		
15	43 34.5	51.0	121 23.7	136	14.8	75	30	16	17 42	12	1 04	53	11	38		
16	58 34.5	50.6	135 56.3	136	22.2	74	35	17 05	33	18 04	11 56	12	03	36		
17	73 34.4	+21 50.2	150 28.8	135	+16 29.5	73	40	16 52	17 22	17 56	1 20	57	11 53	35		
18	88 34.3	+21 49.9	165 01.3	135	+16 36.8	73	45	16 37	17 10	17 46	1 30	60	11 42	33		
19	103 34.2	49.5	179 33.8	135	43.9	71	50	18	16 55	36	43	63	29	29		
20	118 34.2	49.2	194 06.2	134	51.0	71	52	16 09	49	31	49	64	22	29		
21	133 34.1	48.8	208 38.6	134	+16 58.1	71	54	15 59	41	26	1 55	66	15	27		
22	148 34.0	48.4	223 11.0	134	+17 05.0	69	56	48	33	21	2 02	68	11 08	24		
23	163 33.9	48.1	237 43.3	133	11.9	68	58	35	24	15	10	71	10 59	23		
24	178 33.9	+21 47.7	252 15.6	133	+17 18.7	68	60 S	15 20	16 14	17 09	2 19	74	10 49	20		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 4 ^h 38 ^m 1		Mag.: -4.5 PMG: 9 ^h 19 ^m		Mag.: +0.9 PMG: 16 ^h 55 ^m		Mag.: -2.1 PMG: 8 ^h 57 ^m		Mag.: +0.8 PMG: 18 ^h 05 ^m							
	hG ♈	Dec	hG ♊	Dec	hG ♊	Dec	hG ♏	Dec	hG ♎	Dec	hG ♎	Dec	hG ♎	Dec	hG ♎	Dec
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /
0	290 17.7	220 07.5	+17 32.6	106 01.6	-1 36.6	225 28.3	+20 38.4	88 05.3	-6 36.7							
1	305 20.1	235 08.8	32.7	121 02.9	37.2	240 30.2	38.5	103 07.7	36.7							
2	320 22.6	250 10.0	32.9	136 04.1	37.8	255 32.2	38.6	118 10.1	36.7							
3	335 25.1	265 11.3	33.0	151 05.3	38.4	270 34.1	38.7	133 12.5	36.8							
4	350 27.5	280 12.5	33.1	166 06.5	39.0	285 36.0	38.8	148 14.9	36.8							
5	5 30.0	295 13.8	+17 33.2	181 07.7	-1 39.6	300 38.0	+20 38.9	163 17.3	-6 36.8							
6	20 32.4	310 15.0	+17 33.4	196 09.0	-1 40.2	315 39.9	+20 39.0	178 19.7	-6 36.9							
7	35 34.9	325 16.2	33.5	211 10.2	40.7	330 41.8	39.0	193 22.1	36.9							
8	50 37.4	340 17.5	33.6	226 11.4	41.3	345 43.8	39.1	208 24.5	37.0							
9	65 39.8	355 18.7	33.8	241 12.6	41.9	0 45.7	39.2	223 26.9	37.0							
10	80 42.3	10 19.9	33.9	256 13.8	42.5	15 47.6	39.3	238 29.3	37.0							
11	95 44.8	25 21.1	+17 34.0	271 15.1	-1 43.1	30 49.6	+20 39.4	253 31.7	-6 37.1							
12	110 47.2	40 22.4	+17 34.2	286 16.3	-1 43.7	45 51.5	+20 39.5	268 34.1	-6 37.1							
13	125 49.7	55 23.6	34.3	301 17.5	44.3	60 53.5	39.5	283 36.6	37.1							
14	140 52.2	70 24.8	34.4	316 18.7	44.8	75 55.4	39.6	298 39.0	37.2							
15	155 54.6	85 26.0	34.6	331 19.9	45.4	90 57.3	39.7	313 41.4	37.2							
16	170 57.1	100 27.2	34.7	346 21.2	46.0	105 59.3	39.8	328 43.8	37.2							
17	185 59.5	115 28.4	+17 34.8	1 22.4	-1 46.6	121 01.2	+20 39.9	343 46.2	-6 37.3							
18	201 02.0	130 29.7	+17 35.0	16 23.6	-1 47.2	136 03.1	+20 40.0	358 48.6	-6 37.3							
19	216 04.5	145 30.9	35.1	31 24.8	47.8	151 05.1	40.0	13 51.0	37.4							
20	231 06.9	160 32.1	35.2	46 26.0	48.4	166 07.0	40.1	28 53.4	37.4							
21	246 09.4	175 33.3	35.4	61 27.2	48.9	181 09.0	40.2	43 55.8	37.4							
22	261 11.9	190 34.5	35.5	76 28.5	49.5	196 10.9	40.3	58 58.2	37.5							
23	276 14.3	205 35.6	35.6	91 29.7	50.1	211 12.8	40.4	74 00.6	37.5							
24	291 16.8	220 36.8	+17 35.8	106 30.9	-1 50.7	226 14.8	+20 40.5	89 03.0	-6 37.5							
Dif	—	+12	+1	+12	-6	+19	+1	+24	0							

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VIERNES 13 DE JULIO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7		SD: 14 ^h 8 Edad: 23 ^d 4 PHE { 4 ^h : 54/2 12 ^h : 54/2 20 ^h : 54/2 PMG: 7 ^h 25 ^m R°: 47 ^m													
	PMG: 12 ^h 05 ^m 8															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	33.9	+ 21	47.7	252	15.6	+ 17	18.7	60 N	** **	1 40	3 00	23 24	31	16 06	67
1	193	33.8		47.3	266	47.9		25.4	58	** **	2 12	18	37	34	15 53	64
2	208	33.7		47.0	281	20.1		32.1	56	0 33	36	32	49	35	42	62
3	223	33.7		46.6	295	52.3		38.7	54	1 31	2 54	45	23 59	37	32	61
4	238	33.6		46.2	310	24.5		45.2	52	2 01	3 10	3 56	** **	** **	23	60
5	253	33.5	+ 21	45.9	324	56.6	+ 17	51.6	50	2 24	3 23	4 06	** **	** **	15 15	59
6	268	33.4	+ 21	45.5	339	28.7	+ 17	57.9	45	3 03	3 50	4 26	** **	** **	14 58	57
7	283	33.4		45.1	354	00.8	+ 18	04.2	40	30	4 10	42	0 11	37	44	55
8	298	33.3		44.7	8	32.8		10.4	35	3 51	27	4 56	22	38	33	53
9	313	33.2		44.4	23	04.8		16.5	30	4 09	4 41	5 08	31	40	23	52
10	328	33.1		44.0	37	36.8		22.5	20	36	5 04	28	0 47	42	14 05	51
11	343	33.1	+ 21	43.6	52	08.7	+ 18	28.5	10 N	4 56	5 23	5 46	1 01	44	13 50	49
12	358	33.0	+ 21	43.2	66	40.6	+ 18	34.3	0	5 14	5 40	6 02	1 14	46	13 36	47
13	13	32.9		42.9	81	12.5		40.1	10 S	30	5 56	18	27	48	22	45
14	28	32.9		42.5	95	44.3		45.8	20	44	6 12	35	41	50	13 07	44
15	43	32.8		42.1	110	16.1		51.4	30	5 59	29	6 55	1 57	53	12 49	42
16	58	32.7		41.7	124	47.8	+ 18	56.9	35	6 07	38	7 06	2 07	54	39	41
17	73	32.7	+ 21	41.4	139	19.5	+ 19	02.4	40	6 16	6 49	7 19	2 17	56	12 28	39
18	88	32.6	+ 21	41.0	153	51.2	+ 19	07.8	45	6 25	7 01	7 34	2 30	58	12 15	37
19	103	32.5		40.6	168	22.8		13.0	50	35	16	7 53	46	60	11 58	35
20	118	32.4		40.2	182	54.4		18.2	52	40	22	8 02	2 53	62	51	34
21	133	32.4		39.9	197	26.0		23.3	54	45	30	12	3 01	63	42	33
22	148	32.3		39.5	211	57.6		28.3	56	50	38	23	10	65	32	32
23	163	32.2		39.1	226	29.0		33.3	58	6 56	47	36	21	67	22	29
24	178	32.2	+ 21	38.7	241	00.5	+ 19	38.1	60 S	7 02	7 57	8 51	3 33	69	11 09	27
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 4 ^h 34 ^m 1		Mag.: -4.5 PMG: 9 ^h 17 ^m		Mag.: +1.0 PMG: 16 ^h 53 ^m		Mag.: -2.1 PMG: 8 ^h 54 ^m		Mag.: +0.8 PMG: 18 ^h 01 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	291	16.8	220	36.8	+ 17	35.8	226	14.8	+ 20	40.5	89	03.0	- 6	37.5		
1	306	19.3	235	38.0		35.9	241	16.7		40.5	104	05.4		37.6		
2	321	21.7	250	39.2		36.1	256	18.7		40.6	119	07.8		37.6		
3	336	24.2	265	40.4		36.2	271	20.6		40.7	134	10.2		37.6		
4	351	26.7	280	41.6		36.3	286	22.5		40.8	149	12.6		37.7		
5	6	29.1	295	42.8	+ 17	36.5	301	24.5	+ 20	40.9	164	15.0	- 6	37.7		
6	21	31.6	310	43.9	+ 17	36.6	316	26.4	+ 20	41.0	179	17.4	- 6	37.8		
7	36	34.0	325	45.1		36.8	331	28.4		41.0	194	19.8		37.8		
8	51	36.5	340	46.3		36.9	346	30.3		41.1	209	22.2		37.8		
9	66	39.0	355	47.4		37.1	1	32.2		41.2	224	24.6		37.9		
10	81	41.4	10	48.6		37.2	16	34.2		41.3	239	27.0		37.9		
11	96	43.9	25	49.8	+ 17	37.4	31	36.1	+ 20	41.4	254	29.4	- 6	37.9		
12	111	46.4	40	50.9	+ 17	37.5	46	38.1	+ 20	41.5	269	31.8	- 6	38.0		
13	126	48.8	55	52.1		37.7	61	40.0		41.5	284	34.2		38.0		
14	141	51.3	70	53.2		37.8	76	41.9		41.6	299	36.6		38.1		
15	156	53.8	85	54.4		37.9	91	43.9		41.7	314	39.0		38.1		
16	171	56.2	100	55.5		38.1	106	45.8		41.8	329	41.4		38.1		
17	186	58.7	115	56.7	+ 17	38.2	121	47.8	+ 20	41.9	344	43.8	- 6	38.2		
18	202	01.2	130	57.8	+ 17	38.4	136	49.7	+ 20	42.0	359	46.2	- 6	38.2		
19	217	03.6	145	59.0		38.5	151	51.6		42.0	14	48.5		38.2		
20	232	06.1	161	00.1		38.7	166	53.6		42.1	29	50.9		38.3		
21	247	08.5	176	01.3		38.9	181	55.5		42.2	44	53.3		38.3		
22	262	11.0	191	02.4		39.0	196	57.5		42.3	59	55.7		38.4		
23	277	13.5	206	03.5		39.2	211	59.4		42.4	74	58.1		38.4		
24	292	15.9	221	04.6	+ 17	39.3	227	01.3	+ 20	42.4	90	00.5	- 6	38.4		
Dif	—		+12		+1		+12		+19		+1		+24		0	

SÁBADO 14 DE JULIO DE 2012

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15°7 PMG: 12 ^h 05 ^m 9			SD: 14°8 Edad: 24 ^d 4 PHE $\begin{cases} 4^h: 54/2 \\ 12^h: 54/2 \\ 20^h: 54/3 \end{cases}$ PMG: 8 ^h 12 ^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
0	178	32.2	+21	241	00.5	+19	38.1	60 N	21 08	22 26	** **	23 55	43	17 13	58
1	193	32.1		255	31.9		42.9	58	20 51	21 56	** **	** **	***	16 57	57
2	208	32.0		270	03.3		47.6	56	37	33	23 24	** **	***	44	56
3	223	32.0		284	34.7		52.1	54	25	21 15	22 35	** **	***	33	55
4	238	31.9		299	06.0	+19	56.6	52	14	20 59	22 06	0 08	38	23	55
5	253	31.8	+21	313	37.3	+20	01.0	50	20 04	20 46	21 45	0 16	39	16 14	54
6	268	31.8	+21	328	08.6	+20	05.3	45	19 44	20 20	21 07	0 34	40	15 55	53
7	283	31.7		342	39.8		09.6	40	28	20 00	20 40	0 48	42	39	53
8	298	31.6		357	11.0		13.7	35	15	19 44	19	1 00	43	26	52
9	313	31.6		11	42.1		17.7	30	19 03	30	20 02	11	44	15 15	51
10	328	31.5		26	13.2		21.7	20	18 43	19 07	19 36	29	46	14 56	50
11	343	31.4	+21	40	44.3	+20	25.5	10 N	18 26	18 48	19 15	1 45	47	14 39	49
12	358	31.4	+21	55	15.3	+20	29.3	0	18 10	18 32	18 58	2 00	48	14 23	49
13	13	31.3		69	46.3		33.0	10 S	17 54	16	42	15	49	14 07	48
14	28	31.2		84	17.3		36.6	20	37	18 00	28	31	51	13 51	47
15	43	31.2		98	48.3		40.0	30	17	17 43	13	2 50	52	31	46
16	58	31.1		113	19.2		43.4	35	17 06	34	18 05	3 01	53	20	45
17	73	31.0	+21	127	50.1	+20	46.7	40	16 54	17 23	17 57	3 13	54	13 07	45
18	88	31.0	+21	142	20.9	+20	49.9	45	16 38	17 11	17 48	3 28	55	12 52	43
19	103	30.9		156	51.7		53.0	50	20	16 57	38	46	57	33	42
20	118	30.8		171	22.5		56.0	52	11	51	33	3 55	57	25	41
21	133	30.8		185	53.3	+20	58.9	54	16 01	43	28	4 04	59	15	40
22	148	30.7		200	24.0	+21	01.8	56	15 50	36	23	15	60	12 04	39
23	163	30.6		214	54.7		04.5	58	38	27	18	28	61	11 51	38
24	178	30.6	+21	229	25.3	+21	07.1	60 S	15 23	16 17	17 11	4 42	63	11 36	37
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 4 ^h 30 ^m 2			Mag.: -4.5 PMG: 9 ^h 15 ^m			Mag.: +1.0 PMG: 16 ^h 51 ^m			Mag.: -2.1 PMG: 8 ^h 51 ^m			Mag.: +0.8 PMG: 17 ^h 57 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	292	15.9		221	04.6	+17	107	00.0	-2	227	01.3	+20	90	00.5	-6
1	307	18.4		236	05.8		122	01.2	05.4	242	03.3	42.5	105	02.9	38.5
2	322	20.9		251	06.9		137	02.4	06.0	257	05.2	42.6	120	05.3	38.5
3	337	23.3		266	08.0		152	03.6	06.6	272	07.2	42.7	135	07.7	38.5
4	352	25.8		281	09.1		167	04.8	07.2	287	09.1	42.8	150	10.1	38.6
5	7	28.3		296	10.3	+17	182	06.0	-2	302	11.1	+20	165	12.5	-6
6	22	30.7		311	11.4	+17	197	07.2	-2	317	13.0	+20	180	14.9	-6
7	37	33.2		326	12.5		212	08.4	08.9	332	14.9	43.0	195	17.3	38.7
8	52	35.7		341	13.6		227	09.6	09.5	347	16.9	43.1	210	19.7	38.7
9	67	38.1		356	14.7		242	10.8	10.1	2	18.8	43.2	225	22.1	38.8
10	82	40.6		11	15.8		257	12.1	10.7	17	20.8	43.3	240	24.5	38.8
11	97	43.0		26	16.9	+17	272	13.3	-2	32	22.7	+20	255	26.9	-6
12	112	45.5		41	18.0	+17	287	14.5	-2	47	24.7	+20	270	29.3	-6
13	127	48.0		56	19.1		302	15.7	12.5	62	26.6	43.5	285	31.7	38.9
14	142	50.4		71	20.2		317	16.9	13.0	77	28.5	43.6	300	34.1	39.0
15	157	52.9		86	21.3		332	18.1	13.6	92	30.5	43.7	315	36.5	39.0
16	172	55.4		101	22.4		347	19.3	14.2	107	32.4	43.8	330	38.9	39.1
17	187	57.8		116	23.5	+17	2	20.5	-2	122	34.4	+20	345	41.3	-6
18	203	00.3		131	24.5	+17	17	21.7	-2	137	36.3	+20	0	43.7	-6
19	218	02.8		146	25.6		32	22.9	16.0	152	38.3	44.0	15	46.0	39.2
20	233	05.2		161	26.7		47	24.1	16.6	167	40.2	44.1	30	48.4	39.2
21	248	07.7		176	27.8		62	25.3	17.2	182	42.2	44.2	45	50.8	39.2
22	263	10.1		191	28.9		77	26.5	17.8	197	44.1	44.2	60	53.2	39.3
23	278	12.6		206	29.9		92	27.7	18.4	212	46.0	44.3	75	55.6	39.3
24	293	15.1		221	31.0	+17	107	28.9	-2	227	48.0	+20	90	58.0	-6
Dif	—	+11	+2		+12	-6		+19	+1		+24	0			


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DOMINGO 15 DE JULIO DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'7 PMG: 12 ^h 06 ^m 0			SD: 14'8 Edad: 25 ^d 4	PHE { 4 ^h : 54'3 12 ^h : 54'4 20 ^h : 54'5		R°: 49 ^m		Náutico	Civil		Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾		Dif	Dec										Dif
^h	[°]	[']		[°]	[']		[°]	[']	^h	^m	^h	^m	^h	^m	^h	^m
0	178	30.6	+ 21	229	25.3	+ 21	07.1	25	60 N	*** **	1 46	3 04	*** **	***	18 11	47
1	193	30.5		243	56.0 ¹¹⁷		09.6	24	58	*** **	2 17	21	0 11	44	17 54	48
2	208	30.5		258	26.6 ¹¹⁶		12.0	24	56	0 48	39	35	24	45	40	48
3	223	30.4		272	57.1 ¹¹⁵		14.4	24	54	1 37	2 58	48	36	45	28	48
4	238	30.3		287	27.7 ¹¹⁶		16.6	22	52	2 06	3 13	3 58	46	45	18	48
5	253	30.3	+ 21	301	58.2 ¹¹⁵	+ 21	18.7	21	50	2 27	3 26	4 08	0 55	46	17 08	49
6	268	30.2	+ 21	316	28.7 ¹¹⁵	+ 21	20.8	21	45	3 05	3 52	4 28	1 14	47	16 48	49
7	283	30.1		330	59.1 ¹¹⁴		22.7	19	40	32	4 12	44	30	47	32	49
8	298	30.1		345	29.6 ¹¹⁵		24.5	18	35	3 53	29	4 58	43	48	18	49
9	313	30.0		360	00.0 ¹¹⁴		26.2	17	30	4 10	4 42	5 09	1 55	48	16 06	50
10	328	30.0		14	30.3 ¹¹³		27.9	17	20	36	5 05	29	2 15	48	15 46	50
11	343	29.9	+ 21	29	00.7 ¹¹⁴	+ 21	29.4	15	10 N	4 57	5 24	5 46	2 32	49	15 28	50
12	358	29.8	+ 21	43	31.0 ¹¹³	+ 21	30.8	14	0	5 14	5 40	6 02	2 48	49	15 12	50
13	13	29.8		58	01.3 ¹¹³		32.1	13	10 S	30	5 56	18	3 04	50	14 55	50
14	28	29.7		72	31.6 ¹¹³		33.4	13	20	44	6 11	35	22	50	38	49
15	43	29.6		87	01.8 ¹¹²		34.5	11	30	5 59	28	6 54	42	50	17	50
16	58	29.6		101	32.1 ¹¹³		35.5	10	35	6 07	38	7 05	3 54	50	14 05	50
17	73	29.5	+ 21	116	02.3 ¹¹²	+ 21	36.4	9	40	6 15	6 48	7 18	4 07	51	13 52	49
18	88	29.5	+ 21	130	32.5 ¹¹²	+ 21	37.2	8	45	6 24	7 00	7 33	4 23	51	13 35	50
19	103	29.4		145	02.6 ¹¹¹		37.9	7	50	34	14	7 51	43	52	15	50
20	118	29.3		159	32.8 ¹¹²		38.5	6	52	38	21	8 00	4 52	52	13 06	50
21	133	29.3		174	02.9 ¹¹¹		39.0	5	54	43	28	10	5 03	52	12 55	50
22	148	29.2		188	33.0 ¹¹¹		39.4	4	56	48	36	21	15	52	43	50
23	163	29.2		203	03.1 ¹¹¹		39.7	3	58	6 54	44	33	29	52	29	50
24	178	29.1	+ 21	217	33.1 ¹¹⁰	+ 21	39.9	2	60 S	7 00	7 54	8 48	5 45	53	12 13	49
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 4 ^h 26 ^m 3		Mag.: -4.5 PMG: 9 ^h 13 ^m		Mag.: +1.0 PMG: 16 ^h 49 ^m		Mag.: -2.1 PMG: 8 ^h 48 ^m		Mag.: +0.8 PMG: 17 ^h 53 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
^h	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']
0	293	15.1	221	31.0	+ 17	43.2	107	28.9	- 2	18.9	227	48.0	+ 20	44.4	90	58.0
1	308	17.5	236	32.1		43.3	122	30.1		19.5	242	49.9		44.5	106	00.4
2	323	20.0	251	33.1		43.5	137	31.3		20.1	257	51.9		44.6	121	02.8
3	338	22.5	266	34.2		43.7	152	32.5		20.7	272	53.8		44.6	136	05.2
4	353	24.9	281	35.3		43.8	167	33.7		21.3	287	55.8		44.7	151	07.6
5	8	27.4	296	36.3	+ 17	44.0	182	34.9	- 2	21.9	302	57.7	+ 20	44.8	166	10.0
6	23	29.9	311	37.4	+ 17	44.2	197	36.1	- 2	22.5	317	59.7	+ 20	44.9	181	12.4
7	38	32.3	326	38.4		44.3	212	37.3		23.1	333	01.6		45.0	196	14.8
8	53	34.8	341	39.5		44.5	227	38.5		23.7	348	03.6		45.1	211	17.2
9	68	37.3	356	40.5		44.7	242	39.7		24.3	3	05.5		45.1	226	19.5
10	83	39.7	11	41.6		44.9	257	40.9		24.9	18	07.4		45.2	241	21.9
11	98	42.2	26	42.6	+ 17	45.0	272	42.1	- 2	25.4	33	09.4	+ 20	45.3	256	24.3
12	113	44.6	41	43.7	+ 17	45.2	287	43.3	- 2	26.0	48	11.3	+ 20	45.4	271	26.7
13	128	47.1	56	44.7		45.4	302	44.5		26.6	63	13.3		45.5	286	29.1
14	143	49.6	71	45.7		45.6	317	45.7		27.2	78	15.2		45.5	301	31.5
15	158	52.0	86	46.8		45.7	332	46.9		27.8	93	17.2		45.6	316	33.9
16	173	54.5	101	47.8		45.9	347	48.1		28.4	108	19.1		45.7	331	36.3
17	188	57.0	116	48.8	+ 17	46.1	2	49.3	- 2	29.0	123	21.1	+ 20	45.8	346	38.7
18	203	59.4	131	49.8	+ 17	46.3	17	50.5	- 2	29.6	138	23.0	+ 20	45.9	1	41.1
19	219	01.9	146	50.9		46.4	32	51.7		30.2	153	25.0		45.9	16	43.5
20	234	04.4	161	51.9		46.6	47	52.9		30.8	168	26.9		46.0	31	45.8
21	249	06.8	176	52.9		46.8	62	54.1		31.4	183	28.9		46.1	46	48.2
22	264	09.3	191	53.9		47.0	77	55.3		32.0	198	30.8		46.2	61	50.6
23	279	11.8	206	54.9		47.1	92	56.5		32.5	213	32.8		46.3	76	53.0
24	294	14.2	221	56.0	+ 17	47.3	107	57.7	- 2	33.1	228	34.7	+ 20	46.3	91	55.4
Dif	—		+10		+2		+12		-6		+19		+1		+24	
															0	

LUNES 16 DE JULIO DE 2012

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UT	SOL			 LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna	Puesta de Luna
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 1			SD: 14 ^h 9 Edad: 26 ^d 4	PHE { 4 ^h : 54 ^h /6 12 ^h : 54 ^h /7 20 ^h : 54 ^h /8		PMG: 9 ^h 49 ^m						
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora R°	Hora R°
^h	° /	° /		° /		° /		^h ^m	^h ^m	^h ^m ^s	^h ^m ^s	^h ^m ^s	^h ^m ^s
0	178 29.1	+ 21 19.7		217 33.1	111	+ 21 39.9	1	60 N	21 05	22 20	** ** *	0 38 56	18 58 36
1	193 29.1	19.2		232 03.2	110	40.0	0	58	20 48	21 51	** ** *	0 55 55	42 37
2	208 29.0	18.8		246 33.2	110	40.0	0	56	34	29	23 12	1 09 54	28 39
3	223 28.9	18.4		261 03.2	110	39.8	2	54	22	21 12	22 29	21 54	16 41
4	238 28.9	18.0		275 33.2	110	39.6	2	52	12	20 57	22 02	31 54	18 06 41
5	253 28.8	+ 21 17.6		290 03.1	109	+ 21 39.3	3	50	20 03	20 44	21 42	1 41 53	17 57 42
6	268 28.8	+ 21 17.2		304 33.1	110	+ 21 38.8	5	45	19 43	20 19	21 05	2 01 53	17 37 44
7	283 28.7	16.7		319 03.0	109	38.3	5	40	27	19 59	20 38	17 52	21 45
8	298 28.7	16.3		333 33.0	110	37.6	7	35	14	43	18	31 52	17 07 46
9	313 28.6	15.9		348 02.9	109	36.9	7	30	19 02	29	20 01	2 43 51	16 56 46
10	328 28.5	15.5		2 32.8	109	36.0	9	20	18 42	19 07	19 35	3 03 51	36 47
11	343 28.5	+ 21 15.1		17 02.7	109	+ 21 35.0	10	10 N	18 25	18 48	19 15	3 21 50	16 18 49
12	358 28.4	+ 21 14.7		31 32.5	108	+ 21 34.0	10	0	18 10	18 32	18 58	3 37 50	16 02 50
13	13 28.4	14.2		46 02.4	109	32.8	12	10 S	17 54	17	43	3 54 49	15 45 51
14	28 28.3	13.8		60 32.3	109	31.5	13	20	37	18 01	28	4 12 49	27 52
15	43 28.3	13.4		75 02.1	108	30.1	14	30	19	17 44	14	32 48	15 07 53
16	58 28.2	13.0		89 31.9	108	28.6	15	35	17 08	35	18 06	44 48	14 55 54
17	73 28.2	+ 21 12.6		104 01.8	109	+ 21 27.0	16	40	16 55	17 25	17 58	4 58 47	14 41 55
18	88 28.1	+ 21 12.1		118 31.6	108	+ 21 25.3	17	45	16 40	17 13	17 49	5 14 47	14 25 56
19	103 28.0	11.7		133 01.4	108	23.4	19	50	22	16 59	40	35 45	14 05 57
20	118 28.0	11.3		147 31.2	108	21.5	19	52	14	53	35	44 45	13 56 57
21	133 27.9	10.9		162 01.0	108	19.5	20	54	16 04	46	31	5 55 44	45 58
22	148 27.9	10.4		176 30.8	108	17.3	22	56	15 53	38	25	6 07 44	33 59
23	163 27.8	10.0		191 00.6	108	15.1	22	58	41	29	20	21 43	19 60
24	178 27.8	+ 21 09.6		205 30.3	107	+ 21 12.8	23	60 S	15 27	16 20	17 14	6 38 41	13 02 62

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 4 ^h 22 ^m 3		Mag.: -4.5 PMG: 9 ^h 12 ^m		Mag.: +1.0 PMG: 16 ^h 47 ^m		Mag.: -2.1 PMG: 8 ^h 45 ^m		Mag.: +0.8 PMG: 17 ^h 49 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
^h	° /		° /		° /		° /		° /	
0	294 14.2		221 56.0	+ 17 47.3	107 57.7	- 2 33.1	228 34.7	+ 20 46.3	91 55.4	- 6 40.3
1	309 16.7		236 57.0	47.5	122 58.9	33.7	243 36.7	46.4	106 57.8	40.4
2	324 19.1		251 58.0	47.7	138 00.1	34.3	258 38.6	46.5	122 00.2	40.4
3	339 21.6		266 59.0	47.9	153 01.3	34.9	273 40.6	46.6	137 02.6	40.5
4	354 24.1		282 00.0	48.0	168 02.5	35.5	288 42.5	46.7	152 05.0	40.5
5	9 26.5		297 01.0	+ 17 48.2	183 03.7	- 2 36.1	303 44.5	+ 20 46.7	167 07.3	- 6 40.5
6	24 29.0		312 02.0	+ 17 48.4	198 04.9	- 2 36.7	318 46.4	+ 20 46.8	182 09.7	- 6 40.6
7	39 31.5		327 03.0	48.6	213 06.1	37.3	333 48.4	46.9	197 12.1	40.6
8	54 33.9		342 04.0	48.8	228 07.3	37.9	348 50.3	47.0	212 14.5	40.7
9	69 36.4		357 05.0	48.9	243 08.5	38.5	3 52.3	47.0	227 16.9	40.7
10	84 38.9		12 05.9	49.1	258 09.7	39.1	18 54.2	47.1	242 19.3	40.8
11	99 41.3		27 06.9	+ 17 49.3	273 10.8	- 2 39.7	33 56.2	+ 20 47.2	257 21.7	- 6 40.8
12	114 43.8		42 07.9	+ 17 49.5	288 12.0	- 2 40.2	48 58.1	+ 20 47.3	272 24.1	- 6 40.8
13	129 46.3		57 08.9	49.7	303 13.2	40.8	64 00.1	47.4	287 26.5	40.9
14	144 48.7		72 09.9	49.9	318 14.4	41.4	79 02.0	47.4	302 28.8	40.9
15	159 51.2		87 10.9	50.0	333 15.6	42.0	94 04.0	47.5	317 31.2	41.0
16	174 53.6		102 11.8	50.2	348 16.8	42.6	109 05.9	47.6	332 33.6	41.0
17	189 56.1		117 12.8	+ 17 50.4	3 18.0	- 2 43.2	124 07.9	+ 20 47.7	347 36.0	- 6 41.0
18	204 58.6		132 13.8	+ 17 50.6	18 19.2	- 2 43.8	139 09.8	+ 20 47.8	2 38.4	- 6 41.1
19	220 01.0		147 14.7	50.8	33 20.4	44.4	154 11.8	47.8	17 40.8	41.1
20	235 03.5		162 15.7	51.0	48 21.6	45.0	169 13.7	47.9	32 43.2	41.2
21	250 06.0		177 16.7	51.2	63 22.8	45.6	184 15.7	48.0	47 45.5	41.2
22	265 08.4		192 17.6	51.4	78 24.0	46.2	199 17.6	48.1	62 47.9	41.3
23	280 10.9		207 18.6	51.5	93 25.1	46.8	214 19.6	48.2	77 50.3	41.3
24	295 13.4		222 19.5	+ 17 51.7	108 26.3	- 2 47.4	229 21.5	+ 20 48.2	92 52.7	- 6 41.3
Dif	—		+10	+2	+12	-6	+20	+1	+24	0

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MARTES 17 DE JULIO DE 2012

UT	SOL			☾ LUNA			Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15/7 PMG: 12 ^h 06 ^m 2			SD: 15/0 Edad: 27 ^d 4	PHE { 4 ^h : 55/0 12 ^h : 55/1 20 ^h : 55/2			R°: 50 ^m	Náutico		Civil	Hora	R°	Hora	R°	
	hG ☉	Dec		hG ☾	Dif	Dec										Dif
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	
0	178	27.8	+ 21 09.6	205	30.3	+ 21 12.8	60 N	1 53	3 08	1 34	67	19 34	26			
1	193	27.7	09.1	220	00.1	108 10.3	58	2 22	25	1 50	65	19 30				
2	208	27.7	08.7	234	29.9	108 07.7	56	1 00	2 43	2 03	64	19 07	32			
3	223	27.6	08.3	248	59.7	108 05.1	54	1 43	3 01	3 50	15	62	18 57	33		
4	238	27.6	07.9	263	29.4	107 + 21 02.3	52	2 10	16	4 01	25	62	47	35		
5	253	27.5	+ 21 07.4	277	59.2	108 + 20 59.4	50	2 31	3 28	4 10	2 34	61	18 39	35		
6	268	27.5	+ 21 07.0	292	29.0	108 + 20 56.4	45	3 08	3 54	4 30	2 54	58	18 21	38		
7	283	27.4	06.6	306	58.7	107 53.3	40	3 34	4 14	46	3 09	57	18 06	40		
8	298	27.4	06.1	321	28.5	108 50.1	35	3 55	30	4 59	23	55	17 53	42		
9	313	27.3	05.7	335	58.3	108 46.8	30	4 11	4 44	5 10	34	55	42	44		
10	328	27.3	05.3	350	28.0	107 43.4	20	37	5 06	30	3 54	53	23	46		
11	343	27.2	+ 21 04.8	4	57.8	108 + 20 39.9	10 N	4 58	5 24	5 47	4 11	52	17 07	48		
12	358	27.2	+ 21 04.4	19	27.6	108 + 20 36.3	0	5 15	5 40	6 03	4 27	50	16 52	49		
13	13	27.1	04.0	33	57.3	107 32.6	10 S	30	5 56	18	4 43	49	36	52		
14	28	27.1	03.5	48	27.1	108 28.7	20	44	6 11	35	5 01	47	19	54		
15	43	27.0	03.1	62	56.9	108 24.8	30	5 58	28	6 53	20	46	16	00		
16	58	27.0	02.7	77	26.7	108 20.8	35	6 06	37	7 04	32	44	15	49		
17	73	26.9	+ 21 02.2	91	56.5	108 + 20 16.6	40	6 14	6 47	7 17	5 45	43	15	36		
18	88	26.9	+ 21 01.8	106	26.3	108 + 20 12.4	45	6 22	6 59	7 32	6 01	41	15	21		
19	103	26.8	01.3	120	56.1	108 08.0	50	32	7 13	49	20	39	15	02		
20	118	26.8	00.9	135	25.9	108 + 20 03.6	52	37	19	7 58	29	38	14	53		
21	133	26.7	00.5	149	55.7	108 + 19 59.0	54	41	26	8 07	39	37	43	66		
22	148	26.7	+ 21 00.0	164	25.6	109 54.4	56	46	33	18	6 51	35	32	68		
23	163	26.6	+ 20 59.6	178	55.4	108 49.6	58	52	42	30	7 04	33	19	70		
24	178	26.6	+ 20 59.1	193	25.3	109 + 19 44.8	60 S	6 58	7 52	8 44	7 19	31	14	04		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 4 ^h 18 ^m 4			Mag.: -4.5 PMG: 9 ^h 10 ^m			Mag.: +1.0 PMG: 16 ^h 45 ^m			Mag.: -2.1 PMG: 8 ^h 41 ^m			Mag.: +0.8 PMG: 17 ^h 46 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	295	13.4	222 19.5	+ 17 51.7	108 26.3	- 2 47.4	229 21.5	+ 20 48.2	92 52.7	- 6 41.3						
1	310	15.8	237 20.5	51.9	123 27.5	48.0	244 23.5	48.3	107 55.1	41.4						
2	325	18.3	252 21.4	52.1	138 28.7	48.5	259 25.4	48.4	122 57.5	41.4						
3	340	20.8	267 22.4	52.3	153 29.9	49.1	274 27.4	48.5	137 59.9	41.5						
4	355	23.2	282 23.3	52.5	168 31.1	49.7	289 29.3	48.5	153 02.2	41.5						
5	10	25.7	297 24.3	+ 17 52.7	183 32.3	- 2 50.3	304 31.3	+ 20 48.6	168 04.6	- 6 41.6						
6	25	28.1	312 25.2	+ 17 52.9	198 33.5	- 2 50.9	319 33.2	+ 20 48.7	183 07.0	- 6 41.6						
7	40	30.6	327 26.2	53.1	213 34.7	51.5	334 35.2	48.8	198 09.4	41.6						
8	55	33.1	342 27.1	53.3	228 35.8	52.1	349 37.1	48.9	213 11.8	41.7						
9	70	35.5	357 28.0	53.5	243 37.0	52.7	4 39.1	48.9	228 14.2	41.7						
10	85	38.0	12 29.0	53.6	258 38.2	53.3	19 41.0	49.0	243 16.6	41.8						
11	100	40.5	27 29.9	+ 17 53.8	273 39.4	- 2 53.9	34 43.0	+ 20 49.1	258 18.9	- 6 41.8						
12	115	42.9	42 30.8	+ 17 54.0	288 40.6	- 2 54.5	49 44.9	+ 20 49.2	273 21.3	- 6 41.9						
13	130	45.4	57 31.8	54.2	303 41.8	55.1	64 46.9	49.2	288 23.7	41.9						
14	145	47.9	72 32.7	54.4	318 43.0	55.7	79 48.8	49.3	303 26.1	41.9						
15	160	50.3	87 33.6	54.6	333 44.2	56.3	94 50.8	49.4	318 28.5	42.0						
16	175	52.8	102 34.5	54.8	348 45.3	56.9	109 52.8	49.5	333 30.9	42.0						
17	190	55.2	117 35.5	+ 17 55.0	3 46.5	- 2 57.5	124 54.7	+ 20 49.6	348 33.2	- 6 42.1						
18	205	57.7	132 36.4	+ 17 55.2	18 47.7	- 2 58.1	139 56.7	+ 20 49.6	3 35.6	- 6 42.1						
19	221	00.2	147 37.3	55.4	33 48.9	58.7	154 58.6	49.7	18 38.0	42.2						
20	236	02.6	162 38.2	55.6	48 50.1	59.2	170 00.6	49.8	33 40.4	42.2						
21	251	05.1	177 39.1	55.8	63 51.3	- 2 59.8	185 02.5	49.9	48 42.8	42.2						
22	266	07.6	192 40.0	56.0	78 52.4	- 3 00.4	200 04.5	49.9	63 45.1	42.3						
23	281	10.0	207 40.9	56.2	93 53.6	01.0	215 06.4	50.0	78 47.5	42.3						
24	296	12.5	222 41.8	+ 17 56.4	108 54.8	- 3 01.6	230 08.4	+ 20 50.1	93 49.9	- 6 42.4						
Dif	—		+9	+2	+12	-6	+20	+1	+24	0						

MIÉRCOL 18 DE JULIO DE 2012

UT	SOL		● LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 3		SD: 15 ^h 1 Edad: 28 ^d 4 PHE { 4 ^h : 55 ^h /4 12 ^h : 55 ^h /6 20 ^h : 55 ^h /7 PMG: 11 ^h 29 ^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
0	178 26.6	+ 20 59.1	193 25.3		+ 19 44.8		60 N	21 01	22 14	** **	2 41 76	20 00 20		
1	193 26.5	58.7	207 55.1	108	39.8	50	58	20 45	21 47	** **	2 55 73	19 49 23		
2	208 26.5	58.3	222 25.0	109	34.8	50	56	31	26	23 02	3 07 71	39 25		
3	223 26.4	57.8	236 54.9	109	29.6	52	54	20	21 08	22 24	17 69	30 27		
4	238 26.4	57.4	251 24.8	109	24.3	53	52	10	20 54	21 58	27 67	22 29		
5	253 26.3	+ 20 56.9	265 54.7	109	+ 19 19.0	53	50	20 00	20 42	21 39	3 35 65	19 14 31		
6	268 26.3	+ 20 56.5	280 24.6	109	+ 19 13.5	55	45	19 41	20 17	21 02	3 52 63	18 59 34		
7	283 26.2	56.0	294 54.5	109	07.9	56	40	26	19 57	20 37	4 06 61	46 37		
8	298 26.2	55.6	309 24.4	109	+ 19 02.3	56	35	13	41	16	18 59	35 39		
9	313 26.2	55.1	323 54.4	110	+ 18 56.5	58	30	19 01	28	20 00	29 57	26 40		
10	328 26.1	54.7	338 24.3	109	50.7	58	20	18 42	19 06	19 34	4 47 54	18 09 44		
11	343 26.1	+ 20 54.2	352 54.3	110	+ 18 44.7	60	10 N	18 25	18 48	19 14	5 03 51	17 55 46		
12	358 26.0	+ 20 53.8	7 24.3	110	+ 18 38.7	60	0	18 10	18 32	18 58	5 17 50	17 41 49		
13	13 26.0	53.3	21 54.3	110	32.5	62	10 S	17 55	17	43	32 47	28 51		
14	28 25.9	52.9	36 24.4	111	26.3	62	20	38	18 02	29	5 48 45	17 13 54		
15	43 25.9	52.4	50 54.4	110	19.9	64	30	20	17 45	15	6 06 42	16 56 58		
16	58 25.8	52.0	65 24.5	111	13.5	64	35	17 09	36	07	16 40	46 60		
17	73 25.8	+ 20 51.5	79 54.5	110	+ 18 06.9	66	40	16 57	17 26	18 00	6 28 38	16 35 62		
18	88 25.8	+ 20 51.1	94 24.6	111	+ 18 00.3	66	45	16 42	17 15	17 51	6 42 36	16 22 64		
19	103 25.7	50.6	108 54.7	111	+ 17 53.6	67	50	24	17 01	42	6 59 33	16 05 68		
20	118 25.7	50.2	123 24.8	111	46.8	68	52	16	16 55	37	7 07 31	15 58 69		
21	133 25.6	49.7	137 55.0	112	39.9	69	54	16 07	48	33	16 30	49 71		
22	148 25.6	49.3	152 25.1	111	32.9	70	56	15 56	41	28	26 28	40 73		
23	163 25.5	48.8	166 55.3	112	25.8	71	58	44	32	23	37 26	29 75		
24	178 25.5	+ 20 48.4	181 25.5	112	+ 17 18.6	72	60 S	15 30	16 23	17 17	7 50 23	15 16 78		
UT	ARIES PMG 4 ^h 14 ^m 5		VENUS Mag.: -4.5 PMG: 9 ^h 09 ^m		MARTE Mag.: +1.0 PMG: 16 ^h 43 ^m		JÚPITER Mag.: -2.1 PMG: 8 ^h 38 ^m		SATURNO Mag.: +0.8 PMG: 17 ^h 42 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec
h	° ' /	° ' /	° ' /		° ' /		° ' /		° ' /		° ' /		° ' /	
0	296 12.5	222 41.8	+ 17 56.4	108 54.8	- 3 01.6	230 08.4	+ 20 50.1	93 49.9	- 6 42.4					
1	311 15.0	237 42.7	56.6	123 56.0	02.2	245 10.3	50.2	108 52.3	42.4					
2	326 17.4	252 43.6	56.8	138 57.2	02.8	260 12.3	50.3	123 54.7	42.5					
3	341 19.9	267 44.5	57.0	153 58.4	03.4	275 14.3	50.3	138 57.1	42.5					
4	356 22.4	282 45.4	57.2	168 59.5	04.0	290 16.2	50.4	153 59.4	42.6					
5	11 24.8	297 46.3	+ 17 57.4	184 00.7	- 3 04.6	305 18.2	+ 20 50.5	169 01.8	- 6 42.6					
6	26 27.3	312 47.2	+ 17 57.6	199 01.9	- 3 05.2	320 20.1	+ 20 50.6	184 04.2	- 6 42.6					
7	41 29.7	327 48.1	57.8	214 03.1	05.8	335 22.1	50.6	199 06.6	42.7					
8	56 32.2	342 49.0	58.0	229 04.3	06.4	350 24.0	50.7	214 09.0	42.7					
9	71 34.7	357 49.8	58.2	244 05.5	07.0	5 26.0	50.8	229 11.3	42.8					
10	86 37.1	12 50.7	58.4	259 06.6	07.6	20 28.0	50.9	244 13.7	42.8					
11	101 39.6	27 51.6	+ 17 58.6	274 07.8	- 3 08.2	35 29.9	+ 20 50.9	259 16.1	- 6 42.9					
12	116 42.1	42 52.5	+ 17 58.8	289 09.0	- 3 08.8	50 31.9	+ 20 51.0	274 18.5	- 6 42.9					
13	131 44.5	57 53.4	59.0	304 10.2	09.4	65 33.8	51.1	289 20.9	43.0					
14	146 47.0	72 54.2	59.2	319 11.4	10.0	80 35.8	51.2	304 23.2	43.0					
15	161 49.5	87 55.1	59.4	334 12.5	10.6	95 37.7	51.3	319 25.6	43.0					
16	176 51.9	102 56.0	59.6	349 13.7	11.2	110 39.7	51.3	334 28.0	43.1					
17	191 54.4	117 56.8	+ 17 59.8	4 14.9	- 3 11.8	125 41.7	+ 20 51.4	349 30.4	- 6 43.1					
18	206 56.9	132 57.7	+ 18 00.0	19 16.1	- 3 12.3	140 43.6	+ 20 51.5	4 32.8	- 6 43.2					
19	221 59.3	147 58.5	00.2	34 17.2	12.9	155 45.6	51.6	19 35.1	43.2					
20	237 01.8	162 59.4	00.4	49 18.4	13.5	170 47.5	51.6	34 37.5	43.3					
21	252 04.2	178 00.3	00.6	64 19.6	14.1	185 49.5	51.7	49 39.9	43.3					
22	267 06.7	193 01.1	00.8	79 20.8	14.7	200 51.4	51.8	64 42.3	43.4					
23	282 09.2	208 02.0	01.0	94 22.0	15.3	215 53.4	51.9	79 44.7	43.4					
24	297 11.6	223 02.8	+ 18 01.2	109 23.1	- 3 15.9	230 55.4	+ 20 51.9	94 47.0	- 6 43.4					
Dif	—	+9	+2	+12	-6	+20	+1	+24	0					

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JUEVES 19 DE JULIO DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15/7 PMG: 12 ^h 06 ^m 3		SD: 15/2 Edad: 29 ^d 4		PHE { 4 ^h : 55/9 12 ^h : 56/1 20 ^h : 56/2						Hora R°		Hora R°	
	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	178 25.5	+ 20 48.4	181 25.5		+ 17 18.6		60 N	1 59	3 12	3 57	80		20 20	16
1	193 25.5	47.9	195 55.7	112	11.3	73	58	2 27	28	4 08	77		12	18
2	208 25.4	47.4	210 25.9	112	+ 17 03.9	74	56	1 11	2 48	18	74		20 04	21
3	223 25.4	47.0	224 56.2	113	+ 16 56.5	74	54	1 49	3 05	3 53	26	73	19 57	23
4	238 25.3	46.5	239 26.4	112	48.9	76	52	2 15	19	4 03	34	70	51	25
5	253 25.3	+ 20 46.1	253 56.7	113	+ 16 41.3	76	50	2 34	3 31	4 13	4 40	69	19 45	27
6	268 25.3	+ 20 45.6	268 27.0	113	+ 16 33.6	77	45	3 11	3 56	4 32	4 55	65	19 33	30
7	283 25.2	45.1	282 57.4	114	25.8	78	40	36	4 16	4 47	5 07	62	23	33
8	298 25.2	44.7	297 27.7	113	17.9	79	35	3 56	31	5 00	17	60	14	36
9	313 25.1	44.2	311 58.1	114	09.9	80	30	4 13	4 45	12	26	58	19 06	39
10	328 25.1	43.8	326 28.4	113	+ 16 01.8	81	20	38	5 07	31	41	55	18 53	42
11	343 25.1	+ 20 43.3	340 58.8	114	+ 15 53.6	82	10 N	4 58	5 25	5 47	5 54	52	18 41	46
12	358 25.0	+ 20 42.8	355 29.3	115	+ 15 45.4	82	0	5 15	5 41	6 03	6 07	49	18 30	49
13	13 25.0	42.4	9 59.7	114	37.1	83	10 S	30	5 56	18	19	46	19	52
14	28 24.9	41.9	24 30.2	115	28.7	84	20	44	6 11	34	33	42	18 07	55
15	43 24.9	41.4	39 00.6	114	20.2	85	30	5 58	27	6 53	48	39	17 54	58
16	58 24.9	41.0	53 31.1	115	11.6	86	35	6 05	36	7 03	6 56	38	46	60
17	73 24.8	+ 20 40.5	68 01.7	116	+ 15 03.0	86	40	6 13	6 46	7 16	7 06	35	17 37	63
18	88 24.8	+ 20 40.0	82 32.2	115	+ 14 54.2	88	45	6 21	6 57	7 30	7 18	32	17 26	66
19	103 24.7	39.6	97 02.8	116	45.4	88	50	31	7 11	47	32	28	13	70
20	118 24.7	39.1	111 33.3	115	36.5	89	52	35	17	7 56	38	27	07	72
21	133 24.7	38.6	126 03.9	116	27.6	89	54	39	24	8 05	46	25	17 00	74
22	148 24.6	38.2	140 34.6	117	18.5	91	56	44	31	15	7 54	23	16 53	76
23	163 24.6	37.7	155 05.2	116	09.4	91	58	49	39	27	8 03	20	44	79
24	178 24.6	+ 20 37.2	169 35.9	117	+ 14 00.2	92	60 S	6 55	7 49	8 41	8 13	18	16 34	82
UT	ARIES PMG 4 ^h 10 ^m 5		VENUS Mag.: -4.5 PMG: 9 ^h 07 ^m		MARTE Mag.: +1.0 PMG: 16 ^h 41 ^m		JÚPITER Mag.: -2.1 PMG: 8 ^h 35 ^m		SATURNO Mag.: +0.8 PMG: 17 ^h 38 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
h	297 11.6	223 02.8	+ 18 01.2	109 23.1	- 3 15.9	230 55.4	+ 20 51.9	94 47.0	- 6 43.4					
1	312 14.1	238 03.7	01.4	124 24.3	16.5	245 57.3	52.0	109 49.4	43.5					
2	327 16.6	253 04.5	01.6	139 25.5	17.1	260 59.3	52.1	124 51.8	43.5					
3	342 19.0	268 05.4	01.9	154 26.7	17.7	276 01.2	52.2	139 54.2	43.6					
4	357 21.5	283 06.2	02.1	169 27.8	18.3	291 03.2	52.2	154 56.5	43.6					
5	12 24.0	298 07.0	+ 18 02.3	184 29.0	- 3 18.9	306 05.2	+ 20 52.3	169 58.9	- 6 43.7					
6	27 26.4	313 07.9	+ 18 02.5	199 30.2	- 3 19.5	321 07.1	+ 20 52.4	185 01.3	- 6 43.7					
7	42 28.9	328 08.7	02.7	214 31.4	20.1	336 09.1	52.5	200 03.7	43.8					
8	57 31.4	343 09.6	02.9	229 32.5	20.7	351 11.0	52.5	215 06.1	43.8					
9	72 33.8	358 10.4	03.1	244 33.7	21.3	6 13.0	52.6	230 08.4	43.9					
10	87 36.3	13 11.2	03.3	259 34.9	21.9	21 15.0	52.7	245 10.8	43.9					
11	102 38.7	28 12.0	+ 18 03.5	274 36.1	- 3 22.5	36 16.9	+ 20 52.8	260 13.2	- 6 43.9					
12	117 41.2	43 12.9	+ 18 03.7	289 37.2	- 3 23.1	51 18.9	+ 20 52.8	275 15.6	- 6 44.0					
13	132 43.7	58 13.7	03.9	304 38.4	23.7	66 20.8	52.9	290 17.9	44.0					
14	147 46.1	73 14.5	04.1	319 39.6	24.3	81 22.8	53.0	305 20.3	44.1					
15	162 48.6	88 15.3	04.4	334 40.8	24.9	96 24.8	53.1	320 22.7	44.1					
16	177 51.1	103 16.1	04.6	349 41.9	25.5	111 26.7	53.1	335 25.1	44.2					
17	192 53.5	118 17.0	+ 18 04.8	4 43.1	- 3 26.1	126 28.7	+ 20 53.2	350 27.4	- 6 44.2					
18	207 56.0	133 17.8	+ 18 05.0	19 44.3	- 3 26.7	141 30.6	+ 20 53.3	5 29.8	- 6 44.3					
19	222 58.5	148 18.6	05.2	34 45.5	27.3	156 32.6	53.4	20 32.2	44.3					
20	238 00.9	163 19.4	05.4	49 46.6	27.9	171 34.6	53.4	35 34.6	44.4					
21	253 03.4	178 20.2	05.6	64 47.8	28.5	186 36.5	53.5	50 36.9	44.4					
22	268 05.8	193 21.0	05.8	79 49.0	29.1	201 38.5	53.6	65 39.3	44.5					
23	283 08.3	208 21.8	06.0	94 50.1	29.7	216 40.4	53.7	80 41.7	44.5					
24	298 10.8	223 22.6	+ 18 06.3	109 51.3	- 3 30.3	231 42.4	+ 20 53.7	95 44.1	- 6 44.5					
Dif	—	+8	+2	+12	-6	+20	+1	+24	0					

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SÁBADO 21 DE JULIO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15:7 PMG: 12 ^h 06 ^m 4		SD: 15:5 Edad: 1 ^d 8		PHE { 4 ^h : 56/9 12 ^h : 57/1 20 ^h : 57/2			PMG: 13 ^h 55 ^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	178	23.8	+ 20	25.7	157	57.0	+ 9	58.5	60 N	2 06	3 17	6 40	84	20 49	13	
1	193	23.7		25.2	172	28.1		47.7	58	32	32	45	82	46	15	
2	208	23.7		24.8	186	59.2		36.8	56	1 20	2 52	50	78	43	17	
3	223	23.7		24.3	201	30.3		25.8	54	1 55	3 08	54	76	41	19	
4	238	23.7		23.8	216	01.4		14.8	52	2 19	22	4 06	6 57	38	22	
5	253	23.6	+ 20	23.3	230	32.5	+ 9	03.7	50	2 38	3 34	4 15	7 01	72	20 36	
6	268	23.6	+ 20	22.8	245	03.7	+ 8	52.6	45	3 13	3 59	4 34	7 08	68	20 31	
7	283	23.6		22.3	259	34.8		41.4	40	38	4 18	4 49	13	65	27	
8	298	23.5		21.8	274	06.0		30.2	35	3 58	33	5 02	18	62	24	
9	313	23.5		21.3	288	37.2		19.0	30	4 14	4 46	13	23	59	21	
10	328	23.5		20.8	303	08.3	+ 8	07.6	20	39	5 08	32	31	55	16	
11	343	23.5	+ 20	20.3	317	39.5	+ 7	56.3	10 N	4 59	5 25	5 48	7 37	51	20 11	
12	358	23.4	+ 20	19.9	332	10.7	+ 7	44.9	0	5 15	5 41	6 03	7 44	47	20 06	
13	13	23.4		19.4	346	41.9		33.4	10 S	30	5 55	18	50	44	20 02	
14	28	23.4		18.9	1	13.1		21.9	20	43	6 10	34	7 57	40	19 57	
15	43	23.3		18.4	15	44.3	+ 7	10.4	30	5 57	26	6 52	8 04	36	51	
16	58	23.3		17.9	30	15.5	+ 6	58.8	35	6 04	35	7 02	08	34	48	
17	73	23.3	+ 20	17.4	44	46.8	+ 6	47.2	40	6 12	6 45	7 14	8 13	31	19 44	
18	88	23.3	+ 20	16.9	59	18.0	+ 6	35.5	45	6 20	6 56	7 28	8 19	28	19 40	
19	103	23.2		16.4	73	49.2		23.8	50	29	7 09	45	26	23	35	
20	118	23.2		15.9	88	20.5		12.1	52	33	15	7 53	29	22	32	
21	133	23.2		15.4	102	51.7	+ 6	00.3	54	37	21	8 02	32	20	30	
22	148	23.2		14.9	117	22.9	+ 5	48.5	56	42	29	12	36	18	27	
23	163	23.1		14.4	131	54.2		36.6	58	47	37	24	40	16	24	
24	178	23.1	+ 20	13.9	146	25.4	+ 5	24.7	60 S	6 52	7 46	8 37	8 45	13	19 20	
UT	ARIES PMG: 4 ^h 02 ^m 7		VENUS Mag.: -4.5 PMG: 9 ^h 05 ^m		MARTE Mag.: +1.0 PMG: 16 ^h 37 ^m		JÚPITER Mag.: -2.1 PMG: 8 ^h 29 ^m		SATURNO Mag.: +0.8 PMG: 17 ^h 30 ^m							
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♏	Dec	hG ♐	Dec	hG ♑	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	299	09.9	223	41.2	+ 18	11.4	110	19.3	- 3	232	29.5	+ 20	55.5	96	41.0	- 6
1	314	12.4	238	41.9		11.6	125	20.5		247	31.5		55.6	111	43.4	
2	329	14.8	253	42.7		11.9	140	21.7		262	33.5		55.7	126	45.8	
3	344	17.3	268	43.4		12.1	155	22.8		277	35.4		55.7	141	48.1	
4	359	19.8	283	44.2		12.3	170	24.0		292	37.4		55.8	156	50.5	
5	14	22.2	298	44.9	+ 18	12.5	185	25.1	- 3	307	39.4	+ 20	55.9	171	52.9	- 6
6	29	24.7	313	45.7	+ 18	12.7	200	26.3	- 3	322	41.3	+ 20	56.0	186	55.2	- 6
7	44	27.2	328	46.4		13.0	215	27.5		337	43.3		56.0	201	57.6	
8	59	29.6	343	47.1		13.2	230	28.6		352	45.3		56.1	217	00.0	
9	74	32.1	358	47.9		13.4	245	29.8		7	47.2		56.2	232	02.4	
10	89	34.6	13	48.6		13.6	260	31.0		22	49.2		56.3	247	04.7	
11	104	37.0	28	49.3	+ 18	13.8	275	32.1	- 3	37	51.2	+ 20	56.3	262	07.1	- 6
12	119	39.5	43	50.1	+ 18	14.1	290	33.3	- 3	52	53.1	+ 20	56.4	277	09.5	- 6
13	134	41.9	58	50.8		14.3	305	34.4		67	55.1		56.5	292	11.8	
14	149	44.4	73	51.5		14.5	320	35.6		82	57.1		56.6	307	14.2	
15	164	46.9	88	52.2		14.7	335	36.8		97	59.0		56.6	322	16.6	
16	179	49.3	103	53.0		14.9	350	37.9		113	01.0		56.7	337	18.9	
17	194	51.8	118	53.7	+ 18	15.2	5	39.1	- 3	128	03.0	+ 20	56.8	352	21.3	- 6
18	209	54.3	133	54.4	+ 18	15.4	20	40.2	- 3	143	05.0	+ 20	56.8	7	23.7	- 6
19	224	56.7	148	55.1		15.6	35	41.4		158	06.9		56.9	22	26.0	
20	239	59.2	163	55.8		15.8	50	42.6		173	08.9		57.0	37	28.4	
21	255	01.7	178	56.5		16.0	65	43.7		188	10.9		57.1	52	30.8	
22	270	04.1	193	57.2		16.3	80	44.9		203	12.8		57.1	67	33.1	
23	285	06.6	208	57.9		16.5	95	46.0		218	14.8		57.2	82	35.5	
24	300	09.1	223	58.6	+ 18	16.7	110	47.2	- 3	233	16.8	+ 20	57.3	97	37.9	- 6
Dif	—		+7	+2			+12	-6		+20		+1		+24		0


DOMINGO 22 DE JULIO DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 15'7		SD: 15'6 Edad: 2 ^d 8												
	PMG: 12 ^h 06 ^m 5		PMG: 14 ^h 43 ^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
0	178 23.1	+ 20 13.9	146 25.4		+ 5 24.7	119	60 N	20 53	22 01	** **	8 04 86		21 02 12		
1	193 23.1	13.4	160 56.7	123	12.8	119	58	38	21 37	** **	07 82		01 15		
2	208 23.1	12.9	175 27.9	122	+ 5 00.8	120	56	25	17	22 44	08 80		00 18		
3	223 23.0	12.4	189 59.2	123	+ 4 48.8	120	54	14	21 02	22 12	10 78		00 19		
4	238 23.0	11.9	204 30.4	122	36.8	120	52	20 05	20 48	21 49	12 75		21 00 21		
5	253 23.0	+ 20 11.4	219 01.6	122	+ 4 24.8	120	50	19 56	20 36	21 31	8 13 73		20 59 23		
6	268 23.0	+ 20 10.9	233 32.9	123	+ 4 12.7	121	45	19 38	20 13	20 57	8 16 69		20 58 28		
7	283 23.0	10.4	248 04.1	122	+ 4 00.6	121	40	23	19 54	33	18 66		58 30		
8	298 22.9	09.9	262 35.3	122	+ 3 48.5	121	35	19 10	39	20 13	20 63		57 34		
9	313 22.9	09.4	277 06.6	123	36.3	122	30	18 59	26	19 58	22 60		57 36		
10	328 22.9	08.9	291 37.8	122	24.1	122	20	41	19 05	33	26 55		56 40		
11	343 22.9	+ 20 08.4	306 09.0	122	+ 3 11.9	122	10 N	18 25	18 47	19 14	8 28 52		20 55 44		
12	358 22.9	+ 20 07.9	320 40.2	122	+ 2 59.7	122	0	18 10	18 32	18 58	8 31 48		20 54 48		
13	13 22.8	07.3	335 11.4	122	47.4	123	10 S	17 55	18	43	34 44		53 52		
14	28 22.8	06.8	349 42.6	122	35.1	123	20	40	18 03	30	37 40		52 56		
15	43 22.8	06.3	4 13.8	122	22.8	123	30	22	17 48	17	40 36		51 61		
16	58 22.8	05.8	18 44.9	121	+ 2 10.5	123	35	12	39	10	42 33		50 64		
17	73 22.7	+ 20 05.3	33 16.1	122	+ 1 58.2	123	40	17 00	17 29	18 02	8 44 30		20 50 66		
18	88 22.7	+ 20 04.8	47 47.2	121	+ 1 45.9	123	45	16 46	17 18	17 54	8 47 26		20 49 70		
19	103 22.7	04.3	62 18.4	122	33.5	124	50	29	06	46	49 23		48 74		
20	118 22.7	03.8	76 49.5	121	21.1	124	52	21	17 00	42	51 21		47 76		
21	133 22.7	03.3	91 20.6	121	+ 1 08.7	124	54	12	16 53	37	52 19		47 78		
22	148 22.7	02.8	105 51.7	121	+ 0 56.3	124	56	16 03	46	33	54 17		46 81		
23	163 22.6	02.2	120 22.8	121	43.9	124	58	15 51	38	28	56 14		46 83		
24	178 22.6	+ 20 01.7	134 53.8	120	+ 0 31.5	124	60 S	15 38	16 29	17 23	8 58 12		20 45 86		
UT	ARIES PMG: 3 ^h 58 ^m 7		VENUS Mag.: -4.4 PMG: 9 ^h 04 ^m		MARTE Mag.: +1.0 PMG: 16 ^h 36 ^m		JÚPITER Mag.: -2.1 PMG: 8 ^h 26 ^m				SATURNO Mag.: +0.8 PMG: 17 ^h 27 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec		
	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /		
h	300 09.1	223 58.6	+ 18 16.7	110 47.2	- 3 59.0	233 16.8	+ 20 57.3	97 37.9	- 6 46.9						
1	315 11.5	238 59.3	16.9	125 48.3	- 3 59.6	248 18.7	57.4	112 40.2	46.9						
2	330 14.0	254 00.0	17.2	140 49.5	- 4 00.2	263 20.7	57.4	127 42.6	46.9						
3	345 16.4	269 00.7	17.4	155 50.7	00.8	278 22.7	57.5	142 45.0	47.0						
4	0 18.9	284 01.4	17.6	170 51.8	01.4	293 24.6	57.6	157 47.3	47.0						
5	15 21.4	299 02.1	+ 18 17.8	185 53.0	- 4 02.0	308 26.6	+ 20 57.6	172 49.7	- 6 47.1						
6	30 23.8	314 02.8	+ 18 18.1	200 54.1	- 4 02.6	323 28.6	+ 20 57.7	187 52.1	- 6 47.1						
7	45 26.3	329 03.5	18.3	215 55.3	03.2	338 30.6	57.8	202 54.4	47.2						
8	60 28.8	344 04.2	18.5	230 56.4	03.8	353 32.5	57.9	217 56.8	47.2						
9	75 31.2	359 04.9	18.7	245 57.6	04.4	8 34.5	57.9	232 59.2	47.3						
10	90 33.7	14 05.6	18.9	260 58.8	05.0	23 36.5	58.0	248 01.5	47.3						
11	105 36.2	29 06.3	+ 18 19.2	275 59.9	- 4 05.6	38 38.4	+ 20 58.1	263 03.9	- 6 47.4						
12	120 38.6	44 06.9	+ 18 19.4	291 01.1	- 4 06.2	53 40.4	+ 20 58.1	278 06.3	- 6 47.4						
13	135 41.1	59 07.6	19.6	306 02.2	06.8	68 42.4	58.2	293 08.6	47.5						
14	150 43.6	74 08.3	19.8	321 03.4	07.4	83 44.4	58.3	308 11.0	47.5						
15	165 46.0	89 09.0	20.1	336 04.5	08.0	98 46.3	58.4	323 13.4	47.6						
16	180 48.5	104 09.7	20.3	351 05.7	08.6	113 48.3	58.4	338 15.7	47.6						
17	195 50.9	119 10.3	+ 18 20.5	6 06.8	- 4 09.2	128 50.3	+ 20 58.5	353 18.1	- 6 47.7						
18	210 53.4	134 11.0	+ 18 20.7	21 08.0	- 4 09.8	143 52.2	+ 20 58.6	8 20.5	- 6 47.7						
19	225 55.9	149 11.7	21.0	36 09.1	10.4	158 54.2	58.6	23 22.8	47.8						
20	240 58.3	164 12.3	21.2	51 10.3	11.0	173 56.2	58.7	38 25.2	47.8						
21	256 00.8	179 13.0	21.4	66 11.4	11.6	188 58.2	58.8	53 27.6	47.9						
22	271 03.3	194 13.7	21.6	81 12.6	12.2	204 00.1	58.9	68 29.9	47.9						
23	286 05.7	209 14.3	21.9	96 13.8	12.8	219 02.1	58.9	83 32.3	48.0						
24	301 08.2	224 15.0	+ 18 22.1	111 14.9	- 4 13.4	234 04.1	+ 20 59.0	98 34.7	- 6 48.1						
Dif	—	+7	+2	+12	-6	+20	+1	+24	0						

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LUNES 23 DE JULIO DE 2012

UT	SOL			 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'7 PMG: 12 ^h 06 ^m 5			SD: 15'7 Edad: 3 ^d 8 PHE { 4 ^h : 57'9 12 ^h : 58'0 20 ^h : 58'2													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	178	22.6	+ 20	134	53.8	+ 0	31.5	60 N	** **	2	12	3	21	9	30	87	
1	193	22.6		149	24.9		19.0	58	** **		37		36		29	84	
2	208	22.6		163	55.9	+ 0	06.6	56	1	29	2	56	48	28	82	18	
3	223	22.6	+ 20	178	26.9	- 0	05.9	54	2	01	3	12	3	59	28	79	
4	238	22.5	+ 19	192	57.9		18.4	52		24		25	4	09	27	77	
5	253	22.5	+ 19	207	28.9	- 0	30.8	50	2	42	3	37	4	18	9	26	
6	268	22.5	+ 19	221	59.8	- 0	43.3	45	3	16	4	01	4	36	9	25	
7	283	22.5		236	30.8	- 0	55.8	40	3	41		19	4	51	24	67	
8	298	22.5		251	01.7	- 1	08.3	35	4	00		35	5	03	23	64	
9	313	22.5		265	32.6		20.7	30		16	4	47		14	22	62	
10	328	22.5		280	03.4		33.2	20		40	5	08		32	21	57	
11	343	22.4	+ 19	294	34.3	- 1	45.7	10 N	4	59	5	26	5	48	9	20	
12	358	22.4	+ 19	309	05.1	- 1	58.2	0	5	15	5	41	6	03	9	19	
13	13	22.4		323	35.9	- 2	10.6	10 S		30	5	55		18	18	45	
14	28	22.4		338	06.6		23.1	20		43	6	10		33	17	41	
15	43	22.4		352	37.3		35.6	30	5	56		25	6	51	16	36	
16	58	22.4		7	08.0	- 2	48.0	35	6	03		34	7	01	15	34	
17	73	22.4	+ 19	21	38.7	- 3	00.5	40	6	10		6	7	13	9	14	
18	88	22.3	+ 19	36	09.4	- 3	12.9	45	6	18		6	7	26	9	13	
19	103	22.3		50	40.0		25.4	50		27	7	07		43	12	24	
20	118	22.3		65	10.5		37.8	52		31		13	7	51	12	22	
21	133	22.3		79	41.1	- 3	50.2	54		35		19	8	00	11	21	
22	148	22.3		94	11.6	- 4	02.6	56		39		26		09	11	18	
23	163	22.3		108	42.1		15.0	58		44		34		20	10	16	
24	178	22.3	+ 19	123	12.5	- 4	27.3	60 S	6	50	7	42	8	33	9	10	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 3 ^h 54 ^m 8		Mag.: -4.4 PMG: 9 ^h 03 ^m			Mag.: +1.0 PMG: 16 ^h 34 ^m			Mag.: -2.1 PMG: 8 ^h 23 ^m			Mag.: +0.8 PMG: 17 ^h 23 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	301	08.2	224	15.0	+ 18	22.1	111	14.9	- 4	13.4	234	04.1	+ 20	59.0	98	34.7	
1	316	10.7	239	15.6		22.3	126	16.1		14.0	249	06.1		59.1	113	37.0	
2	331	13.1	254	16.3		22.5	141	17.2		14.6	264	08.0		59.1	128	39.4	
3	346	15.6	269	16.9		22.8	156	18.4		15.2	279	10.0		59.2	143	41.7	
4	1	18.0	284	17.6		23.0	171	19.5		15.8	294	12.0		59.3	158	44.1	
5	16	20.5	299	18.2	+ 18	23.2	186	20.7	- 4	16.4	309	13.9	+ 20	59.4	173	46.5	
6	31	23.0	314	18.9	+ 18	23.4	201	21.8	- 4	17.0	324	15.9	+ 20	59.4	188	48.8	
7	46	25.4	329	19.5		23.7	216	23.0		17.6	339	17.9		59.5	203	51.2	
8	61	27.9	344	20.2		23.9	231	24.1		18.2	354	19.9		59.6	218	53.6	
9	76	30.4	359	20.8		24.1	246	25.3		18.8	9	21.8		59.6	233	55.9	
10	91	32.8	14	21.5		24.4	261	26.4		19.4	24	23.8		59.7	248	58.3	
11	106	35.3	29	22.1	+ 18	24.6	276	27.6	- 4	20.1	39	25.8	+ 20	59.8	264	00.6	
12	121	37.8	44	22.7	+ 18	24.8	291	28.7	- 4	20.7	54	27.8	+ 20	59.9	279	03.0	
13	136	40.2	59	23.4		25.0	306	29.9		21.3	69	29.7	+ 20	59.9	294	05.4	
14	151	42.7	74	24.0		25.3	321	31.0		21.9	84	31.7	+ 21	00.0	309	07.7	
15	166	45.2	89	24.6		25.5	336	32.2		22.5	99	33.7		00.1	324	10.1	
16	181	47.6	104	25.3		25.7	351	33.3		23.1	114	35.7		00.1	339	12.5	
17	196	50.1	119	25.9	+ 18	25.9	6	34.4	- 4	23.7	129	37.6	+ 21	00.2	354	14.8	
18	211	52.5	134	26.5	+ 18	26.2	21	35.6	- 4	24.3	144	39.6	+ 21	00.3	9	17.2	
19	226	55.0	149	27.2		26.4	36	36.7		24.9	159	41.6		00.3	24	19.5	
20	241	57.5	164	27.8		26.6	51	37.9		25.5	174	43.6		00.4	39	21.9	
21	256	59.9	179	28.4		26.8	66	39.0		26.1	189	45.6		00.5	54	24.3	
22	272	02.4	194	29.0		27.1	81	40.2		26.7	204	47.5		00.6	69	26.6	
23	287	04.9	209	29.6		27.3	96	41.3		27.3	219	49.5		00.6	84	29.0	
24	302	07.3	224	30.2	+ 18	27.5	111	42.5	- 4	27.9	234	51.5	+ 21	00.7	99	31.3	
Dif	—		+6		+2		+11		-6		+20		+1		+24		-1

MARTES 24 DE JULIO DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 15/7 PMG: 12 ^h 06 ^m 5			SD: 15/9 Edad: 4 ^d 8 PMG: 16 ^h 20 ^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	^h ^m	^h ^m	^h ^m	
0	178	22.3	+19	49.2	123	12.5	-4	27.3	60 N	20 48	21 55	10 57	89	21 27	16	
1	193	22.3		48.7	137	42.9 ¹¹⁴		39.7	58	34	32	53	86	32	19	
2	208	22.2		48.2	152	13.3 ¹¹⁴	-4	52.0	56	22	21 13	50	82	36	22	
3	223	22.2		47.6	166	43.6 ¹¹³	-5	04.4	54	11	20 58	47	80	40	24	
4	238	22.2		47.1	181	13.9 ¹¹³		16.6	52	20 02	45	44	78	44	26	
5	253	22.2	+19	46.6	195	44.2 ¹¹³	-5	28.9	50	19 53	20 33	21 27	10 41	76	21 47	
6	268	22.2	+19	46.1	210	14.4 ¹¹²	-5	41.2	45	19 36	20 10	20 54	10 36	71	21 54	
7	283	22.2		45.5	224	44.6 ¹¹²	-5	53.4	40	21	19 52	30	31	68	22 00	
8	298	22.2		45.0	239	14.7 ¹¹¹	-6	05.6	35	19 09	37	20 12	27	66	05	
9	313	22.2		44.5	253	44.8 ¹¹¹		17.8	30	18 58	25	19 56	24	62	10	
10	328	22.2		43.9	268	14.8 ¹¹⁰		29.9	20	40	19 04	32	18	58	18	
11	343	22.2	+19	43.4	282	44.8 ¹¹⁰	-6	42.1	10 N	18 25	18 47	19 13	10 13	54	22 25	
12	358	22.1	+19	42.9	297	14.8 ¹¹⁰	-6	54.2	0	18 10	18 32	18 58	10 08	51	22 32	
13	13	22.1		42.3	311	44.7 ¹⁰⁹	-7	06.2	10 S	17 56	18	44	10 03	47	38	
14	28	22.1		41.8	326	14.6 ¹⁰⁹		18.3	20	40	18 04	31	9	58	43	
15	43	22.1		41.3	340	44.4 ¹⁰⁸		30.3	30	23	17 49	18	52	39	53	
16	58	22.1		40.7	355	14.2 ¹⁰⁸		42.2	35	13	40	11	49	37	22	
17	73	22.1	+19	40.2	9	43.9 ¹⁰⁷	-7	54.2	40	17 02	17 31	18 04	9	46	33	
18	88	22.1	+19	39.6	24	13.6 ¹⁰⁷	-8	06.0	45	16 48	17 20	17 56	9	41	30	
19	103	22.1		39.1	38	43.2 ¹⁰⁶		17.9	50	32	08	48	36	26	17	
20	118	22.1		38.6	53	12.8 ¹⁰⁶		29.7	52	24	17 02	44	34	24	21	
21	133	22.1		38.0	67	42.3 ¹⁰⁵		41.5	54	15	16 56	40	32	22	24	
22	148	22.1		37.5	82	11.8 ¹⁰⁵	-8	53.2	56	16 06	49	36	29	20	29	
23	163	22.1		36.9	96	41.2 ¹⁰⁴	-9	04.9	58	15 55	41	31	26	17	33	
24	178	22.1	+19	36.4	111	10.6 ¹⁰⁴	-9	16.6	60 S	15 42	16 33	17 26	9	22	15	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 3 ^h 50 ^m 9		Mag.: -4.4 PMG: 9 ^h 02 ^m			Mag.: +1.0 PMG: 16 ^h 32 ^m			Mag.: -2.1 PMG: 8 ^h 19 ^m			Mag.: +0.8 PMG: 17 ^h 19 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
^h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	
0	302	07.3	224	30.2	+18	27.5	111	42.5	-4	27.9	234	51.5	+21	00.7	99	31.3
1	317	09.8		30.9		27.8	126	43.6		28.5	249	53.5		00.8	114	33.7
2	332	12.3		31.5		28.0	141	44.8		29.1	264	55.4		00.8	129	36.1
3	347	14.7		32.1		28.2	156	45.9		29.7	279	57.4		00.9	144	38.4
4	2	17.2		32.7		28.4	171	47.0		30.3	294	59.4		01.0	159	40.8
5	17	19.6		33.3	+18	28.7	186	48.2	-4	30.9	310	01.4	+21	01.0	174	43.1
6	32	22.1		33.9	+18	28.9	201	49.3	-4	31.5	325	03.4	+21	01.1	189	45.5
7	47	24.6		34.5		29.1	216	50.5		32.1	340	05.3		01.2	204	47.9
8	62	27.0		35.1		29.4	231	51.6		32.7	355	07.3		01.3	219	50.2
9	77	29.5		35.7		29.6	246	52.8		33.3	10	09.3		01.3	234	52.6
10	92	32.0		36.3		29.8	261	53.9		33.9	25	11.3		01.4	249	54.9
11	107	34.4		36.9	+18	30.0	276	55.1	-4	34.5	40	13.2	+21	01.5	264	57.3
12	122	36.9		37.5	+18	30.3	291	56.2	-4	35.1	55	15.2	+21	01.5	279	59.7
13	137	39.4		38.1		30.5	306	57.3		35.7	70	17.2		01.6	295	02.0
14	152	41.8		38.7		30.7	321	58.5		36.3	85	19.2		01.7	310	04.4
15	167	44.3		39.3		31.0	336	59.6		36.9	100	21.2		01.7	325	06.7
16	182	46.8		39.8		31.2	352	00.8		37.5	115	23.1		01.8	340	09.1
17	197	49.2		40.4	+18	31.4	7	01.9	-4	38.1	130	25.1	+21	01.9	355	11.4
18	212	51.7		41.0	+18	31.6	22	03.0	-4	38.7	145	27.1	+21	01.9	10	13.8
19	227	54.1		41.6		31.9	37	04.2		39.3	160	29.1		02.0	25	16.2
20	242	56.6		42.2		32.1	52	05.3		39.9	175	31.1		02.1	40	18.5
21	257	59.1		42.7		32.3	67	06.5		40.5	190	33.0		02.2	55	20.9
22	273	01.5		43.3		32.6	82	07.6		41.1	205	35.0		02.2	70	23.2
23	288	04.0		43.9		32.8	97	08.7		41.7	220	37.0		02.3	85	25.6
24	303	06.5		44.5	+18	33.0	112	09.9	-4	42.3	235	39.0	+21	02.4	100	27.9
Dif	—		+6		+2		+11		-6		+20		+1		+24	-1

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MIÉRCOL 25 DE JULIO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 5		SD: 16 ^h 0 Edad: 5 ^d 8 PHE { 4 ^h : 58 ^m /7 12 ^h : 58 ^m /8 20 ^h : 59 ^m /0 PMG: 17 ^h 11 ^m R°: 54 ^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 22.1	+ 19 36.4	111 10.6		− 9 16.6		60 N	** **	2 19	3 25	12 26 89	21 43 21		
1	193 22.1		125 39.9	103	28.2	116	58	0 44	2 42	40	19 86	51 24		
2	208 22.1		140 09.2	103	39.8	116	56	1 37	3 00	3 52	12 84	21 58 27		
3	223 22.0		154 38.4	102	− 9 51.3	115	54	2 07	16	4 02	07 81	22 04 29		
4	238 22.0		169 07.5	101	− 10 02.7	114	52		29	12	12 02 79	10 31		
5	253 22.0	+ 19 33.7	183 36.6	101	− 10 14.1	114	50	2 46	3 40	4 20	11 57 77	22 15 33		
6	268 22.0	+ 19 33.1	198 05.6	100	− 10 25.5	114	45	3 19	4 03	4 38	11 47 73	22 26 37		
7	283 22.0		212 34.6	100		113	40	3 43	21	4 52	39 70	35 40		
8	298 22.0		227 03.5	99		113	35	4 02	36	5 04	33 66	43 43		
9	313 22.0		241 32.4	99	− 10 59.3	112	30		17	4 49	26 65	22 50 45		
10	328 22.0		256 01.2	98	− 11 10.4	111	20	4 41	5 09	33	16 60	23 03 48		
11	343 22.0	+ 19 30.4	270 29.9	97	− 11 21.5	111	10 N	5 00	5 26	5 49	11 07 57	23 13 52		
12	358 22.0	+ 19 29.9	284 58.6	97	− 11 32.6	111	0	5 16	5 41	6 03	10 59 53	23 24 54		
13	13 22.0		299 27.2	96		109	10 S	29	5 55	17	50 50	34 57		
14	28 22.0		313 55.8	96	− 11 54.4	109	20	42	6 09	32	41 47	45 60		
15	43 22.0		328 24.3	95	− 12 05.3	109	30	5 55	24	6 50	31 43	23 57 65		
16	58 22.0		342 52.7	94		108	35	6 02	33	7 00	26 40	** ** *		
17	73 22.0	+ 19 27.1	357 21.1	94	− 12 26.8	107	40	6 09	6 42	7 11	10 19 37	** ** *		
18	88 22.0	+ 19 26.6	11 49.4	93	− 12 37.5	107	45	6 16	6 52	7 24	10 11 35	** ** *		
19	103 22.0		26 17.6	92		105	50	25	7 05	41	10 02 31	** ** *		
20	118 22.0		40 45.8	92	− 12 58.6	106	52	29	10	48	9 58 29	** ** *		
21	133 22.0		55 13.9	91	− 13 09.0	104	54	33	16	7 57	54 26	** ** *		
22	148 22.0		69 42.0	91		104	56	37	23	8 06	49 24	** ** *		
23	163 22.0		84 09.9	89		103	58	41	31	17	43 22	** ** *		
24	178 22.0	+ 19 23.3	98 37.9	90	− 13 39.9	102	60 S	6 47	7 39	8 29	9 37 18	** ** *		
UT	ARIES PMG 3 ^h 46 ^m 9		VENUS Mag.: −4.4 PMG: 9 ^h 01 ^m		MARTE Mag.: +1.0 PMG: 16 ^h 30 ^m		JÚPITER Mag.: −2.1 PMG: 8 ^h 16 ^m		SATURNO Mag.: +0.8 PMG: 17 ^h 15 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	°	'	°	'	°	'	°	'	°	'				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	303 06.5		224 44.5	+ 18 33.0	112 09.9	− 4 42.3	235 39.0	+ 21 02.4	100 27.9	− 6 50.5				
1	318 08.9		239 45.0	33.2	127 11.0	42.9	250 41.0	02.4	115 30.3	50.6				
2	333 11.4		254 45.6	33.5	142 12.2	43.6	265 42.9	02.5	130 32.7	50.7				
3	348 13.9		269 46.2	33.7	157 13.3	44.2	280 44.9	02.6	145 35.0	50.7				
4	3 16.3		284 46.7	33.9	172 14.4	44.8	295 46.9	02.6	160 37.4	50.8				
5	18 18.8		299 47.3	+ 18 34.2	187 15.6	− 4 45.4	310 48.9	+ 21 02.7	175 39.7	− 6 50.8				
6	33 21.3		314 47.9	+ 18 34.4	202 16.7	− 4 46.0	325 50.9	+ 21 02.8	190 42.1	− 6 50.9				
7	48 23.7		329 48.4	34.6	217 17.9	46.6	340 52.9	02.8	205 44.4	50.9				
8	63 26.2		344 49.0	34.8	232 19.0	47.2	355 54.8	02.9	220 46.8	51.0				
9	78 28.6		359 49.5	35.1	247 20.1	47.8	10 56.8	03.0	235 49.1	51.0				
10	93 31.1		14 50.1	35.3	262 21.3	48.4	25 58.8	03.0	250 51.5	51.1				
11	108 33.6		29 50.6	+ 18 35.5	277 22.4	− 4 49.0	41 00.8	+ 21 03.1	265 53.9	− 6 51.1				
12	123 36.0		44 51.2	+ 18 35.8	292 23.5	− 4 49.6	56 02.8	+ 21 03.2	280 56.2	− 6 51.2				
13	138 38.5		59 51.7	36.0	307 24.7	50.2	71 04.8	03.2	295 58.6	51.2				
14	153 41.0		74 52.3	36.2	322 25.8	50.8	86 06.7	03.3	311 00.9	51.3				
15	168 43.4		89 52.8	36.4	337 26.9	51.4	101 08.7	03.4	326 03.3	51.3				
16	183 45.9		104 53.4	36.7	352 28.1	52.0	116 10.7	03.4	341 05.6	51.4				
17	198 48.4		119 53.9	+ 18 36.9	7 29.2	− 4 52.6	131 12.7	+ 21 03.5	356 08.0	− 6 51.5				
18	213 50.8		134 54.5	+ 18 37.1	22 30.3	− 4 53.2	146 14.7	+ 21 03.6	11 10.3	− 6 51.5				
19	228 53.3		149 55.0	37.4	37 31.5	53.8	161 16.7	03.7	26 12.7	51.6				
20	243 55.7		164 55.5	37.6	52 32.6	54.4	176 18.6	03.7	41 15.0	51.6				
21	258 58.2		179 56.1	37.8	67 33.7	55.0	191 20.6	03.8	56 17.4	51.7				
22	274 00.7		194 56.6	38.0	82 34.9	55.6	206 22.6	03.9	71 19.8	51.7				
23	289 03.1		209 57.1	38.3	97 36.0	56.2	221 24.6	03.9	86 22.1	51.8				
24	304 05.6		224 57.7	+ 18 38.5	112 37.1	− 4 56.8	236 26.6	+ 21 04.0	101 24.5	− 6 51.8				
Dif	—		+6	+2	+11	−6	+20	+1	+24	−1				

JUEVES 26 DE JULIO DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna			
	SD: 15 ^h 7 PMG: 12 ^h 06 ^m 5			SD: 16 ^h 1 Edad: 6 ^d 8 PHE { 4 ^h : 59 ^h 1 12 ^h : 59 ^h 2 20 ^h : 59 ^h 3 PMG: 18 ^h 05 ^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	^h ^m ^m			
0	178 22.0	+ 19 23.3		98 37.9	88	- 13 39.9	102	60 N	20 44	21 48	** **	13 55	88	22 04	29		
1	193 22.0		22.7	113 05.7	88	- 13 50.1	101	58	30	26	23 12	45	84	15	33		
2	208 22.0		22.1	127 33.5		- 14 00.2		56	18	21 09	22 28	36	81	25	35		
3	223 22.0		21.6	142 01.2		10.2	100	54	20 08	20 54	22 01	28	79	33	37		
4	238 22.0		21.0	156 28.9		87	99	52	19 59	41	21 40	21	77	41	39		
5	253 22.0	+ 19 20.5		170 56.4	85	- 14 29.9	98	50	19 51	20 30	21 23	13 14	76	22 48	41		
6	268 22.0	+ 19 19.9		185 23.9	85	- 14 39.7	98	45	19 33	20 08	20 52	13 00	72	23 03	44		
7	283 22.0		19.4	199 51.4		49.4	97	40	19	19 50	28	12 49	69	15	46		
8	298 22.0		18.8	214 18.8		84	96	35	19 07	36	20 10	39	67	26	48		
9	313 22.0		18.2	228 46.1		83	95	30	18 57	23	19 55	31	65	35	50		
10	328 22.0		17.7	243 13.3		82	94	20	39	19 03	31	16	62	23 51	53		
11	343 22.0	+ 19 17.1		257 40.5	82	- 15 27.2	93	10 N	18 24	18 47	19 13	12 04	58	** * *	** *		
12	358 22.0	+ 19 16.6		272 07.6	81	- 15 36.5	93	0	18 10	18 32	18 57	11 52	56	** * *	** *		
13	13 22.1		16.0	286 34.6		45.6	91	10 S	17 56	18	44	40	54	** * *	** *		
14	28 22.1		15.4	301 01.6		80	91	20	41	18 04	31	28	50	** * *	** *		
15	43 22.1		14.9	315 28.5		79	90	30	24	17 50	19	14	47	** * *	** *		
16	58 22.1		14.3	329 55.3		78	88	35	14	41	12	11 06	45	0 04	67		
17	73 22.1	+ 19 13.7		344 22.1	78	- 16 21.3	88	40	17 03	17 32	18 05	10 56	43	0 12	70		
18	88 22.1	+ 19 13.2		358 48.8	77	- 16 30.0	87	45	16 50	17 22	17 58	10 46	40	0 22	72		
19	103 22.1		12.6	13 15.4		38.6	86	50	34	10	50	33	36	34	76		
20	118 22.1		12.1	27 41.9		75	85	52	27	17 05	46	27	35	39	78		
21	133 22.1		11.5	42 08.4		75	84	54	19	16 59	42	20	33	45	80		
22	148 22.1		10.9	56 34.8		74	83	56	16 09	52	38	13	31	52	82		
23	163 22.1		10.4	71 01.2		74	81	58	15 59	45	34	10 05	28	0 59	86		
24	178 22.1	+ 19 09.8		85 27.4	72	- 17 20.0	81	60 S	15 46	16 36	17 29	9 55	25	1 08	89		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG 3 ^h 43 ^m 0		Mag.: -4.4 PMG: 9 ^h 00 ^m		Mag.: +1.0 PMG: 16 ^h 28 ^m		Mag.: -2.1 PMG: 8 ^h 13 ^m		Mag.: +0.8 PMG: 17 ^h 12 ^m								
	hG ♈	Dec	hG ♊	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
^h	[°] / [°]	[°] / [°]	[°] / [°]	[°] / [°]	[°] / [°]	[°] / [°]	[°] / [°]	[°] / [°]	[°] / [°]	[°] / [°]	[°] / [°]	[°] / [°]	[°] / [°]	[°] / [°]	[°] / [°]	[°] / [°]	
0	304 05.6	224 57.7	+ 18 38.5	112 37.1	- 4 56.8	236 26.6	+ 21 04.0	101 24.5	- 6 51.8								
1	319 08.1	239 58.2		127 38.3		251 28.6		116 26.8									
2	334 10.5	254 58.7		142 39.4		266 30.6		131 29.2									
3	349 13.0	269 59.3		157 40.5		281 32.5		146 31.5									
4	4 15.5	284 59.8		172 41.7		296 34.5		161 33.9									
5	19 17.9	300 00.3	+ 18 39.6	187 42.8	- 4 59.9	311 36.5	+ 21 04.3	176 36.2	- 6 52.1								
6	34 20.4	315 00.8	+ 18 39.9	202 43.9	- 5 00.5	326 38.5	+ 21 04.4	191 38.6	- 6 52.2								
7	49 22.9	330 01.3		217 45.1		341 40.5		206 40.9									
8	64 25.3	345 01.9		232 46.2		356 42.5		221 43.3									
9	79 27.8	0 02.4		247 47.3		11 44.5		236 45.6									
10	94 30.2	15 02.9		262 48.5		26 46.4		251 48.0									
11	109 32.7	30 03.4	+ 18 41.0	277 49.6	- 5 03.5	41 48.4	+ 21 04.7	266 50.3	- 6 52.4								
12	124 35.2	45 03.9	+ 18 41.2	292 50.7	- 5 04.1	56 50.4	+ 21 04.8	281 52.7	- 6 52.5								
13	139 37.6	60 04.4		307 51.9		71 52.4		296 55.0									
14	154 40.1	75 04.9		322 53.0		86 54.4		311 57.4									
15	169 42.6	90 05.4		337 54.1		101 56.4		326 59.7									
16	184 45.0	105 05.9		352 55.2		116 58.4		342 02.1									
17	199 47.5	120 06.4	+ 18 42.4	7 56.4	- 5 07.1	132 00.4	+ 21 05.1	357 04.4	- 6 52.8								
18	214 50.0	135 06.9	+ 18 42.6	22 57.5	- 5 07.7	147 02.3	+ 21 05.2	12 06.8	- 6 52.8								
19	229 52.4	150 07.4		37 58.6		162 04.3		27 09.1									
20	244 54.9	165 07.9		52 59.8		177 06.3		42 11.5									
21	259 57.4	180 08.4		68 00.9		192 08.3		57 13.8									
22	274 59.8	195 08.9		83 02.0		207 10.3		72 16.2									
23	290 02.3	210 09.4		98 03.1		222 12.3		87 18.5									
24	305 04.7	225 09.9	+ 18 44.0	113 04.3	- 5 11.3	237 14.3	+ 21 05.6	102 20.9	- 6 53.2								
Dif	—	+5	+2	+11	-6	+20	+1	+24	-1								

SÁBADO 28 DE JULIO DE 2012

UT	SOL		☾ LUNA					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 5		SD: 16 ^h 2 Edad: 8 ^d 8		PHE { 4 ^h : 59 ^m /6 12 ^h : 59 ^m /6 20 ^h : 59 ^m /7		PMG: 20 ^h 01 ^m R°: 60 ^m			Civil	Náutico	Hora R°	Hora R°			
	hG ☉	Dec	hG ☾	Dif	Dec	Dif										
h	°	'	°	'	°	'	°	N	h	m	h	m	h	m	h	m
0	178	22.4	+18	56.0	71	38.9	−19	59.7	60	20 39	21 42	** **	16 43	65	23 16	60
1	193	22.4		55.4	86	03.6	57	−20	04.9	52	26	21	22 58	27 64	33	60
2	208	22.4		54.8	100	28.3	57		09.8	49	15	21 04	22 20	13 64	46	61
3	223	22.4		54.3	114	53.0	57		14.7	49	20 05	20 50	21 55	16 01	64	23 59
4	238	22.4		53.7	129	17.6	56		19.4	47	19 56	38	35	15 51	63	** ** *
5	253	22.5	+18	53.1	143	42.1	55	−20	24.0	46	19 48	20 27	21 19	15 41	64	** ** *
6	268	22.5	+18	52.5	158	06.6	55	−20	28.4	44	19 31	20 05	20 49	15 21	63	** ** *
7	283	22.5		51.9	172	31.1	55		32.7	43	17	19 48	26	15 05	63	0 01 54
8	298	22.5		51.3	186	55.5	54		36.9	42	35	19 06	34	14 52	62	14 55
9	313	22.5		50.7	201	19.8	53		40.9	40	30	18 56	22	19 53	40 62	25 56
10	328	22.5		50.2	215	44.1	53		44.8	39	20	39	19 02	30	20 62	0 44 57
11	343	22.6	+18	49.6	230	08.4	53	−20	48.6	38	10 N	18 24	18 46	19 12	14 03	61
12	358	22.6	+18	49.0	244	32.7	53	−20	52.2	36	0	18 10	18 32	18 57	13 47	60
13	13	22.6		48.4	258	56.9	52		55.7	35	10 S	17 56	18	44	31 59	31 61
14	28	22.6		47.8	273	21.0	51	−20	59.0	33	20	42	18 05	32	13 13	60
15	43	22.6		47.2	287	45.1	51	−21	02.2	32	30	25	17 51	20	12 54	58
16	58	22.6		46.6	302	09.2	51		05.2	30	35	16	43	13	42 58	18 64
17	73	22.7	+18	46.0	316	33.3	51	−21	08.1	29	40	17 05	17 34	18 07	12 29	57
18	88	22.7	+18	45.5	330	57.3	50	−21	10.9	28	45	16 52	17 24	18 00	12 14	56
19	103	22.7		44.9	345	21.3	50		13.5	26	50	37	13	17 52	11 55	55
20	118	22.7		44.3	359	45.3	50		16.0	25	52	30	07	49	46 55	13 68
21	133	22.7		43.7	14	09.2	49		18.3	23	54	22	17 01	45	36 54	22 70
22	148	22.8		43.1	28	33.1	49		20.5	22	56	13	16 55	41	24 54	33 71
23	163	22.8		42.5	42	57.0	49		22.5	20	58	16 02	48	37	11 12	52
24	178	22.8	+18	41.9	57	20.9	49	−21	24.4	19	60 S	15 51	16 40	17 32	10 56	52
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG 3 ^h 35 ^m 2		Mag.: −4.4 PMG: 8 ^h 58 ^m			Mag.: +1.1 PMG: 16 ^h 25 ^m			Mag.: −2.1 PMG: 8 ^h 07 ^m			Mag.: +0.8 PMG: 17 ^h 04 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	306	03.9	225	21.2	+18	49.4	113	31.2	−5	25.9	238	02.1	+21	07.2	103	17.2
1	321	06.3	240	21.7		49.6	128	32.4		26.5	253	04.1		07.2	118	19.6
2	336	08.8	255	22.1		49.9	143	33.5		27.1	268	06.1		07.3	133	21.9
3	351	11.3	270	22.5		50.1	158	34.6		27.7	283	08.0		07.4	148	24.3
4	6	13.7	285	23.0		50.3	173	35.7		28.3	298	10.0		07.4	163	26.6
5	21	16.2	300	23.4	+18	50.5	188	36.8	−5	28.9	313	12.0	+21	07.5	178	29.0
6	36	18.7	315	23.9	+18	50.8	203	38.0	−5	29.5	328	14.0	+21	07.6	193	31.3
7	51	21.1	330	24.3		51.0	218	39.1		30.1	343	16.0		07.6	208	33.7
8	66	23.6	345	24.8		51.2	233	40.2		30.7	358	18.0		07.7	223	36.0
9	81	26.1	0	25.2		51.4	248	41.3		31.3	13	20.0		07.8	238	38.4
10	96	28.5	15	25.6		51.7	263	42.4		31.9	28	22.0		07.8	253	40.7
11	111	31.0	30	26.1	+18	51.9	278	43.5	−5	32.5	43	24.0	+21	07.9	268	43.0
12	126	33.5	45	26.5	+18	52.1	293	44.7	−5	33.1	58	26.0	+21	07.9	283	45.4
13	141	35.9	60	26.9		52.3	308	45.8		33.7	73	28.0		08.0	298	47.7
14	156	38.4	75	27.4		52.6	323	46.9		34.3	88	30.0		08.1	313	50.1
15	171	40.8	90	27.8		52.8	338	48.0		35.0	103	32.0		08.1	328	52.4
16	186	43.3	105	28.2		53.0	353	49.1		35.6	118	34.0		08.2	343	54.8
17	201	45.8	120	28.6	+18	53.2	8	50.2	−5	36.2	133	36.0	+21	08.3	358	57.1
18	216	48.2	135	29.1	+18	53.5	23	51.4	−5	36.8	148	38.0	+21	08.3	13	59.5
19	231	50.7	150	29.5		53.7	38	52.5		37.4	163	40.0		08.4	29	01.8
20	246	53.2	165	29.9		53.9	53	53.6		38.0	178	42.0		08.5	44	04.1
21	261	55.6	180	30.3		54.1	68	54.7		38.6	193	44.0		08.5	59	06.5
22	276	58.1	195	30.7		54.4	83	55.8		39.2	208	46.0		08.6	74	08.8
23	292	00.6	210	31.2		54.6	98	56.9		39.8	223	48.0		08.7	89	11.2
24	307	03.0	225	31.6	+18	54.8	113	58.1	−5	40.4	238	50.0	+21	08.7	104	13.5
Dif	—		+4		+2		+11		−6		+20		+1		+23	

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DOMINGO 29 DE JULIO DE 2012

UT	SOL			☾ LUNA					Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15'8 PMG: 12 ^h 06 ^m 5			SD: 16'3 Edad: 9 ^d 8 PHE { 4 ^h : 59'7 12 ^h : 59'7 20 ^h : 59'7 PMG: 21 ^h 01 ^m R°: 60 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	°	'	°	'	°	N	h	m	h	m	h	m	h	m	
0	178	22.8	+ 18	57	20.9	— 21	24.4	18	60	2	32	3	34	17	48	48	*** **	
1	193	22.8		71	44.7	48	26.2	18	58	1	15	2	52	48	31	50	*** **	
2	208	22.8		86	08.6	49	27.8	16	56	1	53	3	09	3	59	17	51	
3	223	22.9		100	32.4	48	29.2	14	54	2	19	24	4	09	17	05	52	
4	238	22.9		114	56.2	48	30.5	13	52	38	36	18	16	54	53	0	09	
5	253	22.9	+ 18	129	19.9	47	31.7	12	50	2	54	3	46	4	26	16	45	
6	268	22.9	+ 18	143	43.7	48	32.7	10	45	3	25	4	08	4	42	16	24	
7	283	22.9		158	07.5	48	33.5	8	40	3	48	25	4	56	16	08	56	
8	298	23.0		172	31.2	47	34.2	7	35	4	05	39	5	07	15	54	57	
9	313	23.0		186	54.9	47	34.8	6	30	20	4	51	17	42	57	21	60	
10	328	23.0		201	18.7	48	35.2	4	20	4	43	5	11	34	22	58	41	
11	343	23.0	+ 18	215	42.4	47	35.4	2	10	5	01	5	27	5	49	15	04	
12	358	23.1	+ 18	230	06.1	47	35.6	2	0	5	16	5	41	6	03	14	47	
13	13	23.1		244	29.8	47	35.5	1	10	29	5	54	17	30	61	2	15	
14	28	23.1		258	53.5	47	35.3	2	20	41	6	08	31	14	13	61	2	50
15	43	23.1		273	17.2	47	35.0	3	30	53	22	47	47	13	52	63	3	10
16	58	23.2		287	41.0	48	34.5	5	35	5	59	30	6	57	40	63	22	60
17	73	23.2	+ 18	302	04.7	47	33.9	6	40	6	06	6	38	7	07	13	26	
18	88	23.2	+ 18	316	28.4	47	33.1	8	45	6	13	6	48	7	20	13	10	
19	103	23.2		330	52.2	48	32.1	10	50	20	7	00	35	12	50	66	4	12
20	118	23.3		345	15.9	47	31.1	10	52	24	05	42	41	66	21	58	21	58
21	133	23.3		359	39.7	48	29.8	13	54	27	11	50	30	67	32	58	32	58
22	148	23.3		14	03.4	47	28.5	13	56	31	17	7	59	18	67	44	57	44
23	163	23.3		28	27.2	48	26.9	16	58	35	24	8	09	12	04	68	4	58
24	178	23.4	+ 18	42	51.0	48	25.3	16	60	6	40	7	32	11	48	68	5	14
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 3 ^h 31 ^m 2			Mag.: -4.4 PMG: 8 ^h 58 ^m			Mag.: +1.1 PMG: 16 ^h 23 ^m			Mag.: -2.1 PMG: 8 ^h 04 ^m			Mag.: +0.8 PMG: 17 ^h 00 ^m					
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'	
0	307	03.0		225	31.6	+ 18	54.8		113	58.1	— 5	40.4	238	50.0	+ 21	08.7	104	13.5
1	322	05.5		240	32.0		55.0		128	59.2		41.0	253	52.0		08.8	119	15.9
2	337	08.0		255	32.4		55.3		144	00.3		41.6	268	54.0		08.8	134	18.2
3	352	10.4		270	32.8		55.5		159	01.4		42.2	283	56.0		08.9	149	20.5
4	7	12.9		285	33.2		55.7		174	02.5		42.8	298	57.9		09.0	164	22.9
5	22	15.3		300	33.6	+ 18	55.9		189	03.6	— 5	43.4	313	59.9	+ 21	09.0	179	25.2
6	37	17.8		315	34.0	+ 18	56.1		204	04.7	— 5	44.0	329	01.9	+ 21	09.1	194	27.6
7	52	20.3		330	34.4		56.4		219	05.9		44.7	344	03.9		09.2	209	29.9
8	67	22.7		345	34.8		56.6		234	07.0		45.3	359	05.9		09.2	224	32.3
9	82	25.2		0	35.2		56.8		249	08.1		45.9	14	07.9		09.3	239	34.6
10	97	27.7		15	35.6		57.0		264	09.2		46.5	29	09.9		09.4	254	36.9
11	112	30.1		30	36.0	+ 18	57.3		279	10.3	— 5	47.1	44	11.9	+ 21	09.4	269	39.3
12	127	32.6		45	36.4	+ 18	57.5		294	11.4	— 5	47.7	59	13.9	+ 21	09.5	284	41.6
13	142	35.1		60	36.8		57.7		309	12.5		48.3	74	15.9		09.5	299	44.0
14	157	37.5		75	37.2		57.9		324	13.6		48.9	89	17.9		09.6	314	46.3
15	172	40.0		90	37.6		58.1		339	14.7		49.5	104	19.9		09.7	329	48.6
16	187	42.5		105	38.0		58.4		354	15.9		50.1	119	21.9		09.7	344	51.0
17	202	44.9		120	38.4	+ 18	58.6		9	17.0	— 5	50.7	134	23.9	+ 21	09.8	359	53.3
18	217	47.4		135	38.7	+ 18	58.8		24	18.1	— 5	51.3	149	25.9	+ 21	09.9	14	55.7
19	232	49.8		150	39.1		59.0		39	19.2		51.9	164	27.9		09.9	29	58.0
20	247	52.3		165	39.5		59.2		54	20.3		52.5	179	29.9		10.0	45	00.3
21	262	54.8		180	39.9		59.5		69	21.4		53.1	194	31.9		10.1	60	02.7
22	277	57.2		195	40.3		59.7		84	22.5		53.7	209	33.9		10.1	75	05.0
23	292	59.7		210	40.7	+ 18	59.9		99	23.6		54.4	224	35.9		10.2	90	07.4
24	308	02.2		225	41.0	+ 19	00.1		114	24.7	— 5	55.0	239	37.9	+ 21	10.2	105	09.7
Dif	—		+4	+2		+2	+11		-6		+20	+1		+23			-1	

LUNES 30 DE JULIO DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna	Puesta de Luna
	SD: 15/8 PMG: 12 ^h 06 ^m 4			SD: 16/3 Edad: 10 ^d 8 PHE { 4 ^h : 59/6 12 ^h : 59/6 20 ^h : 59/5 PMG: 22 ^h 01 ^m R°: 58 ^m									
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°
^h	°	'	°	°	'	°	'	^h ^m	^h ^m	^h ^m	^h ^m	^h ^m	^h ^m
0	178	23.4	+ 18	42	51.0	− 21	25.3	60 N	20 34	21 35	** **	18 36	33
1	193	23.4		57	14.9		23.4	58	22	16	22 47	21 36	0 16
2	208	23.4		71	38.7		21.5	56	11	21 00	22 13	18 08	38
3	223	23.5		86	02.6		19.4	54	20 01	20 46	21 49	17 57	40
4	238	23.5		100	26.5		17.1	52	19 53	34	30	47 42	1 10
5	253	23.5	+ 18	114	50.4	− 21	14.7	50	19 45	20 24	21 15	17 38	43
6	268	23.5	+ 18	129	14.3	− 21	12.1	45	19 29	20 03	20 45	17 19	46
7	283	23.6		143	38.3		09.4	40	15	19 46	23	17 04	48
8	298	23.6		158	02.3		06.6	35	19 04	32	20 06	16 51	50
9	313	23.6		172	26.3		03.6	30	18 54	20	19 52	39 52	21 64
10	328	23.7		186	50.4	− 21	00.5	20	38	19 01	29	20 54	42 62
11	343	23.7	+ 18	201	14.5	− 20	57.2	10 N	18 23	18 46	19 12	16 03	56
12	358	23.7	+ 18	215	38.6	− 20	53.8	0	18 10	18 32	18 57	15 47	58
13	13	23.7		230	02.8		50.2	10 S	17 57	19	44	31 61	32 58
14	28	23.8		244	27.0		46.5	20	43	18 06	32	15 14	63
15	43	23.8		258	51.2		42.7	30	27	17 52	21	14 55	65
16	58	23.8		273	15.5		38.7	35	17	44	15	43 67	22 53
17	73	23.9	+ 18	287	39.8	− 20	34.6	40	17 07	17 36	18 08	14 30	68
18	88	23.9	+ 18	302	04.2	− 20	30.4	45	16 54	17 26	18 02	14 15	70
19	103	23.9		316	28.6		26.0	50	40	15	17 54	13 56	72
20	118	24.0		330	53.1		21.5	52	33	10	51	47 73	19 48
21	133	24.0		345	17.6		16.8	54	25	17 04	48	37 75	30 46
22	148	24.0		359	42.2		12.0	56	16	16 58	44	25 77	41 45
23	163	24.1		14	06.8		07.1	58	16 06	51	40	13 12	79
24	178	24.1	+ 18	28	31.4	− 20	02.0	60 S	15 55	16 44	17 36	12 56	82

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 3 ^h 27 ^m 3		Mag.: −4.4 PMG: 8 ^h 57 ^m		Mag.: +1.1 PMG: 16 ^h 21 ^m		Mag.: −2.1 PMG: 8 ^h 00 ^m		Mag.: +0.8 PMG: 16 ^h 57 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
^h	°	'	°	°	°	'	°	°	°	'
0	308	02.2	225	41.0	+ 19	00.1	114	24.7	− 5	55.0
1	323	04.6	240	41.4		00.3	129	25.8		55.6
2	338	07.1	255	41.8		00.6	144	26.9		56.2
3	353	09.6	270	42.2		00.8	159	28.1		56.8
4	8	12.0	285	42.5		01.0	174	29.2		57.4
5	23	14.5	300	42.9	+ 19	01.2	189	30.3	− 5	58.0
6	38	16.9	315	43.3	+ 19	01.4	204	31.4	− 5	58.6
7	53	19.4	330	43.6		01.6	219	32.5		59.2
8	68	21.9	345	44.0		01.9	234	33.6	− 5	59.8
9	83	24.3	0	44.4		02.1	249	34.7	− 6	00.4
10	98	26.8	15	44.7		02.3	264	35.8		01.0
11	113	29.3	30	45.1	+ 19	02.5	279	36.9	− 6	01.6
12	128	31.7	45	45.4	+ 19	02.7	294	38.0	− 6	02.2
13	143	34.2	60	45.8		02.9	309	39.1		02.8
14	158	36.7	75	46.2		03.2	324	40.2		03.5
15	173	39.1	90	46.5		03.4	339	41.3		04.1
16	188	41.6	105	46.9		03.6	354	42.4		04.7
17	203	44.1	120	47.2	+ 19	03.8	9	43.5	− 6	05.3
18	218	46.5	135	47.6	+ 19	04.0	24	44.6	− 6	05.9
19	233	49.0	150	47.9		04.2	39	45.7		06.5
20	248	51.4	165	48.3		04.5	54	46.8		07.1
21	263	53.9	180	48.6		04.7	69	48.0		07.7
22	278	56.4	195	49.0		04.9	84	49.1		08.3
23	293	58.8	210	49.3		05.1	99	50.2		08.9
24	309	01.3	225	49.6	+ 19	05.3	114	51.3	− 6	09.5
Dif	—		+4		+2		+11		−6	
								+20		+1
										+23
										−1

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MARTES 31 DE JULIO DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 06 ^m 4			SD: 16'2 Edad: 11 ^d 8 ^{PHE} $\left\{\begin{array}{l} 4^h: 59/4 \\ 12^h: 59/3 \\ 20^h: 59/2 \end{array}\right.$ PMG: 22 ^h 59 ^m R°: 55 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
^h 0	178 24.1	+ 18 12.8		28 31.4		− 20 02.0		60 N	^{h m} ** **	^{h m} 2 38	^{h m} 3 39	^{h m} 19 09	^m 23	^{h m} 1 33	^m 86	
1	193 24.1	12.2		42 56.2	58	− 19 56.8	52	58	1 27	2 58	3 52	18 57	26	1 47	83	
2	208 24.2	11.6		57 20.9	57	51.5	53	56	2 00	3 14	4 03	46 29		2 00	80	
3	223 24.2	10.9		71 45.8	59	46.1	54	54	24	27	12	37 31		11	78	
4	238 24.2	10.3		86 10.7	59	40.5	56	52	43	39	21	29 33		20	77	
5	253 24.3	+ 18 09.7		100 35.6	59	− 19 34.8	57	50	2 58	3 50	4 28	18 21	35	2 29	75	
6	268 24.3	+ 18 09.1		115 00.6	60	− 19 29.0	58	45	3 28	4 11	4 44	18 05	39	2 47	72	
7	283 24.3	08.5		129 25.7	61	23.0	60	40	3 50	27	4 58	17 52	42	3 02	69	
8	298 24.4	07.8		143 50.8	61	16.9	61	35	4 07	41	5 09	41 44		14	67	
9	313 24.4	07.2		158 16.0	62	10.7	62	30	21	4 53	19	31 46		25	65	
10	328 24.4	06.6		172 41.2	62	− 19 04.4	63	20	4 44	5 12	35	17 14	50	3 44	62	
11	343 24.5	+ 18 06.0		187 06.5	63	− 18 57.9	65	10 N	5 01	5 27	5 50	16 59	53	4 00	60	
12	358 24.5	+ 18 05.3		201 31.9	64	− 18 51.4	65	0	5 16	5 41	6 03	16 45	56	4 15	57	
13	13 24.6	04.7		215 57.3	64	44.7	67	10 S	29	5 54	16	32 58		30	55	
14	28 24.6	04.1		230 22.9	66	37.9	68	20	40	6 07	30	17 61		4 46	52	
15	43 24.6	03.5		244 48.4	65	30.9	70	30	52	21	46	16 00	64	5 04	49	
16	58 24.7	02.8		259 14.1	67	23.9	70	35	5 58	28	6 55	15 50	66	15	47	
17	73 24.7	+ 18 02.2		273 39.8	67	− 18 16.8	71	40	6 04	6 37	7 05	15 38	69	5 27	45	
18	88 24.7	+ 18 01.6		288 05.6	68	− 18 09.5	73	45	6 11	6 46	7 18	15 25	72	5 41	43	
19	103 24.8	00.9		302 31.4	68	− 18 02.1	74	50	18	6 57	32	08 76		5 59	39	
20	118 24.8	+ 18 00.3		316 57.3	69	− 17 54.6	75	52	21	7 02	39	15 00	78	6 07	37	
21	133 24.9	+ 17 59.7		331 23.3	70	47.0	76	54	24	08	47	14 52	79	16	35	
22	148 24.9	59.1		345 49.4	71	39.3	77	56	28	14	7 55	42 82		26	33	
23	163 24.9	58.4		0 15.5	71	31.5	78	58	32	20	8 05	31 85		37	31	
24	178 25.0	+ 17 57.8		14 41.7	72	− 17 23.6	79	60 S	6 36	7 28	8 16	14 18	88	6 51	27	
UT	ARIES PMG: 3 ^h 23 ^m 4		VENUS Mag.: −4.4 PMG: 8 ^h 56 ^m		MARTE Mag.: +1.1 PMG: 16 ^h 19 ^m		JÚPITER Mag.: −2.2 PMG: 7 ^h 57 ^m		SATURNO Mag.: +0.8 PMG: 16 ^h 53 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
	°	'	°	'	°	'	°	'	°	'	°	'				
^h 0	309 01.3		225 49.6	+ 19 05.3	114 51.3	− 6 09.5	240 26.0	+ 21 11.7	106 05.8	− 6 58.8						
1	324 03.8		240 50.0	05.5	129 52.4	10.1	255 28.1	11.8	121 08.1	58.8						
2	339 06.2		255 50.3	05.7	144 53.5	10.7	270 30.1	11.9	136 10.5	58.9						
3	354 08.7		270 50.6	06.0	159 54.6	11.3	285 32.1	11.9	151 12.8	58.9						
4	9 11.2		285 51.0	06.2	174 55.7	11.9	300 34.1	12.0	166 15.2	59.0						
5	24 13.6		300 51.3	+ 19 06.4	189 56.8	− 6 12.6	315 36.1	+ 21 12.0	181 17.5	− 6 59.1						
6	39 16.1		315 51.7	+ 19 06.6	204 57.9	− 6 13.2	330 38.1	+ 21 12.1	196 19.8	− 6 59.1						
7	54 18.6		330 52.0	06.8	219 59.0	13.8	345 40.1	12.2	211 22.2	59.2						
8	69 21.0		345 52.3	07.0	235 00.1	14.4	0 42.1	12.2	226 24.5	59.3						
9	84 23.5		0 52.6	07.2	250 01.2	15.0	15 44.1	12.3	241 26.8	59.3						
10	99 25.9		15 53.0	07.5	265 02.3	15.6	30 46.1	12.3	256 29.2	59.4						
11	114 28.4		30 53.3	+ 19 07.7	280 03.4	− 6 16.2	45 48.1	+ 21 12.4	271 31.5	− 6 59.4						
12	129 30.9		45 53.6	+ 19 07.9	295 04.5	− 6 16.8	60 50.1	+ 21 12.5	286 33.8	− 6 59.5						
13	144 33.3		60 53.9	08.1	310 05.6	17.4	75 52.1	12.5	301 36.2	59.6						
14	159 35.8		75 54.3	08.3	325 06.7	18.0	90 54.2	12.6	316 38.5	59.6						
15	174 38.3		90 54.6	08.5	340 07.8	18.6	105 56.2	12.7	331 40.8	59.7						
16	189 40.7		105 54.9	08.7	355 08.9	19.2	120 58.2	12.7	346 43.2	59.7						
17	204 43.2		120 55.2	+ 19 08.9	10 10.0	− 6 19.8	136 00.2	+ 21 12.8	1 45.5	− 6 59.8						
18	219 45.7		135 55.5	+ 19 09.1	25 11.1	− 6 20.4	151 02.2	+ 21 12.8	16 47.8	− 6 59.9						
19	234 48.1		150 55.8	09.4	40 12.2	21.1	166 04.2	12.9	31 50.2	− 6 59.9						
20	249 50.6		165 56.2	09.6	55 13.3	21.7	181 06.2	13.0	46 52.5	− 7 00.0						
21	264 53.1		180 56.5	09.8	70 14.4	22.3	196 08.2	13.0	61 54.8	00.1						
22	279 55.5		195 56.8	10.0	85 15.4	22.9	211 10.2	13.1	76 57.2	00.1						
23	294 58.0		210 57.1	10.2	100 16.5	23.5	226 12.2	13.1	91 59.5	00.2						
24	310 00.4		225 57.4	+ 19 10.4	115 17.6	− 6 24.1	241 14.2	+ 21 13.2	107 01.8	− 7 00.2						
Dif	—		+3	+2	+11	−6	+20	+1	+23	−1						

MIÉRCOL 1 DE AGOSTO DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 3		SD: 16 ^h 1 Edad: 12 ^d 8 PHE { 4 ^h : 59/0 12 ^h : 58/9 20 ^h : 58/7 PMG: 23 ^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	
0	178 25.0	+ 17 57.8	14 41.7		- 17 23.6		60 N	20 29	21 29	23 33	19 32 17		2 59 89	
1	193 25.0	57.2	29 08.0	73	15.6	80	58	17	21 10	22 36	23 20		3 10 86	
2	208 25.1	56.5	43 34.4	74	- 17 07.5	81	56	20 07	20 55	22 05	15 23		20 83	
3	223 25.1	55.9	58 00.8	74	- 16 59.2	83	54	19 58	42	21 43	08 25		29 80	
4	238 25.1	55.3	72 27.3	75	50.9	83	52	49	30	26	19 02 27		37 78	
5	253 25.2	+ 17 54.6	86 53.9	76	- 16 42.5	84	50	19 42	20 20	21 11	18 56 29		3 44 76	
6	268 25.2	+ 17 54.0	101 20.6	77	- 16 34.0	85	45	19 26	20 00	20 42	18 44 33		3 59 72	
7	283 25.3	53.4	115 47.3	77	25.4	86	40	13	19 44	21	34 36		4 11 69	
8	298 25.3	52.7	130 14.1	78	16.7	87	35	19 03	30	20 04	25 39		21 67	
9	313 25.4	52.1	144 41.0	79	- 16 07.9	88	30	18 53	19	19 50	17 41		30 65	
10	328 25.4	51.5	159 08.0	80	- 15 59.0	89	20	37	19 00	28	18 04 45		4 46 60	
11	343 25.4	+ 17 50.8	173 35.0	80	- 15 50.0	90	10 N	18 23	18 45	19 11	17 52 49		5 00 57	
12	358 25.5	+ 17 50.2	188 02.1	81	- 15 40.9	91	0	18 10	18 31	18 57	17 41 52		5 12 54	
13	13 25.5	49.5	202 29.3	82	31.8	91	10 S	17 57	19	44	30 55		25 50	
14	28 25.6	48.9	216 56.6	83	22.5	93	20	43	18 06	33	18 59		38 47	
15	43 25.6	48.3	231 23.9	83	13.2	93	30	28	17 53	22	17 04 63		5 53 44	
16	58 25.7	47.6	245 51.4	85	- 15 03.8	94	35	19	46	16	16 56 66		6 02 41	
17	73 25.7	+ 17 47.0	260 18.9	85	- 14 54.3	95	40	17 09	17 37	18 10	16 47 69		6 12 39	
18	88 25.7	+ 17 46.4	274 46.4	85	- 14 44.7	96	45	16 57	17 28	18 04	16 37 71		6 24 35	
19	103 25.8	45.7	289 14.1	87	35.0	97	50	42	17	17 57	24 76		38 31	
20	118 25.8	45.1	303 41.8	87	25.3	97	52	36	13	54	18 78		44 30	
21	133 25.9	44.4	318 09.7	89	15.5	98	54	28	07	50	11 80		51 28	
22	148 25.9	43.8	332 37.6	89	- 14 05.6	99	56	20	17 01	47	16 04 82		6 59 26	
23	163 26.0	43.1	347 05.5	89	- 13 55.6	100	58	10	16 55	43	15 56 85		7 08 23	
24	178 26.0	+ 17 42.5	1 33.6	91	- 13 45.6	100	60 S	16 00	16 48	17 39	15 46 88		7 18 21	
UT	ARIES PMG 3 ^h 19 ^m 4		VENUS Mag.: -4.4 PMG: 8 ^h 56 ^m		MARTE Mag.: +1.1 PMG: 16 ^h 18 ^m		JÚPITER Mag.: -2.2 PMG: 7 ^h 54 ^m		SATURNO Mag.: +0.8 PMG: 16 ^h 49 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	° /	° /	° /		° /		° /		° /					
h	° /	° /	° /		° /		° /		° /					
0	310 00.4	225 57.4	+ 19 10.4		115 17.6	- 6 24.1	241 14.2	+ 21 13.2	107 01.8	- 7 00.2				
1	325 02.9	240 57.7	10.6		130 18.7	24.7	256 16.3	13.3	122 04.2	00.3				
2	340 05.4	255 58.0	10.8		145 19.8	25.3	271 18.3	13.3	137 06.5	00.4				
3	355 07.8	270 58.3	11.0		160 20.9	25.9	286 20.3	13.4	152 08.8	00.4				
4	10 10.3	285 58.6	11.2		175 22.0	26.5	301 22.3	13.4	167 11.2	00.5				
5	25 12.8	300 58.9	+ 19 11.4		190 23.1	- 6 27.1	316 24.3	+ 21 13.5	182 13.5	- 7 00.5				
6	40 15.2	315 59.2	+ 19 11.6		205 24.2	- 6 27.7	331 26.3	+ 21 13.6	197 15.8	- 7 00.6				
7	55 17.7	330 59.5	11.9		220 25.3	28.3	346 28.3	13.6	212 18.2	00.7				
8	70 20.2	345 59.8	12.1		235 26.4	29.0	1 30.3	13.7	227 20.5	00.7				
9	85 22.6	1 00.1	12.3		250 27.5	29.6	16 32.4	13.7	242 22.8	00.8				
10	100 25.1	16 00.4	12.5		265 28.6	30.2	31 34.4	13.8	257 25.2	00.9				
11	115 27.6	31 00.7	+ 19 12.7		280 29.7	- 6 30.8	46 36.4	+ 21 13.9	272 27.5	- 7 00.9				
12	130 30.0	46 01.0	+ 19 12.9		295 30.8	- 6 31.4	61 38.4	+ 21 13.9	287 29.8	- 7 01.0				
13	145 32.5	61 01.2	13.1		310 31.9	32.0	76 40.4	14.0	302 32.1	01.0				
14	160 34.9	76 01.5	13.3		325 33.0	32.6	91 42.4	14.0	317 34.5	01.1				
15	175 37.4	91 01.8	13.5		340 34.1	33.2	106 44.4	14.1	332 36.8	01.2				
16	190 39.9	106 02.1	13.7		355 35.1	33.8	121 46.4	14.2	347 39.1	01.2				
17	205 42.3	121 02.4	+ 19 13.9		10 36.2	- 6 34.4	136 48.5	+ 21 14.2	2 41.5	- 7 01.3				
18	220 44.8	136 02.7	+ 19 14.1		25 37.3	- 6 35.0	151 50.5	+ 21 14.3	17 43.8	- 7 01.4				
19	235 47.3	151 02.9	14.3		40 38.4	35.6	166 52.5	14.3	32 46.1	01.4				
20	250 49.7	166 03.2	14.5		55 39.5	36.2	181 54.5	14.4	47 48.5	01.5				
21	265 52.2	181 03.5	14.7		70 40.6	36.8	196 56.5	14.5	62 50.8	01.6				
22	280 54.7	196 03.8	14.9		85 41.7	37.5	211 58.5	14.5	77 53.1	01.6				
23	295 57.1	211 04.1	15.1		100 42.8	38.1	227 00.5	14.6	92 55.5	01.7				
24	310 59.6	226 04.3	+ 19 15.3		115 43.9	- 6 38.7	242 02.6	+ 21 14.6	107 57.8	- 7 01.7				
Dif	—	+3	+2		+11	-6	+20	+1	+23	-1				

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JUEVES 2 DE AGOSTO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 2		SD: 16 ^h 0 Edad: 13 ^d 8		PHE { 4 ^h : 58 ^m /5 12 ^h : 58 ^m /3 20 ^h : 58 ^m /1									
	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 m		h m m	
0	178 26.0	+ 17 42.5	1 33.6	91	- 13 45.6	101	60 N	0 40	2 44	3 44	19 49 14		4 28 87	
1	193 26.1	41.9	16 01.7	92	35.5	102	58	1 37	3 03	3 56	43 17		36 84	
2	208 26.1	41.2	30 29.9	92	25.3	102	56	2 08	18	4 06	38 19		43 82	
3	223 26.2	40.6	44 58.2	93	15.1	102	54	30	31	16	33 21		49 80	
4	238 26.2	39.9	59 26.5	93	- 13 04.8	103	52	2 48	43	24	29 23		4 55 77	
5	253 26.3	+ 17 39.3	73 55.0	95	- 12 54.4	104	50	3 02	3 53	4 31	19 25 25		5 00 75	
6	268 26.3	+ 17 38.6	88 23.5	95	- 12 44.0	104	45	3 31	4 13	4 47	19 17 29		5 11 71	
7	283 26.4	38.0	102 52.1	96	33.5	105	40	3 52	29	5 00	10 32		20 68	
8	298 26.4	37.3	117 20.7	96	22.9	106	35	4 09	43	10	19 04 34		28 65	
9	313 26.4	36.7	131 49.5	98	12.3	106	30	23	4 54	20	18 58 38		35 62	
10	328 26.5	36.0	146 18.3	98	- 12 01.6	107	20	4 45	5 12	36	49 42		46 58	
11	343 26.5	+ 17 35.4	160 47.2	99	- 11 50.9	107	10 N	5 02	5 28	5 50	18 41 45		5 57 54	
12	358 26.6	+ 17 34.7	175 16.1	99	- 11 40.1	108	0	5 16	5 41	6 03	18 33 49		6 06 51	
13	13 26.6	34.1	189 45.2	101	29.3	108	10 S	28	5 54	16	25 53		15 48	
14	28 26.7	33.4	204 14.3	101	18.4	109	20	40	6 06	29	17 56		25 44	
15	43 26.7	32.8	218 43.4	101	- 11 07.4	110	30	51	19	44	07 61		37 39	
16	58 26.8	32.1	233 12.7	103	- 10 56.4	110	35	5 56	27	6 53	18 02 63		43 37	
17	73 26.8	+ 17 31.5	247 42.0	103	- 10 45.4	110	40	6 02	6 35	7 03	17 56 66		6 51 34	
18	88 26.9	+ 17 30.8	262 11.4	104	- 10 34.3	111	45	6 08	6 44	7 15	17 48 70		6 59 31	
19	103 26.9	30.2	276 40.9	105	23.2	111	50	15	54	29	40 74		7 09 27	
20	118 27.0	29.5	291 10.4	105	12.0	112	52	18	6 59	36	36 76		14 25	
21	133 27.1	28.9	305 40.1	107	- 10 00.8	112	54	21	7 04	43	31 78		19 23	
22	148 27.1	28.2	320 09.7	106	- 9 49.5	113	56	25	10	7 52	26 81		25 21	
23	163 27.2	27.6	334 39.5	108	38.2	113	58	29	16	8 01	21 83		31 19	
24	178 27.2	+ 17 26.9	349 09.3	108	- 9 26.8	114	60 S	6 33	7 24	8 11	17 14 87		7 39 15	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 3 ^h 15 ^m 5		Mag.: -4.4 PMG: 8 ^h 56 ^m		Mag.: +1.1 PMG: 16 ^h 16 ^m		Mag.: -2.2 PMG: 7 ^h 51 ^m		Mag.: +0.8 PMG: 16 ^h 46 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	° /	° /	° /		° /		° /		° /					
0	310 59.6	226 04.3	+ 19 15.3		115 43.9	- 6 38.7	242 02.6	+ 21 14.6	107 57.8	- 7 01.7				
1	326 02.0	241 04.6	15.5		130 45.0	39.3	257 04.6	14.7	123 00.1	01.8				
2	341 04.5	256 04.9	15.7		145 46.1	39.9	272 06.6	14.8	138 02.4	01.9				
3	356 07.0	271 05.1	15.9		160 47.1	40.5	287 08.6	14.8	153 04.8	01.9				
4	11 09.4	286 05.4	16.1		175 48.2	41.1	302 10.6	14.9	168 07.1	02.0				
5	26 11.9	301 05.7	+ 19 16.3		190 49.3	- 6 41.7	317 12.6	+ 21 14.9	183 09.4	- 7 02.1				
6	41 14.4	316 05.9	+ 19 16.5		205 50.4	- 6 42.3	332 14.6	+ 21 15.0	198 11.8	- 7 02.1				
7	56 16.8	331 06.2	16.7		220 51.5	42.9	347 16.7	15.0	213 14.1	02.2				
8	71 19.3	346 06.5	16.9		235 52.6	43.5	2 18.7	15.1	228 16.4	02.2				
9	86 21.8	1 06.7	17.1		250 53.7	44.1	17 20.7	15.2	243 18.7	02.3				
10	101 24.2	16 07.0	17.3		265 54.8	44.7	32 22.7	15.2	258 21.1	02.4				
11	116 26.7	31 07.2	+ 19 17.5		280 55.9	- 6 45.4	47 24.7	+ 21 15.3	273 23.4	- 7 02.4				
12	131 29.2	46 07.5	+ 19 17.7		295 56.9	- 6 46.0	62 26.8	+ 21 15.3	288 25.7	- 7 02.5				
13	146 31.6	61 07.7	17.9		310 58.0	46.6	77 28.8	15.4	303 28.1	02.6				
14	161 34.1	76 08.0	18.1		325 59.1	47.2	92 30.8	15.5	318 30.4	02.6				
15	176 36.5	91 08.3	18.3		341 00.2	47.8	107 32.8	15.5	333 32.7	02.7				
16	191 39.0	106 08.5	18.5		356 01.3	48.4	122 34.8	15.6	348 35.0	02.8				
17	206 41.5	121 08.8	+ 19 18.7		11 02.4	- 6 49.0	137 36.8	+ 21 15.6	3 37.4	- 7 02.8				
18	221 43.9	136 09.0	+ 19 18.9		26 03.5	- 6 49.6	152 38.9	+ 21 15.7	18 39.7	- 7 02.9				
19	236 46.4	151 09.3	19.1		41 04.5	50.2	167 40.9	15.8	33 42.0	03.0				
20	251 48.9	166 09.5	19.3		56 05.6	50.8	182 42.9	15.8	48 44.3	03.0				
21	266 51.3	181 09.7	19.5		71 06.7	51.4	197 44.9	15.9	63 46.7	03.1				
22	281 53.8	196 10.0	19.7		86 07.8	52.0	212 46.9	15.9	78 49.0	03.1				
23	296 56.3	211 10.2	19.9		101 08.9	52.6	227 49.0	16.0	93 51.3	03.2				
24	311 58.7	226 10.5	+ 19 20.1		116 10.0	- 6 53.3	242 51.0	+ 21 16.0	108 53.6	- 7 03.3				
Dif	—	+3	+2		+11	-6	+20	+1	+23	-1				

VIERNES 3 DE AGOSTO DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 15/8		SD: 15/8 Edad: 14 ^d 8 PHE { 4 ^h : 57/9 12 ^h : 57/6 20 ^h : 57/4												
	PMG: 12 ^h 06 ^m 1		PMG: 0 ^h 45 ^m R°: 48 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
^h	°	'	°	°	'	°	'	^h m	^h m	^h m	^h m	^h m	^h m	^h m	^h m
0	178 27.2	+ 17 26.9	349 09.3		- 9 26.8	114	60 N	20 24	21 22	23 11	20 03 11		5 55 85		
1	193 27.3	26.3	3 39.2	109	15.4	114	58	13	21 05	22 26	20 00 14		6 00 82		
2	208 27.3	25.6	18 09.2	110	- 9 04.0	114	56	20 03	20 50	21 58	19 57 17		05 79		
3	223 27.4	25.0	32 39.2	110	- 8 52.5	115	54	19 54	37	37	54 19		09 77		
4	238 27.4	24.3	47 09.3	111	41.0	115	52	46	26	20	52 21		12 75		
5	253 27.5	+ 17 23.6	61 39.4	111	- 8 29.5	115	50	19 39	20 17	21 06	19 50 23		6 15 73		
6	268 27.5	+ 17 23.0	76 09.7	113	- 8 18.0	115	45	19 24	19 57	20 39	19 46 26		6 22 69		
7	283 27.6	22.3	90 40.0	113	- 8 06.4	116	40	11	41	18	42 29		28 65		
8	298 27.6	21.7	105 10.3	113	- 7 54.7	117	35	19 01	28	20 02	38 33		33 62		
9	313 27.7	21.0	119 40.7	114	43.1	116	30	18 52	19 17	19 48	36 35		37 60		
10	328 27.7	20.3	134 11.2	115	31.4	117	20	36	18 59	27	31 39		44 56		
11	343 27.8	+ 17 19.7	148 41.7	115	- 7 19.7	117	10 N	18 22	18 44	19 10	19 26 43		6 51 51		
12	358 27.9	+ 17 19.0	163 12.3	116	- 7 08.0	117	0	18 10	18 31	18 56	19 22 47		6 57 48		
13	13 27.9	18.4	177 43.0	117	- 6 56.2	118	10 S	17 57	19	44	18 50		7 03 44		
14	28 28.0	17.7	192 13.7	117	44.5	117	20	44	18 07	33	13 55		09 40		
15	43 28.0	17.0	206 44.5	118	32.7	118	30	29	17 54	23	08 59		16 36		
16	58 28.1	16.4	221 15.4	119	20.9	118	35	20	47	17	05 62		20 34		
17	73 28.1	+ 17 15.7	235 46.3	119	- 6 09.0	119	40	17 10	17 39	18 12	19 02 64		7 25 30		
18	88 28.2	+ 17 15.1	250 17.2	119	- 5 57.2	118	45	16 59	17 30	18 06	18 58 68		7 30 28		
19	103 28.3	14.4	264 48.2	120	45.3	119	50	45	20	17 59	54 71		36 24		
20	118 28.3	13.7	279 19.3	121	33.4	119	52	39	15	56	52 73		39 22		
21	133 28.4	13.1	293 50.4	121	21.5	119	54	31	10	53	49 76		42 20		
22	148 28.4	12.4	308 21.6	122	- 5 09.6	119	56	23	17 05	50	47 77		46 18		
23	163 28.5	11.7	322 52.9	123	- 4 57.7	119	58	14	16 59	46	44 80		50 15		
24	178 28.5	+ 17 11.1	337 24.2	123	- 4 45.8	119	60 S	16 04	16 52	17 43	18 41 83		7 54 13		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 3 ^h 11 ^m 6		Mag.: -4.4 PMG: 8 ^h 55 ^m			Mag.: +1.1 PMG: 16 ^h 14 ^m			Mag.: -2.2 PMG: 7 ^h 48 ^m			Mag.: +0.8 PMG: 16 ^h 42 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
^h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	311 58.7	226 10.5	+ 19 20.1	116 10.0	- 6 53.3		242 51.0	+ 21 16.0	108 53.6	- 7 03.3					
1	327 01.2	241 10.7	20.3	131 11.0	53.9		257 53.0	16.1	123 56.0	03.3					
2	342 03.7	256 10.9	20.5	146 12.1	54.5		272 55.0	16.2	138 58.3	03.4					
3	357 06.1	271 11.2	20.7	161 13.2	55.1		287 57.0	16.2	154 00.6	03.5					
4	12 08.6	286 11.4	20.9	176 14.3	55.7		302 59.1	16.3	169 03.0	03.5					
5	27 11.0	301 11.6	+ 19 21.1	191 15.4	- 6 56.3		318 01.1	+ 21 16.3	184 05.3	- 7 03.6					
6	42 13.5	316 11.9	+ 19 21.3	206 16.5	- 6 56.9		333 03.1	+ 21 16.4	199 07.6	- 7 03.7					
7	57 16.0	331 12.1	21.5	221 17.5	57.5		348 05.1	16.4	214 09.9	03.7					
8	72 18.4	346 12.3	21.7	236 18.6	58.1		3 07.1	16.5	229 12.3	03.8					
9	87 20.9	1 12.6	21.9	251 19.7	58.7		18 09.2	16.6	244 14.6	03.9					
10	102 23.4	16 12.8	22.0	266 20.8	59.3		33 11.2	16.6	259 16.9	03.9					
11	117 25.8	31 13.0	+ 19 22.2	281 21.9	- 6 59.9		48 13.2	+ 21 16.7	274 19.2	- 7 04.0					
12	132 28.3	46 13.2	+ 19 22.4	296 23.0	- 7 00.5		63 15.2	+ 21 16.7	289 21.6	- 7 04.0					
13	147 30.8	61 13.5	22.6	311 24.0	01.1		78 17.2	16.8	304 23.9	04.1					
14	162 33.2	76 13.7	22.8	326 25.1	01.8		93 19.3	16.9	319 26.2	04.2					
15	177 35.7	91 13.9	23.0	341 26.2	02.4		108 21.3	16.9	334 28.5	04.2					
16	192 38.1	106 14.1	23.2	356 27.3	03.0		123 23.3	17.0	349 30.9	04.3					
17	207 40.6	121 14.3	+ 19 23.4	11 28.4	- 7 03.6		138 25.3	+ 21 17.0	4 33.2	- 7 04.4					
18	222 43.1	136 14.6	+ 19 23.6	26 29.4	- 7 04.2		153 27.4	+ 21 17.1	19 35.5	- 7 04.4					
19	237 45.5	151 14.8	23.8	41 30.5	04.8		168 29.4	17.1	34 37.8	04.5					
20	252 48.0	166 15.0	24.0	56 31.6	05.4		183 31.4	17.2	49 40.1	04.6					
21	267 50.5	181 15.2	24.1	71 32.7	06.0		198 33.4	17.3	64 42.5	04.6					
22	282 52.9	196 15.4	24.3	86 33.7	06.6		213 35.5	17.3	79 44.8	04.7					
23	297 55.4	211 15.6	24.5	101 34.8	07.2		228 37.5	17.4	94 47.1	04.8					
24	312 57.9	226 15.8	+ 19 24.7	116 35.9	- 7 07.8		243 39.5	+ 21 17.4	109 49.4	- 7 04.8					
Dif	—	+2	+2	+11	-6		+20	+1	+23	-1					

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SÁBADO 4 DE AGOSTO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 06 ^m 0		SD: 15 ^h 6 Edad: 15 ^d 8		PHE { 4 ^h : 57/2 12 ^h : 56/9 20 ^h : 56/7									
	PMG: 1 ^h 33 ^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 m	m	h m m	m
0	178 28.5	+ 17 11.1	337 24.2		— 4 45.8		60 N	1 02	2 51	3 49	20 14 12		7 20 82	
1	193 28.6		351 55.5	123	33.8	120	58	1 47	3 08	4 00	14 14		22 80	
2	208 28.7	09.7	6 26.9	124	21.9	119	56	2 15	23	10	14 16		24 77	
3	223 28.7	09.1	20 58.3	124	— 4 09.9	120	54	35	36	19	13 18		26 74	
4	238 28.8	08.4	35 29.8	125	— 3 58.0	119	52	2 52	46	27	13 20		27 72	
5	253 28.8	+ 17 07.7	50 01.4	126	— 3 46.0	120	50	3 06	3 56	4 34	20 13 21		7 28 71	
6	268 28.9	+ 17 07.0	64 33.0	126	— 3 34.0	120	45	3 34	4 16	4 49	20 12 25		7 31 66	
7	283 29.0	06.4	79 04.6	126	22.0	120	40	3 55	31	5 01	11 29		33 63	
8	298 29.0	05.7	93 36.3	127	— 3 10.1	119	35	4 11	44	12	11 31		35 60	
9	313 29.1	05.0	108 08.0	127	— 2 58.1	120	30	4 24	55	21	11 33		37 58	
10	328 29.1	04.4	122 39.8	128	46.1	120	20	4 46	5 13	37	10 38		40 53	
11	343 29.2	+ 17 03.7	137 11.7	129	— 2 34.1	120	10 N	5 02	5 28	5 50	20 09 42		7 42 50	
12	358 29.3	+ 17 03.0	151 43.5	128	— 2 22.1	120	0	5 16	5 41	6 03	20 09 45		7 45 46	
13	13 29.3	02.3	166 15.4	129	— 2 10.2	119	10 S	28	5 53	15	08 49		47 42	
14	28 29.4	01.7	180 47.4	130	— 1 58.2	120	20	39	6 05	28	08 52		49 39	
15	43 29.5	01.0	195 19.4	130	46.2	120	30	49	18	43	07 57		52 34	
16	58 29.5	+ 17 00.3	209 51.4	130	34.3	119	35	5 55	25	6 52	07 59		54 32	
17	73 29.6	+ 16 59.7	224 23.5	131	— 1 22.3	120	40	6 00	6 33	7 01	20 06 62		7 55 30	
18	88 29.6	+ 16 59.0	238 55.6	131	— 1 10.4	119	45	6 06	6 41	7 13	20 06 65		7 58 25	
19	103 29.7	58.3	253 27.8	132	— 0 58.4	120	50	13	51	26	05 70		8 00 22	
20	118 29.8	57.6	268 00.0	132	46.5	119	52	15	6 56	33	05 71		01 20	
21	133 29.8	56.9	282 32.2	132	34.6	119	54	18	7 01	40	05 73		02 19	
22	148 29.9	56.3	297 04.5	133	22.7	119	56	22	07	48	04 76		04 16	
23	163 30.0	55.6	311 36.8	133	— 0 10.8	119	58	25	13	7 57	04 78		05 14	
24	178 30.0	+ 16 54.9	326 09.1	133	+ 0 01.1	119	60 S	6 29	7 19	8 07	20 04 80		8 07 11	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 3 ^h 07 ^m 6		Mag.: -4.4 PMG: 8 ^h 55 ^m		Mag.: +1.1 PMG: 16 ^h 12 ^m		Mag.: -2.2 PMG: 7 ^h 44 ^m		Mag.: +0.8 PMG: 16 ^h 38 ^m					
	hG ♊	Dec	hG ♊	Dec	hG ♊	Dec	hG ♊	Dec	hG ♊	Dec				
h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "				
0	312 57.9	226 15.8	+ 19 24.7	116 35.9	— 7 07.8		243 39.5	+ 21 17.4	109 49.4	— 7 04.8				
1	328 00.3	241 16.0	24.9	131 37.0	08.4		258 41.5	17.5	124 51.8	04.9				
2	343 02.8	256 16.2	25.1	146 38.1	09.0		273 43.5	17.5	139 54.1	05.0				
3	358 05.3	271 16.5	25.3	161 39.1	09.7		288 45.6	17.6	154 56.4	05.0				
4	13 07.7	286 16.7	25.4	176 40.2	10.3		303 47.6	17.7	169 58.7	05.1				
5	28 10.2	301 16.9	+ 19 25.6	191 41.3	— 7 10.9		318 49.6	+ 21 17.7	185 01.1	— 7 05.2				
6	43 12.6	316 17.1	+ 19 25.8	206 42.4	— 7 11.5		333 51.6	+ 21 17.8	200 03.4	— 7 05.2				
7	58 15.1	331 17.3	26.0	221 43.4	12.1		348 53.7	17.8	215 05.7	05.3				
8	73 17.6	346 17.5	26.2	236 44.5	12.7		3 55.7	17.9	230 08.0	05.4				
9	88 20.0	1 17.7	26.4	251 45.6	13.3		18 57.7	17.9	245 10.3	05.4				
10	103 22.5	16 17.8	26.6	266 46.7	13.9		33 59.8	18.0	260 12.7	05.5				
11	118 25.0	31 18.0	+ 19 26.7	281 47.7	— 7 14.5		49 01.8	+ 21 18.0	275 15.0	— 7 05.6				
12	133 27.4	46 18.2	+ 19 26.9	296 48.8	— 7 15.1		64 03.8	+ 21 18.1	290 17.3	— 7 05.6				
13	148 29.9	61 18.4	27.1	311 49.9	15.7		79 05.8	18.2	305 19.6	05.7				
14	163 32.4	76 18.6	27.3	326 51.0	16.3		94 07.9	18.2	320 21.9	05.8				
15	178 34.8	91 18.8	27.5	341 52.0	16.9		109 09.9	18.3	335 24.3	05.8				
16	193 37.3	106 19.0	27.7	356 53.1	17.6		124 11.9	18.3	350 26.6	05.9				
17	208 39.8	121 19.2	+ 19 27.8	11 54.2	— 7 18.2		139 13.9	+ 21 18.4	5 28.9	— 7 06.0				
18	223 42.2	136 19.4	+ 19 28.0	26 55.3	— 7 18.8		154 16.0	+ 21 18.4	20 31.2	— 7 06.0				
19	238 44.7	151 19.6	28.2	41 56.3	19.4		169 18.0	18.5	35 33.6	06.1				
20	253 47.1	166 19.7	28.4	56 57.4	20.0		184 20.0	18.6	50 35.9	06.1				
21	268 49.6	181 19.9	28.6	71 58.5	20.6		199 22.1	18.6	65 38.2	06.2				
22	283 52.1	196 20.1	28.7	86 59.5	21.2		214 24.1	18.7	80 40.5	06.3				
23	298 54.5	211 20.3	28.9	102 00.6	21.8		229 26.1	18.7	95 42.8	06.3				
24	313 57.0	226 20.5	+ 19 29.1	117 01.7	— 7 22.4		244 28.1	+ 21 18.8	110 45.2	— 7 06.4				
Dif	—	+2	+2	+11	-6		+20	+1	+23	-1				

DOMINGO 5 DE AGOSTO DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15/8 PMG: 12 ^h 05 ^m 9			SD: 15/4 Edad: 16 ^d 8 PHE { 4 ^h : 56/4 12 ^h : 56/2 20 ^h : 56/0 PMG: 2 ^h 20 ^m R°: 45 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	178 30.0	+ 16 54.9		326 09.1		+ 0 01.1	119	60 N	20 19	21 16	22 55	20 26 12		8 42 80	
1	193 30.1		54.2	340 41.5	134		13.0	58	20 08	20 59	22 17	28 14		42 76	
2	208 30.2		53.6	355 13.9	134		24.8	56	19 58		45	21 51		41 74	
3	223 30.2		52.9	9 46.3	134		36.7	54		50	33	31		40 72	
4	238 30.3		52.2	24 18.8	135		+ 0 48.5	52		42	22	15		33 20	39 71
5	253 30.4	+ 16	51.5	38 51.3	135		+ 1 00.3	50	19 35	20 13	21 02	20 34 22	8	39 68	
6	268 30.4	+ 16	50.8	53 23.8	135		+ 1 12.1	45	19 21	19 54	20 35	20 37 26	8	37 65	
7	283 30.5		50.2	67 56.4	136		23.9	40	19 09		39	20 15		40 29	36 62
8	298 30.6		49.5	82 29.0	136		35.6	35	18 59		26	19 59		42 32	35 59
9	313 30.6		48.8	97 01.6	136		47.4	30		50	19 16	46	44 34	35	56
10	328 30.7		48.1	111 34.2	136		+ 1 59.1	20		35	18 58	25	48 37	33	52
11	343 30.8	+ 16	47.4	126 06.9	137		+ 2 10.7	10 N	18 22	18 44	19 09	20 51 41	8	32 48	
12	358 30.8	+ 16	46.7	140 39.6	137		+ 2 22.4	0	18 09	18 31	18 56	20 54 44	8	31 44	
13	13 30.9		46.1	155 12.3	137		34.0	10 S	17 57		19	44	20 57 48	29	42
14	28 31.0		45.4	169 45.0	137		45.7	20		45	18 07	34	21 00 51	28	38
15	43 31.0		44.7	184 17.8	138		+ 2 57.3	30		30	17 55	24	04 55	26	34
16	58 31.1		44.0	198 50.6	138		+ 3 08.8	35		22	48	18	06 58	26	31
17	73 31.2	+ 16	43.3	213 23.4	138		+ 3 20.3	40	17 12	17 41	18 13	21 08 61	8	25 28	
18	88 31.2	+ 16	42.6	227 56.2	138		+ 3 31.9	45	17 01	17 32	18 07	21 11 64	8	23 26	
19	103 31.3		41.9	242 29.1	139		43.3	50	16 48		23	18 01	15 67	22	22
20	118 31.4		41.3	257 01.9	138		+ 3 54.8	52		42	18	17 59	16 69	21	21
21	133 31.5		40.6	271 34.8	139		+ 4 06.2	54		35	13	56	18 71	21	18
22	148 31.5		39.9	286 07.7	139		17.6	56		27	08	53	20 73	20	16
23	163 31.6		39.2	300 40.6	139		29.0	58		18	17 02	50	22 76	19	14
24	178 31.7	+ 16	38.5	315 13.6	140		+ 4 40.3	60 S	16 08	16 56	17 46	21 24 79	8	18 12	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 3 ^h 03 ^m 7		Mag.: -4.4 PMG: 8 ^h 55 ^m			Mag.: +1.1 PMG: 16 ^h 11 ^m			Mag.: -2.2 PMG: 7 ^h 41 ^m			Mag.: +0.8 PMG: 16 ^h 34 ^m			
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♎	Dec	hG ♏	Dec	hG ♏	Dec	hG ♏	Dec		
^h 0	313 57.0	226 20.5	+ 19 29.1	117 01.7	- 7 22.4	244 28.1	+ 21 18.8	110 45.2	- 7 06.4						
1	328 59.5	241 20.6		132 02.8	23.0	259 30.2		125 47.5	06.5						
2	344 01.9	256 20.8		147 03.8	23.6	274 32.2		140 49.8	06.5						
3	359 04.4	271 21.0		162 04.9	24.2	289 34.2		155 52.1	06.6						
4	14 06.9	286 21.2		177 06.0	24.8	304 36.3		170 54.4	06.7						
5	29 09.3	301 21.3	+ 19 30.0	192 07.0	- 7 25.5	319 38.3	+ 21 19.1	185 56.7	- 7 06.7						
6	44 11.8	316 21.5	+ 19 30.2	207 08.1	- 7 26.1	334 40.3	+ 21 19.1	200 59.1	- 7 06.8						
7	59 14.2	331 21.7		222 09.2	26.7	349 42.3		216 01.4	06.9						
8	74 16.7	346 21.8		237 10.3	27.3	4 44.4		231 03.7	07.0						
9	89 19.2	1 22.0		252 11.3	27.9	19 46.4		246 06.0	07.0						
10	104 21.6	16 22.2		267 12.4	28.5	34 48.4		261 08.3	07.1						
11	119 24.1	31 22.3	+ 19 31.0	282 13.5	- 7 29.1	49 50.5	+ 21 19.4	276 10.7	- 7 07.2						
12	134 26.6	46 22.5	+ 19 31.2	297 14.5	- 7 29.7	64 52.5	+ 21 19.4	291 13.0	- 7 07.2						
13	149 29.0	61 22.7		312 15.6	30.3	79 54.5		306 15.3	07.3						
14	164 31.5	76 22.8		327 16.7	30.9	94 56.6		321 17.6	07.4						
15	179 34.0	91 23.0		342 17.7	31.5	109 58.6		336 19.9	07.4						
16	194 36.4	106 23.1		357 18.8	32.1	125 00.6		351 22.3	07.5						
17	209 38.9	121 23.3	+ 19 32.1	12 19.9	- 7 32.7	140 02.7	+ 21 19.7	6 24.6	- 7 07.6						
18	224 41.4	136 23.4	+ 19 32.2	27 20.9	- 7 33.4	155 04.7	+ 21 19.8	21 26.9	- 7 07.6						
19	239 43.8	151 23.6		42 22.0	34.0	170 06.7		36 29.2	07.7						
20	254 46.3	166 23.7		57 23.1	34.6	185 08.8		51 31.5	07.8						
21	269 48.7	181 23.9		72 24.1	35.2	200 10.8		66 33.8	07.8						
22	284 51.2	196 24.1		87 25.2	35.8	215 12.8		81 36.2	07.9						
23	299 53.7	211 24.2		102 26.3	36.4	230 14.9		96 38.5	08.0						
24	314 56.1	226 24.4	+ 19 33.3	117 27.3	- 7 37.0	245 16.9	+ 21 20.1	111 40.8	- 7 08.0						
Dif	—	+2	+2	+11	-6	+20	+1	+23	-1						

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LUNES 6 DE AGOSTO DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 8			SD: 15 ^h 2 Edad: 17 ^d 8 PMG: 3 ^h 05 ^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		h m m	
0	178 31.7	+ 16 38.5		315 13.6	+ 4 40.3	113		60 N	1 18	2 57	3 53	20 38 13		10 02 78	
1	193 31.7	37.8		329 46.5	+ 4 51.6	113		58	1 56	3 14	4 04	42 16		9 58 75	
2	208 31.8	37.1		344 19.5	+ 5 02.8	112		56	2 21	28	14	46 18		55 73	
3	223 31.9	36.4		358 52.5	14.1	113		54	41	40	22	50 20		52 71	
4	238 32.0	35.7		13 25.5	25.2	111		52	2 57	50	30	53 22		50 68	
5	253 32.0	+ 16 35.0		27 58.5	+ 5 36.4	112		50	3 10	3 59	4 37	20 56 24		9 47 67	
6	268 32.1	+ 16 34.4		42 31.5	+ 5 47.5	111		45	3 37	4 18	4 51	21 03 27		9 42 63	
7	283 32.2	33.7		57 04.5	+ 5 58.6	111		40	3 57	33	5 03	09 30		38 60	
8	298 32.2	33.0		71 37.5	+ 6 09.6	110		35	4 13	46	13	14 32		34 57	
9	313 32.3	32.3		86 10.6	20.7	111		30	26	4 57	22	18 34		31 55	
10	328 32.4	31.6		100 43.6	31.6	109		20	4 47	5 14	37	25 39		25 51	
11	343 32.5	+ 16 30.9		115 16.7	+ 6 42.5	109		10 N	5 03	5 28	5 50	21 32 42		9 20 48	
12	358 32.5	+ 16 30.2		129 49.8	+ 6 53.4	109		0	5 16	5 41	6 02	21 38 45		9 15 45	
13	13 32.6	29.5		144 22.8	+ 7 04.3	109		10 S	27 5 52	14	45 47	11 41		11 41	
14	28 32.7	28.8		158 55.9	15.1	108		20	38	6 04	27	51 51		06 38	
15	43 32.8	28.1		173 29.0	25.9	108		30	48	16	41	21 59 55		9 00 34	
16	58 32.8	27.4		188 02.1	36.6	107		35	53	23	50	22 04 57		8 57 32	
17	73 32.9	+ 16 26.7		202 35.2	+ 7 47.2	106		40	5 58	6 30	6 59	22 09 59		8 53 29	
18	88 33.0	+ 16 26.0		217 08.3	+ 7 57.9	107		45	6 04	6 39	7 10	22 15 62		8 49 26	
19	103 33.1	25.3		231 41.4	+ 8 08.5	106		50	10	48	23	22 66		44 23	
20	118 33.1	24.6		246 14.5	19.0	105		52	12	53	29	25 68		42 21	
21	133 33.2	23.9		260 47.6	29.5	105		54	15	6 58	36	29 70		39 19	
22	148 33.3	23.2		275 20.7	40.0	105		56	18	7 03	44	33 72		36 18	
23	163 33.4	22.5		289 53.8	+ 8 50.4	104		58	21	09	7 52	38 74		33 15	
24	178 33.4	+ 16 21.8		304 26.9	+ 9 00.7	103		60 S	6 25	7 15	8 02	22 43 77		8 30 12	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG 2 ^h 59 ^m 8			Mag.: -4.4 PMG: 8 ^h 54 ^m			Mag.: +1.1 PMG: 16 ^h 09 ^m			Mag.: -2.2 PMG: 7 ^h 38 ^m			Mag.: +0.8 PMG: 16 ^h 31 ^m		
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	° ' /	° ' /		° ' /	° ' /		° ' /	° ' /		° ' /	° ' /		° ' /	° ' /	
0	314 56.1	226 24.4	+ 19 33.3	117 27.3	- 7 37.0		245 16.9	+ 21 20.1		111 40.8	- 7 08.0				
1	329 58.6	241 24.5	33.4	132 28.4	37.6		260 18.9	20.2		126 43.1	08.1				
2	345 01.1	256 24.6	33.6	147 29.5	38.2		275 21.0	20.2		141 45.4	08.2				
3	0 03.5	271 24.8	33.8	162 30.5	38.8		290 23.0	20.3		156 47.7	08.2				
4	15 06.0	286 24.9	33.9	177 31.6	39.4		305 25.0	20.3		171 50.1	08.3				
5	30 08.5	301 25.1	+ 19 34.1	192 32.7	- 7 40.0		320 27.1	+ 21 20.4		186 52.4	- 7 08.4				
6	45 10.9	316 25.2	+ 19 34.3	207 33.7	- 7 40.6		335 29.1	+ 21 20.4		201 54.7	- 7 08.4				
7	60 13.4	331 25.4	34.4	222 34.8	41.3		350 31.1	20.5		216 57.0	08.5				
8	75 15.8	346 25.5	34.6	237 35.8	41.9		5 33.2	20.5		231 59.3	08.6				
9	90 18.3	1 25.6	34.8	252 36.9	42.5		20 35.2	20.6		247 01.6	08.6				
10	105 20.8	16 25.8	34.9	267 38.0	43.1		35 37.2	20.6		262 03.9	08.7				
11	120 23.2	31 25.9	+ 19 35.1	282 39.0	- 7 43.7		50 39.3	+ 21 20.7		277 06.3	- 7 08.8				
12	135 25.7	46 26.0	+ 19 35.3	297 40.1	- 7 44.3		65 41.3	+ 21 20.8		292 08.6	- 7 08.8				
13	150 28.2	61 26.2	35.4	312 41.2	44.9		80 43.3	20.8		307 10.9	08.9				
14	165 30.6	76 26.3	35.6	327 42.2	45.5		95 45.4	20.9		322 13.2	09.0				
15	180 33.1	91 26.4	35.7	342 43.3	46.1		110 47.4	20.9		337 15.5	09.1				
16	195 35.6	106 26.6	35.9	357 44.3	46.7		125 49.5	21.0		352 17.8	09.1				
17	210 38.0	121 26.7	+ 19 36.1	12 45.4	- 7 47.3		140 51.5	+ 21 21.0		7 20.1	- 7 09.2				
18	225 40.5	136 26.8	+ 19 36.2	27 46.5	- 7 47.9		155 53.5	+ 21 21.1		22 22.5	- 7 09.3				
19	240 43.0	151 26.9	36.4	42 47.5	48.5		170 55.6	21.1		37 24.8	09.3				
20	255 45.4	166 27.1	36.5	57 48.6	49.2		185 57.6	21.2		52 27.1	09.4				
21	270 47.9	181 27.2	36.7	72 49.6	49.8		200 59.6	21.2		67 29.4	09.5				
22	285 50.3	196 27.3	36.9	87 50.7	50.4		216 01.7	21.3		82 31.7	09.5				
23	300 52.8	211 27.4	37.0	102 51.8	51.0		231 03.7	21.3		97 34.0	09.6				
24	315 55.3	226 27.5	+ 19 37.2	117 52.8	- 7 51.6		246 05.8	+ 21 21.4		112 36.3	- 7 09.7				
Dif	—	+1	+2	+11	-6		+20	+1		+23	-1				

MARTES 7 DE AGOSTO DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 7			SD: 15 ^h 1 Edad: 18 ^d 8 PHE { 4 ^h : 55 ^h /2 12 ^h : 55 ^h /0 20 ^h : 54 ^h /8 PMG: 3 ^h 49 ^m R°: 45 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif									
	h	°	'	h	°	'	h	°	h	m	h	m	h	m	h	m
0	178	33.4	+16 21.8	304	26.9	+ 9 00.7	60 N	20 14	21 09	22 41	20 51	16	11 20	75		
1	193	33.5	21.1	319	00.0	11.0	58	20 03	20 53	22 08	20 58	19	13 73			
2	208	33.6	20.4	333	33.1	21.3	56	19 54	40	21 44	21 04	22	08 70			
3	223	33.7	19.7	348	06.2	31.5	54	46	28	26	10 23	11 03	68			
4	238	33.8	19.0	2	39.2	41.6	52	39	18	21 10	15 25	10 58	67			
5	253	33.8	+16 18.3	17	12.3	+ 9 51.8	50	19 32	20 09	20 57	21 20	26	10 54	65		
6	268	33.9	+16 17.6	31	45.4	+10 01.8	45	19 18	19 51	20 32	21 30	30	10 45	61		
7	283	34.0	16.9	46	18.5	11.8	40	19 07	36	20 12	39 32	38 58				
8	298	34.1	16.2	60	51.6	21.8	35	18 57	24	19 57	46 34	31 57				
9	313	34.2	15.5	75	24.6	31.7	30	48	19 14	44	21 52	37 26	54			
10	328	34.2	14.8	89	57.7	41.5	20	34	18 57	24	22 04	39 16	51			
11	343	34.3	+16 14.1	104	30.7	+10 51.3	10 N	18 21	18 43	19 09	22 14	42 10	08 47			
12	358	34.4	+16 13.4	119	03.8	+11 01.0	0	18 09	18 31	18 56	22 23	45 10	00 44			
13	13	34.5	12.7	133	36.8	10.7	10 S	17 57	19	45	32 48	9 52	42			
14	28	34.6	12.0	148	09.8	20.4	20	45	18 08	34	42 51	44 38				
15	43	34.6	11.2	162	42.8	29.9	30	31	17 56	25	22 54	54 34	35			
16	58	34.7	10.5	177	15.8	39.4	35	23	50	20	23 01	55 29	33			
17	73	34.8	+16 09.8	191	48.8	+11 48.9	40	17 14	17 42	18 15	23 08	58 9	22 31			
18	88	34.9	+16 09.1	206	21.8	+11 58.3	45	17 03	17 34	18 09	23 17	61 9	15 28			
19	103	35.0	08.4	220	54.7	+12 07.6	50	16 51	25	04	28 64	07 24				
20	118	35.0	07.7	235	27.7	16.9	52	45	21	18 01	33 66	9 03	23			
21	133	35.1	07.0	250	00.6	26.1	54	38	16	17 59	39 67	8 58	22			
22	148	35.2	06.3	264	33.6	35.3	56	31	11	56	45 69	54 19				
23	163	35.3	05.6	279	06.5	44.4	58	22	06	53	23 52	72 48	17			
24	178	35.4	+16 04.9	293	39.4	+12 53.4	60 S	16 13	17 00	17 50	** ** *	** ** *	8 42 15			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 2 ^h 55 ^m 8		Mag.: -4.4 PMG: 8 ^h 54 ^m			Mag.: +1.1 PMG: 16 ^h 07 ^m			Mag.: -2.2 PMG: 7 ^h 35 ^m			Mag.: +0.8 PMG: 16 ^h 27 ^m				
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	315	55.3	226 27.5	+ 19 37.2	117	52.8	- 7 51.6	246	05.8	+ 21 21.4	112	36.3	- 7 09.7			
1	330	57.7	241 27.7	37.3	132	53.9	52.2	261	07.8	21.5	127	38.7	09.7			
2	346	00.2	256 27.8	37.5	147	54.9	52.8	276	09.8	21.5	142	41.0	09.8			
3	1	02.7	271 27.9	37.7	162	56.0	53.4	291	11.9	21.6	157	43.3	09.9			
4	16	05.1	286 28.0	37.8	177	57.0	54.0	306	13.9	21.6	172	45.6	09.9			
5	31	07.6	301 28.1	+ 19 38.0	192	58.1	- 7 54.6	321	16.0	+ 21 21.7	187	47.9	- 7 10.0			
6	46	10.1	316 28.2	+ 19 38.1	207	59.2	- 7 55.2	336	18.0	+ 21 21.7	202	50.2	- 7 10.1			
7	61	12.5	331 28.4	38.3	223	00.2	55.8	351	20.0	21.8	217	52.5	10.2			
8	76	15.0	346 28.5	38.4	238	01.3	56.4	6	22.1	21.8	232	54.8	10.2			
9	91	17.5	1 28.6	38.6	253	02.3	57.0	21	24.1	21.9	247	57.2	10.3			
10	106	19.9	16 28.7	38.7	268	03.4	57.7	36	26.2	21.9	262	59.5	10.4			
11	121	22.4	31 28.8	+ 19 38.9	283	04.4	- 7 58.3	51	28.2	+ 21 22.0	278	01.8	- 7 10.4			
12	136	24.8	46 28.9	+ 19 39.1	298	05.5	- 7 58.9	66	30.2	+ 21 22.0	293	04.1	- 7 10.5			
13	151	27.3	61 29.0	39.2	313	06.6	- 7 59.5	81	32.3	22.1	308	06.4	10.6			
14	166	29.8	76 29.1	39.4	328	07.6	- 8 00.1	96	34.3	22.1	323	08.7	10.6			
15	181	32.2	91 29.2	39.5	343	08.7	00.7	111	36.4	22.2	338	11.0	10.7			
16	196	34.7	106 29.3	39.7	358	09.7	01.3	126	38.4	22.2	353	13.3	10.8			
17	211	37.2	121 29.4	+ 19 39.8	13	10.8	- 8 01.9	141	40.4	+ 21 22.3	8	15.7	- 7 10.8			
18	226	39.6	136 29.5	+ 19 40.0	28	11.8	- 8 02.5	156	42.5	+ 21 22.4	23	18.0	- 7 10.9			
19	241	42.1	151 29.6	40.1	43	12.9	03.1	171	44.5	22.4	38	20.3	11.0			
20	256	44.6	166 29.7	40.3	58	13.9	03.7	186	46.6	22.5	53	22.6	11.1			
21	271	47.0	181 29.8	40.4	73	15.0	04.3	201	48.6	22.5	68	24.9	11.1			
22	286	49.5	196 29.9	40.6	88	16.0	04.9	216	50.7	22.6	83	27.2	11.2			
23	301	51.9	211 30.0	40.7	103	17.1	05.5	231	52.7	22.6	98	29.5	11.3			
24	316	54.4	226 30.1	+ 19 40.9	118	18.2	- 8 06.2	246	54.7	+ 21 22.7	113	31.8	- 7 11.3			
Dif	—		+1	+2	+11		-6	+20		+1	+23		-1			

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MIÉRCOL 8 DE AGOSTO DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15'8 PMG: 12 ^h 05 ^m 6			SD: 14'9 Edad: 19 ^d 8 PHE { 4 ^h : 54'7 12 ^h : 54'6 20 ^h : 54'5 PMG: 4 ^h 34 ^m R°: 45 ^m																
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico		Civil		Hora	R°	Hora	R°			
h	°	'		°	'		°	'	° N	h	m	h	m	h	m	h	m			
0	178	35.4	+ 16	293	39.4	+ 12	53.4	90	60	1	31	3	03	3	58	21	07			
1	193	35.5		308	12.2	+ 13	02.4	89	58	2	04	19	4	09	17	23	12			
2	208	35.5		322	45.1		11.3	89	56	28		32	18	26	25	18	68			
3	223	35.6		337	17.9		20.2	89	54	2	46	44	26	33	28	11	66			
4	238	35.7		351	50.8		29.0	88	52	3	02	3	54	33	40	29	12			
5	253	35.8	+ 16	6	23.6	+ 13	37.7	87	50	3	14	4	03	4	40	21	46			
6	268	35.9	+ 16	20	56.4	+ 13	46.4	87	45	3	40	4	21	4	54	22	00			
7	283	36.0	+ 15	35	29.2	+ 13	55.0	86	40	3	59	36	5	05	11	35	36			
8	298	36.0		50	01.9	+ 14	03.5	85	35	4	15	48	15	20	38	28	55			
9	313	36.1		64	34.6		12.0	85	30	27	4	58	23	29	39	20	53			
10	328	36.2		79	07.4		20.4	84	20	4	47	5	15	38	43	42	11			
11	343	36.3	+ 15	93	40.1	+ 14	28.7	83	10	5	03	5	29	5	50	22	56			
12	358	36.4	+ 15	108	12.7	+ 14	37.0	83	0	5	16	5	41	6	02	23	08			
13	13	36.5		122	45.4		45.2	82	10	27	5	52	14	20	48	34	43			
14	28	36.6		137	18.0	+ 14	53.3	81	20	37	6	03	26	33	50	22	41			
15	43	36.6		151	50.6	+ 15	01.4	81	30	46	15	40	48	53	09	38	00			
16	58	36.7		166	23.2		09.3	79	35	51	21	48	23	56	55	10	02			
17	73	36.8	+ 15	180	55.8	+ 15	17.3	80	40	5	56	6	28	6	57	**	**			
18	88	36.9	+ 15	195	28.3	+ 15	25.1	78	45	6	01	6	36	7	07	**	**			
19	103	37.0		210	00.9		32.9	78	50	07		45	20	**	**	**	**			
20	118	37.1		224	33.4		40.6	77	52	09	50	26	**	**	**	**	**			
21	133	37.2		239	05.8		48.3	77	54	12	54	32	**	**	**	**	**			
22	148	37.3		253	38.3	+ 15	55.8	75	56	14	6	59	39	**	**	**	**			
23	163	37.3		268	10.7	+ 16	03.3	75	58	17	7	04	47	**	**	**	**			
24	178	37.4	+ 15	282	43.1	+ 16	10.7	74	60	6	20	7	10	7	57	0	00			
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO							
	PMG: 2 ^h 51 ^m 9			Mag.: -4.4 PMG: 8 ^h 54 ^m			Mag.: +1.1 PMG: 16 ^h 06 ^m			Mag.: -2.2 PMG: 7 ^h 31 ^m			Mag.: +0.8 PMG: 16 ^h 23 ^m							
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec						
h	°	'		°	'		°	'		°	'		°	'						
0	316	54.4		226	30.1	+ 19	40.9		118	18.2	- 8	06.2	246	54.7	+ 21	22.7	113	31.8	- 7	11.3
1	331	56.9		241	30.2		41.0		133	19.2		06.8	261	56.8		22.7	128	34.1		11.4
2	346	59.3		256	30.2		41.2		148	20.3		07.4	276	58.8		22.8	143	36.4		11.5
3	2	01.8		271	30.3		41.3		163	21.3		08.0	292	00.9		22.8	158	38.8		11.5
4	17	04.3		286	30.4		41.4		178	22.4		08.6	307	02.9		22.9	173	41.1		11.6
5	32	06.7		301	30.5	+ 19	41.6		193	23.4	- 8	09.2	322	05.0	+ 21	22.9	188	43.4	- 7	11.7
6	47	09.2		316	30.6	+ 19	41.7		208	24.5	- 8	09.8	337	07.0	+ 21	23.0	203	45.7	- 7	11.8
7	62	11.7		331	30.7		41.9		223	25.5		10.4	352	09.1		23.0	218	48.0		11.8
8	77	14.1		346	30.8		42.0		238	26.6		11.0	7	11.1		23.1	233	50.3		11.9
9	92	16.6		1	30.8		42.2		253	27.6		11.6	22	13.1		23.1	248	52.6		12.0
10	107	19.1		16	30.9		42.3		268	28.7		12.2	37	15.2		23.2	263	54.9		12.0
11	122	21.5		31	31.0	+ 19	42.5		283	29.7	- 8	12.8	52	17.2	+ 21	23.2	278	57.2	- 7	12.1
12	137	24.0		46	31.1	+ 19	42.6		298	30.8	- 8	13.4	67	19.3	+ 21	23.3	293	59.5	- 7	12.2
13	152	26.4		61	31.2		42.7		313	31.8		14.0	82	21.3		23.3	309	01.8		12.2
14	167	28.9		76	31.2		42.9		328	32.9		14.7	97	23.4		23.4	324	04.2		12.3
15	182	31.4		91	31.3		43.0		343	33.9		15.3	112	25.4		23.4	339	06.5		12.4
16	197	33.8		106	31.4		43.2		358	35.0		15.9	127	27.5		23.5	354	08.8		12.5
17	212	36.3		121	31.5	+ 19	43.3		13	36.0	- 8	16.5	142	29.5	+ 21	23.5	9	11.1	- 7	12.5
18	227	38.8		136	31.5	+ 19	43.4		28	37.1	- 8	17.1	157	31.6	+ 21	23.6	24	13.4	- 7	12.6
19	242	41.2		151	31.6		43.6		43	38.1		17.7	172	33.6		23.7	39	15.7		12.7
20	257	43.7		166	31.7		43.7		58	39.1		18.3	187	35.7		23.7	54	18.0		12.7
21	272	46.2		181	31.7		43.9		73	40.2		18.9	202	37.7		23.8	69	20.3		12.8
22	287	48.6		196	31.8		44.0		88	41.2		19.5	217	39.8		23.8	84	22.6		12.9
23	302	51.1		211	31.9		44.1		103	42.3		20.1	232	41.8		23.9	99	24.9		13.0
24	317	53.5		226	31.9	+ 19	44.3		118	43.3	- 8	20.7	247	43.9	+ 21	23.9	114	27.2	- 7	13.0
Dif	—			+1	+1		+10	-6		+20		+1		+23		-1				

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UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 05 ^m 4			SD: 14 ^h 8 Edad: 20 ^d 8 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/3 PMG: 5 ^h 19 ^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	m	h m m	m
0	178 37.4	+15 47.6		282 43.1	+16 10.7	74	60 N	20 09	21 03	22 29	21 28	28	13 49	68
1	193 37.5	46.9		297 15.5	18.1	74	58	19 59	20 47	21 59	40	31	37	66
2	208 37.6	46.2		311 47.8	25.4	73	56	50	35	37	21 51	32	26	65
3	223 37.7	45.5		326 20.2	32.6	72	54	42	24	20	22 01	33	17	63
4	238 37.8	44.8		340 52.4	39.7	71	52	35	14	21 05	09	35	09	62
5	253 37.9	+15 44.0		355 24.7	+16 46.8	71	50	19 29	20 05	20 53	22 17	35	13 02	60
6	268 38.0	+15 43.3		9 57.0	+16 53.7	69	45	19 15	19 48	20 28	22 33	38	12 46	58
7	283 38.1	42.6		24 29.2	+17 00.6	68	40	19 04	34	20 09	46	40	34	56
8	298 38.2	41.9		39 01.4	07.4	68	35	18 55	22	19 55	22 58	41	23	54
9	313 38.2	41.1		53 33.5	14.2	68	30	46	19 12	42	23 08	42	12 13	53
10	328 38.3	40.4		68 05.7	20.9	67	20	32	18 55	23	25	44	11 57	51
11	343 38.4	+15 39.7		82 37.8	+17 27.4	65	10 N	18 20	18 42	19 08	23 40	46	11 43	49
12	358 38.5	+15 38.9		97 09.8	+17 34.0	66	0	18 09	18 30	18 55	23 54	47	11 30	47
13	13 38.6	38.2		111 41.9	40.4	64	10 S	17 58	19	45	** ** *	** *	17	45
14	28 38.7	37.5		126 13.9	46.7	63	20	46	18 09	35	** ** *	** *	11 03	43
15	43 38.8	36.8		140 45.9	53.0	63	30	32	17 57	26	** ** *	** *	10 47	40
16	58 38.9	36.0		155 17.9	+17 59.2	62	35	25	51	21	** ** *	** *	38	39
17	73 39.0	+15 35.3		169 49.8	+18 05.3	61	40	17 16	17 44	18 16	0 06	57	10 27	37
18	88 39.1	+15 34.6		184 21.7	+18 11.3	60	45	17 06	17 37	18 11	0 18	59	10 15	35
19	103 39.2	33.8		198 53.6	17.3	60	50	16 53	28	06	32	62	10 00	32
20	118 39.3	33.1		213 25.4	23.2	59	52	48	24	04	39	63	9 53	31
21	133 39.4	32.4		227 57.3	28.9	57	54	41	19	18 02	46	65	45	30
22	148 39.5	31.6		242 29.0	34.6	57	56	34	15	17 59	0 54	67	36	29
23	163 39.5	30.9		257 00.8	40.3	57	58	27	09	56	1 04	68	26	27
24	178 39.6	+15 30.2		271 32.5	+18 45.8	55	60 S	16 18	17 04	17 54	1 14	72	9 15	24
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 2 ^h 48 ^m 0		Mag.: -4.3 PMG: 8 ^h 54 ^m			Mag.: +1.1 PMG: 16 ^h 04 ^m			Mag.: -2.2 PMG: 7 ^h 28 ^m			Mag.: +0.8 PMG: 16 ^h 20 ^m		
	hG ♈	hG ♀	Dec	hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		hG ♅	Dec
h	° /	° /		° /	° /		° /	° /		° /	° /		° /	° /
0	317 53.5	226 31.9	+19 44.3	118 43.3	-8 20.7		247 43.9	+21 23.9		114 27.2	-7 13.0		129 29.5	13.1
1	332 56.0	241 32.0	44.4	133 44.4	21.3		262 45.9	24.0		129 29.5	13.1		159 34.2	13.2
2	347 58.5	256 32.1	44.5	148 45.4	21.9		277 48.0	24.0		144 31.8	13.2		174 36.5	13.3
3	3 00.9	271 32.1	44.7	163 46.5	22.5		292 50.0	24.1		159 34.2	13.2		189 38.8	-7 13.4
4	18 03.4	286 32.2	44.8	178 47.5	23.2		307 52.1	24.1		174 36.5	13.3		204 41.1	-7 13.5
5	33 05.9	301 32.2	+19 44.9	193 48.6	-8 23.8		322 54.1	+21 24.2		219 43.4	13.5		234 45.7	13.6
6	48 08.3	316 32.3	+19 45.1	208 49.6	-8 24.4		337 56.2	+21 24.2		249 48.0	13.7		264 50.3	13.7
7	63 10.8	331 32.4	45.2	223 50.6	25.0		352 58.2	24.3		279 52.6	-7 13.8		294 54.9	-7 13.9
8	78 13.3	346 32.4	45.3	238 51.7	25.6		8 00.3	24.3		309 57.2	14.0		324 59.5	14.0
9	93 15.7	1 32.5	45.5	253 52.7	26.2		23 02.3	24.4		340 01.8	14.1		355 04.1	14.2
10	108 18.2	16 32.5	45.6	268 53.8	26.8		38 04.4	24.4		10 06.4	-7 14.2		25 08.7	-7 14.3
11	123 20.7	31 32.6	+19 45.7	283 54.8	-8 27.4		53 06.4	+21 24.5		40 11.0	14.4		55 13.4	14.5
12	138 23.1	46 32.6	+19 45.9	298 55.9	-8 28.0		68 08.5	+21 24.5		70 15.7	14.5		85 18.0	14.6
13	153 25.6	61 32.7	46.0	313 56.9	28.6		83 10.5	24.6		100 20.3	14.7		115 22.6	-7 14.7
14	168 28.0	76 32.7	46.1	328 57.9	29.2		98 12.6	24.6						
15	183 30.5	91 32.8	46.2	343 59.0	29.8		113 14.6	24.7						
16	198 33.0	106 32.8	46.4	359 00.0	30.4		128 16.7	24.7						
17	213 35.4	121 32.9	+19 46.5	14 01.1	-8 31.0		143 18.7	+21 24.8						
18	228 37.9	136 32.9	+19 46.6	29 02.1	-8 31.6		158 20.8	+21 24.8						
19	243 40.4	151 33.0	46.8	44 03.2	32.3		173 22.8	24.9						
20	258 42.8	166 33.0	46.9	59 04.2	32.9		188 24.9	24.9						
21	273 45.3	181 33.0	47.0	74 05.2	33.5		203 26.9	25.0						
22	288 47.8	196 33.1	47.1	89 06.3	34.1		218 29.0	25.0						
23	303 50.2	211 33.1	47.3	104 07.3	34.7		233 31.0	25.1						
24	318 52.7	226 33.2	+19 47.4	119 08.4	-8 35.3		248 33.1	+21 25.1						
Dif	—	+1	+1	+10	-6		+21	+1		+23	-1			

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UT	SOL		<div><div><div></div></div>LUNA</div>				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 05 ^m 3		SD: 14'8 Edad: 21 ^d 8		PHE <div><div><div>4^h: 54'3</div><div>12^h: 54'3</div><div>20^h: 54'3</div></div></div>									
	PMG: 6 ^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		h m m	
0	178 39.6	+ 15 30.2	271 32.5		+ 18 45.8	54	60 N	1 43	3 09	4 03	21 56 38		14 57 62	
1	193 39.7	29.4	286 04.2	127	51.2	54	58	2 12	24	13	22 11 39		43 60	
2	208 39.8	28.7	300 35.9	127	+ 18 56.6	53	56	34	37	22	23 41		31 58	
3	223 39.9	28.0	315 07.5	126	+ 19 01.9	54	54	2 52	48	30	34 41		20 58	
4	238 40.0	27.2	329 39.2	127	07.1	52	52	3 06	3 57	36	44 42		11 56	
5	253 40.1	+ 15 26.5	344 10.7	125	+ 19 12.2	51	50	3 19	4 06	4 43	22 52 43		14 02 56	
6	268 40.2	+ 15 25.8	358 42.3	126	+ 19 17.2	50	45	3 43	4 24	4 56	23 11 44		13 44 55	
7	283 40.3	25.0	13 13.8	125	22.1	49	40	4 02	38	5 07	26 45		30 53	
8	298 40.4	24.3	27 45.3	125	27.0	49	35	17	49	16	39 45		17 53	
9	313 40.5	23.6	42 16.7	124	31.7	47	30	29	4 59	25	23 50 46		13 06 52	
10	328 40.6	22.8	56 48.2	125	36.4	47	20	4 48	5 15	39	*** **	***	12 48 50	
11	343 40.7	+ 15 22.1	71 19.6	124	+ 19 41.0	46	10 N	5 03	5 29	5 51	*** **	***	12 32 49	
12	358 40.8	+ 15 21.4	85 50.9	123	+ 19 45.5	45	0	5 15	5 40	6 02	*** **	***	12 17 48	
13	13 40.9	20.6	100 22.3	124	49.9	44	10 S	26	5 51	13	0 08 49		12 02 47	
14	28 41.0	19.9	114 53.6	123	54.2	43	20	36	6 02	25	23 51		11 46 45	
15	43 41.1	19.1	129 24.9	123	+ 19 58.4	42	30	45	13	38	41 52		27 44	
16	58 41.2	18.4	143 56.1	122	+ 20 02.5	41	35	49	19	46	0 51 54		17 43	
17	73 41.3	+ 15 17.7	158 27.3	122	+ 20 06.6	41	40	5 54	6 26	6 54	1 03 55		11 04 43	
18	88 41.4	+ 15 16.9	172 58.5	122	+ 20 10.5	39	45	5 59	6 33	7 04	1 17 56		10 50 41	
19	103 41.5	16.2	187 29.7	122	14.4	39	50	6 04	42	16	34 58		32 39	
20	118 41.6	15.4	202 00.8	121	18.1	37	52	06	46	22	42 59		24 38	
21	133 41.7	14.7	216 31.9	121	21.8	37	54	08	50	28	1 51 60		15 37	
22	148 41.8	14.0	231 03.0	121	25.4	36	56	11	6 55	35	2 01 62		10 05 35	
23	163 41.9	13.2	245 34.0	120	28.9	35	58	13	7 00	43	12 64		9 53 34	
24	178 42.0	+ 15 12.5	260 05.0	120	+ 20 32.3	34	60 S	6 16	7 06	7 52	2 26 65		9 39 32	

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 2 ^h 44 ^m 0		Mag.: -4.3 PMG: 8 ^h 54 ^m		Mag.: +1.1 PMG: 16 ^h 02 ^m		Mag.: -2.2 PMG: 7 ^h 25 ^m		Mag.: +0.8 PMG: 16 ^h 16 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /
0	318 52.7	226 33.2	+ 19 47.4	119 08.4	- 8 35.3	248 33.1	+ 21 25.1	115 22.6	- 7 14.7	
1	333 55.2	241 33.2	47.5	134 09.4	35.9	263 35.1	25.2	130 24.9	14.8	
2	348 57.6	256 33.2	47.6	149 10.4	36.5	278 37.2	25.2	145 27.2	14.9	
3	4 00.1	271 33.3	47.8	164 11.5	37.1	293 39.2	25.3	160 29.5	15.0	
4	19 02.5	286 33.3	47.9	179 12.5	37.7	308 41.3	25.3	175 31.8	15.0	
5	34 05.0	301 33.3	+ 19 48.0	194 13.6	- 8 38.3	323 43.4	+ 21 25.4	190 34.1	- 7 15.1	
6	49 07.5	316 33.4	+ 19 48.1	209 14.6	- 8 38.9	338 45.4	+ 21 25.4	205 36.4	- 7 15.2	
7	64 09.9	331 33.4	48.2	224 15.6	39.5	353 47.5	25.5	220 38.7	15.3	
8	79 12.4	346 33.4	48.4	239 16.7	40.1	8 49.5	25.5	235 41.0	15.3	
9	94 14.9	1 33.5	48.5	254 17.7	40.7	23 51.6	25.6	250 43.3	15.4	
10	109 17.3	16 33.5	48.6	269 18.7	41.3	38 53.6	25.6	265 45.6	15.5	
11	124 19.8	31 33.5	+ 19 48.7	284 19.8	- 8 42.0	53 55.7	+ 21 25.7	280 47.9	- 7 15.5	
12	139 22.3	46 33.6	+ 19 48.8	299 20.8	- 8 42.6	68 57.7	+ 21 25.7	295 50.2	- 7 15.6	
13	154 24.7	61 33.6	48.9	314 21.8	43.2	83 59.8	25.8	310 52.5	15.7	
14	169 27.2	76 33.6	49.1	329 22.9	43.8	99 01.9	25.8	325 54.8	15.8	
15	184 29.6	91 33.6	49.2	344 23.9	44.4	114 03.9	25.9	340 57.1	15.8	
16	199 32.1	106 33.6	49.3	359 25.0	45.0	129 06.0	25.9	355 59.4	15.9	
17	214 34.6	121 33.7	+ 19 49.4	14 26.0	- 8 45.6	144 08.0	+ 21 26.0	11 01.7	- 7 16.0	
18	229 37.0	136 33.7	+ 19 49.5	29 27.0	- 8 46.2	159 10.1	+ 21 26.0	26 04.0	- 7 16.1	
19	244 39.5	151 33.7	49.6	44 28.1	46.8	174 12.1	26.1	41 06.3	16.1	
20	259 42.0	166 33.7	49.8	59 29.1	47.4	189 14.2	26.1	56 08.6	16.2	
21	274 44.4	181 33.7	49.9	74 30.1	48.0	204 16.3	26.2	71 10.9	16.3	
22	289 46.9	196 33.8	50.0	89 31.2	48.6	219 18.3	26.2	86 13.2	16.3	
23	304 49.4	211 33.8	50.1	104 32.2	49.2	234 20.4	26.3	101 15.5	16.4	
24	319 51.8	226 33.8	+ 19 50.2	119 33.2	- 8 49.8	249 22.4	+ 21 26.3	116 17.8	- 7 16.5	
Dif	—	0	+1	+10	-6	+21	0	+23	-1	

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DOMINGO 12 DE AGOSTO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 04 ^m 9		SD: 14'8 Edad: 23 ^d 8 PHE { 4 ^h : 54'5 12 ^h : 54'6 20 ^h : 54'7 PMG: 7 ^h 42 ^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 m		h m m	
0	178 44.5	+ 14 54.5	248 21.3		+ 21 24.8	9	60 N	1 53	3 15	4 08	23 24 62		16 50 41	
1	193 44.6		262 51.7	114	25.7	9	58	2 20	29	17	40 61		34 42	
2	208 44.7		277 22.0	113	26.6	7	56	41	41	26	23 54 59		21 42	
3	223 44.8		291 52.4	114	27.3	7	54	2 57	3 52	33	** ** *		16 09 43	
4	238 44.9		306 22.7	113	28.0	7	52	3 11	4 01	40	** ** *		15 58 44	
5	253 45.0	+ 14 50.7	320 53.0	113	+ 21 28.5	5	50	3 23	4 09	4 46	** ** *		15 49 45	
6	268 45.1	+ 14 50.0	335 23.3	113	+ 21 29.0	5	45	3 46	4 26	4 58	** ** *		15 29 46	
7	283 45.2		349 53.5	112	29.3	3	40	4 04	4 40	5 09	0 11 50		13 47	
8	298 45.3		4 23.7	112	29.5	2	35	18	4 51	18	24 50		15 00 47	
9	313 45.4		18 53.9	112	29.7	2	30	30	5 00	26	36 50		14 48 48	
10	328 45.5		33 24.1	112	29.7	0	20	4 49	16	39	0 56 50		28 48	
11	343 45.7	+ 14 46.2	47 54.3	112	+ 21 29.6	1	10 N	5 03	5 29	5 51	1 14 49		14 10 49	
12	358 45.8	+ 14 45.4	62 24.5	112	+ 21 29.5	1	0	5 15	5 40	6 02	1 30 49		13 54 49	
13	13 45.9		76 54.6	111	29.2	3	10 S	25	5 51	12	1 46 50		37 51	
14	28 46.0		91 24.7	111	28.8	4	20	35	6 01	23	2 04 49		13 20 51	
15	43 46.1		105 54.9	112	28.3	5	30	43	11	36	24 49		12 59 52	
16	58 46.2		120 25.0	111	27.7	6	35	47	17	43	36 49		47 52	
17	73 46.3	+ 14 41.6	134 55.0	110	+ 21 27.0	7	40	5 52	6 24	6 52	2 50 48		12 34 52	
18	88 46.4	+ 14 40.9	149 25.1	111	+ 21 26.2	8	45	5 56	6 31	7 01	3 06 48		12 18 53	
19	103 46.5		163 55.2	111	25.3	9	50	6 01	39	13	26 48		11 58 53	
20	118 46.6		178 25.2	110	24.3	10	52	03	43	18	35 48		48 54	
21	133 46.8		192 55.2	110	23.2	11	54	05	47	24	46 47		38 54	
22	148 46.9		207 25.2	110	22.0	12	56	07	51	31	3 58 47		25 55	
23	163 47.0		221 55.2	110	20.7	13	58	09	6 56	38	4 12 47		11 12 55	
24	178 47.1	+ 14 36.3	236 25.2	110	+ 21 19.2	15	60 S	6 12	7 01	7 46	4 28 46		10 55 56	
UT	ARIES PMG: 2 ^h 36 ^m 2		VENUS Mag.: -4.3 PMG: 8 ^h 54 ^m		MARTE Mag.: +1.1 PMG: 15 ^h 59 ^m		JÚPITER Mag.: -2.2 PMG: 7 ^h 18 ^m		SATURNO Mag.: +0.8 PMG: 16 ^h 09 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /				
h	° ' /	° ' /	° ' /		° ' /		° ' /		° ' /					
0	320 51.0	226 33.8	+ 19 52.7	119 57.9	- 9 04.4	250 11.9	+ 21 27.5	117 13.0	- 7 18.3					
1	335 53.4	241 33.8	52.8	134 59.0	05.0	265 14.0	27.5	132 15.3	18.3					
2	350 55.9	256 33.8	52.9	150 00.0	05.6	280 16.0	27.6	147 17.6	18.4					
3	5 58.4	271 33.8	53.0	165 01.0	06.2	295 18.1	27.6	162 19.9	18.5					
4	21 00.8	286 33.8	53.1	180 02.0	06.8	310 20.2	27.7	177 22.2	18.6					
5	36 03.3	301 33.8	+ 19 53.2	195 03.1	- 9 07.4	325 22.2	+ 21 27.7	192 24.5	- 7 18.6					
6	51 05.8	316 33.8	+ 19 53.3	210 04.1	- 9 08.0	340 24.3	+ 21 27.8	207 26.8	- 7 18.7					
7	66 08.2	331 33.7	53.4	225 05.1	08.6	355 26.4	27.8	222 29.1	18.8					
8	81 10.7	346 33.7	53.5	240 06.1	09.2	10 28.4	27.9	237 31.4	18.9					
9	96 13.1	1 33.7	53.6	255 07.2	09.8	25 30.5	27.9	252 33.7	18.9					
10	111 15.6	16 33.7	53.6	270 08.2	10.4	40 32.6	28.0	267 36.0	19.0					
11	126 18.1	31 33.7	+ 19 53.7	285 09.2	- 9 11.0	55 34.6	+ 21 28.0	282 38.3	- 7 19.1					
12	141 20.5	46 33.6	+ 19 53.8	300 10.2	- 9 11.6	70 36.7	+ 21 28.0	297 40.6	- 7 19.2					
13	156 23.0	61 33.6	53.9	315 11.3	12.2	85 38.8	28.1	312 42.9	19.2					
14	171 25.5	76 33.6	54.0	330 12.3	12.8	100 40.8	28.1	327 45.2	19.3					
15	186 27.9	91 33.6	54.1	345 13.3	13.4	115 42.9	28.2	342 47.5	19.4					
16	201 30.4	106 33.5	54.2	0 14.3	14.0	130 45.0	28.2	357 49.8	19.5					
17	216 32.9	121 33.5	+ 19 54.3	15 15.4	- 9 14.7	145 47.0	+ 21 28.3	12 52.1	- 7 19.5					
18	231 35.3	136 33.5	+ 19 54.4	30 16.4	- 9 15.3	160 49.1	+ 21 28.3	27 54.4	- 7 19.6					
19	246 37.8	151 33.5	54.5	45 17.4	15.9	175 51.2	28.4	42 56.6	19.7					
20	261 40.2	166 33.4	54.5	60 18.4	16.5	190 53.2	28.4	57 58.9	19.8					
21	276 42.7	181 33.4	54.6	75 19.4	17.1	205 55.3	28.5	73 01.2	19.8					
22	291 45.2	196 33.4	54.7	90 20.5	17.7	220 57.4	28.5	88 03.5	19.9					
23	306 47.6	211 33.3	54.8	105 21.5	18.3	235 59.5	28.6	103 05.8	20.0					
24	321 50.1	226 33.3	+ 19 54.9	120 22.5	- 9 18.9	251 01.5	+ 21 28.6	118 08.1	- 7 20.1					
Dif	—	0	+1	+10	-6	+21	0	+23	-1					


LUNES 13 DE AGOSTO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 8		SD: 14 ^h 9 Edad: 24 ^d 8 PHE $\begin{cases} 4^h: 54/9 \\ 12^h: 55/0 \\ 20^h: 55/2 \end{cases}$ PMG: 8 ^h 31 ^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	m	h m m	m
0	178 47.1	+ 14 36.3	236 25.2		+ 21 19.2	15	60 N	19 58	20 49	22 07	** ** *		17 31	31
1	193 47.2		250 55.2	110	17.7	16	58	49	36	21 43	** ** *		16	33
2	208 47.3	34.8	265 25.2	110	16.1	18	56	41	24	23	** ** *		17 03	35
3	223 47.4	34.0	279 55.1	109	14.3	18	54	33	14	21 08	0 05	59	16 52	37
4	238 47.5	33.3	294 25.1	110	12.5	18	52	27	20 05	20 55	16	58	42	38
5	253 47.6	+ 14 32.5	308 55.0	109	+ 21 10.5	20	50	19 21	19 58	20 43	0 25	57	16 34	38
6	268 47.8	+ 14 31.7	323 24.9	109	+ 21 08.5	20	45	19 09	19 41	20 21	0 45	56	16 15	41
7	283 47.9	31.0	337 54.8	109	06.3	22	40	18 59	28	20 03	1 01	54	16 00	42
8	298 48.0	30.2	352 24.8	110	04.1	22	35	50	17	19 49	14	54	15 47	44
9	313 48.1	29.4	6 54.7	109	+ 21 01.7	24	30	43	19 08	38	26	53	36	44
10	328 48.2	28.7	21 24.6	109	+ 20 59.2	25	20	30	18 53	20	1 46	52	15 16	47
11	343 48.3	+ 14 27.9	35 54.5	109	+ 20 56.7	25	10 N	18 19	18 40	19 06	2 03	51	14 59	49
12	358 48.4	+ 14 27.1	50 24.3	108	+ 20 54.0	27	0	18 08	18 29	18 54	2 19	50	14 43	50
13	13 48.6	26.4	64 54.2	109	51.2	28	10 S	17 58	19	45	36	49	28	51
14	28 48.7	25.6	79 24.1	109	48.3	29	20	47	18 10	36	2 53	48	14 11	52
15	43 48.8	24.8	93 54.0	109	45.3	30	30	35	17 59	28	3 13	46	13 51	55
16	58 48.9	24.0	108 23.8	108	42.2	31	35	28	54	24	25	45	39	56
17	73 49.0	+ 14 23.3	122 53.7	109	+ 20 39.0	32	40	17 20	17 48	18 20	3 38	45	13 26	57
18	88 49.1	+ 14 22.5	137 23.5	108	+ 20 35.7	33	45	17 10	17 41	18 16	3 54	43	13 11	58
19	103 49.3	21.7	151 53.4	109	32.3	34	50	16 59	33	11	4 14	41	12 51	61
20	118 49.4	21.0	166 23.3	109	28.7	36	52	54	30	09	23	41	42	62
21	133 49.5	20.2	180 53.1	108	25.1	36	54	48	26	08	33	40	32	63
22	148 49.6	19.4	195 23.0	109	21.4	37	56	42	22	06	45	39	20	64
23	163 49.7	18.6	209 52.8	108	17.6	38	58	35	17	04	4 59	37	12 07	66
24	178 49.8	+ 14 17.9	224 22.7	109	+ 20 13.6	40	60 S	16 27	17 12	18 01	5 14	36	11 51	68
UT	ARIES PMG: 2 ^h 32 ^m 2		VENUS Mag.: -4.3 PMG: 8 ^h 54 ^m		MARTE Mag.: +1.1 PMG: 15 ^h 57 ^m		JÚPITER Mag.: -2.2 PMG: 7 ^h 15 ^m			SATURNO Mag.: +0.8 PMG: 16 ^h 05 ^m				
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
	°	°	°	°	°	°	°	°	°					
h	°	'	°	°	'	°	'	°	'	°	'	°	'	
0	321 50.1	226 33.3	+ 19 54.9	120 22.5	- 9 18.9	251 01.5	+ 21 28.6	118 08.1	- 7 20.1					
1	336 52.6	241 33.3	55.0	135 23.5	19.5	266 03.6	28.7	133 10.4	20.1					
2	351 55.0	256 33.2	55.0	150 24.5	20.1	281 05.7	28.7	148 12.7	20.2					
3	6 57.5	271 33.2	55.1	165 25.6	20.7	296 07.7	28.8	163 15.0	20.3					
4	22 00.0	286 33.2	55.2	180 26.6	21.3	311 09.8	28.8	178 17.3	20.4					
5	37 02.4	301 33.1	+ 19 55.3	195 27.6	- 9 21.9	326 11.9	+ 21 28.8	193 19.6	- 7 20.4					
6	52 04.9	316 33.1	+ 19 55.4	210 28.6	- 9 22.5	341 13.9	+ 21 28.9	208 21.9	- 7 20.5					
7	67 07.4	331 33.0	55.4	225 29.6	23.1	356 16.0	28.9	223 24.2	20.6					
8	82 09.8	346 33.0	55.5	240 30.6	23.7	11 18.1	29.0	238 26.5	20.7					
9	97 12.3	1 33.0	55.6	255 31.7	24.3	26 20.2	29.0	253 28.8	20.7					
10	112 14.7	16 32.9	55.7	270 32.7	24.9	41 22.2	29.1	268 31.1	20.8					
11	127 17.2	31 32.9	+ 19 55.8	285 33.7	- 9 25.5	56 24.3	+ 21 29.1	283 33.4	- 7 20.9					
12	142 19.7	46 32.8	+ 19 55.8	300 34.7	- 9 26.1	71 26.4	+ 21 29.2	298 35.7	- 7 21.0					
13	157 22.1	61 32.8	55.9	315 35.7	26.7	86 28.5	29.2	313 37.9	21.0					
14	172 24.6	76 32.7	56.0	330 36.7	27.4	101 30.5	29.3	328 40.2	21.1					
15	187 27.1	91 32.7	56.1	345 37.8	28.0	116 32.6	29.3	343 42.5	21.2					
16	202 29.5	106 32.7	56.1	0 38.8	28.6	131 34.7	29.4	358 44.8	21.3					
17	217 32.0	121 32.6	+ 19 56.2	15 39.8	- 9 29.2	146 36.7	+ 21 29.4	13 47.1	- 7 21.3					
18	232 34.5	136 32.6	+ 19 56.3	30 40.8	- 9 29.8	161 38.8	+ 21 29.4	28 49.4	- 7 21.4					
19	247 36.9	151 32.5	56.4	45 41.8	30.4	176 40.9	29.5	43 51.7	21.5					
20	262 39.4	166 32.5	56.4	60 42.8	31.0	191 43.0	29.5	58 54.0	21.6					
21	277 41.9	181 32.4	56.5	75 43.9	31.6	206 45.0	29.6	73 56.3	21.6					
22	292 44.3	196 32.3	56.6	90 44.9	32.2	221 47.1	29.6	88 58.6	21.7					
23	307 46.8	211 32.3	56.6	105 45.9	32.8	236 49.2	29.7	104 00.9	21.8					
24	322 49.2	226 32.2	+ 19 56.7	120 46.9	- 9 33.4	251 51.3	+ 21 29.7	119 03.2	- 7 21.9					
Dif	—	0	+1	+10	-6	+21	0	+23	-1					

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MARTES 14 DE AGOSTO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'8 PMG: 12 ^h 04 ^m 6		SD: 15'1 Edad: 25 ^d 8		PHE $\left\{ \begin{array}{l} 4^{\text{h}}: 55'/3 \\ 12^{\text{h}}: 55'/5 \\ 20^{\text{h}}: 55'/7 \end{array} \right.$										
			PMG: 9 ^h 21 ^m		R°: 50 ^m										
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
h	°	'	°	'	°	'	°				h	m	h	m	
0	178 49.8	+ 14 17.9	224 22.7		+ 20 13.6		60 N	2 03	3 21	4 13	0 26	72	18 02	23	
1	193 50.0		238 52.5	108	09.6	40	58	28	34	22	41	70	17 49	26	
2	208 50.1	16.3	253 22.4	109	05.4	42	56	2 47	46	30	0 53	68	38 28		
3	223 50.2	15.6	267 52.2	108	+ 20 01.2	42	54	3 02	3 56	37	1 04	66	29 29		
4	238 50.3	14.8	282 22.1	109	+ 19 56.8	44	52	15	4 05	43	14 64	20 32			
5	253 50.4	+ 14 14.0	296 51.9	108	+ 19 52.4	44	50	3 27	4 12	4 49	1 22	64	17 12	33	
6	268 50.5	+ 14 13.2	311 21.8	109	+ 19 47.8	46	45	3 49	4 29	5 01	1 41	61	16 56	36	
7	283 50.7	12.5	325 51.6	108	43.2	46	40	4 06	42	11	1 55	59	42 39		
8	298 50.8	11.7	340 21.5	109	38.4	48	35	20	4 53	19	2 08	57	31 40		
9	313 50.9	10.9	354 51.4	109	33.6	48	30	32	5 02	27	19 56	20 43			
10	328 51.0	10.1	9 21.2	108	28.6	50	20	4 50	17	40	38 53	16 03	45		
11	343 51.1	+ 14 09.4	23 51.1	109	+ 19 23.6	50	10 N	5 04	5 29	5 51	2 54	52	15 48	47	
12	358 51.3	+ 14 08.6	38 21.0	109	+ 19 18.4	52	0	5 15	5 40	6 01	3 09	50	15 33	50	
13	13 51.4	07.8	52 50.9	109	13.1	53	10 S	25	50	11	25 47	19 52			
14	28 51.5	07.0	67 20.8	109	07.8	53	20	33	5 59	22	41 46	15 03	55		
15	43 51.6	06.2	81 50.6	108	+ 19 02.3	55	30	41	6 10	34	3 59	44	14 46	57	
16	58 51.7	05.5	96 20.5	109	+ 18 56.7	56	35	45	15	41	4 10	42	35 59		
17	73 51.9	+ 14 04.7	110 50.4	109	+ 18 51.1	56	40	5 49	6 21	6 49	4 23	40	14 23	61	
18	88 52.0	+ 14 03.9	125 20.4	110	+ 18 45.3	58	45	5 53	6 28	6 58	4 37	39	14 09	63	
19	103 52.1	03.1	139 50.3	109	39.4	59	50	57	35	7 09	4 55	36	13 52	66	
20	118 52.2	02.3	154 20.2	109	33.5	59	52	5 59	39	14	5 04	34	44 67		
21	133 52.4	01.6	168 50.1	109	27.4	61	54	6 01	43	20	13 33	35 69			
22	148 52.5	00.8	183 20.1	110	21.3	61	56	03	47	26	24 31	24 71			
23	163 52.6	+ 14 00.0	197 50.0	109	15.0	63	58	05	51	33	36 29	13 13	73		
24	178 52.7	+ 13 59.2	212 20.0	110	+ 18 08.7	63	60 S	6 07	6 56	7 41	5 50	26	12 59	76	
UT	ARIES PMG: 2 ^h 28 ^m 3		VENUS Mag.: -4.3 PMG: 8 ^h 54 ^m		MARTE Mag.: +1.1 PMG: 15 ^h 56 ^m		JÚPITER Mag.: -2.2 PMG: 7 ^h 12 ^m		SATURNO Mag.: +0.8 PMG: 16 ^h 01 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
	°	'	°	'	°	'	°	'	°	'	°	'			
h	322 49.2	226 32.2	+ 19 56.7	120 46.9	- 9 33.4	251 51.3	+ 21 29.7	119 03.2	- 7 21.9						
1	337 51.7	241 32.2	56.8	135 47.9	34.0	266 53.3	29.8	134 05.5	22.0						
2	352 54.2	256 32.1	56.8	150 48.9	34.6	281 55.4	29.8	149 07.8	22.0						
3	7 56.6	271 32.1	56.9	165 49.9	35.2	296 57.5	29.9	164 10.0	22.1						
4	22 59.1	286 32.0	57.0	180 50.9	35.8	311 59.6	29.9	179 12.3	22.2						
5	38 01.6	301 31.9	+ 19 57.0	195 52.0	- 9 36.4	327 01.6	+ 21 30.0	194 14.6	- 7 22.3						
6	53 04.0	316 31.9	+ 19 57.1	210 53.0	- 9 37.0	342 03.7	+ 21 30.0	209 16.9	- 7 22.3						
7	68 06.5	331 31.8	57.2	225 54.0	37.6	357 05.8	30.0	224 19.2	22.4						
8	83 09.0	346 31.8	57.2	240 55.0	38.2	12 07.9	30.1	239 21.5	22.5						
9	98 11.4	1 31.7	57.3	255 56.0	38.8	27 10.0	30.1	254 23.8	22.6						
10	113 13.9	16 31.6	57.4	270 57.0	39.4	42 12.0	30.2	269 26.1	22.6						
11	128 16.4	31 31.6	+ 19 57.4	285 58.0	- 9 40.0	57 14.1	+ 21 30.2	284 28.4	- 7 22.7						
12	143 18.8	46 31.5	+ 19 57.5	300 59.0	- 9 40.6	72 16.2	+ 21 30.3	299 30.7	- 7 22.8						
13	158 21.3	61 31.4	57.6	316 00.0	41.2	87 18.3	30.3	314 33.0	22.9						
14	173 23.7	76 31.4	57.6	331 01.1	41.8	102 20.3	30.4	329 35.2	23.0						
15	188 26.2	91 31.3	57.7	346 02.1	42.4	117 22.4	30.4	344 37.5	23.0						
16	203 28.7	106 31.2	57.7	1 03.1	43.0	132 24.5	30.4	359 39.8	23.1						
17	218 31.1	121 31.2	+ 19 57.8	16 04.1	- 9 43.7	147 26.6	+ 21 30.5	14 42.1	- 7 23.2						
18	233 33.6	136 31.1	+ 19 57.8	31 05.1	- 9 44.3	162 28.7	+ 21 30.5	29 44.4	- 7 23.3						
19	248 36.1	151 31.0	57.9	46 06.1	44.9	177 30.7	30.6	44 46.7	23.3						
20	263 38.5	166 30.9	58.0	61 07.1	45.5	192 32.8	30.6	59 49.0	23.4						
21	278 41.0	181 30.9	58.0	76 08.1	46.1	207 34.9	30.7	74 51.3	23.5						
22	293 43.5	196 30.8	58.1	91 09.1	46.7	222 37.0	30.7	89 53.6	23.6						
23	308 45.9	211 30.7	58.1	106 10.1	47.3	237 39.1	30.8	104 55.8	23.6						
24	323 48.4	226 30.6	+ 19 58.2	121 11.1	- 9 47.9	252 41.1	+ 21 30.8	119 58.1	- 7 23.7						
Dif	—	-1	+1	+10	-6	+21	0	+23	-1						

MIÉRCOL 15 DE AGOSTO DE 2012

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 4		SD: 15 ^h 2 Edad: 26 ^d 8 PHE { 4 ^h : 55 ^o 9 12 ^h : 56 ^o 1 20 ^h : 56 ^o 3 PMG: 10 ^h 11 ^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	178 52.7	+ 13 59.2	212 20.0		+ 18 08.7	65	60 N	19 52	20 43	21 57	1 38 79		18 25 18	
1	193 52.8	58.4	226 50.0 ¹¹⁰		+ 18 02.2	65	58	43	30	35	1 51 76		15 21	
2	208 53.0	57.6	241 19.9 ¹⁰⁹		+ 17 55.7	65	56	36	19	17	2 01 74		18 06 23	
3	223 53.1	56.9	255 49.9 ¹¹⁰		49.0	67	54	29	09	21 02	10 72		17 58 26	
4	238 53.2	56.1	270 19.9 ¹¹⁰		42.3	67	52	23	20 01	20 49	18 70		52 27	
5	253 53.3	+ 13 55.3	284 49.9 ¹¹⁰		+ 17 35.5	68	50	19 18	19 53	20 39	2 26 68		17 45 29	
6	268 53.5	+ 13 54.5	299 19.9 ¹¹⁰		+ 17 28.5	70	45	19 06	19 38	20 17	2 42 64		17 32 32	
7	283 53.6	53.7	313 50.0 ¹¹¹		21.5	70	40	18 56	25	20 00	2 54 63		21 35	
8	298 53.7	52.9	328 20.0 ¹¹⁰		14.4	71	35	48	15	19 47	3 05 60		11 38	
9	313 53.8	52.2	342 50.0 ¹¹⁰		+ 17 07.2	72	30	41	19 06	36	15 58		17 03 39	
10	328 54.0	51.4	357 20.1 ¹¹¹		+ 16 59.9	73	20	28	18 51	18	31 55		16 48 43	
11	343 54.1	+ 13 50.6	11 50.2 ¹¹¹		+ 16 52.5	74	10 N	18 18	18 39	19 05	3 46 52		16 35 46	
12	358 54.2	+ 13 49.8	26 20.2 ¹¹⁰		+ 16 45.0	75	0	18 08	18 29	18 54	3 59 50		16 23 49	
13	13 54.3	49.0	40 50.3 ¹¹¹		37.5	75	10 S	17 58	20	44	4 12 47		16 11 52	
14	28 54.5	48.2	55 20.4 ¹¹¹		29.8	77	20	48	10	36	27 44		15 58 55	
15	43 54.6	47.4	69 50.5 ¹¹¹		22.1	77	30	36	18 00	29	43 41		43 58	
16	58 54.7	46.7	84 20.7 ¹¹²		14.2	79	35	29	17 55	25	4 52 39		34 61	
17	73 54.8	+ 13 45.9	98 50.8 ¹¹¹		+ 16 06.3	79	40	17 21	17 49	18 21	5 03 37		15 24 63	
18	88 55.0	+ 13 45.1	113 20.9 ¹¹¹		+ 15 58.3	80	45	17 13	17 43	18 18	5 16 34		15 12 66	
19	103 55.1	44.3	127 51.1 ¹¹²		50.2	81	50	17 02	36	14	31 31		14 58 70	
20	118 55.2	43.5	142 21.3 ¹¹²		42.0	82	52	16 57	32	12	38 29		51 72	
21	133 55.3	42.7	156 51.4 ¹¹¹		33.7	83	54	52	29	11	46 27		44 73	
22	148 55.5	41.9	171 21.6 ¹¹²		25.3	84	56	46	25	09	5 55 25		35 76	
23	163 55.6	41.1	185 51.8 ¹¹²		16.9	84	58	39	21	07	6 05 23		26 78	
24	178 55.7	+ 13 40.3	200 22.0 ¹¹²		+ 15 08.3	86	60 S	16 31	17 16	18 05	6 16 20		14 15 81	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 2 ^h 24 ^m 4		Mag.: -4.3 PMG: 8 ^h 54 ^m		Mag.: +1.1 PMG: 15 ^h 54 ^m		Mag.: -2.2 PMG: 7 ^h 08 ^m		Mag.: +0.8 PMG: 15 ^h 58 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♅	Dec
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	323 48.4	226 30.6	+ 19 58.2		121 11.1	- 9 47.9	252 41.1	+ 21 30.8	119 58.1	- 7 23.7				
1	338 50.8	241 30.6	58.2		136 12.1	48.5	267 43.2	30.9	135 00.4	23.8				
2	353 53.3	256 30.5	58.3		151 13.1	49.1	282 45.3	30.9	150 02.7	23.9				
3	8 55.8	271 30.4	58.3		166 14.2	49.7	297 47.4	30.9	165 05.0	24.0				
4	23 58.2	286 30.3	58.4		181 15.2	50.3	312 49.5	31.0	180 07.3	24.0				
5	39 00.7	301 30.3	+ 19 58.4		196 16.2	- 9 50.9	327 51.5	+ 21 31.0	195 09.6	- 7 24.1				
6	54 03.2	316 30.2	+ 19 58.5		211 17.2	- 9 51.5	342 53.6	+ 21 31.1	210 11.9	- 7 24.2				
7	69 05.6	331 30.1	58.5		226 18.2	52.1	357 55.7	31.1	225 14.2	24.3				
8	84 08.1	346 30.0	58.6		241 19.2	52.7	12 57.8	31.2	240 16.4	24.3				
9	99 10.6	1 29.9	58.6		256 20.2	53.3	27 59.9	31.2	255 18.7	24.4				
10	114 13.0	16 29.8	58.7		271 21.2	53.9	43 02.0	31.3	270 21.0	24.5				
11	129 15.5	31 29.7	+ 19 58.7		286 22.2	- 9 54.5	58 04.0	+ 21 31.3	285 23.3	- 7 24.6				
12	144 18.0	46 29.7	+ 19 58.8		301 23.2	- 9 55.1	73 06.1	+ 21 31.3	300 25.6	- 7 24.7				
13	159 20.4	61 29.6	58.8		316 24.2	55.7	88 08.2	31.4	315 27.9	24.7				
14	174 22.9	76 29.5	58.9		331 25.2	56.3	103 10.3	31.4	330 30.2	24.8				
15	189 25.3	91 29.4	58.9		346 26.2	56.9	118 12.4	31.5	345 32.5	24.9				
16	204 27.8	106 29.3	59.0		1 27.2	57.5	133 14.5	31.5	0 34.7	25.0				
17	219 30.3	121 29.2	+ 19 59.0		16 28.2	- 9 58.1	148 16.5	+ 21 31.6	15 37.0	- 7 25.0				
18	234 32.7	136 29.1	+ 19 59.1		31 29.2	- 9 58.7	163 18.6	+ 21 31.6	30 39.3	- 7 25.1				
19	249 35.2	151 29.0	59.1		46 30.2	59.3	178 20.7	31.6	45 41.6	25.2				
20	264 37.7	166 28.9	59.1		61 31.2	- 9 59.9	193 22.8	31.7	60 43.9	25.3				
21	279 40.1	181 28.8	59.2		76 32.2	- 10 00.5	208 24.9	31.7	75 46.2	25.4				
22	294 42.6	196 28.7	59.2		91 33.2	01.1	223 27.0	31.8	90 48.5	25.4				
23	309 45.1	211 28.7	59.3		106 34.2	01.7	238 29.1	31.8	105 50.7	25.5				
24	324 47.5	226 28.6	+ 19 59.3		121 35.2	- 10 02.3	253 31.1	+ 21 31.9	120 53.0	- 7 25.6				
Dif	—	-1	0		+10	-6	+21	0	+23	-1				

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JUEVES 16 DE AGOSTO DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 04 ^m 2		SD: 15'4 Edad: 27 ^d 8		PHE { 4 ^h : 56'5 12 ^h : 56'7 20 ^h : 56'9									
	PMG: 11 ^h 00 ^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 m		h m m	
0	178 55.7	+ 13 40.3	200 22.0		+ 15 08.3		60 N	2 12	3 27	4 17	2 57 83	18 43 14		
1	193 55.9	39.5	214 52.3	113	+ 14 59.7	86	58	35	39	26	3 07 79	36 17		
2	208 56.0	38.7	229 22.5	112	51.0	87	56	2 53	3 50	33	15 77	29 20		
3	223 56.1	38.0	243 52.8	113	42.2	88	54	3 07	4 00	40	22 75	24 22		
4	238 56.2	37.2	258 23.0	112	33.3	89	52	20	08	46	28 73	19 24		
5	253 56.4	+ 13 36.4	272 53.3	113	+ 14 24.4	89	50	3 30	4 16	4 52	3 34 71	18 14 26		
6	268 56.5	+ 13 35.6	287 23.6	113	+ 14 15.3	91	45	3 52	4 31	5 03	3 46 68	18 04 30		
7	283 56.6	34.8	301 53.9	113	+ 14 06.2	91	40	4 09	44	13	3 57 64	17 56 32		
8	298 56.8	34.0	316 24.2	113	+ 13 57.0	92	35	22	4 54	21	4 05 62	49 35		
9	313 56.9	33.2	330 54.5	113	47.8	92	30	33	5 03	28	13 59	42 38		
10	328 57.0	32.4	345 24.9	114	38.4	94	20	4 51	18	40	26 56	31 42		
11	343 57.2	+ 13 31.6	359 55.2	113	+ 13 29.0	94	10 N	5 04	5 29	5 51	4 38 52	17 21 46		
12	358 57.3	+ 13 30.8	14 25.6	114	+ 13 19.5	95	0	5 15	5 40	6 01	4 49 49	17 12 49		
13	13 57.4	30.0	28 55.9	113	09.9	96	10 S	24	49	11	4 59 46	17 03 52		
14	28 57.5	29.2	43 26.3	114	+ 13 00.2	97	20	32	5 58	21	5 11 42	16 53 56		
15	43 57.7	28.4	57 56.7	114	+ 12 50.5	97	30	40	6 08	32	24 38	41 60		
16	58 57.8	27.6	72 27.1	114	40.7	98	35	43	13	39	31 37	35 62		
17	73 57.9	+ 13 26.8	86 57.5	114	+ 12 30.8	99	40	5 47	6 19	6 46	5 40 34	16 27 65		
18	88 58.1	+ 13 26.0	101 28.0	115	+ 12 20.9	99	45	5 50	6 25	6 55	5 50 31	16 18 69		
19	103 58.2	25.2	115 58.4	114	10.9	100	50	54	32	7 06	6 02 27	08 72		
20	118 58.3	24.4	130 28.8	114	+ 12 00.8	101	52	56	35	10	07 26	16 03 74		
21	133 58.5	23.6	144 59.3	115	+ 11 50.6	102	54	57	39	16	13 24	15 57 76		
22	148 58.6	22.8	159 29.8	115	40.4	102	56	5 59	42	22	20 22	51 78		
23	163 58.7	22.0	174 00.2	114	30.1	103	58	6 00	47	28	28 19	44 81		
24	178 58.9	+ 13 21.2	188 30.7	115	+ 11 19.7	104	60 S	6 02	6 51	7 36	6 36 17	15 36 84		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 20 ^m 4		Mag.: -4.3 PMG: 8 ^h 54 ^m		Mag.: +1.1 PMG: 15 ^h 53 ^m		Mag.: -2.2 PMG: 7 ^h 05 ^m		Mag.: +0.8 PMG: 15 ^h 54 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	° ' "	° ' "	° ' "		° ' "		° ' "		° ' "		° ' "			
0	324 47.5	226 28.6	+ 19 59.3		121 35.2	- 10 02.3	253 31.1	+ 21 31.9	120 53.0	- 7 25.6				
1	339 50.0	241 28.5	59.3		136 36.2	02.9	268 33.2	31.9	135 55.3	25.7				
2	354 52.5	256 28.4	59.4		151 37.2	03.5	283 35.3	32.0	150 57.6	25.7				
3	9 54.9	271 28.3	59.4		166 38.2	04.1	298 37.4	32.0	165 59.9	25.8				
4	24 57.4	286 28.2	59.4		181 39.2	04.7	313 39.5	32.0	181 02.2	25.9				
5	39 59.8	301 28.1	+ 19 59.5		196 40.2	- 10 05.3	328 41.6	+ 21 32.1	196 04.5	- 7 26.0				
6	55 02.3	316 28.0	+ 19 59.5		211 41.2	- 10 05.9	343 43.7	+ 21 32.1	211 06.7	- 7 26.1				
7	70 04.8	331 27.9	59.5		226 42.2	06.5	358 45.8	32.2	226 09.0	26.1				
8	85 07.2	346 27.8	59.6		241 43.2	07.2	13 47.8	32.2	241 11.3	26.2				
9	100 09.7	1 27.6	59.6		256 44.2	07.8	28 49.9	32.3	256 13.6	26.3				
10	115 12.2	16 27.5	59.6		271 45.2	08.4	43 52.0	32.3	271 15.9	26.4				
11	130 14.6	31 27.4	+ 19 59.7		286 46.2	- 10 09.0	58 54.1	+ 21 32.3	286 18.2	- 7 26.5				
12	145 17.1	46 27.3	+ 19 59.7		301 47.2	- 10 09.6	73 56.2	+ 21 32.4	301 20.5	- 7 26.5				
13	160 19.6	61 27.2	59.7		316 48.2	10.2	88 58.3	32.4	316 22.7	26.6				
14	175 22.0	76 27.1	59.8		331 49.2	10.8	104 00.4	32.5	331 25.0	26.7				
15	190 24.5	91 27.0	59.8		346 50.2	11.4	119 02.5	32.5	346 27.3	26.8				
16	205 27.0	106 26.9	59.8		1 51.2	12.0	134 04.6	32.6	1 29.6	26.8				
17	220 29.4	121 26.8	+ 19 59.9		16 52.2	- 10 12.6	149 06.7	+ 21 32.6	16 31.9	- 7 26.9				
18	235 31.9	136 26.7	+ 19 59.9		31 53.2	- 10 13.2	164 08.7	+ 21 32.6	31 34.2	- 7 27.0				
19	250 34.3	151 26.6	59.9		46 54.2	13.8	179 10.8	32.7	46 36.4	27.1				
20	265 36.8	166 26.4	+ 19 59.9		61 55.2	14.4	194 12.9	32.7	61 38.7	27.2				
21	280 39.3	181 26.3	+ 20 00.0		76 56.1	15.0	209 15.0	32.8	76 41.0	27.2				
22	295 41.7	196 26.2	00.0		91 57.1	15.6	224 17.1	32.8	91 43.3	27.3				
23	310 44.2	211 26.1	00.0		106 58.1	16.2	239 19.2	32.9	106 45.6	27.4				
24	325 46.7	226 26.0	+ 20 00.0		121 59.1	- 10 16.8	254 21.3	+ 21 32.9	121 47.9	- 7 27.5				
Dif	—	-1	0		+10	-6	+21	0	+23	-1				

VIERNES 17 DE AGOSTO DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 04 ^m 0		SD: 15 ^h 5 Edad: 28 ^d 8 PHE { 4 ^h : 57/1 12 ^h : 57/3 20 ^h : 57/5 PMG: 11 ^h 49 ^m R°: 49 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°		
^h	°	'	°	'	°	'	°	^h ^m	^h ^m	^h ^m	^h ^m ^s	^h ^m ^s	^h ^m ^s	^h ^m ^s
0	178	58.9	+ 13	21.2	188	30.7	+ 11 19.7	60 N	19 46	20 36	21 48	4 20 85	18 57 14	18 57 14
1	193	59.0		20.4	203	01.2	+ 11 09.3	58	38	24	27	26 82	53 16	53 16
2	208	59.1		19.6	217	31.7	+ 10 58.8	56	31	14	21 10	32 79	49 19	49 19
3	223	59.3		18.8	232	02.2	48.2	54	25	20 05	20 56	37 77	46 20	46 20
4	238	59.4		18.0	246	32.7	37.6	52	19	19 57	44	41 75	43 22	43 22
5	253	59.5	+ 13	17.2	261	03.3	+ 10 26.9	50	19 14	19 49	20 34	4 45 73	18 40 24	18 40 24
6	268	59.7	+ 13	16.4	275	33.8	+ 10 16.2	45	19 03	19 34	20 13	4 54 69	18 34 28	18 34 28
7	283	59.8		15.6	290	04.3	+ 10 05.4	40	18 54	22	19 57	5 01 66	28 32	28 32
8	298	59.9		14.8	304	34.9	+ 9 54.5	35	46	12	44	07 63	24 34	24 34
9	314	00.1		14.0	319	05.4	43.5	30	39	19 04	33	12 61	20 37	20 37
10	329	00.2		13.2	333	36.0	32.6	20	27	18 50	17	22 56	13 41	13 41
11	344	00.4	+ 13	12.4	348	06.6	+ 9 21.5	10 N	18 17	18 38	19 04	5 30 52	18 07 45	18 07 45
12	359	00.5	+ 13	11.6	2	37.1	+ 9 10.4	0	18 07	18 29	18 53	5 38 48	18 01 48	18 01 48
13	14	00.6		10.8	17	07.7	+ 8 59.2	10 S	17 58	19	44	45 45	17 55 52	17 55 52
14	29	00.8		10.0	31	38.3	48.0	20	48	11	37	5 53 42	49 56	49 56
15	44	00.9		09.2	46	08.9	36.8	30	37	18 01	30	6 02 38	41 61	41 61
16	59	01.0		08.4	60	39.5	25.4	35	31	17 57	26	08 34	37 63	37 63
17	74	01.2	+ 13	07.6	75	10.1	+ 8 14.1	40	17 23	17 51	18 23	6 14 32	17 32 66	17 32 66
18	89	01.3	+ 13	06.8	89	40.7	+ 8 02.6	45	17 15	17 45	18 20	6 21 28	17 27 69	17 27 69
19	104	01.4		06.0	104	11.3	+ 7 51.2	50	05	38	16	29 25	20 74	20 74
20	119	01.6		05.2	118	41.9	39.6	52	17 00	35	15	33 23	17 75	17 75
21	134	01.7		04.3	133	12.5	28.1	54	16 55	32	14	37 21	13 78	13 78
22	149	01.9		03.5	147	43.1	16.4	56	49	29	12	42 19	09 81	09 81
23	164	02.0		02.7	162	13.7	+ 7 04.8	58	43	25	11	47 16	05 83	05 83
24	179	02.1	+ 13	01.9	176	44.3	+ 6 53.1	60 S	16 36	17 20	18 09	6 53 13	17 00 86	17 00 86
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 16 ^m 5		Mag.: -4.3 PMG: 8 ^h 54 ^m		Mag.: +1.1 PMG: 15 ^h 51 ^m		Mag.: -2.2 PMG: 7 ^h 02 ^m		Mag.: +0.8 PMG: 15 ^h 50 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h	°	'	°	'	°	'	°	'	°	'				
0	325	46.7	226	26.0	+ 20 00.0	121	59.1	- 10 16.8	254	21.3	+ 21 32.9	121	47.9	- 7 27.5
1	340	49.1	241	25.9	00.0	137	00.1	17.4	269	23.4	32.9	136	50.1	27.6
2	355	51.6	256	25.8	00.1	152	01.1	18.0	284	25.5	33.0	151	52.4	27.6
3	10	54.1	271	25.6	00.1	167	02.1	18.6	299	27.6	33.0	166	54.7	27.7
4	25	56.5	286	25.5	00.1	182	03.1	19.2	314	29.7	33.1	181	57.0	27.8
5	40	59.0	301	25.4	+ 20 00.1	197	04.1	- 10 19.8	329	31.8	+ 21 33.1	196	59.3	- 7 27.9
6	56	01.4	316	25.3	+ 20 00.2	212	05.1	- 10 20.4	344	33.8	+ 21 33.2	212	01.6	- 7 28.0
7	71	03.9	331	25.2	00.2	227	06.1	21.0	359	35.9	33.2	227	03.8	28.0
8	86	06.4	346	25.0	00.2	242	07.1	21.6	14	38.0	33.2	242	06.1	28.1
9	101	08.8	1	24.9	00.2	257	08.1	22.2	29	40.1	33.3	257	08.4	28.2
10	116	11.3	16	24.8	00.2	272	09.0	22.8	44	42.2	33.3	272	10.7	28.3
11	131	13.8	31	24.7	+ 20 00.2	287	10.0	- 10 23.4	59	44.3	+ 21 33.4	287	13.0	- 7 28.4
12	146	16.2	46	24.5	+ 20 00.2	302	11.0	- 10 24.0	74	46.4	+ 21 33.4	302	15.3	- 7 28.4
13	161	18.7	61	24.4	00.3	317	12.0	24.6	89	48.5	33.4	317	17.5	28.5
14	176	21.2	76	24.3	00.3	332	13.0	25.2	104	50.6	33.5	332	19.8	28.6
15	191	23.6	91	24.1	00.3	347	14.0	25.8	119	52.7	33.5	347	22.1	28.7
16	206	26.1	106	24.0	00.3	2	15.0	26.4	134	54.8	33.6	2	24.4	28.8
17	221	28.6	121	23.9	+ 20 00.3	17	16.0	- 10 27.0	149	56.9	+ 21 33.6	17	26.7	- 7 28.8
18	236	31.0	136	23.8	+ 20 00.3	32	17.0	- 10 27.6	164	59.0	+ 21 33.7	32	28.9	- 7 28.9
19	251	33.5	151	23.6	00.3	47	17.9	28.2	180	01.1	33.7	47	31.2	29.0
20	266	35.9	166	23.5	00.3	62	18.9	28.8	195	03.2	33.7	62	33.5	29.1
21	281	38.4	181	23.4	00.4	77	19.9	29.4	210	05.3	33.8	77	35.8	29.2
22	296	40.9	196	23.2	00.4	92	20.9	30.0	225	07.4	33.8	92	38.1	29.2
23	311	43.3	211	23.1	00.4	107	21.9	30.6	240	09.5	33.9	107	40.3	29.3
24	326	45.8	226	23.0	+ 20 00.4	122	22.9	- 10 31.2	255	11.6	+ 21 33.9	122	42.6	- 7 29.4
Dif	—		-1		0	+10		-6	+21		0	+23		-1

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SÁBADO 18 DE AGOSTO DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 7		SD: 15 ^h 7 Edad: 0 ^d 3 PHE { 4 ^h : 57 ^m 7 12 ^h : 57 ^m 9 20 ^h : 58 ^m 1 PMG: 12 ^h 38 ^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	h m	h m	h m	h m			
0	179	02.1	+ 13	01.9	176	44.3	+ 6	53.1	60 N	2 21	3 32	4 22	5 45	87	19 11	12		
1	194	02.3		01.1	191	14.9	116	41.3	58	42	44	30	48	84	09	15		
2	209	02.4	+ 13	00.3	205	45.5	116	29.5	56	2 58	3 55	37	51	81	08	17		
3	224	02.6	+ 12	59.5	220	16.1	116	17.7	54	3 12	4 04	44	54	79	06	20		
4	239	02.7		58.7	234	46.8	117	+ 6	05.8	52	24	12	49	56	77	05	22	
5	254	02.8	+ 12	57.9	249	17.4	116	+ 5	53.8	50	3 34	4 19	4 55	5 58	75	19 04	24	
6	269	03.0	+ 12	57.1	263	48.0	116	+ 5	41.9	45	3 55	4 34	5 06	6 03	70	19 02	28	
7	284	03.1		56.3	278	18.6	116	29.9	40	4 11	46	15	07	66	19	00	31	
8	299	03.3		55.4	292	49.2	116	17.8	35	24	4 56	22	10	64	18	58	34	
9	314	03.4		54.6	307	19.8	116	+ 5	05.8	30	35	5 04	29	13	61	57	36	
10	329	03.5		53.8	321	50.3	115	+ 4	53.7	20	4 51	18	41	18	56	54	41	
11	344	03.7	+ 12	53.0	336	20.9	116	+ 4	41.5	10 N	5 04	5 29	5 51	6 22	53	18 52	45	
12	359	03.8	+ 12	52.2	350	51.5	116	+ 4	29.3	0	5 15	5 39	6 00	6 26	49	18 49	49	
13	14	04.0		51.4	5 22.1	116	17.1	122	10 S	23	48	10	30	45	47	53		
14	29	04.1		50.6	19 52.6	115	+ 4	04.9	20	31	5 57	19	35	41	45	57		
15	44	04.2		49.7	34 23.2	116	+ 3	52.6	30	38	6 06	30	40	36	42	61		
16	59	04.4		48.9	48 53.8	116	40.3	123	35	41	11	37	42	35	40	65		
17	74	04.5	+ 12	48.1	63 24.3	115	+ 3	28.0	40	5 44	6 16	6 44	6 46	31	18 38	68		
18	89	04.7	+ 12	47.3	77 54.8	115	+ 3	15.7	45	5 47	6 22	6 52	6 49	28	18 36	71		
19	104	04.8		46.5	92 25.4	116	+ 3	03.3	50	51	28	7 02	54	24	34	75		
20	119	05.0		45.7	106 55.9	115	+ 2	50.9	52	52	31	06	56	22	32	77		
21	134	05.1		44.9	121 26.4	115	38.5	124	54	53	35	11	6 58	20	31	79		
22	149	05.2		44.0	135 56.9	115	26.0	125	56	55	38	17	7 01	17	30	81		
23	164	05.4		43.2	150 27.3	114	13.6	124	58	56	42	23	03	16	28	84		
24	179	05.5	+ 12	42.4	164 57.8	115	+ 2	01.1	60 S	5 57	6 46	7 30	7 06	13	18 26	87		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 2 ^h 12 ^m 6		Mag.: -4.3 PMG: 8 ^h 55 ^m		Mag.: +1.1 PMG: 15 ^h 49 ^m		Mag.: -2.2 PMG: 6 ^h 58 ^m		Mag.: +0.8 PMG: 15 ^h 47 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♏	Dec	hG ♏	Dec									
h	°	'	°	'	°	'	°	'	°	'								
0	326	45.8	226	23.0	+ 20	00.4	122	22.9	- 10	31.2	255	11.6	+ 21	33.9	122	42.6	- 7	29.4
1	341	48.3	241	22.8		00.4	137	23.9		31.8	270	13.7		33.9	137	44.9		29.5
2	356	50.7	256	22.7		00.4	152	24.9		32.4	285	15.8		34.0	152	47.2		29.6
3	11	53.2	271	22.5		00.4	167	25.8		33.0	300	17.9		34.0	167	49.5		29.6
4	26	55.7	286	22.4		00.4	182	26.8		33.6	315	20.0		34.1	182	51.7		29.7
5	41	58.1	301	22.3	+ 20	00.4	197	27.8	- 10	34.2	330	22.1	+ 21	34.1	197	54.0	- 7	29.8
6	57	00.6	316	22.1	+ 20	00.4	212	28.8	- 10	34.8	345	24.2	+ 21	34.2	212	56.3	- 7	29.9
7	72	03.0	331	22.0		00.4	227	29.8		35.4	0 26.3		34.2		227	58.6		30.0
8	87	05.5	346	21.8		00.4	242	30.8		36.0	15 28.4		34.2		243	00.9		30.0
9	102	08.0	1 21.7			00.4	257	31.7		36.6	30 30.5		34.3		258	03.1		30.1
10	117	10.4	16 21.6			00.4	272	32.7		37.2	45 32.6		34.3		273	05.4		30.2
11	132	12.9	31 21.4	+ 20	00.4		287	33.7	- 10	37.8	60 34.7	+ 21	34.4		288	07.7	- 7	30.3
12	147	15.4	46 21.3	+ 20	00.4		302	34.7	- 10	38.4	75 36.8	+ 21	34.4		303	10.0	- 7	30.4
13	162	17.8	61 21.1		00.4		317	35.7		39.0	90 38.9		34.4		318	12.3		30.4
14	177	20.3	76 21.0		00.4		332	36.7		39.6	105 41.0		34.5		333	14.5		30.5
15	192	22.8	91 20.8		00.4		347	37.6		40.2	120 43.1		34.5		348	16.8		30.6
16	207	25.2	106 20.7		00.4		2 38.6	40.8		40.8	135 45.2		34.6		3 19.1			30.7
17	222	27.7	121 20.5	+ 20	00.4		17 39.6	- 10	41.4		150 47.3	+ 21	34.6		18 21.4	- 7	30.8	
18	237	30.2	136 20.4	+ 20	00.4		32 40.6	- 10	42.0		165 49.4	+ 21	34.6		33 23.7	- 7	30.8	
19	252	32.6	151 20.2		00.4		47 41.6	42.6		42.6	180 51.5		34.7		48 25.9			30.9
20	267	35.1	166 20.1		00.4		62 42.6	43.2		43.2	195 53.6		34.7		63 28.2			31.0
21	282	37.5	181 19.9		00.3		77 43.5	43.8		43.8	210 55.7		34.8		78 30.5			31.1
22	297	40.0	196 19.8		00.3		92 44.5	44.4		44.4	225 57.8		34.8		93 32.8			31.2
23	312	42.5	211 19.6		00.3		107 45.5	45.0		45.0	240 59.9		34.8		108 35.0			31.2
24	327	44.9	226 19.5	+ 20	00.3		122	46.5	- 10	45.6	256 02.0	+ 21	34.9		123 37.3	- 7	31.3	
Dif	—		-1		0		+10		-6		+21		0		+23		-1	

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LUNES 20 DE AGOSTO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8		SD: 16 ^h 0		Edad: 2 ^d 3	PHE { 4 ^h : 58 ^h /7 12 ^h : 58 ^h /8 20 ^h : 58 ^h /9		Náutico	Civil		Hora	R°	Hora	R°
	PMG: 12 ^h 03 ^m 3		PMG: 14 ^h 17 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif								
h	° /	° /	° /		° /		°	h m	h m	h m	h m	h m	h m	h m
0	179 09.0	+ 12 22.7	153 03.7		− 3 01.3	126	60 N	2 29	3 38	4 27	8 40 90		19 37 15	
1	194 09.2		167 33.6	109	13.9	126	58	2 48	49	35	37 87		40 19	
2	209 09.3		182 03.5	109	26.5	126	56	3 04	3 59	41	35 83		44 21	
3	224 09.5		196 33.4	109	39.1	125	54	17	4 08	47	33 81		47 24	
4	239 09.6		211 03.3	109	− 3 51.6	125	52	28	16	53	30 79		50 26	
5	254 09.8	+ 12 18.6	225 33.1	108	− 4 04.1	125	50	3 38	4 22	4 58	8 29 77		19 53 27	
6	269 09.9	+ 12 17.7	240 02.9	108	− 4 16.7	126	45	3 58	4 37	5 08	8 25 72		19 59 31	
7	284 10.1		254 32.7	108	29.2	125	40	4 14	48	17	21 69		20 03 35	
8	299 10.2		269 02.4	107	41.6	124	35	26	4 57	24	19 66		08 37	
9	314 10.4		283 32.1	107	− 4 54.1	125	30	36	5 06	30	16 63		11 40	
10	329 10.5		298 01.8	107	− 5 06.5	124	20	4 52	19	41	12 58		18 44	
11	344 10.7	+ 12 13.6	312 31.4	106	− 5 19.0	125	10 N	5 04	5 30	5 51	8 08 55		20 23 49	
12	359 10.9	+ 12 12.8	327 01.0	106	− 5 31.3	123	0	5 14	5 39	6 00	8 05 51		20 29 52	
13	14 11.0		341 30.5	105	43.7	124	10 S	22	47	09	8 01 47		34 55	
14	29 11.2		356 00.1	106	− 5 56.0	123	20	30	5 55	18	7 58 43		40 59	
15	44 11.3		10 29.5	104	− 6 08.4	124	30	36	6 04	28	53 39		46 64	
16	59 11.5		24 59.0	105	20.6	122	35	39	08	34	51 36		50 66	
17	74 11.6	+ 12 08.6	39 28.4	104	− 6 32.9	123	40	5 42	6 13	6 41	7 49 33		20 54 70	
18	89 11.8	+ 12 07.8	53 57.8	104	− 6 45.1	122	45	5 44	6 19	6 49	7 46 30		20 59 73	
19	104 11.9		68 27.1	103	− 6 57.3	122	50	47	25	6 58	42 26		21 05 77	
20	119 12.1		82 56.4	103	− 7 09.4	121	52	48	27	7 02	40 24		08 79	
21	134 12.2		97 25.6	102	21.6	122	54	49	30	07	39 22		11 81	
22	149 12.4		111 54.8	102	33.6	120	56	50	34	12	37 19		14 84	
23	164 12.5		126 24.0	102	45.7	121	58	51	37	18	34 18		18 86	
24	179 12.7	+ 12 02.8	140 53.1	101	− 7 57.7	120	60 S	5 52	6 41	7 25	7 32 15		21 22 90	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 2 ^h 04 ^m 7		Mag.: −4.3 PMG: 8 ^h 55 ^m		Mag.: +1.2 PMG: 15 ^h 46 ^m		Mag.: −2.3 PMG: 6 ^h 52 ^m		Mag.: +0.8 PMG: 15 ^h 39 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	° /	° /	° /		° /		° /		° /		° /		° /	
0	328 44.1	226 15.6	+ 19 59.9	123 09.9	− 10 59.9	256 52.6	+ 21 35.8	124 31.9	− 7 33.3					
1	343 46.5	241 15.4	59.8	138 10.9	− 11 00.5	271 54.7	35.9	139 34.2	33.4					
2	358 49.0	256 15.3	59.8	153 11.8	01.1	286 56.8	35.9	154 36.5	33.5					
3	13 51.5	271 15.1	59.8	168 12.8	01.7	301 58.9	36.0	169 38.8	33.5					
4	28 53.9	286 14.9	59.7	183 13.8	02.3	317 01.0	36.0	184 41.0	33.6					
5	43 56.4	301 14.7	+ 19 59.7	198 14.8	− 11 02.9	332 03.1	+ 21 36.0	199 43.3	− 7 33.7					
6	58 58.9	316 14.6	+ 19 59.7	213 15.7	− 11 03.5	347 05.2	+ 21 36.1	214 45.6	− 7 33.8					
7	74 01.3	331 14.4	59.6	228 16.7	04.1	2 07.4	36.1	229 47.9	33.9					
8	89 03.8	346 14.2	59.6	243 17.7	04.7	17 09.5	36.2	244 50.1	33.9					
9	104 06.3	1 14.0	59.6	258 18.6	05.3	32 11.6	36.2	259 52.4	34.0					
10	119 08.7	16 13.9	59.5	273 19.6	05.9	47 13.7	36.2	274 54.7	34.1					
11	134 11.2	31 13.7	+ 19 59.5	288 20.6	− 11 06.5	62 15.8	+ 21 36.3	289 57.0	− 7 34.2					
12	149 13.6	46 13.5	+ 19 59.5	303 21.6	− 11 07.1	77 17.9	+ 21 36.3	304 59.2	− 7 34.3					
13	164 16.1	61 13.3	59.4	318 22.5	07.7	92 20.0	36.3	320 01.5	34.4					
14	179 18.6	76 13.1	59.4	333 23.5	08.3	107 22.1	36.4	335 03.8	34.4					
15	194 21.0	91 13.0	59.4	348 24.5	08.9	122 24.3	36.4	350 06.1	34.5					
16	209 23.5	106 12.8	59.3	3 25.4	09.5	137 26.4	36.5	5 08.3	34.6					
17	224 26.0	121 12.6	+ 19 59.3	18 26.4	− 11 10.1	152 28.5	+ 21 36.5	20 10.6	− 7 34.7					
18	239 28.4	136 12.4	+ 19 59.2	33 27.4	− 11 10.7	167 30.6	+ 21 36.5	35 12.9	− 7 34.8					
19	254 30.9	151 12.2	59.2	48 28.3	11.2	182 32.7	36.6	50 15.1	34.9					
20	269 33.4	166 12.1	59.1	63 29.3	11.8	197 34.8	36.6	65 17.4	34.9					
21	284 35.8	181 11.9	59.1	78 30.3	12.4	212 36.9	36.7	80 19.7	35.0					
22	299 38.3	196 11.7	59.1	93 31.2	13.0	227 39.1	36.7	95 22.0	35.1					
23	314 40.7	211 11.5	59.0	108 32.2	13.6	242 41.2	36.7	110 24.2	35.2					
24	329 43.2	226 11.3	+ 19 59.0	123 33.2	− 11 14.2	257 43.3	+ 21 36.8	125 26.5	− 7 35.3					
Dif	—	−2	0	+10	−6	+21	0	+23	−1					


MARTES 21 DE AGOSTO DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 12 ^h 03 ^m 0			SD: 16 ^h 1 Edad: 3 ^d 3 PHE { 4 ^h : 59 ^h 0 12 ^h : 59 ^h 1 20 ^h : 59 ^h 1 PMG: 15 ^h 08 ^m R°: 54 ^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	179	12.7	+ 12	140	53.1	—	7 57.7	60 N	19 35	20 23	21 30	10 10	90	19 52	20		
1	194	12.8		155	22.2	101	— 8 09.6	58	28		12 12	10 04	86	19 59	23		
2	209	13.0		169	51.2	100	21.6	56	21	20 03	20 57	9 58	84	20 05	26		
3	224	13.1	+ 12	184	20.2	100	33.4	54	16	19 55	44	54	81	11	27		
4	239	13.3	+ 11	198	49.1	99	45.3	52	11	47	34	49	80	16	29		
5	254	13.5	+ 11	213	18.0	99	— 8 57.0	50	19 06	19 41	20 24	9 46	77	20 20	32		
6	269	13.6	+ 11	227	46.9	99	— 9 08.8	45	18 56	19 27	20 05	9 37	73	20 30	35		
7	284	13.8		242	15.7	98	20.5	40	48	16	19 50	30	70	38	39		
8	299	13.9		256	44.4	97	32.1	35	41	19 07	39	25	66	45	41		
9	314	14.1		271	13.1	97	43.7	30	35	18 59	29	19	65	20 51	44		
10	329	14.2		285	41.8	97	— 9 55.2	20	24	47	13	10	61	21 02	48		
11	344	14.4	+ 11	300	10.4	96	— 10 06.7	10 N	18 15	18 36	19 01	9 03	56	21 12	51		
12	359	14.5	+ 11	314	39.0	96	— 10 18.1	0	18 06	18 27	18 52	8 56	53	21 21	54		
13	14	14.7		329	07.5	95	29.5	10 S	17 58	19	44	48	50	29	58		
14	29	14.9		343	35.9	94	40.8	20	49	12	37	41	46	39	61		
15	44	15.0		358	04.3	94	— 10 52.0	30	39	18 04	32	32	42	50	65		
16	59	15.2		12	32.7	94	— 11 03.2	35	34	17 59	29	27	40	21 56	67		
17	74	15.3	+ 11	27	01.0	93	— 11 14.4	40	17 27	17 55	18 26	8 22	37	22 04	69		
18	89	15.5	+ 11	41	29.3	93	— 11 25.4	45	17 20	17 50	18 24	8 16	33	22 12	73		
19	104	15.6		55	57.5	92	36.4	50	11	44	22	08	29	22	77		
20	119	15.8		70	25.7	92	47.4	52	07	41	21	04	28	27	79		
21	134	16.0		84	53.8	91	— 11 58.2	54	17 02	39	20	8 01	25	32	81		
22	149	16.1		99	21.8	90	— 12 09.0	56	16 57	36	19	7 56	24	38	83		
23	164	16.3		113	49.8	90	19.8	58	52	32	18	52	20	44	87		
24	179	16.4	+ 11	128	17.8	90	— 12 30.4	60 S	16 45	17 29	18 17	7 47	17	22 52	89		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 2 ^h 00 ^m 8			Mag.: -4.3 PMG: 8 ^h 55 ^m			Mag.: +1.2 PMG: 15 ^h 45 ^m			Mag.: -2.3 PMG: 6 ^h 48 ^m			Mag.: +0.8 PMG: 15 ^h 36 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°		
0	329	43.2		226	11.3	+ 19	59.0	123	33.2	— 11	14.2	257	43.3	+ 21	36.8		
1	344	45.7		241	11.1		58.9	138	34.1		14.8	272	45.4		36.8		
2	359	48.1		256	10.9		58.9	153	35.1		15.4	287	47.5		36.8		
3	14	50.6		271	10.7		58.8	168	36.1		16.0	302	49.6		36.9		
4	29	53.1		286	10.6		58.8	183	37.0		16.6	317	51.8		36.9		
5	44	55.5		301	10.4	+ 19	58.7	198	38.0	— 11	17.2	332	53.9	+ 21	37.0		
6	59	58.0		316	10.2	+ 19	58.7	213	39.0	— 11	17.8	347	56.0	+ 21	37.0		
7	75	00.5		331	10.0		58.6	228	39.9		18.4	2 58.1			37.0		
8	90	02.9		346	09.8		58.6	243	40.9		19.0	18 00.2		37.1	245 44.7		
9	105	05.4		1 09.6			58.5	258	41.8		19.6	33 02.3		37.1	260 46.9		
10	120	07.9		16 09.4			58.5	273	42.8		20.2	48 04.5		37.1	275 49.2		
11	135	10.3		31 09.2	+ 19	58.4		288	43.8	— 11	20.8	63 06.6	+ 21	37.2	290 51.5		
12	150	12.8		46 09.0	+ 19	58.4		303	44.7	— 11	21.4	78 08.7	+ 21	37.2	305 53.8		
13	165	15.2		61 08.8		58.3		318	45.7		22.0	93 10.8		37.3	320 56.0		
14	180	17.7		76 08.6		58.3		333	46.7		22.6	108 12.9		37.3	335 58.3		
15	195	20.2		91 08.4		58.2		348	47.6		23.2	123 15.1		37.3	351 00.6		
16	210	22.6		106 08.2		58.1		3 48.6		23.7		138 17.2		37.4	6 02.8		
17	225	25.1		121 08.0	+ 19	58.1		18 49.5	— 11	24.3		153 19.3	+ 21	37.4	21 05.1		
18	240	27.6		136 07.8	+ 19	58.0		33 50.5	— 11	24.9		168 21.4	+ 21	37.4	36 07.4		
19	255	30.0		151 07.6		58.0		48 51.5		25.5		183 23.5		37.5	51 09.6		
20	270	32.5		166 07.4		57.9		63 52.4		26.1		198 25.7		37.5	66 11.9		
21	285	35.0		181 07.2		57.9		78 53.4		26.7		213 27.8		37.6	81 14.2		
22	300	37.4		196 07.0		57.8		93 54.3		27.3		228 29.9		37.6	96 16.5		
23	315	39.9		211 06.8		57.7		108 55.3		27.9		243 32.0		37.6	111 18.7		
24	330	42.3		226 06.6	+ 19	57.7		123 56.3	— 11	28.5		258 34.2	+ 21	37.7	126 21.0		
Dif	—			-2			-1	+10			-6	+21			0	+23	
																-1	

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MIÉRCOL 22 DE AGOSTO DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 8		SD: 16 ^h 1 Edad: 4 ^d 3		PHE $\begin{cases} 4^h: 59/2 \\ 12^h: 59/2 \\ 20^h: 59/3 \end{cases}$	R°: 55 ^m										
	hG ☉	Dec	hG ☾	Dif				Dec	Dif		Náutico	Civil	Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	16.4	+ 11	42.7	128	17.8	- 12	30.4	60 N	2 37	3 44	4 32	11 40	88	20 12	
1	194	16.6		41.8	142	45.7	89	41.0	58	2 55	3 54	39	30	86	22 30	
2	209	16.8		41.0	157	13.5	88	- 12	51.5	56	3 10	4 04	45	22	83	
3	224	16.9		40.2	171	41.3	88	- 13	02.0	54	22	12	51	15	80	
4	239	17.1		39.3	186	09.0	87	12.4	52	33	19	4 56	09	78	45	
5	254	17.2	+ 11	38.5	200	36.7	87	- 13	22.7	50	3 42	4 26	5 01	11 03	76	
6	269	17.4	+ 11	37.6	215	04.3	86	- 13	32.9	45	4 01	4 39	5 10	10 50	73	
7	284	17.6		36.8	229	31.9	86	43.0	40	16	50	19	40	70	17	
8	299	17.7		35.9	243	59.4	85	- 13	53.0	35	28	4 59	25	31	67	
9	314	17.9		35.1	258	26.8	84	- 14	03.0	30	37	5 07	32	24	65	
10	329	18.0		34.2	272	54.3	85	12.9	20	4 53	19	42	10 11	61	21 50	
11	344	18.2	+ 11	33.4	287	21.6	83	- 14	22.7	10 N	5 04	5 30	5 51	9 59	58	
12	359	18.4	+ 11	32.6	301	48.9	83	- 14	32.4	0	5 14	5 38	5 59	9 49	55	
13	14	18.5		31.7	316	16.1	82	42.1	97	10 S	22	46	6 08	38	52	
14	29	18.7		30.9	330	43.3	82	- 14	51.6	20	28	5 54	16	27	49	
15	44	18.8		30.0	345	10.4	81	- 15	01.1	30	34	6 02	26	14	46	
16	59	19.0		29.2	359	37.5	81	10.4	93	35	36	06	32	9 07	43	
17	74	19.2	+ 11	28.3	14	04.5	80	- 15	19.7	40	5 39	6 10	6 38	8 59	41	
18	89	19.3	+ 11	27.5	28	31.5	80	- 15	28.9	45	5 41	6 15	6 45	8 49	38	
19	104	19.5		26.6	42	58.4	79	38.0	91	50	43	21	54	37	35	
20	119	19.7		25.8	57	25.2	78	47.0	90	52	44	23	6 58	32	33	
21	134	19.8		24.9	71	52.0	78	- 15	55.8	54	45	26	7 03	26	31	
22	149	20.0		24.1	86	18.8	78	- 16	04.6	56	46	29	07	20	28	
23	164	20.1		23.2	100	45.5	77	13.3	87	58	47	32	13	12	26	
24	179	20.3	+ 11	22.4	115	12.1	76	- 16	21.9	60 S	5 47	6 36	7 19	8 04	23	
UT	ARIES PMG 1 ^h 56 ^m 9		VENUS Mag.: -4.3 PMG: 8 ^h 56 ^m		MARTE Mag.: +1.2 PMG: 15 ^h 43 ^m		JÚPITER Mag.: -2.3 PMG: 6 ^h 45 ^m		SATURNO Mag.: +0.8 PMG: 15 ^h 32 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	330	42.3	226	06.6	+ 19	57.7	123	56.3	- 11	28.5	258	34.2	+ 21	37.7	126	21.0
1	345	44.8	241	06.4		57.6	138	57.2		29.1	273	36.3		37.7	141	23.3
2	0	47.3	256	06.2		57.5	153	58.2		29.7	288	38.4		37.7	156	25.5
3	15	49.7	271	06.0		57.5	168	59.1		30.3	303	40.5		37.8	171	27.8
4	30	52.2	286	05.8		57.4	184	00.1		30.9	318	42.6		37.8	186	30.1
5	45	54.7	301	05.6	+ 19	57.3	199	01.1	- 11	31.5	333	44.8	+ 21	37.9	201	32.3
6	60	57.1	316	05.4	+ 19	57.3	214	02.0	- 11	32.1	348	46.9	+ 21	37.9	216	34.6
7	75	59.6	331	05.2		57.2	229	03.0		32.7	3 49.0		37.9		231	36.9
8	91	02.1	346	05.0		57.1	244	03.9		33.3	18 51.1		38.0		246	39.1
9	106	04.5	1 04.8			57.1	259	04.9		33.8	33 53.3		38.0		261	41.4
10	121	07.0	16 04.6			57.0	274	05.8		34.4	48 55.4		38.0		276	43.7
11	136	09.5	31 04.4	+ 19	56.9		289	06.8	- 11	35.0	63 57.5	+ 21	38.1		291	46.0
12	151	11.9	46 04.2	+ 19	56.8		304	07.8	- 11	35.6	78 59.6	+ 21	38.1		306	48.2
13	166	14.4	61 03.9		56.8		319	08.7		36.2	94 01.8		38.2		321	50.5
14	181	16.8	76 03.7		56.7		334	09.7		36.8	109 03.9		38.2		336	52.8
15	196	19.3	91 03.5		56.6		349	10.6		37.4	124 06.0		38.2		351	55.0
16	211	21.8	106 03.3		56.6		4 11.6			38.0	139 08.1		38.3		6 57.3	38.6
17	226	24.2	121 03.1	+ 19	56.5		19 12.5	- 11	38.6		154 10.3	+ 21	38.3		21 59.6	- 7 38.7
18	241	26.7	136 02.9	+ 19	56.4		34 13.5	- 11	39.2		169 12.4	+ 21	38.3		37 01.8	- 7 38.8
19	256	29.2	151 02.7		56.3		49 14.4		39.8		184 14.5		38.4		52 04.1	38.9
20	271	31.6	166 02.5		56.2		64 15.4		40.4		199 16.7		38.4		67 06.4	39.0
21	286	34.1	181 02.2		56.2		79 16.3		41.0		214 18.8		38.4		82 08.6	39.0
22	301	36.6	196 02.0		56.1		94 17.3		41.6		229 20.9		38.5		97 10.9	39.1
23	316	39.0	211 01.8		56.0		109 18.3		42.2		244 23.0		38.5		112 13.2	39.2
24	331	41.5	226 01.6	+ 19	55.9		124 19.2	- 11	42.7		259 25.2	+ 21	38.6		127 15.4	- 7 39.3
Dif	—	-2	-1		+10	-6					+21	0			+23	-1

JUEVES 23 DE AGOSTO DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8		SD: 16 ^h 2 Edad: 5 ^d 3	PHE { 4 ^h : 59 ^h /3 12 ^h : 59 ^h /3 20 ^h : 59 ^h /3														
	PMG: 12 ^h 02 ^m 5																	
	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	20.3	+ 11	22.4	115	12.1	76	- 16	21.9	85	60 N	19 29	20 17	21 21	13 08 82	20 39 38		
1	194	20.5		21.5	129	38.7	75		30.4	84	58	22	20 06	21 04	12 56 79	20 52 40		
2	209	20.6		20.7	144	05.2	75		38.8	83	56	16	19 57	20 50	45 77	21 03 42		
3	224	20.8		19.8	158	31.7	74		47.1	82	54	11	50	39	35 75	13 44		
4	239	21.0		19.0	172	58.1	73	- 16	55.3	81	52	06	43	28	27 73	22 45		
5	254	21.1	+ 11	18.1	187	24.4	73	- 17	03.4	80	50	19 02	19 37	20 19	12 19 72	21 30 46		
6	269	21.3	+ 11	17.3	201	50.7	73	- 17	11.4	78	45	18 53	19 24	20 01	12 03 69	21 47 49		
7	284	21.5		16.4	216	17.0	72		19.2	78	40	45	13	19 47	11 50 67	22 01 50		
8	299	21.6		15.6	230	43.2	72		27.0	78	35	38	19 04	36	38 66	13 52		
9	314	21.8		14.7	245	09.4	72		34.7	77	30	32	18 57	26	29 64	23 53		
10	329	22.0		13.9	259	35.5	71		42.2	75	20	22	45	12	11 12 62	41 55		
11	344	22.1	+ 11	13.0	274	01.5	70	- 17	49.6	74	10 N	18 14	18 35	19 00	10 57 60	22 56 57		
12	359	22.3	+ 11	12.2	288	27.5	70	- 17	56.9	73	0	18 06	18 27	18 51	10 44 57	23 11 58		
13	14	22.5		11.3	302	53.5	70	- 18	04.2	73	10 S	17 58	19	44	30 56	26 59		
14	29	22.6		10.5	317	19.4	69		11.2	70	20	50	12	38	16 53	41 62		
15	44	22.8		09.6	331	45.2	68		18.2	70	30	40	05	33	10 00 51	23 59 64		
16	59	23.0		08.8	346	11.0	68		25.1	69	35	35	18 01	30	9 50 50	*** **		
17	74	23.1	+ 11	07.9	0	36.8	68	- 18	31.8	67	40	17 29	17 57	18 28	9 40 47	*** **		
18	89	23.3	+ 11	07.1	15	02.5	67	- 18	38.4	66	45	17 22	17 52	18 26	9 27 45	*** **		
19	104	23.5		06.2	29	28.1	66		44.9	65	50	14	47	24	12 42	*** **		
20	119	23.6		05.4	43	53.7	66		51.3	64	52	10	44	24	9 05 41	*** **		
21	134	23.8		04.5	58	19.3	66	- 18	57.6	63	54	06	42	23	8 57 39	*** **		
22	149	24.0		03.6	72	44.8	65	- 19	03.7	61	56	17 01	39	23	48 38	0 01 80		
23	164	24.1		02.8	87	10.3	65		09.7	60	58	16 56	36	22	38 35	11 82		
24	179	24.3	+ 11	01.9	101	35.8	65	- 19	15.6	59	60 S	16 50	17 33	18 22	8 27 32	0 21 86		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 1 ^h 52 ^m 9		Mag.: -4.3 PMG: 8 ^h 56 ^m		Mag.: +1.2 PMG: 15 ^h 42 ^m		Mag.: -2.3 PMG: 6 ^h 41 ^m		Mag.: +0.8 PMG: 15 ^h 29 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
^h	°	'	°	'	°	'	°	'	°	'								
0	331	41.5	226	01.6	+ 19	55.9	124	19.2	- 11	42.7	259	25.2	+ 21	38.6	127	15.4	- 7	39.3
1	346	44.0	241	01.4		55.8	139	20.2		43.3	274	27.3		38.6	142	17.7		39.4
2	1	46.4	256	01.2		55.8	154	21.1		43.9	289	29.4		38.6	157	20.0		39.5
3	16	48.9	271	00.9		55.7	169	22.1		44.5	304	31.6		38.7	172	22.2		39.5
4	31	51.3	286	00.7		55.6	184	23.0		45.1	319	33.7		38.7	187	24.5		39.6
5	46	53.8	301	00.5	+ 19	55.5	199	24.0	- 11	45.7	334	35.8	+ 21	38.7	202	26.8	- 7	39.7
6	61	56.3	316	00.3	+ 19	55.4	214	24.9	- 11	46.3	349	37.9	+ 21	38.8	217	29.0	- 7	39.8
7	76	58.7	331	00.1		55.3	229	25.9		46.9	4	40.1		38.8	232	31.3		39.9
8	92	01.2	345	59.8		55.2	244	26.8		47.5	19	42.2		38.8	247	33.6		40.0
9	107	03.7	0	59.6		55.2	259	27.8		48.1	34	44.3		38.9	262	35.8		40.1
10	122	06.1	15	59.4		55.1	274	28.7		48.7	49	46.5		38.9	277	38.1		40.1
11	137	08.6	30	59.2	+ 19	55.0	289	29.7	- 11	49.3	64	48.6	+ 21	38.9	292	40.4	- 7	40.2
12	152	11.1	45	58.9	+ 19	54.9	304	30.6	- 11	49.8	79	50.7	+ 21	39.0	307	42.6	- 7	40.3
13	167	13.5	60	58.7		54.8	319	31.6		50.4	94	52.9		39.0	322	44.9		40.4
14	182	16.0	75	58.5		54.7	334	32.5		51.0	109	55.0		39.1	337	47.1		40.5
15	197	18.4	90	58.3		54.6	349	33.5		51.6	124	57.1		39.1	352	49.4		40.6
16	212	20.9	105	58.0		54.5	4	34.4		52.2	139	59.3		39.1	7	51.7		40.6
17	227	23.4	120	57.8	+ 19	54.4	19	35.4	- 11	52.8	155	01.4	+ 21	39.2	22	53.9	- 7	40.7
18	242	25.8	135	57.6	+ 19	54.3	34	36.3	- 11	53.4	170	03.5	+ 21	39.2	37	56.2	- 7	40.8
19	257	28.3	150	57.4		54.2	49	37.2		54.0	185	05.7		39.2	52	58.5		40.9
20	272	30.8	165	57.1		54.1	64	38.2		54.6	200	07.8		39.3	68	00.7		41.0
21	287	33.2	180	56.9		54.0	79	39.1		55.2	215	09.9		39.3	83	03.0		41.1
22	302	35.7	195	56.7		53.9	94	40.1		55.8	230	12.1		39.3	98	05.3		41.2
23	317	38.2	210	56.4		53.8	109	41.0		56.3	245	14.2		39.4	113	07.5		41.2
24	332	40.6	225	56.2	+ 19	53.7	124	42.0	- 11	56.9	260	16.3	+ 21	39.4	128	09.8	- 7	41.3
Dif	—	-2	-1		+9	-6		+21		0		+23		-1				

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VIERNES 24 DE AGOSTO DE 2012


UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 2		SD: 16 ^h 2 Edad: 6 ^d 3		PHE { 4 ^h : 59/3 12 ^h : 59/3 20 ^h : 59/3			PMG: 17 ^h 55 ^m 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	179	24.3	+ 11	01.9	101	35.8	− 19	15.6	58	60 N	2 44	3 49	4 37	14 30	69	21 17	53	
1	194	24.5		01.1	116	01.2	64	21.4	58	58	3 01	3 59	43	15	68	32	54	
2	209	24.6	+ 11	00.2	130	26.5	63	27.0	56	56	15	4 08	49	14 02	67	45	55	
3	224	24.8	+ 10	59.4	144	51.8	63	32.5	55	54	27	16	54	13 50	66	21 57	55	
4	239	25.0		58.5	159	17.1	63	37.9	54	52	37	23	4 59	40	66	22 07	56	
5	254	25.1	+ 10	57.6	173	42.3	62	− 19	43.2	50	3 46	4 29	5 04	13 31	65	22 16	56	
6	269	25.3	+ 10	56.8	188	07.5	62	− 19	48.3	45	4 04	4 42	5 13	13 12	64	22 36	56	
7	284	25.5		55.9	202	32.7	62	53.3	50	40	18	4 52	20	12 57	63	22 51	57	
8	299	25.6		55.1	216	57.8	61	− 19	58.2	35	29	5 01	27	44	63	23 05	57	
9	314	25.8		54.2	231	22.9	61	− 20	02.9	30	39	08	33	33	62	16	58	
10	329	26.0		53.4	245	47.9	60	07.5	46	20	4 53	20	43	12 14	60	36	58	
11	344	26.2	+ 10	52.5	260	13.0	61	− 20	12.0	10 N	5 05	5 30	5 51	11 57	60	23 53	59	
12	359	26.3	+ 10	51.6	274	37.9	59	− 20	16.4	0	5 13	5 38	5 59	11 41	59	***	***	
13	14	26.5		50.8	289	02.9	60	20.6	42	10 S	21	45	6 07	26	58	***	***	
14	29	26.7		49.9	303	27.8	59	24.7	39	20	27	5 52	15	11 09	57	***	***	
15	44	26.8		49.1	317	52.7	59	28.6	38	30	32	6 00	24	10 51	55	***	***	
16	59	27.0		48.2	332	17.6	59	32.4	39	35	34	04	29	40	54	0	10	
17	74	27.2	+ 10	47.3	346	42.4	58	− 20	36.1	40	5 36	6 08	6 35	10 27	54	0 22	65	
18	89	27.4	+ 10	46.5	1	07.2	58	− 20	39.6	45	5 38	6 12	6 42	10 12	53	0 36	67	
19	104	27.5		45.6	15	32.0	58	43.0	34	50	40	17	50	9 54	51	0 54	69	
20	119	27.7		44.7	29	56.8	58	46.3	33	52	40	19	54	46	50	1 02	70	
21	134	27.9		43.9	44	21.5	57	49.4	31	54	41	22	6 58	36	50	11	71	
22	149	28.0		43.0	58	46.3	58	52.4	30	56	41	24	7 03	26	48	21	73	
23	164	28.2		42.2	73	11.0	57	55.2	28	58	42	27	08	9 13	47	33	74	
24	179	28.4	+ 10	41.3	87	35.6	56	− 20	58.0	60 S	5 42	6 30	7 13	8 59	46	1 47	76	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 1 ^h 49 ^m 0		Mag.: −4.3 PMG: 8 ^h 56 ^m		Mag.: +1.2 PMG: 15 ^h 40 ^m		Mag.: −2.3 PMG: 6 ^h 38 ^m		Mag.: +0.8 PMG: 15 ^h 25 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	332	40.6	225	56.2	+ 19	53.7	124	42.0	− 11	56.9	260	16.3	+ 21	39.4	128	09.8	− 7	41.3
1	347	43.1	240	56.0		53.6	139	42.9		57.5	275	18.5		39.4	143	12.1		41.4
2	2	45.6	255	55.7		53.5	154	43.9		58.1	290	20.6		39.5	158	14.3		41.5
3	17	48.0	270	55.5		53.4	169	44.8		58.7	305	22.7		39.5	173	16.6		41.6
4	32	50.5	285	55.3		53.3	184	45.8		59.3	320	24.9		39.5	188	18.8		41.7
5	47	52.9	300	55.0	+ 19	53.2	199	46.7	− 11	59.9	335	27.0	+ 21	39.6	203	21.1	− 7	41.8
6	62	55.4	315	54.8	+ 19	53.1	214	47.7	− 12	00.5	350	29.2	+ 21	39.6	218	23.4	− 7	41.8
7	77	57.9	330	54.6		53.0	229	48.6		01.1	5	31.3		39.7	233	25.6		41.9
8	93	00.3	345	54.3		52.9	244	49.5		01.7	20	33.4		39.7	248	27.9		42.0
9	108	02.8	0	54.1		52.8	259	50.5		02.3	35	35.6		39.7	263	30.2		42.1
10	123	05.3	15	53.9		52.7	274	51.4		02.8	50	37.7		39.8	278	32.4		42.2
11	138	07.7	30	53.6	+ 19	52.6	289	52.4	− 12	03.4	65	39.8	+ 21	39.8	293	34.7	− 7	42.3
12	153	10.2	45	53.4	+ 19	52.5	304	53.3	− 12	04.0	80	42.0	+ 21	39.8	308	37.0	− 7	42.4
13	168	12.7	60	53.1		52.4	319	54.2		04.6	95	44.1		39.9	323	39.2		42.4
14	183	15.1	75	52.9		52.3	334	55.2		05.2	110	46.3		39.9	338	41.5		42.5
15	198	17.6	90	52.7		52.1	349	56.1		05.8	125	48.4		39.9	353	43.7		42.6
16	213	20.1	105	52.4		52.0	4	57.1		06.4	140	50.5		40.0	8	46.0		42.7
17	228	22.5	120	52.2	+ 19	51.9	19	58.0	− 12	07.0	155	52.7	+ 21	40.0	23	48.3	− 7	42.8
18	243	25.0	135	51.9	+ 19	51.8	34	59.0	− 12	07.6	170	54.8	+ 21	40.0	38	50.5	− 7	42.9
19	258	27.4	150	51.7		51.7	49	59.9		08.1	185	57.0		40.1	53	52.8		43.0
20	273	29.9	165	51.5		51.6	65	00.8		08.7	200	59.1		40.1	68	55.0		43.0
21	288	32.4	180	51.2		51.5	80	01.8		09.3	216	01.2		40.1	83	57.3		43.1
22	303	34.8	195	51.0		51.3	95	02.7		09.9	231	03.4		40.2	98	59.6		43.2
23	318	37.3	210	50.7		51.2	110	03.7		10.5	246	05.5		40.2	114	01.8		43.3
24	333	39.8	225	50.5	+ 19	51.1	125	04.6	− 12	11.1	261	07.7	+ 21	40.2	129	04.1	− 7	43.4
Dif	—		−2		−1		+9		−6		+21		0		+23		−1	

SÁBADO 25 DE AGOSTO DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna													
	SD: 15 ^h 8 PMG: 12 ^h 02 ^m 0		SD: 16 ^h 1 Edad: 7 ^d 3 PHE { 4 ^h : 59/2 12 ^h : 59/2 20 ^h : 59/1 PMG: 18 ^h 54 ^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	h m	h m	h m	h m											
0	179	28.4	+ 10	41.3	87	35.6	57	- 20	58.0	25	60 N	19	23	20	10	21	13	15	39	53	22	10	68	26		
1	194	28.6		40.4	102	00.3	56	- 21	00.5	25	58	17	20	00	20	57	23	53			26	68				
2	209	28.7		39.6	116	24.9	56		03.0	25	56	11	19	52	44		15	09	54	40	67					
3	224	28.9		38.7	130	49.6	57		05.3	23	54	06		45	33		14	56	55	22	52	66				
4	239	29.1		37.8	145	14.2	56		07.4	21	52	19	02	38	23		46	55		23	03	65				
5	254	29.3	+ 10	37.0	159	38.8	56	- 21	09.4	20	50	18	58	19	32	20	15	14	36	56	23	12	65			
6	269	29.4	+ 10	36.1	174	03.4	56	- 21	11.3	19	45	18	49	19	20	19	57	14	16	57	23	32	64			
7	284	29.6		35.2	188	28.0	56		13.0	17	40	42		10	44		14	00	57	23	48	63				
8	299	29.8		34.4	202	52.6	56		14.6	16	35	36		19	02	33		13	47	57	**	**	**			
9	314	29.9		33.5	217	17.1	55		16.1	15	30	30		18	55	24		35	57	**	**	**	**			
10	329	30.1		32.6	231	41.7	56		17.4	13	20	21		43	19	10		13	14	58	**	**	**	**		
11	344	30.3	+ 10	31.8	246	06.3	56	- 21	18.5	11	10 N	18	13	18	34	18	59	12	57	58	**	**	**	**		
12	359	30.5	+ 10	30.9	260	30.8	55	- 21	19.6	11	0	18	05	18	26	18	51	12	40	59	0	09	59			
13	14	30.6		30.0	274	55.4	56		20.4	8	10 S	17	58	19		44		24	59		25	60				
14	29	30.8		29.2	289	19.9	55		21.2	8	20	50		12	38		12	06	60	0	43	59				
15	44	31.0		28.3	303	44.5	56		21.8	6	30	41		06	34		11	46	60	1	03	59				
16	59	31.2		27.4	318	09.0	55		22.2	4	35	36		18	02	32		34	60	14	60					
17	74	31.4	+ 10	26.6	332	33.6	56	- 21	22.6	4	40	17	31	17	58	18	30	11	21	60	1	27	61			
18	89	31.5	+ 10	25.7	346	58.1	55	- 21	22.7	1	45	17	24	17	54	18	28	11	05	60	1	43	61			
19	104	31.7		24.8	1	22.7	56		22.8	1	50	17		50	27		10	45	61	2	03	60				
20	119	31.9		24.0	15	47.3	56		22.6	2	52	13		47	27		36	61		12	60					
21	134	32.1		23.1	30	11.9	56		22.4	2	54	09		45	26		26	61		22	61					
22	149	32.2		22.2	44	36.5	56		22.0	4	56	05		43	26		14	61		34	60					
23	164	32.4		21.4	59	01.1	56		21.5	5	58	17	00		40	26		10	00	61	2	47	61			
24	179	32.6	+ 10	20.5	73	25.7	56	- 21	20.8	7	60 S	16	55	17	37	18	26	9	45	61	3	03	61			
UT	ARIES PMG 1 ^h 45 ^m 1		VENUS Mag.: -4.3 PMG: 8 ^h 57 ^m		MARTE Mag.: +1.2 PMG: 15 ^h 39 ^m		JÚPITER Mag.: -2.3 PMG: 6 ^h 35 ^m		SATURNO Mag.: +0.8 PMG: 15 ^h 21 ^m																	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♆	Dec												
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'												
0	333	39.8	225	50.5	+ 19	51.1	125	04.6	- 12	11.1	261	07.7	+ 21	40.2	129	04.1	- 7	43.4								
1	348	42.2	240	50.2		51.0	140	05.5		11.7	276	09.8		40.3	144	06.4		43.5								
2	3	44.7	255	50.0		50.9	155	06.5		12.3	291	11.9		40.3	159	08.6		43.6								
3	18	47.2	270	49.7		50.7	170	07.4		12.9	306	14.1		40.3	174	10.9		43.7								
4	33	49.6	285	49.5		50.6	185	08.3		13.4	321	16.2		40.4	189	13.1		43.7								
5	48	52.1	300	49.3	+ 19	50.5	200	09.3	- 12	14.0	336	18.4	+ 21	40.4	204	15.4	- 7	43.8								
6	63	54.6	315	49.0	+ 19	50.4	215	10.2	- 12	14.6	351	20.5	+ 21	40.4	219	17.7	- 7	43.9								
7	78	57.0	330	48.8		50.2	230	11.2		15.2	6	22.7		40.5	234	19.9		44.0								
8	93	59.5	345	48.5		50.1	245	12.1		15.8	21	24.8		40.5	249	22.2		44.1								
9	109	01.9	0	48.3		50.0	260	13.0		16.4	36	26.9		40.5	264	24.4		44.2								
10	124	04.4	15	48.0		49.9	275	14.0		17.0	51	29.1		40.6	279	26.7		44.3								
11	139	06.9	30	47.8	+ 19	49.7	290	14.9	- 12	17.6	66	31.2	+ 21	40.6	294	29.0	- 7	44.3								
12	154	09.3	45	47.5	+ 19	49.6	305	15.8	- 12	18.1	81	33.4	+ 21	40.6	309	31.2	- 7	44.4								
13	169	11.8	60	47.3		49.5	320	16.8		18.7	96	35.5		40.7	324	33.5		44.5								
14	184	14.3	75	47.0		49.4	335	17.7		19.3	111	37.7		40.7	339	35.7		44.6								
15	199	16.7	90	46.7		49.2	350	18.6		19.9	126	39.8		40.7	354	38.0		44.7								
16	214	19.2	105	46.5		49.1	5	19.6		20.5	141	42.0		40.8	9	40.3		44.8								
17	229	21.7	120	46.2	+ 19	49.0	20	20.5	- 12	21.1	156	44.1	+ 21	40.8	24	42.5	- 7	44.9								
18	244	24.1	135	46.0	+ 19	48.8	35	21.4	- 12	21.7	171	46.2	+ 21	40.8	39	44.8	- 7	45.0								
19	259	26.6	150	45.7		48.7	50	22.4		22.3	186	48.4		40.9	54	47.0		45.0								
20	274	29.0	165	45.5		48.6	65	23.3		22.8	201	50.5		40.9	69	49.3		45.1								
21	289	31.5	180	45.2		48.4	80	24.2		23.4	216	52.7		40.9	84	51.6		45.2								
22	304	34.0	195	45.0		48.3	95	25.2		24.0	231	54.8		41.0	99	53.8		45.3								
23	319	36.4	210	44.7		48.1	110	26.1		24.6	246	57.0		41.0	114	56.1		45.4								
24	334	38.9	225	44.4	+ 19	48.0	125	27.0	- 12	25.2	261	59.1	+ 21	41.0	129	58.3	- 7	45.5								
Dif	—		-3		-1		+9		-6		+21			0		+23		-1								

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DOMINGO 26 DE AGOSTO DE 2012

UT	SOL			 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 7			SD: 16 ^h 1 Edad: 8 ^d 3 PHE $\begin{cases} 4^h: 59^m/1 \\ 12^h: 59^m/0 \\ 20^h: 58^m/9 \end{cases}$ PMG: 19 ^h 53 ^m R°: 57 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
^h 0	179	32.6	+ 10	73	25.7	– 21	20.8	60 N	2 52	3 55	4 41	16 32	37	23 18	81			
1	194	32.8		87	50.3		20.0	58	3 07	4 04	48	16 40		34 77				
2	209	32.9		102	15.0		19.0	56	20	13	53	16 03	42	47 75				
3	224	33.1		116	39.6		17.9	54	32	20	4 58	15 51	44	23 58	74			
4	239	33.3		131	04.3		16.7	52	41	26	5 02	41 45		*** **	***			
5	254	33.5	+ 10	145	29.0	– 21	15.3	50	3 50	4 32	5 06	15 32	46	*** **	***			
6	269	33.7	+ 10	159	53.8	– 21	13.8	45	4 07	4 44	5 15	15 13	48	*** **	***			
7	284	33.8		174	18.5		12.1	40	20	4 54	22	14 57	50	*** **	***			
8	299	34.0		188	43.3		10.3	35	31	5 02	28	44 51		0 02	62			
9	314	34.2		203	08.1		08.4	30	40	09	34	32 53		14 61				
10	329	34.4		217	32.9		06.3	20	4 54	21	43	14 12	55	34 60				
11	344	34.5	+ 10	231	57.7	– 21	04.1	10 N	5 05	5 30	5 51	13 55	56	0 52	59			
12	359	34.7	+ 10	246	22.6	– 21	01.8	0	5 13	5 37	5 58	13 39	57	1 08	59			
13	14	34.9		260	47.5	– 20	59.3	10 S	20	44	6 06	23 59		25 57				
14	29	35.1		275	12.4		56.7	20	25	51	13	13 06	60	1 42	57			
15	44	35.3		289	37.4		53.9	30	30	5 58	22	12 46	62	2 02	56			
16	59	35.4		304	02.4		51.0	35	32	6 01	27	34 64		14 54				
17	74	35.6	+ 10	318	27.4	– 20	48.0	40	5 33	6 05	6 32	12 21	65	2 28	53			
18	89	35.8	+ 10	332	52.5	– 20	44.9	45	5 35	6 09	6 39	12 05	66	2 44	52			
19	104	36.0		347	17.6		41.6	50	36	13	46	11 46	68	3 03	51			
20	119	36.2		1 42.8			38.1	52	36	15	50	37 69		12 50				
21	134	36.3		16 07.9			34.6	54	36	17	53	27 70		23 49				
22	149	36.5		30 33.2			30.9	56	37	20	6 58	15 71		34 48				
23	164	36.7	+ 10	44 58.4			27.1	58	37	22	7 02	11 01	74	3 48	47			
24	179	36.9	+ 9	59 23.7		– 20	23.1	60 S	5 37	6 25	7 08	10 46	75	4 04	45			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 1 ^h 41 ^m 1		Mag.: –4.2 PMG: 8 ^h 57 ^m		Mag.: +1.2 PMG: 15 ^h 37 ^m		Mag.: –2.3 PMG: 6 ^h 31 ^m		Mag.: +0.8 PMG: 15 ^h 18 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
^h 0	334	38.9	225	44.4	+ 19	48.0	125	27.0	– 12	25.2	261	59.1	+ 21	41.0	129	58.3	– 7	45.5
1	349	41.4		47.9		47.9	140	28.0		25.8	277	01.3		41.1	145	00.6		45.6
2	4	43.8	255	43.9		47.7	155	28.9		26.4	292	03.4		41.1	160	02.9		45.7
3	19	46.3	270	43.7		47.6	170	29.8		27.0	307	05.6		41.1	175	05.1		45.7
4	34	48.8	285	43.4		47.4	185	30.8		27.5	322	07.7		41.2	190	07.4		45.8
5	49	51.2	300	43.2	+ 19	47.3	200	31.7	– 12	28.1	337	09.9	+ 21	41.2	205	09.6	– 7	45.9
6	64	53.7	315	42.9	+ 19	47.2	215	32.6	– 12	28.7	352	12.0	+ 21	41.2	220	11.9	– 7	46.0
7	79	56.2	330	42.6		47.0	230	33.6		29.3	7	14.2		41.3	235	14.1		46.1
8	94	58.6	345	42.4		46.9	245	34.5		29.9	22	16.3		41.3	250	16.4		46.2
9	110	01.1	0	42.1		46.7	260	35.4		30.5	37	18.5		41.3	265	18.7		46.3
10	125	03.5	15	41.8		46.6	275	36.3		31.1	52	20.6		41.4	280	20.9		46.3
11	140	06.0	30	41.6	+ 19	46.4	290	37.3	– 12	31.6	67	22.8	+ 21	41.4	295	23.2	– 7	46.4
12	155	08.5	45	41.3	+ 19	46.3	305	38.2	– 12	32.2	82	24.9	+ 21	41.4	310	25.4	– 7	46.5
13	170	10.9	60	41.1		46.1	320	39.1		32.8	97	27.1		41.5	325	27.7		46.6
14	185	13.4	75	40.8		46.0	335	40.1		33.4	112	29.2		41.5	340	30.0		46.7
15	200	15.9	90	40.5		45.8	350	41.0		34.0	127	31.4		41.5	355	32.2		46.8
16	215	18.3	105	40.3		45.7	5	41.9		34.6	142	33.5		41.6	10	34.5		46.9
17	230	20.8	120	40.0	+ 19	45.5	20	42.8	– 12	35.2	157	35.7	+ 21	41.6	25	36.7	– 7	47.0
18	245	23.3	135	39.7	+ 19	45.4	35	43.8	– 12	35.7	172	37.8	+ 21	41.6	40	39.0	– 7	47.1
19	260	25.7	150	39.5		45.2	50	44.7		36.3	187	40.0		41.7	55	41.2		47.1
20	275	28.2	165	39.2		45.1	65	45.6		36.9	202	42.1		41.7	70	43.5		47.2
21	290	30.7	180	38.9		44.9	80	46.5		37.5	217	44.3		41.7	85	45.7		47.3
22	305	33.1	195	38.6		44.8	95	47.5		38.1	232	46.5		41.8	100	48.0		47.4
23	320	35.6	210	38.4		44.6	110	48.4		38.7	247	48.6		41.8	115	50.3		47.5
24	335	38.0	225	38.1	+ 19	44.5	125	49.3	– 12	39.2	262	50.8	+ 21	41.8	130	52.5	– 7	47.6
Dif	—		–3		–1		+9		–6		+22		0		+23		–1	

LUNES 27 DE AGOSTO DE 2012

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UT	SOL		LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna	Puesta de Luna
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 4		SD: 16 ^h 0 Edad: 9 ^d 3		PHE { 4 ^h : 58/9 12 ^h : 58/8 20 ^h : 58/7							
	hG ☉	Dec	hG ☾	Dif		Dec			Dif	Civil	Náutico	Hora
^h 0	179 36.9	+ 9 59.5	59 23.7		− 20 23.1		60 N	^h ^m 19 17	^h ^m 20 03	^h ^m 21 05	^h ^m 17 09 26	^h ^m 21 05
1	194 37.1	58.6	73 49.1	64	19.0	41	58	12	19 54	20 50	16 56 29	*** **
2	209 37.3	57.8	88 14.5	64	14.8	42	56	06	47	38	45 31	*** **
3	224 37.4	56.9	102 39.9	64	10.5	43	54	19 02	40	27	35 33	*** **
4	239 37.6	56.0	117 05.4	65	06.0	45	52	18 58	33	18	26 35	0 08 72
5	254 37.8	+ 9 55.1	131 30.9	65	− 20 01.4	46	50	18 54	19 28	20 10	16 18 37	0 17 71
6	269 38.0	+ 9 54.3	145 56.5	66	− 19 56.7	47	45	18 46	19 16	19 53	16 01 40	0 36 68
7	284 38.2	53.4	160 22.2	67	51.9	48	40	39	19 07	40	15 47 43	0 51 66
8	299 38.3	52.5	174 47.8	66	46.9	50	35	33	18 59	30	35 45	1 04 65
9	314 38.5	51.6	189 13.6	68	41.8	51	30	28	52	21	25 46	15 63
10	329 38.7	50.7	203 39.3	67	36.6	52	20	19	42	19 08	15 07 50	34 61
11	344 38.9	+ 9 49.9	218 05.2	69	− 19 31.3	53	10 N	18 12	18 33	18 58	14 51 53	1 51 59
12	359 39.1	+ 9 49.0	232 31.1	69	− 19 25.8	55	0	18 05	18 26	18 50	14 36 56	2 07 56
13	14 39.3	48.1	246 57.0	69	20.2	56	10 S	17 58	19	44	22 57	22 55
14	29 39.4	47.2	261 23.0	70	14.6	56	20	51	13	39	14 06 60	39 52
15	44 39.6	46.3	275 49.1	71	08.7	59	30	43	07	35	13 48 63	2 58 49
16	59 39.8	45.5	290 15.2	71	− 19 02.8	59	35	38	03	33	38 65	3 08 49
17	74 40.0	+ 9 44.6	304 41.3	71	− 18 56.8	60	40	17 33	18 00	18 32	13 26 67	3 21 46
18	89 40.2	+ 9 43.7	319 07.6	73	− 18 50.6	62	45	17 27	17 56	18 31	13 11 70	3 36 44
19	104 40.4	42.8	333 33.8	72	44.3	63	50	19	52	30	12 54 73	3 54 41
20	119 40.5	41.9	348 00.2	74	38.0	63	52	16	50	30	46 74	4 02 40
21	134 40.7	41.1	2 26.6	74	31.5	65	54	13	49	30	37 76	12 38
22	149 40.9	40.2	16 53.0	74	24.9	66	56	09	47	30	26 78	22 37
23	164 41.1	39.3	31 19.6	76	18.1	68	58	17 04	44	30	15 80	35 34
24	179 41.3	+ 9 38.4	45 46.1	75	− 18 11.3	68	60 S	16 59	17 42	18 30	12 01 83	4 49 31

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 1 ^h 37 ^m 2		Mag.: −4.2 PMG: 8 ^h 58 ^m		Mag.: +1.2 PMG: 15 ^h 36 ^m		Mag.: −2.3 PMG: 6 ^h 28 ^m		Mag.: +0.8 PMG: 15 ^h 14 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
^h 0	335 38.0		225 38.1	+ 19 44.5	125 49.3	− 12 39.2	262 50.8	+ 21 41.8	130 52.5	− 7 47.6
1	350 40.5		240 37.8	44.3	140 50.3	39.8	277 52.9	41.9	145 54.8	47.7
2	5 43.0		255 37.6	44.1	155 51.2	40.4	292 55.1	41.9	160 57.0	47.8
3	20 45.4		270 37.3	44.0	170 52.1	41.0	307 57.2	41.9	175 59.3	47.8
4	35 47.9		285 37.0	43.8	185 53.0	41.6	322 59.4	42.0	191 01.5	47.9
5	50 50.4		300 36.8	+ 19 43.7	200 53.9	− 12 42.2	338 01.5	+ 21 42.0	206 03.8	− 7 48.0
6	65 52.8		315 36.5	+ 19 43.5	215 54.9	− 12 42.8	353 03.7	+ 21 42.0	221 06.1	− 7 48.1
7	80 55.3		330 36.2	43.3	230 55.8	43.3	8 05.9	42.0	236 08.3	48.2
8	95 57.8		345 35.9	43.2	245 56.7	43.9	23 08.0	42.1	251 10.6	48.3
9	111 00.2		0 35.7	43.0	260 57.6	44.5	38 10.2	42.1	266 12.8	48.4
10	126 02.7		15 35.4	42.8	275 58.6	45.1	53 12.3	42.1	281 15.1	48.5
11	141 05.2		30 35.1	+ 19 42.7	290 59.5	− 12 45.7	68 14.5	+ 21 42.2	296 17.3	− 7 48.5
12	156 07.6		45 34.8	+ 19 42.5	306 00.4	− 12 46.3	83 16.6	+ 21 42.2	311 19.6	− 7 48.6
13	171 10.1		60 34.6	42.3	321 01.3	46.8	98 18.8	42.2	326 21.8	48.7
14	186 12.5		75 34.3	42.2	336 02.2	47.4	113 21.0	42.3	341 24.1	48.8
15	201 15.0		90 34.0	42.0	351 03.2	48.0	128 23.1	42.3	356 26.4	48.9
16	216 17.5		105 33.7	41.8	6 04.1	48.6	143 25.3	42.3	11 28.6	49.0
17	231 19.9		120 33.4	+ 19 41.6	21 05.0	− 12 49.2	158 27.4	+ 21 42.4	26 30.9	− 7 49.1
18	246 22.4		135 33.2	+ 19 41.5	36 05.9	− 12 49.8	173 29.6	+ 21 42.4	41 33.1	− 7 49.2
19	261 24.9		150 32.9	41.3	51 06.8	50.3	188 31.7	42.4	56 35.4	49.3
20	276 27.3		165 32.6	41.1	66 07.8	50.9	203 33.9	42.5	71 37.6	49.3
21	291 29.8		180 32.3	41.0	81 08.7	51.5	218 36.1	42.5	86 39.9	49.4
22	306 32.3		195 32.0	40.8	96 09.6	52.1	233 38.2	42.5	101 42.1	49.5
23	321 34.7		210 31.8	40.6	111 10.5	52.7	248 40.4	42.6	116 44.4	49.6
24	336 37.2		225 31.5	+ 19 40.4	126 11.4	− 12 53.3	263 42.6	+ 21 42.6	131 46.6	− 7 49.7
Dif	—		−3	−2	+9	−6	+22	0	+23	−1

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MARTES 28 DE AGOSTO DE 2012

UT	SOL			☾ LUNA						Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 01 ^m 1			SD: 16 ^h 0 Edad: 10 ^d 3 PHE { 4 ^h : 58/5 12 ^h : 58/4 20 ^h : 58/3 PMG: 21 ^h 44 ^m R°: 52 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico		Civil			Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	179	41.3	+ 9	45	46.1	— 18	11.3	60 N	2	59	4	00	4	46	17	35	
1	194	41.5		60	12.8	77	— 18	04.4	58	3	13	09	52	25	22	0	
2	209	41.7		74	39.5	77	— 17	57.3	56	26	17	4	57	16	25	1	
3	224	41.8		89	06.3	78		50.2	54	36	24	5	02	08	27	12	
4	239	42.0		103	33.1	78		42.9	52	45	30	06	17	01	29	20	
5	254	42.2	+ 9	118	00.0	79	— 17	35.6	50	3	53	4	35	5	09	16	
6	269	42.4	+ 9	132	26.9	79	— 17	28.1	45	4	10	4	47	5	18	16	
7	284	42.6		146	54.0	81		20.6	40	23	4	56	24	30	37	1	
8	299	42.8		161	21.1	81		12.9	35	33	5	04	30	20	40	2	
9	314	43.0		175	48.2	81	— 17	05.2	30	41	10	35	16	11	43	18	
10	329	43.2		190	15.4	82	— 16	57.3	20	4	55	21	44	15	57	46	
11	344	43.3	+ 9	204	42.7	83	— 16	49.4	10 N	5	05	5	30	5	51	15	
12	359	43.5	+ 9	219	10.1	84	— 16	41.3	0	5	12	5	37	5	58	15	
13	14	43.7		233	37.5	84		33.2	10 S	19	43	6	05	19	56	3	
14	29	43.9		248	05.0	85		24.9	20	24	49	12	15	06	59	31	
15	44	44.1		262	32.5	85		16.6	30	28	55	20	14	51	63	47	
16	59	44.3		277	00.1	86	— 16	08.2	35	29	5	59	24	43	64	3	
17	74	44.5	+ 9	291	27.8	87	— 15	59.7	40	5	30	6	02	6	29	14	
18	89	44.7	+ 9	305	55.5	87	— 15	51.1	45	5	31	6	05	6	35	14	
19	104	44.8		320	23.4	89		42.4	50	32	09	42	07	74	35	34	
20	119	45.0		334	51.2	88		33.6	52	32	11	45	14	00	76	42	
21	134	45.2		349	19.2	90		24.8	54	32	13	49	13	53	78	50	
22	149	45.4		3	47.2	90		15.8	56	32	15	53	44	81	4	59	
23	164	45.6		18	15.3	91	— 15	06.8	58	32	17	6	57	35	83	5	
24	179	45.8	+ 9	32	43.4	91	— 14	57.7	60 S	5	31	6	19	7	02	13	
UT	ARIES PMG: 1 ^h 33 ^m 3			VENUS Mag.: -4.2 PMG: 8 ^h 58 ^m			MARTE Mag.: +1.2 PMG: 15 ^h 34 ^m			JÚPITER Mag.: -2.3 PMG: 6 ^h 24 ^m			SATURNO Mag.: +0.8 PMG: 15 ^h 11 ^m				
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	'	
0	336	37.2		225	31.5	+ 19	126	11.4	— 12	263	42.6	+ 21	131	46.6	— 7	49.7	
1	351	39.7		240	31.2		141	12.4		278	44.7		146	48.9		49.8	
2	6	42.1		255	30.9		156	13.3		293	46.9		161	51.1		49.9	
3	21	44.6		270	30.6		171	14.2		308	49.0		176	53.4		50.0	
4	36	47.0		285	30.4		186	15.1		323	51.2		191	55.7		50.1	
5	51	49.5	+ 19	300	30.1	+ 19	201	16.0	— 12	338	53.4	+ 21	206	57.9	— 7	50.1	
6	66	52.0	+ 19	315	29.8	+ 19	216	16.9	— 12	353	55.5	+ 21	222	00.2	— 7	50.2	
7	81	54.4		330	29.5		231	17.9		8	57.7		237	02.4		50.3	
8	96	56.9		345	29.2		246	18.8		23	59.9		252	04.7		50.4	
9	111	59.4		0	28.9		261	19.7		39	02.0		267	06.9		50.5	
10	127	01.8		15	28.6		276	20.6		54	04.2		282	09.2		50.6	
11	142	04.3	+ 19	30	28.4	+ 19	291	21.5	— 12	69	06.3	+ 21	297	11.4	— 7	50.7	
12	157	06.8	+ 19	45	28.1	+ 19	306	22.4	— 13	84	08.5	+ 21	312	13.7	— 7	50.8	
13	172	09.2		60	27.8		321	23.4		99	10.7		327	15.9		50.9	
14	187	11.7		75	27.5		336	24.3		114	12.8		342	18.2		50.9	
15	202	14.1		90	27.2		351	25.2		129	15.0		357	20.4		51.0	
16	217	16.6		105	26.9		6	26.1		144	17.2		12	22.7		51.1	
17	232	19.1	+ 19	120	26.6	+ 19	21	27.0	— 13	159	19.3	+ 21	27	24.9	— 7	51.2	
18	247	21.5	+ 19	135	26.3	+ 19	36	27.9	— 13	174	21.5	+ 21	42	27.2	— 7	51.3	
19	262	24.0		150	26.0		51	28.8		189	23.7		57	29.4		51.4	
20	277	26.5		165	25.8		66	29.8		204	25.8		72	31.7		51.5	
21	292	28.9		180	25.5		81	30.7		219	28.0		87	33.9		51.6	
22	307	31.4		195	25.2		96	31.6		234	30.2		102	36.2		51.7	
23	322	33.9		210	24.9		111	32.5		249	32.3		117	38.5		51.7	
24	337	36.3	+ 19	225	24.6	+ 19	126	33.4	— 13	264	34.5	+ 21	132	40.7	— 7	51.8	
Dif	—			—3			+9			+22			0			—1	

MIÉRCOL 29 DE AGOSTO DE 2012

UT	SOL		☉ LUNA						Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 00 ^m 8		SD: 15 ^h 9 Edad: 11 ^d 3 PMG: 22 ^h 36 ^m R°: 49 ^m														
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Civil	Náutico			Hora	R°	Hora	R°			
^h 0	179 45.8	+ 9 17.1	32 43.4		— 14 57.7	92	60 N	19 11	19 57	20 57	17 54	15	2 05	86			
1	194 46.0		47 11.6	92	48.5	92	58	06	48	43	47 18		14 83				
2	209 46.2	15.4	61 39.9	93	39.3	92	56	19 01	41	31	41 20		22 81				
3	224 46.4	14.5	76 08.3	94	29.9	94	54	18 57	34	21	35 23		29 79				
4	239 46.5	13.6	90 36.7	94	20.5	94	52	53	29	13	30 25		36 76				
5	254 46.7	+ 9 12.7	105 05.2	95	— 14 11.0	95	50	18 50	19 23	20 05	17 26	26	2 42	74			
6	269 46.9	+ 9 11.8	119 33.7	95	— 14 01.5	95	45	18 42	19 12	19 49	17 16	30	2 54	71			
7	284 47.1	10.9	134 02.3	96	— 13 51.8	97	40	36	19 04	37	07 34		3 05	67			
8	299 47.3	10.0	148 31.0	97	42.1	97	35	30	18 56	27	17 00	36	14	64			
9	314 47.5	09.1	162 59.8	98	32.4	97	30	26	50	19	16 54	38	21	62			
10	329 47.7	08.2	177 28.6	98	22.5	99	20	18	40	19 06	43 42		35 57				
11	344 47.9	+ 9 07.3	191 57.4	98	— 13 12.6	100	10 N	18 11	18 32	18 57	16 33	46	3 46	54			
12	359 48.1	+ 9 06.4	206 26.4	100	— 13 02.6	100	0	18 04	18 25	18 49	16 24	49	3 57	51			
13	14 48.3	05.5	220 55.4	100	— 12 52.6	100	10 S	17 58	19	44	15 53		4 08	47			
14	29 48.4	04.7	235 24.5	101	42.5	101	20	51	13	39	16 05	57	19	44			
15	44 48.6	03.8	249 53.6	101	32.3	102	30	44	08	36	15 54	61	32	40			
16	59 48.8	02.9	264 22.8	102	22.1	102	35	39	05	34	47 64		39 38				
17	74 49.0	+ 9 02.0	278 52.1	103	— 12 11.8	103	40	17 35	18 02	18 33	15 40	66	4 48	35			
18	89 49.2	+ 9 01.1	293 21.4	103	— 12 01.4	104	45	17 29	17 59	18 33	15 31	70	4 57	33			
19	104 49.4	+ 9 00.2	307 50.8	104	— 11 51.0	104	50	22	55	33	21 73		5 09	28			
20	119 49.6	+ 8 59.3	322 20.3	105	40.5	105	52	19	54	33	16 75		14 27				
21	134 49.8	58.4	336 49.8	105	30.0	105	54	16	52	33	11 77		20 25				
22	149 50.0	57.5	351 19.4	106	19.4	106	56	12	50	33	15 05	80	27	23			
23	164 50.2	56.6	5 49.0	106	— 11 08.8	106	58	08	48	34	14 58	83	34	20			
24	179 50.4	+ 8 55.7	20 18.7	107	— 10 58.1	107	60 S	17 04	17 46	18 34	14 50	86	5 43	17			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 1 ^h 29 ^m 3		Mag.: -4.2 PMG: 8 ^h 59 ^m			Mag.: +1.2 PMG: 15 ^h 33 ^m			Mag.: -2.3 PMG: 6 ^h 21 ^m			Mag.: +0.8 PMG: 15 ^h 07 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
^h 0	337 36.3		225 24.6	+ 19 35.9	126 33.4	— 13 07.2	264 34.5	+ 21 43.3	132 40.7	— 7 51.8							
1	352 38.8		240 24.3	35.7	141 34.3	07.8	279 36.7	43.3	147 43.0	51.9							
2	7 41.3		255 24.0	35.5	156 35.2	08.4	294 38.8	43.4	162 45.2	52.0							
3	22 43.7		270 23.7	35.3	171 36.1	08.9	309 41.0	43.4	177 47.5	52.1							
4	37 46.2		285 23.4	35.1	186 37.0	09.5	324 43.2	43.4	192 49.7	52.2							
5	52 48.6		300 23.1	+ 19 34.9	201 38.0	— 13 10.1	339 45.3	+ 21 43.5	207 52.0	— 7 52.3							
6	67 51.1		315 22.8	+ 19 34.7	216 38.9	— 13 10.7	354 47.5	+ 21 43.5	222 54.2	— 7 52.4							
7	82 53.6		330 22.5	34.5	231 39.8	11.3	9 49.7	43.5	237 56.5	52.5							
8	97 56.0		345 22.2	34.3	246 40.7	11.8	24 51.9	43.6	252 58.7	52.6							
9	112 58.5		0 21.9	34.1	261 41.6	12.4	39 54.0	43.6	268 01.0	52.6							
10	128 01.0		15 21.6	33.9	276 42.5	13.0	54 56.2	43.6	283 03.2	52.7							
11	143 03.4		30 21.3	+ 19 33.7	291 43.4	— 13 13.6	69 58.4	+ 21 43.6	298 05.5	— 7 52.8							
12	158 05.9		45 21.0	+ 19 33.5	306 44.3	— 13 14.1	85 00.5	+ 21 43.7	313 07.7	— 7 52.9							
13	173 08.4		60 20.7	33.3	321 45.2	14.7	100 02.7	43.7	328 10.0	53.0							
14	188 10.8		75 20.4	33.1	336 46.1	15.3	115 04.9	43.7	343 12.2	53.1							
15	203 13.3		90 20.1	32.9	351 47.0	15.9	130 07.1	43.8	358 14.5	53.2							
16	218 15.8		105 19.8	32.7	6 47.9	16.5	145 09.2	43.8	13 16.7	53.3							
17	233 18.2		120 19.5	+ 19 32.4	21 48.8	— 13 17.0	160 11.4	+ 21 43.8	28 19.0	— 7 53.4							
18	248 20.7		135 19.2	+ 19 32.2	36 49.8	— 13 17.6	175 13.6	+ 21 43.9	43 21.2	— 7 53.4							
19	263 23.1		150 18.9	32.0	51 50.7	18.2	190 15.7	43.9	58 23.5	53.5							
20	278 25.6		165 18.6	31.8	66 51.6	18.8	205 17.9	43.9	73 25.7	53.6							
21	293 28.1		180 18.3	31.6	81 52.5	19.4	220 20.1	43.9	88 28.0	53.7							
22	308 30.5		195 18.0	31.4	96 53.4	19.9	235 22.3	44.0	103 30.2	53.8							
23	323 33.0		210 17.7	31.2	111 54.3	20.5	250 24.4	44.0	118 32.5	53.9							
24	338 35.5		225 17.4	+ 19 30.9	126 55.2	— 13 21.1	265 26.6	+ 21 44.0	133 34.7	— 7 54.0							
Dif	—		—3	—2	+9	—6	+22	0	+23	—1							

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JUEVES 30 DE AGOSTO DE 2012

UT	SOL			☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 15 ^h 8 PMG: 12 ^h 00 ^m 5			SD: 15 ^h 7 Edad: 12 ^d 3 PHE { 4 ^h : 57 ^m /7 12 ^h : 57 ^m /5 20 ^h : 57 ^m /3 PMG: 23 ^h 25 ^m R°: 47 ^m											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	h	m	h	m
0	179	50.4	+ 8	20	18.7	108	− 10	58.1	3	06	4	5	18	09	13
1	194	50.6		34	48.5	107		47.4	19	14	4	56	05	15	37
2	209	50.8		49	18.3	108		36.6	31	21	5	01	18	01	43
3	224	50.9		63	48.2	109		25.8	41	28	0	51	17	58	20
4	239	51.1		78	18.2	110		14.9	49	33	09	55	22	52	75
5	254	51.3	+ 8	92	48.2	110	− 10	04.0	3	57	4	39	5	17	52
6	269	51.5	+ 8	107	18.2	110	− 9	53.0	4	13	4	49	5	17	46
7	284	51.7		121	48.4	112		42.0	25	4	58	26	41	30	12
8	299	51.9		136	18.5	111		30.9	35	5	05	31	36	33	18
9	314	52.1		150	48.8	113		19.8	43	12	36	32	36	23	60
10	329	52.3		165	19.1	113	− 9	08.7	4	55	22	44	25	40	32
11	344	52.5	+ 8	179	49.4	113	− 8	57.5	5	05	5	30	5	17	19
12	359	52.7	+ 8	194	19.8	114	− 8	46.3	5	12	5	36	5	57	17
13	14	52.9		208	50.3	115		35.0	18	42	6	03	08	51	4
14	29	53.1		223	20.8	115		23.8	22	48	10	17	02	54	4
15	44	53.3		237	51.4	116		12.4	30	25	53	17	16	55	5
16	59	53.5		252	22.0	116	− 8	01.1	35	27	56	21	51	61	17
17	74	53.7	+ 8	266	52.7	117	− 7	49.7	5	27	5	59	6	16	46
18	89	53.9	+ 8	281	23.4	117	− 7	38.3	5	28	6	02	6	16	41
19	104	54.1		295	54.2	118		26.9	28	05	38	34	72	37	25
20	119	54.3		310	25.1	119		15.4	28	07	41	31	74	41	23
21	134	54.4		324	56.0	119	− 7	03.9	54	28	08	44	28	76	45
22	149	54.6		339	26.9	119	− 6	52.4	56	27	10	48	25	78	50
23	164	54.8		353	57.9	120		40.8	58	27	12	52	21	80	5
24	179	55.0	+ 8	8	28.9	120	− 6	29.2	60	26	6	14	6	16	84
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 1 ^h 25 ^m 4			Mag.: −4.2 PMG: 8 ^h 59 ^m			Mag.: +1.2 PMG: 15 ^h 31 ^m			Mag.: −2.3 PMG: 6 ^h 17 ^m			Mag.: +0.8 PMG: 15 ^h 03 ^m		
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°
0	338	35.5		225	17.4	+ 19	126	55.2	− 13	265	26.6	+ 21	133	34.7	− 7
1	353	37.9		240	17.1		141	56.1		280	28.8		148	37.0	
2	8	40.4		255	16.8		156	57.0		295	31.0		163	39.2	
3	23	42.9		270	16.5		171	57.9		310	33.1		178	41.5	
4	38	45.3		285	16.2		186	58.8		325	35.3		193	43.7	
5	53	47.8		300	15.9	+ 19	201	59.7	− 13	340	37.5	+ 21	208	46.0	− 7
6	68	50.2		315	15.6	+ 19	217	00.6	− 13	355	39.7	+ 21	223	48.2	− 7
7	83	52.7		330	15.3		232	01.5		10	41.8		238	50.5	
8	98	55.2		345	15.0		247	02.4		25	44.0		253	52.7	
9	113	57.6		0	14.7		262	03.3		40	46.2		268	54.9	
10	129	00.1		15	14.4		277	04.2		55	48.4		283	57.2	
11	144	02.6		30	14.1	+ 19	292	05.1	− 13	70	50.6	+ 21	298	59.4	− 7
12	159	05.0		45	13.8	+ 19	307	06.0	− 13	85	52.7	+ 21	314	01.7	− 7
13	174	07.5		60	13.5		322	06.9		100	54.9		329	03.9	
14	189	10.0		75	13.2		337	07.8		115	57.1		344	06.2	
15	204	12.4		90	12.8		352	08.7		130	59.3		359	08.4	
16	219	14.9		105	12.5		7	09.6		146	01.4		14	10.7	
17	234	17.4		120	12.2	+ 19	22	10.5	− 13	161	03.6	+ 21	29	12.9	− 7
18	249	19.8		135	11.9	+ 19	37	11.4	− 13	176	05.8	+ 21	44	15.2	− 7
19	264	22.3		150	11.6		52	12.3		191	08.0		59	17.4	
20	279	24.7		165	11.3		67	13.2		206	10.2		74	19.7	
21	294	27.2		180	11.0		82	14.1		221	12.3		89	21.9	
22	309	29.7		195	10.7		97	15.0		236	14.5		104	24.2	
23	324	32.1		210	10.4		112	15.9		251	16.7		119	26.4	
24	339	34.6		225	10.0	+ 19	127	16.8	− 13	266	18.9	+ 21	134	28.7	− 7
Dif	—		−3	−2		+9	−6		+22	0		+22	−1		

VIERNES 31 DE AGOSTO DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15'8 PMG: 12 ^h 00 ^m 2		SD: 15'6 Edad: 13 ^d 3 PHE { 4 ^h : 57'1 12 ^h : 57'0 20 ^h : 56'8 PMG: **h **m R°: ***m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	179 55.0	+ 8 34.1	8 28.9		- 6 29.2		60 N	19 05	19 50	20 49	18 22	12	4 56	83
1	194 55.2		23 00.0	121	17.6	116	58	19 01	42	36	20 15	4	59	80
2	209 55.4	32.3	37 31.1	121	- 6 06.0	116	56	18 56	36	25	19 17	5	02	77
3	224 55.6	31.4	52 02.3	122	- 5 54.4	116	54	52	29	16	18 18	04	76	
4	239 55.8	30.5	66 33.5	122	42.7	117	52	49	24	07	17 20	07	73	
5	254 56.0	+ 8 29.6	81 04.8	123	- 5 31.0	117	50	18 45	19 19	20 00	18 15	23	5 09	71
6	269 56.2	+ 8 28.7	95 36.1	123	- 5 19.4	116	45	18 38	19 09	19 45	18 13	26	5 13	67
7	284 56.4	27.8	110 07.5	124	- 5 07.6	118	40	33	19 00	33	11 29	17	64	
8	299 56.6	26.9	124 38.9	124	- 4 55.9	117	35	28	18 53	24	09 32	20	61	
9	314 56.8	26.0	139 10.4	125	44.2	117	30	23	48	16	08 34	23	59	
10	329 57.0	25.1	153 41.9	125	32.4	118	20	16	38	19 04	05 39	28	54	
11	344 57.2	+ 8 24.2	168 13.4	125	- 4 20.7	117	10 N	18 09	18 31	18 55	18 03	42	5 32	51
12	359 57.4	+ 8 23.3	182 45.0	126	- 4 08.9	118	0	18 03	18 24	18 49	18 01	46	5 36	47
13	14 57.6	22.4	197 16.6	126	- 3 57.1	118	10 S	17 58	19	43	17 59	49	40	43
14	29 57.8	21.5	211 48.3	127	45.3	118	20	52	14	39	56 54	44	40	
15	44 58.0	20.6	226 19.9	126	33.5	118	30	45	09	37	54 57	49	35	
16	59 58.2	19.7	240 51.7	128	21.7	118	35	41	06	36	52 60	52	32	
17	74 58.4	+ 8 18.8	255 23.5	128	- 3 09.9	118	40	17 36	18 04	18 35	17 51	62	5 55	30
18	89 58.6	+ 8 17.9	269 55.3	128	- 2 58.1	118	45	17 31	18 01	18 35	17 49	66	5 58	27
19	104 58.8	17.0	284 27.1	128	46.3	118	50	25	17 58	35	46 70	6	02	23
20	119 59.0	16.1	298 59.0	129	34.4	119	52	23	57	36	45 72	04	21	
21	134 59.2	15.2	313 30.9	129	22.6	118	54	20	55	36	44 74	06	20	
22	149 59.4	14.3	328 02.9	130	- 2 10.8	118	56	16	54	37	43 76	09	17	
23	164 59.6	13.4	342 34.9	130	- 1 59.0	118	58	13	52	38	41 79	11	15	
24	179 59.8	+ 8 12.4	357 06.9	130	- 1 47.1	119	60 S	17 08	17 51	18 39	17 40	81	6 14	12
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 1 ^h 21 ^m 5		Mag.: -4.2 PMG: 9 ^h 00 ^m		Mag.: +1.2 PMG: 15 ^h 30 ^m		Mag.: -2.3 PMG: 6 ^h 14 ^m		Mag.: +0.8 PMG: 15 ^h 00 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h 0	339 34.6	225 10.0	+ 19 25.5		127 16.8	- 13 34.9	266 18.9	+ 21 44.7	134 28.7	- 7 56.2				
1	354 37.1	240 09.7	25.2		142 17.7	35.5	281 21.1	44.7	149 30.9	56.3				
2	9 39.5	255 09.4	25.0		157 18.6	36.1	296 23.3	44.8	164 33.2	56.3				
3	24 42.0	270 09.1	24.8		172 19.5	36.6	311 25.4	44.8	179 35.4	56.4				
4	39 44.5	285 08.8	24.5		187 20.4	37.2	326 27.6	44.8	194 37.6	56.5				
5	54 46.9	300 08.5	+ 19 24.3		202 21.3	- 13 37.8	341 29.8	+ 21 44.9	209 39.9	- 7 56.6				
6	69 49.4	315 08.2	+ 19 24.0		217 22.2	- 13 38.4	356 32.0	+ 21 44.9	224 42.1	- 7 56.7				
7	84 51.8	330 07.8	23.8		232 23.1	38.9	11 34.2	44.9	239 44.4	56.8				
8	99 54.3	345 07.5	23.6		247 24.0	39.5	26 36.4	44.9	254 46.6	56.9				
9	114 56.8	0 07.2	23.3		262 24.9	40.1	41 38.5	45.0	269 48.9	57.0				
10	129 59.2	15 06.9	23.1		277 25.8	40.7	56 40.7	45.0	284 51.1	57.1				
11	145 01.7	30 06.6	+ 19 22.8		292 26.7	- 13 41.2	71 42.9	+ 21 45.0	299 53.4	- 7 57.2				
12	160 04.2	45 06.3	+ 19 22.6		307 27.6	- 13 41.8	86 45.1	+ 21 45.1	314 55.6	- 7 57.3				
13	175 06.6	60 05.9	22.3		322 28.5	42.4	101 47.3	45.1	329 57.9	57.3				
14	190 09.1	75 05.6	22.1		337 29.3	43.0	116 49.5	45.1	345 00.1	57.4				
15	205 11.6	90 05.3	21.8		352 30.2	43.5	131 51.6	45.1	0 02.3	57.5				
16	220 14.0	105 05.0	21.6		7 31.1	44.1	146 53.8	45.2	15 04.6	57.6				
17	235 16.5	120 04.7	+ 19 21.3		22 32.0	- 13 44.7	161 56.0	+ 21 45.2	30 06.8	- 7 57.7				
18	250 19.0	135 04.3	+ 19 21.1		37 32.9	- 13 45.2	176 58.2	+ 21 45.2	45 09.1	- 7 57.8				
19	265 21.4	150 04.0	20.8		52 33.8	45.8	192 00.4	45.2	60 11.3	57.9				
20	280 23.9	165 03.7	20.6		67 34.7	46.4	207 02.6	45.3	75 13.6	58.0				
21	295 26.3	180 03.4	20.3		82 35.6	47.0	222 04.8	45.3	90 15.8	58.1				
22	310 28.8	195 03.1	20.0		97 36.5	47.5	237 07.0	45.3	105 18.1	58.2				
23	325 31.3	210 02.7	19.8		112 37.4	48.1	252 09.1	45.4	120 20.3	58.3				
24	340 33.7	225 02.4	+ 19 19.5		127 38.3	- 13 48.7	267 11.3	+ 21 45.4	135 22.5	- 7 58.4				
Dif	—	-3	-2		+9	-6	+22	0	+22	-1				

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SÁBADO 1 DE SEPTIEMBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 8 PMG: 11 ^h 59 ^m 9		SD: 15 ^h 4 Edad: 14 ^d 3 PHE { 4 ^h : 56 ^h /6 12 ^h : 56 ^h /4 20 ^h : 56 ^h /2 PMG: 0 ^h 12 ^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	179	59.8	+ 8	12.4	357	06.9	118	3	12	4	11	4	56	18	34
1	195	00.0		11.5	11	39.0	131	58	25	19	5	01		35	14
2	210	00.2		10.6	26	11.0	130	56	36	25	05		36	16	19
3	225	00.4		09.7	40	43.2	132	54	45	31	09		36	19	20
4	240	00.6		08.8	55	15.3	131	52	3	53	37	12		37	21
5	255	00.8	+ 8	07.9	69	47.5	132	50	4	01	4	42	5	15	18
6	270	01.0	+ 8	07.0	84	19.7	132	45	4	16	4	52	5	22	18
7	285	01.2		06.1	98	51.9	132	40	27	5	00	28		40	29
8	300	01.4		05.2	113	24.2	133	35	36	07	33		41	32	21
9	315	01.6		04.3	127	56.5	133	30	44	13	37		42	34	22
10	330	01.8		03.4	142	28.8	133	20	4	56	22	44		44	38
11	345	02.0	+ 8	02.5	157	01.2	134	10 N	5	05	5	30	5	51	18
12	0	02.2	+ 8	01.5	171	33.5	133	0	5	11	5	36	5	57	18
13	15	02.4	+ 8	00.6	186	05.9	134	10 S	17	41	6	02		48	48
14	30	02.6	+ 7	59.7	200	38.4	135	20	20	46	08		50	52	24
15	45	02.8		58.8	215	10.8	134	30	23	51	15		51	57	24
16	60	03.0		57.9	229	43.3	135	35	24	53	19		52	59	24
17	75	03.2	+ 7	57.0	244	15.7	134	40	5	24	5	56	6	23	18
18	90	03.4	+ 7	56.1	258	48.3	136	45	5	24	5	58	6	28	18
19	105	03.6		55.2	273	20.8	135	50	24	6	01	34		56	69
20	120	03.8		54.3	287	53.3	135	52	23	02	36		57	70	25
21	135	04.0		53.4	302	25.9	136	54	23	04	39		58	72	26
22	150	04.2		52.4	316	58.5	136	56	22	05	43		18	59	74
23	165	04.4		51.5	331	31.1	136	58	21	07	46		19	00	77
24	180	04.6	+ 7	50.6	346	03.7	136	60 S	5	20	6	08	6	50	19
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 1 ^h 17 ^m 5		Mag.: −4.2 PMG: 9 ^h 00 ^m			Mag.: +1.2 PMG: 15 ^h 29 ^m			Mag.: −2.3 PMG: 6 ^h 10 ^m			Mag.: +0.8 PMG: 14 ^h 56 ^m			
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	340	33.7	225	02.4	+ 19	127	38.3	− 13	267	11.3	+ 21	135	22.5	− 7	
1	355	36.2	240	02.1		142	39.2		282	13.5		150	24.8		
2	10	38.7	255	01.8		157	40.0		297	15.7		165	27.0		
3	25	41.1	270	01.5		172	40.9		312	17.9		180	29.3		
4	40	43.6	285	01.1		187	41.8		327	20.1		195	31.5		
5	55	46.1	300	00.8	+ 19	202	42.7	− 13	342	22.3	+ 21	210	33.8	− 7	
6	70	48.5	315	00.5	+ 19	217	43.6	− 13	357	24.5	+ 21	225	36.0	− 7	
7	85	51.0	330	00.2		232	44.5		12	26.7		240	38.3		
8	100	53.5	344	59.8		247	45.4		27	28.9		255	40.5		
9	115	55.9	359	59.5		262	46.3		42	31.0		270	42.7		
10	130	58.4	14	59.2		277	47.2		57	33.2		285	45.0		
11	146	00.8	29	58.9	+ 19	292	48.0	− 13	72	35.4	+ 21	300	47.2	− 7	
12	161	03.3	44	58.5	+ 19	307	48.9	− 13	87	37.6	+ 21	315	49.5	− 7	
13	176	05.8	59	58.2		322	49.8		102	39.8		330	51.7		
14	191	08.2	74	57.9		337	50.7		117	42.0		345	54.0		
15	206	10.7	89	57.5		352	51.6		132	44.2		0	56.2		
16	221	13.2	104	57.2		7	52.5		147	46.4		15	58.4		
17	236	15.6	119	56.9	+ 19	22	53.4	− 13	162	48.6	+ 21	31	00.7	− 7	
18	251	18.1	134	56.6	+ 19	37	54.2	− 13	177	50.8	+ 21	46	02.9	− 8	
19	266	20.6	149	56.2		52	55.1	− 13	192	53.0		61	05.2		
20	281	23.0	164	55.9		67	56.0	− 14	207	55.2		76	07.4		
21	296	25.5	179	55.6		82	56.9		222	57.4		91	09.7		
22	311	27.9	194	55.2		97	57.8		237	59.6		106	11.9		
23	326	30.4	209	54.9		112	58.7		253	01.7		121	14.1		
24	341	32.9	224	54.6	+ 19	127	59.5	− 14	268	03.9	+ 21	136	16.4	− 8	
Dif	—	−3	−3		+9	−6		+22	0		+22	−1			

DOMINGO 2 DE SEPTIEMBRE DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna				
	SD: 15°9 PMG: 11 ^h 59 ^m 5		SD: 15°3 Edad: 15 ^d 3 PHE { 4 ^h : 56°0 12 ^h : 55°8 20 ^h : 55°6 PMG: 0 ^h 58 ^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	180	04.6	+ 7	50.6	346	03.7	+ 2	53.8	60 N	18 59	19 44	20 41	18 46	13	7 39	79		
1	195	04.8		49.7		0 36.3	136	+ 3	05.3	58	55	36	29	49	16	37	76	
2	210	05.0		48.8		15 09.0	137		16.8	56	51	30	19	52	18	35	73	
3	225	05.2		47.9		29 41.7	137		28.2	54	47	24	10	55	20	33	71	
4	240	05.4		47.0		44 14.4	137		39.7	52	44	19	20 02	18 58	21	31	69	
5	255	05.6	+ 7	46.0	58	47.1	137	+ 3	51.0	50	18 41	19 15	19 55	19 00	23	7 29	68	
6	270	05.8	+ 7	45.1	73	19.8	137	+ 4	02.4	45	18 35	19 05	19 41	19 05	27	7 26	64	
7	285	06.0		44.2	87	52.5	137		13.7	40	29	18 57	30	09	30	23	61	
8	300	06.2		43.3	102	25.2	137		25.0	35	25	51	21	13	32	21	58	
9	315	06.4		42.4	116	58.0	138		36.3	30	21	45	14	16	35	18	56	
10	330	06.6		41.5	131	30.7	137		47.6	20	14	36	19 02	22	38	15	51	
11	345	06.8	+ 7	40.6	146	03.5	138	+ 4	58.8	10 N	18 08	18 29	18 54	19 27	42	7 11	49	
12	0	07.0	+ 7	39.6	160	36.3	138	+ 5	09.9	0	18 03	18 24	18 48	19 32	44	7 08	45	
13	15	07.2		38.7	175	09.1	138		21.1	10 S	17 57	19	43	36	48	05	42	
14	30	07.4		37.8	189	41.9	138		32.2	20	52	14	40	42	51	7 02	38	
15	45	07.6		36.9	204	14.7	138		43.3	30	46	10	38	48	55	6 58	34	
16	60	07.9		36.0	218	47.5	138	+ 5	54.3	35	42	08	37	51	58	56	32	
17	75	08.1	+ 7	35.1	233	20.3	138	+ 6	05.3	40	17 38	18 05	18 37	19 55	60	6 54	29	
18	90	08.3	+ 7	34.2	247	53.1	138	+ 6	16.3	45	17 34	18 03	18 37	19 59	64	6 51	26	
19	105	08.5		33.2	262	25.9	138		27.2	50	28	01	38	20	05	67	47	23
20	120	08.7		32.3	276	58.8	139		38.1	52	26	18 00	39	07	69	46	21	
21	135	08.9		31.4	291	31.6	138		48.9	54	23	17 59	40	10	71	44	19	
22	150	09.1		30.5	306	04.4	138	+ 6	59.8	56	20	58	41	13	73	42	17	
23	165	09.3		29.6	320	37.3	139	+ 7	10.5	58	17	56	42	17	75	40	15	
24	180	09.5	+ 7	28.7	335	10.1	138	+ 7	21.3	60 S	17 13	17 55	18 43	20 21	77	6 38	12	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 1 ^h 13 ^m 6		Mag.: -4.2 PMG: 9 ^h 01 ^m		Mag.: +1.2 PMG: 15 ^h 27 ^m		Mag.: -2.3 PMG: 6 ^h 07 ^m		Mag.: +0.8 PMG: 14 ^h 53 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	341	32.9	224	54.6	+ 19	13.1	127	59.5	- 14	02.4	268	03.9	+ 21	46.0	136	16.4	- 8	00.6
1	356	35.3	239	54.3		12.8	143	00.4		02.9	283	06.1		46.1	151	18.6		00.6
2	11	37.8	254	53.9		12.5	158	01.3		03.5	298	08.3		46.1	166	20.9		00.7
3	26	40.3	269	53.6		12.3	173	02.2		04.1	313	10.5		46.1	181	23.1		00.8
4	41	42.7	284	53.3		12.0	188	03.1		04.7	328	12.7		46.1	196	25.4		00.9
5	56	45.2	299	52.9	+ 19	11.7	203	04.0	- 14	05.2	343	14.9	+ 21	46.2	211	27.6	- 8	01.0
6	71	47.7	314	52.6	+ 19	11.4	218	04.8	- 14	05.8	358	17.1	+ 21	46.2	226	29.8	- 8	01.1
7	86	50.1	329	52.3		11.1	233	05.7		06.4	13	19.3		46.2	241	32.1		01.2
8	101	52.6	344	51.9		10.8	248	06.6		06.9	28	21.5		46.2	256	34.3		01.3
9	116	55.1	359	51.6		10.5	263	07.5		07.5	43	23.7		46.3	271	36.6		01.4
10	131	57.5	14	51.3		10.3	278	08.4		08.1	58	25.9		46.3	286	38.8		01.5
11	147	00.0	29	50.9	+ 19	10.0	293	09.2	- 14	08.6	73	28.1	+ 21	46.3	301	41.0	- 8	01.6
12	162	02.4	44	50.6	+ 19	09.7	308	10.1	- 14	09.2	88	30.3	+ 21	46.3	316	43.3	- 8	01.7
13	177	04.9	59	50.3		09.4	323	11.0		09.8	103	32.5		46.4	331	45.5		01.8
14	192	07.4	74	49.9		09.1	338	11.9		10.3	118	34.7		46.4	346	47.8		01.8
15	207	09.8	89	49.6		08.8	353	12.8		10.9	133	36.9		46.4	1	50.0		01.9
16	222	12.3	104	49.3		08.5	8	13.6		11.5	148	39.1		46.4	16	52.2		02.0
17	237	14.8	119	48.9	+ 19	08.2	23	14.5	- 14	12.0	163	41.3	+ 21	46.5	31	54.5	- 8	02.1
18	252	17.2	134	48.6	+ 19	07.9	38	15.4	- 14	12.6	178	43.5	+ 21	46.5	46	56.7	- 8	02.2
19	267	19.7	149	48.2		07.6	53	16.3		13.2	193	45.7		46.5	61	59.0		02.3
20	282	22.2	164	47.9		07.3	68	17.2		13.7	208	47.9		46.5	77	01.2		02.4
21	297	24.6	179	47.6		07.0	83	18.0		14.3	223	50.1		46.6	92	03.4		02.5
22	312	27.1	194	47.2		06.7	98	18.9		14.9	238	52.3		46.6	107	05.7		02.6
23	327	29.5	209	46.9		06.5	113	19.8		15.4	253	54.5		46.6	122	07.9		02.7
24	342	32.0	224	46.6	+ 19	06.2	128	20.7	- 14	16.0	268	56.7	+ 21	46.6	137	10.2	- 8	02.8
Dif	—		-3		-3		+9		-6		+22		0		+22		-1	

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LUNES 3 DE SEPTIEMBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15°9 PMG: 11 ^h 59 ^m 2		SD: 15°1 Edad: 16 ^d 3 PHE { 4 ^h : 55/4 12 ^h : 55/3 20 ^h : 55/1 PMG: 1 ^h 42 ^m R°: 45 ^m															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°				
	h	°	'	°	'	°		'	h		m	h	m	h	m			
0	180	09.5	+ 7	28.7	335	10.1	+ 7	21.3	60 N	3 19	4 16	5 00	18 59	15	8 58	77		
1	195	09.7		27.7	349	43.0	139	31.9	58	31	23	05	19 05	18	53	74		
2	210	09.9		26.8	4	15.8	138	42.6	56	41	30	09	10 20		48	72		
3	225	10.1		25.9	18	48.7	139	+ 7 53.2	54	50	35	12	15 22		44	70		
4	240	10.3		25.0	33	21.5	138	+ 8 03.7	52	3 57	40	15	19 24		40	68		
5	255	10.5	+ 7	24.1	47	54.4	139	+ 8 14.3	50	4 04	4 45	5 18	19 23	26	8 37	66		
6	270	10.7	+ 7	23.1	62	27.2	138	+ 8 24.7	45	4 18	4 55	5 25	19 32	29	8 30	62		
7	285	10.9		22.2	77	00.1	139	35.1	40	29	5 02	30	39 31		24	60		
8	300	11.1		21.3	91	32.9	138	45.5	35	38	09	34	45 34		19	57		
9	315	11.3		20.4	106	05.8	139	+ 8 55.8	30	45	14	38	19 51	35	14	55		
10	330	11.5		19.5	120	38.6	138	+ 9 06.1	20	4 57	23	45	20 00	39	06	52		
11	345	11.7	+ 7	18.5	135	11.4	138	+ 9 16.3	10 N	5 05	5 29	5 51	20 09	42	8 00	48		
12	0	12.0	+ 7	17.6	149	44.3	139	+ 9 26.5	0	5 11	5 35	5 56	20 16	46	7 53	45		
13	15	12.2		16.7	164	17.1	138	36.7	10 S	15	40	6 01	24 48		47	42		
14	30	12.4		15.8	178	49.9	138	46.7	20	19	44	07	33 51		40	39		
15	45	12.6		14.9	193	22.7	138	+ 9 56.8	30	21	49	13	43 54		32	35		
16	60	12.8		13.9	207	55.5	138	+ 10 06.7	35	21	51	16	49 56		28	33		
17	75	13.0	+ 7	13.0	222	28.3	138	+ 10 16.7	40	5 21	5 53	6 20	20 55	59	7 23	30		
18	90	13.2	+ 7	12.1	237	01.1	138	+ 10 26.5	45	5 21	5 55	6 24	21 03	61	7 17	28		
19	105	13.4		11.2	251	33.9	138	36.3	50	20	57	30	12 65		10	24		
20	120	13.6		10.3	266	06.7	138	46.1	52	19	58	32	16 67		07	22		
21	135	13.8		09.3	280	39.5	138	+ 10 55.8	54	18	5 59	35	21 68		7 03	21		
22	150	14.0		08.4	295	12.2	137	+ 11 05.5	56	17	6 00	37	26 71		6 59	19		
23	165	14.2		07.5	309	45.0	138	15.0	58	16	01	41	32 73		55	17		
24	180	14.4	+ 7	06.6	324	17.7	137	+ 11 24.6	60 S	5 14	6 02	6 44	21 38	76	6 50	14		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 1 ^h 09 ^m 7		Mag.: -4.2 PMG: 9 ^h 01 ^m		Mag.: +1.2 PMG: 15 ^h 26 ^m		Mag.: -2.3 PMG: 6 ^h 03 ^m		Mag.: +0.8 PMG: 14 ^h 49 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	342	32.0	224	46.6	+ 19	06.2	128	20.7	- 14	16.0	268	56.7	+ 21	46.6	137	10.2	- 8	02.8
1	357	34.5	239	46.2		05.9	143	21.5		16.6	283	58.9		46.7	152	12.4		02.9
2	12	36.9	254	45.9		05.6	158	22.4		17.1	299	01.1		46.7	167	14.6		03.0
3	27	39.4	269	45.5		05.3	173	23.3		17.7	314	03.3		46.7	182	16.9		03.1
4	42	41.9	284	45.2		04.9	188	24.2		18.3	329	05.5		46.7	197	19.1		03.1
5	57	44.3	299	44.9	+ 19	04.6	203	25.0	- 14	18.8	344	07.7	+ 21	46.8	212	21.4	- 8	03.2
6	72	46.8	314	44.5	+ 19	04.3	218	25.9	- 14	19.4	359	09.9	+ 21	46.8	227	23.6	- 8	03.3
7	87	49.3	329	44.2		04.0	233	26.8		20.0	14	12.2		46.8	242	25.8		03.4
8	102	51.7	344	43.8		03.7	248	27.7		20.5	29	14.4		46.8	257	28.1		03.5
9	117	54.2	359	43.5		03.4	263	28.5		21.1	44	16.6		46.9	272	30.3		03.6
10	132	56.7	14	43.2		03.1	278	29.4		21.7	59	18.8		46.9	287	32.6		03.7
11	147	59.1	29	42.8	+ 19	02.8	293	30.3	- 14	22.2	74	21.0	+ 21	46.9	302	34.8	- 8	03.8
12	163	01.6	44	42.5	+ 19	02.5	308	31.2	- 14	22.8	89	23.2	+ 21	46.9	317	37.0	- 8	03.9
13	178	04.0	59	42.1		02.2	323	32.0		23.4	104	25.4		47.0	332	39.3		04.0
14	193	06.5	74	41.8		01.9	338	32.9		23.9	119	27.6		47.0	347	41.5		04.1
15	208	09.0	89	41.4		01.6	353	33.8		24.5	134	29.8		47.0	2	43.8		04.2
16	223	11.4	104	41.1		01.3	8	34.6		25.1	149	32.0		47.0	17	46.0		04.3
17	238	13.9	119	40.8	+ 19	00.9	23	35.5	- 14	25.6	164	34.2	+ 21	47.1	32	48.2	- 8	04.4
18	253	16.4	134	40.4	+ 19	00.6	38	36.4	- 14	26.2	179	36.4	+ 21	47.1	47	50.5	- 8	04.5
19	268	18.8	149	40.1		00.3	53	37.3		26.7	194	38.6		47.1	62	52.7		04.5
20	283	21.3	164	39.7	+ 19	00.0	68	38.1		27.3	209	40.8		47.1	77	54.9		04.6
21	298	23.8	179	39.4	+ 18	59.7	83	39.0		27.9	224	43.0		47.2	92	57.2		04.7
22	313	26.2	194	39.0		59.4	98	39.9		28.4	239	45.3		47.2	107	59.4		04.8
23	328	28.7	209	38.7		59.0	113	40.7		29.0	254	47.5		47.2	123	01.7		04.9
24	343	31.1	224	38.3	+ 18	58.7	128	41.6	- 14	29.6	269	49.7	+ 21	47.2	138	03.9	- 8	05.0
Dif	—		-3		-3		+9		-6		+22		0		+22		-1	

MARTES 4 DE SEPTIEMBRE DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna			
	SD: 15°9 PMG: 11 ^h 58 ^m 9			SD: 15°0 Edad: 17 ^d 3														
				PHE { 4 ^h : 55°0 12 ^h : 54°8 20 ^h : 54°7														
	PMG: 2 ^h 27 ^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			
0	180	14.4	+ 7 06.6	324	17.7	+ 11 24.6	95	60 N	18 53	19 37	20 34	19 14	20	10 15	74			
1	195	14.6	05.6	338	50.4	34.1	95	58	49	31	22	23	22	07	72			
2	210	14.9	04.7	353	23.2	43.5	94	56	46	24	13	30	24	10 00	69			
3	225	15.1	03.8	7 55.9	137	+ 11 52.8	93	54	42	19	20 04	37	26	9 54	67			
4	240	15.3	02.9	22 28.6	137	+ 12 02.1	93	52	40	14	19 57	43	28	48	66			
5	255	15.5	+ 7 02.0	37 01.2	136	+ 12 11.4	93	50	18 37	19 10	19 50	19 49	29	9 43	64			
6	270	15.7	+ 7 01.0	51 33.9	137	+ 12 20.6	92	45	18 31	19 01	19 37	20 01	31	9 32	61			
7	285	15.9	+ 7 00.1	66 06.6	137	29.7	91	40	26	18 54	27	10	35	24	58			
8	300	16.1	+ 6 59.2	80 39.2	136	38.8	91	35	22	48	18	19	36	16	56			
9	315	16.3	58.3	95 11.9	137	47.8	90	30	19	43	11	26	38	9 09	54			
10	330	16.5	57.3	109 44.5	136	+ 12 56.7	89	20	12	35	19 01	39	41	8 58	51			
11	345	16.7	+ 6 56.4	124 17.1	136	+ 13 05.6	89	10 N	18 07	18 28	18 53	20 51	43	8 48	48			
12	0	16.9	+ 6 55.5	138 49.7	136	+ 13 14.4	88	0	18 02	18 23	18 47	21 02	46	8 38	46			
13	15	17.1	54.6	153 22.2	135	23.1	87	10 S	17 57	18	43	12	49	29	43			
14	30	17.4	53.6	167 54.8	136	31.8	87	20	52	14	40	24	51	19	40			
15	45	17.6	52.7	182 27.3	135	40.4	86	30	47	11	39	37	54	07	37			
16	60	17.8	51.8	196 59.9	136	49.0	86	35	44	09	38	45	56	8 01	35			
17	75	18.0	+ 6 50.9	211 32.4	135	+ 13 57.4	84	40	17 40	18 07	18 39	21 54	58	7 53	33			
18	90	18.2	+ 6 49.9	226 04.9	135	+ 14 05.9	85	45	17 36	18 05	18 39	22 04	60	7 45	30			
19	105	18.4	49.0	240 37.3	134	14.2	83	50	31	04	41	17	63	34	27			
20	120	18.6	48.1	255 09.8	135	22.5	83	52	29	03	42	23	64	29	26			
21	135	18.8	47.2	269 42.2	134	30.7	82	54	27	02	43	29	67	24	24			
22	150	19.0	46.2	284 14.7	135	38.8	81	56	24	01	44	37	68	18	22			
23	165	19.2	45.3	298 47.1	134	46.9	81	58	21	18 00	46	45	70	12	19			
24	180	19.4	+ 6 44.4	313 19.4	133	+ 14 54.9	80	60 S	17 18	17 59	18 48	22 54	73	7 04	17			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 1 ^h 05 ^m 7		Mag.: -4.2 PMG: 9 ^h 02 ^m			Mag.: +1.2 PMG: 15 ^h 24 ^m			Mag.: -2.3 PMG: 6 ^h 00 ^m			Mag.: +0.8 PMG: 14 ^h 46 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	343	31.1	224	38.3	+ 18	58.7	128	41.6	- 14	29.6	269	49.7	+ 21	47.2	138	03.9	- 8	05.0
1	358	33.6	239	38.0	58.4	143	42.5	30.1	284	51.9	47.3	153	06.1	05.1				
2	13	36.1	254	37.6	58.1	158	43.3	30.7	299	54.1	47.3	168	08.4	05.2				
3	28	38.5	269	37.3	57.8	173	44.2	31.3	314	56.3	47.3	183	10.6	05.3				
4	43	41.0	284	37.0	57.4	188	45.1	31.8	329	58.5	47.3	198	12.8	05.4				
5	58	43.5	299	36.6	+ 18	57.1	203	45.9	- 14	32.4	345	00.7	+ 21	47.4	213	15.1	- 8	05.5
6	73	45.9	314	36.3	+ 18	56.8	218	46.8	- 14	32.9	0 02.9	+ 21	47.4	228	17.3	- 8	05.6	
7	88	48.4	329	35.9	56.5	233	47.7	33.5	15	05.2	47.4	243	19.6	05.7				
8	103	50.9	344	35.6	56.1	248	48.5	34.1	30	07.4	47.4	258	21.8	05.8				
9	118	53.3	359	35.2	55.8	263	49.4	34.6	45	09.6	47.5	273	24.0	05.9				
10	133	55.8	14	34.9	55.5	278	50.3	35.2	60	11.8	47.5	288	26.3	06.0				
11	148	58.3	29	34.5	+ 18	55.1	293	51.1	- 14	35.8	75	14.0	+ 21	47.5	303	28.5	- 8	06.0
12	164	00.7	44	34.2	+ 18	54.8	308	52.0	- 14	36.3	90	16.2	+ 21	47.5	318	30.7	- 8	06.1
13	179	03.2	59	33.8	54.5	323	52.9	36.9	105	18.4	47.6	333	33.0	06.2				
14	194	05.6	74	33.5	54.2	338	53.7	37.4	120	20.6	47.6	348	35.2	06.3				
15	209	08.1	89	33.1	53.8	353	54.6	38.0	135	22.9	47.6	3 37.4	06.4					
16	224	10.6	104	32.8	53.5	8 55.5	38.6	150	25.1	47.6	18	39.7	06.5					
17	239	13.0	119	32.4	+ 18	53.2	23	56.3	- 14	39.1	165	27.3	+ 21	47.6	33	41.9	- 8	06.6
18	254	15.5	134	32.1	+ 18	52.8	38	57.2	- 14	39.7	180	29.5	+ 21	47.7	48	44.2	- 8	06.7
19	269	18.0	149	31.7	52.5	53	58.1	40.3	195	31.7	47.7	63	46.4	06.8				
20	284	20.4	164	31.4	52.1	68	58.9	40.8	210	33.9	47.7	78	48.6	06.9				
21	299	22.9	179	31.0	51.8	83	59.8	41.4	225	36.2	47.7	93	50.9	07.0				
22	314	25.4	194	30.7	51.5	99	00.6	41.9	240	38.4	47.8	108	53.1	07.1				
23	329	27.8	209	30.3	51.1	114	01.5	42.5	255	40.6	47.8	123	55.3	07.2				
24	344	30.3	224	30.0	+ 18	50.8	129	02.4	- 14	43.1	270	42.8	+ 21	47.8	138	57.6	- 8	07.3
Dif	—	—	-3	-3	+9	-6	+22	0	+22	0	+22	-1	-1	-1	-1	-1	-1	-1

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MIÉRCOL 5 DE SEPTIEMBRE DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 5			SD: 14 ^h 9 Edad: 18 ^d 3 PHE $\left\{ \begin{array}{l} 4^h: 54/6 \\ 12^h: 54/5 \\ 20^h: 54/4 \end{array} \right.$ PMG: 3 ^h 13 ^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	19.4	+ 6	313	19.4	+ 14	54.9	60 N	3 25	4 21	5 05	19 34	25	11 29	71	
1	195	19.7		327	51.8 ¹³⁴	+ 15	02.8	58	36	28	09	45	27	19	68	
2	210	19.9		342	24.1 ¹³³		10.7	56	46	34	13	19 54	30	09	67	
3	225	20.1		356	56.5 ¹³⁴		18.5	54	3 54	39	16	20 03	31	11 01	65	
4	240	20.3		11	28.8 ¹³³		26.2	52	4 01	44	19	11	32	10 54	63	
5	255	20.5	+ 6	26	01.1 ¹³³	+ 15	33.8	50	4 08	4 48	5 21	20 18	33	10 47	62	
6	270	20.7	+ 6	40	33.3 ¹³²	+ 15	41.4	45	4 21	4 57	5 27	20 32	37	10 33	59	
7	285	20.9		55	05.6 ¹³³		48.9	40	31	5 04	32	45	38	22	57	
8	300	21.1		69	37.8 ¹³²	+ 15	56.3	35	40	10	36	20 55	40	12	55	
9	315	21.3		84	10.0 ¹³²	+ 16	03.7	30	47	15	39	21 04	41	10 03	54	
10	330	21.5		98	42.2 ¹³²		11.0	20	4 57	23	45	20	44	9 49	50	
11	345	21.8	+ 6	113	14.3 ¹³¹	+ 16	18.2	10 N	5 05	5 29	5 51	21 34	46	9 36	48	
12	0	22.0	+ 6	127	46.5 ¹³²	+ 16	25.3	0	5 10	5 34	5 55	21 48	46	9 24	46	
13	15	22.2		142	18.6 ¹³¹		32.3	10 S	14	39	6 00	22 01	48	9 12	44	
14	30	22.4		156	50.7 ¹³¹		39.3	20	17	43	05	15	50	8 59	42	
15	45	22.6		171	22.8 ¹³¹		46.2	30	18	46	10	31	53	44	40	
16	60	22.8		185	54.8 ¹³⁰		53.0	35	19	48	13	41	54	36	38	
17	75	23.0	+ 6	200	26.8 ¹³⁰	+ 16	59.7	40	5 18	5 50	6 17	22 52	55	8 26	36	
18	90	23.2	+ 6	214	58.8 ¹³⁰	+ 17	06.4	45	5 17	5 51	6 21	23 04	58	8 15	34	
19	105	23.4		229	30.8 ¹³⁰		13.0	50	16	53	25	20	60	8 01	31	
20	120	23.7		244	02.8 ¹³⁰		19.5	52	15	54	27	27	61	7 55	30	
21	135	23.9		258	34.7 ¹²⁹		25.9	54	14	54	30	36	62	48	28	
22	150	24.1		273	06.6 ¹²⁹		32.2	56	12	55	32	45	64	40	27	
23	165	24.3		287	38.5 ¹²⁹		38.5	58	11	56	35	23 55	66	31	25	
24	180	24.5	+ 6	302	10.4 ¹²⁹	+ 17	44.7	60 S	5 09	5 57	6 38	** ** *	** ** *	7 21	22	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 1 ^h 01 ^m 8		Mag.: -4.2 PMG: 9 ^h 02 ^m			Mag.: +1.2 PMG: 15 ^h 23 ^m			Mag.: -2.4 PMG: 5 ^h 56 ^m			Mag.: +0.8 PMG: 14 ^h 42 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
^h	°	'	°	°	'	°	'	°	°	'	°	°	'	°		
0	344	30.3	224	30.0	+ 18	129	02.4	- 14	270	42.8	+ 21	138	57.6	- 8		
1	359	32.8	239	29.6		144	03.2		285	45.0		153	59.8			
2	14	35.2	254	29.2		159	04.1		300	47.2		169	02.0			
3	29	37.7	269	28.9		174	05.0		315	49.5		184	04.3			
4	44	40.1	284	28.5		189	05.8		330	51.7		199	06.5			
5	59	42.6	299	28.2	+ 18	204	06.7	- 14	345	53.9	+ 21	214	08.7	- 8		
6	74	45.1	314	27.8	+ 18	219	07.5	- 14	0	56.1	+ 21	229	11.0	- 8		
7	89	47.5	329	27.5		234	08.4		15	58.3		244	13.2			
8	104	50.0	344	27.1		249	09.3		31	00.6		259	15.4			
9	119	52.5	359	26.8		264	10.1		46	02.8		274	17.7			
10	134	54.9	14	26.4		279	11.0		61	05.0		289	19.9			
11	149	57.4	29	26.1	+ 18	294	11.8	- 14	76	07.2	+ 21	304	22.2	- 8		
12	164	59.9	44	25.7	+ 18	309	12.7	- 14	91	09.4	+ 21	319	24.4	- 8		
13	180	02.3	59	25.3		324	13.5		106	11.7		334	26.6			
14	195	04.8	74	25.0		339	14.4		121	13.9		349	28.9			
15	210	07.2	89	24.6		354	15.3		136	16.1		4	31.1			
16	225	09.7	104	24.3		9	16.1		151	18.3		19	33.3			
17	240	12.2	119	23.9	+ 18	24	17.0	- 14	166	20.5	+ 21	34	35.6	- 8		
18	255	14.6	134	23.6	+ 18	39	17.8	- 14	181	22.8	+ 21	49	37.8	- 8		
19	270	17.1	149	23.2		54	18.7		196	25.0		64	40.0			
20	285	19.6	164	22.8		69	19.5		211	27.2		79	42.3			
21	300	22.0	179	22.5		84	20.4		226	29.4		94	44.5			
22	315	24.5	194	22.1		99	21.3		241	31.7		109	46.7			
23	330	27.0	209	21.8		114	22.1		256	33.9		124	49.0			
24	345	29.4	224	21.4	+ 18	129	23.0	- 14	271	36.1	+ 21	139	51.2	- 8		
Dif	—		-4		-4	+9		-6	+22		0	+22		-1		

JUEVES 6 DE SEPTIEMBRE DE 2012

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UT	SOL			☾ LUNA			Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 58 ^m 2			SD: 14 ^h 8 Edad: 19 ^d 3 PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /3 20 ^h : 54 ^h /3 PMG: 3 ^h 59 ^m 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
0	180 24.5	+ 6 22.1		302 10.4		+ 17 44.7	61	60 N	18 47	19 31	20 26	19 59	33	12 40 64
1	195 24.7		21.1	316 42.2	128		50.8	58	44	25	15	20 12	35	27 62
2	210 24.9		20.2	331 14.1	129	+ 17 56.8	60	56	41	19	20 06	24 36		16 61
3	225 25.1		19.3	345 45.9	128	+ 18 02.7	59	54	38	14	19 59	34 38	12 06	59
4	240 25.4		18.3	0 17.6	127		08.6	52	35	10	52	43 39	11 57	59
5	255 25.6	+ 6 17.4		14 49.4	128	+ 18 14.3	57	50	18 33	19 06	19 46	20 51	40	11 49 58
6	270 25.8	+ 6 16.5		29 21.1	127	+ 18 20.0	57	45	18 27	18 57	19 33	21 09	41	11 32 56
7	285 26.0		15.5	43 52.8	127		25.6	40	23	50	23	23 42		19 54
8	300 26.2		14.6	58 24.5	127		31.1	35	19	45	15	35 43		11 07 53
9	315 26.4		13.7	72 56.1	126		36.5	30	16	40	19 09	21 45	45	10 57 52
10	330 26.6		12.7	87 27.8	127		41.9	20	11	33	18 59	22 04	45	39 51
11	345 26.8	+ 6 11.8		101 59.4	126	+ 18 47.1	52	10 N	18 06	18 27	18 52	22 20	46	10 24 49
12	0 27.1	+ 6 10.9		116 31.0	126	+ 18 52.3	52	0	18 01	18 22	18 46	22 34	48	10 10 47
13	15 27.3		09.9	131 02.5	125	+ 18 57.4	51	10 S	17 57	18	43	22 49	49	9 56 46
14	30 27.5		09.0	145 34.1	126	+ 19 02.4	50	20	53	15	40	23 05	50	41 44
15	45 27.7		08.1	160 05.6	125		07.3	30	48	12	40	24 51		24 42
16	60 27.9		07.1	174 37.1	125		12.1	35	45	10	40	35 52		14 41
17	75 28.1	+ 6 06.2		189 08.5	124	+ 19 16.9	48	40	17 42	18 09	18 40	23 47	53	9 02 40
18	90 28.3	+ 6 05.3		203 40.0	125	+ 19 21.5	46	45	17 38	18 08	18 42	*** **	***	8 49 38
19	105 28.5		04.3	218 11.4	124		26.1	50	34	06	44	*** **	***	32 37
20	120 28.8		03.4	232 42.8	124		30.5	52	32	06	45	*** **	***	25 35
21	135 29.0		02.5	247 14.1	123		34.9	54	30	05	46	*** **	***	16 34
22	150 29.2		01.5	261 45.5	124		39.2	56	28	05	48	*** **	***	8 07 32
23	165 29.4	+ 6 00.6		276 16.8	123		43.4	58	25	04	50	*** **	***	7 56 31
24	180 29.6	+ 5 59.6		290 48.1	123	+ 19 47.5	41	60 S	17 22	18 04	18 52	0 07	68	7 43 29
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO		
	PMG: 0 ^h 57 ^m 9		Mag.: -4.2 PMG: 9 ^h 03 ^m			Mag.: +1.2 PMG: 15 ^h 22 ^m			Mag.: -2.4 PMG: 5 ^h 53 ^m			Mag.: +0.8 PMG: 14 ^h 38 ^m		
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec	
h	° /		° /		° /		° /		° /		° /		° /	
0	345 29.4		224 21.4	+ 18 42.4		129 23.0	- 14 56.5		271 36.1	+ 21 48.4		139 51.2	- 8 09.5	
1	0 31.9		239 21.0	42.0		144 23.8	57.0		286 38.3	48.4		154 53.4	09.6	
2	15 34.4		254 20.7	41.6		159 24.7	57.6		301 40.6	48.4		169 55.7	09.7	
3	30 36.8		269 20.3	41.3		174 25.5	58.1		316 42.8	48.4		184 57.9	09.8	
4	45 39.3		284 20.0	40.9		189 26.4	58.7		331 45.0	48.5		200 00.1	09.9	
5	60 41.7		299 19.6	+ 18 40.5		204 27.2	- 14 59.3		346 47.2	+ 21 48.5		215 02.4	- 8 10.0	
6	75 44.2		314 19.2	+ 18 40.2		219 28.1	- 14 59.8		1 49.5	+ 21 48.5		230 04.6	- 8 10.1	
7	90 46.7		329 18.9	39.8		234 28.9	- 15 00.4		16 51.7	48.5		245 06.8	10.2	
8	105 49.1		344 18.5	39.4		249 29.8	00.9		31 53.9	48.5		260 09.1	10.3	
9	120 51.6		359 18.2	39.1		264 30.6	01.5		46 56.1	48.6		275 11.3	10.4	
10	135 54.1		14 17.8	38.7		279 31.5	02.0		61 58.4	48.6		290 13.5	10.5	
11	150 56.5		29 17.4	+ 18 38.3		294 32.3	- 15 02.6		77 00.6	+ 21 48.6		305 15.7	- 8 10.6	
12	165 59.0		44 17.1	+ 18 38.0		309 33.2	- 15 03.1		92 02.8	+ 21 48.6		320 18.0	- 8 10.7	
13	181 01.5		59 16.7	37.6		324 34.0	03.7		107 05.1	48.7		335 20.2	10.8	
14	196 03.9		74 16.4	37.2		339 34.9	04.3		122 07.3	48.7		350 22.4	10.9	
15	211 06.4		89 16.0	36.8		354 35.7	04.8		137 09.5	48.7		5 24.7	11.0	
16	226 08.8		104 15.6	36.5		9 36.6	05.4		152 11.7	48.7		20 26.9	11.1	
17	241 11.3		119 15.3	+ 18 36.1		24 37.4	- 15 05.9		167 14.0	+ 21 48.7		35 29.1	- 8 11.1	
18	256 13.8		134 14.9	+ 18 35.7		39 38.3	- 15 06.5		182 16.2	+ 21 48.8		50 31.4	- 8 11.2	
19	271 16.2		149 14.5	35.3		54 39.1	07.0		197 18.4	48.8		65 33.6	11.3	
20	286 18.7		164 14.2	34.9		69 40.0	07.6		212 20.7	48.8		80 35.8	11.4	
21	301 21.2		179 13.8	34.6		84 40.8	08.1		227 22.9	48.8		95 38.1	11.5	
22	316 23.6		194 13.5	34.2		99 41.7	08.7		242 25.1	48.8		110 40.3	11.6	
23	331 26.1		209 13.1	33.8		114 42.5	09.2		257 27.4	48.9		125 42.5	11.7	
24	346 28.6		224 12.7	+ 18 33.4		129 43.4	- 15 09.8		272 29.6	+ 21 48.9		140 44.8	- 8 11.8	
Dif	—		-4	-4		+9	-6		+22		0	+22		-1

SÁBADO 8 DE SEPTIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 5		SD: 14 ^h 8 Edad: 21 ^d 3 PHE { 4 ^h : 54 ^h /3 12 ^h : 54 ^h /4 20 ^h : 54 ^h /5 PMG: 5 ^h 34 ^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	h m	h m	h m	h m			
0	180	34.8	+ 5	37.1	279	12.8	+ 20	58.3	18 41	19 25	20 19	21 17	56	14 40	45			
1	195	35.0		36.2	293	43.5	+ 21	00.0	38	19	09	33	55	24	46			
2	210	35.2		35.2	308	14.3		01.7	35	13	20 00	46	55	14 11	46			
3	225	35.4		34.3	322	45.0		03.2	33	09	19 53	21 58	54	13 59	46			
4	240	35.6		33.4	337	15.8		04.7	30	05	46	22 08	54	49	46			
5	255	35.8	+ 5	32.4	351	46.5	+ 21	06.1	18 28	19 01	19 41	22 17	54	13 39	47			
6	270	36.1	+ 5	31.5	6	17.2	+ 21	07.3	18 24	18 53	19 29	22 37	52	13 20	47			
7	285	36.3		30.5	20	47.8		08.5	20	47	20	22 52	53	13 04	48			
8	300	36.5		29.6	35	18.5		09.6	17	42	12	23 06	51	12 51	48			
9	315	36.7		28.7	49	49.1		10.5	14	38	19 06	17	52	39	48			
10	330	36.9		27.7	64	19.7		11.4	09	31	18 57	37	51	19	49			
11	345	37.1	+ 5	26.8	78	50.3	+ 21	12.2	18 05	18 26	18 50	23 55	49	12 02	49			
12	0	37.4	+ 5	25.8	93	20.9	+ 21	12.8	18 01	18 22	18 46	** ** *	** ** *	11 46	49			
13	15	37.6		24.9	107	51.5		13.4	17 57	18	43	** ** *	** ** *	30	49			
14	30	37.8		23.9	122	22.1		13.9	53	15	41	** ** *	** ** *	11 12	49			
15	45	38.0		23.0	136	52.6		14.3	49	13	41	0 15	50	10 52	50			
16	60	38.2		22.1	151	23.2		14.5	47	12	41	27	49	40	50			
17	75	38.4	+ 5	21.1	165	53.7	+ 21	14.7	17 44	18 11	18 42	0 40	50	10 27	50			
18	90	38.7	+ 5	20.2	180	24.2	+ 21	14.8	17 41	18 10	18 44	0 56	50	10 11	50			
19	105	38.9		19.2	194	54.7		14.7	37	09	47	1 15	50	9 52	50			
20	120	39.1		18.3	209	25.2		14.6	35	09	48	24	50	42	50			
21	135	39.3		17.3	223	55.6		14.4	34	09	50	35	50	32	50			
22	150	39.5		16.4	238	26.1		14.1	32	09	52	1 46	51	20	50			
23	165	39.7		15.5	252	56.5		13.6	29	09	54	2 00	50	9 07	50			
24	180	40.0	+ 5	14.5	267	27.0	+ 21	13.1	17 27	18 08	18 57	2 16	50	8 51	50			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 0 ^h 50 ^m 0		Mag.: -4.2 PMG: 9 ^h 04 ^m		Mag.: +1.2 PMG: 15 ^h 19 ^m		Mag.: -2.4 PMG: 5 ^h 46 ^m		Mag.: +0.8 PMG: 14 ^h 31 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	347	27.7	224	03.9	+ 18	24.0	130	03.6	- 15	23.1	273	23.2	+ 21	49.4	141	38.3	- 8	14.1
1	2	30.2	239	03.5		23.6	145	04.5		23.6	288	25.5		49.4	156	40.5		14.2
2	17	32.6	254	03.2		23.2	160	05.3		24.2	303	27.7		49.4	171	42.7		14.3
3	32	35.1	269	02.8		22.8	175	06.1		24.7	318	30.0		49.5	186	45.0		14.4
4	47	37.6	284	02.4		22.4	190	07.0		25.3	333	32.2		49.5	201	47.2		14.5
5	62	40.0	299	02.1	+ 18	22.0	205	07.8	- 15	25.8	348	34.4	+ 21	49.5	216	49.4	- 8	14.6
6	77	42.5	314	01.7	+ 18	21.6	220	08.7	- 15	26.4	3	36.7	+ 21	49.5	231	51.7	- 8	14.7
7	92	44.9	329	01.3		21.1	235	09.5		26.9	18	38.9		49.5	246	53.9		14.8
8	107	47.4	344	00.9		20.7	250	10.3		27.5	33	41.2		49.6	261	56.1		14.9
9	122	49.9	359	00.6		20.3	265	11.2		28.0	48	43.4		49.6	276	58.3		15.0
10	137	52.3	14	00.2		19.9	280	12.0		28.6	63	45.7		49.6	292	00.6		15.1
11	152	54.8	28	59.8	+ 18	19.5	295	12.8	- 15	29.1	78	47.9	+ 21	49.6	307	02.8	- 8	15.2
12	167	57.3	43	59.5	+ 18	19.1	310	13.7	- 15	29.6	93	50.1	+ 21	49.6	322	05.0	- 8	15.3
13	182	59.7	58	59.1		18.7	325	14.5		30.2	108	52.4		49.7	337	07.2		15.4
14	198	02.2	73	58.7		18.3	340	15.3		30.7	123	54.6		49.7	352	09.5		15.5
15	213	04.7	88	58.3		17.8	355	16.2		31.3	138	56.9		49.7	7	11.7		15.6
16	228	07.1	103	58.0		17.4	10	17.0		31.8	153	59.1		49.7	22	13.9		15.7
17	243	09.6	118	57.6	+ 18	17.0	25	17.9	- 15	32.4	169	01.4	+ 21	49.7	37	16.2	- 8	15.7
18	258	12.1	133	57.2	+ 18	16.6	40	18.7	- 15	32.9	184	03.6	+ 21	49.8	52	18.4	- 8	15.8
19	273	14.5	148	56.9		16.2	55	19.5		33.5	199	05.9		49.8	67	20.6		15.9
20	288	17.0	163	56.5		15.7	70	20.4		34.0	214	08.1		49.8	82	22.8		16.0
21	303	19.4	178	56.1		15.3	85	21.2		34.6	229	10.3		49.8	97	25.1		16.1
22	318	21.9	193	55.7		14.9	100	22.0		35.1	244	12.6		49.8	112	27.3		16.2
23	333	24.4	208	55.4		14.5	115	22.9		35.7	259	14.8		49.9	127	29.5		16.3
24	348	26.8	223	55.0	+ 18	14.1	130	23.7	- 15	36.2	274	17.1	+ 21	49.9	142	31.7	- 8	16.4
Dif	—	—	-4	-4		-4	+8	-5		-5	+22	0		0	+22	-1		-1

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DOMINGO 9 DE SEPTIEMBRE DE 2012

UT	SOL		<div><div><div>☾</div>LUNA</div><div>SD: 14^h Edad: 22^d3</div><div>PMG: 6^h 23^m R°: 49^m</div></div> <div><div>PHE</div><div><div>4^h: 54/6</div><div>12^h: 54/7</div><div>20^h: 54/8</div></div></div>				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 57 ^m 2																	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°				
h	°	/	°	/	°	/	°	h m	h m	h m	h m	h m	m	h m	m			
0	180	40.0	+ 5	14.5	267	27.0	60 N	3 37	4 31	5 14	22 13	67	15 25	34	6			
1	195	40.2		13.6	281	57.4	58	47	37	18	28	65	15 10	36	8			
2	210	40.4		12.6	296	27.8	56	3 55	42	20	41	63	14 57	37	8			
3	225	40.6		11.7	310	58.2	54	4 03	47	23	22 52	62	45	39	9			
4	240	40.8		10.7	325	28.6	52	09	51	25	23 02	61	35	40	11			
5	255	41.0	+ 5	09.8	339	59.0	50	4 15	4 54	5 27	23 11	60	14 26	41	11			
6	270	41.3	+ 5	08.8	354	29.3	45	4 27	5 02	5 32	23 29	58	14 07	43	11			
7	285	41.5		07.9	8	59.7	40	36	08	36	45	56	13 52	44	12			
8	300	41.7		07.0	23	30.1	35	43	13	39	23 57	56	39	44	14			
9	315	41.9		06.0	38	00.4	30	49	17	41	** ** *	***	27	46	14			
10	330	42.1		05.1	52	30.8	20	4 58	24	46	** ** *	***	13 08	47	16			
11	345	42.4	+ 5	04.1	67	01.1	10 N	5 05	5 29	5 50	** ** *	***	12 51	48	16			
12	0	42.6	+ 5	03.2	81	31.4	0	5 09	5 33	5 54	0 11	49	12 35	49	18			
13	15	42.8		02.2	96	01.7	10 S	12	36	5 57	27	49	19	50	18			
14	30	43.0		01.3	110	32.0	20	14	39	6 01	0 45	47	12 01	52	20			
15	45	43.2	+ 5	00.3	125	02.3	30	14	41	05	1 05	46	11 42	52	22			
16	60	43.4	+ 4	59.4	139	32.6	35	13	42	08	16	47	30	53	22			
17	75	43.7	+ 4	58.4	154	02.9	40	5 12	5 43	6 10	1 30	45	11 17	54	24			
18	90	43.9	+ 4	57.5	168	33.2	45	5 10	5 44	6 13	1 46	44	11 01	55	26			
19	105	44.1		56.5	183	03.5	50	07	44	17	2 05	44	10 42	56	26			
20	120	44.3		55.6	197	33.8	52	06	45	18	14	44	32	58	27			
21	135	44.5		54.6	212	04.1	54	04	45	20	25	42	22	58	27			
22	150	44.7		53.7	226	34.3	56	02	45	22	37	41	10 10	60	29			
23	165	45.0		52.8	241	04.6	58	5 00	45	24	2 50	41	9 57	60	29			
24	180	45.2	+ 4	51.8	255	34.9	60 S	4 57	5 45	6 26	3 06	40	9 41	62	29			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 0 ^h 46 ^m 1		Mag.: -4.2 PMG: 9 ^h 05 ^m		Mag.: +1.2 PMG: 15 ^h 18 ^m		Mag.: -2.4 PMG: 5 ^h 42 ^m		Mag.: +0.8 PMG: 14 ^h 28 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	/	°	/	°	/	°	/	°	/								
0	348	26.8	223	55.0	+ 18	14.1	130	23.7	- 15	36.2	274	17.1	+ 21	49.9	142	31.7	- 8	16.4
1	3	29.3	238	54.6		13.6	145	24.5		36.8	289	19.3		49.9	157	34.0		16.5
2	18	31.8	253	54.2		13.2	160	25.4		37.3	304	21.6		49.9	172	36.2		16.6
3	33	34.2	268	53.9		12.8	175	26.2		37.9	319	23.8		49.9	187	38.4		16.7
4	48	36.7	283	53.5		12.4	190	27.0		38.4	334	26.1		50.0	202	40.7		16.8
5	63	39.2	298	53.1	+ 18	11.9	205	27.8	- 15	39.0	349	28.3	+ 21	50.0	217	42.9	- 8	16.9
6	78	41.6	313	52.7	+ 18	11.5	220	28.7	- 15	39.5	4	30.6	+ 21	50.0	232	45.1	- 8	17.0
7	93	44.1	328	52.4		11.1	235	29.5		40.0	19	32.8		50.0	247	47.3		17.1
8	108	46.6	343	52.0		10.6	250	30.3		40.6	34	35.1		50.0	262	49.6		17.2
9	123	49.0	358	51.6		10.2	265	31.2		41.1	49	37.3		50.1	277	51.8		17.3
10	138	51.5	13	51.2		09.8	280	32.0		41.7	64	39.6		50.1	292	54.0		17.4
11	153	53.9	28	50.9	+ 18	09.3	295	32.8	- 15	42.2	79	41.8	+ 21	50.1	307	56.2	- 8	17.5
12	168	56.4	43	50.5	+ 18	08.9	310	33.7	- 15	42.8	94	44.1	+ 21	50.1	322	58.5	- 8	17.6
13	183	58.9	58	50.1		08.5	325	34.5		43.3	109	46.3		50.1	338	00.7		17.7
14	199	01.3	73	49.7		08.0	340	35.3		43.9	124	48.6		50.2	353	02.9		17.8
15	214	03.8	88	49.4		07.6	355	36.1		44.4	139	50.8		50.2	8	05.1		17.9
16	229	06.3	103	49.0		07.2	10	37.0		45.0	154	53.1		50.2	23	07.4		18.0
17	244	08.7	118	48.6	+ 18	06.7	25	37.8	- 15	45.5	169	55.3	+ 21	50.2	38	09.6	- 8	18.1
18	259	11.2	133	48.2	+ 18	06.3	40	38.6	- 15	46.0	184	57.6	+ 21	50.2	53	11.8	- 8	18.2
19	274	13.7	148	47.8		05.8	55	39.4		46.6	199	59.8		50.3	68	14.0		18.3
20	289	16.1	163	47.5		05.4	70	40.3		47.1	215	02.1		50.3	83	16.3		18.4
21	304	18.6	178	47.1		05.0	85	41.1		47.7	230	04.4		50.3	98	18.5		18.5
22	319	21.1	193	46.7		04.5	100	41.9		48.2	245	06.6		50.3	113	20.7		18.6
23	334	23.5	208	46.3		04.1	115	42.7		48.8	260	08.9		50.3	128	22.9		18.7
24	349	26.0	223	46.0	+ 18	03.6	130	43.6	- 15	49.3	275	11.1	+ 21	50.3	143	25.2	- 8	18.8
Dif	—		-4		-4		+8		-5		+23		0		+22		-1	

LUNES 10 DE SEPTIEMBRE DE 2012

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UT	SOL			LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna								
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 8			SD: 15 ^h 0 Edad: 23 ^d 3 PMG: 7 ^h 12 ^m R°: 49 ^m																			
				PHE { 4 ^h : 55 ^h 0 12 ^h : 55 ^h 1 20 ^h : 55 ^h 3																			
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m					
0	180	45.2	+ 4	51.8	255	34.9	+ 20	30.0	31	60 N	18	35	19	18	20	11	23	20	75				
1	195	45.4		50.9	270	05.1		26.9	32	58		32		13	20	02	33	72	46	29			
2	210	45.6		49.9	284	35.4		23.7	32	56		30		08	19	54	44	70	34	31			
3	225	45.8		49.0	299	05.6		20.5	32	54		28		04		47	23	54	68	24	33		
4	240	46.1		48.0	313	35.9		17.1	34	52		26	19	00		41	**	**	***	15	34		
5	255	46.3	+ 4	47.1	328	06.1	+ 20	13.6	35	50		18	24	18	57	19	36	**	**	***	15	07	35
6	270	46.5	+ 4	46.1	342	36.4	+ 20	10.1	35	45		18	20	18	49	19	25	**	**	***	14	50	37
7	285	46.7		45.2	357	06.6		06.4	37	40		16		44		16	**	**	***	36	39		
8	300	46.9		44.2	11	36.9	+ 20	02.6	38	35		14		39		09	**	**	***	23	42		
9	315	47.2		43.3	26	07.1	+ 19	58.8	38	30		11		35	19	03	0	09	54	14	13	43	
10	330	47.4		42.3	40	37.4		54.8	40	20		07		29	18	55	28	52	13	55	45		
11	345	47.6	+ 4	41.4	55	07.6	+ 19	50.7	41	10 N		18	03	18	24	18	49	0	44	51	13	39	47
12	0	47.8	+ 4	40.4	69	37.9	+ 19	46.5	42	0		18	00	18	21	18	45	1	00	49	13	24	49
13	15	48.0		39.5	84	08.1		42.3	42	10 S		17	57	18		42	16	47	13	09	51		
14	30	48.2		38.5	98	38.4		37.9	44	20		54		16		41	32	46	12	53	53		
15	45	48.5		37.6	113	08.6		33.4	45	30		50		14		42	1	51	45	34	56		
16	60	48.7		36.6	127	38.9		28.9	45	35		48		13		43	2	03	43	23	57		
17	75	48.9	+ 4	35.7	142	09.1	+ 19	24.2	47	40		17	46	18	13	18	44	2	15	42	12	11	58
18	90	49.1	+ 4	34.7	156	39.4	+ 19	19.4	48	45		17	43	18	12	18	46	2	30	41	11	56	61
19	105	49.3		33.8	171	09.6		14.6	48	50		40		12		50	49	38	38	63			
20	120	49.6		32.8	185	39.9		09.6	50	52		39		12		51	2	58	36	30	64		
21	135	49.8		31.9	200	10.1	+ 19	04.6	50	54		37		12		53	3	07	36	20	66		
22	150	50.0		30.9	214	40.4	+ 18	59.4	52	56		35		13		56	18	34	11	10	67		
23	165	50.2		30.0	229	10.7		54.1	53	58		34		13	18	58	31	32	10	57	69		
24	180	50.4	+ 4	29.0	243	40.9	+ 18	48.8	53	60 S		17	32	18	13	19	01	3	46	30	10	43	71
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO										
	PMG: 0 ^h 42 ^m 2			Mag.: -4.2 PMG: 9 ^h 05 ^m			Mag.: +1.2 PMG: 15 ^h 16 ^m			Mag.: -2.4 PMG: 5 ^h 38 ^m			Mag.: +0.8 PMG: 14 ^h 24 ^m										
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec									
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°								
0	349	26.0		223	46.0	+ 18	130	43.6	- 15	275	11.1	+ 21	143	25.2	- 8	18.8							
1	4	28.4		238	45.6		145	44.4		290	13.4		158	27.4		18.8							
2	19	30.9		253	45.2		160	45.2		305	15.6		173	29.6		18.9							
3	34	33.4		268	44.8		175	46.0		320	17.9		188	31.8		19.0							
4	49	35.8		283	44.4		190	46.9		335	20.1		203	34.1		19.1							
5	64	38.3	+ 18	298	44.1	01.8	205	47.7	- 15	350	22.4	+ 21	218	36.3	- 8	19.2							
6	79	40.8		313	43.7	+ 18	220	48.5	- 15	5	24.7	+ 21	233	38.5	- 8	19.3							
7	94	43.2		328	43.3	00.5	235	49.3		20	26.9		248	40.7		19.4							
8	109	45.7	+ 18	343	42.9	00.0	250	50.2		35	29.2		263	43.0		19.5							
9	124	48.2	+ 17	358	42.5	59.6	265	51.0		50	31.4		278	45.2		19.6							
10	139	50.6		13	42.2	59.1	280	51.8		65	33.7		293	47.4		19.7							
11	154	53.1	+ 17	28	41.8	58.7	295	52.6	- 15	80	35.9	+ 21	308	49.6	- 8	19.8							
12	169	55.5	+ 17	43	41.4	58.2	310	53.4	- 15	95	38.2	+ 21	323	51.9	- 8	19.9							
13	184	58.0		58	41.0	57.8	325	54.3		110	40.5		338	54.1		20.0							
14	200	00.5		73	40.6	57.3	340	55.1		125	42.7		353	56.3		20.1							
15	215	02.9		88	40.3	56.9	355	55.9		140	45.0		8	58.5		20.2							
16	230	05.4		103	39.9	56.4	10	56.7		155	47.2		24	00.8		20.3							
17	245	07.9	+ 17	118	39.5	55.9	25	57.5	- 15	170	49.5	+ 21	39	03.0	- 8	20.4							
18	260	10.3	+ 17	133	39.1	55.5	40	58.4	- 15	185	51.8	+ 21	54	05.2	- 8	20.5							
19	275	12.8		148	38.7	55.0	55	59.2	- 15	200	54.0		69	07.4		20.6							
20	290	15.3		163	38.4	54.6	71	00.0	- 16	215	56.3		84	09.6		20.7							
21	305	17.7		178	38.0	54.1	86	00.8		230	58.5		99	11.9		20.8							
22	320	20.2		193	37.6	53.6	101	01.6		246	00.8		114	14.1		20.9							
23	335	22.7		208	37.2	53.2	116	02.5		261	03.1		129	16.3		21.0							
24	350	25.1	+ 17	223	36.8	52.7	131	03.3	- 16	276	05.3	+ 21	144	18.5	- 8	21.1							
Dif	—		-4	-5			+8	-5		+23		0	+22		-1								

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MARTES 11 DE SEPTIEMBRE DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15'9 PMG: 11 ^h 56 ^m 5			SD: 15'1 Edad: 24 ^d 3 PHE { 4 ^h : 55'5 12 ^h : 55'7 20 ^h : 56'0 PMG: 8 ^h 01 ^m R°: 49 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
	h	°	'	°	'	°	'		°	'		h	m	h	m	h
0	180	50.4	+ 4	29.0	243	40.9	+ 18	48.8	60 N	3 43	4 36	5 19	** ** *	16 26	20	
1	195	50.7		28.1	258	11.2	113	43.3	58	3 52	4 42	22	** ** *	15	23	
2	210	50.9		27.1	272	41.5	113	37.8	55	4 00	46	24	** ** *	16 05	25	
3	225	51.1		26.2	287	11.8	113	32.2	56	07	50	27	** ** *	15 57	27	
4	240	51.3		25.2	301	42.0	112	26.4	58	13	54	29	0 03	66	49 29	
5	255	51.5	+ 4	24.3	316	12.3	113	+ 18 20.6	58	18	57	5 30	0 11	65	15 42 31	
6	270	51.8	+ 4	23.3	330	42.6	113	+ 18 14.6	60	29	04	5 34	0 27	63	15 27 34	
7	285	52.0		22.4	345	12.9	113	08.6	61	38	10	37	41	60	15 37	
8	300	52.2		21.4	359	43.2	113	+ 18 02.5	60	45	15	40	0 53	58	15 05 38	
9	315	52.4		20.5	14	13.5	113	+ 17 56.3	62	50	18	43	1 03	56	14 56 40	
10	330	52.6		19.5	28	43.8	113	50.0	63	59	24	47	20	54	40 44	
11	345	52.9	+ 4	18.5	43	14.1	113	+ 17 43.6	64	04	29	5 50	1 35	52	14 26 46	
12	0	53.1	+ 4	17.6	57	44.4	113	+ 17 37.1	65	08	5	5 53	1 49	49	14 13 49	
13	15	53.3		16.6	72	14.7	113	30.5	66	11	35	56	2 03	47	14 00 51	
14	30	53.5		15.7	86	45.0	113	23.8	67	12	37	5 59	18	45	13 46 54	
15	45	53.7		14.7	101	15.4	114	17.0	68	11	39	6 03	36	41	30 57	
16	60	54.0		13.8	115	45.7	113	10.1	69	10	40	05	46	40	20 60	
17	75	54.2	+ 4	12.8	130	16.0	113	+ 17 03.2	69	09	5	6 07	2 57	38	13 09 62	
18	90	54.4	+ 4	11.9	144	46.4	114	+ 16 56.1	71	06	5	6 09	3 11	35	12 57 64	
19	105	54.6		10.9	159	16.7	113	49.0	73	03	40	12	27	33	41 67	
20	120	54.8		10.0	173	47.1	114	41.7	73	01	40	14	34	32	34 69	
21	135	55.1		09.0	188	17.4	113	34.4	73	59	40	15	43	30	26 70	
22	150	55.3		08.1	202	47.8	114	27.0	74	57	40	17	3 52	28	17 72	
23	165	55.5		07.1	217	18.1	113	19.5	75	54	39	18	4 03	26	12 06 75	
24	180	55.7	+ 4	06.1	231	48.5	114	+ 16 11.9	76	51	5	6 20	4 16	23	11 54 78	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 0 ^h 38 ^m 2		Mag.: -4.2 PMG: 9 ^h 06 ^m			Mag.: +1.2 PMG: 15 ^h 15 ^m			Mag.: -2.4 PMG: 5 ^h 35 ^m			Mag.: +0.8 PMG: 14 ^h 21 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	350	25.1	223	36.8	+ 17	131	03.3	- 16	276	05.3	+ 21	144	18.5	- 8	21.1	
1	5	27.6	238	36.5		146	04.1		291	07.6		159	20.8		21.2	
2	20	30.0	253	36.1		161	04.9		306	09.9		174	23.0		21.3	
3	35	32.5	268	35.7		176	05.7		321	12.1		189	25.2		21.4	
4	50	35.0	283	35.3		191	06.5		336	14.4		204	27.4		21.5	
5	65	37.4	298	34.9	+ 17	206	07.4	- 16	351	16.6	+ 21	219	29.7	- 8	21.6	
6	80	39.9	313	34.5	+ 17	221	08.2	- 16	6	18.9	+ 21	234	31.9	- 8	21.7	
7	95	42.4	328	34.2		236	09.0		21	21.2		249	34.1		21.8	
8	110	44.8	343	33.8		251	09.8		36	23.4		264	36.3		21.9	
9	125	47.3	358	33.4		266	10.6		51	25.7		279	38.5		22.0	
10	140	49.8	13	33.0		281	11.4		66	28.0		294	40.8		22.1	
11	155	52.2	28	32.6	+ 17	296	12.2	- 16	81	30.2	+ 21	309	43.0	- 8	22.2	
12	170	54.7	43	32.2	+ 17	311	13.1	- 16	96	32.5	+ 21	324	45.2	- 8	22.3	
13	185	57.2	58	31.9		326	13.9		111	34.8		339	47.4		22.4	
14	200	59.6	73	31.5		341	14.7		126	37.0		354	49.7		22.5	
15	216	02.1	88	31.1		356	15.5		141	39.3		9	51.9		22.6	
16	231	04.5	103	30.7		11	16.3		156	41.6		24	54.1		22.7	
17	246	07.0	118	30.3	+ 17	26	17.1	- 16	171	43.8	+ 21	39	56.3	- 8	22.8	
18	261	09.5	133	29.9	+ 17	41	17.9	- 16	186	46.1	+ 21	54	58.5	- 8	22.8	
19	276	11.9	148	29.6		56	18.7		201	48.4		70	00.8		22.9	
20	291	14.4	163	29.2		71	19.6		216	50.7		85	03.0		23.0	
21	306	16.9	178	28.8		86	20.4		231	52.9		100	05.2		23.1	
22	321	19.3	193	28.4		101	21.2		246	55.2		115	07.4		23.2	
23	336	21.8	208	28.0		116	22.0		261	57.5		130	09.6		23.3	
24	351	24.3	223	27.6	+ 17	131	22.8	- 16	276	59.7	+ 21	145	11.9	- 8	23.4	
Dif	—		-4		-5		+8		-5		+23		0		+22	

MIÉRCOL 12 DE SEPTIEMBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna				
	SD: 15 ^h 9 PMG: 11 ^h 56 ^m 1		SD: 15 ^h 3 Edad: 25 ^d 3		PHE $\left\{ \begin{array}{l} 4^h: 56/2 \\ 12^h: 56/4 \\ 20^h: 56/7 \end{array} \right.$													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			R°: 49 ^m									
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	h	m	
0	180	55.7	+ 4	06.1	231	48.5	+ 16	11.9	77	60 N	18	29	19	12	20	04	0	35
1	195	55.9		05.2	246	18.9	+ 16	04.2	78	58	27	07	19	56		45	78	38
2	210	56.2		04.2	260	49.3	+ 15	56.4	78	56	25	19	02	48	0	54	75	30
3	225	56.4		03.3	275	19.7		48.6	80	54	23	18	59	42	1	02	73	24
4	240	56.6		02.3	289	50.0		40.6	80	52	21	55	36	09	71	18	26	
5	255	56.8	+ 4	01.4	304	20.4	+ 15	32.6	80	50	18	19	18	52	19	31	1	16
6	270	57.0	+ 4	00.4	318	50.8	+ 15	24.5	81	45	18	16	18	46	19	21	1	30
7	285	57.3	+ 3	59.5	333	21.2		16.3	82	40	13	40	13		41	63	15	52
8	300	57.5		58.5	347	51.6	+ 15	08.0	83	35	11	36	06		51	60	43	37
9	315	57.7		57.6	2	22.1	+ 14	59.6	84	30	09	33	19	01	1	59	59	36
10	330	57.9		56.6	16	52.5		51.1	85	20	05	27	18	53	2	14	55	24
11	345	58.1	+ 3	55.6	31	22.9	+ 14	42.6	85	10 N	18	02	18	23	18	48	2	27
12	0	58.4	+ 3	54.7	45	53.3	+ 14	34.0	86	0	17	59	18	20	18	44	2	38
13	15	58.6		53.7	60	23.7		25.3	87	10 S	57	18	42		2	50	46	14
14	30	58.8		52.8	74	54.2		16.5	88	20	54	16	42		3	03	43	40
15	45	59.0		51.8	89	24.6	+ 14	07.6	89	30	51	15	43		17	40		27
16	60	59.2		50.9	103	55.0	+ 13	58.6	90	35	49	15	44		26	37		20
17	75	59.5	+ 3	49.9	118	25.5	+ 13	49.6	90	40	17	48	18	15	18	46	3	35
18	90	59.7	+ 3	49.0	132	55.9	+ 13	40.5	91	45	17	45	18	15	18	49	3	46
19	105	59.9		48.0	147	26.4		31.3	92	50	43	15	53		4	00	28	13
20	121	00.1		47.0	161	56.8		22.0	93	52	42	15	55		06	27		43
21	136	00.3		46.1	176	27.3		12.7	93	54	41	16	18	57	13	25		36
22	151	00.6		45.1	190	57.7	+ 13	03.2	95	56	39	16	19	00	20	24		29
23	166	00.8		44.2	205	28.2	+ 12	53.7	95	58	38	17	03		29	21		21
24	181	01.0	+ 3	43.2	219	58.7	+ 12	44.1	96	60 S	17	36	18	18	19	06	4	39
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 0 ^h 34 ^m 3		Mag.: -4.2 PMG: 9 ^h 06 ^m		Mag.: +1.2 PMG: 15 ^h 14 ^m		Mag.: -2.4 PMG: 5 ^h 31 ^m		Mag.: +0.8 PMG: 14 ^h 17 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	351	24.3	223	27.6	+ 17	41.3	131	22.8	- 16	15.2	276	59.7	+ 21	51.2	145	11.9	- 8	23.4
1	6	26.7	238	27.3		40.8	146	23.6		15.7	292	02.0		51.2	160	14.1		23.5
2	21	29.2	253	26.9		40.3	161	24.4		16.3	307	04.3		51.2	175	16.3		23.6
3	36	31.6	268	26.5		39.8	176	25.2		16.8	322	06.5		51.3	190	18.5		23.7
4	51	34.1	283	26.1		39.3	191	26.0		17.3	337	08.8		51.3	205	20.7		23.8
5	66	36.6	298	25.7	+ 17	38.8	206	26.8	- 16	17.9	352	11.1	+ 21	51.3	220	23.0	- 8	23.9
6	81	39.0	313	25.3	+ 17	38.3	221	27.7	- 16	18.4	7	13.4	+ 21	51.3	235	25.2	- 8	24.0
7	96	41.5	328	24.9		37.8	236	28.5		18.9	22	15.6		51.3	250	27.4		24.1
8	111	44.0	343	24.6		37.4	251	29.3		19.5	37	17.9		51.3	265	29.6		24.2
9	126	46.4	358	24.2		36.9	266	30.1		20.0	52	20.2		51.4	280	31.9		24.3
10	141	48.9	13	23.8		36.4	281	30.9		20.6	67	22.5		51.4	295	34.1		24.4
11	156	51.4	28	23.4	+ 17	35.9	296	31.7	- 16	21.1	82	24.7	+ 21	51.4	310	36.3	- 8	24.5
12	171	53.8	43	23.0	+ 17	35.4	311	32.5	- 16	21.6	97	27.0	+ 21	51.4	325	38.5	- 8	24.6
13	186	56.3	58	22.6		34.9	326	33.3		22.2	112	29.3		51.4	340	40.7		24.7
14	201	58.8	73	22.2		34.4	341	34.1		22.7	127	31.6		51.4	355	43.0		24.8
15	217	01.2	88	21.9		33.9	356	34.9		23.2	142	33.8		51.5	10	45.2		24.9
16	232	03.7	103	21.5		33.4	11	35.7		23.8	157	36.1		51.5	25	47.4		25.0
17	247	06.1	118	21.1	+ 17	32.9	26	36.5	- 16	24.3	172	38.4	+ 21	51.5	40	49.6	- 8	25.1
18	262	08.6	133	20.7	+ 17	32.4	41	37.3	- 16	24.8	187	40.7	+ 21	51.5	55	51.8	- 8	25.2
19	277	11.1	148	20.3		31.9	56	38.1		25.3	202	42.9		51.5	70	54.0		25.3
20	292	13.5	163	19.9		31.4	71	38.9		25.9	217	45.2		51.5	85	56.3		25.4
21	307	16.0	178	19.5		30.9	86	39.7		26.4	232	47.5		51.6	100	58.5		25.5
22	322	18.5	193	19.2		30.4	101	40.5		26.9	247	49.8		51.6	116	00.7		25.6
23	337	20.9	208	18.8		29.9	116	41.3		27.5	262	52.0		51.6	131	02.9		25.7
24	352	23.4	223	18.4	+ 17	29.4	131	42.1	- 16	28.0	277	54.3	+ 21	51.6	146	05.1	- 8	25.8
Dif	—		-4		-5		+8		-5		+23		0		+22		-1	

VIERNES 14 DE SEPTIEMBRE DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 55 ^m 4		SD: 15 ^h 7 Edad: 27 ^d 3		PHE $\left\{ \begin{array}{l} 4^{\text{h}}: 57^{\text{'}}7 \\ 12^{\text{h}}: 58^{\text{'}}0 \\ 20^{\text{h}}: 58^{\text{'}}2 \end{array} \right.$	PMG: 10 ^h 28 ^m R°: 49 ^m												
	hG ☉	Dec	hG ☾	Dif					Dec	Dif								
	h	°	'	°	'	°			'	h	m	h	m	h	m	h	m	
0	181	06.3	+ 3	20.2	208	09.5	+ 8	33.2	60 N	18 23	19 05	19 57	3 19	87				
1	196	06.5		19.2	222	39.9	114	22.0	112	58	21	19 01	49	24 83				
2	211	06.8		18.3	237	10.3	114	+ 8	10.7	113	56	19	18 57	42				
3	226	07.0		17.3	251	40.7	114	+ 7	59.3	114	54	18	53	36				
4	241	07.2		16.4	266	11.1	114	47.9	114	52	16	50	31	34				
5	256	07.4	+ 3	15.4	280	41.5	114	+ 7	36.4	115	50	18 15	18 48	19 26				
6	271	07.7	+ 3	14.4	295	11.8	113	+ 7	24.9	115	45	18 12	18 42	19 17				
7	286	07.9		13.5	309	42.2	114	13.4	115	40	10	37	09	49				
8	301	08.1		12.5	324	12.5	113	+ 7	01.7	117	35	08	33	19 03				
9	316	08.3		11.6	338	42.9	114	+ 6	50.1	116	30	06	30	18 58				
10	331	08.5		10.6	353	13.2	113	38.4	117	20	03	25	51	4 05				
11	346	08.8	+ 3	09.6	7	43.5	113	+ 6	26.6	118	10 N	18 01	18 22	18 46				
12	1	09.0	+ 3	08.7	22	13.8	113	+ 6	14.8	118	0	17 59	18 19	18 43				
13	16	09.2		07.7	36	44.1	113	+ 6	02.9	119	10 S	57	18	42				
14	31	09.4		06.8	51	14.4	113	+ 5	51.0	119	20	54	16	42				
15	46	09.6		05.8	65	44.7	113	39.1	119	30	52	16	44	35				
16	61	09.9		04.8	80	14.9	112	27.1	120	35	51	16	45	39				
17	76	10.1	+ 3	03.9	94	45.2	113	+ 5	15.1	120	40	17 49	18 16	18 48				
18	91	10.3	+ 3	02.9	109	15.4	112	+ 5	03.0	121	45	17 48	18 17	18 51				
19	106	10.5		01.9	123	45.6	112	+ 4	50.9	121	50	46	18	56				
20	121	10.8		01.0	138	15.8	112	38.8	122	52	45	19	18 58	4 57				
21	136	11.0	+ 3	00.0	152	46.0	112	26.6	122	54	44	19	19 01	5 01				
22	151	11.2	+ 2	59.1	167	16.1	111	14.4	122	56	43	20	04	04				
23	166	11.4		58.1	181	46.3	112	+ 4	02.1	123	58	42	21	07				
24	181	11.6	+ 2	57.1	196	16.4	111	+ 3	49.8	123	60 S	17 41	18 22	19 11				
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO			
	PMG: 0 ^h 26 ^m 4		Mag.: -4.2 PMG: 9 ^h 08 ^m				Mag.: +1.2 PMG: 15 ^h 11 ^m				Mag.: -2.4 PMG: 5 ^h 24 ^m				Mag.: +0.8 PMG: 14 ^h 10 ^m			
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	353	22.5	223	09.1	+ 17	16.9	132	01.3	- 16	40.7	278	49.1	+ 21	52.0	146	58.4	- 8	28.2
1	8	25.0	238	08.7		16.4	147	02.1		41.2	293	51.4		52.0	162	00.6		28.3
2	23	27.5	253	08.3		15.9	162	02.9		41.8	308	53.7		52.0	177	02.8		28.4
3	38	29.9	268	07.9		15.4	177	03.7		42.3	323	56.0		52.0	192	05.0		28.5
4	53	32.4	283	07.5		14.8	192	04.5		42.8	338	58.3		52.0	207	07.2		28.6
5	68	34.9	298	07.1	+ 17	14.3	207	05.3	- 16	43.4	354	00.5	+ 21	52.1	222	09.5	- 8	28.7
6	83	37.3	313	06.7	+ 17	13.8	222	06.1	- 16	43.9	9	02.8	+ 21	52.1	237	11.7	- 8	28.8
7	98	39.8	328	06.3		13.2	237	06.9		44.4	24	05.1		52.1	252	13.9		28.9
8	113	42.2	343	05.9		12.7	252	07.6		44.9	39	07.4		52.1	267	16.1		29.0
9	128	44.7	358	05.6		12.2	267	08.4		45.5	54	09.7		52.1	282	18.3		29.1
10	143	47.2	13	05.2		11.6	282	09.2		46.0	69	12.0		52.1	297	20.5		29.2
11	158	49.6	28	04.8	+ 17	11.1	297	10.0	- 16	46.5	84	14.3	+ 21	52.2	312	22.8	- 8	29.3
12	173	52.1	43	04.4	+ 17	10.6	312	10.8	- 16	47.0	99	16.6	+ 21	52.2	327	25.0	- 8	29.4
13	188	54.6	58	04.0		10.0	327	11.6		47.6	114	18.9		52.2	342	27.2		29.5
14	203	57.0	73	03.6		09.5	342	12.4		48.1	129	21.2		52.2	357	29.4		29.6
15	218	59.5	88	03.2		08.9	357	13.2		48.6	144	23.4		52.2	12	31.6		29.7
16	234	02.0	103	02.8		08.4	12	14.0		49.1	159	25.7		52.2	27	33.8		29.8
17	249	04.4	118	02.4	+ 17	07.9	27	14.8	- 16	49.7	174	28.0	+ 21	52.2	42	36.1	- 8	29.9
18	264	06.9	133	02.0	+ 17	07.3	42	15.5	- 16	50.2	189	30.3	+ 21	52.3	57	38.3	- 8	30.0
19	279	09.3	148	01.7		06.8	57	16.3		50.7	204	32.6		52.3	72	40.5		30.1
20	294	11.8	163	01.3		06.2	72	17.1		51.2	219	34.9		52.3	87	42.7		30.2
21	309	14.3	178	00.9		05.7	87	17.9		51.8	234	37.2		52.3	102	44.9		30.3
22	324	16.7	193	00.5		05.1	102	18.7		52.3	249	39.5		52.3	117	47.1		30.4
23	339	19.2	208	00.1		04.6	117	19.5		52.8	264	41.8		52.3	132	49.3		30.5
24	354	21.7	222	59.7	+ 17	04.1	132	20.3	- 16	53.3	279	44.1	+ 21	52.3	147	51.6	- 8	30.6
Dif	—		-4		-5		+8		-5		+23		0		+22		-1	

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SÁBADO 15 DE SEPTIEMBRE DE 2012

UT	SOL			● LUNA			Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna											
	SD: 15 ^h 9 PMG: 11 ^h 55 ^m 0			SD: 15 ^h 9 Edad: 28 ^d 3 PHE { 4 ^h : 58 ^m /5 12 ^h : 58 ^m /7 20 ^h : 58 ^m /9 PMG: 11 ^h 17 ^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	^h	^m					
0	181	11.6	+ 2	196	16.4	+ 3	49.8	60 N	3 54	4 46	5 29	4 46	89	17 30	14									
1	196	11.9		210	46.5	111	37.5	58	4 02	51	30	47	86	30 17										
2	211	12.1		225	16.6	111	25.1	56	09	54	32	49	83	30 19										
3	226	12.3		239	46.7	111	12.8	54	15	4 58	34	50	81	30 21										
4	241	12.5		254	16.7	110	+ 3	52	20	5 01	35	51	79	30 23										
5	256	12.8	+ 2	268	46.7	110	+ 2	50	4 25	5 04	5 36	4 52	77	17 30	25									
6	271	13.0	+ 2	283	16.7	110	+ 2	45	4 35	5 09	5 39	4 54	73	17 30	29									
7	286	13.2		297	46.7	110	22.9	40	42	14	41	56	69	30 33										
8	301	13.4		312	16.7	110	+ 2	35	48	18	43	58	65	30 35										
9	316	13.6		326	46.6	109	+ 1	30	4 53	21	45	4 59	63	30 38										
10	331	13.9		341	16.5	109	45.3	20	5 00	25	47	5 01	59	30 43										
11	346	14.1	+ 2	355	46.4	109	+ 1	10 N	5 04	5 29	5 50	5 04	54	17 30	47									
12	1	14.3	+ 2	10	16.3	109	+ 1	0	5 07	5 31	5 52	5 06	50	17 29	51									
13	16	14.5		24	46.1	108	+ 1	10 S	08	33	54	08	46	29 55										
14	31	14.8		39	15.9	108	+ 0	20	08	34	56	10	42	29 59										
15	46	15.0		53	45.7	108	42.2	30	06	34	58	12	38	29 63										
16	61	15.2		68	15.4	107	29.5	35	05	34	5 59	14	35	29 66										
17	76	15.4	+ 2	82	45.2	108	+ 0	40	5 02	5 33	6 00	5 15	33	17 29	69									
18	91	15.6	+ 2	97	14.9	107	+ 0	45	4 59	5 33	6 02	5 17	29	17 28	73									
19	106	15.9		111	44.5	106	- 0	50	54	31	04	19	25	28 78										
20	121	16.1		126	14.2	107	21.3	52	52	31	04	20	23	28 79										
21	136	16.3		140	43.8	106	34.0	54	49	30	05	22	21	28 82										
22	151	16.5		155	13.4	106	46.8	56	46	29	06	23	19	28 84										
23	166	16.8		169	42.9	105	- 0	58	42	28	07	24	16	28 86										
24	181	17.0	+ 2	184	12.4	105	- 1	60 S	4 38	5 27	6 08	5 26	13	17 27	90									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO											
	PMG: 0 ^h 22 ^m 5			Mag.: -4.2 PMG: 9 ^h 08 ^m			Mag.: +1.2 PMG: 15 ^h 10 ^m			Mag.: -2.4 PMG: 5 ^h 20 ^m			Mag.: +0.8 PMG: 14 ^h 06 ^m											
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec										
^h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°									
0	354	21.7		222	59.7	+ 17	132	20.3	- 16	279	44.1	+ 21	147	51.6	- 8	30.6								
1	9	24.1		237	59.3		147	21.1		294	46.4		162	53.8		30.7								
2	24	26.6		252	58.9		162	21.8		309	48.7		177	56.0		30.8								
3	39	29.1		267	58.5		177	22.6		324	51.0		192	58.2		30.9								
4	54	31.5		282	58.1		192	23.4		339	53.3		208	00.4		31.0								
5	69	34.0		297	57.8	+ 17	207	24.2	- 16	354	55.6	+ 21	223	02.6	- 8	31.1								
6	84	36.5		312	57.4	+ 17	222	25.0	- 16	9	57.9	+ 21	238	04.9	- 8	31.2								
7	99	38.9		327	57.0	+ 17	237	25.8		25	00.2		253	07.1		31.3								
8	114	41.4		342	56.6	+ 16	252	26.6		40	02.5		268	09.3		31.4								
9	129	43.8		357	56.2		267	27.3		55	04.8		283	11.5		31.5								
10	144	46.3		12	55.8		282	28.1		70	07.1		298	13.7		31.6								
11	159	48.8		27	55.4	+ 16	297	28.9	- 16	85	09.4	+ 21	313	15.9	- 8	31.7								
12	174	51.2		42	55.0	+ 16	312	29.7	- 16	100	11.7	+ 21	328	18.1	- 8	31.8								
13	189	53.7		57	54.6		327	30.5	- 17	115	14.0		343	20.4		31.9								
14	204	56.2		72	54.2		342	31.3		130	16.3		358	22.6		32.0								
15	219	58.6		87	53.8		357	32.0		145	18.6		13	24.8		32.1								
16	235	01.1		102	53.5		12	32.8		160	20.9		28	27.0		32.2								
17	250	03.6		117	53.1	+ 16	27	33.6	- 17	175	23.2	+ 21	43	29.2	- 8	32.3								
18	265	06.0		132	52.7	+ 16	42	34.4	- 17	190	25.5	+ 21	58	31.4	- 8	32.4								
19	280	08.5		147	52.3		57	35.2		205	27.8		73	33.6		32.5								
20	295	11.0		162	51.9		72	35.9		220	30.1		88	35.9		32.6								
21	310	13.4		177	51.5		87	36.7		235	32.4		103	38.1		32.7								
22	325	15.9		192	51.1		102	37.5		250	34.7		118	40.3		32.8								
23	340	18.3		207	50.7		117	38.3		265	37.0		133	42.5		32.9								
24	355	20.8		222	50.3	+ 16	132	39.1	- 17	280	39.3	+ 21	148	44.7	- 8	33.0								
Dif	—			-4			+8			-5			+23			0			+22			-1		

DOMINGO 16 DE SEPTIEMBRE DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 15'9 PMG: 11 ^h 54 ^m 7		SD: 16'1 Edad: 29 ^d 3 PMG: 12 ^h 08 ^m PHE { 4 ^h : 59'1 12 ^h : 59'3 20 ^h : 59'4 R°: 52 ^m												
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
^h 0	181 17.0	+ 2 34.0	184 12.4		12.3		60 N	18 17	18 59	19 50	6 15	91	17 44	15	
1	196 17.2	33.0	198 41.9	105	25.0	127	58	15	55	43	13	88	47	18	
2	211 17.4	32.1	213 11.4	105	37.8	128	56	14	51	37	12	85	49	21	
3	226 17.6	31.1	227 40.8	104	− 1 50.5	127	54	13	48	31	11	82	51	23	
4	241 17.9	30.1	242 10.2	104	− 2 03.3	128	52	12	46	26	10	80	53	26	
5	256 18.1	+ 2 29.2	256 39.5	103	− 2 16.0	127	50	18 11	18 43	19 22	6 09	78	17 55	27	
6	271 18.3	+ 2 28.2	271 08.8	103	− 2 28.8	128	45	18 08	18 38	19 13	6 07	73	17 59	32	
7	286 18.5	27.3	285 38.1	103	41.5	127	40	07	34	06	05	70	18 03	34	
8	301 18.8	26.3	300 07.3	102	− 2 54.3	128	35	05	30	19 00	03	67	05	38	
9	316 19.0	25.3	314 36.5	102	− 3 07.0	127	30	04	28	18 56	02	64	08	40	
10	331 19.2	24.4	329 05.7	102	19.7	127	20	01	23	49	6 00	59	13	44	
11	346 19.4	+ 2 23.4	343 34.8	101	− 3 32.5	128	10 N	18 00	18 21	18 45	5 58	55	18 17	48	
12	1 19.6	+ 2 22.4	358 03.9	101	− 3 45.2	127	0	17 58	18 19	18 43	5 56	52	18 20	53	
13	16 19.9	21.5	12 32.9	100	− 3 57.8	126	10 S	56	17	42	54	48	24	56	
14	31 20.1	20.5	27 01.9	100	− 4 10.5	127	20	55	17	42	52	44	28	60	
15	46 20.3	19.5	41 30.9	100	23.2	127	30	53	17	45	50	39	32	66	
16	61 20.5	18.6	55 59.8	99	35.8	126	35	52	18	47	49	37	35	68	
17	76 20.8	+ 2 17.6	70 28.7	99	− 4 48.5	127	40	17 51	18 18	18 50	5 48	33	18 38	71	
18	91 21.0	+ 2 16.6	84 57.5	98	− 5 01.1	126	45	17 50	18 19	18 54	5 46	30	18 41	75	
19	106 21.2	15.7	99 26.3	98	13.7	126	50	49	21	18 59	44	26	46	78	
20	121 21.4	14.7	113 55.1	98	26.2	125	52	48	22	19 01	43	25	47	81	
21	136 21.6	13.7	128 23.8	97	38.8	126	54	48	23	04	43	22	50	83	
22	151 21.9	12.8	142 52.5	97	− 5 51.3	125	56	47	24	08	42	19	52	85	
23	166 22.1	11.8	157 21.1	96	− 6 03.8	125	58	46	25	12	40	18	54	89	
24	181 22.3	+ 2 10.8	171 49.7	96	− 6 16.2	124	60 S	17 45	18 27	19 16	5 39	15	18 57	92	
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG: 0 ^h 18 ^m 6		Mag.: −4.1 PMG: 9 ^h 09 ^m		Mag.: +1.2 PMG: 15 ^h 09 ^m		Mag.: −2.4 PMG: 5 ^h 17 ^m			Mag.: +0.8 PMG: 14 ^h 03 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
^h 0	355 20.8	222 50.3	+ 16 50.7		132 39.1	− 17 05.8	280 39.3	+ 21 52.7	148 44.7	− 8 33.0					
1	10 23.3	237 49.9	50.1		147 39.8	06.3	295 41.6	52.7	163 46.9	33.1					
2	25 25.7	252 49.5	49.5		162 40.6	06.9	310 43.9	52.7	178 49.1	33.2					
3	40 28.2	267 49.1	49.0		177 41.4	07.4	325 46.2	52.7	193 51.3	33.3					
4	55 30.7	282 48.8	48.4		192 42.2	07.9	340 48.5	52.7	208 53.6	33.4					
5	70 33.1	297 48.4	+ 16 47.8		207 43.0	− 17 08.4	355 50.8	+ 21 52.7	223 55.8	− 8 33.5					
6	85 35.6	312 48.0	+ 16 47.3		222 43.7	− 17 08.9	10 53.1	+ 21 52.8	238 58.0	− 8 33.6					
7	100 38.1	327 47.6	46.7		237 44.5	09.5	25 55.4	52.8	254 00.2	33.7					
8	115 40.5	342 47.2	46.1		252 45.3	10.0	40 57.7	52.8	269 02.4	33.8					
9	130 43.0	357 46.8	45.5		267 46.1	10.5	56 00.0	52.8	284 04.6	33.9					
10	145 45.4	12 46.4	45.0		282 46.8	11.0	71 02.3	52.8	299 06.8	34.0					
11	160 47.9	27 46.0	+ 16 44.4		297 47.6	− 17 11.5	86 04.6	+ 21 52.8	314 09.1	− 8 34.1					
12	175 50.4	42 45.6	+ 16 43.8		312 48.4	− 17 12.0	101 06.9	+ 21 52.8	329 11.3	− 8 34.2					
13	190 52.8	57 45.2	43.2		327 49.2	12.6	116 09.2	52.9	344 13.5	34.3					
14	205 55.3	72 44.8	42.6		342 49.9	13.1	131 11.5	52.9	359 15.7	34.4					
15	220 57.8	87 44.4	42.1		357 50.7	13.6	146 13.9	52.9	14 17.9	34.5					
16	236 00.2	102 44.0	41.5		12 51.5	14.1	161 16.2	52.9	29 20.1	34.6					
17	251 02.7	117 43.7	+ 16 40.9		27 52.3	− 17 14.6	176 18.5	+ 21 52.9	44 22.3	− 8 34.7					
18	266 05.2	132 43.3	+ 16 40.3		42 53.0	− 17 15.1	191 20.8	+ 21 52.9	59 24.5	− 8 34.8					
19	281 07.6	147 42.9	39.7		57 53.8	15.7	206 23.1	52.9	74 26.8	34.9					
20	296 10.1	162 42.5	39.2		72 54.6	16.2	221 25.4	52.9	89 29.0	35.0					
21	311 12.6	177 42.1	38.6		87 55.4	16.7	236 27.7	53.0	104 31.2	35.1					
22	326 15.0	192 41.7	38.0		102 56.1	17.2	251 30.0	53.0	119 33.4	35.2					
23	341 17.5	207 41.3	37.4		117 56.9	17.7	266 32.3	53.0	134 35.6	35.3					
24	356 19.9	222 40.9	+ 16 36.8		132 57.7	− 17 18.2	281 34.6	+ 21 53.0	149 37.8	− 8 35.4					
Dif	—	−4	−6		+8	−5	+23	0	+22	−1					

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LUNES 17 DE SEPTIEMBRE DE 2012

UT	SOL			☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna						
	SD: 15°9 PMG: 11 ^h 54 ^m 3			SD: 16°2 Edad: 0 ^d 9 PHE { 4 ^h : 59°6 12 ^h : 59°7 20 ^h : 59°8 PMG: 13 ^h 00 ^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				
0	181	22.3	+ 2	171	49.7	— 6	16.2	60 N	4 00	4 51	5 33	7 46	92	17 59	19					
1	196	22.5		186	18.2		28.6	58	07	55	35	41	89	18 05	22					
2	211	22.8		200	46.7		41.0	56	13	4 59	36	37	86	10	25					
3	226	23.0		215	15.1	— 6	53.4	54	19	5 02	37	33	84	14	28					
4	241	23.2		229	43.5	— 7	05.7	52	24	04	38	30	81	19	29					
5	256	23.4	+ 2	244	11.8	— 7	18.0	50	4 28	5 07	5 39	7 27	79	18 22	31					
6	271	23.6	+ 2	258	40.1	— 7	30.3	45	4 37	5 12	5 41	7 20	76	18 31	35					
7	286	23.9		273	08.4		42.5	40	44	16	43	15	72	37	39					
8	301	24.1		287	36.5	— 7	54.7	35	49	19	45	10	69	43	41					
9	316	24.3		302	04.7	— 8	06.8	30	4 54	22	46	7 06	66	48	44					
10	331	24.5		316	32.8		18.9	20	5 00	26	48	6 59	62	18 57	48					
11	346	24.8	+ 2	331	00.8	— 8	31.0	10 N	5 04	5 29	5 50	6 53	58	19 05	52					
12	1	25.0	+ 1	345	28.8	— 8	43.0	0	5 06	5 30	5 51	6 48	53	19 13	55					
13	16	25.2		359	56.8	— 8	54.9	10 S	07	32	53	42	50	20	59					
14	31	25.4		14	24.6	— 9	06.8	20	06	32	54	36	46	28	63					
15	46	25.6		28	52.5		18.7	30	04	32	55	29	42	38	66					
16	61	25.9		43	20.3		30.5	35	5 02	31	56	26	39	43	69					
17	76	26.1	+ 1	57	48.0	— 9	42.2	40	4 59	5 30	5 57	6 21	37	19 49	72					
18	91	26.3	+ 1	72	15.7	— 9	53.9	45	4 55	5 29	5 58	6 16	33	19 56	75					
19	106	26.5		86	43.3	— 10	05.6	50	49	27	5 59	10	29	20 04	80					
20	121	26.8		101	10.9		17.2	52	47	26	6 00	08	27	08	82					
21	136	27.0		115	38.4		28.7	54	44	25	00	05	25	13	83					
22	151	27.2		130	05.9		40.2	56	40	24	01	6 01	23	17	86					
23	166	27.4		144	33.3	— 10	51.6	58	36	23	01	5 58	20	23	89					
24	181	27.6	+ 1	159	00.7	— 11	02.9	60 S	4 32	5 21	6 02	5 54	17	20 29	92					
UT	ARIES PMG: 0 ^h 14 ^m 6			VENUS Mag.: -4.1 PMG: 9 ^h 10 ^m			MARTE Mag.: +1.2 PMG: 15 ^h 07 ^m			JÚPITER Mag.: -2.4 PMG: 5 ^h 13 ^m			SATURNO Mag.: +0.8 PMG: 13 ^h 59 ^m							
	hG ♈			hG ♀	Dec			hG ♂	Dec			hG ♃	Dec							
	°	'	°	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
h	356	19.9		222	40.9	+ 16	36.8	132	57.7	— 17	18.2	281	34.6	+ 21	53.0	149	37.8	— 8	35.4	
1	11	22.4		237	40.5		36.2	147	58.4		18.7	296	37.0		53.0	164	40.0		35.5	
2	26	24.9		252	40.1		35.6	162	59.2		19.3	311	39.3		53.0	179	42.2		35.6	
3	41	27.3		267	39.7		35.0	178	00.0		19.8	326	41.6		53.0	194	44.4		35.7	
4	56	29.8		282	39.3		34.5	193	00.8		20.3	341	43.9		53.0	209	46.7		35.8	
5	71	32.3		297	38.9	+ 16	33.9	208	01.5	— 17	20.8	356	46.2	+ 21	53.1	224	48.9	— 8	35.9	
6	86	34.7		312	38.6	+ 16	33.3	223	02.3	— 17	21.3	11	48.5	+ 21	53.1	239	51.1	— 8	36.0	
7	101	37.2		327	38.2		32.7	238	03.1		21.8	26	50.8		53.1	254	53.3		36.1	
8	116	39.7		342	37.8		32.1	253	03.8		22.3	41	53.1		53.1	269	55.5		36.2	
9	131	42.1		357	37.4		31.5	268	04.6		22.8	56	55.5		53.1	284	57.7		36.3	
10	146	44.6		12	37.0		30.9	283	05.4		23.4	71	57.8		53.1	299	59.9		36.4	
11	161	47.0		27	36.6	+ 16	30.3	298	06.1	— 17	23.9	87	00.1	+ 21	53.1	315	02.1	— 8	36.5	
12	176	49.5		42	36.2	+ 16	29.7	313	06.9	— 17	24.4	102	02.4	+ 21	53.1	330	04.3	— 8	36.6	
13	191	52.0		57	35.8		29.1	328	07.7		24.9	117	04.7		53.2	345	06.6		36.7	
14	206	54.4		72	35.4		28.5	343	08.4		25.4	132	07.0		53.2	0	08.8		36.8	
15	221	56.9		87	35.0		27.9	358	09.2		25.9	147	09.3		53.2	15	11.0		36.9	
16	236	59.4		102	34.6		27.3	13	10.0		26.4	162	11.7		53.2	30	13.2		37.0	
17	252	01.8		117	34.2	+ 16	26.7	28	10.7	— 17	26.9	177	14.0	+ 21	53.2	45	15.4	— 8	37.1	
18	267	04.3		132	33.8	+ 16	26.1	43	11.5	— 17	27.5	192	16.3	+ 21	53.2	60	17.6	— 8	37.2	
19	282	06.8		147	33.5		25.5	58	12.3		28.0	207	18.6		53.2	75	19.8		37.3	
20	297	09.2		162	33.1		24.9	73	13.0		28.5	222	20.9		53.2	90	22.0		37.4	
21	312	11.7		177	32.7		24.3	88	13.8		29.0	237	23.3		53.3	105	24.2		37.5	
22	327	14.2		192	32.3		23.7	103	14.6		29.5	252	25.6		53.3	120	26.5		37.6	
23	342	16.6		207	31.9		23.1	118	15.3		30.0	267	27.9		53.3	135	28.7		37.7	
24	357	19.1		222	31.5	+ 16	22.5	133	16.1	— 17	30.5	282	30.2	+ 21	53.3	150	30.9	— 8	37.8	
Dif	—			-4			-6	+8			-5	+23			0	+22				-1

MARTES 18 DE SEPTIEMBRE DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna				
	SD: 15°9 PMG: 11 ^h 54 ^m 0		SD: 16°3 Edad: 1 ^d 9		PHE { 4 ^h : 59/9 12 ^h : 59/9 20 ^h : 59/9													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			R°: 56 ^m									
h	°	'	°	'	°	'	°	h	m	h	m	h	m	m	h	m	m	
0	181	27.6	+ 1	47.6	159	00.7	− 11	02.9	60 N	18 11	18 53	19 44	9 18	92	18 18	25	28	
1	196	27.9		46.6	173	28.0	83	14.2	58	10	49	37	10 88		27	28		
2	211	28.1		45.7	187	55.2	82	25.4	56	09	46	31	9 03	85	35	31		
3	226	28.3		44.7	202	22.4	82	36.5	54	08	43	26	8 57	83	42	33		
4	241	28.5		43.7	216	49.6	82	47.6	52	07	41	21	51	81	48	35		
5	256	28.8	+ 1	42.8	231	16.7	81	− 11	50	18 06	18 39	19 17	8 46	79	18 53	37		
6	271	29.0	+ 1	41.8	245	43.7	80	− 12	45	18 05	18 34	19 09	8 36	74	19 06	40		
7	286	29.2		40.8	260	10.7	80	20.4	40	03	30	19 02	27	71	16	43		
8	301	29.4		39.9	274	37.6	79	31.1	35	02	27	18 57	19	69	24	46		
9	316	29.6		38.9	289	04.5	79	41.8	30	01	25	53	12	67	32	48		
10	331	29.9		37.9	303	31.3	78	− 12	20	18 00	22	47	8 01	62	45	52		
11	346	30.1	+ 1	37.0	317	58.1	78	− 13	10 N	17 58	18 19	18 44	7 51	59	19 57	54		
12	1	30.3	+ 1	36.0	332	24.8	77	− 13	0	17 57	18 18	18 42	7 41	57	20 08	57		
13	16	30.5		35.0	346	51.4	76	23.8	10 S	56	17	42	32	53	19	60		
14	31	30.8		34.1	1	18.0	76	34.1	20	55	17	43	22	50	31	63		
15	46	31.0		33.1	15	44.6	76	44.3	30	54	18	46	11	46	44	66		
16	61	31.2		32.1	30	11.1	75	− 13	35	54	19	48	7 05	43	20	52		
17	76	31.4	+ 1	31.1	44	37.5	74	− 14	40	17 53	18 20	18 52	6 58	41	21	01		
18	91	31.6	+ 1	30.2	59	03.9	74	− 14	45	17 53	18 22	18 56	6 49	38	21	11		
19	106	31.9		29.2	73	30.2	73	24.3	50	52	24	19 02	39	34	24	77		
20	121	32.1		28.2	87	56.5	73	34.1	52	52	25	05	35	32	30	79		
21	136	32.3		27.3	102	22.7	72	43.8	54	51	27	08	30	30	36	81		
22	151	32.5		26.3	116	48.9	72	− 14	56	51	28	12	24	28	43	84		
23	166	32.8		25.3	131	15.0	71	− 15	58	51	30	16	18	25	21	52		
24	181	33.0	+ 1	24.4	145	41.1	71	− 15	60 S	17 50	18 32	19 21	6 11	22	22	01		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG		Mag.: −4.1		Mag.: +1.2		Mag.: −2.4		Mag.: +0.8									
	0 ^h 10 ^m 7		PMG: 9 ^h 10 ^m		PMG: 15 ^h 06 ^m		PMG: 5 ^h 09 ^m		PMG: 13 ^h 56 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	357	19.1	222	31.5	+ 16	22.5	133	16.1	− 17	30.5	282	30.2	+ 21	53.3	150	30.9	− 8	37.8
1	12	21.5	237	31.1		21.9	148	16.9		31.0	297	32.5		53.3	165	33.1		37.9
2	27	24.0	252	30.7		21.3	163	17.6		31.5	312	34.9		53.3	180	35.3		38.0
3	42	26.5	267	30.3		20.7	178	18.4		32.0	327	37.2		53.3	195	37.5		38.1
4	57	28.9	282	29.9		20.0	193	19.2		32.5	342	39.5		53.3	210	39.7		38.2
5	72	31.4	297	29.5	+ 16	19.4	208	19.9	− 17	33.1	357	41.8	+ 21	53.3	225	41.9	− 8	38.3
6	87	33.9	312	29.1	+ 16	18.8	223	20.7	− 17	33.6	12	44.1	+ 21	53.4	240	44.1	− 8	38.4
7	102	36.3	327	28.7		18.2	238	21.4		34.1	27	46.5		53.4	255	46.3		38.5
8	117	38.8	342	28.3		17.6	253	22.2		34.6	42	48.8		53.4	270	48.5		38.6
9	132	41.3	357	28.0		17.0	268	23.0		35.1	57	51.1		53.4	285	50.8		38.7
10	147	43.7	12	27.6		16.4	283	23.7		35.6	72	53.4		53.4	300	53.0		38.8
11	162	46.2	27	27.2	+ 16	15.7	298	24.5	− 17	36.1	87	55.8	+ 21	53.4	315	55.2	− 8	38.9
12	177	48.6	42	26.8	+ 16	15.1	313	25.2	− 17	36.6	102	58.1	+ 21	53.4	330	57.4	− 8	39.0
13	192	51.1	57	26.4		14.5	328	26.0		37.1	118	00.4		53.4	345	59.6		39.1
14	207	53.6	72	26.0		13.9	343	26.8		37.6	133	02.7		53.5	1	01.8		39.2
15	222	56.0	87	25.6		13.3	358	27.5		38.1	148	05.0		53.5	16	04.0		39.3
16	237	58.5	102	25.2		12.7	13	28.3		38.6	163	07.4		53.5	31	06.2		39.4
17	253	01.0	117	24.8	+ 16	12.0	28	29.0	− 17	39.1	178	09.7	+ 21	53.5	46	08.4	− 8	39.5
18	268	03.4	132	24.4	+ 16	11.4	43	29.8	− 17	39.7	193	12.0	+ 21	53.5	61	10.6	− 8	39.6
19	283	05.9	147	24.0		10.8	58	30.6		40.2	208	14.4		53.5	76	12.8		39.7
20	298	08.4	162	23.6		10.2	73	31.3		40.7	223	16.7		53.5	91	15.1		39.8
21	313	10.8	177	23.2		09.5	88	32.1		41.2	238	19.0		53.5	106	17.3		39.9
22	328	13.3	192	22.9		08.9	103	32.8		41.7	253	21.3		53.5	121	19.5		40.0
23	343	15.8	207	22.5		08.3	118	33.6		42.2	268	23.7		53.6	136	21.7		40.1
24	358	18.2	222	22.1	+ 16	07.7	133	34.3	− 17	42.7	283	26.0	+ 21	53.6	151	23.9	− 8	40.2
Dif	—		−4		−6		+8		−5		+23		0		+22		−1	


JUEVES 20 DE SEPTIEMBRE DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9		SD: 16 ^h 3		PHE { 4 ^h : 59/9 12 ^h : 59/8 20 ^h : 59/7									
	PMG: 11 ^h 53 ^m 3		Edad: 3 ^d 9											
	PMG: 15 ^h 50 ^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	h m m
0	181 38.3	+ 1 01.1	131 51.9		− 18 25.2	65	60 N	18 05	18 47	19 37	12 16	74	19 18	49
1	196 38.5	+ 1 00.1	146 16.8	59	31.7	65	58	04	43	30	12 01	73	33	50
2	211 38.7	+ 0 59.1	160 41.6	58	38.2	65	56	03	41	25	11 49	71	46	51
3	226 39.0	58.2	175 06.5	59	44.5	63	54	03	38	20	38	71	19 57	52
4	241 39.2	57.2	189 31.3	58	50.7	62	52	02	36	16	29	69	20 06	53
5	256 39.4	+ 0 56.2	203 56.0	57	− 18 56.8	61	50	18 02	18 34	19 12	11 20	69	20 15	54
6	271 39.6	+ 0 55.2	218 20.8	58	− 19 02.7	59	45	18 01	18 30	19 05	11 03	66	20 34	54
7	286 39.8	54.3	232 45.5	57	08.5	58	40	18 00	27	18 59	10 48	65	20 49	55
8	301 40.1	53.3	247 10.1	56	14.2	57	35	17 59	25	54	36	64	21 01	57
9	316 40.3	52.3	261 34.8	57	19.7	55	30	59	23	50	25	63	13	57
10	331 40.5	51.4	275 59.4	56	25.2	55	20	58	20	45	10 07	61	32	58
11	346 40.7	+ 0 50.4	290 24.0	56	− 19 30.4	52	10 N	17 57	18 18	18 42	9 51	60	21 48	59
12	1 40.9	+ 0 49.4	304 48.5	55	− 19 35.6	52	0	17 57	18 17	18 41	9 36	59	22 04	59
13	16 41.2	48.4	319 13.1	56	40.6	50	10 S	56	17	41	21	58	20	60
14	31 41.4	47.5	333 37.6	55	45.5	49	20	56	18	43	9 05	57	36	61
15	46 41.6	46.5	348 02.1	55	50.2	47	30	55	19	47	8 47	55	22 55	62
16	61 41.8	45.5	2 26.5	54	54.8	46	35	55	20	50	37	54	23 07	62
17	76 42.1	+ 0 44.6	16 51.0	55	− 19 59.3	45	40	17 55	18 22	18 54	8 25	53	23 19	63
18	91 42.3	+ 0 43.6	31 15.4	54	− 20 03.6	43	45	17 55	18 24	18 59	8 11	51	23 35	63
19	106 42.5	42.6	45 39.8	54	07.8	42	50	55	27	19 05	7 54	49	23 53	64
20	121 42.7	41.6	60 04.2	54	11.9	41	52	55	29	08	46	48	***	***
21	136 42.9	40.7	74 28.5	53	15.8	39	54	55	30	12	37	47	***	***
22	151 43.2	39.7	88 52.9	54	19.6	38	56	55	32	16	27	46	***	***
23	166 43.4	38.7	103 17.2	53	23.2	36	58	55	34	21	16	44	***	***
24	181 43.6	+ 0 37.8	117 41.6	54	− 20 26.7	35	60 S	17 55	18 36	19 26	7 03	42	***	***
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 0 ^h 02 ^m 8		Mag.: −4.1 PMG: 9 ^h 11 ^m		Mag.: +1.2 PMG: 15 ^h 04 ^m		Mag.: −2.5 PMG: 5 ^h 02 ^m		Mag.: +0.8 PMG: 13 ^h 49 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	° /	° /	° /		° /		° /		° /		° /		° /	
0	359 17.4	222 12.6	+ 15 52.4		133 52.4	− 17 54.7	284 22.0	+ 21 53.8	152 16.9	− 8 42.6				
1	14 19.8	237 12.3	51.7		148 53.1	55.2	299 24.3	53.8	167 19.1	42.7				
2	29 22.3	252 11.9	51.1		163 53.9	55.7	314 26.6	53.8	182 21.3	42.8				
3	44 24.7	267 11.5	50.5		178 54.6	56.2	329 29.0	53.8	197 23.5	42.9				
4	59 27.2	282 11.1	49.8		193 55.4	56.7	344 31.3	53.9	212 25.7	43.0				
5	74 29.7	297 10.7	+ 15 49.2		208 56.1	− 17 57.2	359 33.7	+ 21 53.9	227 27.9	− 8 43.1				
6	89 32.1	312 10.3	+ 15 48.5		223 56.9	− 17 57.7	14 36.0	+ 21 53.9	242 30.1	− 8 43.2				
7	104 34.6	327 09.9	47.9		238 57.6	58.2	29 38.3	53.9	257 32.3	43.3				
8	119 37.1	342 09.5	47.2		253 58.4	58.7	44 40.7	53.9	272 34.5	43.5				
9	134 39.5	357 09.1	46.5		268 59.1	59.2	59 43.0	53.9	287 36.7	43.6				
10	149 42.0	12 08.7	45.9		283 59.9	− 17 59.7	74 45.3	53.9	302 38.9	43.7				
11	164 44.5	27 08.3	+ 15 45.2		299 00.6	− 18 00.2	89 47.7	+ 21 53.9	317 41.1	− 8 43.8				
12	179 46.9	42 07.9	+ 15 44.6		314 01.4	− 18 00.7	104 50.0	+ 21 53.9	332 43.3	− 8 43.9				
13	194 49.4	57 07.6	43.9		329 02.1	01.2	119 52.4	53.9	347 45.6	44.0				
14	209 51.9	72 07.2	43.3		344 02.8	01.7	134 54.7	54.0	2 47.8	44.1				
15	224 54.3	87 06.8	42.6		359 03.6	02.2	149 57.1	54.0	17 50.0	44.2				
16	239 56.8	102 06.4	42.0		14 04.3	02.7	164 59.4	54.0	32 52.2	44.3				
17	254 59.2	117 06.0	+ 15 41.3		29 05.1	− 18 03.2	180 01.7	+ 21 54.0	47 54.4	− 8 44.4				
18	270 01.7	132 05.6	+ 15 40.6		44 05.8	− 18 03.7	195 04.1	+ 21 54.0	62 56.6	− 8 44.5				
19	285 04.2	147 05.2	40.0		59 06.6	04.2	210 06.4	54.0	77 58.8	44.6				
20	300 06.6	162 04.8	39.3		74 07.3	04.7	225 08.8	54.0	93 01.0	44.7				
21	315 09.1	177 04.4	38.6		89 08.0	05.2	240 11.1	54.0	108 03.2	44.8				
22	330 11.6	192 04.0	38.0		104 08.8	05.7	255 13.5	54.0	123 05.4	44.9				
23	345 14.0	207 03.6	37.3		119 09.5	06.2	270 15.8	54.0	138 07.6	45.0				
24	0 16.5	222 03.2	+ 15 36.7		134 10.3	− 18 06.7	285 18.1	+ 21 54.0	153 09.8	− 8 45.1				
Dif	—	−4	−7		+7	−5	+23	0	+22	−1				

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VIERNES 21 DE SEPTIEMBRE DE 2012


UT	SOL			 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 15 ^h 9 PMG: 11 ^h 52 ^m 9			SD: 16 ^h 3 Edad: 4 ^d 9 PHE $\begin{cases} 4^h: 59/6 \\ 12^h: 59/5 \\ 20^h: 59/4 \end{cases}$ PMG: 16 ^h 49 ^m R°: 59 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
^h 0	181	43.6	+ 0	117	41.6	− 20	26.7	60 N	4 10	5 01	5 43	13 30	58	20 07	65	
1	196	43.8		132	05.9		30.1	58	17	04	43	14	58	23	64	
2	211	44.0		146	30.2		33.3	56	22	07	44	13	00	59	37	
3	226	44.3		160	54.5		36.3	54	27	09	44	12	49	58	49	
4	241	44.5		175	18.8		39.3	52	31	11	45	38	59	20	63	
5	256	44.7	+ 0	189	43.1	− 20	42.1	50	4 35	5 13	5 45	12 29	59	21 09	62	
6	271	44.9	+ 0	204	07.3	− 20	44.7	45	4 42	5 17	5 46	12 09	59	21 28	62	
7	286	45.1		218	31.6		47.2	40	48	20	47	11 53	60	44	62	
8	301	45.4		232	55.9		49.6	35	53	22	47	40	59	21 58	61	
9	316	45.6		247	20.2		51.8	30	4 56	24	48	28	60	22 10	60	
10	331	45.8		261	44.5		53.9	20	5 01	27	49	11 08	60	30	59	
11	346	46.0	+ 0	276	08.7	− 20	55.9	10 N	5 04	5 28	5 49	10 51	59	22 47	59	
12	1	46.2	+ 0	290	33.0	− 20	57.7	0	5 05	5 29	5 50	10 35	59	23 03	59	
13	16	46.5		304	57.3	− 20	59.3	10 S	05	29	50	19	59	20	58	
14	31	46.7		319	21.6	− 21	00.8	20	5 03	28	50	10 02	59	37	57	
15	46	46.9		333	45.9		02.2	30	4 59	27	50	9 42	59	23 57	57	
16	61	47.1		348	10.2		03.4	35	56	25	50	31	58	** ** *	** ** *	
17	76	47.3	+ 0	2	34.6	− 21	04.5	40	4 52	5 23	5 50	9 18	58	** ** *	** ** *	
18	91	47.6	+ 0	16	58.9	− 21	05.5	45	4 47	5 21	5 50	9 02	59	** ** *	** ** *	
19	106	47.8		31	23.3		06.3	50	40	18	50	8 43	58	** ** *	** ** *	
20	121	48.0		45	47.6		06.9	52	37	17	50	34	58	0 02	64	
21	136	48.2		60	12.0		07.4	54	33	15	50	24	58	12	65	
22	151	48.4		74	36.4		07.8	56	29	13	50	13	57	23	65	
23	166	48.7		89	00.8		08.0	58	24	11	50	8 00	57	36	66	
24	181	48.9	+ 0	103	25.3	− 21	08.1	60 S	4 19	5 09	5 50	7 45	56	0 51	66	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 55 ^m 0			Mag.: −4.1 PMG: 9 ^h 12 ^m			Mag.: +1.2 PMG: 15 ^h 03 ^m			Mag.: −2.5 PMG: 4 ^h 58 ^m			Mag.: +0.8 PMG: 13 ^h 45 ^m			
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
^h 0	0	16.5	222	03.2	+ 15	36.7	134	10.3	− 18	06.7	285	18.1	+ 21	54.0	153	09.8
1	15	19.0	237	02.9		36.0	149	11.0		07.2	300	20.5		54.1	168	12.0
2	30	21.4	252	02.5		35.3	164	11.8		07.7	315	22.8		54.1	183	14.2
3	45	23.9	267	02.1		34.7	179	12.5		08.2	330	25.2		54.1	198	16.4
4	60	26.4	282	01.7		34.0	194	13.2		08.7	345	27.5		54.1	213	18.6
5	75	28.8	297	01.3	+ 15	33.3	209	14.0	− 18	09.2	0	29.9	+ 21	54.1	228	20.8
6	90	31.3	312	00.9	+ 15	32.6	224	14.7	− 18	09.6	15	32.2	+ 21	54.1	243	23.0
7	105	33.7	327	00.5		32.0	239	15.5		10.1	30	34.6		54.1	258	25.2
8	120	36.2	342	00.1		31.3	254	16.2		10.6	45	36.9		54.1	273	27.4
9	135	38.7	356	59.7		30.6	269	16.9		11.1	60	39.3		54.1	288	29.7
10	150	41.1	11	59.3		30.0	284	17.7		11.6	75	41.6		54.1	303	31.9
11	165	43.6	26	58.9	+ 15	29.3	299	18.4	− 18	12.1	90	44.0	+ 21	54.1	318	34.1
12	180	46.1	41	58.5	+ 15	28.6	314	19.1	− 18	12.6	105	46.3	+ 21	54.2	333	36.3
13	195	48.5	56	58.2		27.9	329	19.9		13.1	120	48.7		54.2	348	38.5
14	210	51.0	71	57.8		27.3	344	20.6		13.6	135	51.0		54.2	3	40.7
15	225	53.5	86	57.4		26.6	359	21.4		14.1	150	53.4		54.2	18	42.9
16	240	55.9	101	57.0		25.9	14	22.1		14.6	165	55.7		54.2	33	45.1
17	255	58.4	116	56.6	+ 15	25.2	29	22.8	− 18	15.1	180	58.1	+ 21	54.2	48	47.3
18	271	00.8	131	56.2	+ 15	24.6	44	23.6	− 18	15.6	196	00.4	+ 21	54.2	63	49.5
19	286	03.3	146	55.8		23.9	59	24.3		16.0	211	02.8		54.2	78	51.7
20	301	05.8	161	55.4		23.2	74	25.0		16.5	226	05.1		54.2	93	53.9
21	316	08.2	176	55.0		22.5	89	25.8		17.0	241	07.5		54.2	108	56.1
22	331	10.7	191	54.6		21.8	104	26.5		17.5	256	09.8		54.2	123	58.3
23	346	13.2	206	54.2		21.1	119	27.2		18.0	271	12.2		54.3	139	00.5
24	1	15.6	221	53.9	+ 15	20.5	134	28.0	− 18	18.5	286	14.5	+ 21	54.3	154	02.7
Dif	—	−4	−7		+7	−5		+23		0		+22		−1		

SÁBADO 22 DE SEPTIEMBRE DE 2012

UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna						
	SD: 15 ^h 9 PMG: 11 ^h 52 ^m 6			SD: 16 ^h 2 Edad: 5 ^d 9 PHE { 4 ^h : 59 ^m /2 12 ^h : 59 ^m /1 20 ^h : 59 ^m /0 PMG: 17 ^h 48 ^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	h m m	h m m						
0	181	48.9	+0	103	25.3	-21	08.1	17 59	18 40	19 30	14 28 41	21 12 76									
1	196	49.1		117	49.7		08.1	58	38	24	14 12 44	27 74									
2	211	49.3		132	14.2		07.9	58	35	19	13 59 45	40 73									
3	226	49.5		146	38.7		07.5	58	33	15	47 47	21 52 71									
4	241	49.8		161	03.3		07.1	58	31	11	37 47	22 02 70									
5	256	50.0	+0	175	27.8	-21	06.5	17 57	18 30	19 08	13 28 48	22 11 69									
6	271	50.2	+0	189	52.4	-21	05.7	17 57	18 26	19 01	13 08 51	22 30 66									
7	286	50.4		204	17.0		04.8	57	24	18 55	12 53 51	46 64									
8	301	50.6		218	41.7		03.8	56	22	51	39 53	22 59 63									
9	316	50.9		233	06.4		02.6	56	20	48	28 53	23 10 62									
10	331	51.1		247	31.1	-21	01.3	56	18	44	12 08 55	29 60									
11	346	51.3	+0	261	55.8	-20	59.8	17 56	18 17	18 41	11 50 57	23 46 58									
12	1	51.5	+0	276	20.6	-20	58.3	17 56	18 16	18 40	11 34 58	*** ** *									
13	16	51.7		290	45.4		56.5	56	17	41	18 59	*** ** *									
14	31	52.0	+0	305	10.3		54.7	56	18	44	11 01 60	*** ** *									
15	46	52.2	-0	319	35.2		52.7	56	20	48	10 41 61	*** ** *									
16	61	52.4		334	00.1		50.6	57	22	51	29 63	0 09 56									
17	76	52.6	-0	348	25.1	-20	48.3	17 57	18 24	18 56	10 16 63	0 22 55									
18	91	52.8	-0	2	50.1	-20	45.9	17 57	18 27	19 01	10 01 64	0 38 54									
19	106	53.1		17	15.2		43.4	58	30	08	9 41 66	0 57 54									
20	121	53.3		31	40.3		40.7	58	32	12	32 66	1 06 54									
21	136	53.5		46	05.4		37.9	58	34	16	22 67	17 52									
22	151	53.7		60	30.6		35.0	59	36	20	9 10 68	28 52									
23	166	53.9		74	55.9		31.9	17 59	38	25	8 57 69	42 50									
24	181	54.2	-0	89	21.2	-20	28.7	18 00	18 41	19 31	8 41 71	1 57 50									
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO								
	PMG: 23 ^h 51 ^m 0			Mag.: -4.1 PMG: 9 ^h 13 ^m			Mag.: +1.2 PMG: 15 ^h 01 ^m			Mag.: -2.5 PMG: 4 ^h 54 ^m			Mag.: +0.7 PMG: 13 ^h 42 ^m								
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec							
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°						
0	1	15.6	221	53.9	+15	20.5	134	28.0	-18	18.5	286	14.5	+21	54.3	154	02.7	-8	47.5			
1	16	18.1	236	53.5		19.8	149	28.7		19.0	301	16.9		54.3	169	04.9		47.6			
2	31	20.6	251	53.1		19.1	164	29.4		19.5	316	19.2		54.3	184	07.1		47.7			
3	46	23.0	266	52.7		18.4	179	30.2		20.0	331	21.6		54.3	199	09.3		47.8			
4	61	25.5	281	52.3		17.7	194	30.9		20.5	346	23.9		54.3	214	11.5		47.9			
5	76	28.0	296	51.9	+15	17.0	209	31.6	-18	20.9	1	26.3	+21	54.3	229	13.7	-8	48.0			
6	91	30.4	311	51.5	+15	16.3	224	32.4	-18	21.4	16	28.7	+21	54.3	244	15.9	-8	48.1			
7	106	32.9	326	51.1		15.7	239	33.1		21.9	31	31.0		54.3	259	18.1		48.2			
8	121	35.3	341	50.7		15.0	254	33.8		22.4	46	33.4		54.3	274	20.3		48.4			
9	136	37.8	356	50.3		14.3	269	34.6		22.9	61	35.7		54.3	289	22.5		48.5			
10	151	40.3	11	50.0		13.6	284	35.3		23.4	76	38.1		54.3	304	24.7		48.6			
11	166	42.7	26	49.6	+15	12.9	299	36.0	-18	23.9	91	40.4	+21	54.4	319	27.0	-8	48.7			
12	181	45.2	41	49.2	+15	12.2	314	36.7	-18	24.4	106	42.8	+21	54.4	334	29.2	-8	48.8			
13	196	47.7	56	48.8		11.5	329	37.5		24.8	121	45.2		54.4	349	31.4		48.9			
14	211	50.1	71	48.4		10.8	344	38.2		25.3	136	47.5		54.4	4	33.6		49.0			
15	226	52.6	86	48.0		10.1	359	38.9		25.8	151	49.9		54.4	19	35.8		49.1			
16	241	55.1	101	47.6		09.4	14	39.7		26.3	166	52.2		54.4	34	38.0		49.2			
17	256	57.5	116	47.2	+15	08.7	29	40.4	-18	26.8	181	54.6	+21	54.4	49	40.2	-8	49.3			
18	272	00.0	131	46.8	+15	08.0	44	41.1	-18	27.3	196	56.9	+21	54.4	64	42.4	-8	49.4			
19	287	02.5	146	46.4		07.3	59	41.8		27.8	211	59.3		54.4	79	44.6		49.5			
20	302	04.9	161	46.1		06.6	74	42.6		28.3	227	01.7		54.4	94	46.8		49.6			
21	317	07.4	176	45.7		05.9	89	43.3		28.7	242	04.0		54.4	109	49.0		49.7			
22	332	09.8	191	45.3		05.2	104	44.0		29.2	257	06.4		54.4	124	51.2		49.8			
23	347	12.3	206	44.9		04.5	119	44.8		29.7	272	08.8		54.4	139	53.4		49.9			
24	2	14.8	221	44.5	+15	03.8	134	45.5	-18	30.2	287	11.1	+21	54.5	154	55.6	-8	50.0			
Dif	—			-4			+7			-5			+24			+22			-1		

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DOMINGO 23 DE SEPTIEMBRE DE 2012

UT	SOL			 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 15°9 PMG: 11 ^h 52 ^m 2			SD: 16°0 Edad: 6 ^d 9 PHE $\begin{cases} 4^h: 58'8 \\ 12^h: 58'7 \\ 20^h: 58'5 \end{cases}$ PMG: 18 ^h 45 ^m R°: 55 ^m														
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
^h 0	181	54.2	− 0	08.9	89	21.2	− 20	28.7	60 N	4 16	5 06	5 47	15 09	29	22 28	83		
1	196	54.4		09.9	103	46.5		25.4	58	21		08	48	14 56	32	41 80		
2	211	54.6		10.9	118	11.9		21.9	56	26		11	48	44 34	22 53	77		
3	226	54.8		11.9	132	37.4		18.4	54	31		13	48	34 36	23 03	75		
4	241	55.0		12.8	147	02.9		14.7	52	35		14	48	24 38	12 73			
5	256	55.3	− 0	13.8	161	28.4	− 20	10.8	50	4 38	5 16	5 48	14 16	39	23 20	71		
6	271	55.5	− 0	14.8	175	54.1	− 20	06.9	45	4 45	5 19	5 49	13 59	42	23 36	69		
7	286	55.7		15.7	190	19.7	− 20	02.8	40	50		22	49	44 45	23 50	66		
8	301	55.9		16.7	204	45.4	− 19	58.6	35	54		24	49	32 46	** ** *	***		
9	316	56.1		17.7	219	11.2		54.3	30	4 57		25	49	21 48	** ** *	***		
10	331	56.3		18.7	233	37.0		49.8	20	5 02		27	49	13 03	** ** *	***		
11	346	56.6	− 0	19.6	248	02.9	− 19	45.2	10 N	5 04	5 28	5 49	12 47	53	** ** *	***		
12	1	56.8	− 0	20.6	262	28.9	− 19	40.6	0	5 04	5 28	5 49	12 32	55	0 02	57		
13	16	57.0		21.6	276	54.9		35.7	10 S	03		28	49	17 57		18 55		
14	31	57.2		22.6	291	21.0		30.8	20	5 01		26	48	12 01	59	34 53		
15	46	57.4		23.5	305	47.1		25.8	30	4 56		24	48	11 42	63	0 54 50		
16	61	57.7		24.5	320	13.3		20.6	35	53		22	48	32 63	1 05	49		
17	76	57.9	− 0	25.5	334	39.5	− 19	15.3	40	4 49	5 20	5 47	11 19	66	1 17	49		
18	91	58.1	− 0	26.5	349	05.9	− 19	09.9	45	4 43	5 17	5 47	11 05	67	1 32	47		
19	106	58.3		27.4	3	32.2	− 19	04.4	50	36		14	46	10 47	70	1 51 44		
20	121	58.5		28.4	17	58.7	− 18	58.8	52	32		12	46	38 72	2 00	42		
21	136	58.7		29.4	32	25.2		53.1	54	28		10	45	29 73	09	41		
22	151	59.0		30.3	46	51.7		47.2	56	24		08	45	18 76	20	40		
23	166	59.2		31.3	61	18.4		41.3	58	18		05	44	10 06	78	32 38		
24	181	59.4	− 0	32.3	75	45.1	− 18	35.2	60 S	4 12	5 02	5 44	9 52	80	2 47	35		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 47 ^m 1			Mag.: −4.1 PMG: 9 ^h 13 ^m			Mag.: +1.2 PMG: 15 ^h 00 ^m			Mag.: −2.5 PMG: 4 ^h 50 ^m			Mag.: +0.7 PMG: 13 ^h 38 ^m					
	hG ♈		Dec	hG ♀		Dec	hG ♂		Dec	hG ♃		Dec	hG ♄		Dec			
^h 0	2	14.8	221	44.5	+ 15	03.8	134	45.5	− 18	30.2	287	11.1	+ 21	54.5	154	55.6	− 8	50.0
1	17	17.2	236	44.1		03.1	149	46.2		30.7	302	13.5		54.5	169	57.8		50.1
2	32	19.7	251	43.7		02.4	164	46.9		31.2	317	15.8		54.5	185	00.0		50.2
3	47	22.2	266	43.3		01.7	179	47.7		31.6	332	18.2		54.5	200	02.2		50.3
4	62	24.6	281	42.9		01.0	194	48.4		32.1	347	20.6		54.5	215	04.4		50.4
5	77	27.1	296	42.5	+ 15	00.3	209	49.1	− 18	32.6	2	22.9	+ 21	54.5	230	06.6	− 8	50.5
6	92	29.6	311	42.2	+ 14	59.6	224	49.8	− 18	33.1	17	25.3	+ 21	54.5	245	08.8	− 8	50.6
7	107	32.0	326	41.8		58.9	239	50.6		33.6	32	27.7		54.5	260	11.0		50.7
8	122	34.5	341	41.4		58.2	254	51.3		34.1	47	30.0		54.5	275	13.2		50.8
9	137	37.0	356	41.0		57.5	269	52.0		34.5	62	32.4		54.5	290	15.4		50.9
10	152	39.4	11	40.6		56.7	284	52.7		35.0	77	34.8		54.5	305	17.6		51.0
11	167	41.9	26	40.2	+ 14	56.0	299	53.4	− 18	35.5	92	37.1	+ 21	54.5	320	19.8	− 8	51.1
12	182	44.3	41	39.8	+ 14	55.3	314	54.2	− 18	36.0	107	39.5	+ 21	54.5	335	22.0	− 8	51.2
13	197	46.8	56	39.4		54.6	329	54.9		36.5	122	41.9		54.6	350	24.2		51.3
14	212	49.3	71	39.0		53.9	344	55.6		37.0	137	44.2		54.6	5	26.4		51.4
15	227	51.7	86	38.7		53.2	359	56.3		37.4	152	46.6		54.6	20	28.6		51.5
16	242	54.2	101	38.3		52.5	14	57.1		37.9	167	49.0		54.6	35	30.8		51.6
17	257	56.7	116	37.9	+ 14	51.8	29	57.8	− 18	38.4	182	51.3	+ 21	54.6	50	33.0	− 8	51.7
18	272	59.1	131	37.5	+ 14	51.0	44	58.5	− 18	38.9	197	53.7	+ 21	54.6	65	35.2	− 8	51.8
19	288	01.6	146	37.1		50.3	59	59.2		39.4	212	56.1		54.6	80	37.4		51.9
20	303	04.1	161	36.7		49.6	74	59.9		39.8	227	58.4		54.6	95	39.6		52.0
21	318	06.5	176	36.3		48.9	90	00.7		40.3	243	00.8		54.6	110	41.8		52.2
22	333	09.0	191	35.9		48.2	105	01.4		40.8	258	03.2		54.6	125	44.0		52.3
23	348	11.4	206	35.6		47.4	120	02.1		41.3	273	05.5		54.6	140	46.2		52.4
24	3	13.9	221	35.2	+ 14	46.7	135	02.8	− 18	41.8	288	07.9	+ 21	54.6	155	48.4	− 8	52.5
Dif	—		−4		−7		+7		−5		+24		0		+22		−1	

LUNES 24 DE SEPTIEMBRE DE 2012

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UT	SOL		LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 15 ^h 9 PMG: 11 ^h 51 ^m 9		SD: 15 ^h 9 Edad: 7 ^d 9		PHE { 4 ^h : 58/3 12 ^h : 58/2 20 ^h : 58/0									
	PMG: 19 ^h 40 ^m R°: 51 ^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	181 59.4	− 0 32.3	75 45.1		− 18 35.2	62	60 N	17 53	18 34	19 24	15 38	22	23 51	84
1	196 59.6	33.3	90 11.9	78	29.0	62	58	53	32	18	28	24	***	***
2	211 59.8	34.2	104 38.7	78	22.7	63	56	53	30	14	18	27	***	***
3	227 00.1	35.2	119 05.6	79	16.3	64	54	53	28	10	10	28	***	***
4	242 00.3	36.2	133 32.6	80	09.9	64	52	53	27	06	15 02	31	***	***
5	257 00.5	− 0 37.2	147 59.6	80	− 18 03.3	66	50	17 53	18 25	19 03	14 55	33	***	***
6	272 00.7	− 0 38.1	162 26.7	81	− 17 56.6	67	45	17 53	18 22	18 57	14 41	35	***	***
7	287 00.9	39.1	176 53.9	82	49.8	68	40	53	20	52	29	38	***	***
8	302 01.1	40.1	191 21.1	82	42.9	69	35	54	19	48	18	41	0 02	64
9	317 01.4	41.1	205 48.4	83	35.8	71	30	54	18	45	14 09	43	12	62
10	332 01.6	42.0	220 15.8	84	28.7	71	20	54	16	42	13 54	46	29	59
11	347 01.8	− 0 43.0	234 43.2	84	− 17 21.6	71	10 N	17 55	18 16	18 40	13 40	49	0 44	57
12	2 02.0	− 0 44.0	249 10.7	85	− 17 14.3	73	0	17 55	18 16	18 40	13 27	52	0 59	53
13	17 02.2	44.9	263 38.3	86	− 17 06.9	74	10 S	56	17	41	14	55	1 13	51
14	32 02.4	45.9	278 06.0	87	− 16 59.4	75	20	57	19	44	13 00	58	27	49
15	47 02.7	46.9	292 33.7	87	51.8	76	30	58	21	49	12 45	61	44	46
16	62 02.9	47.9	307 01.5	88	44.1	77	35	58	23	53	35	64	1 54	44
17	77 03.1	− 0 48.8	321 29.3	88	− 16 36.4	77	40	17 59	18 26	18 58	12 25	66	2 06	41
18	92 03.3	− 0 49.8	335 57.2	89	− 16 28.5	79	45	18 00	18 29	19 04	12 12	69	2 19	39
19	107 03.5	50.8	350 25.2	90	20.6	79	50	01	33	12	11 57	73	35	35
20	122 03.7	51.8	4 53.3	91	12.6	80	52	01	35	15	50	74	42	34
21	137 04.0	52.7	19 21.4	91	− 16 04.4	82	54	02	37	20	42	76	2 50	33
22	152 04.2	53.7	33 49.6	92	− 15 56.2	82	56	03	40	25	34	78	3 00	30
23	167 04.4	54.7	48 17.9	93	48.0	82	58	03	43	30	24	80	10	28
24	182 04.6	− 0 55.7	62 46.3	93	− 15 39.6	84	60 S	18 04	18 46	19 37	11 12	84	3 22	25
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 23 ^h 43 ^m 2		Mag.: −4.1 PMG: 9 ^h 14 ^m		Mag.: +1.2 PMG: 14 ^h 59 ^m		Mag.: −2.5 PMG: 4 ^h 47 ^m		Mag.: +0.7 PMG: 13 ^h 35 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	3 13.9	221 35.2	+ 14 46.7		135 02.8	− 18 41.8	288 07.9	+ 21 54.6	155 48.4	− 8 52.5				
1	18 16.4	236 34.8	46.0		150 03.5	42.2	303 10.3	54.6	170 50.6	52.6				
2	33 18.8	251 34.4	45.3		165 04.2	42.7	318 12.7	54.6	185 52.8	52.7				
3	48 21.3	266 34.0	44.6		180 05.0	43.2	333 15.0	54.6	200 55.0	52.8				
4	63 23.8	281 33.6	43.8		195 05.7	43.7	348 17.4	54.7	215 57.2	52.9				
5	78 26.2	296 33.2	+ 14 43.1		210 06.4	− 18 44.1	3 19.8	+ 21 54.7	230 59.4	− 8 53.0				
6	93 28.7	311 32.8	+ 14 42.4		225 07.1	− 18 44.6	18 22.1	+ 21 54.7	246 01.6	− 8 53.1				
7	108 31.2	326 32.4	41.7		240 07.8	45.1	33 24.5	54.7	261 03.8	53.2				
8	123 33.6	341 32.1	40.9		255 08.5	45.6	48 26.9	54.7	276 06.0	53.3				
9	138 36.1	356 31.7	40.2		270 09.3	46.1	63 29.3	54.7	291 08.2	53.4				
10	153 38.6	11 31.3	39.5		285 10.0	46.5	78 31.6	54.7	306 10.4	53.5				
11	168 41.0	26 30.9	+ 14 38.7		300 10.7	− 18 47.0	93 34.0	+ 21 54.7	321 12.6	− 8 53.6				
12	183 43.5	41 30.5	+ 14 38.0		315 11.4	− 18 47.5	108 36.4	+ 21 54.7	336 14.8	− 8 53.7				
13	198 45.9	56 30.1	37.3		330 12.1	48.0	123 38.8	54.7	351 17.0	53.8				
14	213 48.4	71 29.7	36.5		345 12.8	48.4	138 41.1	54.7	6 19.2	53.9				
15	228 50.9	86 29.3	35.8		0 13.5	48.9	153 43.5	54.7	21 21.4	54.0				
16	243 53.3	101 29.0	35.1		15 14.3	49.4	168 45.9	54.7	36 23.6	54.1				
17	258 55.8	116 28.6	+ 14 34.4		30 15.0	− 18 49.9	183 48.3	+ 21 54.7	51 25.8	− 8 54.2				
18	273 58.3	131 28.2	+ 14 33.6		45 15.7	− 18 50.3	198 50.6	+ 21 54.7	66 28.0	− 8 54.3				
19	289 00.7	146 27.8	32.9		60 16.4	50.8	213 53.0	54.8	81 30.2	54.4				
20	304 03.2	161 27.4	32.1		75 17.1	51.3	228 55.4	54.8	96 32.4	54.5				
21	319 05.7	176 27.0	31.4		90 17.8	51.8	243 57.8	54.8	111 34.6	54.6				
22	334 08.1	191 26.6	30.7		105 18.5	52.2	259 00.2	54.8	126 36.8	54.7				
23	349 10.6	206 26.3	29.9		120 19.2	52.7	274 02.5	54.8	141 39.0	54.8				
24	4 13.1	221 25.9	+ 14 29.2		135 20.0	− 18 53.2	289 04.9	+ 21 54.8	156 41.2	− 8 54.9				
Dif	—	−4	−7		+7	−5	+24	0	+22	−1				

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MARTES 25 DE SEPTIEMBRE DE 2012

UT	SOL		LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 15 ^h 9 PMG: 11 ^h 51 ^m 5		SD: 15 ^h 8 Edad: 8 ^d 9 PHE $\begin{cases} 4^h: 57/9 \\ 12^h: 57/7 \\ 20^h: 57/5 \end{cases}$ PMG: 20 ^h 31 ^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	h	m	
0	182	04.6	− 0	55.7	62	46.3	− 15	39.6	60 N	4 21	5 10	5 52	16 00	16	0 01	81	19	
1	197	04.8		56.6	77	14.7		31.1	58			52	15 52	19				
2	212	05.0		57.6	91	43.1		22.6	56	31	15	52	45	21	10	79		
3	227	05.3		58.6	106	11.7		14.0	54	35	16	52	38	24	18	76		
4	242	05.5	− 0	59.6	120	40.3	− 15	05.3	52	38	18	51	33	25	25	74		
5	257	05.7	− 1	00.5	135	09.0	− 14	56.5	50	4 41	5 19	5 51	15 28	27	0 31	73		
6	272	05.9	− 1	01.5	149	37.7	− 14	47.7	45	4 47	5 22	5 51	15 16	31	0 45	69		
7	287	06.1		02.5	164	06.5		38.8	40	52	24	51	15 07	34	0 56	66		
8	302	06.3		03.4	178	35.4		29.8	35	56	25	50	14 59	37	1 06	63		
9	317	06.5		04.4	193	04.4		20.7	30	4 58	26	50	52	39	14	61		
10	332	06.8		05.4	207	33.4		11.6	20	5 02	28	50	40	43	28	57		
11	347	07.0	− 1	06.4	222	02.5	− 14	02.4	10 N	5 04	5 28	5 49	14 29	46	1 41	54		
12	2	07.2	− 1	07.3	236	31.6	− 13	53.1	0	5 04	5 28	5 48	14 19	50	1 52	51		
13	17	07.4		08.3	251	00.9		43.7	10 S	5 02	27	48	14 09	53	2 04	48		
14	32	07.6		09.3	265	30.1		34.3	20	4 59	25	47	13 58	56	16	45		
15	47	07.8		10.3	279	59.5		24.8	30	54	22	45	46	60	30	41		
16	62	08.1		11.2	294	28.9		15.3	35	50	19	45	39	62	38	39		
17	77	08.3	− 1	12.2	308	58.4	− 13	05.7	40	4 45	5 17	5 44	13 31	65	2 47	36		
18	92	08.5	− 1	13.2	323	27.9	− 12	56.0	45	4 39	5 14	5 43	13 21	68	2 58	33		
19	107	08.7		14.2	337	57.5		46.2	50	31	09	42	10	72	3 10	30		
20	122	08.9		15.1	352	27.2		36.4	52	27	07	41	13	04	16	28		
21	137	09.1		16.1	6	56.9		26.6	54	23	05	40	12	58	23	26		
22	152	09.3		17.1	21	26.7		16.7	56	18	02	40	52	78	30	24		
23	167	09.6		18.0	35	56.6	− 12	06.7	58	12	5 00	39	44	81	38	22		
24	182	09.8	− 1	19.0	50	26.5	− 11	56.6	60 S	4 06	4 56	5 38	12 36	83	3 47	19		
UT	ARIES PMG 23 ^h 39 ^m 2		VENUS Mag.: −4.1 PMG: 9 ^h 15 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 58 ^m		JÚPITER Mag.: −2.5 PMG: 4 ^h 43 ^m		SATURNO Mag.: +0.7 PMG: 13 ^h 31 ^m									
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♃	Dec	hG ♄	Dec							
	°	°	°	°	°	°	°	°	°	°	°							
h	4	13.1	221	25.9	+ 14	29.2	135	20.0	− 18	53.2	289	04.9	+ 21	54.8	156	41.2	− 8	54.9
1	19	15.5	236	25.5		28.5	150	20.7		53.7	304	07.3		54.8	171	43.4		55.0
2	34	18.0	251	25.1		27.7	165	21.4		54.1	319	09.7		54.8	186	45.6		55.1
3	49	20.4	266	24.7		27.0	180	22.1		54.6	334	12.1		54.8	201	47.8		55.2
4	64	22.9	281	24.3		26.2	195	22.8		55.1	349	14.4		54.8	216	50.0		55.3
5	79	25.4	296	23.9	+ 14	25.5	210	23.5	− 18	55.5	4	16.8	+ 21	54.8	231	52.2	− 8	55.4
6	94	27.8	311	23.5	+ 14	24.7	225	24.2	− 18	56.0	19	19.2	+ 21	54.8	246	54.4	− 8	55.6
7	109	30.3	326	23.2		24.0	240	24.9		56.5	34	21.6		54.8	261	56.6		55.7
8	124	32.8	341	22.8		23.3	255	25.6		57.0	49	24.0		54.8	276	58.8		55.8
9	139	35.2	356	22.4		22.5	270	26.3		57.4	64	26.3		54.8	292	01.0		55.9
10	154	37.7	11	22.0		21.8	285	27.0		57.9	79	28.7		54.8	307	03.2		56.0
11	169	40.2	26	21.6	+ 14	21.0	300	27.8	− 18	58.4	94	31.1	+ 21	54.8	322	05.4	− 8	56.1
12	184	42.6	41	21.2	+ 14	20.3	315	28.5	− 18	58.8	109	33.5	+ 21	54.9	337	07.6	− 8	56.2
13	199	45.1	56	20.8		19.5	330	29.2		59.3	124	35.9		54.9	352	09.8		56.3
14	214	47.6	71	20.5		18.8	345	29.9	− 18	59.8	139	38.3		54.9	7	12.0		56.4
15	229	50.0	86	20.1		18.0	0	30.6	− 19	00.3	154	40.6		54.9	22	14.2		56.5
16	244	52.5	101	19.7		17.3	15	31.3		00.7	169	43.0		54.9	37	16.4		56.6
17	259	54.9	116	19.3	+ 14	16.5	30	32.0	− 19	01.2	184	45.4	+ 21	54.9	52	18.6	− 8	56.7
18	274	57.4	131	18.9	+ 14	15.8	45	32.7	− 19	01.7	199	47.8	+ 21	54.9	67	20.8	− 8	56.8
19	289	59.9	146	18.5		15.0	60	33.4		02.1	214	50.2		54.9	82	23.0		56.9
20	305	02.3	161	18.1		14.3	75	34.1		02.6	229	52.6		54.9	97	25.2		57.0
21	320	04.8	176	17.8		13.5	90	34.8		03.1	244	55.0		54.9	112	27.4		57.1
22	335	07.3	191	17.4		12.7	105	35.5		03.5	259	57.3		54.9	127	29.6		57.2
23	350	09.7	206	17.0		12.0	120	36.2		04.0	274	59.7		54.9	142	31.8		57.3
24	5	12.2	221	16.6	+ 14	11.2	135	36.9	− 19	04.5	290	02.1	+ 21	54.9	157	34.0	− 8	57.4
Dif	—		−4		−7		+7		−5		+24		0		+22		−1	

MIÉRCOL 26 DE SEPTIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16°0 PMG: 11 ^h 51 ^m 2		SD: 15°7 Edad: 9 ^d 9 PHE $\left\{ \begin{array}{l} 4^{\text{h}}: 57/4 \\ 12^{\text{h}}: 57/2 \\ 20^{\text{h}}: 57/0 \end{array} \right.$ PMG: 21 ^h 20 ^m R°: 47 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	182 09.8	− 1 19.0	50 26.5		− 11 56.6		60 N	^h ^m 17 47	^h ^m 18 28	^h ^m 19 17	^h ^m ^m 16 16 13	^h ^m ^m 1 15 84		
1	197 10.0		64 56.5	¹¹⁰		46.6	100	58 47		12	11 16	22 81		
2	212 10.2	21.0	79 26.5	¹¹⁰		36.4	102	56 48	24	08	06 19	29 78		
3	227 10.4	21.9	93 56.6	¹¹¹		26.2	102	54 48	23	04	16 02	21 34 76		
4	242 10.6	22.9	108 26.8	¹¹²		16.0	102	52 48	22	19 01	15 58 23	39 74		
5	257 10.8	− 1 23.9	122 57.0	¹¹²	− 11 05.7		103	50 17 49	18 21	18 58	15 55 24	1 44 72		
6	272 11.1	− 1 24.9	137 27.3	¹¹³	− 10 55.3		104	45 17 49	18 19	18 53	15 47 28	1 54 68		
7	287 11.3	25.8	151 57.6	¹¹³		44.9	104	40 50	17	48	41 31	2 02 64		
8	302 11.5	26.8	166 28.0	¹¹⁴		34.5	104	35 51	16	45	36 33	09 62		
9	317 11.7	27.8	180 58.5	¹¹⁵		24.0	105	30 51	15	43	31 36	15 59		
10	332 11.9	28.8	195 29.0	¹¹⁵		13.4	106	20 52	14	40	23 40	25 56		
11	347 12.1	− 1 29.7	209 59.6	¹¹⁶	− 10 02.8		106	10 N 17 53	18 14	18 39	15 15 44	2 35 51		
12	2 12.3	− 1 30.7	224 30.2	¹¹⁶	− 9 52.2		106	0 17 54	18 15	18 39	15 09 47	2 43 48		
13	17 12.6	31.7	239 00.9	¹¹⁷		41.5	107	10 S 56	17	41	15 02 50	2 52 45		
14	32 12.8	32.6	253 31.6	¹¹⁷		30.8	107	20 57	19	45	14 54 55	3 01 41		
15	47 13.0	33.6	268 02.4	¹¹⁸		20.1	107	30 17 59	23	51	46 59	11 37		
16	62 13.2	34.6	282 33.2	¹¹⁸	− 9 09.3		108	35 18 00	25	18 55	41 61	17 35		
17	77 13.4	− 1 35.6	297 04.1	¹¹⁹	− 8 58.5		108	40 18 01	18 28	19 00	14 36 63	3 23 33		
18	92 13.6	− 1 36.5	311 35.0	¹¹⁹	− 8 47.6		109	45 18 02	18 32	19 06	14 29 67	3 31 29		
19	107 13.8	37.5	326 06.0	¹²⁰		36.7	109	50 04	36	15	22 71	40 26		
20	122 14.1	38.5	340 37.1	¹²¹		25.7	110	52 05	39	19	18 73	44 24		
21	137 14.3	39.5	355 08.2	¹²¹		14.8	109	54 06	41	24	14 75	49 22		
22	152 14.5	40.4	9 39.3	¹²¹	− 8 03.8		110	56 07	44	29	10 77	3 54 20		
23	167 14.7	41.4	24 10.5	¹²²	− 7 52.7		111	58 08	47	35	14 05 79	4 00 17		
24	182 14.9	− 1 42.4	38 41.7	¹²²	− 7 41.7		110	60 S 18 09	18 51	19 42	13 59 83	4 06 15		
UT	ARIES PMG 23 ^h 35 ^m 3		VENUS Mag.: −4.1 PMG: 9 ^h 15 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 57 ^m		JÚPITER Mag.: −2.5 PMG: 4 ^h 39 ^m		SATURNO Mag.: +0.7 PMG: 13 ^h 28 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	^h 0	5 12.2	221 16.6	+ 14 11.2	135 36.9	− 19 04.5	290 02.1	+ 21 54.9	157 34.0	− 8 57.4				
1	20 14.7	236 16.2		10.5	150 37.6		04.9	305 04.5		54.9	172 36.2	57.5		
2	35 17.1	251 15.8		09.7	165 38.3		05.4	320 06.9		54.9	187 38.4	57.6		
3	50 19.6	266 15.5		09.0	180 39.0		05.9	335 09.3		54.9	202 40.6	57.7		
4	65 22.0	281 15.1		08.2	195 39.7		06.3	350 11.7		54.9	217 42.8	57.8		
5	80 24.5	296 14.7	+ 14 07.4	210 40.4	− 19 06.8	5 14.1	+ 21 54.9	232 45.0	− 8 57.9					
6	95 27.0	311 14.3	+ 14 06.7	225 41.1	− 19 07.3	20 16.5	+ 21 54.9	247 47.2	− 8 58.0					
7	110 29.4	326 13.9		05.9	240 41.8		07.7	35 18.8		55.0	262 49.4	58.1		
8	125 31.9	341 13.5		05.1	255 42.5		08.2	50 21.2		55.0	277 51.6	58.2		
9	140 34.4	356 13.1		04.4	270 43.2		08.7	65 23.6		55.0	292 53.8	58.3		
10	155 36.8	11 12.8		03.6	285 43.9		09.1	80 26.0		55.0	307 56.0	58.4		
11	170 39.3	26 12.4	+ 14 02.9	300 44.6	− 19 09.6	95 28.4	+ 21 55.0	322 58.2	− 8 58.6					
12	185 41.8	41 12.0	+ 14 02.1	315 45.3	− 19 10.1	110 30.8	+ 21 55.0	338 00.3	− 8 58.7					
13	200 44.2	56 11.6		01.3	330 46.0		10.5	125 33.2		55.0	353 02.5	58.8		
14	215 46.7	71 11.2	+ 14 00.6	345 46.7		140 35.6		55.0		55.0	8 04.7	58.9		
15	230 49.2	86 10.8	+ 13 59.8	0 47.4		11.5	155 38.0	55.0	23 06.9	59.0				
16	245 51.6	101 10.5		59.0	15 48.1	11.9	170 40.4	55.0	38 09.1	59.1				
17	260 54.1	116 10.1	+ 13 58.2	30 48.8	− 19 12.4	185 42.8	+ 21 55.0	53 11.3	− 8 59.2					
18	275 56.5	131 09.7	+ 13 57.5	45 49.5	− 19 12.9	200 45.2	+ 21 55.0	68 13.5	− 8 59.3					
19	290 59.0	146 09.3		56.7	60 50.2		13.3	215 47.6		55.0	83 15.7	59.4		
20	306 01.5	161 08.9		55.9	75 50.9		13.8	230 50.0		55.0	98 17.9	59.5		
21	321 03.9	176 08.5		55.2	90 51.6		14.3	245 52.4		55.0	113 20.1	59.6		
22	336 06.4	191 08.2		54.4	105 52.3		14.7	260 54.7		55.0	128 22.3	59.7		
23	351 08.9	206 07.8		53.6	120 53.0		15.2	275 57.1		55.0	143 24.5	59.8		
24	6 11.3	221 07.4	+ 13 52.8	135 53.7	− 19 15.6	290 59.5	+ 21 55.0	158 26.7	− 8 59.9					
Dif	—	−4	−8	+7	−5	+24	0	+22	−1					

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JUEVES 27 DE SEPTIEMBRE DE 2012

UT	SOL			☉ LUNA					Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0 PMG: 11 ^h 50 ^m 8			SD: 15 ^h 5 Edad: 10 ^d 9 PHE { 4 ^h : 56 ^m /9 12 ^h : 56 ^m /7 20 ^h : 56 ^m /5 PMG: 22 ^h 07 ^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	182	14.9	- 1	38	41.7	- 7	41.7	60 N	4 26	5 15	5 57	16 29	13	2 39	81			
1	197	15.1		53	13.0		30.6	58	31	17	56	27 15		43	79			
2	212	15.3		67	44.3		19.4	56	35	19	56	25 17		47	76			
3	227	15.5		82	15.7	- 7	08.3	54	38	20	55	23 19		50	74			
4	242	15.8		96	47.1	- 6	57.1	52	42	21	55	21 21		53	72			
5	257	16.0	- 1	111	18.6	- 6	45.9	50	4 44	5 22	5 54	16 19	23	2 56	70			
6	272	16.2	- 1	125	50.1	- 6	34.6	45	4 50	5 24	5 53	16 15	26	3 02	66			
7	287	16.4		140	21.7		23.4	40	54	26	53	12 29		06	64			
8	302	16.6		154	53.3		12.1	35	4 57	27	52	09 32		11	60			
9	317	16.8		169	24.9	- 6	00.8	30	5 00	27	51	07 34		14	58			
10	332	17.0		183	56.6	- 5	49.5	20	02	28	50	16 03	38	21	53			
11	347	17.2	- 1	198	28.3	- 5	38.1	10 N	5 03	5 28	5 49	15 59	42	3 26	50			
12	2	17.4	- 1	213	00.1	- 5	26.8	0	5 03	5 27	5 48	15 56	46	3 31	47			
13	17	17.7		227	31.9		15.4	10 S	5 01	25	46	52 50		37	43			
14	32	17.9		242	03.7	- 5	04.0	20	4 57	23	45	49 53		42	39			
15	47	18.1		256	35.6	- 4	52.6	30	51	19	43	45 57		48	35			
16	62	18.3		271	07.5		41.1	35	47	17	42	42 60		52	32			
17	77	18.5	- 1	285	39.5	- 4	29.7	40	4 42	5 13	5 41	15 39	63	3 56	30			
18	92	18.7	- 1	300	11.5	- 4	18.2	45	4 35	5 10	5 39	15 36	66	4 00	27			
19	107	18.9	- 2	314	43.5	- 4	06.8	50	26	05	37	33 69		06	23			
20	122	19.1		329	15.6	- 3	55.3	52	22	02	36	31 71		08	22			
21	137	19.3		343	47.6		43.8	54	17	5 00	35	29 73		11	20			
22	152	19.6		358	19.8		32.3	56	12	4 57	34	27 75		14	17			
23	167	19.8		12	51.9		20.8	58	4 06	54	33	24 78		17	16			
24	182	20.0	- 2	27	24.1	- 3	09.2	60 S	3 59	4 50	5 32	15 22	80	4 21	13			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 23 ^h 31 ^m 4		Mag.: -4.1 PMG: 9 ^h 16 ^m			Mag.: +1.2 PMG: 14 ^h 56 ^m			Mag.: -2.5 PMG: 4 ^h 35 ^m			Mag.: +0.7 PMG: 13 ^h 24 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	'		
0	6	11.3	221	07.4	+ 13	52.8	135	53.7	- 19	15.6	290	59.5	+ 21	55.0	158	26.7	- 8	
1	21	13.8	236	07.0		52.1	150	54.4		16.1	306	01.9		55.0	173	28.9	- 9	
2	36	16.3	251	06.6		51.3	165	55.1		16.6	321	04.3		55.0	188	31.1	00.1	
3	51	18.7	266	06.2		50.5	180	55.8		17.0	336	06.7		55.0	203	33.3	00.2	
4	66	21.2	281	05.9		49.7	195	56.5		17.5	351	09.1		55.0	218	35.5	00.3	
5	81	23.6	296	05.5	+ 13	49.0	210	57.2	- 19	17.9	6	11.5	+ 21	55.1	233	37.7	- 9	
6	96	26.1	311	05.1	+ 13	48.2	225	57.9	- 19	18.4	21	13.9	+ 21	55.1	248	39.9	- 9	
7	111	28.6	326	04.7		47.4	240	58.6		18.9	36	16.3		55.1	263	42.1	00.6	
8	126	31.0	341	04.3		46.6	255	59.3		19.3	51	18.7		55.1	278	44.3	00.7	
9	141	33.5	356	03.9		45.8	271	00.0		19.8	66	21.1		55.1	293	46.5	00.8	
10	156	36.0	11	03.6		45.0	286	00.7		20.2	81	23.5		55.1	308	48.7	00.9	
11	171	38.4	26	03.2	+ 13	44.3	301	01.3	- 19	20.7	96	25.9	+ 21	55.1	323	50.9	- 9	
12	186	40.9	41	02.8	+ 13	43.5	316	02.0	- 19	21.2	111	28.3	+ 21	55.1	338	53.1	- 9	
13	201	43.4	56	02.4		42.7	331	02.7		21.6	126	30.7		55.1	353	55.3	01.2	
14	216	45.8	71	02.0		41.9	346	03.4		22.1	141	33.1		55.1	8	57.5	01.4	
15	231	48.3	86	01.7		41.1	1	04.1		22.5	156	35.5		55.1	23	59.7	01.5	
16	246	50.8	101	01.3		40.3	16	04.8		23.0	171	37.9		55.1	39	01.8	01.6	
17	261	53.2	116	00.9	+ 13	39.6	31	05.5	- 19	23.5	186	40.3	+ 21	55.1	54	04.0	- 9	
18	276	55.7	131	00.5	+ 13	38.8	46	06.2	- 19	23.9	201	42.7	+ 21	55.1	69	06.2	- 9	
19	291	58.1	146	00.1		38.0	61	06.9		24.4	216	45.1		55.1	84	08.4	01.9	
20	307	00.6	160	59.7		37.2	76	07.6		24.8	231	47.6		55.1	99	10.6	02.0	
21	322	03.1	175	59.4		36.4	91	08.3		25.3	246	50.0		55.1	114	12.8	02.1	
22	337	05.5	190	59.0		35.6	106	08.9		25.7	261	52.4		55.1	129	15.0	02.2	
23	352	08.0	205	58.6		34.8	121	09.6		26.2	276	54.8		55.1	144	17.2	02.3	
24	7	10.5	220	58.2	+ 13	34.0	136	10.3	- 19	26.7	291	57.2	+ 21	55.1	159	19.4	- 9	
Dif	—		-4		-8		+7		-5		+24		0		+22		-1	

VIERNES 28 DE SEPTIEMBRE DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 50 ^m 5		SD: 15'4 Edad: 11 ^d 9 PHE { 4 ^h : 56'4 12 ^h : 56'2 20 ^h : 56'0 PMG: 22 ^h 52 ^m R°: 45 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	182 20.0	− 2 05.7	27 24.1		− 3 09.2		^h m 60 N 17 41	^h m 18 22	^h m 19 11	^h m 16 42	^h m 12	^h m 4 00	^m 80	
1	197 20.2	06.7	41 56.3	132	− 2 57.7	115	58 41	20	06	42	14	02	77	
2	212 20.4	07.7	56 28.6	133	46.2	115	56 42	19	19 03	42	16	03	75	
3	227 20.6	08.6	71 00.9	133	34.7	115	54 43	18	18 59	42	18	04	73	
4	242 20.8	09.6	85 33.2	133	23.1	116	52 44	17	56	42	20	05	71	
5	257 21.0	− 2 10.6	100 05.5	133	− 2 11.6	115	50 17 44	18 16	18 54	16 42	22	4 06	69	
6	272 21.2	− 2 11.5	114 37.9	134	− 2 00.0	116	45 17 46	18 15	18 49	16 41	26	4 08	65	
7	287 21.4	12.5	129 10.3	134	− 1 48.5	115	40 47	14	45	41	29	10	61	
8	302 21.7	13.5	143 42.7	134	36.9	116	35 48	13	42	41	32	11	59	
9	317 21.9	14.5	158 15.2	135	25.4	115	30 49	13	40	41	34	12	57	
10	332 22.1	15.4	172 47.6	134	13.8	116	20 50	12	38	41	38	14	53	
11	347 22.3	− 2 16.4	187 20.1	135	− 1 02.3	115	10 N 17 52	18 13	18 37	16 41	42	4 16	49	
12	2 22.5	− 2 17.4	201 52.6	135	− 0 50.8	115	0 17 54	18 14	18 38	16 42	44	4 18	45	
13	17 22.7	18.3	216 25.2	136	39.2	116	10 S 55	17	41	42	48	20	41	
14	32 22.9	19.3	230 57.7	135	27.7	115	20 17 57	19	45	42	52	21	38	
15	47 23.1	20.3	245 30.3	136	16.2	115	30 18 00	24	52	42	56	23	34	
16	62 23.3	21.3	260 02.9	136	− 0 04.7	115	35 01	27	18 56	42	58	24	32	
17	77 23.5	− 2 22.2	274 35.6	137	+ 0 06.9	116	40 18 03	18 30	19 02	16 42	61	4 26	29	
18	92 23.8	− 2 23.2	289 08.2	136	+ 0 18.4	115	45 18 05	18 34	19 09	16 42	64	4 27	26	
19	107 24.0	24.2	303 40.9	137	29.8	114	50 07	40	18	42	68	29	22	
20	122 24.2	25.1	318 13.5	136	41.3	115	52 08	42	23	42	70	30	20	
21	137 24.4	26.1	332 46.2	137	+ 0 52.8	115	54 09	45	28	42	72	31	18	
22	152 24.6	27.1	347 19.0	138	+ 1 04.2	114	56 11	48	33	42	74	31	17	
23	167 24.8	28.1	1 51.7	137	15.7	115	58 12	52	40	42	77	33	14	
24	182 25.0	− 2 29.0	16 24.4	137	+ 1 27.1	114	60 S 18 14	18 56	19 48	16 42	80	4 34	12	
UT	ARIES PMG 23 ^h 27 ^m 4		VENUS Mag.: −4.1 PMG: 9 ^h 16 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 55 ^m		JÚPITER Mag.: −2.5 PMG: 4 ^h 31 ^m		SATURNO Mag.: +0.7 PMG: 13 ^h 21 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
	°	°	°	°	°	°	°	°	°					
^h 0	7 10.5	220 58.2	+ 13 34.0	136 10.3	− 19 26.7	291 57.2	+ 21 55.1	159 19.4	− 9 02.4					
1	22 12.9	235 57.8	33.2	151 11.0	27.1	306 59.6	55.1	174 21.6	02.5					
2	37 15.4	250 57.5	32.4	166 11.7	27.6	322 02.0	55.1	189 23.8	02.6					
3	52 17.9	265 57.1	31.6	181 12.4	28.0	337 04.4	55.1	204 26.0	02.7					
4	67 20.3	280 56.7	30.8	196 13.1	28.5	352 06.8	55.1	219 28.2	02.8					
5	82 22.8	295 56.3	+ 13 30.1	211 13.8	− 19 28.9	7 09.2	+ 21 55.1	234 30.4	− 9 02.9					
6	97 25.3	310 55.9	+ 13 29.3	226 14.4	− 19 29.4	22 11.6	+ 21 55.1	249 32.6	− 9 03.0					
7	112 27.7	325 55.5	28.5	241 15.1	29.8	37 14.0	55.1	264 34.8	03.1					
8	127 30.2	340 55.2	27.7	256 15.8	30.3	52 16.4	55.2	279 37.0	03.2					
9	142 32.6	355 54.8	26.9	271 16.5	30.7	67 18.8	55.2	294 39.2	03.3					
10	157 35.1	10 54.4	26.1	286 17.2	31.2	82 21.2	55.2	309 41.4	03.4					
11	172 37.6	25 54.0	+ 13 25.3	301 17.9	− 19 31.7	97 23.7	+ 21 55.2	324 43.6	− 9 03.5					
12	187 40.0	40 53.6	+ 13 24.5	316 18.6	− 19 32.1	112 26.1	+ 21 55.2	339 45.8	− 9 03.6					
13	202 42.5	55 53.3	23.7	331 19.2	32.6	127 28.5	55.2	354 47.9	03.7					
14	217 45.0	70 52.9	22.9	346 19.9	33.0	142 30.9	55.2	9 50.1	03.8					
15	232 47.4	85 52.5	22.1	1 20.6	33.5	157 33.3	55.2	24 52.3	03.9					
16	247 49.9	100 52.1	21.3	16 21.3	33.9	172 35.7	55.2	39 54.5	04.1					
17	262 52.4	115 51.7	+ 13 20.4	31 22.0	− 19 34.4	187 38.1	+ 21 55.2	54 56.7	− 9 04.2					
18	277 54.8	130 51.4	+ 13 19.6	46 22.7	− 19 34.8	202 40.5	+ 21 55.2	69 58.9	− 9 04.3					
19	292 57.3	145 51.0	18.8	61 23.3	35.3	217 42.9	55.2	85 01.1	04.4					
20	307 59.7	160 50.6	18.0	76 24.0	35.7	232 45.4	55.2	100 03.3	04.5					
21	323 02.2	175 50.2	17.2	91 24.7	36.2	247 47.8	55.2	115 05.5	04.6					
22	338 04.7	190 49.8	16.4	106 25.4	36.6	262 50.2	55.2	130 07.7	04.7					
23	353 07.1	205 49.5	15.6	121 26.1	37.1	277 52.6	55.2	145 09.9	04.8					
24	8 09.6	220 49.1	+ 13 14.8	136 26.7	− 19 37.5	292 55.0	+ 21 55.2	160 12.1	− 9 04.9					
Dif	—	−4	−8	+7	−5	+24	0	+22	−1					

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SÁBADO 29 DE SEPTIEMBRE DE 2012

UT	SOL			☉ LUNA					Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 50 ^m 2			SD: 15'2 Edad: 12 ^d 9 PHE { 4 ^h : 55'9 12 ^h : 55'7 20 ^h : 55'6 PMG: 23 ^h 37 ^m R°: 45 ^m									Hora R°		Hora R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Náutico	Civil						
h	°	'	°	°	'	°	'	°		h	m	h	m	h	m	h	m
0	182	25.0	− 2	29.0	16 24.4	+ 1	27.1	60 N	4 31	5 20	6 01	16 54	12	5 20	79		
1	197	25.2		30.0	30 57.2		38.5	58	35	21	00	56 15		19 76			
2	212	25.4		31.0	45 30.0	+ 1	49.9	56	39	23	6 00	16 58	18	18 73			
3	227	25.6		31.9	60 02.8	+ 2	01.3	54	42	24	5 59	17 00	20	17 71			
4	242	25.8		32.9	74 35.6		12.7	52	45	24	58	02 21		16 69			
5	257	26.0	− 2	33.9	89 08.4	+ 2	24.0	50	4 47	5 25	5 57	17 04	23	5 15	68		
6	272	26.2	− 2	34.9	103 41.2	+ 2	35.4	45	4 52	5 27	5 56	17 07	27	5 13	64		
7	287	26.5		35.8	118 14.1		46.7	40	56	28	55	10 30		11 61			
8	302	26.7		36.8	132 46.9	+ 2	58.0	35	4 59	28	53	13 32		10 58			
9	317	26.9		37.8	147 19.8	+ 3	09.2	30	5 01	28	52	15 34		09 56			
10	332	27.1		38.7	161 52.6		20.5	20	03	28	50	19 38		07 51			
11	347	27.3	− 2	39.7	176 25.5	+ 3	31.7	10 N	5 03	5 28	5 49	17 23	41	5 05	48		
12	2	27.5	− 2	40.7	190 58.4	+ 3	42.9	0	5 02	5 26	5 47	17 26	45	5 03	45		
13	17	27.7		41.7	205 31.3	+ 3	54.1	10 S	5 00	24	45	30 48		5 01	42		
14	32	27.9		42.6	220 04.2	+ 4	05.3	20	4 55	21	43	34 51		4 59	38		
15	47	28.1		43.6	234 37.1		16.4	30	49	17	40	38 55		57 34			
16	62	28.3		44.6	249 10.0		27.5	35	44	14	39	40 58		56 32			
17	77	28.5	− 2	45.5	263 42.9	+ 4	38.6	40	4 38	5 10	5 37	17 43	60	4 55	29		
18	92	28.7	− 2	46.5	278 15.8	+ 4	49.6	45	4 31	5 06	5 35	17 46	64	4 53	26		
19	107	28.9		47.5	292 48.8	+ 5	00.6	50	22	5 00	33	50 67		51 23			
20	122	29.1		48.5	307 21.7		11.6	52	17	4 58	32	52 69		50 21			
21	137	29.3		49.4	321 54.6		22.6	54	12	55	30	54 71		49 19			
22	152	29.5		50.4	336 27.6		33.5	56	06	52	29	56 73		48 17			
23	167	29.8		51.4	351 00.5		44.4	58	4 00	48	27	17 59	75	47 15			
24	182	30.0	− 2	52.3	5 33.4	+ 5	55.2	60 S	3 52	4 44	5 26	18 02	77	4 46	12		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG 23 ^h 23 ^m 5		Mag.: −4.1 PMG: 9 ^h 17 ^m			Mag.: +1.2 PMG: 14 ^h 54 ^m			Mag.: −2.5 PMG: 4 ^h 28 ^m			Mag.: +0.7 PMG: 13 ^h 17 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	'	
0	8	09.6	220	49.1	+ 13 14.8	136	26.7	− 19 37.5	292	55.0	+ 21 55.2	160	12.1	− 9 04.9			
1	23	12.1	235	48.7	14.0	151	27.4	38.0	307	57.4	55.2	175	14.3	05.0			
2	38	14.5	250	48.3	13.2	166	28.1	38.4	322	59.8	55.2	190	16.5	05.1			
3	53	17.0	265	48.0	12.4	181	28.8	38.9	338	02.3	55.2	205	18.7	05.2			
4	68	19.5	280	47.6	11.6	196	29.5	39.3	353	04.7	55.2	220	20.9	05.3			
5	83	21.9	295	47.2	+ 13 10.7	211	30.1	− 19 39.8	8	07.1	+ 21 55.2	235	23.1	− 9 05.4			
6	98	24.4	310	46.8	+ 13 09.9	226	30.8	− 19 40.2	23	09.5	+ 21 55.2	250	25.2	− 9 05.5			
7	113	26.9	325	46.4	09.1	241	31.5	40.7	38	11.9	55.2	265	27.4	05.6			
8	128	29.3	340	46.1	08.3	256	32.2	41.1	53	14.3	55.2	280	29.6	05.7			
9	143	31.8	355	45.7	07.5	271	32.9	41.6	68	16.8	55.2	295	31.8	05.8			
10	158	34.2	10	45.3	06.7	286	33.5	42.0	83	19.2	55.2	310	34.0	05.9			
11	173	36.7	25	44.9	+ 13 05.9	301	34.2	− 19 42.5	98	21.6	+ 21 55.2	325	36.2	− 9 06.0			
12	188	39.2	40	44.5	+ 13 05.0	316	34.9	− 19 42.9	113	24.0	+ 21 55.2	340	38.4	− 9 06.1			
13	203	41.6	55	44.2	04.2	331	35.6	43.4	128	26.4	55.2	355	40.6	06.2			
14	218	44.1	70	43.8	03.4	346	36.2	43.8	143	28.8	55.2	10	42.8	06.3			
15	233	46.6	85	43.4	02.6	1	36.9	44.2	158	31.3	55.2	25	45.0	06.4			
16	248	49.0	100	43.0	01.8	16	37.6	44.7	173	33.7	55.2	40	47.2	06.6			
17	263	51.5	115	42.7	+ 13 00.9	31	38.3	− 19 45.1	188	36.1	+ 21 55.2	55	49.4	− 9 06.7			
18	278	54.0	130	42.3	+ 13 00.1	46	38.9	− 19 45.6	203	38.5	+ 21 55.2	70	51.6	− 9 06.8			
19	293	56.4	145	41.9	+ 12 59.3	61	39.6	46.0	218	41.0	55.2	85	53.8	06.9			
20	308	58.9	160	41.5	58.5	76	40.3	46.5	233	43.4	55.2	100	56.0	07.0			
21	324	01.3	175	41.1	57.6	91	41.0	46.9	248	45.8	55.2	115	58.1	07.1			
22	339	03.8	190	40.8	56.8	106	41.6	47.4	263	48.2	55.3	131	00.3	07.2			
23	354	06.3	205	40.4	56.0	121	42.3	47.8	278	50.6	55.3	146	02.5	07.3			
24	9	08.7	220	40.0	+ 12 55.2	136	43.0	− 19 48.3	293	53.1	+ 21 55.3	161	04.7	− 9 07.4			
Dif	—		−4		−8	+7		−4	+24		0	+22		−	0		

DOMINGO 30 DE SEPTIEMBRE DE 2012

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UT	SOL			☉ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 11 ^h 49 ^m 8			SD: 15 ^h 1 Edad: 13 ^d 9 PHE { 4 ^h : 55 ^h 4 12 ^h : 55 ^h 3 20 ^h : 55 ^h 1 PMG: **h **m R°: ***m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
h	°	′	″	°	′	″	′	° N	h	m	h	m	h	m	h	m
0	182	30.0	− 2 52.3	5 33.4	140	+ 5 55.2	109	60	17 35	18 16	19 04	17 06	15	6 39	77	
1	197	30.2	53.3	20 06.4	139	+ 6 06.1	107	58	36	15	19 01	11 18		35	74	
2	212	30.4	54.3	34 39.3	139	16.8	107	56	37	14	18 57	16 19		31	72	
3	227	30.6	55.2	49 12.2	139	27.6	108	54	38	13	54	20 21		28	70	
4	242	30.8	56.2	63 45.2	140	38.3	107	52	39	13	52	23 23		25	68	
5	257	31.0	− 2 57.2	78 18.1	139	+ 6 49.0	107	50	17 40	18 12	18 50	17 27	24	6 23	66	
6	272	31.2	− 2 58.2	92 51.0	139	+ 6 59.6	106	45	17 42	18 11	18 45	17 34	28	6 17	63	
7	287	31.4	− 2 59.1	107 23.9	139	+ 7 10.2	106	40	44	10	42	40 30		12	60	
8	302	31.6	− 3 00.1	121 56.9	140	20.8	106	35	45	10	39	45 33		08	57	
9	317	31.8	01.1	136 29.8	139	31.3	105	30	46	10	38	49 36		6 05	55	
10	332	32.0	02.0	151 02.7	139	41.8	105	20	49	11	36	17 57	39	5 58	52	
11	347	32.2	− 3 03.0	165 35.6	139	+ 7 52.3	105	10 N	17 51	18 12	18 36	18 04	42	5 53	48	
12	2 32.4	− 3 04.0	180 08.5	139	+ 8 02.7	104		0	17 53	18 14	18 38	18 11	45	5 48	45	
13	17 32.6	04.9	194 41.4	139	13.1	104		10 S	55	16	41	18 48		43	41	
14	32 32.8	05.9	209 14.3	139	23.4	103		20	17 58	20	46	25 51		37	39	
15	47 33.0	06.9	223 47.2	139	33.6	102		30	18 01	25	53	33 55		31	35	
16	62 33.2	07.8	238 20.1	139	43.9	103		35	03	28	18 58	38 57		28	32	
17	77 33.4	− 3 08.8	252 52.9	138	+ 8 54.1	102		40	18 05	18 32	19 04	18 43	60	5 24	30	
18	92 33.6	− 3 09.8	267 25.8	139	+ 9 04.2	101		45	18 07	18 37	19 12	18 50	62	5 19	27	
19	107 33.8	10.8	281 58.7	139	14.3	101		50	10	43	22	18 57	66	14	23	
20	122 34.0	11.7	296 31.5	138	24.3	100		52	11	46	26	19 01	67	11	22	
21	137 34.2	12.7	311 04.3	138	34.3	100		54	13	49	32	05 69		08	21	
22	152 34.4	13.7	325 37.2	139	44.3	100		56	15	52	38	09 71		05	19	
23	167 34.6	14.6	340 10.0	138	+ 9 54.2	99		58	16	18 56	45	14 74		5 02	16	
24	182 34.9	− 3 15.6	354 42.8	138	+ 10 04.0	98		60 S	18 18	19 01	19 53	19 19	77	4 58	14	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 23 ^h 19 ^m 6			Mag.: −4.1 PMG: 9 ^h 18 ^m			Mag.: +1.2 PMG: 14 ^h 52 ^m			Mag.: −2.5 PMG: 4 ^h 24 ^m			Mag.: +0.7 PMG: 13 ^h 14 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	′	″	°	′	″	°	′	″	°	′	″	°	′	″	
0	9	08.7	220 40.0	+ 12 55.2	136 43.0	− 19 48.3	293 53.1	+ 21 55.3	161 04.7	− 9 07.4						
1	24	11.2	235 39.6	54.3	151 43.7	48.7	308 55.5	55.3	176 06.9	07.5						
2	39	13.7	250 39.3	53.5	166 44.3	49.1	323 57.9	55.3	191 09.1	07.6						
3	54	16.1	265 38.9	52.7	181 45.0	49.6	339 00.3	55.3	206 11.3	07.7						
4	69	18.6	280 38.5	51.9	196 45.7	50.0	354 02.8	55.3	221 13.5	07.8						
5	84	21.1	295 38.1	+ 12 51.0	211 46.4	− 19 50.5	9 05.2	+ 21 55.3	236 15.7	− 9 07.9						
6	99	23.5	310 37.8	+ 12 50.2	226 47.0	− 19 50.9	24 07.6	+ 21 55.3	251 17.9	− 9 08.0						
7	114	26.0	325 37.4	49.4	241 47.7	51.4	39 10.0	55.3	266 20.1	08.1						
8	129	28.5	340 37.0	48.5	256 48.4	51.8	54 12.5	55.3	281 22.3	08.2						
9	144	30.9	355 36.6	47.7	271 49.0	52.2	69 14.9	55.3	296 24.5	08.3						
10	159	33.4	10 36.2	46.9	286 49.7	52.7	84 17.3	55.3	311 26.6	08.4						
11	174	35.8	25 35.9	+ 12 46.0	301 50.4	− 19 53.1	99 19.7	+ 21 55.3	326 28.8	− 9 08.5						
12	189	38.3	40 35.5	+ 12 45.2	316 51.0	− 19 53.6	114 22.2	+ 21 55.3	341 31.0	− 9 08.6						
13	204	40.8	55 35.1	44.4	331 51.7	54.0	129 24.6	55.3	356 33.2	08.7						
14	219	43.2	70 34.7	43.5	346 52.4	54.4	144 27.0	55.3	11 35.4	08.8						
15	234	45.7	85 34.4	42.7	1 53.1	54.9	159 29.5	55.3	26 37.6	09.0						
16	249	48.2	100 34.0	41.9	16 53.7	55.3	174 31.9	55.3	41 39.8	09.1						
17	264	50.6	115 33.6	+ 12 41.0	31 54.4	− 19 55.8	189 34.3	+ 21 55.3	56 42.0	− 9 09.2						
18	279	53.1	130 33.2	+ 12 40.2	46 55.1	− 19 56.2	204 36.7	+ 21 55.3	71 44.2	− 9 09.3						
19	294	55.6	145 32.9	39.3	61 55.7	56.6	219 39.2	55.3	86 46.4	09.4						
20	309	58.0	160 32.5	38.5	76 56.4	57.1	234 41.6	55.3	101 48.6	09.5						
21	325	00.5	175 32.1	37.7	91 57.1	57.5	249 44.0	55.3	116 50.8	09.6						
22	340	02.9	190 31.7	36.8	106 57.7	58.0	264 46.5	55.3	131 53.0	09.7						
23	355	05.4	205 31.4	36.0	121 58.4	58.4	279 48.9	55.3	146 55.1	09.8						
24	10	07.9	220 31.0	+ 12 35.1	136 59.1	− 19 58.8	294 51.3	+ 21 55.3	161 57.3	− 9 09.9						
Dif	—	−4	−8		+7	−4	+24	0		+22	−1					

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LUNES 1 DE OCTUBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 11 ^h 49 ^m 5		SD: 15 ^h 0 Edad: 14 ^d 9 PHE { 4 ^h : 55 ^h 0 12 ^h : 54 ^h 9 20 ^h : 54 ^h 8 PMG: 0 ^h 22 ^m R°: 45 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
^h 0	182 34.9	− 3 15.6	354 42.8		+ 10 04.0		60 N	4 36	5 25	6 06	17 21	18	7 56	75
1	197 35.1		9 15.6 138		13.8 98		58	40	26	05	29 20		49 73	
2	212 35.3		23 48.4 138		23.6 98		56	43	27	04	35 23		43 71	
3	227 35.5		38 21.1 137		33.3 97		54	46	27	02	41 25		38 68	
4	242 35.7		52 53.9 138		42.9 96		52	48	28	01	46 27		33 67	
5	257 35.9	− 3 20.4	67 26.6 137		+ 10 52.5 96		50	4 51	5 28	6 00	17 51	28	7 29	65
6	272 36.1	− 3 21.4	81 59.4 138		+ 11 02.1 96		45	4 55	5 29	5 58	18 02	31	7 20	61
7	287 36.3		96 32.1 137		11.5 94		40	4 58	30	57	10 34		12 59	
8	302 36.5		111 04.8 137		21.0 95		35	5 00	30	55	18 36		05 57	
9	317 36.7		125 37.5 137		30.3 93		30	02	30	53	25 37		7 00	54
10	332 36.9		140 10.2 137		39.6 93		20	03	29	51	36 41		6 50	51
11	347 37.1	− 3 26.3	154 42.8 136		+ 11 48.9 93		10 N	5 03	5 28	5 49	18 46	44	6 41	48
12	2 37.3	− 3 27.2	169 15.5 137		+ 11 58.1 92		0	5 02	5 26	5 46	18 56	46	6 33	45
13	17 37.5		183 48.1 136		+ 12 07.2 91		10 S	4 58	23	44	19 06	48	24	43
14	32 37.7		198 20.7 136		16.3 91		20	53	19	41	16 51		16 39	
15	47 37.9		212 53.3 136		25.3 90		30	46	14	38	28 54		06 36	
16	62 38.1		227 25.9 136		34.3 89		35	41	11	36	35 56		6 00	34
17	77 38.3	− 3 32.1	241 58.5 136		+ 12 43.2 88		40	4 35	5 07	5 34	19 43	58	5 54	32
18	92 38.5	− 3 33.0	256 31.0 135		+ 12 52.0 88		45	4 27	5 02	5 31	19 52	61	5 46	30
19	107 38.7		271 03.5 135		+ 13 00.8 87		50	17	4 56	28	20 03	64	37	26
20	122 38.9		285 36.1 136		09.5 87		52	12	53	27	08 66		33 25	
21	137 39.1		300 08.6 135		18.2 87		54	07	50	25	14 67		29 22	
22	152 39.3		314 41.0 134		26.8 86		56	4 00	46	24	20 70		24 20	
23	167 39.5		329 13.5 135		35.3 85		58	3 53	42	22	28 71		18 19	
24	182 39.7	− 3 38.8	343 45.9 134		+ 13 43.8 85		60 S	3 45	4 37	5 20	20 36	74	5 12	16
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 23 ^h 15 ^m 7		Mag.: −4.1 PMG: 9 ^h 18 ^m		Mag.: +1.2 PMG: 14 ^h 51 ^m		Mag.: −2.5 PMG: 4 ^h 20 ^m		Mag.: +0.7 PMG: 13 ^h 10 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h 0	10 07.9	220 31.0	+ 12 35.1		136 59.1	− 19 58.8	294 51.3	+ 21 55.3	161 57.3	− 9 09.9				
1	25 10.3	235 30.6		34.3	151 59.7	59.3	309 53.8	55.3	176 59.5	10.0				
2	40 12.8	250 30.2		33.4	167 00.4	− 19 59.7	324 56.2	55.3	192 01.7	10.1				
3	55 15.3	265 29.9		32.6	182 01.1	− 20 00.1	339 58.6	55.3	207 03.9	10.2				
4	70 17.7	280 29.5		31.8	197 01.7	00.6	355 01.1	55.3	222 06.1	10.3				
5	85 20.2	295 29.1	+ 12 30.9		212 02.4	− 20 01.0	10 03.5	+ 21 55.3	237 08.3	− 9 10.4				
6	100 22.7	310 28.7	+ 12 30.1		227 03.0	− 20 01.4	25 05.9	+ 21 55.3	252 10.5	− 9 10.5				
7	115 25.1	325 28.4		29.2	242 03.7	01.9	40 08.4	55.3	267 12.7	10.6				
8	130 27.6	340 28.0		28.4	257 04.4	02.3	55 10.8	55.3	282 14.9	10.7				
9	145 30.1	355 27.6		27.5	272 05.0	02.8	70 13.2	55.3	297 17.1	10.8				
10	160 32.5	10 27.2		26.7	287 05.7	03.2	85 15.7	55.3	312 19.2	10.9				
11	175 35.0	25 26.9	+ 12 25.8		302 06.4	− 20 03.6	100 18.1	+ 21 55.3	327 21.4	− 9 11.0				
12	190 37.4	40 26.5	+ 12 25.0		317 07.0	− 20 04.1	115 20.5	+ 21 55.3	342 23.6	− 9 11.1				
13	205 39.9	55 26.1		24.1	332 07.7	04.5	130 23.0	55.3	357 25.8	11.2				
14	220 42.4	70 25.8		23.3	347 08.3	04.9	145 25.4	55.3	12 28.0	11.4				
15	235 44.8	85 25.4		22.4	2 09.0	05.4	160 27.9	55.3	27 30.2	11.5				
16	250 47.3	100 25.0		21.6	17 09.7	05.8	175 30.3	55.3	42 32.4	11.6				
17	265 49.8	115 24.6	+ 12 20.7		32 10.3	− 20 06.2	190 32.7	+ 21 55.3	57 34.6	− 9 11.7				
18	280 52.2	130 24.3	+ 12 19.9		47 11.0	− 20 06.7	205 35.2	+ 21 55.3	72 36.8	− 9 11.8				
19	295 54.7	145 23.9		19.0	62 11.6	07.1	220 37.6	55.3	87 39.0	11.9				
20	310 57.2	160 23.5		18.1	77 12.3	07.5	235 40.0	55.3	102 41.2	12.0				
21	325 59.6	175 23.1		17.3	92 13.0	08.0	250 42.5	55.3	117 43.3	12.1				
22	341 02.1	190 22.8		16.4	107 13.6	08.4	265 44.9	55.3	132 45.5	12.2				
23	356 04.5	205 22.4		15.6	122 14.3	08.8	280 47.4	55.3	147 47.7	12.3				
24	11 07.0	220 22.0	+ 12 14.7		137 14.9	− 20 09.2	295 49.8	+ 21 55.3	162 49.9	− 9 12.4				
Dif	—	−4	−9		+7	−4	+24	0	+22	−1				

MARTES 2 DE OCTUBRE DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 11 ^h 49 ^m 2		SD: 14 ^h 9 Edad: 15 ^d 9 PHE { 4 ^h : 54 ^m 6 12 ^h : 54 ^m 5 20 ^h : 54 ^m 4											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	182 39.7	− 3 38.8	343 45.9		+ 13 43.8	83	60 N	^h 17 29	^h 18 10	^h 18 58	^h 17 39	^m 23	^h 9 11	^m 73
1	197 39.9	39.8	358 18.4	135	+ 13 52.1	84	58	30	09	55	49	26	9 02	70
2	212 40.1	40.8	12 50.8	134	+ 14 00.5	84	56	32	09	52	17 58	27	8 54	67
3	227 40.3	41.7	27 23.2	134	08.7	82	54	33	08	49	18 06	29	46	66
4	242 40.5	42.7	41 55.5	133	16.9	82	52	34	08	47	13	30	40	64
5	257 40.7	− 3 43.7	56 27.9	134	+ 14 25.0	81	50	17 36	18 08	18 45	18 19	32	8 34	63
6	272 40.9	− 3 44.6	71 00.2	133	+ 14 33.1	81	45	17 38	18 07	18 41	18 33	34	8 21	60
7	287 41.1	45.6	85 32.5	133	41.1	80	40	40	07	39	44	37	11	57
8	302 41.3	46.6	100 04.8	133	49.0	79	35	42	07	37	18 54	38	8 02	55
9	317 41.5	47.5	114 37.1	133	+ 14 56.8	78	30	44	08	35	19 02	40	7 54	54
10	332 41.7	48.5	129 09.3	132	+ 15 04.6	78	20	47	09	34	17	42	41	51
11	347 41.9	− 3 49.5	143 41.5	132	+ 15 12.3	77	10 N	17 50	18 11	18 35	19 30	44	7 29	48
12	2 42.0	− 3 50.4	158 13.7	132	+ 15 19.9	76	0	17 52	18 13	18 37	19 42	46	7 18	46
13	17 42.2	51.4	172 45.9	132	27.5	76	10 S	55	16	41	19 54	49	7 07	44
14	32 42.4	52.4	187 18.1	132	35.0	75	20	17 58	21	46	20 07	51	6 55	42
15	47 42.6	53.3	201 50.2	131	42.4	74	30	18 02	26	18 54	22	53	42	39
16	62 42.8	54.3	216 22.4	132	49.7	73	35	04	30	19 00	31	55	34	37
17	77 43.0	− 3 55.3	230 54.5	131	+ 15 57.0	73	40	18 07	18 34	19 06	20 41	56	6 26	35
18	92 43.2	− 3 56.2	245 26.5	130	+ 16 04.2	72	45	18 10	18 39	19 14	20 53	58	6 16	32
19	107 43.4	57.2	259 58.6	131	11.3	71	50	13	46	25	21 07	61	6 03	30
20	122 43.6	58.2	274 30.6	130	18.4	71	52	15	49	30	14	62	5 58	28
21	137 43.8	− 3 59.1	289 02.6	130	25.3	69	54	17	53	36	21	64	51	27
22	152 44.0	− 4 00.1	303 34.6	130	32.2	69	56	19	18 56	43	30	65	44	25
23	167 44.2	01.1	318 06.6	130	39.0	68	58	21	19 01	50	39	68	37	22
24	182 44.4	− 4 02.0	332 38.6	130	+ 16 45.7	67	60 S	18 23	19 06	19 59	21 50	70	5 28	20
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG		Mag.: −4.1		Mag.: +1.2		Mag.: −2.5		Mag.: +0.7					
	23 ^h 11 ^m 7		PMG: 9 ^h 19 ^m		PMG: 14 ^h 50 ^m		PMG: 4 ^h 16 ^m		PMG: 13 ^h 07 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h 0	11 07.0		220 22.0	+ 12 14.7	137 14.9	− 20 09.2	295 49.8	+ 21 55.3	162 49.9	− 9 12.4				
1	26 09.5		235 21.6	13.9	152 15.6	09.7	310 52.2	55.3	177 52.1	12.5				
2	41 11.9		250 21.3	13.0	167 16.3	10.1	325 54.7	55.3	192 54.3	12.6				
3	56 14.4		265 20.9	12.1	182 16.9	10.5	340 57.1	55.3	207 56.5	12.7				
4	71 16.9		280 20.5	11.3	197 17.6	11.0	355 59.6	55.3	222 58.7	12.8				
5	86 19.3		295 20.2	+ 12 10.4	212 18.2	− 20 11.4	11 02.0	+ 21 55.3	238 00.9	− 9 12.9				
6	101 21.8		310 19.8	+ 12 09.5	227 18.9	− 20 11.8	26 04.5	+ 21 55.3	253 03.1	− 9 13.0				
7	116 24.3		325 19.4	08.7	242 19.5	12.3	41 06.9	55.3	268 05.3	13.1				
8	131 26.7		340 19.0	07.8	257 20.2	12.7	56 09.3	55.3	283 07.4	13.2				
9	146 29.2		355 18.7	07.0	272 20.9	13.1	71 11.8	55.3	298 09.6	13.3				
10	161 31.7		10 18.3	06.1	287 21.5	13.5	86 14.2	55.3	313 11.8	13.4				
11	176 34.1		25 17.9	+ 12 05.2	302 22.2	− 20 14.0	101 16.7	+ 21 55.3	328 14.0	− 9 13.6				
12	191 36.6		40 17.6	+ 12 04.4	317 22.8	− 20 14.4	116 19.1	+ 21 55.3	343 16.2	− 9 13.7				
13	206 39.0		55 17.2	03.5	332 23.5	14.8	131 21.6	55.3	358 18.4	13.8				
14	221 41.5		70 16.8	02.6	347 24.1	15.3	146 24.0	55.3	13 20.6	13.9				
15	236 44.0		85 16.4	01.8	2 24.8	15.7	161 26.5	55.3	28 22.8	14.0				
16	251 46.4		100 16.1	00.9	17 25.4	16.1	176 28.9	55.3	43 25.0	14.1				
17	266 48.9		115 15.7	+ 12 00.0	32 26.1	− 20 16.5	191 31.4	+ 21 55.3	58 27.1	− 9 14.2				
18	281 51.4		130 15.3	+ 11 59.1	47 26.7	− 20 17.0	206 33.8	+ 21 55.3	73 29.3	− 9 14.3				
19	296 53.8		145 15.0	58.3	62 27.4	17.4	221 36.3	55.3	88 31.5	14.4				
20	311 56.3		160 14.6	57.4	77 28.0	17.8	236 38.7	55.3	103 33.7	14.5				
21	326 58.8		175 14.2	56.5	92 28.7	18.2	251 41.1	55.3	118 35.9	14.6				
22	342 01.2		190 13.8	55.7	107 29.3	18.7	266 43.6	55.3	133 38.1	14.7				
23	357 03.7		205 13.5	54.8	122 30.0	19.1	281 46.0	55.3	148 40.3	14.8				
24	12 06.2		220 13.1	+ 11 53.9	137 30.6	− 20 19.5	296 48.5	+ 21 55.3	163 42.5	− 9 14.9				
Dif	—		−4	−9	+7	−4	+24	0	+22	−1				

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MIÉRCOL 3 DE OCTUBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 0 PMG: 11 ^h 48 ^m 9		SD: 14 ^h 8 Edad: 16 ^d 9 PHE { 4 ^h : 54/4 12 ^h : 54/3 20 ^h : 54/2 PMG: 1 ^h 53 ^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 ^s	^h ^m ^s	^h ^m ^s	^h ^m ^s
0	182 44.4	− 4 02.0	332 38.6		+ 16 45.7	67	60 N	4 41	5 30	6 11	18 02 31	10 24 67		
1	197 44.6	03.0	347 10.5	129	52.4	67	58	44	30	09	15 32	12 64		
2	212 44.8	04.0	1 42.4	129	+ 16 59.0	66	56	47	30	08	25 34	10 01 63		
3	227 45.0	04.9	16 14.3	129	+ 17 05.5	65	54	50	31	06	35 35	9 52 62		
4	242 45.2	05.9	30 46.2	129	11.9	64	52	52	31	05	43 37	44 60		
5	257 45.4	− 4 06.9	45 18.0	128	+ 17 18.2	63	50	4 54	5 31	6 03	18 51 37	9 37 59		
6	272 45.6	− 4 07.8	59 49.8	128	+ 17 24.5	63	45	4 57	5 32	6 01	19 07 39	9 21 57		
7	287 45.8	08.8	74 21.6	128	30.6	61	40	5 00	31	5 58	21 40	9 08 56		
8	302 46.0	09.8	88 53.4	128	36.7	61	35	02	31	56	32 42	8 57 54		
9	317 46.2	10.7	103 25.2	128	42.7	60	30	03	31	55	42 43	48 53		
10	332 46.4	11.7	117 56.9	127	48.7	60	20	04	29	51	19 59 45	32 50		
11	347 46.6	− 4 12.6	132 28.6	127	+ 17 54.5	58	10 N	5 03	5 27	5 48	20 14 46	8 17 49		
12	2 46.7	− 4 13.6	147 00.3	127	+ 18 00.3	58	0	5 01	5 25	5 46	20 28 48	8 04 47		
13	17 46.9	14.6	161 32.0	127	06.0	57	10 S	4 57	22	43	43 48	7 51 45		
14	32 47.1	15.5	176 03.6	126	11.6	56	20	52	17	39	20 58 50	37 43		
15	47 47.3	16.5	190 35.2	126	17.1	55	30	43	12	36	21 15 52	21 41		
16	62 47.5	17.5	205 06.8	126	22.5	54	35	38	08	33	26 52	11 40		
17	77 47.7	− 4 18.4	219 38.4	126	+ 18 27.8	53	40	4 31	5 03	5 31	21 37 54	7 01 38		
18	92 47.9	− 4 19.4	234 10.0	126	+ 18 33.1	53	45	4 23	4 58	5 28	21 51 56	6 48 37		
19	107 48.1	20.4	248 41.5	125	38.3	52	50	12	51	24	22 08 57	33 34		
20	122 48.3	21.3	263 13.1	126	43.3	50	52	07	48	22	16 58	26 33		
21	137 48.5	22.3	277 44.6	125	48.3	50	54	4 01	45	20	25 59	18 32		
22	152 48.7	23.2	292 16.1	125	53.2	49	56	3 55	41	18	35 60	6 09 31		
23	167 48.9	24.2	306 47.5	124	+ 18 58.1	49	58	47	36	16	22 47 61	5 59 29		
24	182 49.1	− 4 25.2	321 19.0	125	+ 19 02.8	47	60 S	3 38	4 31	5 14	23 00 63	5 48 26		
UT	ARIES PMG: 23 ^h 07 ^m 8		VENUS Mag.: −4.1 PMG: 9 ^h 19 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 49 ^m		JÚPITER Mag.: −2.5 PMG: 4 ^h 12 ^m		SATURNO Mag.: +0.7 PMG: 13 ^h 03 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	12 06.2	220 13.1	+ 11 53.9		137 30.6	− 20 19.5	296 48.5	+ 21 55.3	163 42.5	− 9 14.9				
1	27 08.6	235 12.7	53.0		152 31.3	19.9	311 50.9	55.3	178 44.7	15.0				
2	42 11.1	250 12.4	52.2		167 31.9	20.4	326 53.4	55.3	193 46.9	15.1				
3	57 13.5	265 12.0	51.3		182 32.6	20.8	341 55.8	55.3	208 49.0	15.2				
4	72 16.0	280 11.6	50.4		197 33.2	21.2	356 58.3	55.3	223 51.2	15.3				
5	87 18.5	295 11.3	+ 11 49.5		212 33.9	− 20 21.6	12 00.8	+ 21 55.3	238 53.4	− 9 15.4				
6	102 20.9	310 10.9	+ 11 48.7		227 34.5	− 20 22.1	27 03.2	+ 21 55.3	253 55.6	− 9 15.5				
7	117 23.4	325 10.5	47.8		242 35.2	22.5	42 05.7	55.3	268 57.8	15.6				
8	132 25.9	340 10.1	46.9		257 35.8	22.9	57 08.1	55.3	284 00.0	15.8				
9	147 28.3	355 09.8	46.0		272 36.5	23.3	72 10.6	55.3	299 02.2	15.9				
10	162 30.8	10 09.4	45.1		287 37.1	23.7	87 13.0	55.3	314 04.4	16.0				
11	177 33.3	25 09.0	+ 11 44.3		302 37.8	− 20 24.2	102 15.5	+ 21 55.3	329 06.6	− 9 16.1				
12	192 35.7	40 08.7	+ 11 43.4		317 38.4	− 20 24.6	117 17.9	+ 21 55.3	344 08.7	− 9 16.2				
13	207 38.2	55 08.3	42.5		332 39.1	25.0	132 20.4	55.3	359 10.9	16.3				
14	222 40.6	70 07.9	41.6		347 39.7	25.4	147 22.8	55.3	14 13.1	16.4				
15	237 43.1	85 07.6	40.7		2 40.4	25.9	162 25.3	55.3	29 15.3	16.5				
16	252 45.6	100 07.2	39.8		17 41.0	26.3	177 27.7	55.3	44 17.5	16.6				
17	267 48.0	115 06.8	+ 11 38.9		32 41.7	− 20 26.7	192 30.2	+ 21 55.3	59 19.7	− 9 16.7				
18	282 50.5	130 06.5	+ 11 38.1		47 42.3	− 20 27.1	207 32.7	+ 21 55.3	74 21.9	− 9 16.8				
19	297 53.0	145 06.1	37.2		62 43.0	27.5	222 35.1	55.3	89 24.1	16.9				
20	312 55.4	160 05.7	36.3		77 43.6	27.9	237 37.6	55.3	104 26.3	17.0				
21	327 57.9	175 05.3	35.4		92 44.2	28.4	252 40.0	55.3	119 28.4	17.1				
22	343 00.4	190 05.0	34.5		107 44.9	28.8	267 42.5	55.3	134 30.6	17.2				
23	358 02.8	205 04.6	33.6		122 45.5	29.2	282 44.9	55.3	149 32.8	17.3				
24	13 05.3	220 04.2	+ 11 32.7		137 46.2	− 20 29.6	297 47.4	+ 21 55.3	164 35.0	− 9 17.4				
Dif	—	−4	−9		+6	−4	+25	0	+22	−1				

JUEVES 4 DE OCTUBRE DE 2012

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UT	SOL		☾ LUNA					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0 PMG: 11 ^h 48 ^m 6		SD: 14 ^h 8 Edad: 17 ^d 9 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 1 20 ^h : 54 ^m 1 PMG: 2 ^h 40 ^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	^h ^m	^h ^m		
0	182	49.1	−4	25.2	321	19.0	+19	02.8	46	60 N	17	23	18	04	18	52	
1	197	49.3		26.1	335	50.4		07.4	46	58	25		04	49	47	41	
2	212	49.4		27.1	350	21.8		12.0	46	56	27		04	47	18	59	
3	227	49.6		28.1	4	53.2		16.5	45	54	28		03	44	19	10	
4	242	49.8		29.0	19	24.5		20.9	44	52	30		03	42	20	43	
5	257	50.0	−4	30.0	33	55.9	+19	25.1	42	50	17	31	18	03	19	28	
6	272	50.2	−4	31.0	48	27.2	+19	29.3	42	45	17	34	18	04	19	46	
7	287	50.4		31.9	62	58.5		33.5	42	40	37		04	35	20	01	
8	302	50.6		32.9	77	29.8		37.5	40	35	39		05	34	14	46	
9	317	50.8		33.8	92	01.1		41.4	39	30	41		05	33	25	46	
10	332	51.0		34.8	106	32.3		45.2	38	20	45		07	33	20	44	
11	347	51.2	−4	35.8	121	03.6	+19	49.0	38	10 N	17	49	18	10	21	00	
12	2	51.4	−4	36.7	135	34.8	+19	52.6	36	0	17	52	18	13	21	16	
13	17	51.5		37.7	150	06.0		56.2	36	10 S	55		16	41	31	49	
14	32	51.7		38.7	164	37.2	+19	59.7	35	20	17	59	21	47	21	48	
15	47	51.9		39.6	179	08.3	+20	03.1	34	30	18	03	27	18	56	22	
16	62	52.1		40.6	193	39.5		06.3	32	35	06		31	19	01	18	
17	77	52.3	−4	41.5	208	10.6	+20	09.5	32	40	18	09	18	36	19	08	
18	92	52.5	−4	42.5	222	41.7	+20	12.6	31	45	18	12	18	42	19	17	
19	107	52.7		43.5	237	12.8		15.7	31	50	16		49	29	23	05	
20	122	52.9		44.4	251	43.9		18.6	29	52	18		53	34	14	52	
21	137	53.1		45.4	266	15.0		21.4	28	54	20		56	40	24	52	
22	152	53.2		46.4	280	46.0		24.1	27	56	23		01	47	35	53	
23	167	53.4		47.3	295	17.1		26.7	26	58	25		06	19	56	23	
24	182	53.6	−4	48.3	309	48.1	+20	29.3	26	60 S	18	28	19	11	20	05	
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 23 ^h 03 ^m 9		Mag.: −4.1 PMG: 9 ^h 20 ^m			Mag.: +1.2 PMG: 14 ^h 48 ^m			Mag.: −2.6 PMG: 4 ^h 08 ^m			Mag.: +0.7 PMG: 13 ^h 00 ^m					
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
^h	°	'	°	'	°	'	°	'	°	'	°	'	°	'			
0	13	05.3	220	04.2	+11	32.7	137	46.2	−20	29.6	297	47.4	+21	55.3	164	35.0	
1	28	07.8	235	03.9		31.8	152	46.8		30.0	312	49.9		55.3	179	37.2	
2	43	10.2	250	03.5		31.0	167	47.5		30.5	327	52.3		55.3	194	39.4	
3	58	12.7	265	03.1		30.1	182	48.1		30.9	342	54.8		55.3	209	41.6	
4	73	15.1	280	02.8		29.2	197	48.7		31.3	357	57.2		55.3	224	43.8	
5	88	17.6	295	02.4	+11	28.3	212	49.4	−20	31.7	12	59.7	+21	55.3	239	45.9	
6	103	20.1	310	02.0	+11	27.4	227	50.0	−20	32.1	28	02.2	+21	55.3	254	48.1	
7	118	22.5	325	01.7		26.5	242	50.7		32.5	43	04.6		55.3	269	50.3	
8	133	25.0	340	01.3		25.6	257	51.3		33.0	58	07.1		55.3	284	52.5	
9	148	27.5	355	00.9		24.7	272	51.9		33.4	73	09.5		55.3	299	54.7	
10	163	29.9	10	00.6		23.8	287	52.6		33.8	88	12.0		55.3	314	56.9	
11	178	32.4	25	00.2	+11	22.9	302	53.2	−20	34.2	103	14.5	+21	55.3	329	59.1	
12	193	34.9	39	59.8	+11	22.0	317	53.9	−20	34.6	118	16.9	+21	55.3	345	01.3	
13	208	37.3	54	59.5		21.1	332	54.5		35.0	133	19.4		55.3	0	03.5	
14	223	39.8	69	59.1		20.2	347	55.1		35.4	148	21.9		55.3	15	05.6	
15	238	42.3	84	58.7		19.3	2	55.8		35.9	163	24.3		55.3	30	07.8	
16	253	44.7	99	58.4		18.4	17	56.4		36.3	178	26.8		55.3	45	10.0	
17	268	47.2	114	58.0	+11	17.5	32	57.1	−20	36.7	193	29.3	+21	55.3	60	12.2	
18	283	49.6	129	57.6	+11	16.6	47	57.7	−20	37.1	208	31.7	+21	55.3	75	14.4	
19	298	52.1	144	57.3		15.7	62	58.3		37.5	223	34.2		55.2	90	16.6	
20	313	54.6	159	56.9		14.8	77	59.0		37.9	238	36.7		55.2	105	18.8	
21	328	57.0	174	56.5		13.9	92	59.6		38.3	253	39.1		55.2	120	20.9	
22	343	59.5	189	56.2		13.0	108	00.2		38.7	268	41.6		55.2	135	23.1	
23	359	02.0	204	55.8		12.1	123	00.9		39.2	283	44.1		55.2	150	25.3	
24	14	04.4	219	55.4	+11	11.2	138	01.5	−20	39.6	298	46.5	+21	55.2	165	27.5	
Dif	—		−4		−9		+6		−4		+25		0		+22		−1

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VIERNES 5 DE OCTUBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 48 ^m 3		SD: 14'7 Edad: 18 ^d 9 PHE { 4 ^h : 54'1 12 ^h : 54'1 20 ^h : 54'2 PMG: 3 ^h 27 ^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	182	53.6	-4	48.3	309	48.1	+20	29.3	60 N	4	46	5	34	6	16
1	197	53.8		49.2	324	19.1	120	31.7	58 N		49		34	14	
2	212	54.0		50.2	338	50.1	120	34.1	56		51		34	12	
3	227	54.2		51.2	353	21.1	120	36.3	54		53		34	10	
4	242	54.4		52.1	7	52.1	120	38.5	52		55		34	08	
5	257	54.6	-4	53.1	22	23.0	119	+20	50	4	57	5	34	6	07
6	272	54.8	-4	54.0	36	54.0	120	+20	45	5	00	5	34	6	03
7	287	54.9		55.0	51	24.9	119	44.4	40		02	33	6	00	
8	302	55.1		56.0	65	55.8	119	46.1	35		03	33	5	58	
9	317	55.3		56.9	80	26.7	119	47.8	30		04	32		56	
10	332	55.5		57.9	94	57.6	119	49.4	20		04	30		52	
11	347	55.7	-4	58.8	109	28.5	119	+20	10 N	5	03	5	27	5	48
12	2	55.9	-4	59.8	123	59.4	119	+20	0	5	00	5	24	5	45
13	17	56.1	-5	00.8	138	30.3	119	53.6	10 S	4	56		20	41	
14	32	56.2		01.7	153	01.1	118	54.8	20		50	16		38	
15	47	56.4		02.7	167	32.0	119	55.9	30		41	09	33		
16	62	56.6		03.6	182	02.8	118	56.9	35		35	05	31		
17	77	56.8	-5	04.6	196	33.6	118	+20	40	4	28	5	00	5	28
18	92	57.0	-5	05.6	211	04.5	119	+20	45	4	19	4	54	5	24
19	107	57.2		06.5	225	35.3	118	59.3	50		07	47	20		
20	122	57.4		07.5	240	06.1	118	+20	52	4	02	43	18		
21	137	57.5		08.4	254	36.9	118	+21	54	3	56	40	16		
22	152	57.7		09.4	269	07.6	117	00.8	56		49	35	13		
23	167	57.9		10.4	283	38.4	118	01.1	58		40	30	11		
24	182	58.1	-5	11.3	298	09.2	118	+21	60 S	3	31	4	25	5	08
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 59 ^m 9		Mag.: -4.1 PMG: 9 ^h 21 ^m			Mag.: +1.2 PMG: 14 ^h 47 ^m			Mag.: -2.6 PMG: 4 ^h 04 ^m			Mag.: +0.7 PMG: 12 ^h 56 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	14	04.4	219	55.4	+11	11.2	138	01.5	-20	39.6	298	46.5	+21	55.2	
1	29	06.9	234	55.1		10.3	153	02.2		40.0	313	49.0		55.2	
2	44	09.4	249	54.7		09.4	168	02.8		40.4	328	51.5		55.2	
3	59	11.8	264	54.3		08.5	183	03.4		40.8	343	53.9		55.2	
4	74	14.3	279	54.0		07.6	198	04.1		41.2	358	56.4		55.2	
5	89	16.7	294	53.6	+11	06.7	213	04.7	-20	41.6	13	58.9	+21	55.2	
6	104	19.2	309	53.2	+11	05.7	228	05.3	-20	42.0	29	01.3	+21	55.2	
7	119	21.7	324	52.9		04.8	243	06.0		42.4	44	03.8		55.2	
8	134	24.1	339	52.5		03.9	258	06.6		42.8	59	06.3		55.2	
9	149	26.6	354	52.1		03.0	273	07.2		43.3	74	08.8		55.2	
10	164	29.1	9	51.8		02.1	288	07.9		43.7	89	11.2		55.2	
11	179	31.5	24	51.4	+11	01.2	303	08.5	-20	44.1	104	13.7	+21	55.2	
12	194	34.0	39	51.1	+11	00.3	318	09.1	-20	44.5	119	16.2	+21	55.2	
13	209	36.5	54	50.7	+10	59.4	333	09.7		44.9	134	18.6		55.2	
14	224	38.9	69	50.3		58.5	348	10.4		45.3	149	21.1		55.2	
15	239	41.4	84	50.0		57.5	3	11.0		45.7	164	23.6		55.2	
16	254	43.9	99	49.6		56.6	18	11.6		46.1	179	26.1		55.2	
17	269	46.3	114	49.2	+10	55.7	33	12.3	-20	46.5	194	28.5	+21	55.2	
18	284	48.8	129	48.9	+10	54.8	48	12.9	-20	46.9	209	31.0	+21	55.2	
19	299	51.2	144	48.5		53.9	63	13.5		47.3	224	33.5		55.2	
20	314	53.7	159	48.1		53.0	78	14.2		47.7	239	36.0		55.2	
21	329	56.2	174	47.8		52.0	93	14.8		48.1	254	38.4		55.2	
22	344	58.6	189	47.4		51.1	108	15.4		48.5	269	40.9		55.2	
23	0	01.1	204	47.1		50.2	123	16.0		48.9	284	43.4		55.2	
24	15	03.6	219	46.7	+10	49.3	138	16.7	-20	49.3	299	45.9	+21	55.2	
Dif	—		-4		-9		+6		-4		+25		0		+22

SÁBADO 6 DE OCTUBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 48 ^m 0		SD: 14'8 Edad: 19 ^d 9		PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4	PMG: 4 ^h 16 ^m R°: 48 ^m												
	hG ☉	Dec	hG ☾	Dif		Dec			Dif	Civil	Náutico	Hora	R°	Hora	R°			
^h 0	182	58.1	-5	11.3	298	09.2	+21	01.4	60 N	17 17	17 58	18 46	20 04	61	13 18	38		
1	197	58.3		12.3	312	40.0		01.5	58	19	58	44	19	60	13 03	39		
2	212	58.5		13.2	327	10.7		01.5	56	21	58	41	32	59	12 50	40		
3	227	58.6		14.2	341	41.5		01.4	54	23	59	39	43	58	38	42		
4	242	58.8		15.1	356	12.2		01.3	52	25	59	38	20	53	28	42		
5	257	59.0	-5	16.1	10	43.0	+21	01.0	50	17 27	17 59	18 37	21 02	56	12 19	43		
6	272	59.2	-5	17.1	25	13.7	+21	00.6	45	17 31	18 00	18 34	21 21	55	12 00	44		
7	287	59.4		18.0	39	44.5	+21	00.1	40	34	01	32	36	54	11 45	44		
8	302	59.6		19.0	54	15.2	+20	59.6	35	37	02	31	21	49	53	32	45	
9	317	59.7		19.9	68	45.9		58.9	30	39	03	31	22	00	52	20	46	
10	332	59.9		20.9	83	16.7		58.2	20	43	06	31	20	50	11 00	47		
11	348	00.1	-5	21.9	97	47.4	+20	57.3	10 N	17 47	18 08	18 33	22 37	49	10 43	48		
12	3	00.3	-5	22.8	112	18.1	+20	56.3	0	17 51	18 12	18 36	22 52	49	10 27	49		
13	18	00.5		23.8	126	48.8		55.3	10 S	55	16	41	23	08	47	10 11	49	
14	33	00.7		24.7	141	19.5		54.1	20	17 59	22	48	25	46	9 54	50		
15	48	00.8		25.7	155	50.3		52.9	30	18 04	29	18 57	44	45	34	51		
16	63	01.0		26.6	170	21.0		51.5	35	07	33	19 03	23	56	43	23	51	
17	78	01.2	-5	27.6	184	51.7	+20	50.1	40	18 11	18 38	19 11	** ** *	** ** *	9 10	51		
18	93	01.4	-5	28.5	199	22.4	+20	48.5	45	18 15	18 45	19 20	** ** *	** ** *	8 54	52		
19	108	01.6		29.5	213	53.1		46.9	50	19	52	32	** ** *	** ** *	35	53		
20	123	01.7		30.5	228	23.8		45.1	52	22	18 56	38	0 06	46	25	54		
21	138	01.9		31.4	242	54.5		43.3	54	24	19 00	45	16	45	15	54		
22	153	02.1		32.4	257	25.2		41.4	56	27	05	19 52	28	45	8 04	54		
23	168	02.3		33.3	271	56.0		39.3	58	30	10	20 01	41	45	7 50	56		
24	183	02.5	-5	34.3	286	26.7	+20	37.2	60 S	18 33	19 16	20 11	0 57	44	7 34	57		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 56 ^m 0		Mag.: -4.1 PMG: 9 ^h 21 ^m		Mag.: +1.2 PMG: 14 ^h 46 ^m		Mag.: -2.6 PMG: 4 ^h 00 ^m		Mag.: +0.7 PMG: 12 ^h 53 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
^h 0	15	03.6	219	46.7	+10	49.3	138	16.7	-20	49.3	299	45.9	+21	55.2	166	20.0	-9	22.5
1	30	06.0	234	46.3		48.4	153	17.3		49.8	314	48.3		55.2	181	22.2		22.6
2	45	08.5	249	46.0		47.5	168	17.9		50.2	329	50.8		55.2	196	24.4		22.7
3	60	11.0	264	45.6		46.5	183	18.6		50.6	344	53.3		55.2	211	26.6		22.8
4	75	13.4	279	45.2		45.6	198	19.2		51.0	359	55.8		55.2	226	28.7		22.9
5	90	15.9	294	44.9	+10	44.7	213	19.8	-20	51.4	14	58.3	+21	55.2	241	30.9	-9	23.0
6	105	18.4	309	44.5	+10	43.8	228	20.4	-20	51.8	30	00.7	+21	55.2	256	33.1	-9	23.1
7	120	20.8	324	44.1		42.8	243	21.1		52.2	45	03.2		55.2	271	35.3		23.2
8	135	23.3	339	43.8		41.9	258	21.7		52.6	60	05.7		55.2	286	37.5		23.3
9	150	25.7	354	43.4		41.0	273	22.3		53.0	75	08.2		55.1	301	39.7		23.4
10	165	28.2	9	43.1		40.1	288	22.9		53.4	90	10.7		55.1	316	41.9		23.5
11	180	30.7	24	42.7	+10	39.1	303	23.6	-20	53.8	105	13.1	+21	55.1	331	44.0	-9	23.6
12	195	33.1	39	42.3	+10	38.2	318	24.2	-20	54.2	120	15.6	+21	55.1	346	46.2	-9	23.7
13	210	35.6	54	42.0		37.3	333	24.8		54.6	135	18.1		55.1	1	48.4		23.8
14	225	38.1	69	41.6		36.4	348	25.4		55.0	150	20.6		55.1	16	50.6		23.9
15	240	40.5	84	41.2		35.4	3	26.1		55.4	165	23.1		55.1	31	52.8		24.0
16	255	43.0	99	40.9		34.5	18	26.7		55.8	180	25.5		55.1	46	55.0		24.2
17	270	45.5	114	40.5	+10	33.6	33	27.3	-20	56.2	195	28.0	+21	55.1	61	57.2	-9	24.3
18	285	47.9	129	40.2	+10	32.6	48	27.9	-20	56.6	210	30.5	+21	55.1	76	59.3	-9	24.4
19	300	50.4	144	39.8		31.7	63	28.6		57.0	225	33.0		55.1	92	01.5		24.5
20	315	52.8	159	39.4		30.8	78	29.2		57.4	240	35.5		55.1	107	03.7		24.6
21	330	55.3	174	39.1		29.8	93	29.8		57.8	255	38.0		55.1	122	05.9		24.7
22	345	57.8	189	38.7		28.9	108	30.4		58.2	270	40.4		55.1	137	08.1		24.8
23	1	00.2	204	38.4		28.0	123	31.0		58.6	285	42.9		55.1	152	10.3		24.9
24	16	02.7	219	38.0	+10	27.0	138	31.7	-20	59.0	300	45.4	+21	55.1	167	12.5	-9	25.0
Dif	—		-4		-9		+6		-4		+25		0		+22		-1	

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DOMINGO 7 DE OCTUBRE DE 2012

UT	SOL			<div><div><div><div><div></div><div>LUNA</div></div><div><div>SD: 14'8</div><div>Edad: 20^d9</div><div>PMG: 5^h 04^m</div></div><div><div>PHE</div><div><div><div>4^h: 54'5</div><div>12^h: 54'6</div><div>20^h: 54'7</div></div></div><div>R°: 48^m</div></div></div></div></div>				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 47 ^m 7																	
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil			Hora	R°	Hora	R°		
h	°	'	°	°	'	°	°	h	m	h	m	h	m	h	m	h	m	
0	183	02.5	− 5	34.3	286	26.7	+ 20	37.2	22	60 N	4 51	5 39	6 21	21 05	70	13 56	29	
1	198	02.6		35.2	300	57.4	117	35.0	22	58	53	39	18	19 68		42 32		
2	213	02.8		36.2	315	28.1	117	32.6	24	56	55	38	16	31 66		30 33		
3	228	03.0		37.2	329	58.8	117	30.2	24	54	57	38	13	41 64		20 34		
4	243	03.2		38.1	344	29.5	117	27.7	25	52	4 59	38	11	50 63		10 36		
5	258	03.4	− 5	39.1	359	00.3	118	+ 20	25.0	27	50	5 00	5 37	6 10	21 58	62	13 02	37
6	273	03.5	− 5	40.0	13	31.0	117	+ 20	22.3	27	45	5 02	5 36	6 06	22 16	59	12 44	39
7	288	03.7		41.0	28	01.7	117	19.5	28	40	04	35	02	30 57		29 41		
8	303	03.9		41.9	42	32.5	118	16.6	29	35	05	34	6 00	42 56		17 42		
9	318	04.1		42.9	57	03.2	117	13.6	30	30	05	33	5 57	22 52	55	12 06	43	
10	333	04.2		43.8	71	33.9	117	10.5	31	20	05	30	52	23 10	53	11 47	45	
11	348	04.4	− 5	44.8	86	04.7	118	+ 20	07.3	32	10 N	5 03	5 27	5 48	23 26	50	11 31	47
12	3	04.6	− 5	45.7	100	35.4	117	+ 20	04.0	33	0	5 00	5 24	5 44	23 41	48	11 16	48
13	18	04.8		46.7	115	06.2	118	+ 20	00.6	34	10 S	4 55	5 19	40	23 55	47	11 00	50
14	33	05.0		47.7	129	36.9	117	+ 19	57.1	35	20	48	14	36	*** **	***	10 44	51
15	48	05.1		48.6	144	07.7	118	53.5	36	30	38	07	31	31	*** **	***	25 53	
16	63	05.3		49.6	158	38.4	117	49.8	37	35	32	5 02	28	28	*** **	***	14 54	
17	78	05.5	− 5	50.5	173	09.2	118	+ 19	46.0	38	40	4 24	4 57	5 24	0 09	42	10 01	56
18	93	05.7	− 5	51.5	187	40.0	118	+ 19	42.2	38	45	4 15	4 50	5 20	0 24	41	9 46	58
19	108	05.8		52.4	202	10.8	118	38.2	40	50	4 03	42	15	43	39	28	59	
20	123	06.0		53.4	216	41.6	118	34.1	41	52	3 57	39	13	0 52	38	19	60	
21	138	06.2		54.3	231	12.3	117	30.0	41	54	50	34	11	1 01	38	9 09	62	
22	153	06.4		55.3	245	43.1	118	25.7	43	56	43	30	08	13	36	8 58	63	
23	168	06.5		56.2	260	13.9	118	21.3	44	58	34	24	05	26	35	46	64	
24	183	06.7	− 5	57.2	274	44.8	119	+ 19	16.9	44	60 S	3 24	4 18	5 01	1 41	33	8 31	66

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG: 22 ^h 52 ^m 1		Mag.: −4.1 PMG: 9 ^h 22 ^m		Mag.: +1.2 PMG: 14 ^h 45 ^m		Mag.: −2.6 PMG: 3 ^h 56 ^m		Mag.: +0.7 PMG: 12 ^h 49 ^m	
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
h	°	'	°	°	°	'	°	°	°	'
0	16	02.7	219	38.0	+ 10	27.0	138	31.7	− 20	59.0
1	31	05.2	234	37.6		26.1	153	32.3		59.4
2	46	07.6	249	37.3		25.2	168	32.9	− 20	59.8
3	61	10.1	264	36.9		24.2	183	33.5	− 21	00.1
4	76	12.6	279	36.6		23.3	198	34.1		00.5
5	91	15.0	294	36.2	+ 10	22.4	213	34.8	− 21	00.9
6	106	17.5	309	35.8	+ 10	21.4	228	35.4	− 21	01.3
7	121	20.0	324	35.5		20.5	243	36.0		01.7
8	136	22.4	339	35.1		19.6	258	36.6		02.1
9	151	24.9	354	34.8		18.6	273	37.2		02.5
10	166	27.3	9	34.4		17.7	288	37.8		02.9
11	181	29.8	24	34.0	+ 10	16.7	303	38.5	− 21	03.3
12	196	32.3	39	33.7	+ 10	15.8	318	39.1	− 21	03.7
13	211	34.7	54	33.3		14.9	333	39.7		04.1
14	226	37.2	69	33.0		13.9	348	40.3		04.5
15	241	39.7	84	32.6		13.0	3	40.9		04.9
16	256	42.1	99	32.2		12.0	18	41.5		05.3
17	271	44.6	114	31.9	+ 10	11.1	33	42.2	− 21	05.7
18	286	47.1	129	31.5	+ 10	10.1	48	42.8	− 21	06.1
19	301	49.5	144	31.2		09.2	63	43.4		06.4
20	316	52.0	159	30.8		08.3	78	44.0		06.8
21	331	54.5	174	30.4		07.3	93	44.6		07.2
22	346	56.9	189	30.1		06.4	108	45.2		07.6
23	1	59.4	204	29.7		05.4	123	45.8		08.0
24	17	01.8	219	29.4	+ 10	04.5	138	46.5	− 21	08.4
Dif	—		−4		−9		+6		−4	
								+25		0
									+22	
										−1

LUNES 8 DE OCTUBRE DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 47 ^m 4		SD: 14'9 Edad: 21 ^d 9		PHE { 4 ^h : 54'9 12 ^h : 55'1 20 ^h : 55'3										
	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	183 06.7	− 5 57.2	274 44.8		+ 19 16.9	45	60 N	17 11	17 52	18 40	22 15 76		14 25 23		
1	198 06.9	58.1	289 15.6	118	12.4	45	58	14	53	38	27 73		14 24		
2	213 07.1	− 5 59.1	303 46.4	118	07.7	47	56	16	53	36	37 71		14 03 27		
3	228 07.2	− 6 00.0	318 17.2	118	+ 19 03.0	47	54	19	54	35	45 69		13 54 29		
4	243 07.4	01.0	332 48.0	118	+ 18 58.2	48	52	21	54	33	22 53 68		46 30		
5	258 07.6	− 6 02.0	347 18.9	119	+ 18 53.3	49	50	17 23	17 55	18 32	23 00 66		13 39 31		
6	273 07.8	− 6 02.9	1 49.7	118	+ 18 48.3	50	45	17 27	17 56	18 30	23 15 63		13 23 35		
7	288 07.9	03.9	16 20.6	119	43.2	51	40	31	58	29	27 61		13 10 37		
8	303 08.1	04.8	30 51.4	118	38.0	52	35	34	17 59	29	38 58		12 59 39		
9	318 08.3	05.8	45 22.3	119	32.7	53	30	37	18 01	28	23 47 56		49 41		
10	333 08.5	06.7	59 53.2	119	27.3	54	20	42	04	29	** ** *		32 44		
11	348 08.6	− 6 07.7	74 24.1	119	+ 18 21.9	54	10 N	17 46	18 07	18 32	** ** *		12 18 46		
12	3 08.8	− 6 08.6	88 54.9	118	+ 18 16.3	56	0	17 51	18 11	18 36	** ** *		12 04 48		
13	18 09.0	09.6	103 25.8	119	10.6	57	10 S	17 55	16	41	** ** *		11 50 50		
14	33 09.1	10.5	117 56.7	119	+ 18 04.9	57	20	18 00	22	48	0 11 44		35 53		
15	48 09.3	11.5	132 27.7	120	+ 17 59.1	58	30	06	30	18 58	29 42		18 56		
16	63 09.5	12.4	146 58.6	119	53.2	60	35	09	35	19 05	39 41		11 08 57		
17	78 09.7	− 6 13.4	161 29.5	119	+ 17 47.1	60	40	18 13	18 40	19 13	0 51 39		10 57 59		
18	93 09.8	− 6 14.3	176 00.4	119	+ 17 41.0	61	45	18 17	18 47	19 23	1 05 37		10 44 61		
19	108 10.0	15.3	190 31.3	119	34.8	62	50	23	18 56	36	22 35		27 64		
20	123 10.2	16.2	205 02.3	120	28.6	62	52	25	19 00	42	30 33		19 66		
21	138 10.3	17.2	219 33.2	119	22.2	64	54	28	04	49	39 32		11 67		
22	153 10.5	18.1	234 04.2	120	15.7	65	56	31	09	19 57	1 49 30		10 01 69		
23	168 10.7	19.1	248 35.2	120	09.2	65	58	34	15	20 06	2 01 28		9 50 71		
24	183 10.9	− 6 20.0	263 06.1	119	+ 17 02.6	66	60 S	18 38	19 22	20 17	2 14 25		9 37 74		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 22 ^h 48 ^m 1		Mag.: −4.1 PMG: 9 ^h 22 ^m		Mag.: +1.2 PMG: 14 ^h 44 ^m		Mag.: −2.6 PMG: 3 ^h 52 ^m		Mag.: +0.7 PMG: 12 ^h 46 ^m						
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
^h	°	'	°	'	°	'	°	'	°	'					
0	17 01.8		219 29.4	+ 10 04.5	138 46.5	− 21 08.4	301 45.2	+ 21 55.0	168 04.9	− 9 27.5					
1	32 04.3		234 29.0	03.5	153 47.1	08.8	316 47.7	55.0	183 07.1	27.6					
2	47 06.8		249 28.6	02.6	168 47.7	09.2	331 50.2	55.0	198 09.3	27.7					
3	62 09.2		264 28.3	01.6	183 48.3	09.6	346 52.7	55.0	213 11.4	27.8					
4	77 11.7		279 27.9	+ 10 00.7	198 48.9	10.0	1 55.2	55.0	228 13.6	27.9					
5	92 14.2		294 27.6	+ 9 59.7	213 49.5	− 21 10.3	16 57.7	+ 21 55.0	243 15.8	− 9 28.0					
6	107 16.6		309 27.2	+ 9 58.8	228 50.1	− 21 10.7	32 00.2	+ 21 55.0	258 18.0	− 9 28.2					
7	122 19.1		324 26.9	57.8	243 50.7	11.1	47 02.7	55.0	273 20.2	28.3					
8	137 21.6		339 26.5	56.9	258 51.4	11.5	62 05.2	55.0	288 22.4	28.4					
9	152 24.0		354 26.1	55.9	273 52.0	11.9	77 07.7	55.0	303 24.5	28.5					
10	167 26.5		9 25.8	55.0	288 52.6	12.3	92 10.2	55.0	318 26.7	28.6					
11	182 29.0		24 25.4	+ 9 54.0	303 53.2	− 21 12.7	107 12.7	+ 21 54.9	333 28.9	− 9 28.7					
12	197 31.4		39 25.1	+ 9 53.0	318 53.8	− 21 13.1	122 15.2	+ 21 54.9	348 31.1	− 9 28.8					
13	212 33.9		54 24.7	52.1	333 54.4	13.4	137 17.7	54.9	3 33.3	28.9					
14	227 36.3		69 24.3	51.1	348 55.0	13.8	152 20.2	54.9	18 35.5	29.0					
15	242 38.8		84 24.0	50.2	3 55.6	14.2	167 22.7	54.9	33 37.6	29.1					
16	257 41.3		99 23.6	49.2	18 56.2	14.6	182 25.2	54.9	48 39.8	29.2					
17	272 43.7		114 23.3	+ 9 48.3	33 56.8	− 21 15.0	197 27.7	+ 21 54.9	63 42.0	− 9 29.3					
18	287 46.2		129 22.9	+ 9 47.3	48 57.4	− 21 15.4	212 30.2	+ 21 54.9	78 44.2	− 9 29.4					
19	302 48.7		144 22.6	46.4	63 58.1	15.8	227 32.7	54.9	93 46.4	29.5					
20	317 51.1		159 22.2	45.4	78 58.7	16.1	242 35.2	54.9	108 48.6	29.6					
21	332 53.6		174 21.9	44.4	93 59.3	16.5	257 37.7	54.9	123 50.7	29.7					
22	347 56.1		189 21.5	43.5	108 59.9	16.9	272 40.2	54.9	138 52.9	29.8					
23	2 58.5		204 21.1	42.5	124 00.5	17.3	287 42.7	54.9	153 55.1	29.9					
24	18 01.0		219 20.8	+ 9 41.6	139 01.1	− 21 17.7	302 45.2	+ 21 54.9	168 57.3	− 9 30.0					
Dif	—		−4	−10	+6	−4	+25	0	+22	−1					

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MARTES 9 DE OCTUBRE DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16°0 PMG: 11 ^h 47 ^m 1			SD: 15°1 Edad: 22 ^d 9 PHE { 4 ^h : 55°5 12 ^h : 55°7 20 ^h : 56°0 PMG: 6 ^h 41 ^m R°: 47 ^m								Hora R°		Hora R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
^h	°	'	°	°	'	°	'	°	^h	^m	^h	^m	^h	^m	^h	^m
0	183	10.9	− 6	263	06.1	+ 17	02.6	60 N	4 55	5 44	6 25	23 31	81	14 48	18	
1	198	11.0		277	37.1	+ 16	55.8	58	58	43	22	40	78	38	21	
2	213	11.2		292	08.1		49.0	56	4 59	42	20	48	75	30	22	
3	228	11.4		306	39.1		42.1	54	5 01	42	17	23 54	73	23	25	
4	243	11.5		321	10.1		35.2	52	02	41	15	** ** *	** ** *	16	27	
5	258	11.7	− 6	335	41.1	+ 16	28.1	50	5 03	5 40	6 13	** ** *	** ** *	14 10	29	
6	273	11.9	− 6	350	12.1	+ 16	21.0	45	5 05	5 39	6 08	** ** *	** ** *	13 58	31	
7	288	12.0		4	43.1		13.7	40	06	37	05	** ** *	** ** *	47	34	
8	303	12.2		19	14.1	+ 16	06.4	35	07	36	6 01	** ** *	** ** *	38	36	
9	318	12.4		33	45.1	+ 15	59.0	30	07	34	5 58	** ** *	** ** *	30	38	
10	333	12.6		48	16.1		51.5	20	05	31	53	0 03	53	16	42	
11	348	12.7	− 6	62	47.2	+ 15	43.9	10 N	5 03	5 27	5 48	0 16	51	13 04	45	
12	3	12.9	− 6	77	18.2	+ 15	36.3	0	4 59	5 23	5 44	0 29	48	12 52	48	
13	18	13.1		91	49.2		28.5	10 S	53	18	39	42	45	40	51	
14	33	13.2		106	20.3		20.7	20	46	12	34	0 55	43	28	54	
15	48	13.4		120	51.3		12.8	30	36	5 04	28	1 11	39	14	57	
16	63	13.6		135	22.4	+ 15	04.8	35	29	4 59	25	20	38	12 05	59	
17	78	13.7	− 6	149	53.4	+ 14	56.7	40	4 21	4 54	5 21	1 30	36	11 56	61	
18	93	13.9	− 6	164	24.5	+ 14	48.6	45	4 11	4 47	5 17	1 42	33	11 45	64	
19	108	14.1		178	55.6		40.4	50	3 58	38	11	1 57	30	31	68	
20	123	14.2		193	26.6		32.1	52	52	34	09	2 03	29	25	69	
21	138	14.4		207	57.7		23.7	54	45	29	06	11	27	18	71	
22	153	14.6		222	28.8		15.2	56	36	24	5 03	19	25	10	73	
23	168	14.7		236	59.8	+ 14	06.7	58	27	18	4 59	29	22	11 01	75	
24	183	14.9	− 6	251	30.9	+ 13	58.0	60 S	3 16	4 12	4 55	2 39	20	10 51	78	
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 22 ^h 44 ^m 2			Mag.: −4.1 PMG: 9 ^h 23 ^m			Mag.: +1.2 PMG: 14 ^h 43 ^m			Mag.: −2.6 PMG: 3 ^h 48 ^m			Mag.: +0.7 PMG: 12 ^h 42 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
^h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	
0	18	01.0		219	20.8	+ 9	139	01.1	− 21	302	45.2	+ 21	168	57.3	− 9	
1	33	03.4		234	20.4		154	01.7		317	47.7		183	59.5		
2	48	05.9		249	20.1		169	02.3		332	50.2		199	01.7		
3	63	08.4		264	19.7		184	02.9		347	52.7		214	03.9		
4	78	10.8		279	19.4		199	03.5		2	55.2		229	06.0		
5	93	13.3		294	19.0	+ 9	214	04.1	− 21	17	57.7	+ 21	244	08.2	− 9	
6	108	15.8		309	18.6	+ 9	229	04.7	− 21	33	00.2	+ 21	259	10.4	− 9	
7	123	18.2		324	18.3		244	05.3		48	02.7		274	12.6		
8	138	20.7		339	17.9		259	05.9		63	05.2		289	14.8		
9	153	23.2		354	17.6		274	06.5		78	07.7		304	17.0		
10	168	25.6		9	17.2		289	07.1		93	10.2		319	19.1		
11	183	28.1		24	16.9	+ 9	304	07.7	− 21	108	12.7	+ 21	334	21.3	− 9	
12	198	30.6		39	16.5	+ 9	319	08.3	− 21	123	15.3	+ 21	349	23.5	− 9	
13	213	33.0		54	16.2		334	08.9		138	17.8		4	25.7		
14	228	35.5		69	15.8		349	09.5		153	20.3		19	27.9		
15	243	37.9		84	15.4		4	10.1		168	22.8		34	30.0		
16	258	40.4		99	15.1		19	10.7		183	25.3		49	32.2		
17	273	42.9		114	14.7	+ 9	34	11.3	− 21	198	27.8	+ 21	64	34.4	− 9	
18	288	45.3		129	14.4	+ 9	49	11.9	− 21	213	30.3	+ 21	79	36.6	− 9	
19	303	47.8		144	14.0		64	12.5		228	32.8		94	38.8		
20	318	50.3		159	13.7		79	13.1		243	35.3		109	41.0		
21	333	52.7		174	13.3		94	13.7		258	37.9		124	43.1		
22	348	55.2		189	13.0		109	14.3		273	40.4		139	45.3		
23	3	57.7		204	12.6		124	14.9		288	42.9		154	47.5		
24	19	00.1		219	12.3	+ 9	139	15.5	− 21	303	45.4	+ 21	169	49.7	− 9	
Dif	—			−4	−10		+6	−4		+25			0	+22	−1	

MIÉRCOL 10 DE OCTUBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 11 ^h 46 ^m 9		SD: 15 ^h 3 Edad: 23 ^d 9 PHE { 4 ^h : 56 ^m 2 12 ^h : 56 ^m 5 20 ^h : 56 ^m 8 PMG: 7 ^h 28 ^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	h m	m	h m	m
0	183	14.9	− 6	251	30.9	+ 13	58.0	17 05	17 46	18 34	***	01	71	15 06	15
1	198	15.1		266	02.0		49.3	08	47	33	***	28	62	14 59	18
2	213	15.2		280	33.1		40.6	11	48	31	***	50	38	53	20
3	228	15.4		295	04.1		31.7	14	49	30	***	51	38	48	22
4	243	15.6		309	35.2		22.8	16	50	29	0	01	71	43	24
5	258	15.7	− 6	324	06.3	+ 13	13.8	17 19	17 51	18 28	0	06	69	14 39	25
6	273	15.9	− 6	338	37.4	+ 13	04.7	17 23	17 53	18 27	0	18	65	14 29	30
7	288	16.0		353	08.5	+ 12	55.5	28	55	26	28	62	21	33	33
8	303	16.2		7	39.5		46.3	31	57	26	36	60	14	35	35
9	318	16.4		22	10.6		37.0	34	17 58	26	43	58	14 08	38	38
10	333	16.5		36	41.7		27.6	40	18 02	28	0	56	54	13 58	41
11	348	16.7	− 6	51	12.7	+ 12	18.2	17 45	18 06	18 31	1	07	51	13 49	44
12	3	16.9	− 6	65	43.8	+ 12	08.7	17 50	18 11	18 35	1	17	48	13 40	48
13	18	17.0		80	14.9	+ 11	59.1	17 55	16	41	27	45	31	51	51
14	33	17.2		94	45.9		49.4	18 01	23	18 49	38	42	22	54	54
15	48	17.3		109	17.0		39.7	07	31	19 00	50	38	11	58	58
16	63	17.5		123	48.0		29.9	11	36	07	1	58	35	13 04	61
17	78	17.7	− 6	138	19.1	+ 11	20.0	18 15	18 42	19 15	2	06	33	12 57	64
18	93	17.8	− 6	152	50.1	+ 11	10.1	18 20	18 50	19 26	2	15	31	12 49	67
19	108	18.0	− 7	167	21.2	+ 11	00.1	26	18 59	40	27	26	39	70	70
20	123	18.2		181	52.2	+ 10	50.0	29	19 04	46	32	25	34	72	72
21	138	18.3		196	23.2		39.9	32	08	19 54	38	23	29	74	74
22	153	18.5		210	54.2		29.7	35	14	20 02	44	21	23	77	77
23	168	18.6		225	25.3		19.4	39	20	12	51	19	16	80	80
24	183	18.8	− 7	239	56.3	+ 10	09.1	18 43	19 27	20 24	2	59	17	12 09	82
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 22 ^h 40 ^m 3		Mag.: −4.1 PMG: 9 ^h 23 ^m		Mag.: +1.2 PMG: 14 ^h 42 ^m		Mag.: −2.6 PMG: 3 ^h 44 ^m		Mag.: +0.7 PMG: 12 ^h 39 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	19	00.1	219	12.3	+ 9	18.3	303	45.4	+ 21	54.7	169	49.7	− 9	32.6	
1	34	02.6	234	11.9		17.3	318	47.9		54.7	184	51.9		32.7	
2	49	05.1	249	11.5		16.4	333	50.4		54.7	199	54.1		32.8	
3	64	07.5	264	11.2		15.4	348	52.9		54.7	214	56.2		32.9	
4	79	10.0	279	10.8		14.4	3	55.4		54.7	229	58.4		33.0	
5	94	12.4	294	10.5	+ 9	13.4	18	58.0	+ 21	54.7	245	00.6	− 9	33.1	
6	109	14.9	309	10.1	+ 9	12.5	34	00.5	+ 21	54.7	260	02.8	− 9	33.2	
7	124	17.4	324	09.8		11.5	49	03.0		54.7	275	05.0		33.3	
8	139	19.8	339	09.4		10.5	64	05.5		54.7	290	07.2		33.4	
9	154	22.3	354	09.1		09.5	79	08.0		54.7	305	09.3		33.5	
10	169	24.8	9	08.7		08.6	94	10.5		54.7	320	11.5		33.6	
11	184	27.2	24	08.4	+ 9	07.6	109	13.1	+ 21	54.7	335	13.7	− 9	33.7	
12	199	29.7	39	08.0	+ 9	06.6	124	15.6	+ 21	54.7	350	15.9	− 9	33.8	
13	214	32.2	54	07.7		05.6	139	18.1		54.7	5	18.1		33.9	
14	229	34.6	69	07.3		04.6	154	20.6		54.7	20	20.2		34.1	
15	244	37.1	84	07.0		03.6	169	23.1		54.6	35	22.4		34.2	
16	259	39.5	99	06.6		02.7	184	25.6		54.6	50	24.6		34.3	
17	274	42.0	114	06.3	+ 9	01.7	199	28.2	+ 21	54.6	65	26.8	− 9	34.4	
18	289	44.5	129	05.9	+ 9	00.7	214	30.7	+ 21	54.6	80	29.0	− 9	34.5	
19	304	46.9	144	05.5	+ 8	59.7	229	33.2		54.6	95	31.2		34.6	
20	319	49.4	159	05.2		58.7	244	35.7		54.6	110	33.3		34.7	
21	334	51.9	174	04.8		57.7	259	38.2		54.6	125	35.5		34.8	
22	349	54.3	189	04.5		56.8	274	40.8		54.6	140	37.7		34.9	
23	4	56.8	204	04.1		55.8	289	43.3		54.6	155	39.9		35.0	
24	19	59.3	219	03.8	+ 8	54.8	304	45.8	+ 21	54.6	170	42.1	− 9	35.1	
Dif	—		−4 −10		+6 −4		+25 0		+22 −1						

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JUEVES 11 DE OCTUBRE DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 0 PMG: 11 ^h 46 ^m 6			SD: 15 ^h 5 Edad: 24 ^d 9 PHE $\begin{cases} 4^h: 57/1 \\ 12^h: 57/4 \\ 20^h: 57/7 \end{cases}$ PMG: 8 ^h 16 ^m R°: 49 ^m								Hora R°		Hora R°		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil						
h	°	'	°	°	'	°	'	°	N	h m	h m	h m	h m m	h m m	h m m	h m m
0	183	18.8	− 7 05.4	239	56.3	+ 10 09.1	104	60	5 00	5 48	6 30	0 52 84	15 21 14			
1	198	19.0	06.4	254	27.3	+ 9 58.7	105	58	02	47	27	0 58 80	17 16			
2	213	19.1	07.3	268	58.2	48.2	105	56	03	46	24	1 03 78	13 19			
3	228	19.3	08.3	283	29.2	37.7	106	54	04	45	21	07 76	10 21			
4	243	19.4	09.2	298	00.2	27.1	106	52	05	44	18	12 74	07 23			
5	258	19.6	− 7 10.1	312	31.1	+ 9 16.4	107	50	5 06	5 44	6 16	1 15 72	15 04 25			
6	273	19.8	− 7 11.1	327	02.1	+ 9 05.7	107	45	5 07	5 41	6 11	1 23 69	14 59 28			
7	288	19.9	12.0	341	33.0	+ 8 55.0	107	40	08	39	07	30 65	54 31			
8	303	20.1	13.0	356	03.9	44.1	109	35	08	37	6 03	36 62	49 35			
9	318	20.2	13.9	10	34.8	33.3	108	30	08	35	5 59	41 60	46 37			
10	333	20.4	14.8	25	05.7	22.3	110	20	06	31	54	50 55	39 41			
11	348	20.5	− 7 15.8	39	36.6	+ 8 11.3	110	10 N	5 03	5 27	5 48	1 58 51	14 33 45			
12	3	20.7	− 7 16.7	54	07.4	+ 8 00.3	110	0	4 58	5 22	5 43	2 05 48	14 28 48			
13	18	20.9	17.7	68	38.3	+ 7 49.2	111	10 S	52	17	38	12 45	22 52			
14	33	21.0	18.6	83	09.1	38.0	112	20	44	10	33	20 41	16 56			
15	48	21.2	19.5	97	39.9	26.8	112	30	33	5 02	26	28 37	09 61			
16	63	21.3	20.5	112	10.7	15.5	113	35	26	4 57	22	33 35	05 63			
17	78	21.5	− 7 21.4	126	41.5	+ 7 04.2	113	40	4 18	4 50	5 18	2 39 32	14 01 66			
18	93	21.6	− 7 22.4	141	12.3	+ 6 52.8	114	45	4 07	4 43	5 13	2 46 28	13 56 69			
19	108	21.8	23.3	155	43.0	41.4	114	50	3 53	34	07	53 26	49 74			
20	123	22.0	24.2	170	13.7	29.9	117	52	46	29	04	2 57 23	46 76			
21	138	22.1	25.2	184	44.4	18.4	115	54	39	24	5 01	3 01 21	43 77			
22	153	22.3	26.1	199	15.1	+ 6 06.8	116	56	30	19	4 58	05 20	40 79			
23	168	22.4	27.1	213	45.8	+ 5 55.2	116	58	20	12	54	10 17	36 82			
24	183	22.6	− 7 28.0	228	16.4	+ 5 43.5	117	60 S	3 09	4 05	4 49	3 16 14	13 31 85			
UT	ARIES		VENUS		MARTE		JÚPITER				SATURNO					
	PMG: 22 ^h 36 ^m 3		Mag.: −4.1 PMG: 9 ^h 24 ^m		Mag.: +1.2 PMG: 14 ^h 41 ^m		Mag.: −2.6 PMG: 3 ^h 40 ^m				Mag.: +0.7 PMG: 12 ^h 35 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃		Dec	hG ♄		Dec				
h	°	'	°	°	°	'	°	°	'	°	°	'	°	°	'	°
0	19	59.3	219 03.8	+ 8 54.8	139 29.8	− 21 35.7	304 45.8	+ 21 54.6	170 42.1	− 9 35.1						
1	35	01.7	234 03.4	53.8	154 30.4	36.0	319 48.3	54.6	185 44.2	35.2						
2	50	04.2	249 03.1	52.8	169 31.0	36.4	334 50.9	54.6	200 46.4	35.3						
3	65	06.7	264 02.7	51.8	184 31.6	36.8	349 53.4	54.6	215 48.6	35.4						
4	80	09.1	279 02.4	50.8	199 32.2	37.1	4 55.9	54.6	230 50.8	35.5						
5	95	11.6	294 02.0	+ 8 49.8	214 32.8	− 21 37.5	19 58.4	+ 21 54.6	245 53.0	− 9 35.6						
6	110	14.0	309 01.7	+ 8 48.9	229 33.3	− 21 37.9	35 01.0	+ 21 54.5	260 55.2	− 9 35.7						
7	125	16.5	324 01.3	47.9	244 33.9	38.2	50 03.5	54.5	275 57.3	35.8						
8	140	19.0	339 01.0	46.9	259 34.5	38.6	65 06.0	54.5	290 59.5	35.9						
9	155	21.4	354 00.6	45.9	274 35.1	39.0	80 08.5	54.5	306 01.7	36.1						
10	170	23.9	9 00.3	44.9	289 35.7	39.3	95 11.1	54.5	321 03.9	36.2						
11	185	26.4	23 59.9	+ 8 43.9	304 36.3	− 21 39.7	110 13.6	+ 21 54.5	336 06.1	− 9 36.3						
12	200	28.8	38 59.6	+ 8 42.9	319 36.9	− 21 40.1	125 16.1	+ 21 54.5	351 08.2	− 9 36.4						
13	215	31.3	53 59.2	41.9	334 37.5	40.4	140 18.6	54.5	6 10.4	36.5						
14	230	33.8	68 58.9	40.9	349 38.0	40.8	155 21.2	54.5	21 12.6	36.6						
15	245	36.2	83 58.5	39.9	4 38.6	41.1	170 23.7	54.5	36 14.8	36.7						
16	260	38.7	98 58.2	38.9	19 39.2	41.5	185 26.2	54.5	51 17.0	36.8						
17	275	41.1	113 57.8	+ 8 37.9	34 39.8	− 21 41.9	200 28.7	+ 21 54.5	66 19.2	− 9 36.9						
18	290	43.6	128 57.5	+ 8 36.9	49 40.4	− 21 42.2	215 31.3	+ 21 54.5	81 21.3	− 9 37.0						
19	305	46.1	143 57.1	35.9	64 41.0	42.6	230 33.8	54.5	96 23.5	37.1						
20	320	48.5	158 56.8	34.9	79 41.6	42.9	245 36.3	54.4	111 25.7	37.2						
21	335	51.0	173 56.4	33.9	94 42.1	43.3	260 38.9	54.4	126 27.9	37.3						
22	350	53.5	188 56.1	32.9	109 42.7	43.7	275 41.4	54.4	141 30.1	37.4						
23	5	55.9	203 55.7	31.9	124 43.3	44.0	290 43.9	54.4	156 32.2	37.5						
24	20	58.4	218 55.4	+ 8 31.0	139 43.9	− 21 44.4	305 46.5	+ 21 54.4	171 34.4	− 9 37.6						
Dif	—		−4	−10	+6	−4	+25	0	+22	−1						

VIERNES 12 DE OCTUBRE DE 2012

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UT	SOL			LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 46 ^m 4			SD: 15'8 Edad: 25 ^d 9	PHE { 4 ^h : 58'0 12 ^h : 58'3 20 ^h : 58'6											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°	
^h	°	'	°	°	'	°	'	°	^h ^m	^h ^m	^h ^m	^h ^m ^s	^h ^m ^s	^h ^m ^s	^h ^m ^s	
0	183	22.6	− 7 28.0	228	16.4	+ 5 43.5	117	60 N	16 59	17 41	18 29	2 16 86	15 35 13			
1	198	22.7	28.9	242	47.0	31.8	116	58	17 03	42	27	18 84	33 17			
2	213	22.9	29.9	257	17.6	20.1	117	56	06	43	26	21 81	32 19			
3	228	23.0	30.8	271	48.2	+ 5 08.3	116	54	09	45	25	23 79	31 21			
4	243	23.2	31.7	286	18.7	+ 4 56.4	115	52	12	46	25	26 76	30 23			
5	258	23.3	− 7 32.7	300	49.3	+ 4 44.5	116	50	17 14	17 47	18 24	2 27 75	15 29 25			
6	273	23.5	− 7 33.6	315	19.7	+ 4 32.6	119	45	17 20	17 49	18 23	2 32 70	15 27 29			
7	288	23.7	34.6	329	50.2	20.7	115	40	25	52	23	35 67	25 33			
8	303	23.8	35.5	344	20.6	+ 4 08.7	120	35	29	54	23	38 64	24 35			
9	318	24.0	36.4	358	51.1	+ 3 56.6	121	30	32	17 56	24	41 61	23 37			
10	333	24.1	37.4	13	21.4	44.5	121	20	39	18 01	26	45 57	20 43			
11	348	24.3	− 7 38.3	27	51.8	+ 3 32.4	121	10 N	17 44	18 05	18 30	2 49 53	15 18 47			
12	3	24.4	− 7 39.2	42	22.1	+ 3 20.3	121	0	17 50	18 11	18 35	2 53 49	15 16 51			
13	18	24.6	40.2	56	52.4	+ 3 08.1	122	10 S	17 55	16	41	2 57 46	14 54			
14	33	24.7	41.1	71	22.7	+ 2 55.9	122	20	18 01	24	18 50	3 01 42	12 58			
15	48	24.9	42.0	85	52.9	43.6	123	30	08	33	19 01	05 38	10 63			
16	63	25.0	43.0	100	23.1	31.3	123	35	12	38	09	08 35	08 66			
17	78	25.2	− 7 43.9	114	53.2	+ 2 19.0	123	40	18 17	18 45	19 18	3 11 32	15 07 68			
18	93	25.3	− 7 44.8	129	23.4	+ 2 06.7	123	45	18 22	18 53	19 29	3 14 29	15 05 72			
19	108	25.5	45.8	143	53.4	+ 1 54.3	124	50	29	19 03	43	19 24	03 76			
20	123	25.6	46.7	158	23.5	42.0	123	52	32	07	50	20 23	02 78			
21	138	25.8	47.6	172	53.5	29.5	125	54	35	12	19 58	22 21	15 00 81			
22	153	25.9	48.6	187	23.5	17.1	124	56	39	18	20 07	25 19	14 59 83			
23	168	26.1	49.5	201	53.4	+ 1 04.6	125	58	43	25	18	27 17	58 85			
24	183	26.2	− 7 50.5	216	23.3	+ 0 52.1	125	60 S	18 48	19 33	20 30	3 30 14	14 56 88			
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 32 ^m 4		Mag.: −4.1 PMG: 9 ^h 25 ^m			Mag.: +1.2 PMG: 14 ^h 41 ^m			Mag.: −2.6 PMG: 3 ^h 36 ^m			Mag.: +0.7 PMG: 12 ^h 32 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
^h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	°	
0	20	58.4	218	55.4	+ 8 31.0	139	43.9	− 21 44.4	305	46.5	+ 21 54.4	171	34.4	− 9 37.6		
1	36	00.9	233	55.0	30.0	154	44.5	44.8	320	49.0	54.4	186	36.6	37.7		
2	51	03.3	248	54.7	29.0	169	45.1	45.1	335	51.5	54.4	201	38.8	37.8		
3	66	05.8	263	54.3	28.0	184	45.6	45.5	350	54.1	54.4	216	41.0	37.9		
4	81	08.3	278	54.0	26.9	199	46.2	45.8	5	56.6	54.4	231	43.1	38.1		
5	96	10.7	293	53.6	+ 8 25.9	214	46.8	− 21 46.2	20	59.1	+ 21 54.4	246	45.3	− 9 38.2		
6	111	13.2	308	53.3	+ 8 24.9	229	47.4	− 21 46.5	36	01.6	+ 21 54.4	261	47.5	− 9 38.3		
7	126	15.6	323	52.9	23.9	244	48.0	46.9	51	04.2	54.4	276	49.7	38.4		
8	141	18.1	338	52.6	22.9	259	48.5	47.3	66	06.7	54.4	291	51.9	38.5		
9	156	20.6	353	52.2	21.9	274	49.1	47.6	81	09.3	54.3	306	54.1	38.6		
10	171	23.0	8	51.9	20.9	289	49.7	48.0	96	11.8	54.3	321	56.2	38.7		
11	186	25.5	23	51.5	+ 8 19.9	304	50.3	− 21 48.3	111	14.3	+ 21 54.3	336	58.4	− 9 38.8		
12	201	28.0	38	51.2	+ 8 18.9	319	50.9	− 21 48.7	126	16.9	+ 21 54.3	352	00.6	− 9 38.9		
13	216	30.4	53	50.8	17.9	334	51.5	49.0	141	19.4	54.3	7	02.8	39.0		
14	231	32.9	68	50.5	16.9	349	52.0	49.4	156	21.9	54.3	22	05.0	39.1		
15	246	35.4	83	50.1	15.9	4	52.6	49.7	171	24.5	54.3	37	07.1	39.2		
16	261	37.8	98	49.8	14.9	19	53.2	50.1	186	27.0	54.3	52	09.3	39.3		
17	276	40.3	113	49.4	+ 8 13.9	34	53.8	− 21 50.5	201	29.5	+ 21 54.3	67	11.5	− 9 39.4		
18	291	42.8	128	49.1	+ 8 12.9	49	54.3	− 21 50.8	216	32.1	+ 21 54.3	82	13.7	− 9 39.5		
19	306	45.2	143	48.7	11.9	64	54.9	51.2	231	34.6	54.3	97	15.9	39.6		
20	321	47.7	158	48.4	10.9	79	55.5	51.5	246	37.2	54.3	112	18.0	39.7		
21	336	50.1	173	48.0	09.9	94	56.1	51.9	261	39.7	54.2	127	20.2	39.8		
22	351	52.6	188	47.7	08.8	109	56.7	52.2	276	42.2	54.2	142	22.4	39.9		
23	6	55.1	203	47.3	07.8	124	57.2	52.6	291	44.8	54.2	157	24.6	40.1		
24	21	57.5	218	47.0	+ 8 06.8	139	57.8	− 21 52.9	306	47.3	+ 21 54.2	172	26.8	− 9 40.2		
Dif	—		−3	−10		+6	−4		+25		0	+22	−1			

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SÁBADO 13 DE OCTUBRE DE 2012

UT	SOL			☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16'0 PMG: 11 ^h 46 ^m 1			SD: 16'0 Edad: 26 ^d 9 PMG: 9 ^h 54 ^m R°: 52 ^m					PHE { 4 ^h : 58'9 12 ^h : 59'2 20 ^h : 59'4			de Luna		de Luna				
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°			
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	26.2	- 7	50.5	216	23.3	+ 0	52.1	5 05	5 53	6 35	3 42	90	15 48	15	48		
1	198	26.4		51.4	230	53.2		39.6	06	52	31	42	87	50	17	48		
2	213	26.5		52.3	245	23.0		27.1	07	50	28	42	85	51	20	48		
3	228	26.7		53.3	259	52.8		14.6	08	49	25	42	82	52	23	48		
4	243	26.8		54.2	274	22.6	+ 0	02.0	09	48	22	42	80	53	25	48		
5	258	27.0	- 7	55.1	288	52.3	- 0	10.6	5 09	5 47	6 19	3 42	78	15 54	27	48		
6	273	27.1	- 7	56.0	303	21.9	- 0	23.2	5 10	5 44	6 13	3 42	74	15 56	31	48		
7	288	27.3		57.0	317	51.5		35.8	10	41	09	42	70	58	34	48		
8	303	27.4		57.9	332	21.1	- 0	48.4	10	39	04	42	67	15 59	37	48		
9	318	27.6		58.8	346	50.6	- 1	01.0	09	37	6 01	42	64	16 00	40	48		
10	333	27.7	- 7	59.8	1	20.1		13.7	06	32	5 54	42	60	03	44	48		
11	348	27.9	- 8	00.7	15	49.5	- 1	26.3	5 03	5 27	5 48	3 42	55	16 05	48	48		
12	3	28.0	- 8	01.6	30	18.9	- 1	39.0	4 58	5 22	5 43	3 42	52	16 07	52	48		
13	18	28.1		02.6	44	48.2	- 1	51.6	51	16	37	43	47	08	56	48		
14	33	28.3		03.5	59	17.5	- 2	04.3	43	09	31	43	43	10	61	48		
15	48	28.4		04.4	73	46.8		17.0	31	5	00	43	39	13	64	48		
16	63	28.6		05.4	88	16.0		29.6	23	4	54	20	43	36	14	67		
17	78	28.7	- 8	06.3	102	45.1	- 2	42.3	4	47	5	15	3	43	33	71		
18	93	28.9	- 8	07.2	117	14.2	- 2	55.0	4	03	4	39	3	43	30	74		
19	108	29.0		08.2	131	43.2	- 3	07.7	3	48	29	03	43	26	19	79		
20	123	29.2		09.1	146	12.2		20.3	41	24	5	00	43	24	20	81		
21	138	29.3		10.0	160	41.1		33.0	33	19	4	56	43	22	21	83		
22	153	29.5		10.9	175	10.0		45.7	24	13	52	44	19	22	85	48		
23	168	29.6		11.9	189	38.8	- 3	58.3	14	4	07	48	17	23	88	48		
24	183	29.7	- 8	12.8	204	07.6	- 4	10.9	3	01	3	59	4	44	16	24		
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO					
	PMG: 22 ^h 28 ^m 5			Mag.: -4.1 PMG: 9 ^h 25 ^m			Mag.: +1.2 PMG: 14 ^h 40 ^m			Mag.: -2.6 PMG: 3 ^h 32 ^m			Mag.: +0.7 PMG: 12 ^h 28 ^m					
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'		
0	21	57.5		218	47.0	+ 8	06.8	139	57.8	- 21	52.9	306	47.3	+ 21	54.2	172	26.8	
1	37	00.0		233	46.7		05.8	154	58.4		53.3	321	49.9		54.2	187	28.9	
2	52	02.5		248	46.3		04.8	169	59.0		53.6	336	52.4		54.2	202	31.1	
3	67	04.9		263	46.0		03.8	184	59.5		54.0	351	54.9		54.2	217	33.3	
4	82	07.4		278	45.6		02.8	200	00.1		54.3	6	57.5		54.2	232	35.5	
5	97	09.9		293	45.3	+ 8	01.8	215	00.7	- 21	54.7	22	00.0	+ 21	54.2	247	37.7	
6	112	12.3		308	44.9	+ 8	00.8	230	01.3	- 21	55.0	37	02.6	+ 21	54.2	262	39.8	
7	127	14.8		323	44.6	+ 7	59.7	245	01.8		55.4	52	05.1		54.2	277	42.0	
8	142	17.2		338	44.2		58.7	260	02.4		55.7	67	07.6		54.1	292	44.2	
9	157	19.7		353	43.9		57.7	275	03.0		56.1	82	10.2		54.1	307	46.4	
10	172	22.2		8	43.5		56.7	290	03.6		56.4	97	12.7		54.1	322	48.6	
11	187	24.6		23	43.2	+ 7	55.7	305	04.1	- 21	56.8	112	15.3	+ 21	54.1	337	50.7	
12	202	27.1		38	42.8	+ 7	54.7	320	04.7	- 21	57.1	127	17.8	+ 21	54.1	352	52.9	
13	217	29.6		53	42.5		53.6	335	05.3		57.5	142	20.4		54.1	7	55.1	
14	232	32.0		68	42.1		52.6	350	05.8		57.8	157	22.9		54.1	22	57.3	
15	247	34.5		83	41.8		51.6	5	06.4		58.2	172	25.5		54.1	37	59.5	
16	262	37.0		98	41.4		50.6	20	07.0		58.5	187	28.0		54.1	53	01.6	
17	277	39.4		113	41.1	+ 7	49.6	35	07.6	- 21	58.9	202	30.6	+ 21	54.1	68	03.8	
18	292	41.9		128	40.8	+ 7	48.6	50	08.1	- 21	59.2	217	33.1	+ 21	54.1	83	06.0	
19	307	44.4		143	40.4		47.5	65	08.7		59.6	232	35.6		54.1	98	08.2	
20	322	46.8		158	40.1		46.5	80	09.3	- 21	59.9	247	38.2		54.0	113	10.4	
21	337	49.3		173	39.7		45.5	95	09.8	- 22	00.2	262	40.7		54.0	128	12.5	
22	352	51.7		188	39.4		44.5	110	10.4		00.6	277	43.3		54.0	143	14.7	
23	7	54.2		203	39.0		43.4	125	11.0		00.9	292	45.8		54.0	158	16.9	
24	22	56.7		218	38.7	+ 7	42.4	140	11.5	- 22	01.3	307	48.4	+ 21	54.0	173	19.1	
Dif	—			-3			-10			+6			-3			+25		
																0		
																+22		
																-		

DOMINGO 14 DE OCTUBRE DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna		
	SD: 16'0 PMG: 11 ^h 45 ^m 9		SD: 16'2 Edad: 27 ^d 9		PHE $\left\{ \begin{array}{l} 4^{\text{h}}: 59'7 \\ 12^{\text{h}}: 59'9 \\ 20^{\text{h}}: 60'1 \end{array} \right.$				PMG: 10 ^h 46 ^m R°: 54 ^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	^m	
0	183	29.7	− 8 12.8		204	07.6		16 53	17 35	18 23	5 12	94	16 03	18 21		
1	198	29.9		13.7	218	36.3	97	16 57	37	22	09	90	07	21		
2	213	30.0		14.7	233	05.0	97	17 01	38	21	07	87	11	24		
3	228	30.2		15.6	247	33.6	96	04	40	21	04	85	15	25		
4	243	30.3		16.5	262	02.1	95	07	41	20	02	82	18	28		
5	258	30.5	− 8 17.4		276	30.6	95	17 10	17 43	18 20	5 00	80	16 21	29		
6	273	30.6	− 8 18.4		290	59.0	94	17 16	17 46	18 20	4 56	75	16 27	34		
7	288	30.7		19.3	305	27.4	94	22	49	20	52	72	32	37		
8	303	30.9		20.2	319	55.7	93	26	51	21	49	69	36	41		
9	318	31.0		21.2	334	24.0	93	30	54	22	46	66	40	43		
10	333	31.2		22.1	348	52.1	91	37	17 59	25	42	61	47	48		
11	348	31.3	− 8 23.0		3 20.3	92	− 6 29.0	17 43	18 04	18 29	4 37	58	16 53	51		
12	3 31.5	− 8 23.9			17 48.3	90	− 6 41.4	17 49	18 10	18 34	4 34	53	16 59	55		
13	18 31.6	24.9			32 16.3	90	− 6 53.8	17 55	17	41	30	50	17 04	59		
14	33 31.7	25.8			46 44.3	90	− 7 06.2	18 02	24	18 50	26	46	11	62		
15	48 31.9	26.7			61 12.2	89	18.5	30	10	34	19	03	22	41		
16	63 32.0	27.6			75 40.0	88	30.8	35	14	40	11	19	39	21		
17	78 32.2	− 8 28.6			90 07.7	87	− 7 43.1	18 19	18 47	19 20	4 16	36	17 26	70		
18	93 32.3	− 8 29.5			104 35.4	87	− 7 55.3	18 25	18 55	19 32	4 13	32	17 31	77		
19	108 32.4	30.4			119 03.0	86	− 8 07.5	32	19 06	47	09	28	38	80		
20	123 32.6	31.3			133 30.6	86	19.6	36	11	19 55	07	26	41	82		
21	138 32.7	32.3			147 58.1	85	31.7	39	17	20 03	05	24	44	85		
22	153 32.8	33.2			162 25.5	84	43.8	43	23	13	03	22	47	88		
23	168 33.0	34.1			176 52.8	83	− 8 55.8	48	30	24	4 01	19	51	91		
24	183 33.1	− 8 35.0			191 20.1	83	− 9 07.8	18 53	19 38	20 37	3 58	16	17 56	94		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 22 ^h 24 ^m 5		Mag.: −4.1 PMG: 9 ^h 26 ^m		Mag.: +1.2 PMG: 14 ^h 39 ^m		Mag.: −2.6 PMG: 3 ^h 28 ^m		Mag.: +0.7 PMG: 12 ^h 25 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
^h	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']
0	22	56.7	218	38.7	+ 7 42.4	140	11.5	− 22 01.3	307	48.4	+ 21 54.0	173	19.1	− 9 42.7		
1	37	59.1	233	38.3	41.4	155	12.1	01.6	322	50.9	54.0	188	21.3	42.8		
2	53	01.6	248	38.0	40.4	170	12.7	02.0	337	53.5	54.0	203	23.4	42.9		
3	68	04.1	263	37.6	39.4	185	13.3	02.3	352	56.0	54.0	218	25.6	43.0		
4	83	06.5	278	37.3	38.3	200	13.8	02.7	7	58.6	54.0	233	27.8	43.1		
5	98	09.0	293	37.0	+ 7 37.3	215	14.4	− 22 03.0	23	01.1	+ 21 54.0	248	30.0	− 9 43.2		
6	113	11.5	308	36.6	+ 7 36.3	230	15.0	− 22 03.3	38	03.7	+ 21 53.9	263	32.2	− 9 43.3		
7	128	13.9	323	36.3	35.3	245	15.5	03.7	53	06.2	53.9	278	34.3	43.4		
8	143	16.4	338	35.9	34.2	260	16.1	04.0	68	08.8	53.9	293	36.5	43.5		
9	158	18.8	353	35.6	33.2	275	16.7	04.4	83	11.4	53.9	308	38.7	43.6		
10	173	21.3	8 35.2	32.2	32.2	290	17.2	04.7	98	13.9	53.9	323	40.9	43.7		
11	188	23.8	23 34.9	+ 7 31.2	31.2	305	17.8	− 22 05.0	113	16.5	+ 21 53.9	338	43.1	− 9 43.8		
12	203	26.2	38 34.5	+ 7 30.1	30.1	320	18.4	− 22 05.4	128	19.0	+ 21 53.9	353	45.2	− 9 43.9		
13	218	28.7	53 34.2	29.1	29.1	335	18.9	05.7	143	21.6	53.9	8 47.4	44.1			
14	233	31.2	68 33.8	28.1	28.1	350	19.5	06.1	158	24.1	53.9	23 49.6	44.2			
15	248	33.6	83 33.5	27.0	27.0	5 20.0	06.4	06.4	173	26.7	53.9	38 51.8	44.3			
16	263	36.1	98 33.2	26.0	26.0	20 20.6	06.7	06.7	188	29.2	53.9	53 54.0	44.4			
17	278	38.6	113 32.8	+ 7 25.0	25.0	35 21.2	− 22 07.1	07.1	203	31.8	+ 21 53.8	68 56.1	− 9 44.5			
18	293	41.0	128 32.5	+ 7 24.0	24.0	50 21.7	− 22 07.4	07.4	218	34.3	+ 21 53.8	83 58.3	− 9 44.6			
19	308	43.5	143 32.1	22.9	22.9	65 22.3	07.8	07.8	233	36.9	53.8	99 00.5	44.7			
20	323	46.0	158 31.8	21.9	21.9	80 22.9	08.1	08.1	248	39.5	53.8	114 02.7	44.8			
21	338	48.4	173 31.4	20.9	20.9	95 23.4	08.4	08.4	263	42.0	53.8	129 04.8	44.9			
22	353	50.9	188 31.1	19.8	19.8	110 24.0	08.8	08.8	278	44.6	53.8	144 07.0	45.0			
23	8 53.3	203 30.8	18.8	18.8	18.8	125 24.6	09.1	09.1	293	47.1	53.8	159 09.2	45.1			
24	23 55.8	218 30.4	+ 7 17.8	17.8	17.8	140 25.1	− 22 09.4	09.4	308	49.7	+ 21 53.8	174 11.4	− 9 45.2			
Dif	—	−3	−10		+6	−3		+26	0		+22	−1				

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LUNES 15 DE OCTUBRE DE 2012

UT	SOL			● LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'0 PMG: 11 ^h 45 ^m 7			SD: 16'4 Edad: 28 ^d 9 PHE { 4 ^h : 60'3 12 ^h : 60'5 20 ^h : 60'6 PMG: 11 ^h 40 ^m R°: 58 ^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	h m m
0	183	33.1	− 8 35.0	191	20.1	82	− 9 07.8	119	60 N	5 10	5 58	6 40	6 46 94	16 21 23	
1	198	33.3	36.0	205	47.3	82	19.7	119	58	11	56	36	39 91	28 27	
2	213	33.4	36.9	220	14.5	82	31.6	119	56	11	54	32	34 88	35 29	
3	228	33.5	37.8	234	41.6	81	43.4	118	54	12	53	28	29 85	40 32	
4	243	33.7	38.7	249	08.6	80	− 9 55.2	118	52	12	51	25	24 83	46 33	
5	258	33.8	− 8 39.7	263	35.5	79	− 10 06.9	117	50	5 12	5 50	6 22	6 20 81	16 50 36	
6	273	33.9	− 8 40.6	278	02.4	79	− 10 18.6	117	45	5 12	5 46	6 16	6 11 77	17 01 39	
7	288	34.1	41.5	292	29.2	78	30.2	116	40	12	43	11	6 04 74	09 43	
8	303	34.2	42.4	306	56.0	78	41.8	116	35	11	41	06	5 58 70	17 45	
9	318	34.4	43.4	321	22.7	77	− 10 53.3	115	30	10	38	6 02	52 68	23 48	
10	333	34.5	44.3	335	49.3	76	− 11 04.7	114	20	07	33	5 55	43 64	35 51	
11	348	34.6	− 8 45.2	350	15.8	75	− 11 16.1	114	10 N	5 03	5 27	5 48	5 35 60	17 44 55	
12	3	34.8	− 8 46.1	4	42.3	75	− 11 27.4	113	0	4 57	5 21	5 42	5 27 57	17 54 58	
13	18	34.9	47.0	19	08.7	74	38.6	112	10 S	50	15	36	20 53	18 03 61	
14	33	35.0	48.0	33	35.0	73	− 11 49.8	112	20	41	5 07	29	12 49	13 65	
15	48	35.2	48.9	48	01.2	72	− 12 00.9	111	30	29	4 57	22	5 03 45	25 68	
16	63	35.3	49.8	62	27.4	72	11.9	110	35	21	51	17	4 58 42	31 71	
17	78	35.4	− 8 50.7	76	53.6	72	− 12 22.8	109	40	4 11	4 44	5 12	4 52 40	18 39 73	
18	93	35.6	− 8 51.6	91	19.6	70	− 12 33.7	109	45	3 59	4 36	5 06	4 45 37	18 48 76	
19	108	35.7	52.6	105	45.6	70	44.5	108	50	44	25	4 59	37 33	18 58 81	
20	123	35.8	53.5	120	11.5	69	− 12 55.2	107	52	36	20	55	33 31	19 03 83	
21	138	36.0	54.4	134	37.3	68	− 13 05.8	106	54	28	14	51	29 29	09 84	
22	153	36.1	55.3	149	03.1	68	16.4	106	56	18	08	47	25 26	15 87	
23	168	36.2	56.2	163	28.8	67	26.9	105	58	3 07	4 01	43	20 24	22 90	
24	183	36.4	− 8 57.2	177	54.5	67	− 13 37.3	104	60 S	2 53	3 52	4 38	4 14 21	19 30 93	
UT	ARIES		VENUS		MARTE			JÚPITER			SATURNO				
	PMG: 22 ^h 20 ^m 6		Mag.: −4.1 PMG: 9 ^h 26 ^m		Mag.: +1.2 PMG: 14 ^h 38 ^m			Mag.: −2.6 PMG: 3 ^h 24 ^m			Mag.: +0.7 PMG: 12 ^h 21 ^m				
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	°	°	'	°	'	°	'	°	'	°	'	
0	23	55.8	218	30.4	+ 7 17.8	140	25.1	− 22 09.4	308	49.7	+ 21 53.8	174	11.4	− 9 45.2	
1	38	58.3	233	30.1	16.7	155	25.7	09.8	323	52.2	53.8	189	13.6	45.3	
2	54	00.7	248	29.7	15.7	170	26.2	10.1	338	54.8	53.8	204	15.7	45.4	
3	69	03.2	263	29.4	14.7	185	26.8	10.4	353	57.4	53.7	219	17.9	45.5	
4	84	05.7	278	29.0	13.6	200	27.4	10.8	8	59.9	53.7	234	20.1	45.6	
5	99	08.1	293	28.7	+ 7 12.6	215	27.9	− 22 11.1	24	02.5	+ 21 53.7	249	22.3	− 9 45.7	
6	114	10.6	308	28.3	+ 7 11.6	230	28.5	− 22 11.4	39	05.0	+ 21 53.7	264	24.5	− 9 45.8	
7	129	13.1	323	28.0	10.5	245	29.0	11.8	54	07.6	53.7	279	26.6	45.9	
8	144	15.5	338	27.7	09.5	260	29.6	12.1	69	10.2	53.7	294	28.8	46.1	
9	159	18.0	353	27.3	08.4	275	30.2	12.4	84	12.7	53.7	309	31.0	46.2	
10	174	20.4	8	27.0	07.4	290	30.7	12.8	99	15.3	53.7	324	33.2	46.3	
11	189	22.9	23	26.6	+ 7 06.4	305	31.3	− 22 13.1	114	17.8	+ 21 53.7	339	35.4	− 9 46.4	
12	204	25.4	38	26.3	+ 7 05.3	320	31.8	− 22 13.4	129	20.4	+ 21 53.6	354	37.5	− 9 46.5	
13	219	27.8	53	25.9	04.3	335	32.4	13.8	144	23.0	53.6	9	39.7	46.6	
14	234	30.3	68	25.6	03.3	350	33.0	14.1	159	25.5	53.6	24	41.9	46.7	
15	249	32.8	83	25.3	02.2	5	33.5	14.4	174	28.1	53.6	39	44.1	46.8	
16	264	35.2	98	24.9	01.2	20	34.1	14.8	189	30.7	53.6	54	46.2	46.9	
17	279	37.7	113	24.6	+ 7 00.1	35	34.6	− 22 15.1	204	33.2	+ 21 53.6	69	48.4	− 9 47.0	
18	294	40.2	128	24.2	+ 6 59.1	50	35.2	− 22 15.4	219	35.8	+ 21 53.6	84	50.6	− 9 47.1	
19	309	42.6	143	23.9	58.1	65	35.7	15.8	234	38.4	53.6	99	52.8	47.2	
20	324	45.1	158	23.5	57.0	80	36.3	16.1	249	40.9	53.6	114	55.0	47.3	
21	339	47.6	173	23.2	56.0	95	36.8	16.4	264	43.5	53.6	129	57.1	47.4	
22	354	50.0	188	22.9	54.9	110	37.4	16.7	279	46.1	53.5	144	59.3	47.5	
23	9	52.5	203	22.5	53.9	125	38.0	17.1	294	48.6	53.5	160	01.5	47.6	
24	24	54.9	218	22.2	+ 6 52.8	140	38.5	− 22 17.4	309	51.2	+ 21 53.5	175	03.7	− 9 47.7	
Dif	—		−3 −10		+6 −3			+26 0			+22 −1				


MARTES 16 DE OCTUBRE DE 2012

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UT	SOL		● LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 16'0 PMG: 11 ^h 45 ^m 5		SD: 16'5 Edad: 0 ^d 5		PHE { 4 ^h : 60'7 12 ^h : 60'8 20 ^h : 60'8													
	PMG: 12 ^h 38 ^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	183	36.4	− 8	177	54.5	− 13	37.3	60 N	16 47	17 30	18 18	8 20	92	16 44	32			
1	198	36.5		192	20.0		47.6	58	52	32	17	10	88	16 55	35			
2	213	36.6		206	45.5	− 13	57.8	56	16 56	34	17	8 02	85	17 04	37			
3	228	36.8	− 8	221	11.0	− 14	07.9	54	17 00	35	16	7 54	83	12	39			
4	243	36.9	− 9	235	36.3		17.9	52	03	37	16	47	82	19	42			
5	258	37.0	− 9	250	01.6	− 14	27.9	50	17 06	17 39	18 16	7 41	80	17 26	43			
6	273	37.1	− 9	264	26.9	− 14	37.7	45	17 13	17 43	18 17	7 28	76	17 40	46			
7	288	37.3		278	52.0		47.5	40	19	46	17	18	73	17 52	48			
8	303	37.4		293	17.1	− 14	57.1	36	23	49	18	08	71	18 02	50			
9	318	37.5		307	42.2	− 15	06.7	30	28	52	20	7 00	69	11	52			
10	333	37.7		322	07.1		16.1	20	35	17 58	23	6 47	65	26	55			
11	348	37.8	− 9	336	32.1	− 15	25.4	10 N	17 42	18 04	18 28	6 35	62	18 39	58			
12	3	37.9	− 9	350	56.9	− 15	34.7	0	17 49	18 10	18 34	6 24	59	18 52	60			
13	18	38.1		5	21.7		43.8	10 S	17 55	17	42	13	56	19 04	63			
14	33	38.2		19	46.4	− 15	52.9	91	20	18 03	25	6 01	54	18	65			
15	48	38.3		34	11.1	− 16	01.8	89	30	11	35	5 48	50	33	68			
16	63	38.4		48	35.7		10.6	88	35	16	42	13	40	48	70			
17	78	38.6	− 9	63	00.2	− 16	19.3	87	40	18 21	18 49	19 23	5 32	45	19 52	72		
18	93	38.7	− 9	77	24.7	− 16	27.9	86	45	18 28	18 58	19 35	5 22	42	20 04	75		
19	108	38.8		91	49.1		36.4	85	50	35	19 10	51	10	39	19	77		
20	123	38.9		106	13.4		44.7	83	52	39	15	19 59	5 04	37	26	79		
21	138	39.1		120	37.7	− 16	53.0	83	54	43	21	20 08	4 58	35	33	81		
22	153	39.2		135	02.0	− 17	01.1	81	56	47	27	18	51	33	42	82		
23	168	39.3		149	26.2		09.1	80	58	52	35	30	44	30	20	84		
24	183	39.4	− 9	163	50.3	− 17	17.0	79	60 S	18 58	19 44	20 44	4 35	27	21 03	87		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 22 ^h 16 ^m 7		Mag.: −4.1 PMG: 9 ^h 27 ^m		Mag.: +1.2 PMG: 14 ^h 37 ^m		Mag.: −2.6 PMG: 3 ^h 20 ^m		Mag.: +0.7 PMG: 12 ^h 18 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'				
0	24	54.9	218	22.2	+ 6	52.8	140	38.5	− 22	17.4	309	51.2	+ 21	53.5	175	03.7	− 9	47.7
1	39	57.4	233	21.8		51.8	155	39.1		17.7	324	53.8		53.5	190	05.9		47.8
2	54	59.9	248	21.5		50.7	170	39.6		18.1	339	56.3		53.5	205	08.0		47.9
3	70	02.3	263	21.2		49.7	185	40.2		18.4	354	58.9		53.5	220	10.2		48.1
4	85	04.8	278	20.8		48.7	200	40.7		18.7	10	01.5		53.5	235	12.4		48.2
5	100	07.3	293	20.5	+ 6	47.6	215	41.3	− 22	19.0	25	04.0	+ 21	53.5	250	14.6	− 9	48.3
6	115	09.7	308	20.1	+ 6	46.6	230	41.8	− 22	19.4	40	06.6	+ 21	53.5	265	16.7	− 9	48.4
7	130	12.2	323	19.8		45.5	245	42.4		19.7	55	09.2		53.4	280	18.9		48.5
8	145	14.7	338	19.4		44.5	260	42.9		20.0	70	11.7		53.4	295	21.1		48.6
9	160	17.1	353	19.1		43.4	275	43.5		20.3	85	14.3		53.4	310	23.3		48.7
10	175	19.6	8	18.8		42.4	290	44.0		20.7	100	16.9		53.4	325	25.5		48.8
11	190	22.1	23	18.4	+ 6	41.3	305	44.6	− 22	21.0	115	19.5	+ 21	53.4	340	27.6	− 9	48.9
12	205	24.5	38	18.1	+ 6	40.3	320	45.1	− 22	21.3	130	22.0	+ 21	53.4	355	29.8	− 9	49.0
13	220	27.0	53	17.7		39.2	335	45.7		21.6	145	24.6		53.4	10	32.0		49.1
14	235	29.4	68	17.4		38.2	350	46.3		21.9	160	27.2		53.4	25	34.2		49.2
15	250	31.9	83	17.1		37.1	5	46.8		22.3	175	29.7		53.4	40	36.4		49.3
16	265	34.4	98	16.7		36.1	20	47.4		22.6	190	32.3		53.3	55	38.5		49.4
17	280	36.8	113	16.4	+ 6	35.0	35	47.9	− 22	22.9	205	34.9	+ 21	53.3	70	40.7	− 9	49.5
18	295	39.3	128	16.0	+ 6	34.0	50	48.5	− 22	23.2	220	37.5	+ 21	53.3	85	42.9	− 9	49.6
19	310	41.8	143	15.7		32.9	65	49.0		23.6	235	40.0		53.3	100	45.1		49.7
20	325	44.2	158	15.4		31.9	80	49.5		23.9	250	42.6		53.3	115	47.2		49.8
21	340	46.7	173	15.0		30.8	95	50.1		24.2	265	45.2		53.3	130	49.4		49.9
22	355	49.2	188	14.7		29.8	110	50.6		24.5	280	47.8		53.3	145	51.6		50.0
23	10	51.6	203	14.3		28.7	125	51.2		24.8	295	50.3		53.3	160	53.8		50.2
24	25	54.1	218	14.0	+ 6	27.7	140	51.7	− 22	25.2	310	52.9	+ 21	53.2	175	56.0	− 9	50.3
Dif	—		−3	−10		+6	−3			+26		0			+22		−1	

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MIÉRCOL 17 DE OCTUBRE DE 2012

UT	SOL			 LUNA					Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 0 PMG: 11 ^h 45 ^m 3			SD: 16 ^h 6 Edad: 1 ^d 5						PHE { 4 ^h : 60 ^m 8 12 ^h : 60 ^m 8 20 ^h : 60 ^m 7			PMG: 13 ^h 38 ^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	183	39.4	− 9	163	50.3	− 17	17.0	60 N	5	14	6	03	6	45	9	52		
1	198	39.6		178	14.4		24.7	58	15	6	00	40	38	80	17	16		
2	213	39.7		192	38.4		32.4	56	15	5	58	36	27	78	41	49		
3	228	39.8		207	02.4		39.9	54	15	56	32	17	77	17	51	51		
4	243	40.0		221	26.4		47.3	52	15	54	29	09	75	18	01	51		
5	258	40.1	− 9	235	50.2	48	− 17	50	5	15	5	53	6	26	9	01		
6	273	40.2	− 9	250	14.1	49	− 18	45	5	15	5	49	6	19	8	44		
7	288	40.3		264	37.9	48		40	14	45	13	31	69	40	56			
8	303	40.4		279	01.6	47		35	13	42	08	19	68	18	52	57		
9	318	40.6		293	25.3	47		30	11	39	6	03	8	09	19	03		
10	333	40.7		307	49.0	47		20	08	33	5	56	7	52	21	59		
11	348	40.8	− 9	322	12.6	46	− 18	10 N	5	03	5	27	5	49	7	37		
12	3	40.9	− 9	336	36.2	46	− 18	0	4	57	5	21	5	42	7	23		
13	18	41.1		350	59.7	45		10 S	49	14	35	7	09	60	20	07		
14	33	41.2		5	23.2	45	− 18	20	39	5	05	28	6	55	23	64		
15	48	41.3		19	46.6	44	− 19	30	26	4	55	19	38	55	41	66		
16	63	41.4		34	10.1	45		35	18	49	15	28	54	20	52	66		
17	78	41.6	− 9	48	33.5	44	− 19	40	4	08	4	41	5	09	6	17		
18	93	41.7	− 9	62	56.8	43	− 19	45	3	55	4	32	5	02	6	04		
19	108	41.8		77	20.2	44		50	39	20	4	54	5	49	47	36		
20	123	41.9		91	43.5	43		52	31	15	51	41	47	45	70			
21	138	42.0		106	06.7	42		54	22	09	47	33	45	21	54	71		
22	153	42.2		120	30.0	43		56	12	4	02	42	24	43	22	04		
23	168	42.3		134	53.2	42		58	3	00	3	55	37	14	41	16		
24	183	42.4	− 9	149	16.4	42	− 19	60 S	2	45	3	46	4	32	5	02		
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 22 ^h 12 ^m 7		Mag.: −4.1 PMG: 9 ^h 27 ^m			Mag.: +1.2 PMG: 14 ^h 36 ^m			Mag.: −2.6 PMG: 3 ^h 16 ^m			Mag.: +0.6 PMG: 12 ^h 14 ^m						
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'				
0	25	54.1	218	14.0	+ 6	27.7	140	51.7	− 22	25.2	310	52.9	+ 21	53.2	175	56.0		
1	40	56.5	233	13.7		26.6	155	52.3		25.5	325	55.5		53.2	190	58.1		
2	55	59.0	248	13.3		25.6	170	52.8		25.8	340	58.1		53.2	206	00.3		
3	71	01.5	263	13.0		24.5	185	53.4		26.1	356	00.6		53.2	221	02.5		
4	86	03.9	278	12.6		23.5	200	53.9		26.4	11	03.2		53.2	236	04.7		
5	101	06.4	293	12.3	+ 6	22.4	215	54.5	− 22	26.7	26	05.8	+ 21	53.2	251	06.8		
6	116	08.9	308	12.0	+ 6	21.3	230	55.0	− 22	27.1	41	08.4	+ 21	53.2	266	09.0		
7	131	11.3	323	11.6		20.3	245	55.6		27.4	56	11.0		53.2	281	11.2		
8	146	13.8	338	11.3		19.2	260	56.1		27.7	71	13.5		53.2	296	13.4		
9	161	16.3	353	10.9		18.2	275	56.7		28.0	86	16.1		53.1	311	15.6		
10	176	18.7	8	10.6		17.1	290	57.2		28.3	101	18.7		53.1	326	17.7		
11	191	21.2	23	10.3	+ 6	16.1	305	57.7	− 22	28.6	116	21.3	+ 21	53.1	341	19.9		
12	206	23.7	38	09.9	+ 6	15.0	320	58.3	− 22	29.0	131	23.9	+ 21	53.1	356	22.1		
13	221	26.1	53	09.6		13.9	335	58.8		29.3	146	26.4		53.1	11	24.3		
14	236	28.6	68	09.2		12.9	350	59.4		29.6	161	29.0		53.1	26	26.4		
15	251	31.0	83	08.9		11.8	5	59.9		29.9	176	31.6		53.1	41	28.6		
16	266	33.5	98	08.6		10.8	21	00.5		30.2	191	34.2		53.1	56	30.8		
17	281	36.0	113	08.2	+ 6	09.7	36	01.0	− 22	30.5	206	36.8	+ 21	53.0	71	33.0		
18	296	38.4	128	07.9	+ 6	08.6	51	01.6	− 22	30.8	221	39.3	+ 21	53.0	86	35.2		
19	311	40.9	143	07.5		07.6	66	02.1		31.2	236	41.9		53.0	101	37.3		
20	326	43.4	158	07.2		06.5	81	02.6		31.5	251	44.5		53.0	116	39.5		
21	341	45.8	173	06.9		05.5	96	03.2		31.8	266	47.1		53.0	131	41.7		
22	356	48.3	188	06.5		04.4	111	03.7		32.1	281	49.7		53.0	146	43.9		
23	11	50.8	203	06.2		03.3	126	04.3		32.4	296	52.3		53.0	161	46.0		
24	26	53.2	218	05.8	+ 6	02.3	141	04.8	− 22	32.7	311	54.8	+ 21	53.0	176	48.2		
Dif	—	—	−3	−11	—	—	+5	−3	—	—	+26	0	—	—	+22	−		

JUEVES 18 DE OCTUBRE DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1 PMG: 11 ^h 45 ^m 1		SD: 16 ^h 5 Edad: 2 ^d 5		PHE { 4 ^h : 60/6 12 ^h : 60/5 20 ^h : 60/4										PMG: 14 ^h 39 ^m R°: 61 ^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	183	42.4	− 9	41.0	149	16.4	− 19	47.1	45	60 N	16 41	17 24	18 12	11 14	66	
1	198	42.5		41.9	163	39.6	42	51.6	45	58	47	27	12	10 58	66	
2	213	42.6		42.8	178	02.7	41	− 19	56.0	44	56	51	29	12	45	
3	228	42.8		43.7	192	25.9	42	− 20	00.2	42	54	55	31	12	34	
4	243	42.9		44.6	206	49.0	41	04.3	41	52	16 59	33	12	24	65	
5	258	43.0	− 9	45.5	221	12.1	41	− 20	08.2	39	50	17 02	17 35	18 12	10 15	
6	273	43.1	− 9	46.4	235	35.2	41	− 20	12.0	38	45	17 10	17 39	18 13	9 56	
7	288	43.2		47.4	249	58.3	41	15.6	36	40	16	43	15	40	64	
8	303	43.3		48.3	264	21.4	41	19.1	35	35	21	47	16	27	64	
9	318	43.5		49.2	278	44.4	40	22.5	34	30	26	50	18	9 16	63	
10	333	43.6		50.1	293	07.5	41	25.7	32	20	34	17 56	22	8 57	62	
11	348	43.7	− 9	51.0	307	30.5	40	− 20	28.7	30	10 N	17 41	18 03	18 27	8 40	
12	3	43.8	− 9	51.9	321	53.6	41	− 20	31.6	29	0	17 48	18 09	18 34	8 24	
13	18	43.9		52.8	336	16.6	40	34.3	27	10 S	17 56	17	42	8 09	61	
14	33	44.0		53.7	350	39.7	41	36.9	26	20	18 03	26	18 52	7 52	60	
15	48	44.2		54.6	5	02.7	40	39.4	25	30	12	37	19 06	33	60	
16	63	44.3		55.5	19	25.8	41	41.6	22	35	17	44	15	22	59	
17	78	44.4	− 9	56.4	33	48.9	41	− 20	43.8	22	40	18 23	18 52	19 25	7 09	
18	93	44.5	− 9	57.3	48	11.9	40	− 20	45.8	20	45	18 30	19 01	19 38	6 54	
19	108	44.6		58.2	62	35.0	41	47.6	18	50	39	13	19 55	36	57	
20	123	44.7	− 9	59.1	76	58.1	41	49.3	17	52	43	19	20 04	28	56	
21	138	44.8	− 10	00.0	91	21.2	41	50.8	15	54	47	25	13	18	56	
22	153	45.0		00.9	105	44.3	41	52.2	14	56	52	32	24	6 07	55	
23	168	45.1		01.8	120	07.5	42	53.4	12	58	18 57	40	37	5 55	54	
24	183	45.2	− 10	02.7	134	30.6	41	− 20	54.5	11	60 S	19 03	19 50	20 52	5 41	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 22 ^h 08 ^m 8		Mag.: −4.0 PMG: 9 ^h 28 ^m		Mag.: +1.2 PMG: 14 ^h 35 ^m		Mag.: −2.6 PMG: 3 ^h 12 ^m		Mag.: +0.6 PMG: 12 ^h 11 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	26	53.2	218	05.8	+ 6	02.3	141	04.8	− 22	32.7	311	54.8	+ 21	53.0	176	48.2
1	41	55.7	233	05.5		01.2	156	05.3		33.0	326	57.4		52.9	191	50.4
2	56	58.2	248	05.2	+ 6	00.1	171	05.9		33.3	342	00.0		52.9	206	52.6
3	72	00.6	263	04.8	+ 5	59.1	186	06.4		33.6	357	02.6		52.9	221	54.8
4	87	03.1	278	04.5		58.0	201	07.0		34.0	12	05.2		52.9	236	56.9
5	102	05.5	293	04.1	+ 5	56.9	216	07.5	− 22	34.3	27	07.8	+ 21	52.9	251	59.1
6	117	08.0	308	03.8	+ 5	55.9	231	08.0	− 22	34.6	42	10.4	+ 21	52.9	267	01.3
7	132	10.5	323	03.5		54.8	246	08.6		34.9	57	12.9		52.9	282	03.5
8	147	12.9	338	03.1		53.7	261	09.1		35.2	72	15.5		52.9	297	05.6
9	162	15.4	353	02.8		52.7	276	09.7		35.5	87	18.1		52.8	312	07.8
10	177	17.9	8	02.5		51.6	291	10.2		35.8	102	20.7		52.8	327	10.0
11	192	20.3	23	02.1	+ 5	50.5	306	10.7	− 22	36.1	117	23.3	+ 21	52.8	342	12.2
12	207	22.8	38	01.8	+ 5	49.5	321	11.3	− 22	36.4	132	25.9	+ 21	52.8	357	14.4
13	222	25.3	53	01.4		48.4	336	11.8		36.7	147	28.5		52.8	12	16.5
14	237	27.7	68	01.1		47.3	351	12.3		37.0	162	31.1		52.8	27	18.7
15	252	30.2	83	00.8		46.3	6	12.9		37.3	177	33.7		52.8	42	20.9
16	267	32.6	98	00.4		45.2	21	13.4		37.6	192	36.2		52.8	57	23.1
17	282	35.1	113	00.1	+ 5	44.1	36	14.0	− 22	38.0	207	38.8	+ 21	52.7	72	25.2
18	297	37.6	127	59.8	+ 5	43.1	51	14.5	− 22	38.3	222	41.4	+ 21	52.7	87	27.4
19	312	40.0	142	59.4		42.0	66	15.0		38.6	237	44.0		52.7	102	29.6
20	327	42.5	157	59.1		40.9	81	15.6		38.9	252	46.6		52.7	117	31.8
21	342	45.0	172	58.7		39.9	96	16.1		39.2	267	49.2		52.7	132	33.9
22	357	47.4	187	58.4		38.8	111	16.6		39.5	282	51.8		52.7	147	36.1
23	12	49.9	202	58.1		37.7	126	17.2		39.8	297	54.4		52.7	162	38.3
24	27	52.4	217	57.7	+ 5	36.6	141	17.7	− 22	40.1	312	57.0	+ 21	52.6	177	40.5
Dif	—		−3	−11			+5	−3			+26	0			+22	−1

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VIERNES 19 DE OCTUBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16:1 PMG: 11 ^h 44 ^m 9		SD: 16:4 Edad: 3 ^d 5 PHE { 4 ^h : 60/2 12 ^h : 60/0 20 ^h : 59/9 PMG: 15 ^h 40 ^m R°: 60 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	45.2	-10	02.7	134	30.6	-20	54.5	9	60 N	5	19	6	07	6	50
1	198	45.3		03.6	148	53.8		55.4	8	58	19		05	45	12	20
2	213	45.4		04.5	163	17.0		56.2	7	56	19		02	40	11	51
3	228	45.5		05.4	177	40.2		56.9	7	54	19		6	00	36	39
4	243	45.6		06.3	192	03.4		57.3	4	52	19		5	58	32	29
5	258	45.8	-10	07.2	206	26.7	-20	57.7	4	50	5	18	5	56	6	29
6	273	45.9	-10	08.1	220	50.0	-20	57.8	1	45	5	17	5	51	6	21
7	288	46.0		09.0	235	13.3		57.9	1	40	16		48	15	11	00
8	303	46.1		09.9	249	36.7		57.7	2	35	14		44	10	31	56
9	318	46.2		10.8	264	00.1		57.5	2	30	13		40	6	05	10
10	333	46.3		11.7	278	23.5		57.1	4	20	08		34	5	56	9
11	348	46.4	-10	12.6	292	47.0	-20	56.5	6	10 N	5	03	5	27	5	49
12	3	46.5	-10	13.5	307	10.5	-20	55.8	7	0	4	56	5	21	5	42
13	18	46.6		14.4	321	34.0		54.9	9	10 S	48		13	34	9	10
14	33	46.7		15.3	335	57.6		53.9	10	20	38		5	04	26	8
15	48	46.9		16.2	350	21.2		52.8	11	30	24		4	53	17	33
16	63	47.0		17.1	4	44.9		51.5	13	35	15		46	12	21	63
17	78	47.1	-10	18.0	19	08.6	-20	50.1	14	40	4	04	4	38	5	06
18	93	47.2	-10	18.9	33	32.4	-20	48.5	16	45	3	51	4	28	4	59
19	108	47.3		19.8	47	56.2		46.7	18	50	34		16	50	33	65
20	123	47.4		20.7	62	20.0		44.9	18	52	26		10	46	24	66
21	138	47.5		21.6	76	43.9		42.9	20	54	16		4	04	42	14
22	153	47.6		22.5	91	07.9		40.7	22	56	3	05	3	57	37	7
23	168	47.7		23.4	105	31.9		38.4	23	58	2	53	49	32	6	49
24	183	47.8	-10	24.3	119	56.0	-20	36.0	24	60 S	2	37	3	39	4	26
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 22 ^h 04 ^m 9		Mag.: -4.0 PMG: 9 ^h 28 ^m		Mag.: +1.2 PMG: 14 ^h 34 ^m		Mag.: -2.7 PMG: 3 ^h 08 ^m		Mag.: +0.6 PMG: 12 ^h 08 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	27	52.4	217	57.7	+5	36.6	141	17.7	-22	40.1	312	57.0	+21	52.6	177	40.5
1	42	54.8	232	57.4		35.6	156	18.2		40.4	327	59.6		52.6	192	42.7
2	57	57.3	247	57.1		34.5	171	18.8		40.7	343	02.2		52.6	207	44.8
3	72	59.8	262	56.7		33.4	186	19.3		41.0	358	04.8		52.6	222	47.0
4	88	02.2	277	56.4		32.3	201	19.8		41.3	13	07.4		52.6	237	49.2
5	103	04.7	292	56.0	+5	31.3	216	20.4	-22	41.6	28	10.0	+21	52.6	252	51.4
6	118	07.1	307	55.7	+5	30.2	231	20.9	-22	41.9	43	12.6	+21	52.6	267	53.5
7	133	09.6	322	55.4		29.1	246	21.4		42.2	58	15.2		52.6	282	55.7
8	148	12.1	337	55.0		28.0	261	22.0		42.5	73	17.7		52.6	297	57.9
9	163	14.5	352	54.7		27.0	276	22.5		42.8	88	20.3		52.5	313	00.1
10	178	17.0	7	54.4		25.9	291	23.0		43.1	103	22.9		52.5	328	02.2
11	193	19.5	22	54.0	+5	24.8	306	23.6	-22	43.4	118	25.5	+21	52.5	343	04.4
12	208	21.9	37	53.7	+5	23.7	321	24.1	-22	43.7	133	28.1	+21	52.5	358	06.6
13	223	24.4	52	53.3		22.7	336	24.6		44.0	148	30.7		52.5	13	08.8
14	238	26.9	67	53.0		21.6	351	25.2		44.3	163	33.3		52.5	28	11.0
15	253	29.3	82	52.7		20.5	6	25.7		44.6	178	35.9		52.4	43	13.1
16	268	31.8	97	52.3		19.4	21	26.2		44.9	193	38.5		52.4	58	15.3
17	283	34.3	112	52.0	+5	18.4	36	26.7	-22	45.2	208	41.1	+21	52.4	73	17.5
18	298	36.7	127	51.7	+5	17.3	51	27.3	-22	45.5	223	43.7	+21	52.4	88	19.7
19	313	39.2	142	51.3		16.2	66	27.8		45.8	238	46.3		52.4	103	21.8
20	328	41.6	157	51.0		15.1	81	28.3		46.0	253	48.9		52.4	118	24.0
21	343	44.1	172	50.6		14.0	96	28.9		46.3	268	51.5		52.4	133	26.2
22	358	46.6	187	50.3		13.0	111	29.4		46.6	283	54.1		52.3	148	28.4
23	13	49.0	202	50.0		11.9	126	29.9		46.9	298	56.7		52.3	163	30.5
24	28	51.5	217	49.6	+5	10.8	141	30.4	-22	47.2	313	59.3	+21	52.3	178	32.7
Dif	—		-3	-11		+5		-3		+26		0		+22		-1

SÁBADO 20 DE OCTUBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 7		SD: 16 ^h 3 Edad: 4 ^d 5		PHE { 4 ^h : 59 ^h /6 12 ^h : 59 ^h /4 20 ^h : 59 ^h /2	PMG: 16 ^h 40 ^m R°: 56 ^m											
	hG ☉	Dec	hG ☾	Dif					Dec	Dif							
	h	°	'	°	'	°			'	°	N	h m	h m	h m	h m	h m	h m
0	183	47.8	-10	24.3	119	56.0	-20	36.0	26	60	16 36	17 19	18 07	13 08 33	20 17 82		
1	198	47.9		25.2	134	20.1		33.4	26	58	41	22	07	12 54 36	31 79		
2	213	48.0		26.1	148	44.3		30.7	27	56	46	24	07	41 39	43 77		
3	228	48.1		27.0	163	08.6		27.9	28	54	51	27	08	31 40	20 53 75		
4	243	48.3		27.9	177	32.9		24.9	30	52	55	29	08	21 42	21 02 74		
5	258	48.4	-10	28.8	191	57.2	-20	21.8	31	50	16 58	17 31	18 09	12 13 42	21 11 72		
6	273	48.5	-10	29.7	206	21.7	-20	18.5	33	45	17 06	17 36	18 10	11 55 45	21 28 69		
7	288	48.6		30.5	220	46.2		15.1	34	40	13	40	12	40 47	42 67		
8	303	48.7		31.4	235	10.7		11.6	35	35	19	44	14	27 49	21 55 64		
9	318	48.8		32.3	249	35.3		08.0	36	30	24	48	16	11 16 51	22 05 63		
10	333	48.9		33.2	264	00.0		04.2	37	20	33	17 55	21	10 57 54	23 60		
11	348	49.0	-10	34.1	278	24.8	-20	00.3	38	10 N	17 41	18 02	18 27	10 41 55	22 39 57		
12	3	49.1	-10	35.0	292	49.6	-19	56.3	40	0	17 48	18 09	18 34	10 26 57	22 53 56		
13	18	49.2		35.9	307	14.5		52.1	42	10 S	17 56	17	42	10 10 59	23 08 53		
14	33	49.3		36.8	321	39.5		47.8	43	20	18 04	27	18 53	9 54 61	23 51		
15	48	49.4		37.7	336	04.5		43.4	44	30	14	38	19 07	35 63	41 48		
16	63	49.5		38.6	350	29.7		38.8	46	35	19	45	17	24 65	23 51 46		
17	78	49.6	-10	39.5	4	54.8	-19	34.2	46	40	18 26	18 54	19 28	9 11 67	*** ** *		
18	93	49.7	-10	40.4	19	20.1	-19	29.4	48	45	18 33	19 04	19 42	8 56 69	*** ** *		
19	108	49.8		41.2	33	45.4		24.5	49	50	42	17	19 59	38 71	*** ** *		
20	123	49.9		42.1	48	10.8		19.4	51	52	46	23	20 08	30 71	*** ** *		
21	138	50.0		43.0	62	36.3		14.3	51	54	51	29	18	20 73	0 04 46		
22	153	50.1		43.9	77	01.9		09.0	53	56	18 56	37	29	8 09 75	15 44		
23	168	50.2		44.8	91	27.5	-19	03.6	54	58	19 02	45	43	7 56 77	28 42		
24	183	50.3	-10	45.7	105	53.3	-18	58.1	55	60 S	19 08	19 55	20 59	7 42 79	0 42 41		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 22 ^h 00 ^m 9		Mag.: -4.0 PMG: 9 ^h 29 ^m		Mag.: +1.2 PMG: 14 ^h 33 ^m		Mag.: -2.7 PMG: 3 ^h 04 ^m		Mag.: +0.6 PMG: 12 ^h 04 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
h	°	'	°	'	°	'	°	'	°	'							
0	28	51.5	217	49.6	+5	10.8	313	59.3	+21	52.3							
1	43	54.0	232	49.3		09.7	329	01.9		52.3							
2	58	56.4	247	49.0		08.6	344	04.5		52.3							
3	73	58.9	262	48.6		07.6	359	07.2		52.3							
4	89	01.4	277	48.3		06.5	14	09.8		52.3							
5	104	03.8	292	48.0	+5	05.4	29	12.4	+21	52.2							
6	119	06.3	307	47.6	+5	04.3	44	15.0	+21	52.2							
7	134	08.8	322	47.3		03.2	59	17.6		52.2							
8	149	11.2	337	46.9		02.1	74	20.2		52.2							
9	164	13.7	352	46.6		01.1	89	22.8		52.2							
10	179	16.1	7	46.3	+5	00.0	104	25.4		52.2							
11	194	18.6	22	45.9	+4	58.9	119	28.0	+21	52.2							
12	209	21.1	37	45.6	+4	57.8	134	30.6	+21	52.1							
13	224	23.5	52	45.3		56.7	149	33.2		52.1							
14	239	26.0	67	44.9		55.6	164	35.8		52.1							
15	254	28.5	82	44.6		54.5	179	38.4		52.1							
16	269	30.9	97	44.3		53.5	194	41.0		52.1							
17	284	33.4	112	43.9	+4	52.4	209	43.6	+21	52.1							
18	299	35.9	127	43.6	+4	51.3	224	46.2	+21	52.1							
19	314	38.3	142	43.3		50.2	239	48.9		52.0							
20	329	40.8	157	42.9		49.1	254	51.5		52.0							
21	344	43.3	172	42.6		48.0	269	54.1		52.0							
22	359	45.7	187	42.2		46.9	284	56.7		52.0							
23	14	48.2	202	41.9		45.8	299	59.3		52.0							
24	29	50.6	217	41.6	+4	44.8	315	01.9	+21	52.0							
Dif	—		-3	-11	+5	-3	+26	0	+22	-1							

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DOMINGO 21 DE OCTUBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna									
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 6		SD: 16 ^h 1 Edad: 5 ^d 5 PHE { 4 ^h : 59/0 12 ^h : 58/7 20 ^h : 58/5 PMG: 17 ^h 36 ^m R°: 53 ^m																			
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°								
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m							
0	183	50.3	− 10	45.7	105	53.3	− 18	58.1	56	58	23	6	55	13	41	24	21	39	85			
1	198	50.4		46.6	120	19.0		52.5	56	58	23		09	49	30	26	21	50	82			
2	213	50.5		47.5	134	44.9		46.8	57	56	23		06	44	20	29	22	00	79			
3	228	50.6		48.4	149	10.9		40.9	59	54	22		04	40	11	31		08	77			
4	243	50.7		49.3	163	36.9		35.0	59	52	22	6	01	36	13	03	33	16	74			
5	258	50.8	− 10	50.1	178	03.0	− 18	28.9	61	50	5	21	5	59	6	32	12	55	35	22	23	72
6	273	50.9	− 10	51.0	192	29.2	− 18	22.7	62	45	5	20	5	54	6	24	12	40	38	22	37	69
7	288	51.0		51.9	206	55.5		16.5	62	40	18		50	17		27	41	49	66			
8	303	51.1		52.8	221	21.9		10.1	64	35	16		46	11		16	43	22	59	64		
9	318	51.2		53.7	235	48.3	− 18	03.6	65	30	14		42	6	06	12	07	45	23	08	62	
10	333	51.3		54.6	250	14.8	− 17	57.0	66	20	09		35	5	57	11	51	48		23	58	
11	348	51.4	− 10	55.5	264	41.4	− 17	50.3	67	10 N	5	03	5	28	5	49	11	36	51	23	36	55
12	3	51.5	− 10	56.3	279	08.1	− 17	43.5	68	0	4	56	5	20	5	41	11	23	53	23	49	52
13	18	51.6		57.2	293	34.9		36.6	69	10 S	4	47		12	33	11	09	56	***	***	***	
14	33	51.7		58.1	308	01.7		29.6	70	20	36	5	02	25	10	55	59	***	***	***	***	
15	48	51.8		59.0	322	28.7		22.5	71	30	21	4	51	15	38	63	***	***	***	***	***	
16	63	51.9	− 10	59.9	336	55.7		15.3	72	35	12		43	10	29	64	***	***	***	***	***	
17	78	52.0	− 11	00.8	351	22.8	− 17	08.0	73	40	4	01	4	35	5	03	10	18	66	0	03	44
18	93	52.1	− 11	01.7	5	50.0	− 17	00.6	74	45	3	47	4	25	4	56	10	05	69	0	16	42
19	108	52.2		02.5	20	17.3	− 16	53.1	75	50	29		12	46	9	49	72	33	39			
20	123	52.3		03.4	34	44.6		45.5	76	52	20		4	06	42	41	74	41	37			
21	138	52.4		04.3	49	12.0		37.9	76	54	3	11	3	59	38	33	76	50	35			
22	153	52.4		05.2	63	39.6		30.1	78	56	2	59		52	32	24	78	0	59	34		
23	168	52.5		06.1	78	07.2		22.3	78	58	45		43	27	13	81	1	10	31			
24	183	52.6	− 11	06.9	92	34.8	− 16	14.3	80	60 S	2	29	3	33	4	20	9	01	83	1	23	28
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO													
	PMG: 21 ^h 57 ^m 0		Mag.: −4.0 PMG: 9 ^h 29 ^m		Mag.: +1.2 PMG: 14 ^h 33 ^m		Mag.: −2.7 PMG: 2 ^h 59 ^m		Mag.: +0.6 PMG: 12 ^h 01 ^m													
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec												
h	°	'	°	'	°	'	°	'	°	'												
0	29	50.6	217	41.6	+ 4	44.8	141	43.0	− 22	54.2	315	01.9	+ 21	52.0	179	25.0	− 10	00.3				
1	44	53.1	232	41.2		43.7	156	43.5		54.5	330	04.5		52.0	194	27.1		00.4				
2	59	55.6	247	40.9		42.6	171	44.1		54.7	345	07.1		51.9	209	29.3		00.5				
3	74	58.0	262	40.6		41.5	186	44.6		55.0	0	09.7		51.9	224	31.5		00.6				
4	90	00.5	277	40.2		40.4	201	45.1		55.3	15	12.3		51.9	239	33.7		00.7				
5	105	03.0	292	39.9	+ 4	39.3	216	45.6	− 22	55.6	30	15.0	+ 21	51.9	254	35.8	− 10	00.8				
6	120	05.4	307	39.6	+ 4	38.2	231	46.1	− 22	55.9	45	17.6	+ 21	51.9	269	38.0	− 10	00.9				
7	135	07.9	322	39.2		37.1	246	46.7		56.2	60	20.2		51.9	284	40.2		01.0				
8	150	10.4	337	38.9		36.0	261	47.2		56.4	75	22.8		51.8	299	42.4		01.1				
9	165	12.8	352	38.6		34.9	276	47.7		56.7	90	25.4		51.8	314	44.6		01.3				
10	180	15.3	7	38.2		33.8	291	48.2		57.0	105	28.0		51.8	329	46.7		01.4				
11	195	17.7	22	37.9	+ 4	32.8	306	48.7	− 22	57.3	120	30.6	+ 21	51.8	344	48.9	− 10	01.5				
12	210	20.2	37	37.5	+ 4	31.7	321	49.3	− 22	57.6	135	33.3	+ 21	51.8	359	51.1	− 10	01.6				
13	225	22.7	52	37.2		30.6	336	49.8		57.8	150	35.9		51.8	14	53.3		01.7				
14	240	25.1	67	36.9		29.5	351	50.3		58.1	165	38.5		51.8	29	55.4		01.8				
15	255	27.6	82	36.5		28.4	6	50.8		58.4	180	41.1		51.7	44	57.6		01.9				
16	270	30.1	97	36.2		27.3	21	51.3		58.7	195	43.7		51.7	59	59.8		02.0				
17	285	32.5	112	35.9	+ 4	26.2	36	51.8	− 22	59.0	210	46.3	+ 21	51.7	75	02.0	− 10	02.1				
18	300	35.0	127	35.5	+ 4	25.1	51	52.4	− 22	59.2	225	49.0	+ 21	51.7	90	04.1	− 10	02.2				
19	315	37.5	142	35.2		24.0	66	52.9		59.5	240	51.6		51.7	105	06.3		02.3				
20	330	39.9	157	34.9		22.9	81	53.4	− 22	59.8	255	54.2		51.7	120	08.5		02.4				
21	345	42.4	172	34.5		21.8	96	53.9	− 23	00.1	270	56.8		51.7	135	10.7		02.5				
22	0	44.9	187	34.2		20.7	111	54.4		00.3	285	59.4		51.6	150	12.8		02.6				
23	15	47.3	202	33.9		19.6	126	54.9		00.6	301	02.0		51.6	165	15.0		02.7				
24	30	49.8	217	33.5	+ 4	18.5	141	55.4	− 23	00.9	316	04.7	+ 21	51.6	180	17.2	− 10	02.8				
Dif	—	—	−3	−11		+5	−3	—	—	—	+26	0	—	—	+22	−1	—	—	—			


LUNES 22 DE OCTUBRE DE 2012

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UT	SOL			☾ LUNA						Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 4			SD: 15 ^h 9 Edad: 6 ^d 5 PHE { 4 ^h : 58 ^h /2 12 ^h : 58 ^h /0 20 ^h : 57 ^h /8 PMG: 18 ^h 29 ^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		
0	183	52.6	− 11 06.9	92	34.8	88	− 16 14.3	80	60 N	16 30	17 13	18 02	14 05 18	23 04 83					
1	198	52.7	07.8	107	02.6	89	− 16 06.3	81	58	36	17	02	13 56 21	12 80					
2	213	52.8	08.7	121	30.5	89	− 15 58.2	82	56	41	20	03	49 23	19 77					
3	228	52.9	09.6	135	58.4	89	50.0	82	54	46	22	04	42 25	25 75					
4	243	53.0	10.5	150	26.4	90	41.8	82	52	50	25	04	36 27	30 74					
5	258	53.1	− 11 11.4	164	54.5	91	− 15 33.4	84	50	16 54	17 27	18 05	13 30 29	23 35 72					
6	273	53.2	− 11 12.2	179	22.7	92	− 15 25.0	85	45	17 03	17 33	18 07	13 18 32	23 46 68					
7	288	53.3	13.1	193	50.9	92	16.5	86	40	10	38	09	13 08 35	23 55 65					
8	303	53.4	14.0	208	19.3	94	− 15 07.9	86	35	16	42	11	12 59 38	*** **	***	***			
9	318	53.5	14.9	222	47.7	94	− 14 59.2	87	30	22	46	14	52 40	*** **	***	***			
10	333	53.6	15.8	237	16.2	95	50.5	87	20	31	17 54	19	39 43	*** **	***	***			
11	348	53.6	− 11 16.6	251	44.8	96	− 14 41.7	88	10 N	17 40	18 01	18 26	12 27 47	*** **	***	***			
12	3	53.7	− 11 17.5	266	13.5	97	− 14 32.8	89	0	17 48	18 09	18 33	12 16 50	*** **	***	***			
13	18	53.8	18.4	280	42.2	97	23.8	90	10 S	17 56	17	42	12 05 54	0 01 49					
14	33	53.9	19.3	295	11.0	98	14.8	90	20	18 05	27	18 54	11 54 56	14 46					
15	48	54.0	20.1	309	39.9	99	− 14 05.7	91	30	15	40	19 09	41 60	29 42					
16	63	54.1	21.0	324	08.9	100	− 13 56.6	91	35	21	47	19	33 62	37 40					
17	78	54.2	− 11 21.9	338	38.0	101	− 13 47.3	93	40	18 28	18 56	19 30	11 24 65	0 47 38					
18	93	54.3	− 11 22.8	353	07.1	101	− 13 38.0	93	45	18 36	19 07	19 45	11 14 68	0 58 35					
19	108	54.4	23.7	7	36.3	102	28.7	93	50	45	20	20 04	11 01 72	1 12 31					
20	123	54.4	24.5	22	05.6	103	19.3	94	52	50	27	13	10 55 74	18 30					
21	138	54.5	25.4	36	35.0	104	09.8	95	54	18 55	34	23	49 76	25 28					
22	153	54.6	26.3	51	04.4	104	− 13 00.2	96	56	19 00	42	35	42 78	33 26					
23	168	54.7	27.2	65	33.9	105	− 12 50.6	96	58	06	19 51	20 50	34 80	41 24					
24	183	54.8	− 11 28.0	80	03.5	106	− 12 41.0	96	60 S	19 13	20 01	21 07	10 24 84	1 51 21					
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO						
	PMG: 21 ^h 53 ^m 1			Mag.: −4.0 PMG: 9 ^h 30 ^m			Mag.: +1.2 PMG: 14 ^h 32 ^m			Mag.: −2.7 PMG: 2 ^h 55 ^m			Mag.: +0.6 PMG: 11 ^h 57 ^m						
	hG ♈	Dec		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec					
h	°	'	°	°	'	°	°	'	°	°	'	°	°	'	°	°	'		
0	30	49.8	217 33.5	+ 4 18.5	141 55.4	− 23 00.9	316 04.7	+ 21 51.6	180 17.2	− 10 02.8									
1	45	52.2	232 33.2	17.4	156 56.0	01.2	331 07.3	51.6	195 19.4	02.9									
2	60	54.7	247 32.9	16.3	171 56.5	01.4	346 09.9	51.6	210 21.5	03.0									
3	75	57.2	262 32.5	15.2	186 57.0	01.7	1 12.5	51.6	225 23.7	03.1									
4	90	59.6	277 32.2	14.1	201 57.5	02.0	16 15.1	51.5	240 25.9	03.2									
5	106	02.1	292 31.9	+ 4 13.0	216 58.0	− 23 02.3	31 17.8	+ 21 51.5	255 28.1	− 10 03.3									
6	121	04.6	307 31.5	+ 4 11.9	231 58.5	− 23 02.5	46 20.4	+ 21 51.5	270 30.3	− 10 03.4									
7	136	07.0	322 31.2	10.8	246 59.0	02.8	61 23.0	51.5	285 32.4	03.5									
8	151	09.5	337 30.8	09.7	261 59.6	03.1	76 25.6	51.5	300 34.6	03.7									
9	166	12.0	352 30.5	08.6	277 00.1	03.4	91 28.3	51.5	315 36.8	03.8									
10	181	14.4	7 30.2	07.5	292 00.6	03.6	106 30.9	51.4	330 39.0	03.9									
11	196	16.9	22 29.8	+ 4 06.4	307 01.1	− 23 03.9	121 33.5	+ 21 51.4	345 41.1	− 10 04.0									
12	211	19.4	37 29.5	+ 4 05.3	322 01.6	− 23 04.2	136 36.1	+ 21 51.4	0 43.3	− 10 04.1									
13	226	21.8	52 29.2	04.2	337 02.1	04.4	151 38.8	51.4	15 45.5	04.2									
14	241	24.3	67 28.8	03.1	352 02.6	04.7	166 41.4	51.4	30 47.7	04.3									
15	256	26.7	82 28.5	02.0	7 03.1	05.0	181 44.0	51.4	45 49.8	04.4									
16	271	29.2	97 28.2	+ 4 00.9	22 03.6	05.3	196 46.6	51.3	60 52.0	04.5									
17	286	31.7	112 27.8	+ 3 59.8	37 04.2	− 23 05.5	211 49.2	+ 21 51.3	75 54.2	− 10 04.6									
18	301	34.1	127 27.5	+ 3 58.7	52 04.7	− 23 05.8	226 51.9	+ 21 51.3	90 56.4	− 10 04.7									
19	316	36.6	142 27.2	57.6	67 05.2	06.1	241 54.5	51.3	105 58.5	04.8									
20	331	39.1	157 26.8	56.5	82 05.7	06.3	256 57.1	51.3	121 00.7	04.9									
21	346	41.5	172 26.5	55.4	97 06.2	06.6	271 59.8	51.3	136 02.9	05.0									
22	1	44.0	187 26.2	54.3	112 06.7	06.9	287 02.4	51.3	151 05.1	05.1									
23	16	46.5	202 25.8	53.2	127 07.2	07.1	302 05.0	51.2	166 07.2	05.2									
24	31	48.9	217 25.5	+ 3 52.1	142 07.7	− 23 07.4	317 07.6	+ 21 51.2	181 09.4	− 10 05.3									
Dif	—	—	−3	−11	+5	−3	+26	0	+22	−1									

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MARTES 23 DE OCTUBRE DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 11 ^h 44 ^m 3		SD: 15 ^h 7 Edad: 7 ^d 5 PHE $\begin{cases} 4^h: 57/5 \\ 12^h: 57/3 \\ 20^h: 57/1 \end{cases}$ PMG: 19 ^h 18 ^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 ^m	^h ^m ^m	^h ^m ^m	^h ^m ^m
0	183 54.8	− 11 28.0	80 03.5	107	− 12 41.0	98	60 N	5 28	6 17	7 00	14 23 14	** ** *	** ** *	** ** *
1	198 54.9	28.9	94 33.2	107	31.2	97	58	27	13	6 54	17 17	** ** *	** ** *	** ** *
2	213 55.0	29.8	109 02.9	108	21.5	99	56	27	10	49	12 19	** ** *	** ** *	** ** *
3	228 55.1	30.7	123 32.7	109	11.6	99	54	26	07	44	07 21	** ** *	** ** *	** ** *
4	243 55.1	31.5	138 02.6	109	− 12 01.7	99	52	25	05	39	14 03 23	** ** *	** ** *	** ** *
5	258 55.2	− 11 32.4	152 32.5	109	− 11 51.8	99	50	5 24	6 02	6 35	13 59 25	** ** *	** ** *	** ** *
6	273 55.3	− 11 33.3	167 02.5	110	− 11 41.8	100	45	5 22	5 57	6 27	13 50 29	** ** *	** ** *	** ** *
7	288 55.4	34.1	181 32.6	111	31.8	100	40	20	52	19	43 32	** ** *	** ** *	** ** *
8	303 55.5	35.0	196 02.8	112	21.7	101	35	18	47	13	37 34	0 03	62	
9	318 55.6	35.9	210 33.0	112	11.5	102	30	15	43	6 07	32 36	10 59		
10	333 55.6	36.8	225 03.3	113	− 11 01.3	102	20	09	35	5 58	22 41	21 56		
11	348 55.7	− 11 37.6	239 33.7	114	− 10 51.1	102	10 N	5 03	5 28	5 49	13 14 44	0 31	52	
12	3 55.8	− 11 38.5	254 04.1	114	− 10 40.8	103	0	4 55	5 20	5 41	13 06 48	0 41	48	
13	18 55.9	39.4	268 34.6	115	30.5	103	10 S	46	11	33	12 59 50	0 50	45	
14	33 56.0	40.2	283 05.2	116	20.1	104	20	34	5 01	24	50 55	1 00	42	
15	48 56.1	41.1	297 35.8	116	− 10 09.7	104	30	19	4 49	13	41 58	11 38		
16	63 56.1	42.0	312 06.5	117	− 9 59.2	105	35	4 10	41	07	35 61	17 36		
17	78 56.2	− 11 42.9	326 37.3	118	− 9 48.7	105	40	3 58	4 32	5 00	12 29 64	1 25	33	
18	93 56.3	− 11 43.7	341 08.1	118	− 9 38.2	105	45	3 43	4 21	4 52	12 22 67	1 33	30	
19	108 56.4	44.6	355 38.9	118	27.6	106	50	25	08	43	13 71	43 27		
20	123 56.5	45.5	10 09.9	120	17.0	106	52	15	4 01	38	09 73	48 25		
21	138 56.5	46.3	24 40.9	120	− 9 06.4	106	54	3 05	3 54	33	05 74	53 23		
22	153 56.6	47.2	39 11.9	120	− 8 55.7	107	56	2 53	46	27	12 00 76	1 59 21		
23	168 56.7	48.1	53 43.1	122	45.0	107	58	38	37	21	11 54 79	2 05 19		
24	183 56.8	− 11 48.9	68 14.2	121	− 8 34.2	108	60 S	2 20	3 26	4 14	11 48 82	2 12 16		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 49 ^m 2		Mag.: −4.0 PMG: 9 ^h 31 ^m		Mag.: +1.2 PMG: 14 ^h 31 ^m		Mag.: −2.7 PMG: 2 ^h 51 ^m		Mag.: +0.6 PMG: 11 ^h 54 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
^h	° /	° /	° /		° /		° /		° /		° /		° /	
0	31 48.9	217 25.5	+ 3 52.1	142 07.7	− 23 07.4	317 07.6	+ 21 51.2	181 09.4	− 10 05.3					
1	46 51.4	232 25.2	51.0	157 08.2	07.7	332 10.3	51.2	196 11.6	05.4					
2	61 53.9	247 24.8	49.9	172 08.7	07.9	347 12.9	51.2	211 13.8	05.5					
3	76 56.3	262 24.5	48.8	187 09.2	08.2	2 15.5	51.2	226 15.9	05.6					
4	91 58.8	277 24.2	47.7	202 09.7	08.5	17 18.2	51.2	241 18.1	05.7					
5	107 01.2	292 23.8	+ 3 46.6	217 10.3	− 23 08.7	32 20.8	+ 21 51.1	256 20.3	− 10 05.8					
6	122 03.7	307 23.5	+ 3 45.5	232 10.8	− 23 09.0	47 23.4	+ 21 51.1	271 22.5	− 10 05.9					
7	137 06.2	322 23.2	44.4	247 11.3	09.3	62 26.0	51.1	286 24.6	06.0					
8	152 08.6	337 22.8	43.3	262 11.8	09.5	77 28.7	51.1	301 26.8	06.2					
9	167 11.1	352 22.5	42.2	277 12.3	09.8	92 31.3	51.1	316 29.0	06.3					
10	182 13.6	7 22.1	41.0	292 12.8	10.1	107 33.9	51.1	331 31.2	06.4					
11	197 16.0	22 21.8	+ 3 39.9	307 13.3	− 23 10.3	122 36.6	+ 21 51.0	346 33.4	− 10 06.5					
12	212 18.5	37 21.5	+ 3 38.8	322 13.8	− 23 10.6	137 39.2	+ 21 51.0	1 35.5	− 10 06.6					
13	227 21.0	52 21.1	37.7	337 14.3	10.8	152 41.8	51.0	16 37.7	06.7					
14	242 23.4	67 20.8	36.6	352 14.8	11.1	167 44.5	51.0	31 39.9	06.8					
15	257 25.9	82 20.5	35.5	7 15.3	11.4	182 47.1	51.0	46 42.1	06.9					
16	272 28.3	97 20.1	34.4	22 15.8	11.6	197 49.7	51.0	61 44.2	07.0					
17	287 30.8	112 19.8	+ 3 33.3	37 16.3	− 23 11.9	212 52.4	+ 21 50.9	76 46.4	− 10 07.1					
18	302 33.3	127 19.5	+ 3 32.2	52 16.8	− 23 12.1	227 55.0	+ 21 50.9	91 48.6	− 10 07.2					
19	317 35.7	142 19.1	31.1	67 17.3	12.4	242 57.6	50.9	106 50.8	07.3					
20	332 38.2	157 18.8	30.0	82 17.8	12.7	258 00.3	50.9	121 52.9	07.4					
21	347 40.7	172 18.5	28.9	97 18.3	12.9	273 02.9	50.9	136 55.1	07.5					
22	2 43.1	187 18.1	27.7	112 18.8	13.2	288 05.5	50.8	151 57.3	07.6					
23	17 45.6	202 17.8	26.6	127 19.3	13.4	303 08.2	50.8	166 59.5	07.7					
24	32 48.1	217 17.5	+ 3 25.5	142 19.8	− 23 13.7	318 10.8	+ 21 50.8	182 01.6	− 10 07.8					
Dif	—	−3	−11	+5	−3	+26	0	+22	−1					

MIÉRCOL 24 DE OCTUBRE DE 2012

UT	SOL			 LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 11 ^h 44 ^m 2			SD: 15:5 Edad: 8 ^d 5 PHE { 4 ^h : 56/9 12 ^h : 56/7 20 ^h : 56/5 PMG: 20 ^h 05 ^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	^h ^m	^h ^m	^h ^m	^h ^m
0	183	56.8	-11	48.9	68	14.2	-8	34.2	60 N	16 25	17 08	17 57	14 37	12	0	27 81
1	198	56.9		49.8	82	45.5 ¹²³		23.4 ¹⁰⁸	58	31	12	58	34	15		32 78
2	213	56.9		50.7	97	16.8 ¹²³		12.6 ¹⁰⁸	56	37	15	17 59	31	17		36 76
3	228	57.0		51.5	111	48.1 ¹²³	-8	01.8 ¹⁰⁸	54	42	18	18 00	28	19		40 74
4	243	57.1		52.4	126	19.5 ¹²⁴	-7	50.9 ¹⁰⁹	52	46	21	01	26	21		44 72
5	258	57.2	-11	53.3	140	50.9 ¹²⁴	-7	40.0 ¹⁰⁹	50	16 51	17 24	18 02	14 24	22	0	47 70
6	273	57.3	-11	54.1	155	22.5 ¹²⁶	-7	29.1 ¹⁰⁹	45	17 00	17 30	18 04	14 19	26	0	54 66
7	288	57.3		55.0	169	54.0 ¹²⁵		18.1 ¹¹⁰	40	07	35	07	15	29	1	00 63
8	303	57.4		55.9	184	25.6 ¹²⁶	-7	07.1 ¹¹⁰	35	14	40	09	11	32		05 60
9	318	57.5		56.7	198	57.3 ¹²⁷	-6	56.1 ¹¹⁰	30	20	44	12	08	35		09 58
10	333	57.6		57.6	213	29.0 ¹²⁷		45.1 ¹¹⁰	20	30	17 52	18	14	03		17 53
11	348	57.6	-11	58.5	228	00.7 ¹²⁷	-6	34.0 ¹¹¹	10 N	17 39	18 00	18 25	13 58	42	1	23 50
12	3	57.7	-11	59.3	242	32.5 ¹²⁸	-6	23.0 ¹¹⁰	0	17 48	18 09	18 33	13 54	45	1	29 47
13	18	57.8	-12	00.2	257	04.4 ¹²⁹		11.9 ¹¹¹	10 S	17 56	18	43	49	49		35 44
14	33	57.9		01.1	271	36.3 ¹²⁹	-6	00.7 ¹¹²	20	18 06	28	18 55	45	52		42 39
15	48	57.9		01.9	286	08.3 ¹³⁰	-5	49.6 ¹¹¹	30	16	41	19 11	39	57		49 36
16	63	58.0		02.8	300	40.2 ¹²⁹		38.5 ¹¹¹	35	23	49	21	36	59		53 33
17	78	58.1	-12	03.6	315	12.3 ¹³¹	-5	27.3 ¹¹²	40	18 30	18 59	19 33	13 33	62	1	58 30
18	93	58.2	-12	04.5	329	44.4 ¹³¹	-5	16.1 ¹¹²	45	18 39	19 10	19 48	13 29	65	2	03 28
19	108	58.2		05.4	344	16.5 ¹³¹	-5	04.9 ¹¹²	50	49	24	20 08	24	69		10 24
20	123	58.3		06.2	358	48.6 ¹³¹	-4	53.7 ¹¹²	52	54	31	17	22	70		13 22
21	138	58.4		07.1	373	20.8 ¹³²		42.4 ¹¹³	54	18 59	38	28	19	73		16 20
22	153	58.5		07.9	387	53.1 ¹³³		31.2 ¹¹²	56	19 05	47	41	16	75		20 18
23	168	58.5		08.8	402	25.4 ¹³³		19.9 ¹¹³	58	11	19 56	20 57	13	78		24 16
24	183	58.6	-12	09.7	417	57.7 ¹³³	-4	08.7 ¹¹²	60 S	19 19	20 07	21 16	13 10	80	2	28 13
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 21 ^h 45 ^m 2		Mag.: -4.0 PMG: 9 ^h 31 ^m		Mag.: +1.2 PMG: 14 ^h 30 ^m		Mag.: -2.7 PMG: 2 ^h 47 ^m		Mag.: +0.6 PMG: 11 ^h 50 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
^h	°	'	°	'	°	'	°	'	°	'						
0	32	48.1	217	17.5	+3	25.5	142	19.8	+21	50.8	182	01.6	-10	07.8		
1	47	50.5	232	17.1		24.4	157	20.3		50.8	197	03.8		07.9		
2	62	53.0	247	16.8		23.3	172	20.8		50.8	212	06.0		08.0		
3	77	55.5	262	16.5		22.2	187	21.3		50.8	227	08.2		08.1		
4	92	57.9	277	16.1		21.1	202	21.8		50.7	242	10.3		08.2		
5	108	00.4	292	15.8	+3	20.0	217	22.3	-23	50.7	257	12.5	-10	08.3		
6	123	02.8	307	15.5	+3	18.8	232	22.8	-23	50.7	272	14.7	-10	08.4		
7	138	05.3	322	15.1		17.7	247	23.3		50.7	287	16.9		08.5		
8	153	07.8	337	14.8		16.6	262	23.8		50.7	302	19.0		08.6		
9	168	10.2	352	14.5		15.5	277	24.3		50.7	317	21.2		08.7		
10	183	12.7	7	14.1		14.4	292	24.8		50.6	332	23.4		08.9		
11	198	15.2	22	13.8	+3	13.3	307	25.3	-23	50.6	347	25.6	-10	09.0		
12	213	17.6	37	13.5	+3	12.2	322	25.8	-23	50.6	2	27.7	-10	09.1		
13	228	20.1	52	13.1		11.1	337	26.3		50.6	17	29.9		09.2		
14	243	22.6	67	12.8		09.9	352	26.8		50.6	32	32.1		09.3		
15	258	25.0	82	12.4		08.8	7	27.3		50.6	47	34.3		09.4		
16	273	27.5	97	12.1		07.7	22	27.8		50.5	62	36.4		09.5		
17	288	29.9	112	11.8	+3	06.6	37	28.3	-23	50.5	77	38.6	-10	09.6		
18	303	32.4	127	11.4	+3	05.5	52	28.8	-23	50.5	92	40.8	-10	09.7		
19	318	34.9	142	11.1		04.4	67	29.3		50.5	107	43.0		09.8		
20	333	37.3	157	10.8		03.2	82	29.8		50.5	122	45.2		09.9		
21	348	39.8	172	10.4		02.1	97	30.3		50.4	137	47.3		10.0		
22	3	42.3	187	10.1	+3	01.0	112	30.8		50.4	152	49.5		10.1		
23	18	44.7	202	09.8	+2	59.9	127	31.3		50.4	167	51.7		10.2		
24	33	47.2	217	09.4	+2	58.8	142	31.8	-23	50.4	182	53.9	-10	10.3		
Dif	—		-3	-11			+5	-3		+26	0		+22		-1	

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UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'1 PMG: 11 ^h 44 ^m 0			SD: 15'4 Edad: 9 ^d 5 PHE { 4 ^h : 56'3 12 ^h : 56'1 20 ^h : 55'9 PMG: 20 ^h 50 ^m R°: 44 ^m								de Luna		de Luna		
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°	
^h	°	'		°	'			°	^h	^m	^h	^m	^h	^m	^h	^m
0	183	58.6	− 12 09.7	56	57.7	− 4 08.7	113	60 N	5 33	6 21	7 05	14 49	13	1 48	79	
1	198	58.7	10.5	71	30.1	− 3 57.4	113	58	32	18	6 59	49	14	50	77	
2	213	58.7	11.4	86	02.5	46.1	113	56	31	14	53	48	17	52	74	
3	228	58.8	12.2	100	34.9	34.8	113	54	30	11	48	47	19	54	72	
4	243	58.9	13.1	115	07.4	23.5	113	52	28	08	43	47	20	56	70	
5	258	59.0	− 12 14.0	129	39.9	− 3 12.2	113	50	5 27	6 05	6 39	14 46	22	1 57	68	
6	273	59.0	− 12 14.8	144	12.4	− 3 00.9	113	45	5 25	5 59	6 29	14 45	26	2 00	65	
7	288	59.1	15.7	158	45.0	− 2 49.6	113	40	22	54	22	44	29	03	61	
8	303	59.2	16.5	173	17.6	38.3	113	35	19	49	15	43	32	05	58	
9	318	59.2	17.4	187	50.2	26.9	114	30	16	44	6 09	43	33	07	56	
10	333	59.3	18.2	202	22.9	15.6	113	20	10	36	5 59	41	38	10	52	
11	348	59.4	− 12 19.1	216	55.5	− 2 04.3	113	10 N	5 03	5 28	5 49	14 40	41	2 13	48	
12	3	59.4	− 12 20.0	231	28.3	− 1 52.9	114	0	4 55	5 20	5 41	14 39	45	2 16	45	
13	18	59.5	20.8	246	01.0	41.6	113	10 S	45	10	32	38	48	19	41	
14	33	59.6	21.7	260	33.8	30.3	113	20	33	5 00	22	37	52	21	38	
15	48	59.6	22.5	275	06.6	18.9	114	30	17	4 46	11	36	56	25	33	
16	63	59.7	23.4	289	39.4	− 1 07.6	113	35	4 07	38	5 05	35	58	26	32	
17	78	59.8	− 12 24.2	304	12.3	− 0 56.3	113	40	3 55	4 29	4 58	14 35	60	2 28	29	
18	93	59.8	− 12 25.1	318	45.1	− 0 45.0	113	45	3 39	4 18	4 49	14 34	64	2 31	26	
19	108	59.9	25.9	333	18.0	33.6	113	50	20	4 04	39	33	67	34	22	
20	124	00.0	26.8	347	51.0	22.3	114	52	3 10	3 57	34	32	70	35	21	
21	139	00.0	27.6	2	23.9	− 0 11.0	113	54	2 59	49	29	32	71	36	19	
22	154	00.1	28.5	16	56.9	+ 0 00.3	113	56	46	41	23	31	73	38	17	
23	169	00.2	29.4	31	29.8	11.6	113	58	31	31	16	31	75	40	14	
24	184	00.2	− 12 30.2	46	02.8	+ 0 22.8	112	60 S	2 12	3 20	4 09	14 30	78	2 41	13	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 21 ^h 41 ^m 3		Mag.: −4.0 PMG: 9 ^h 32 ^m		Mag.: +1.2 PMG: 14 ^h 29 ^m		Mag.: −2.7 PMG: 2 ^h 43 ^m		Mag.: +0.6 PMG: 11 ^h 47 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
^h	°	'	°	'	°	'	°	'	°	'						
0	33	47.2	217	09.4	+ 2 58.8	142	31.8	− 23 19.8	319	14.2	+ 21 50.4	182	53.9	− 10 10.3		
1	48	49.7	232	09.1	57.7	157	32.3	20.0	334	16.8	50.4	197	56.0	10.4		
2	63	52.1	247	08.8	56.5	172	32.8	20.3	349	19.5	50.4	212	58.2	10.5		
3	78	54.6	262	08.4	55.4	187	33.3	20.5	4	22.1	50.3	228	00.4	10.6		
4	93	57.1	277	08.1	54.3	202	33.8	20.8	19	24.8	50.3	243	02.6	10.7		
5	108	59.5	292	07.8	+ 2 53.2	217	34.3	− 23 21.0	34	27.4	+ 21 50.3	258	04.7	− 10 10.8		
6	124	02.0	307	07.4	+ 2 52.1	232	34.8	− 23 21.3	49	30.0	+ 21 50.3	273	06.9	− 10 10.9		
7	139	04.4	322	07.1	50.9	247	35.3	21.5	64	32.7	50.3	288	09.1	11.0		
8	154	06.9	337	06.8	49.8	262	35.8	21.7	79	35.3	50.2	303	11.3	11.1		
9	169	09.4	352	06.4	48.7	277	36.3	22.0	94	38.0	50.2	318	13.4	11.2		
10	184	11.8	7	06.1	47.6	292	36.8	22.2	109	40.6	50.2	333	15.6	11.3		
11	199	14.3	22	05.8	+ 2 46.5	307	37.3	− 23 22.5	124	43.3	+ 21 50.2	348	17.8	− 10 11.4		
12	214	16.8	37	05.4	+ 2 45.3	322	37.7	− 23 22.7	139	45.9	+ 21 50.2	3	20.0	− 10 11.5		
13	229	19.2	52	05.1	44.2	337	38.2	23.0	154	48.6	50.2	18	22.1	11.6		
14	244	21.7	67	04.8	43.1	352	38.7	23.2	169	51.2	50.1	33	24.3	11.7		
15	259	24.2	82	04.4	42.0	7	39.2	23.5	184	53.9	50.1	48	26.5	11.9		
16	274	26.6	97	04.1	40.9	22	39.7	23.7	199	56.5	50.1	63	28.7	12.0		
17	289	29.1	112	03.7	+ 2 39.7	37	40.2	− 23 23.9	214	59.2	+ 21 50.1	78	30.8	− 10 12.1		
18	304	31.6	127	03.4	+ 2 38.6	52	40.7	− 23 24.2	230	01.8	+ 21 50.1	93	33.0	− 10 12.2		
19	319	34.0	142	03.1	37.5	67	41.2	24.4	245	04.5	50.0	108	35.2	12.3		
20	334	36.5	157	02.7	36.4	82	41.7	24.7	260	07.1	50.0	123	37.4	12.4		
21	349	38.9	172	02.4	35.3	97	42.2	24.9	275	09.8	50.0	138	39.5	12.5		
22	4	41.4	187	02.1	34.1	112	42.7	25.1	290	12.4	50.0	153	41.7	12.6		
23	19	43.9	202	01.7	33.0	127	43.2	25.4	305	15.1	50.0	168	43.9	12.7		
24	34	46.3	217	01.4	+ 2 31.9	142	43.6	− 23 25.6	320	17.7	+ 21 49.9	183	46.1	− 10 12.8		
Dif	—		−3	−11		+5	−2		+26		0	+22		−1		

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UT	SOL		LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 9		SD: 15 ^h 2 Edad: 10 ^d 5 PHE { 4 ^h : 55 ^m 7 12 ^h : 55 ^m 6 20 ^h : 55 ^m 4													
	PMG: 21 ^h 34 ^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	h m	m	h m	m	
0	184	00.2	− 12	30.2	46	02.8	+ 0	22.8	113	60 N	16 19	17 03	17 52	15 02	12	
1	199	00.3		31.1	60	35.9	141	34.1	113	58	26	07	53	03	15	
2	214	00.4		31.9	75	08.9	140	45.4	113	56	32	11	54	05	17	
3	229	00.4		32.8	89	42.0	141	+ 0	56.6	112	54	37	14	06	19	
4	244	00.5		33.6	104	15.0	140	+ 1	07.9	113	52	42	17	07	21	
5	259	00.6	− 12	34.5	118	48.1	141	+ 1	19.1	112	50	16 47	17 20	17 58	15 08 23	
6	274	00.6	− 12	35.3	133	21.2	141	+ 1	30.3	112	45	16 57	17 27	18 01	15 11 26	
7	289	00.7		36.2	147	54.3	141	41.5	112	40	17 05	32	04	13	29	
8	304	00.8		37.0	162	27.5	142	+ 1	52.7	112	35	12	38	07	15	
9	319	00.8		37.9	177	00.6	141	+ 2	03.8	111	30	18	42	10	16	
10	334	00.9		38.7	191	33.8	142	15.0	112	20	29	17 51	17	19	37	
11	349	00.9	− 12	39.6	206	06.9	141	+ 2	26.1	111	10 N	17 38	18 00	18 25	15 21 41	
12	4	01.0	− 12	40.4	220	40.1	142	+ 2	37.3	112	0	17 47	18 09	18 33	15 24 44	
13	19	01.1		41.2	235	13.3	142	48.4	111	10 S	17 57	18	43	26	48	
14	34	01.1		42.1	249	46.5	142	+ 2	59.4	110	20	18 06	29	18 56	29 51	
15	49	01.2		42.9	264	19.7	142	+ 3	10.5	111	30	18	43	19 13	32 55	
16	64	01.2		43.8	278	52.9	142	21.5	110	35	25	18 51	23	33 58	58 31	
17	79	01.3	− 12	44.6	293	26.1	142	+ 3	32.6	111	40	18 32	19 01	19 36	15 35 60	
18	94	01.4	− 12	45.5	307	59.3	142	+ 3	43.5	109	45	18 41	19 13	19 51	15 38 62	
19	109	01.4		46.3	322	32.6	143	+ 3	54.5	110	50	52	28	20 12	40 67	
20	124	01.5		47.2	337	05.8	142	+ 4	05.5	110	52	18 57	35	22	42 68	
21	139	01.5		48.0	351	39.0	142	16.4	109	54	19 03	42	34	43 70	55 20	
22	154	01.6		48.9	6	12.3	143	27.3	109	56	09	19 51	20 47	44 73	55 17	
23	169	01.6		49.7	20	45.5	142	38.2	109	58	16	20 02	21 04	46 75	54 15	
24	184	01.7	− 12	50.5	35	18.8	143	+ 4	49.0	108	60 S	19 24	20 14	21 24	15 48 77	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 21 ^h 37 ^m 4		Mag.: −4.0 PMG: 9 ^h 32 ^m		Mag.: +1.2 PMG: 14 ^h 29 ^m		Mag.: −2.7 PMG: 2 ^h 38 ^m		Mag.: +0.6 PMG: 11 ^h 43 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	34	46.3	217	01.4	+ 2	31.9	142	43.6	− 23	25.6	320	17.7	+ 21	49.9	183	46.1
1	49	48.8	232	01.1		30.8	157	44.1		25.9	335	20.4		49.9	198	48.2
2	64	51.3	247	00.7		29.6	172	44.6		26.1	350	23.0		49.9	213	50.4
3	79	53.7	262	00.4		28.5	187	45.1		26.3	5	25.7		49.9	228	52.6
4	94	56.2	277	00.1		27.4	202	45.6		26.6	20	28.4		49.9	243	54.8
5	109	58.7	291	59.7	+ 2	26.3	217	46.1	− 23	26.8	35	31.0	+ 21	49.9	258	56.9
6	125	01.1	306	59.4	+ 2	25.1	232	46.6	− 23	27.0	50	33.7	+ 21	49.8	273	59.1
7	140	03.6	321	59.1		24.0	247	47.1		27.3	65	36.3		49.8	289	01.3
8	155	06.0	336	58.7		22.9	262	47.6		27.5	80	39.0		49.8	304	03.5
9	170	08.5	351	58.4		21.8	277	48.0		27.8	95	41.6		49.8	319	05.6
10	185	11.0	6	58.0		20.6	292	48.5		28.0	110	44.3		49.8	334	07.8
11	200	13.4	21	57.7	+ 2	19.5	307	49.0	− 23	28.2	125	46.9	+ 21	49.7	349	10.0
12	215	15.9	36	57.4	+ 2	18.4	322	49.5	− 23	28.5	140	49.6	+ 21	49.7	4	12.2
13	230	18.4	51	57.0		17.3	337	50.0		28.7	155	52.3		49.7	19	14.3
14	245	20.8	66	56.7		16.1	352	50.5		28.9	170	54.9		49.7	34	16.5
15	260	23.3	81	56.4		15.0	7	51.0		29.2	185	57.6		49.7	49	18.7
16	275	25.8	96	56.0		13.9	22	51.4		29.4	201	00.2		49.6	64	20.9
17	290	28.2	111	55.7	+ 2	12.8	37	51.9	− 23	29.6	216	02.9	+ 21	49.6	79	23.1
18	305	30.7	126	55.4	+ 2	11.6	52	52.4	− 23	29.9	231	05.5	+ 21	49.6	94	25.2
19	320	33.2	141	55.0		10.5	67	52.9		30.1	246	08.2		49.6	109	27.4
20	335	35.6	156	54.7		09.4	82	53.4		30.3	261	10.9		49.6	124	29.6
21	350	38.1	171	54.4		08.2	97	53.9		30.5	276	13.5		49.5	139	31.8
22	5	40.5	186	54.0		07.1	112	54.4		30.8	291	16.2		49.5	154	33.9
23	20	43.0	201	53.7		06.0	127	54.8		31.0	306	18.8		49.5	169	36.1
24	35	45.5	216	53.4	+ 2	04.9	142	55.3	− 23	31.2	321	21.5	+ 21	49.5	184	38.3
Dif	—	−3	−11		+5	−2			+27	0			+22	−1		

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SÁBADO 27 DE OCTUBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 8		SD: 15 ^h 1 Edad: 11 ^d 5		PHE { 4 ^h : 55 ^h 3 12 ^h : 55 ^h 1 20 ^h : 55 ^h 0			R°: 44 ^m			de Luna		de Luna	
	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	h m m
0	184 01.7	− 12 50.5	35 18.8		+ 4 49.0	108	60 N	5 37	6 26	7 10	15 14 14	4 25 77		
1	199 01.8	51.4	49 52.0	142	+ 4 59.8	108	58	36	22	7 03	18 17	22 74		
2	214 01.8	52.2	64 25.3	143	+ 5 10.6	108	56	34	18	6 57	22 18	19 72		
3	229 01.9	53.1	78 58.5	142	21.4	108	54	33	15	51	25 21	17 69		
4	244 01.9	53.9	93 31.7	142	32.1	107	52	32	11	46	28 22	14 68		
5	259 02.0	− 12 54.8	108 05.0	143	+ 5 42.8	107	50	5 30	6 08	6 42	15 31 24	4 12 66		
6	274 02.0	− 12 55.6	122 38.2	142	+ 5 53.5	107	45	5 27	6 02	6 32	15 37 27	4 08 62		
7	289 02.1	56.4	137 11.5	143	+ 6 04.1	106	40	24	5 56	24	42 30	04 60		
8	304 02.2	57.3	151 44.7	142	14.8	107	35	21	51	17	46 32	4 01 57		
9	319 02.2	58.1	166 18.0	143	25.3	105	30	18	46	6 10	50 34	3 58 55		
10	334 02.3	59.0	180 51.2	142	35.9	106	20	11	37	5 59	15 56 39	53 51		
11	349 02.3	− 12 59.8	195 24.4	142	+ 6 46.4	105	10 N	5 03	5 28	5 50	16 02 42	3 49 47		
12	4 02.4	− 13 00.6	209 57.6	142	+ 6 56.9	105	0	4 55	5 19	5 40	16 08 44	3 45 44		
13	19 02.4	01.5	224 30.9	143	+ 7 07.3	104	10 S	44	5 10	31	14 47	41 41		
14	34 02.5	02.3	239 04.1	142	17.7	104	20	32	4 58	21	20 50	37 38		
15	49 02.5	03.2	253 37.3	142	28.1	104	30	15	45	09	27 54	32 34		
16	64 02.6	04.0	268 10.5	142	38.4	103	35	4 04	36	5 03	31 56	29 32		
17	79 02.6	− 13 04.8	282 43.7	142	+ 7 48.7	103	40	3 52	4 26	4 55	16 35 59	3 26 29		
18	94 02.7	− 13 05.7	297 16.8	141	+ 7 58.9	102	45	3 36	4 14	4 46	16 40 62	3 22 27		
19	109 02.7	06.5	311 50.0	142	+ 8 09.1	102	50	15	4 00	35	47 65	18 23		
20	124 02.8	07.4	326 23.2	142	19.3	102	52	3 05	3 52	30	50 67	16 21		
21	139 02.8	08.2	340 56.3	141	29.4	101	54	2 53	45	24	53 69	14 20		
22	154 02.9	09.0	355 29.5	142	39.5	101	56	40	36	18	16 57 71	12 17		
23	169 02.9	09.9	10 02.6	141	49.5	100	58	23	25	11	17 01 73	09 15		
24	184 03.0	− 13 10.7	24 35.7	141	+ 8 59.5	100	60 S	2 03	3 13	4 03	17 05 76	3 06 13		
UT	ARIES PMG: 21 ^h 33 ^m 4		VENUS Mag.: −4.0 PMG: 9 ^h 33 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 28 ^m		JÚPITER Mag.: −2.7 PMG: 2 ^h 34 ^m		SATURNO Mag.: +0.6 PMG: 11 ^h 40 ^m					
	hG ♈	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "					
h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "					
0	35 45.5	216 53.4	+ 2 04.9	142 55.3	− 23 31.2	321 21.5	+ 21 49.5	184 38.3	− 10 15.3					
1	50 47.9	231 53.0	03.7	157 55.8	31.5	336 24.2	49.5	199 40.5	15.4					
2	65 50.4	246 52.7	02.6	172 56.3	31.7	351 26.8	49.4	214 42.6	15.5					
3	80 52.9	261 52.3	01.5	187 56.8	31.9	6 29.5	49.4	229 44.8	15.6					
4	95 55.3	276 52.0	+ 2 00.3	202 57.3	32.2	21 32.1	49.4	244 47.0	15.7					
5	110 57.8	291 51.7	+ 1 59.2	217 57.7	− 23 32.4	36 34.8	+ 21 49.4	259 49.2	− 10 15.8					
6	126 00.3	306 51.3	+ 1 58.1	232 58.2	− 23 32.6	51 37.5	+ 21 49.4	274 51.3	− 10 15.9					
7	141 02.7	321 51.0	57.0	247 58.7	32.8	66 40.1	49.3	289 53.5	16.0					
8	156 05.2	336 50.7	55.8	262 59.2	33.1	81 42.8	49.3	304 55.7	16.1					
9	171 07.6	351 50.3	54.7	277 59.7	33.3	96 45.5	49.3	319 57.9	16.2					
10	186 10.1	6 50.0	53.6	293 00.2	33.5	111 48.1	49.3	335 00.0	16.3					
11	201 12.6	21 49.7	+ 1 52.4	308 00.6	− 23 33.7	126 50.8	+ 21 49.3	350 02.2	− 10 16.4					
12	216 15.0	36 49.3	+ 1 51.3	323 01.1	− 23 34.0	141 53.5	+ 21 49.2	5 04.4	− 10 16.5					
13	231 17.5	51 49.0	50.2	338 01.6	34.2	156 56.1	49.2	20 06.6	16.6					
14	246 20.0	66 48.6	49.0	353 02.1	34.4	171 58.8	49.2	35 08.7	16.7					
15	261 22.4	81 48.3	47.9	8 02.6	34.6	187 01.4	49.2	50 10.9	16.8					
16	276 24.9	96 48.0	46.8	23 03.0	34.9	202 04.1	49.2	65 13.1	16.9					
17	291 27.4	111 47.6	+ 1 45.6	38 03.5	− 23 35.1	217 06.8	+ 21 49.1	80 15.3	− 10 17.0					
18	306 29.8	126 47.3	+ 1 44.5	53 04.0	− 23 35.3	232 09.4	+ 21 49.1	95 17.4	− 10 17.1					
19	321 32.3	141 47.0	43.4	68 04.5	35.5	247 12.1	49.1	110 19.6	17.2					
20	336 34.8	156 46.6	42.2	83 05.0	35.7	262 14.8	49.1	125 21.8	17.3					
21	351 37.2	171 46.3	41.1	98 05.4	36.0	277 17.4	49.1	140 24.0	17.4					
22	6 39.7	186 46.0	40.0	113 05.9	36.2	292 20.1	49.0	155 26.1	17.5					
23	21 42.1	201 45.6	38.8	128 06.4	36.4	307 22.8	49.0	170 28.3	17.6					
24	36 44.6	216 45.3	+ 1 37.7	143 06.9	− 23 36.6	322 25.4	+ 21 49.0	185 30.5	− 10 17.7					
Dif	—	−3	−11	+5	−2	+27	0	+22	−1					

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LUNES 29 DE OCTUBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'1 PMG: 11 ^h 43 ^m 7		SD: 14'9 Edad: 13 ^d 5		PHE { 4 ^h : 54'6 12 ^h : 54'5 20 ^h : 54'4											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
^h	[°]	[']	[°]	[']	[°]	[']	[°]	^h	^m	^h	^m	^h	^m	^h	^m	
0	184	04.1	—	13	30.6	13	45.9	5	42	6	31	7	15	15	45	
1	199	04.1			31.5	28	18.6	40	26	08		15	54	24	49	
2	214	04.2			32.3	42	51.3	38	22	7	01	16	02	26	41	
3	229	04.2			33.1	57	23.9	37	18	6	55	09	27	35	66	
4	244	04.2			33.9	71	56.6	35	15	50		15	29	29	64	
5	259	04.3	—	13	34.8	86	29.2	5	33	6	11	6	45	16	21	
6	274	04.3	—	13	35.6	101	01.8	5	30	6	04	6	35	16	34	
7	289	04.4			36.4	115	34.3	26	5	58	26	44	35	6	12	
8	304	04.4			37.2	130	06.9	23	52	18	16	53	37	5	54	
9	319	04.4			38.1	144	39.4	19	47	12	17	01	39	47	54	
10	334	04.5			38.9	159	11.9	12	38	6	00	14	42	35	51	
11	349	04.5	—	13	39.7	173	44.3	5	03	5	28	5	50	17	26	
12	4	04.5	—	13	40.5	188	16.8	4	54	5	19	5	40	17	38	
13	19	04.6			41.3	202	49.2	43	5	09	30	17	49	5	04	
14	34	04.6			42.2	217	21.6	30	4	57	20	18	01	4	53	
15	49	04.7			43.0	231	54.0	13	43	08	15	54		41	38	
16	64	04.7			43.8	246	26.3	4	02	34	5	01	23	55	34	
17	79	04.7	—	13	44.6	260	58.6	3	49	4	23	4	52	18	32	
18	94	04.8	—	13	45.5	275	30.9	3	32	4	11	4	43	18	43	
19	109	04.8			46.3	290	03.2	10	3	56	31	18	57	62	06	
20	124	04.8			47.1	304	35.5	3	00	48	26	19	03	63	4	
21	139	04.9			47.9	319	07.7	2	47	40	20	10	64	3	55	
22	154	04.9			48.7	333	39.9	2	33	30	13	17	67	49	23	
23	169	04.9			49.5	348	12.1	2	15	19	4	06	26	69	42	
24	184	05.0	—	13	50.4	2	44.2	1	53	3	07	3	57	19	36	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 21 ^h 25 ^m 6		Mag.: -4.0 PMG: 9 ^h 34 ^m		Mag.: +1.2 PMG: 14 ^h 26 ^m		Mag.: -2.7 PMG: 2 ^h 26 ^m		Mag.: +0.6 PMG: 11 ^h 33 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
^h	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']	[°]	[']				
0	37	43.7	216	37.2	143	18.3	323	29.6	186	22.7	—	10	20.2			
1	52	46.2	231	36.8	158	18.8	338	32.3	201	24.9	—	10	20.3			
2	67	48.7	246	36.5	173	19.2	353	34.9	216	27.0	—	10	20.4			
3	82	51.1	261	36.2	188	19.7	8	37.6	231	29.2	—	10	20.5			
4	97	53.6	276	35.8	203	20.2	23	40.3	246	31.4	—	10	20.6			
5	112	56.1	291	35.5	218	20.6	38	43.0	261	33.6	—	10	20.7			
6	127	58.5	306	35.1	233	21.1	53	45.7	276	35.7	—	10	20.8			
7	143	01.0	321	34.8	248	21.6	68	48.3	291	37.9	—	10	20.9			
8	158	03.5	336	34.5	263	22.1	83	51.0	306	40.1	—	10	21.0			
9	173	05.9	351	34.1	278	22.5	98	53.7	321	42.3	—	10	21.1			
10	188	08.4	6	33.8	293	23.0	113	56.4	336	44.5	—	10	21.2			
11	203	10.9	21	33.5	308	23.5	128	59.0	351	46.6	—	10	21.3			
12	218	13.3	36	33.1	323	23.9	144	01.7	6	48.8	—	10	21.4			
13	233	15.8	51	32.8	338	24.4	159	04.4	21	51.0	—	10	21.5			
14	248	18.2	66	32.4	353	24.9	174	07.1	36	53.2	—	10	21.6			
15	263	20.7	81	32.1	8	25.3	189	09.8	51	55.3	—	10	21.7			
16	278	23.2	96	31.8	23	25.8	204	12.5	66	57.5	—	10	21.8			
17	293	25.6	111	31.4	38	26.3	219	15.1	81	59.7	—	10	21.9			
18	308	28.1	126	31.1	53	26.7	234	17.8	97	01.9	—	10	22.0			
19	323	30.6	141	30.7	68	27.2	249	20.5	112	04.0	—	10	22.1			
20	338	33.0	156	30.4	83	27.7	264	23.2	127	06.2	—	10	22.2			
21	353	35.5	171	30.1	98	28.2	279	25.9	142	08.4	—	10	22.3			
22	8	38.0	186	29.7	113	28.6	294	28.5	157	10.6	—	10	22.4			
23	23	40.4	201	29.4	128	29.1	309	31.2	172	12.7	—	10	22.5			
24	38	42.9	216	29.0	143	29.6	324	33.9	187	14.9	—	10	22.7			
Dif	—		-3		-11		+5		-2		+27		0		+22	

MARTES 30 DE OCTUBRE DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		SD: 14 ^h 8		Edad: 14 ^d 5											
	PMG: 11 ^h 43 ^m 6	PMG: **h **m	R°: ****m	PHE { 4 ^h : 54/3 12 ^h : 54/2 20 ^h : 54/2	hG ☉	Dec			hG ☾	Dif	Dec	Dif	Civil	Náutico	Hora	R°
h	° /	° /	° /		° /		°	h m	h m	h m	h m	m	h m	m	h m	m
0	184 05.0	− 13 50.4	2 44.2		+ 15 55.9	71	60 N	16 08	16 53	17 42	16 06	28	8 10	69		
1	199 05.0	51.2	17 16.4	132	+ 16 03.0	71	58	16	16 58	44	18 29		7 59	67		
2	214 05.0	52.0	31 48.5	131	10.1	71	56	23	17 02	46	28 31		49	65		
3	229 05.1	52.8	46 20.5	130	17.0	69	54	29	06	48	36 33		41	63		
4	244 05.1	53.6	60 52.6	131	23.9	69	52	35	10	50	44 35		33	62		
5	259 05.1	− 13 54.4	75 24.6	130	+ 16 30.7	68	50	16 40	17 13	17 52	16 51	36	7 27	60		
6	274 05.2	− 13 55.3	89 56.6	130	+ 16 37.4	67	45	16 51	17 21	17 56	17 07	37	7 12	58		
7	289 05.2	56.1	104 28.6	130	44.1	67	40	17 00	28	18 00	19 40		7 00	56		
8	304 05.2	56.9	119 00.6	130	50.6	65	35	07	34	03	30 41		6 50	54		
9	319 05.3	57.7	133 32.5	129	+ 16 57.1	65	30	14	39	07	40 42		41	53		
10	334 05.3	58.5	148 04.4	129	+ 17 03.5	64	20	26	49	15	17 56	44	26	50		
11	349 05.3	− 13 59.3	162 36.3	129	+ 17 09.9	64	10 N	17 37	17 59	18 24	18 10	46	6 12	49		
12	4 05.4	− 14 00.1	177 08.1	128	+ 17 16.1	62	0	17 47	18 08	18 33	18 24	47	6 00	47		
13	19 05.4	01.0	191 40.0	129	22.3	62	10 S	17 57	19	44	37 49		5 47	45		
14	34 05.4	01.8	206 11.8	128	28.4	61	20	18 08	31	18 58	18 52	50	34	43		
15	49 05.4	02.6	220 43.6	128	34.4	60	30	21	46	19 16	19 09	52	19	40		
16	64 05.5	03.4	235 15.3	127	40.4	60	35	28	18 55	27	18 54		10	39		
17	79 05.5	− 14 04.2	249 47.1	128	+ 17 46.2	58	40	18 37	19 06	19 41	19 29	55	5 00	38		
18	94 05.5	− 14 05.0	264 18.8	127	+ 17 52.0	58	45	18 47	19 19	19 58	19 43	56	4 49	35		
19	109 05.5	05.8	278 50.5	127	+ 17 57.7	57	50	18 59	35	20 21	19 59	58	34	33		
20	124 05.6	06.6	293 22.1	126	+ 18 03.3	56	52	19 05	43	32	20 06	60	28	31		
21	139 05.6	07.4	307 53.8	127	08.8	55	54	11	19 51	20 45	14 61		21	30		
22	154 05.6	08.3	322 25.4	126	14.3	55	56	18	20 01	21 00	24 62		12	29		
23	169 05.7	09.1	336 57.0	126	19.6	53	58	26	13	19	35 63		4 03	27		
24	184 05.7	− 14 09.9	351 28.6	126	+ 18 24.9	53	60 S	19 35	20 26	21 43	20 47	66	3 53	24		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 21 ^h 21 ^m 6		Mag.: −4.0 PMG: 9 ^h 34 ^m		Mag.: +1.2 PMG: 14 ^h 26 ^m		Mag.: −2.7 PMG: 2 ^h 21 ^m		Mag.: +0.6 PMG: 11 ^h 29 ^m							
	hG ♈	Dec	hG ♊	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	° /	° /	° /		° /		° /		° /		° /					
0	38 42.9	216 29.0	+ 0 43.1		143 29.6	− 23 46.7	324 33.9	+ 21 48.0	187 14.9	− 10 22.7						
1	53 45.3	231 28.7	41.9		158 30.0	46.9	339 36.6	48.0	202 17.1	22.8						
2	68 47.8	246 28.4	40.8		173 30.5	47.1	354 39.3	47.9	217 19.3	22.9						
3	83 50.3	261 28.0	39.6		188 31.0	47.3	9 42.0	47.9	232 21.4	23.0						
4	98 52.7	276 27.7	38.5		203 31.4	47.5	24 44.7	47.9	247 23.6	23.1						
5	113 55.2	291 27.3	+ 0 37.4		218 31.9	− 23 47.7	39 47.3	+ 21 47.9	262 25.8	− 10 23.2						
6	128 57.7	306 27.0	+ 0 36.2		233 32.4	− 23 47.9	54 50.0	+ 21 47.9	277 28.0	− 10 23.3						
7	144 00.1	321 26.7	35.1		248 32.8	48.1	69 52.7	47.8	292 30.1	23.4						
8	159 02.6	336 26.3	33.9		263 33.3	48.3	84 55.4	47.8	307 32.3	23.5						
9	174 05.1	351 26.0	32.8		278 33.7	48.5	99 58.1	47.8	322 34.5	23.6						
10	189 07.5	6 25.6	31.6		293 34.2	48.7	115 00.8	47.8	337 36.7	23.7						
11	204 10.0	21 25.3	+ 0 30.5		308 34.7	− 23 48.9	130 03.5	+ 21 47.7	352 38.8	− 10 23.8						
12	219 12.5	36 25.0	+ 0 29.3		323 35.1	− 23 49.1	145 06.1	+ 21 47.7	7 41.0	− 10 23.9						
13	234 14.9	51 24.6	28.2		338 35.6	49.3	160 08.8	47.7	22 43.2	24.0						
14	249 17.4	66 24.3	27.1		353 36.1	49.5	175 11.5	47.7	37 45.4	24.1						
15	264 19.8	81 23.9	25.9		8 36.5	49.7	190 14.2	47.7	52 47.5	24.2						
16	279 22.3	96 23.6	24.8		23 37.0	49.9	205 16.9	47.6	67 49.7	24.3						
17	294 24.8	111 23.2	+ 0 23.6		38 37.5	− 23 50.1	220 19.6	+ 21 47.6	82 51.9	− 10 24.4						
18	309 27.2	126 22.9	+ 0 22.5		53 37.9	− 23 50.3	235 22.3	+ 21 47.6	97 54.1	− 10 24.5						
19	324 29.7	141 22.6	21.3		68 38.4	50.5	250 25.0	47.6	112 56.2	24.6						
20	339 32.2	156 22.2	20.2		83 38.8	50.6	265 27.7	47.5	127 58.4	24.7						
21	354 34.6	171 21.9	19.0		98 39.3	50.8	280 30.3	47.5	143 00.6	24.8						
22	9 37.1	186 21.5	17.9		113 39.8	51.0	295 33.0	47.5	158 02.8	24.9						
23	24 39.6	201 21.2	16.8		128 40.2	51.2	310 35.7	47.5	173 04.9	25.0						
24	39 42.0	216 20.9	+ 0 15.6		143 40.7	− 23 51.4	325 38.4	+ 21 47.4	188 07.1	− 10 25.1						
Dif	—	−3	−11		+5	−2	+27	0	+22	−1						

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MIÉRCOL 31 DE OCTUBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 6		SD: 14 ^h 8 Edad: 15 ^d 5 PMG: 0 ^h 35 ^m R°: 48 ^m					PHE { 4 ^h : 54 ^h 1 12 ^h : 54 ^h 1 20 ^h : 54 ^h 0			de Luna		de Luna			
	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	184 05.7	− 14 09.9	351 28.6		+ 18 24.9		60 N	5 46	6 35	7 21	16 34 36	9 19 62				
1	199 05.7	10.7	6 00.1	125	30.1	52	58	44	30	13	47 38	9 06 60				
2	214 05.7	11.5	20 31.6	125	35.2	51	56	42	26	7 06	16 59 39	8 54 59				
3	229 05.8	12.3	35 03.1	125	40.2	50	54	40	22	6 59	17 09 40	44 58				
4	244 05.8	13.1	49 34.6	125	45.1	49	52	38	18	54	19 40	35 57				
5	259 05.8	− 14 13.9	64 06.1	125	+ 18 50.0	49	50	5 36	6 15	6 49	17 27 41	8 27 56				
6	274 05.8	− 14 14.7	78 37.5	124	+ 18 54.7	47	45	5 32	6 07	6 37	17 44 43	8 10 55				
7	289 05.8	15.5	93 09.0	125	+ 18 59.4	47	40	28	6 00	28	17 59 43	7 56 54				
8	304 05.9	16.3	107 40.4	124	+ 19 04.0	46	35	24	5 54	20	18 11 44	44 53				
9	319 05.9	17.1	122 11.7	123	08.5	45	30	20	49	13	22 45	34 52				
10	334 05.9	17.9	136 43.1	124	12.9	44	20	12	38	6 01	40 46	16 50				
11	349 05.9	− 14 18.7	151 14.4	123	+ 19 17.2	43	10 N	5 04	5 29	5 50	18 56 47	7 01 49				
12	4 06.0	− 14 19.5	165 45.7	123	+ 19 21.4	42	0	4 54	5 19	5 40	19 11 48	6 47 47				
13	19 06.0	20.3	180 17.0	123	25.6	42	10 S	43	5 08	30	26 49	32 47				
14	34 06.0	21.1	194 48.3	123	29.6	40	20	29	4 56	19	19 42 50	6 17 45				
15	49 06.0	21.9	209 19.6	123	33.6	40	30	4 11	41	5 06	20 01 51	5 59 44				
16	64 06.0	22.8	223 50.8	122	37.4	38	35	3 59	32	4 58	12 51	49 43				
17	79 06.1	− 14 23.6	238 22.0	122	+ 19 41.2	38	40	3 46	4 21	4 50	20 24 52	5 38 41				
18	94 06.1	− 14 24.4	252 53.3	123	+ 19 44.9	37	45	3 28	4 08	4 40	20 39 53	5 24 40				
19	109 06.1	25.2	267 24.4	121	48.5	36	50	3 06	3 52	28	20 57 54	5 07 38				
20	124 06.1	26.0	281 55.6	122	52.0	35	52	2 55	44	22	21 06 54	4 59 38				
21	139 06.1	26.8	296 26.8	122	55.4	34	54	42	35	16	15 55	51 36				
22	154 06.1	27.6	310 57.9	121	+ 19 58.7	33	56	26	25	09	26 56	41 35				
23	169 06.2	28.4	325 29.0	121	+ 20 02.0	33	58	2 07	14	4 01	38 57	30 33				
24	184 06.2	− 14 29.2	340 00.1	121	+ 20 05.1	31	60 S	1 43	3 00	3 52	21 53 57	4 17 32				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 21 ^h 17 ^m 7		Mag.: −4.0 PMG: 9 ^h 35 ^m		Mag.: +1.2 PMG: 14 ^h 25 ^m		Mag.: −2.7 PMG: 2 ^h 17 ^m		Mag.: +0.6 PMG: 11 ^h 26 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	° /	° /	° /		° /		° /		° /		° /					
0	39 42.0	216 20.9	+ 0 15.6	143 40.7	− 23 51.4	325 38.4	+ 21 47.4	188 07.1	− 10 25.1							
1	54 44.5	231 20.5	14.5	158 41.2	51.6	340 41.1	47.4	203 09.3	25.2							
2	69 47.0	246 20.2	13.3	173 41.6	51.8	355 43.8	47.4	218 11.5	25.3							
3	84 49.4	261 19.8	12.2	188 42.1	52.0	10 46.5	47.4	233 13.6	25.4							
4	99 51.9	276 19.5	11.0	203 42.5	52.2	25 49.2	47.4	248 15.8	25.5							
5	114 54.3	291 19.1	+ 0 09.9	218 43.0	− 23 52.4	40 51.9	+ 21 47.3	263 18.0	− 10 25.6							
6	129 56.8	306 18.8	+ 0 08.7	233 43.5	− 23 52.5	55 54.6	+ 21 47.3	278 20.2	− 10 25.7							
7	144 59.3	321 18.5	07.6	248 43.9	52.7	70 57.3	47.3	293 22.3	25.8							
8	160 01.7	336 18.1	06.4	263 44.4	52.9	86 00.0	47.3	308 24.5	25.9							
9	175 04.2	351 17.8	05.3	278 44.8	53.1	101 02.7	47.2	323 26.7	26.0							
10	190 06.7	6 17.4	04.1	293 45.3	53.3	116 05.4	47.2	338 28.9	26.1							
11	205 09.1	21 17.1	+ 0 03.0	308 45.8	− 23 53.5	131 08.0	+ 21 47.2	353 31.0	− 10 26.2							
12	220 11.6	36 16.7	+ 0 01.8	323 46.2	− 23 53.7	146 10.7	+ 21 47.2	8 33.2	− 10 26.3							
13	235 14.1	51 16.4	+ 0 00.7	338 46.7	53.9	161 13.4	47.1	23 35.4	26.4							
14	250 16.5	66 16.1	− 0 00.5	353 47.1	54.0	176 16.1	47.1	38 37.6	26.5							
15	265 19.0	81 15.7	01.6	8 47.6	54.2	191 18.8	47.1	53 39.8	26.6							
16	280 21.4	96 15.4	02.7	23 48.1	54.4	206 21.5	47.1	68 41.9	26.7							
17	295 23.9	111 15.0	− 0 03.9	38 48.5	− 23 54.6	221 24.2	+ 21 47.1	83 44.1	− 10 26.8							
18	310 26.4	126 14.7	− 0 05.0	53 49.0	− 23 54.8	236 26.9	+ 21 47.0	98 46.3	− 10 26.9							
19	325 28.8	141 14.3	06.2	68 49.4	55.0	251 29.6	47.0	113 48.5	27.0							
20	340 31.3	156 14.0	07.3	83 49.9	55.1	266 32.3	47.0	128 50.6	27.1							
21	355 33.8	171 13.7	08.5	98 50.3	55.3	281 35.0	47.0	143 52.8	27.2							
22	10 36.2	186 13.3	09.6	113 50.8	55.5	296 37.7	46.9	158 55.0	27.3							
23	25 38.7	201 13.0	10.8	128 51.3	55.7	311 40.4	46.9	173 57.2	27.4							
24	40 41.2	216 12.6	− 0 11.9	143 51.7	− 23 55.9	326 43.1	+ 21 46.9	188 59.3	− 10 27.5							
Dif	—	−3	−11	+5	−2	+27	0	+22	−1							

JUEVES 1 DE NOVIEMBRE DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 6		SD: 14 ^h 7 Edad: 16 ^d 5 PHE $\begin{cases} 4^h: 54^o/0 \\ 12^h: 54^o/0 \\ 20^h: 54^o/0 \end{cases}$ PMG: 1 ^h 23 ^m R°: 48 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	184 06.2	− 14 29.2	340 00.1		+ 20 05.1		60 N	^{h m} 16 03	^{h m} 16 48	^{h m} 17 38	^{h m m} 17 10 47	^{h m m} 10 21 52		
1	199 06.2		354 31.2	121	08.1	30	58	11	54	40	25 48	10 06 52		
2	214 06.2		9 02.3	121	11.1	30	56	19	16 58	42	38 48	9 53 52		
3	229 06.2		23 33.4	121	13.9	28	54	25	17 03	45	49 48	42 51		
4	244 06.2		38 04.4	120	16.7	28	52	31	07	47	17 59 48	32 51		
5	259 06.3	− 14 33.1	52 35.4	120	+ 20 19.4	27	50	16 36	17 10	17 48	18 08 48	9 23 51		
6	274 06.3	− 14 33.9	67 06.5	121	+ 20 22.0	26	45	16 48	17 18	17 53	18 27 48	9 05 50		
7	289 06.3		81 37.5	120	24.4	24	40	16 57	25	17 57	42 48	8 50 50		
8	304 06.3		96 08.5	120	26.8	24	35	17 05	32	18 02	18 55 49	37 49		
9	319 06.3		110 39.5	120	29.1	23	30	13	37	06	19 07 48	26 49		
10	334 06.3		125 10.4	119	31.3	22	20	25	48	14	26 48	8 06 49		
11	349 06.3	− 14 37.9	139 41.4	120	+ 20 33.4	21	10 N	17 36	17 58	18 23	19 43 48	7 50 48		
12	4 06.4	− 14 38.7	154 12.3	119	+ 20 35.4	20	0	17 47	18 08	18 33	19 59 48	7 34 48		
13	19 06.4		168 43.3	120	37.3	19	10 S	17 58	19	45	20 15 48	19 47		
14	34 06.4		183 14.2	119	39.1	18	20	18 09	32	18 59	32 48	7 02 47		
15	49 06.4		197 45.1	119	40.8	17	30	23	48	19 18	20 52 48	6 43 47		
16	64 06.4		212 16.0	119	42.5	17	35	30	18 57	30	21 03 48	32 46		
17	79 06.4	− 14 42.7	226 46.9	119	+ 20 44.0	15	40	18 39	19 08	19 44	21 16 48	6 19 46		
18	94 06.4	− 14 43.5	241 17.8	119	+ 20 45.4	14	45	18 50	19 22	20 02	21 32 48	6 04 45		
19	109 06.4		255 48.7	119	46.8	14	50	19 02	39	25	21 51 48	5 45 45		
20	124 06.5		270 19.6	119	48.0	12	52	08	47	37	22 00 48	37 44		
21	139 06.5		284 50.5	119	49.1	11	54	15	19 56	20 51	10 48	27 44		
22	154 06.5		299 21.3	118	50.2	11	56	22	20 06	21 07	22 47	16 43		
23	169 06.5		313 52.2	119	51.1	9	58	30	18	27	35 47	5 03 43		
24	184 06.5	− 14 48.2	328 23.1	119	+ 20 52.0	9	60 S	19 40	20 33	21 54	22 50 47	4 49 41		

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO	
	PMG 21 ^h 13 ^m 8		Mag.: −4.0 PMG: 9 ^h 35 ^m		Mag.: +1.2 PMG: 14 ^h 24 ^m		Mag.: −2.7 PMG: 2 ^h 13 ^m		Mag.: +0.6 PMG: 11 ^h 22 ^m	
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec
^h 0	40 41.2	216 12.6	− 0 11.9		143 51.7	− 23 55.9	326 43.1	+ 21 46.9	188 59.3	− 10 27.5
1	55 43.6	231 12.3	13.1		158 52.2	56.0	341 45.8	46.9	204 01.5	27.6
2	70 46.1	246 11.9	14.2		173 52.6	56.2	356 48.5	46.8	219 03.7	27.7
3	85 48.6	261 11.6	15.4		188 53.1	56.4	11 51.2	46.8	234 05.9	27.8
4	100 51.0	276 11.2	16.5		203 53.5	56.6	26 53.9	46.8	249 08.0	27.9
5	115 53.5	291 10.9	− 0 17.7		218 54.0	− 23 56.8	41 56.6	+ 21 46.8	264 10.2	− 10 28.0
6	130 55.9	306 10.6	− 0 18.8		233 54.4	− 23 56.9	56 59.3	+ 21 46.8	279 12.4	− 10 28.1
7	145 58.4	321 10.2	20.0		248 54.9	57.1	72 02.0	46.7	294 14.6	28.2
8	161 00.9	336 09.9	21.1		263 55.4	57.3	87 04.7	46.7	309 16.7	28.4
9	176 03.3	351 09.5	22.3		278 55.8	57.5	102 07.4	46.7	324 18.9	28.5
10	191 05.8	6 09.2	23.4		293 56.3	57.6	117 10.1	46.7	339 21.1	28.6
11	206 08.3	21 08.8	− 0 24.6		308 56.7	− 23 57.8	132 12.8	+ 21 46.6	354 23.3	− 10 28.7
12	221 10.7	36 08.5	− 0 25.7		323 57.2	− 23 58.0	147 15.5	+ 21 46.6	9 25.4	− 10 28.8
13	236 13.2	51 08.1	26.9		338 57.6	58.2	162 18.2	46.6	24 27.6	28.9
14	251 15.7	66 07.8	28.0		353 58.1	58.3	177 20.9	46.6	39 29.8	29.0
15	266 18.1	81 07.4	29.2		8 58.5	58.5	192 23.6	46.5	54 32.0	29.1
16	281 20.6	96 07.1	30.3		23 59.0	58.7	207 26.3	46.5	69 34.1	29.2
17	296 23.1	111 06.8	− 0 31.5		38 59.4	− 23 58.9	222 29.0	+ 21 46.5	84 36.3	− 10 29.3
18	311 25.5	126 06.4	− 0 32.6		53 59.9	− 23 59.0	237 31.7	+ 21 46.5	99 38.5	− 10 29.4
19	326 28.0	141 06.1	33.8		69 00.3	59.2	252 34.4	46.4	114 40.7	29.5
20	341 30.4	156 05.7	34.9		84 00.8	59.4	267 37.1	46.4	129 42.8	29.6
21	356 32.9	171 05.4	36.1		99 01.2	59.6	282 39.9	46.4	144 45.0	29.7
22	11 35.4	186 05.0	37.2		114 01.7	59.7	297 42.6	46.4	159 47.2	29.8
23	26 37.8	201 04.7	38.4		129 02.1	− 23 59.9	312 45.3	46.3	174 49.4	29.9
24	41 40.3	216 04.3	− 0 39.5		144 02.6	− 24 00.1	327 48.0	+ 21 46.3	189 51.6	− 10 30.0
Dif	—	−3	−12		+5	−2	+27	0	+22	−1

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VIERNES 2 DE NOVIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1		SD: 14 ^h 7 Edad: 17 ^d 5											
	PMG: 11 ^h 43 ^m 6		PMG: 2 ^h 11 ^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	h m	m
0	184 06.5	− 14 48.2	328 23.1		+ 20 52.0	7	60 N	5 50	6 40	7 26	17 57 58		11 13 42	
1	199 06.5	49.0	342 53.9	118	52.7	7	58	48	35	17	18 13 56		10 58 42	
2	214 06.5	49.8	357 24.8	119	53.4	7	56	46	30	10	26 55		45 43	
3	229 06.5	50.6	11 55.6	118	53.9	5	54	43	25	7 03	37 55		33 44	
4	244 06.5	51.4	26 26.4	118	54.4	5	52	41	21	6 57	47 54		23 44	
5	259 06.5	− 14 52.1	40 57.3	119	+ 20 54.8	4	50	5 39	6 18	6 52	18 56 54		10 14 45	
6	274 06.5	− 14 52.9	55 28.1	118	+ 20 55.0	2	45	5 35	6 09	6 40	19 15 53		9 55 45	
7	289 06.5	53.7	69 58.9	118	55.2	2	40	30	6 02	31	30 52		40 45	
8	304 06.5	54.5	84 29.8	119	55.3	1	35	26	5 56	22	44 51		26 47	
9	319 06.6	55.3	99 00.6	118	55.3	0	30	22	50	15	19 55 51		9 15 47	
10	334 06.6	56.1	113 31.4	118	55.1	2	20	13	39	6 02	20 14 50		8 55 48	
11	349 06.6	− 14 56.9	128 02.3	119	+ 20 54.9	2	10 N	5 04	5 29	5 51	20 31 49		8 38 48	
12	4 06.6	− 14 57.6	142 33.1	118	+ 20 54.6	3	0	4 54	5 19	5 40	20 47 48		8 22 49	
13	19 06.6	58.4	157 03.9	118	54.2	4	10 S	42	5 08	29	21 03 47		8 06 49	
14	34 06.6	− 14 59.2	171 34.7	118	53.7	5	20	28	4 55	18	20 46		7 49 49	
15	49 06.6	− 15 00.0	186 05.6	119	53.1	6	30	4 09	39	5 04	40 45		30 49	
16	64 06.6	00.8	200 36.4	118	52.4	7	35	3 57	29	4 56	21 51 45		18 50	
17	79 06.6	− 15 01.6	215 07.2	118	+ 20 51.6	8	40	3 43	4 18	4 47	22 04 44		7 05 50	
18	94 06.6	− 15 02.3	229 38.1	119	+ 20 50.7	9	45	3 25	4 05	4 37	22 20 42		6 49 51	
19	109 06.6	03.1	244 08.9	118	49.7	10	50	3 01	3 48	24	39 41		30 51	
20	124 06.6	03.9	258 39.8	119	48.6	11	52	2 50	40	18	48 40		21 51	
21	139 06.6	04.7	273 10.6	118	47.4	12	54	36	30	12	22 58 40		6 11 51	
22	154 06.6	05.5	287 41.5	119	46.1	13	56	2 20	20	4 04	23 09 39		5 59 52	
23	169 06.6	06.2	302 12.3	118	44.7	14	58	1 59	3 08	3 56	22 38		46 52	
24	184 06.6	− 15 07.0	316 43.2	119	+ 20 43.3	14	60 S	1 33	2 54	3 46	23 37 37		5 30 53	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG		Mag.: −4.0		Mag.: +1.2		Mag.: −2.7		Mag.: +0.6					
	21 ^h 09 ^m 8		PMG: 9 ^h 36 ^m		PMG: 14 ^h 23 ^m		PMG: 2 ^h 08 ^m		PMG: 11 ^h 19 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	° /	° /	° /		° /		° /		° /		° /			
0	41 40.3	216 04.3	− 0 39.5		144 02.6	− 24 00.1	327 48.0	+ 21 46.3	189 51.6	− 10 30.0				
1	56 42.8	231 04.0	40.7		159 03.0	00.2	342 50.7	46.3	204 53.7	30.1				
2	71 45.2	246 03.6	41.9		174 03.5	00.4	357 53.4	46.3	219 55.9	30.2				
3	86 47.7	261 03.3	43.0		189 03.9	00.6	12 56.1	46.2	234 58.1	30.3				
4	101 50.2	276 02.9	44.2		204 04.4	00.8	27 58.8	46.2	250 00.3	30.4				
5	116 52.6	291 02.6	− 0 45.3		219 04.8	− 24 00.9	43 01.5	+ 21 46.2	265 02.4	− 10 30.5				
6	131 55.1	306 02.2	− 0 46.5		234 05.3	− 24 01.1	58 04.2	+ 21 46.2	280 04.6	− 10 30.6				
7	146 57.6	321 01.9	47.6		249 05.7	01.3	73 06.9	46.1	295 06.8	30.7				
8	162 00.0	336 01.5	48.8		264 06.2	01.4	88 09.6	46.1	310 09.0	30.8				
9	177 02.5	351 01.2	49.9		279 06.6	01.6	103 12.3	46.1	325 11.1	30.9				
10	192 04.9	6 00.9	51.1		294 07.1	01.8	118 15.0	46.1	340 13.3	31.0				
11	207 07.4	21 00.5	− 0 52.2		309 07.5	− 24 01.9	133 17.8	+ 21 46.0	355 15.5	− 10 31.1				
12	222 09.9	36 00.2	− 0 53.4		324 08.0	− 24 02.1	148 20.5	+ 21 46.0	10 17.7	− 10 31.2				
13	237 12.3	50 59.8	54.5		339 08.4	02.3	163 23.2	46.0	25 19.8	31.3				
14	252 14.8	65 59.5	55.7		354 08.9	02.4	178 25.9	46.0	40 22.0	31.4				
15	267 17.3	80 59.1	56.8		9 09.3	02.6	193 28.6	46.0	55 24.2	31.5				
16	282 19.7	95 58.8	58.0		24 09.8	02.7	208 31.3	45.9	70 26.4	31.6				
17	297 22.2	110 58.4	− 0 59.1		39 10.2	− 24 02.9	223 34.0	+ 21 45.9	85 28.5	− 10 31.7				
18	312 24.7	125 58.1	− 1 00.3		54 10.7	− 24 03.1	238 36.7	+ 21 45.9	100 30.7	− 10 31.8				
19	327 27.1	140 57.7	01.4		69 11.1	03.2	253 39.4	45.9	115 32.9	31.9				
20	342 29.6	155 57.4	02.6		84 11.6	03.4	268 42.2	45.8	130 35.1	32.0				
21	357 32.0	170 57.0	03.8		99 12.0	03.6	283 44.9	45.8	145 37.2	32.1				
22	12 34.5	185 56.7	04.9		114 12.5	03.7	298 47.6	45.8	160 39.4	32.2				
23	27 37.0	200 56.3	06.1		129 12.9	03.9	313 50.3	45.8	175 41.6	32.3				
24	42 39.4	215 56.0	− 1 07.2		144 13.4	− 24 04.0	328 53.0	+ 21 45.7	190 43.8	− 10 32.4				
Dif	—	−3	−12		+4	−2	+27	0	+22	−1				

SÁBADO 3 DE NOVIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 6		SD: 14 ^h Edad: 18 ^d 5		PHE { 4 ^h : 54/1 12 ^h : 54/2 20 ^h : 54/3									
	hG ☉	Dec	hG ☾	Dif		Dec			Dif	°				
h	° /	° /	° /		° /		°	h m	h m	h m	h m	h m	h m	h m
0	184 06.6	− 15 07.0	316 43.2		+ 20 43.3	16	60 N	15 58	16 44	17 33	18 55	66	11 55	32
1	199 06.6	07.8	331 14.1	119	41.7	16	58	16 07	49	36	19 09	64	40	34
2	214 06.6	08.6	345 44.9	118	40.0	17	56	14	54	39	21	63	28	35
3	229 06.6	09.3	0 15.8	119	38.3	17	54	21	16 59	41	32	61	17	36
4	244 06.6	10.1	14 46.7	119	36.4	19	52	27	17 03	43	41	61	11 07	38
5	259 06.6	− 15 10.9	29 17.6	119	+ 20 34.4	20	50	16 33	17 07	17 45	19 50	59	10 59	38
6	274 06.6	− 15 11.7	43 48.5	119	+ 20 32.4	20	45	16 45	17 16	17 51	20 08	57	10 40	41
7	289 06.6	12.5	58 19.4	119	30.2	22	40	16 55	23	17 55	22	56	25	42
8	304 06.6	13.2	72 50.3	119	28.0	22	35	17 04	30	18 00	35	54	13	42
9	319 06.6	14.0	87 21.2	119	25.6	24	30	11	36	04	20 46	52	10 02	43
10	334 06.6	14.8	101 52.2	120	23.2	24	20	24	47	13	21 04	51	9 43	45
11	349 06.6	− 15 15.6	116 23.1	119	+ 20 20.7	25	10 N	17 36	17 58	18 23	21 20	49	9 26	47
12	4 06.6	− 15 16.3	130 54.1	120	+ 20 18.0	27	0	17 47	18 08	18 33	21 35	48	9 11	47
13	19 06.6	17.1	145 25.0	119	15.3	27	10 S	17 58	20	18 46	21 50	46	8 55	49
14	34 06.6	17.9	159 56.0	120	12.5	28	20	18 10	33	19 01	22 06	45	38	51
15	49 06.5	18.6	174 27.0	120	09.6	29	30	24	50	20	25	42	19	52
16	64 06.5	19.4	188 58.0	120	06.6	30	35	32	18 59	32	36	41	8 08	53
17	79 06.5	− 15 20.2	203 29.0	120	+ 20 03.5	31	40	18 42	19 11	19 47	22 48	39	7 55	54
18	94 06.5	− 15 21.0	218 00.0	120	+ 20 00.3	32	45	18 52	19 25	20 05	23 02	38	7 40	55
19	109 06.5	21.7	232 31.0	120	+ 19 57.0	33	50	19 06	43	30	20	36	21	56
20	124 06.5	22.5	247 02.1	121	53.6	34	52	12	19 51	42	28	35	12	57
21	139 06.5	23.3	261 33.1	120	50.2	34	54	19	20 01	20 56	38	33	7 02	58
22	154 06.5	24.0	276 04.2	121	46.6	36	56	27	12	21 14	23 48	32	6 51	59
23	169 06.5	24.8	290 35.2	120	42.9	37	58	35	24	21 35	*** **	***	38	61
24	184 06.5	− 15 25.6	305 06.3	121	+ 19 39.2	37	60 S	19 45	20 39	22 05	*** **	***	6 23	62
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 21 ^h 05 ^m 9		Mag.: −4.0 PMG: 9 ^h 36 ^m		Mag.: +1.2 PMG: 14 ^h 23 ^m		Mag.: −2.7 PMG: 2 ^h 04 ^m		Mag.: +0.6 PMG: 11 ^h 15 ^m					
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec				
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
0	42 39.4	215 56.0	− 1 07.2	144 13.4	− 24 04.0	328 53.0	+ 21 45.7	190 43.8	− 10 32.4					
1	57 41.9	230 55.6	08.4	159 13.8	04.2	343 55.7	45.7	205 45.9	32.5					
2	72 44.4	245 55.3	09.5	174 14.2	04.4	358 58.4	45.7	220 48.1	32.6					
3	87 46.8	260 54.9	10.7	189 14.7	04.5	14 01.1	45.7	235 50.3	32.7					
4	102 49.3	275 54.6	11.8	204 15.1	04.7	29 03.9	45.6	250 52.5	32.8					
5	117 51.8	290 54.2	− 1 13.0	219 15.6	− 24 04.8	44 06.6	+ 21 45.6	265 54.7	− 10 32.9					
6	132 54.2	305 53.9	− 1 14.1	234 16.0	− 24 05.0	59 09.3	+ 21 45.6	280 56.8	− 10 33.0					
7	147 56.7	320 53.5	15.3	249 16.5	05.2	74 12.0	45.5	295 59.0	33.1					
8	162 59.2	335 53.2	16.4	264 16.9	05.3	89 14.7	45.5	311 01.2	33.2					
9	178 01.6	350 52.8	17.6	279 17.4	05.5	104 17.4	45.5	326 03.4	33.3					
10	193 04.1	5 52.5	18.8	294 17.8	05.6	119 20.2	45.5	341 05.5	33.4					
11	208 06.5	20 52.1	− 1 19.9	309 18.2	− 24 05.8	134 22.9	+ 21 45.4	356 07.7	− 10 33.5					
12	223 09.0	35 51.8	− 1 21.1	324 18.7	− 24 05.9	149 25.6	+ 21 45.4	11 09.9	− 10 33.6					
13	238 11.5	50 51.4	22.2	339 19.1	06.1	164 28.3	45.4	26 12.1	33.7					
14	253 13.9	65 51.1	23.4	354 19.6	06.2	179 31.0	45.4	41 14.2	33.8					
15	268 16.4	80 50.7	24.5	9 20.0	06.4	194 33.7	45.3	56 16.4	33.9					
16	283 18.9	95 50.3	25.7	24 20.5	06.6	209 36.5	45.3	71 18.6	34.0					
17	298 21.3	110 50.0	− 1 26.8	39 20.9	− 24 06.7	224 39.2	+ 21 45.3	86 20.8	− 10 34.1					
18	313 23.8	125 49.6	− 1 28.0	54 21.3	− 24 06.9	239 41.9	+ 21 45.3	101 22.9	− 10 34.2					
19	328 26.3	140 49.3	29.1	69 21.8	07.0	254 44.6	45.2	116 25.1	34.3					
20	343 28.7	155 48.9	30.3	84 22.2	07.2	269 47.3	45.2	131 27.3	34.4					
21	358 31.2	170 48.6	31.5	99 22.7	07.3	284 50.1	45.2	146 29.5	34.5					
22	13 33.7	185 48.2	32.6	114 23.1	07.5	299 52.8	45.2	161 31.6	34.6					
23	28 36.1	200 47.9	33.8	129 23.6	07.6	314 55.5	45.1	176 33.8	34.7					
24	43 38.6	215 47.5	− 1 34.9	144 24.0	− 24 07.8	329 58.2	+ 21 45.1	191 36.0	− 10 34.8					
Dif	—	−4	−12	+4	−2	+27	0	+22	−1					

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DOMINGO 4 DE NOVIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 6		SD: 14 ^h 8 Edad: 19 ^d 5		PHE { 4 ^h : 54 ^h 4 12 ^h : 54 ^h 5 20 ^h : 54 ^h 6												
	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	184 06.5	− 15 25.6	305 06.3		+ 19 39.2	39	60 N	5 55	6 45	7 31	20 01	73	12 27	24			
1	199 06.5	26.3	319 37.4	121	35.3	39	58	52	39	22	13 70		14 27				
2	214 06.5	27.1	334 08.5	121	31.4	40	56	49	34	14	24 68		12 03	29			
3	229 06.5	27.9	348 39.7	122	27.4	40	54	47	29	07	33 66		11 53	31			
4	244 06.4	28.6	3 10.8	121	23.3	41	52	45	25	7 01	42 64		45 32				
5	259 06.4	− 15 29.4	17 42.0	122	+ 19 19.0	43	50	5 42	6 21	6 55	20 49	63	11 37	33			
6	274 06.4	− 15 30.2	32 13.1	121	+ 19 14.7	43	45	5 37	6 12	6 43	21 05	60	11 21	35			
7	289 06.4	30.9	46 44.3	122	10.4	43	40	32	6 04	33	18 58		11 07	38			
8	304 06.4	31.7	61 15.5	122	05.9	45	35	28	5 58	24	29 56		10 55	40			
9	319 06.4	32.5	75 46.7	122	+ 19 01.3	46	30	23	52	16	38 55		45 41				
10	334 06.4	33.2	90 17.9	122	+ 18 56.6	47	20	14	40	6 03	21 55	52	28 43				
11	349 06.4	− 15 34.0	104 49.2	123	+ 18 51.9	47	10 N	5 04	5 30	5 51	22 09	50	10 13	45			
12	4 06.3	− 15 34.8	119 20.4	122	+ 18 47.0	49	0	4 54	5 19	5 40	22 23	47	9 58	48			
13	19 06.3	35.5	133 51.7	123	42.1	49	10 S	41	5 07	29	36 45		44 49				
14	34 06.3	36.3	148 23.0	123	37.1	50	20	26	4 54	17	22 51	42	29 51				
15	49 06.3	37.1	162 54.3	123	32.0	51	30	4 07	37	5 03	23 07	40	11 53				
16	64 06.3	37.8	177 25.6	123	26.8	52	35	3 55	27	4 55	17 37		9 01	55			
17	79 06.3	− 15 38.6	191 56.9	123	+ 18 21.5	53	40	3 40	4 16	4 45	23 27	36	8 49	56			
18	94 06.3	− 15 39.3	206 28.2	123	+ 18 16.2	53	45	3 21	4 02	4 34	23 40	34	8 35	58			
19	109 06.2	40.1	220 59.6	124	10.7	55	50	2 57	3 44	21	23 56	30	17 62				
20	124 06.2	40.9	235 31.0	124	+ 18 05.2	55	52	44	35	14	** ** *	** *	09 63				
21	139 06.2	41.6	250 02.3	123	+ 17 59.5	57	54	30	26	08	** ** *	** *	8 00	64			
22	154 06.2	42.4	264 33.7	124	53.8	57	56	2 13	15	4 00	** ** *	** *	7 50	66			
23	169 06.2	43.1	279 05.2	125	48.0	58	58	1 51	3 02	3 51	0 00	30	39 67				
24	184 06.2	− 15 43.9	293 36.6	124	+ 17 42.1	59	60 S	1 22	2 47	3 41	0 14	27	7 25	70			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 21 ^h 02 ^m 0		Mag.: −4.0 PMG: 9 ^h 37 ^m		Mag.: +1.2 PMG: 14 ^h 22 ^m		Mag.: −2.7 PMG: 2 ^h 00 ^m		Mag.: +0.6 PMG: 11 ^h 12 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	° /	° /	° /		° /		° /		° /		° /						
0	43 38.6	215 47.5	− 1 34.9	144 24.0	− 24 07.8	329 58.2	+ 21 45.1	191 36.0	− 10 34.8								
1	58 41.0	230 47.2	36.1	159 24.4	07.9	345 00.9	45.1	206 38.2	34.9								
2	73 43.5	245 46.8	37.2	174 24.9	08.1	0 03.7	45.1	221 40.4	35.0								
3	88 46.0	260 46.5	38.4	189 25.3	08.2	15 06.4	45.0	236 42.5	35.1								
4	103 48.4	275 46.1	39.5	204 25.8	08.4	30 09.1	45.0	251 44.7	35.2								
5	118 50.9	290 45.8	− 1 40.7	219 26.2	− 24 08.5	45 11.8	+ 21 45.0	266 46.9	− 10 35.3								
6	133 53.4	305 45.4	− 1 41.9	234 26.6	− 24 08.7	60 14.5	+ 21 45.0	281 49.1	− 10 35.4								
7	148 55.8	320 45.1	43.0	249 27.1	08.8	75 17.3	44.9	296 51.2	35.5								
8	163 58.3	335 44.7	44.2	264 27.5	09.0	90 20.0	44.9	311 53.4	35.6								
9	179 00.8	350 44.3	45.3	279 28.0	09.1	105 22.7	44.9	326 55.6	35.7								
10	194 03.2	5 44.0	46.5	294 28.4	09.2	120 25.4	44.9	341 57.8	35.8								
11	209 05.7	20 43.6	− 1 47.6	309 28.8	− 24 09.4	135 28.2	+ 21 44.8	356 59.9	− 10 35.9								
12	224 08.2	35 43.3	− 1 48.8	324 29.3	− 24 09.5	150 30.9	+ 21 44.8	12 02.1	− 10 36.0								
13	239 10.6	50 42.9	49.9	339 29.7	09.7	165 33.6	44.8	27 04.3	36.1								
14	254 13.1	65 42.6	51.1	354 30.1	09.8	180 36.3	44.8	42 06.5	36.2								
15	269 15.5	80 42.2	52.3	9 30.6	10.0	195 39.1	44.7	57 08.6	36.3								
16	284 18.0	95 41.9	53.4	24 31.0	10.1	210 41.8	44.7	72 10.8	36.4								
17	299 20.5	110 41.5	− 1 54.6	39 31.5	− 24 10.3	225 44.5	+ 21 44.7	87 13.0	− 10 36.5								
18	314 22.9	125 41.1	− 1 55.7	54 31.9	− 24 10.4	240 47.2	+ 21 44.6	102 15.2	− 10 36.6								
19	329 25.4	140 40.8	56.9	69 32.3	10.5	255 50.0	44.6	117 17.4	36.7								
20	344 27.9	155 40.4	58.0	84 32.8	10.7	270 52.7	44.6	132 19.5	36.8								
21	359 30.3	170 40.1	− 1 59.2	99 33.2	10.8	285 55.4	44.6	147 21.7	36.9								
22	14 32.8	185 39.7	− 2 00.4	114 33.6	11.0	300 58.1	44.5	162 23.9	37.0								
23	29 35.3	200 39.4	01.5	129 34.1	11.1	316 00.9	44.5	177 26.1	37.1								
24	44 37.7	215 39.0	− 2 02.7	144 34.5	− 24 11.2	331 03.6	+ 21 44.5	192 28.2	− 10 37.2								
Dif	—	−4	−12	+4	−1	+27	0	+22	−1								

LUNES 5 DE NOVIEMBRE DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1		SD: 14 ^h 9		PHE { 4 ^h : 54/8 12 ^h : 55/0 20 ^h : 55/2										
	PMG: 11 ^h 43 ^m 6		Edad: 20 ^d 5												
				PMG: 4 ^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	184	06.2	− 15 43.9	293	36.6	+ 17 42.1	59	60 N	15 53	16 39	17 29	21 14	76	12 51	19
1	199	06.1	44.6	308	08.0	36.2	61	58	16 02	45	32	23 74	41	21	21
2	214	06.1	45.4	322	39.5	30.1	61	56	10	51	35	32 71	32	23	23
3	229	06.1	46.2	337	11.0	24.0	61	54	17	16 56	38	39 70	24	25	25
4	244	06.1	46.9	351	42.4	17.8	62	52	24	17 00	40	46 68	17	27	27
5	259	06.1	− 15 47.7	6	13.9	+ 17 11.4	64	50	16 30	17 04	17 43	21 52	66	12 10	29
6	274	06.1	− 15 48.4	20	45.5	+ 17 05.1	63	45	16 42	17 13	17 48	22 05	63	11 56	32
7	289	06.0	49.2	35	17.0	+ 16 58.6	65	40	16 53	21	53	16 60	45	34	34
8	304	06.0	49.9	49	48.5	52.0	66	35	17 02	28	17 58	25 58	35	36	36
9	319	06.0	50.7	64	20.1	45.4	66	30	10	35	18 03	33 56	26	38	38
10	334	06.0	51.4	78	51.7	38.7	67	20	23	46	13	47 52	11 11	42	42
11	349	05.9	− 15 52.2	93	23.2	+ 16 31.9	68	10 N	17 36	17 57	18 23	22 59	49	10 58	44
12	4	05.9	− 15 52.9	107	54.8	+ 16 25.0	69	0	17 47	18 09	18 34	23 10	46	10 46	46
13	19	05.9	53.7	122	26.5	18.0	70	10 S	17 59	21	18 46	21 44	33	49	49
14	34	05.9	54.5	136	58.1	11.0	71	20	18 11	34	19 02	33 41	20	52	52
15	49	05.9	55.2	151	29.7	+ 16 03.9	72	30	26	18 51	22	47 37	10 04	55	55
16	64	05.8	56.0	166	01.4	+ 15 56.7	72	35	34	19 01	34	23 54	36	9 56	56
17	79	05.8	− 15 56.7	180	33.0	+ 15 49.4	73	40	18 44	19 13	19 50	** ** *	** ** *	9 45	59
18	94	05.8	− 15 57.5	195	04.7	+ 15 42.1	73	45	18 55	19 28	20 09	** ** *	** ** *	9 33	62
19	109	05.8	58.2	209	36.4	34.6	75	50	19 09	46	34	** ** *	** ** *	19	64
20	124	05.7	59.0	224	08.1	27.1	75	52	16	19 55	20 47	0 03	29	12	66
21	139	05.7	− 15 59.7	238	39.8	19.5	76	54	23	20 05	21 02	11 28	9 04	68	68
22	154	05.7	− 16 00.4	253	11.5	11.9	76	56	31	17	21	20 26	8 56	69	69
23	169	05.7	01.2	267	43.3	+ 15 04.1	78	58	40	30	21 44	30 24	46	72	72
24	184	05.6	− 16 01.9	282	15.0	+ 14 56.3	78	60 S	19 51	20 46	22 17	0 41	22	8 35	74
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 20 ^h 58 ^m 0		Mag.: −4.0 PMG: 9 ^h 38 ^m		Mag.: +1.2 PMG: 14 ^h 21 ^m		Mag.: −2.8 PMG: 1 ^h 55 ^m		Mag.: +0.6 PMG: 11 ^h 09 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec			
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	44	37.7	215	39.0	− 2 02.7	144	34.5	− 24 11.2	331	03.6	+ 21 44.5	192	28.2	− 10 37.2	
1	59	40.2	230	38.7	03.8	159	35.0	11.4	346	06.3	44.5	207	30.4	37.3	
2	74	42.6	245	38.3	05.0	174	35.4	11.5	1	09.0	44.4	222	32.6	37.4	
3	89	45.1	260	37.9	06.1	189	35.8	11.7	16	11.8	44.4	237	34.8	37.5	
4	104	47.6	275	37.6	07.3	204	36.3	11.8	31	14.5	44.4	252	36.9	37.6	
5	119	50.0	290	37.2	− 2 08.4	219	36.7	− 24 11.9	46	17.2	+ 21 44.4	267	39.1	− 10 37.7	
6	134	52.5	305	36.9	− 2 09.6	234	37.1	− 24 12.1	61	20.0	+ 21 44.3	282	41.3	− 10 37.8	
7	149	55.0	320	36.5	10.8	249	37.6	12.2	76	22.7	44.3	297	43.5	37.9	
8	164	57.4	335	36.2	11.9	264	38.0	12.3	91	25.4	44.3	312	45.6	38.0	
9	179	59.9	350	35.8	13.1	279	38.4	12.5	106	28.1	44.2	327	47.8	38.1	
10	195	02.4	5 35.4	14.2	294	38.9	12.6	121	30.9	44.2	342	50.0	38.2		
11	210	04.8	20 35.1	− 2 15.4	309	39.3	− 24 12.8	136	33.6	+ 21 44.2	357	52.2	− 10 38.3		
12	225	07.3	35 34.7	− 2 16.5	324	39.7	− 24 12.9	151	36.3	+ 21 44.2	12	54.4	− 10 38.4		
13	240	09.8	50 34.4	17.7	339	40.2	13.0	166	39.1	44.1	27	56.5	38.5		
14	255	12.2	65 34.0	18.9	354	40.6	13.2	181	41.8	44.1	42	58.7	38.6		
15	270	14.7	80 33.6	20.0	9	41.0	13.3	196	44.5	44.1	58	00.9	38.7		
16	285	17.1	95 33.3	21.2	24	41.5	13.4	211	47.3	44.1	73	03.1	38.8		
17	300	19.6	110 32.9	− 2 22.3	39	41.9	− 24 13.6	226	50.0	+ 21 44.0	88	05.2	− 10 38.9		
18	315	22.1	125 32.6	− 2 23.5	54	42.3	− 24 13.7	241	52.7	+ 21 44.0	103	07.4	− 10 39.0		
19	330	24.5	140 32.2	24.6	69	42.8	13.8	256	55.5	44.0	118	09.6	39.1		
20	345	27.0	155 31.8	25.8	84	43.2	14.0	271	58.2	44.0	133	11.8	39.2		
21	0	29.5	170 31.5	27.0	99	43.6	14.1	287	00.9	43.9	148	13.9	39.3		
22	15	31.9	185 31.1	28.1	114	44.1	14.2	302	03.7	43.9	163	16.1	39.4		
23	30	34.4	200 30.8	29.3	129	44.5	14.3	317	06.4	43.9	178	18.3	39.5		
24	45	36.9	215 30.4	− 2 30.4	144	44.9	− 24 14.5	332	09.1	+ 21 43.8	193	20.5	− 10 39.6		
Dif	—		−4 −12		+4 −1		+27 0		+22 −1						

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MARTES 6 DE NOVIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:1 PMG: 11 ^h 43 ^m 6		SD: 15:1 Edad: 21 ^d 5 PHE { 4 ^h : 55/4 12 ^h : 55/6 20 ^h : 55/8 PMG: 5 ^h 21 ^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 m		h m m		
0	184 05.6	− 16 01.9	282 15.0	128	+ 14 56.3	79	60 N	5 59	6 49	7 36	22 30 80		13 10 16		
1	199 05.6	02.7	296 46.8	128	48.4	80	58	56	43	27	37 77		13 02 19		
2	214 05.6	03.4	311 18.5	127	40.4	80	56	53	38	18	43 75		12 55 21		
3	229 05.6	04.2	325 50.3	128	32.4	80	54	50	33	11	49 72		49 23		
4	244 05.5	04.9	340 22.1	128	24.3	81	52	48	28	7 04	54 70		44 24		
5	259 05.5	− 16 05.7	354 53.9	128	+ 14 16.1	82	50	5 45	6 24	6 58	22 58 69		12 39 26		
6	274 05.5	− 16 06.4	9 25.7	128	+ 14 07.8	83	45	5 40	6 15	6 46	23 08 65		12 28 29		
7	289 05.4	07.2	23 57.5	128	+ 13 59.5	83	40	34	07	35	16 62		19 32		
8	304 05.4	07.9	38 29.3	128	51.1	84	35	29	6 00	26	23 59		11 35		
9	319 05.4	08.6	53 01.1	128	42.6	85	30	25	5 53	18	29 57		12 04 37		
10	334 05.4	09.4	67 32.9	128	34.1	85	20	15	41	6 04	39 53		11 53 40		
11	349 05.3	− 16 10.1	82 04.8	129	+ 13 25.5	86	10 N	5 05	5 30	5 52	23 48 50		11 42 44		
12	4 05.3	− 16 10.9	96 36.6	128	+ 13 16.8	87	0	4 54	5 19	5 40	23 56 47		11 32 47		
13	19 05.3	11.6	111 08.5	129	+ 13 08.0	88	10 S	41	5 06	28	** ** *		22 50		
14	34 05.2	12.4	125 40.3	128	+ 12 59.2	88	20	25	4 53	16	** ** *		11 12 52		
15	49 05.2	13.1	140 12.2	129	50.3	89	30	4 05	36	5 01	** ** *		10 59 57		
16	64 05.2	13.8	154 44.0	128	41.3	90	35	3 53	25	4 53	** ** *		52 59		
17	79 05.1	− 16 14.6	169 15.9	129	+ 12 32.3	90	40	3 37	4 13	4 43	0 03 34		10 44 61		
18	94 05.1	− 16 15.3	183 47.8	129	+ 12 23.2	91	45	3 18	3 59	4 31	0 14 30		10 35 64		
19	109 05.1	16.0	198 19.7	129	14.0	92	50	2 52	40	17	26 28		23 68		
20	124 05.0	16.8	212 51.5	128	+ 12 04.8	92	52	39	31	11	32 26		18 69		
21	139 05.0	17.5	227 23.4	129	+ 11 55.5	93	54	24	21	4 04	39 24		12 71		
22	154 05.0	18.3	241 55.3	129	46.1	94	56	2 06	3 10	3 56	46 22		10 05 73		
23	169 04.9	19.0	256 27.2	129	36.7	94	58	1 42	2 57	46	0 54 20		9 58 75		
24	184 04.9	− 16 19.7	270 59.1	129	+ 11 27.2	95	60 S	1 09	2 41	3 36	1 03 17		9 49 79		
UT	ARIES PMG: 20 ^h 54 ^m 1		VENUS Mag.: −4.0 PMG: 9 ^h 38 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 21 ^m		JÚPITER Mag.: −2.8 PMG: 1 ^h 51 ^m		SATURNO Mag.: +0.6 PMG: 11 ^h 05 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /					
h	° /	° /	° /		° /		° /		° /						
0	45 36.9	215 30.4	− 2 30.4	144 44.9	− 24 14.5	332 09.1	+ 21 43.8	193 20.5	− 10 39.6						
1	60 39.3	230 30.0	31.6	159 45.4	14.6	347 11.9	43.8	208 22.7	39.7						
2	75 41.8	245 29.7	32.7	174 45.8	14.7	2 14.6	43.8	223 24.8	39.8						
3	90 44.3	260 29.3	33.9	189 46.2	14.9	17 17.3	43.8	238 27.0	39.9						
4	105 46.7	275 29.0	35.1	204 46.6	15.0	32 20.1	43.7	253 29.2	40.0						
5	120 49.2	290 28.6	− 2 36.2	219 47.1	− 24 15.1	47 22.8	+ 21 43.7	268 31.4	− 10 40.1						
6	135 51.6	305 28.2	− 2 37.4	234 47.5	− 24 15.2	62 25.5	+ 21 43.7	283 33.5	− 10 40.2						
7	150 54.1	320 27.9	38.5	249 47.9	15.4	77 28.3	43.6	298 35.7	40.3						
8	165 56.6	335 27.5	39.7	264 48.4	15.5	92 31.0	43.6	313 37.9	40.4						
9	180 59.0	350 27.1	40.8	279 48.8	15.6	107 33.7	43.6	328 40.1	40.5						
10	196 01.5	5 26.8	42.0	294 49.2	15.7	122 36.5	43.6	343 42.2	40.6						
11	211 04.0	20 26.4	− 2 43.2	309 49.7	− 24 15.9	137 39.2	+ 21 43.5	358 44.4	− 10 40.7						
12	226 06.4	35 26.1	− 2 44.3	324 50.1	− 24 16.0	152 42.0	+ 21 43.5	13 46.6	− 10 40.8						
13	241 08.9	50 25.7	45.5	339 50.5	16.1	167 44.7	43.5	28 48.8	40.9						
14	256 11.4	65 25.3	46.6	354 50.9	16.2	182 47.4	43.5	43 51.0	41.0						
15	271 13.8	80 25.0	47.8	9 51.4	16.4	197 50.2	43.4	58 53.1	41.1						
16	286 16.3	95 24.6	48.9	24 51.8	16.5	212 52.9	43.4	73 55.3	41.2						
17	301 18.7	110 24.2	− 2 50.1	39 52.2	− 24 16.6	227 55.6	+ 21 43.4	88 57.5	− 10 41.3						
18	316 21.2	125 23.9	− 2 51.2	54 52.7	− 24 16.7	242 58.4	+ 21 43.3	103 59.7	− 10 41.4						
19	331 23.7	140 23.5	52.4	69 53.1	16.9	258 01.1	43.3	119 01.8	41.5						
20	346 26.1	155 23.2	53.6	84 53.5	17.0	273 03.9	43.3	134 04.0	41.6						
21	1 28.6	170 22.8	54.7	99 53.9	17.1	288 06.6	43.3	149 06.2	41.7						
22	16 31.1	185 22.4	55.9	114 54.4	17.2	303 09.3	43.2	164 08.4	41.8						
23	31 33.5	200 22.1	57.0	129 54.8	17.3	318 12.1	43.2	179 10.6	41.9						
24	46 36.0	215 21.7	− 2 58.2	144 55.2	− 24 17.5	333 14.8	+ 21 43.2	194 12.7	− 10 42.0						
Dif	—	−4	−12	+4	−1	+27	0	+22	−1						

MIÉRCOL 7 DE NOVIEMBRE DE 2012

UT	SOL		 LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 7		SD: 15 ^h 2 Edad: 22 ^d 5		PHE { 4 ^h : 56 ^h /1 12 ^h : 56 ^h /3 20 ^h : 56 ^h /6									
	PMG: 6 ^h 08 ^m R°: 46 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	184 04.9	− 16 19.7	270 59.1		+ 11 27.2		60 N	^h ^m 15 48	^h ^m 16 35	^h ^m 17 25	^h ^m 23 50	^m 82	^h ^m 13 26	^m 14
1	199 04.9		285 31.0	¹²⁹	17.6	⁹⁶	58	15 58	41	29	54	80	21	16
2	214 04.8		300 02.8	¹²⁸	+ 11 08.0	⁹⁶	56	16 06	47	32	23 58	77	16	19
3	229 04.8		314 34.7	¹²⁹	+ 10 58.3	⁹⁷	54	14	52	35	*** **	***	12	21
4	244 04.7		329 06.6	¹²⁹	48.6	⁹⁷	52	20	16 57	37	*** **	***	08	23
5	259 04.7	− 16 23.4	343 38.5	¹²⁹	+ 10 38.8	⁹⁸	50	16 27	17 01	17 40	*** **	***	13 05	24
6	274 04.7	− 16 24.1	358 10.3	¹²⁸	+ 10 28.9	⁹⁹	45	16 40	17 11	17 46	*** **	***	12 57	28
7	289 04.6	24.9	12 42.2	¹²⁹	19.0	⁹⁹	40	16 51	19	51	*** **	***	51	31
8	304 04.6	25.6	27 14.1	¹²⁹	+ 10 09.0	¹⁰⁰	35	17 00	27	17 57	*** **	***	46	33
9	319 04.6	26.3	41 45.9	¹²⁸	+ 9 58.9	¹⁰¹	30	08	33	18 02	*** **	***	41	36
10	334 04.5	27.1	56 17.8	¹²⁹	48.8	¹⁰¹	20	23	46	12	*** **	***	33	40
11	349 04.5	− 16 27.8	70 49.6	¹²⁸	+ 9 38.7	¹⁰¹	10 N	17 35	17 57	18 22	*** **	***	12 26	43
12	4 04.4	− 16 28.5	85 21.5	¹²⁹	+ 9 28.5	¹⁰²	0	17 47	18 09	18 34	*** **	***	12 19	46
13	19 04.4	29.3	99 53.3	¹²⁸	18.2	¹⁰³	10 S	17 59	21	18 47	0 05	43	12	50
14	34 04.4	30.0	114 25.2	¹²⁹	+ 9 07.8	¹⁰⁴	20	18 12	36	19 03	14	40	12 04	54
15	49 04.3	30.7	128 57.0	¹²⁸	+ 8 57.5	¹⁰³	30	27	18 53	24	24	36	11 56	57
16	64 04.3	31.4	143 28.8	¹²⁸	47.0	¹⁰⁵	35	36	19 04	37	30	34	51	60
17	79 04.2	− 16 32.2	158 00.6	¹²⁸	+ 8 36.5	¹⁰⁵	40	18 46	19 16	19 53	0 37	31	11 45	63
18	94 04.2	− 16 32.9	172 32.4	¹²⁸	+ 8 26.0	¹⁰⁵	45	18 58	19 31	20 12	0 44	29	11 39	66
19	109 04.2	33.6	187 04.2	¹²⁸	15.4	¹⁰⁶	50	19 13	50	39	54	25	31	69
20	124 04.1	34.3	201 35.9	¹²⁷	+ 8 04.7	¹⁰⁷	52	19	19 59	20 52	0 58	23	27	72
21	139 04.1	35.1	216 07.7	¹²⁸	+ 7 54.0	¹⁰⁷	54	27	20 10	21 08	1 03	21	23	73
22	154 04.0	35.8	230 39.4	¹²⁷	43.2	¹⁰⁸	56	35	22	28	08	19	18	76
23	169 04.0	36.5	245 11.2	¹²⁸	32.4	¹⁰⁸	58	45	36	21 53	14	17	13	79
24	184 03.9	− 16 37.2	259 42.9	¹²⁷	+ 7 21.5	¹⁰⁹	60 S	19 56	20 53	22 31	1 20	15	11 08	81
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 20 ^h 50 ^m 2		Mag.: −4.0 PMG: 9 ^h 39 ^m		Mag.: +1.2 PMG: 14 ^h 20 ^m		Mag.: −2.8 PMG: 1 ^h 47 ^m		Mag.: +0.6 PMG: 11 ^h 02 ^m					
	hG ♀	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec				
^h 0	46 36.0	215 21.7	− 2 58.2		144 55.2	− 24 17.5	333 14.8	+ 21 43.2	194 12.7	− 10 42.0				
1	61 38.5	230 21.3	− 2 59.3		159 55.6	17.6	348 17.6	43.1	209 14.9	42.1				
2	76 40.9	245 21.0	− 3 00.5		174 56.1	17.7	3 20.3	43.1	224 17.1	42.2				
3	91 43.4	260 20.6	01.7		189 56.5	17.8	18 23.0	43.1	239 19.3	42.3				
4	106 45.9	275 20.2	02.8		204 56.9	17.9	33 25.8	43.1	254 21.4	42.4				
5	121 48.3	290 19.9	− 3 04.0		219 57.3	− 24 18.0	48 28.5	+ 21 43.0	269 23.6	− 10 42.5				
6	136 50.8	305 19.5	− 3 05.1		234 57.8	− 24 18.2	63 31.3	+ 21 43.0	284 25.8	− 10 42.6				
7	151 53.2	320 19.1	06.3		249 58.2	18.3	78 34.0	43.0	299 28.0	42.7				
8	166 55.7	335 18.8	07.4		264 58.6	18.4	93 36.8	43.0	314 30.2	42.8				
9	181 58.2	350 18.4	08.6		279 59.0	18.5	108 39.5	42.9	329 32.3	42.9				
10	197 00.6	5 18.0	09.8		294 59.5	18.6	123 42.2	42.9	344 34.5	43.0				
11	212 03.1	20 17.7	− 3 10.9		309 59.9	− 24 18.7	138 45.0	+ 21 42.9	359 36.7	− 10 43.1				
12	227 05.6	35 17.3	− 3 12.1		325 00.3	− 24 18.8	153 47.7	+ 21 42.8	14 38.9	− 10 43.2				
13	242 08.0	50 16.9	13.2		340 00.7	19.0	168 50.5	42.8	29 41.0	43.3				
14	257 10.5	65 16.6	14.4		355 01.2	19.1	183 53.2	42.8	44 43.2	43.4				
15	272 13.0	80 16.2	15.5		10 01.6	19.2	198 56.0	42.8	59 45.4	43.5				
16	287 15.4	95 15.8	16.7		25 02.0	19.3	213 58.7	42.7	74 47.6	43.6				
17	302 17.9	110 15.5	− 3 17.9		40 02.4	− 24 19.4	229 01.4	+ 21 42.7	89 49.7	− 10 43.7				
18	317 20.4	125 15.1	− 3 19.0		55 02.9	− 24 19.5	244 04.2	+ 21 42.7	104 51.9	− 10 43.8				
19	332 22.8	140 14.7	20.2		70 03.3	19.6	259 06.9	42.6	119 54.1	43.9				
20	347 25.3	155 14.4	21.3		85 03.7	19.7	274 09.7	42.6	134 56.3	44.0				
21	2 27.7	170 14.0	22.5		100 04.1	19.8	289 12.4	42.6	149 58.5	44.1				
22	17 30.2	185 13.6	23.6		115 04.6	20.0	304 15.2	42.6	165 00.6	44.2				
23	32 32.7	200 13.2	24.8		130 05.0	20.1	319 17.9	42.5	180 02.8	44.3				
24	47 35.1	215 12.9	− 3 26.0		145 05.4	− 24 20.2	334 20.7	+ 21 42.5	195 05.0	− 10 44.4				
Dif	—	−4	−12		+4	−1	+27	0	+22	−1				

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JUEVES 8 DE NOVIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 8		SD: 15 ^h 5 Edad: 23 ^d 5 PHE { 4 ^h : 56 ^m /9 12 ^h : 57 ^m /2 20 ^h : 57 ^m /5 PMG: 6 ^h 54 ^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		h m m	
0	184 03.9	− 16 37.2	259 42.9		+ 7 21.5	109	60 N	6 03	6 54	7 41	** ** *		13 40	13
1	199 03.9	38.0	274 14.6	127	+ 7 10.6	109	58	6 00	47	31	** ** *		37	16
2	214 03.8	38.7	288 46.2	126	+ 6 59.7	110	56	5 57	42	23	** ** *		35	18
3	229 03.8	39.4	303 17.9	127	48.7	111	54	54	36	15	0 01	75	33	20
4	244 03.8	40.1	317 49.6	127	37.6	111	52	51	31	08	04	73	31	22
5	259 03.7	− 16 40.9	332 21.2	126	+ 6 26.5	111	50	5 48	6 27	7 02	0 07	71	13 29	24
6	274 03.7	− 16 41.6	346 52.8	126	+ 6 15.3	112	45	5 42	6 17	6 48	0 13	67	13 25	28
7	289 03.6	42.3	1 24.4	126	+ 6 04.2	111	40	36	09	37	18	64	22	31
8	304 03.6	43.0	15 55.9	125	+ 5 52.9	113	35	31	6 01	28	22	61	19	34
9	319 03.5	43.7	30 27.5	126	41.6	113	30	26	5 55	20	26	58	17	36
10	334 03.5	44.5	44 59.0	125	30.3	113	20	16	42	6 05	32	55	13	40
11	349 03.4	− 16 45.2	59 30.5	125	+ 5 18.9	114	10 N	5 05	5 30	5 52	0 38	50	13 09	44
12	4 03.4	− 16 45.9	74 02.0	125	+ 5 07.5	114	0	4 54	5 19	5 40	0 43	47	13 05	48
13	19 03.3	46.6	88 33.4	124	+ 4 56.1	114	10 S	40	5 06	28	48	44	13 02	51
14	34 03.3	47.3	103 04.9	125	44.6	115	20	24	4 52	15	0 54	40	12 58	55
15	49 03.2	48.0	117 36.3	124	33.1	115	30	4 04	34	5 00	1 00	36	53	60
16	64 03.2	48.8	132 07.6	123	21.5	116	35	3 50	24	4 51	04	34	51	62
17	79 03.1	− 16 49.5	146 39.0	124	+ 4 09.9	116	40	3 35	4 11	4 41	1 08	31	12 48	65
18	94 03.1	− 16 50.2	161 10.3	123	+ 3 58.2	117	45	3 14	3 56	4 29	1 13	28	12 45	68
19	109 03.0	50.9	175 41.6	123	46.6	116	50	2 48	37	14	19	24	40	73
20	124 03.0	51.6	190 12.8	122	34.9	117	52	34	27	07	21	23	39	74
21	139 02.9	52.3	204 44.1	123	23.1	118	54	2 18	17	4 00	24	21	36	77
22	154 02.9	53.1	219 15.3	122	+ 3 11.3	118	56	1 59	3 05	3 51	27	19	34	79
23	169 02.8	53.8	233 46.4	121	+ 2 59.5	118	58	1 33	2 51	42	31	16	32	81
24	184 02.8	− 16 54.5	248 17.5	121	+ 2 47.7	118	60 S	0 56	2 34	3 31	1 35	13	12 29	84
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 20 ^h 46 ^m 2		Mag.: −4.0 PMG: 9 ^h 39 ^m		Mag.: +1.2 PMG: 14 ^h 19 ^m		Mag.: −2.8 PMG: 1 ^h 42 ^m		Mag.: +0.6 PMG: 10 ^h 58 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	° /	° /	° /		° /		° /		° /					
0	47 35.1	215 12.9	− 3 26.0	145 05.4	− 24 20.2	334 20.7	+ 21 42.5	195 05.0	− 10 44.4					
1	62 37.6	230 12.5	27.1	160 05.8	20.3	349 23.4	42.5	210 07.2	44.5					
2	77 40.1	245 12.1	28.3	175 06.2	20.4	4 26.2	42.4	225 09.3	44.6					
3	92 42.5	260 11.8	29.4	190 06.7	20.5	19 28.9	42.4	240 11.5	44.7					
4	107 45.0	275 11.4	30.6	205 07.1	20.6	34 31.7	42.4	255 13.7	44.8					
5	122 47.5	290 11.0	− 3 31.7	220 07.5	− 24 20.7	49 34.4	+ 21 42.4	270 15.9	− 10 44.9					
6	137 49.9	305 10.7	− 3 32.9	235 07.9	− 24 20.8	64 37.2	+ 21 42.3	285 18.1	− 10 45.0					
7	152 52.4	320 10.3	34.0	250 08.4	20.9	79 39.9	42.3	300 20.2	45.1					
8	167 54.8	335 09.9	35.2	265 08.8	21.0	94 42.7	42.3	315 22.4	45.2					
9	182 57.3	350 09.5	36.4	280 09.2	21.1	109 45.4	42.2	330 24.6	45.3					
10	197 59.8	5 09.2	37.5	295 09.6	21.2	124 48.2	42.2	345 26.8	45.4					
11	213 02.2	20 08.8	− 3 38.7	310 10.0	− 24 21.3	139 50.9	+ 21 42.2	0 29.0	− 10 45.5					
12	228 04.7	35 08.4	− 3 39.8	325 10.5	− 24 21.4	154 53.7	+ 21 42.1	15 31.1	− 10 45.6					
13	243 07.2	50 08.1	41.0	340 10.9	21.5	169 56.4	42.1	30 33.3	45.7					
14	258 09.6	65 07.7	42.1	355 11.3	21.6	184 59.2	42.1	45 35.5	45.8					
15	273 12.1	80 07.3	43.3	10 11.7	21.7	200 01.9	42.1	60 37.7	45.8					
16	288 14.6	95 06.9	44.5	25 12.1	21.8	215 04.7	42.0	75 39.8	45.9					
17	303 17.0	110 06.6	− 3 45.6	40 12.6	− 24 21.9	230 07.4	+ 21 42.0	90 42.0	− 10 46.0					
18	318 19.5	125 06.2	− 3 46.8	55 13.0	− 24 22.1	245 10.2	+ 21 42.0	105 44.2	− 10 46.1					
19	333 22.0	140 05.8	47.9	70 13.4	22.1	260 12.9	41.9	120 46.4	46.2					
20	348 24.4	155 05.4	49.1	85 13.8	22.2	275 15.7	41.9	135 48.6	46.3					
21	3 26.9	170 05.1	50.2	100 14.2	22.3	290 18.4	41.9	150 50.7	46.4					
22	18 29.3	185 04.7	51.4	115 14.6	22.4	305 21.2	41.9	165 52.9	46.5					
23	33 31.8	200 04.3	52.5	130 15.1	22.5	320 23.9	41.8	180 55.1	46.6					
24	48 34.3	215 04.0	− 3 53.7	145 15.5	− 24 22.6	335 26.7	+ 21 41.8	195 57.3	− 10 46.7					
Dif	—	−4	−12	+4	−1	+27	0	+22	−1					


VIERNES 9 DE NOVIEMBRE DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 1 PMG: 11 ^h 43 ^m 9		SD: 15 ^h 7 Edad: 24 ^d 5 PHE { 4 ^h : 57/8 12 ^h : 58/2 20 ^h : 58/5 PMG: 7 ^h 42 ^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	h m	h m	h m	h m
0	184	02.8	− 16 54.5	248 17.5	+ 2 47.7	119	60 N	15 43	16 31	17 21	1 12 86	13 53 14			
1	199	02.7	55.2	262 48.6	35.8	121	58	15 53	37	25	14 83	53 16			
2	214	02.7	55.9	277 19.7	23.9	119	56	16 02	43	28	15 81	53 19			
3	229	02.6	56.6	291 50.7	11.9	120	54	10	49	32	16 78	53 21			
4	244	02.5	57.3	306 21.7	+ 2 00.0	119	52	17	54	35	17 76	53 23			
5	259	02.5	− 16 58.0	320 52.6	+ 1 48.0	120	50	16 24	16 59	17 37	1 18 74	13 53 25			
6	274	02.4	− 16 58.7	335 23.5	+ 1 36.0	120	45	16 37	17 09	17 44	1 20 70	13 53 29			
7	289	02.4	− 16 59.5	349 54.4	23.9	121	40	49	17	50	22 66	53 32			
8	304	02.3	− 17 00.2	4 25.2	+ 1 11.8	121	35	16 58	25	17 55	23 64	53 35			
9	319	02.3	00.9	18 56.0	+ 0 59.8	120	30	17 07	32	18 01	24 61	53 38			
10	334	02.2	01.6	33 26.7	47.6	122	20	22	45	11	27 56	53 42			
11	349	02.2	− 17 02.3	47 57.4	+ 0 35.5	121	10 N	17 35	17 57	18 22	1 28 53	13 53 46			
12	4 02.1	− 17 03.0		62 28.1	+ 0 23.3	122	0	17 47	18 09	18 34	1 30 49	13 53 50			
13	19 02.0	03.7		76 58.7	+ 0 11.2	121	10 S	18 00	22	18 48	32 45	53 54			
14	34 02.0	04.4		91 29.3	− 0 01.0	122	20	13	37	19 04	34 41	53 58			
15	49 01.9	05.1		105 59.8	13.3	123	30	29	18 55	26	36 37	53 62			
16	64 01.9	05.8		120 30.2	25.5	122	35	38	19 06	39	38 34	53 65			
17	79 01.8	− 17 06.5		135 00.6	− 0 37.7	122	40	18 49	19 19	19 55	1 39 32	13 53 68			
18	94 01.7	− 17 07.2		149 31.0	− 0 50.0	123	45	19 01	19 34	20 16	1 41 28	13 53 71			
19	109 01.7	07.9		164 01.3	− 1 02.3	123	50	16	19 54	44	43 24	53 75			
20	124 01.6	08.6		178 31.6	14.6	123	52	23	20 04	20 58	44 22	53 77			
21	139 01.6	09.3		193 01.8	26.9	123	54	31	14	21 15	45 20	53 79			
22	154 01.5	10.0		207 32.0	39.2	123	56	40	27	21 35	46 18	53 82			
23	169 01.4	10.7		222 02.1	− 1 51.5	123	58	19 50	42	22 03	47 16	53 84			
24	184 01.4	− 17 11.4		236 32.1	− 2 03.8	123	60 S	20 01	20 59	22 48	1 48 14	13 53 87			
UT	ARIES		VENUS		MARTE		JÚPITER			SATURNO					
	PMG: 20 ^h 42 ^m 3		Mag.: −4.0 PMG: 9 ^h 40 ^m		Mag.: +1.2 PMG: 14 ^h 19 ^m		Mag.: −2.8 PMG: 1 ^h 38 ^m			Mag.: +0.6 PMG: 10 ^h 55 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'			
0	48 34.3	215 04.0	− 3 53.7	145 15.5	− 24 22.6	335 26.7	+ 21 41.8	195 57.3	− 10 46.7						
1	63 36.7	230 03.6	54.9	160 15.9	22.7	350 29.4	41.8	210 59.4	46.8						
2	78 39.2	245 03.2	56.0	175 16.3	22.8	5 32.2	41.7	226 01.6	46.9						
3	93 41.7	260 02.8	57.2	190 16.7	22.9	20 34.9	41.7	241 03.8	47.0						
4	108 44.1	275 02.5	58.3	205 17.2	23.0	35 37.7	41.7	256 06.0	47.1						
5	123 46.6	290 02.1	− 3 59.5	220 17.6	− 24 23.1	50 40.4	+ 21 41.6	271 08.2	− 10 47.2						
6	138 49.1	305 01.7	− 4 00.6	235 18.0	− 24 23.2	65 43.2	+ 21 41.6	286 10.3	− 10 47.3						
7	153 51.5	320 01.3	01.8	250 18.4	23.3	80 45.9	41.6	301 12.5	47.4						
8	168 54.0	335 01.0	02.9	265 18.8	23.4	95 48.7	41.6	316 14.7	47.5						
9	183 56.5	350 00.6	04.1	280 19.2	23.5	110 51.5	41.5	331 16.9	47.6						
10	198 58.9	5 00.2	05.2	295 19.6	23.6	125 54.2	41.5	346 19.1	47.7						
11	214 01.4	19 59.8	− 4 06.4	310 20.1	− 24 23.7	140 57.0	+ 21 41.5	1 21.2	− 10 47.8						
12	229 03.8	34 59.4	− 4 07.6	325 20.5	− 24 23.8	155 59.7	+ 21 41.4	16 23.4	− 10 47.9						
13	244 06.3	49 59.1	08.7	340 20.9	23.9	171 02.5	41.4	31 25.6	48.0						
14	259 08.8	64 58.7	09.9	355 21.3	24.0	186 05.2	41.4	46 27.8	48.1						
15	274 11.2	79 58.3	11.0	10 21.7	24.1	201 08.0	41.4	61 29.9	48.2						
16	289 13.7	94 57.9	12.2	25 22.1	24.1	216 10.8	41.3	76 32.1	48.3						
17	304 16.2	109 57.6	− 4 13.3	40 22.6	− 24 24.2	231 13.5	+ 21 41.3	91 34.3	− 10 48.4						
18	319 18.6	124 57.2	− 4 14.5	55 23.0	− 24 24.3	246 16.3	+ 21 41.3	106 36.5	− 10 48.5						
19	334 21.1	139 56.8	15.6	70 23.4	24.4	261 19.0	41.2	121 38.7	48.6						
20	349 23.6	154 56.4	16.8	85 23.8	24.5	276 21.8	41.2	136 40.8	48.7						
21	4 26.0	169 56.0	17.9	100 24.2	24.6	291 24.5	41.2	151 43.0	48.8						
22	19 28.5	184 55.7	19.1	115 24.6	24.7	306 27.3	41.1	166 45.2	48.9						
23	34 30.9	199 55.3	20.3	130 25.0	24.8	321 30.1	41.1	181 47.4	49.0						
24	49 33.4	214 54.9	− 4 21.4	145 25.5	− 24 24.9	336 32.8	+ 21 41.1	196 49.6	− 10 49.1						
Dif	—	−4	−12	+4	−1	+28	0	+22	−1						

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SÁBADO 10 DE NOVIEMBRE DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 44 ^m 0		SD: 16'0 Edad: 25 ^d 5		PHE { 4 ^h : 58'8 12 ^h : 59'1 20 ^h : 59'4									
	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	h m m
0	184 01.4	− 17 11.4	236 32.1	110	− 2 03.8	123	60 N	6 08	6 58	7 46	2 38 90	14 07 16		
1	199 01.3	12.1	251 02.1	110	16.1	123	58	04	52	36	37 86	09 19		
2	214 01.3	12.8	265 32.1	110	28.5	124	56	6 00	45	27	36 83	12 21		
3	229 01.2	13.5	280 02.0	109	40.8	123	54	5 57	40	19	34 82	14 24		
4	244 01.1	14.2	294 31.8	108	− 2 53.2	124	52	54	35	12	33 79	16 26		
5	259 01.1	− 17 14.9	309 01.5	107	− 3 05.5	123	50	5 51	6 30	7 05	2 32 77	14 18 28		
6	274 01.0	− 17 15.6	323 31.2	107	− 3 17.9	124	45	5 45	6 20	6 51	2 30 73	14 22 32		
7	289 00.9	16.3	338 00.9	107	30.2	123	40	39	11	40	28 70	25 35		
8	304 00.9	17.0	352 30.5	106	42.6	124	35	33	6 03	30	27 66	28 38		
9	319 00.8	17.7	7 00.0	105	− 3 54.9	123	30	27	5 56	21	25 64	31 40		
10	334 00.7	18.4	21 29.5	105	− 4 07.3	124	20	17	43	6 06	23 59	35 45		
11	349 00.7	− 17 19.1	35 58.8	103	− 4 19.6	123	10 N	5 06	5 31	5 53	2 21 55	14 39 49		
12	4 00.6	− 17 19.8	50 28.2	104	− 4 31.9	123	0	4 54	5 19	5 40	2 19 51	14 43 53		
13	19 00.5	20.5	64 57.4	102	44.3	124	10 S	40	5 06	28	17 48	47 56		
14	34 00.5	21.2	79 26.6	102	− 4 56.6	123	20	23	4 51	5 14	15 44	51 60		
15	49 00.4	21.9	93 55.8	102	− 5 08.9	123	30	4 02	33	4 59	13 39	55 65		
16	64 00.3	22.6	108 24.8	100	21.2	123	35	3 48	22	49	12 36	14 58 68		
17	79 00.3	− 17 23.3	122 53.8	100	− 5 33.4	122	40	3 32	4 09	4 39	2 11 33	15 01 71		
18	94 00.2	− 17 23.9	137 22.7	99	− 5 45.7	123	45	3 11	3 53	4 26	2 09 30	15 04 75		
19	109 00.1	24.6	151 51.6	99	− 5 57.9	122	50	2 44	33	11	07 26	08 79		
20	124 00.1	25.3	166 20.4	98	− 6 10.2	123	52	29	24	4 04	06 25	10 81		
21	139 00.0	26.0	180 49.1	97	22.4	122	54	2 13	13	3 56	05 23	12 83		
22	153 59.9	26.7	195 17.7	96	34.6	122	56	1 52	3 00	47	04 20	15 85		
23	168 59.8	27.4	209 46.3	96	46.8	122	58	1 24	2 45	37	03 18	17 88		
24	183 59.8	− 17 28.1	224 14.8	95	− 6 58.9	121	60 S	0 39	2 28	3 26	2 02 15	15 20 91		
UT	ARIES PMG: 20 ^h 38 ^m 4		VENUS Mag.: −4.0 PMG: 9 ^h 41 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 18 ^m		JÚPITER Mag.: −2.8 PMG: 1 ^h 34 ^m		SATURNO Mag.: +0.6 PMG: 10 ^h 51 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "			
h	° ' "	° ' "	° ' "		° ' "		° ' "		° ' "		° ' "	° ' "	° ' "	° ' "
0	49 33.4	214 54.9	− 4 21.4	145 25.5	− 24 24.9	336 32.8	+ 21 41.1	196 49.6	− 10 49.1					
1	64 35.9	229 54.5	22.6	160 25.9	24.9	351 35.6	41.0	211 51.7	49.2					
2	79 38.3	244 54.1	23.7	175 26.3	25.0	6 38.3	41.0	226 53.9	49.3					
3	94 40.8	259 53.8	24.9	190 26.7	25.1	21 41.1	41.0	241 56.1	49.4					
4	109 43.3	274 53.4	26.0	205 27.1	25.2	36 43.9	41.0	256 58.3	49.5					
5	124 45.7	289 53.0	− 4 27.2	220 27.5	− 24 25.3	51 46.6	+ 21 40.9	272 00.4	− 10 49.6					
6	139 48.2	304 52.6	− 4 28.3	235 27.9	− 24 25.4	66 49.4	+ 21 40.9	287 02.6	− 10 49.7					
7	154 50.7	319 52.2	29.5	250 28.3	25.5	81 52.1	40.9	302 04.8	49.8					
8	169 53.1	334 51.9	30.6	265 28.8	25.5	96 54.9	40.8	317 07.0	49.9					
9	184 55.6	349 51.5	31.8	280 29.2	25.6	111 57.7	40.8	332 09.2	50.0					
10	199 58.1	4 51.1	32.9	295 29.6	25.7	127 00.4	40.8	347 11.3	50.1					
11	215 00.5	19 50.7	− 4 34.1	310 30.0	− 24 25.8	142 03.2	+ 21 40.7	2 13.5	− 10 50.2					
12	230 03.0	34 50.3	− 4 35.3	325 30.4	− 24 25.9	157 05.9	+ 21 40.7	17 15.7	− 10 50.3					
13	245 05.4	49 50.0	36.4	340 30.8	25.9	172 08.7	40.7	32 17.9	50.4					
14	260 07.9	64 49.6	37.6	355 31.2	26.0	187 11.5	40.7	47 20.1	50.5					
15	275 10.4	79 49.2	38.7	10 31.6	26.1	202 14.2	40.6	62 22.2	50.5					
16	290 12.8	94 48.8	39.9	25 32.1	26.2	217 17.0	40.6	77 24.4	50.6					
17	305 15.3	109 48.4	− 4 41.0	40 32.5	− 24 26.3	232 19.8	+ 21 40.6	92 26.6	− 10 50.7					
18	320 17.8	124 48.0	− 4 42.2	55 32.9	− 24 26.3	247 22.5	+ 21 40.5	107 28.8	− 10 50.8					
19	335 20.2	139 47.7	43.3	70 33.3	26.4	262 25.3	40.5	122 31.0	50.9					
20	350 22.7	154 47.3	44.5	85 33.7	26.5	277 28.0	40.5	137 33.1	51.0					
21	5 25.2	169 46.9	45.6	100 34.1	26.6	292 30.8	40.4	152 35.3	51.1					
22	20 27.6	184 46.5	46.8	115 34.5	26.7	307 33.6	40.4	167 37.5	51.2					
23	35 30.1	199 46.1	47.9	130 34.9	26.7	322 36.3	40.4	182 39.7	51.3					
24	50 32.5	214 45.7	− 4 49.1	145 35.3	− 24 26.8	337 39.1	+ 21 40.3	197 41.9	− 10 51.4					
Dif	—	−4	−12	+4	−1	+28	0	+22	−1					

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LUNES 12 DE NOVIEMBRE DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'2 PMG: 11 ^h 44 ^m 2		SD: 16'5 Edad: 27 ^d 5		PHE $\left\{ \begin{array}{l} 4^h: 60'5 \\ 12^h: 60'7 \\ 20^h: 60'9 \end{array} \right.$						Hora		R°	Hora	R°
	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	h m m	
0	183 57.9	− 17 44.4	211 14.8		− 11 39.5		60 N	6 12	7 03	7 51	5 41 94	14 43 27			
1	198 57.9	45.1	225 41.2	74	− 11 50.6	111	58	08	6 56	40	33 91	51 31			
2	213 57.8	45.8	240 07.6	74	− 12 01.6	110	56	04	49	31	26 88	14 59 33			
3	228 57.7	46.5	254 33.9	73	12.5	109	54	6 00	43	23	20 85	15 06 35			
4	243 57.6	47.1	269 00.1	72	23.4	109	52	5 57	38	15	15 83	12 37			
5	258 57.5	− 17 47.8	283 26.2	71	− 12 34.2	108	50	5 54	6 33	7 08	5 10 81	15 18 39			
6	273 57.5	− 17 48.5	297 52.2	70	− 12 44.9	107	45	5 47	6 22	6 54	4 59 77	15 30 43			
7	288 57.4	49.1	312 18.1	69	− 12 55.6	107	40	41	13	42	50 74	40 46			
8	303 57.3	49.8	326 44.0	69	− 13 06.2	106	35	35	6 05	32	42 71	49 48			
9	318 57.2	50.5	341 09.8	68	16.7	105	30	29	5 58	23	36 68	15 56 51			
10	333 57.1	51.2	355 35.4	66	27.1	104	20	18	44	6 07	24 65	16 10 53			
11	348 57.0	− 17 51.8	10 01.0	66	− 13 37.5	104	10 N	5 06	5 32	5 54	4 14 62	16 21 57			
12	3 57.0	− 17 52.5	24 26.5	65	− 13 47.7	102	0	4 54	5 19	5 41	4 05 58	16 32 60			
13	18 56.9	53.2	38 51.9	64	− 13 57.9	102	10 S	40	5 05	28	3 56 55	43 63			
14	33 56.8	53.8	53 17.3	64	− 14 08.0	101	20	22	4 50	5 14	46 51	16 55 65			
15	48 56.7	54.5	67 42.5	62	18.0	100	30	4 00	31	4 57	35 47	17 08 69			
16	63 56.6	55.2	82 07.7	62	27.9	99	35	3 46	20	48	29 45	16 71			
17	78 56.5	− 17 55.8	96 32.7	60	− 14 37.8	99	40	3 30	4 07	4 37	3 21 43	17 25 74			
18	93 56.4	− 17 56.5	110 57.7	60	− 14 47.5	97	45	3 08	3 50	4 24	3 13 40	17 35 77			
19	108 56.4	57.2	125 22.6	59	− 14 57.2	97	50	2 39	30	08	3 03 36	48 80			
20	123 56.3	57.8	139 47.4	58	− 15 06.7	95	52	25	20	4 01	2 59 33	17 54 82			
21	138 56.2	58.5	154 12.2	58	16.2	95	54	2 07	3 09	3 53	54 31	18 00 84			
22	153 56.1	59.2	168 36.8	56	25.5	93	56	1 44	2 55	43	48 29	07 87			
23	168 56.0	− 17 59.8	183 01.4	56	34.8	93	58	1 14	40	33	42 26	16 89			
24	183 55.9	− 18 00.5	197 25.8	54	− 15 43.9	91	60 S	0 15	2 21	3 21	2 35 23	18 25 92			
UT	ARIES PMG: 20 ^h 30 ^m 5		VENUS Mag.: −4.0 PMG: 9 ^h 42 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 17 ^m		JÚPITER Mag.: −2.8 PMG: 1 ^h 25 ^m		SATURNO Mag.: +0.6 PMG: 10 ^h 44 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /	° ' /					
^h	° ' /	° ' /	° ' /		° ' /		° ' /		° ' /		° ' /		° ' /		
0	51 31.7	214 36.4	− 5 16.7		145 45.1	− 24 28.5	338 45.5	+ 21 39.6	198 34.2	− 10 53.8					
1	66 34.2	229 36.0	17.8		160 45.5	28.6	353 48.3	39.6	213 36.3	53.8					
2	81 36.6	244 35.6	19.0		175 45.9	28.6	8 51.1	39.5	228 38.5	53.9					
3	96 39.1	259 35.2	20.1		190 46.3	28.7	23 53.8	39.5	243 40.7	54.0					
4	111 41.5	274 34.9	21.3		205 46.7	28.8	38 56.6	39.5	258 42.9	54.1					
5	126 44.0	289 34.5	− 5 22.4		220 47.2	− 24 28.8	53 59.4	+ 21 39.4	273 45.1	− 10 54.2					
6	141 46.5	304 34.1	− 5 23.6		235 47.6	− 24 28.9	69 02.1	+ 21 39.4	288 47.2	− 10 54.3					
7	156 48.9	319 33.7	24.7		250 48.0	28.9	84 04.9	39.4	303 49.4	54.4					
8	171 51.4	334 33.3	25.9		265 48.4	29.0	99 07.7	39.3	318 51.6	54.5					
9	186 53.9	349 32.9	27.0		280 48.8	29.1	114 10.5	39.3	333 53.8	54.6					
10	201 56.3	4 32.5	28.2		295 49.2	29.1	129 13.2	39.3	348 56.0	54.7					
11	216 58.8	19 32.1	− 5 29.3		310 49.6	− 24 29.2	144 16.0	+ 21 39.2	3 58.1	− 10 54.8					
12	232 01.3	34 31.7	− 5 30.5		325 50.0	− 24 29.2	159 18.8	+ 21 39.2	19 00.3	− 10 54.9					
13	247 03.7	49 31.3	31.6		340 50.4	29.3	174 21.6	39.2	34 02.5	55.0					
14	262 06.2	64 30.9	32.8		355 50.8	29.4	189 24.3	39.1	49 04.7	55.1					
15	277 08.6	79 30.5	33.9		10 51.2	29.4	204 27.1	39.1	64 06.9	55.2					
16	292 11.1	94 30.1	35.1		25 51.6	29.5	219 29.9	39.1	79 09.0	55.3					
17	307 13.6	109 29.7	− 5 36.2		40 52.0	− 24 29.5	234 32.6	+ 21 39.1	94 11.2	− 10 55.4					
18	322 16.0	124 29.3	− 5 37.4		55 52.4	− 24 29.6	249 35.4	+ 21 39.0	109 13.4	− 10 55.5					
19	337 18.5	139 28.9	38.5		70 52.8	29.7	264 38.2	39.0	124 15.6	55.6					
20	352 21.0	154 28.6	39.7		85 53.2	29.7	279 41.0	39.0	139 17.8	55.7					
21	7 23.4	169 28.2	40.8		100 53.6	29.8	294 43.7	38.9	154 20.0	55.8					
22	22 25.9	184 27.8	41.9		115 54.0	29.8	309 46.5	38.9	169 22.1	55.9					
23	37 28.4	199 27.4	43.1		130 54.4	29.9	324 49.3	38.9	184 24.3	56.0					
24	52 30.8	214 27.0	− 5 44.2		145 54.8	− 24 29.9	339 52.1	+ 21 38.8	199 26.5	− 10 56.1					
Dif	—	−4	−11		+4	−1	+28	0	+22	−1					

MARTES 13 DE NOVIEMBRE DE 2012

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UT	SOL		● LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2		SD: 16 ^h 6		PHE									
	PMG: 11 ^h 44 ^m 3		Edad: 28 ^d 5											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			4 ^h : 61 ^m 1 ^s 12 ^h : 61 ^m 2 ^s 20 ^h : 61 ^m 3 ^s					
h	° /	° /	° /		° /		°	h m	h m	h m	h m	h m m	h m m	h m m
0	183 55.9	− 18 00.5	197 25.8		− 15 43.9	91	60 N	15 34	16 23	17 14	7 15 90	15 10 39		
1	198 55.8	01.1	211 50.2	54	− 15 53.0	89	58	45	30	18	7 04 87	22 41		
2	213 55.7	01.8	226 14.6	54	− 16 01.9	89	56	15 55	37	22	6 54 84	32 44		
3	228 55.6	02.5	240 38.8	52	10.7	88	54	16 03	43	26	45 83	41 46		
4	243 55.5	03.1	255 02.9	51	19.5	88	52	11	48	29	38 80	49 48		
5	258 55.5	− 18 03.8	269 27.0	51	− 16 28.1	86	50	16 18	16 53	17 33	6 31 79	15 57 48		
6	273 55.4	− 18 04.4	283 51.0	50	− 16 36.6	85	45	16 33	17 05	17 40	6 16 76	16 13 51		
7	288 55.3	05.1	298 14.9	49	45.0	84	40	45	14	47	6 04 73	26 53		
8	303 55.2	05.8	312 38.8	49	− 16 53.3	83	35	16 56	22	53	5 53 72	37 55		
9	318 55.1	06.4	327 02.5	47	− 17 01.4	81	30	17 05	30	17 59	44 70	16 47 56		
10	333 55.0	07.1	341 26.2	47	09.5	81	20	21	44	18 10	29 66	17 03 59		
11	348 54.9	− 18 07.7	355 49.9	47	− 17 17.4	79	10 N	17 35	17 57	18 22	5 16 63	17 18 61		
12	3 54.8	− 18 08.4	10 13.4	45	− 17 25.2	78	0	17 48	18 10	18 35	5 03 62	17 32 63		
13	18 54.7	09.0	24 36.9	45	32.9	77	10 S	18 01	23	18 49	4 51 59	17 46 64		
14	33 54.6	09.7	39 00.3	44	40.4	75	20	16	39	19 07	37 57	18 00 67		
15	48 54.5	10.4	53 23.6	43	47.9	75	30	32	18 58	30	22 54	17 69		
16	63 54.4	11.0	67 46.9	43	− 17 55.2	73	35	42	19 10	19 44	14 51	27 70		
17	78 54.3	− 18 11.7	82 10.0	41	− 18 02.3	71	40	18 53	19 24	20 01	4 04 50	18 39 71		
18	93 54.2	− 18 12.3	96 33.2	42	− 18 09.4	71	45	19 07	19 40	20 23	3 53 47	18 52 73		
19	108 54.1	13.0	110 56.2	40	16.3	69	50	23	20 02	20 53	39 43	19 08 76		
20	123 54.0	13.6	125 19.2	40	23.1	68	52	30	12	21 08	32 42	16 77		
21	138 54.0	14.3	139 42.2	40	29.7	66	54	39	24	22	25 41	24 79		
22	153 53.9	14.9	154 05.0	38	36.2	65	56	49	37	21 51	17 39	34 80		
23	168 53.8	15.6	168 27.9	39	42.6	64	58	19 59	20 54	22 25	3 08 36	45 81		
24	183 53.7	− 18 16.2	182 50.6	37	− 18 48.8	62	60 S	20 12	21 13	** ** *	2 58 33	19 57 84		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG	Mag.: −4.0		Mag.: +1.2		Mag.: −2.8		Mag.: +0.6						
	20 ^h 26 ^m 6	PMG: 9 ^h 42 ^m		PMG: 14 ^h 16 ^m		PMG: 1 ^h 20 ^m		PMG: 10 ^h 41 ^m						
	hG ♂	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec					
h	° /	° /	° /	° /	° /	° /	° /	° /	° /					
0	52 30.8	214 27.0	− 5 44.2	145 54.8	− 24 29.9	339 52.1	+ 21 38.8	199 26.5	− 10 56.1					
1	67 33.3	229 26.6	45.4	160 55.2	30.0	354 54.8	38.8	214 28.7	56.2					
2	82 35.8	244 26.2	46.5	175 55.6	30.0	9 57.6	38.8	229 30.9	56.3					
3	97 38.2	259 25.8	47.7	190 56.0	30.1	25 00.4	38.7	244 33.0	56.4					
4	112 40.7	274 25.4	48.8	205 56.4	30.1	40 03.2	38.7	259 35.2	56.4					
5	127 43.1	289 25.0	− 5 50.0	220 56.8	− 24 30.2	55 06.0	+ 21 38.7	274 37.4	− 10 56.5					
6	142 45.6	304 24.6	− 5 51.1	235 57.2	− 24 30.2	70 08.7	+ 21 38.6	289 39.6	− 10 56.6					
7	157 48.1	319 24.2	52.3	250 57.6	30.3	85 11.5	38.6	304 41.8	56.7					
8	172 50.5	334 23.8	53.4	265 58.0	30.3	100 14.3	38.6	319 43.9	56.8					
9	187 53.0	349 23.4	54.5	280 58.4	30.4	115 17.1	38.5	334 46.1	56.9					
10	202 55.5	4 23.0	55.7	295 58.8	30.4	130 19.8	38.5	349 48.3	57.0					
11	217 57.9	19 22.6	− 5 56.8	310 59.2	− 24 30.5	145 22.6	+ 21 38.5	4 50.5	− 10 57.1					
12	233 00.4	34 22.2	− 5 58.0	325 59.6	− 24 30.5	160 25.4	+ 21 38.4	19 52.7	− 10 57.2					
13	248 02.9	49 21.8	− 5 59.1	341 00.0	30.6	175 28.2	38.4	34 54.8	57.3					
14	263 05.3	64 21.4	− 6 00.3	356 00.4	30.6	190 31.0	38.4	49 57.0	57.4					
15	278 07.8	79 21.0	01.4	11 00.8	30.7	205 33.7	38.3	64 59.2	57.5					
16	293 10.3	94 20.6	02.6	26 01.2	30.7	220 36.5	38.3	80 01.4	57.6					
17	308 12.7	109 20.2	− 6 03.7	41 01.6	− 24 30.8	235 39.3	+ 21 38.3	95 03.6	− 10 57.7					
18	323 15.2	124 19.8	− 6 04.8	56 02.0	− 24 30.8	250 42.1	+ 21 38.2	110 05.8	− 10 57.8					
19	338 17.6	139 19.4	06.0	71 02.4	30.9	265 44.8	38.2	125 07.9	57.9					
20	353 20.1	154 19.0	07.1	86 02.8	30.9	280 47.6	38.2	140 10.1	58.0					
21	8 22.6	169 18.6	08.3	101 03.2	31.0	295 50.4	38.1	155 12.3	58.1					
22	23 25.0	184 18.2	09.4	116 03.6	31.0	310 53.2	38.1	170 14.5	58.2					
23	38 27.5	199 17.8	10.6	131 04.0	31.1	325 56.0	38.1	185 16.7	58.3					
24	53 30.0	214 17.4	− 6 11.7	146 04.4	− 24 31.1	340 58.7	+ 21 38.0	200 18.8	− 10 58.4					
Dif	—	−4	−11	+4	0	+28	0	+22	−1					

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MIÉRCOL 14 DE NOVIEMBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2 PMG: 11 ^h 44 ^m 5		SD: 16 ^h 7 Edad: 0 ^d 1 PHE { 4 ^h : 61 ^h 3 12 ^h : 61 ^h 4 20 ^h : 61 ^h 3 PMG: 12 ^h 20 ^m R°: 63 ^m													
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°		
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m	
0	183	53.7	-18	16.2	182	50.6	-18	48.8	6	16	7	07	7	56	8	45
1	198	53.6		16.9	197	13.3	37	-18	54.9	11	7	00	45		31	75
2	213	53.5		17.5	211	36.0	37	-19	00.9	07	6	53	35		18	75
3	228	53.4		18.2	225	58.6	36		06.7	04	47		26	8	08	73
4	243	53.3		18.8	240	21.1	35		12.4	00	41	19	7	58	73	37
5	258	53.2	-18	19.5	254	43.6	35	-19	17.9	5	57	6	36	7	50	71
6	273	53.1	-18	20.1	269	06.0	34	-19	23.3	5	49	6	25	6	32	70
7	288	53.0		20.7	283	28.4	34		28.5	43	15	44		17	69	19
8	303	52.9		21.4	297	50.8	34		33.6	36	6	07	34	7	05	68
9	318	52.8		22.0	312	13.1	33		38.6	30	5	59	24	6	54	67
10	333	52.7		22.7	326	35.4	33		43.4	19	45	6	08	35	66	18
11	348	52.6	-18	23.3	340	57.6	32	-19	48.0	5	07	5	32	5	19	65
12	3	52.5	-18	24.0	355	19.8	32	-19	52.5	4	54	5	19	5	41	64
13	18	52.4		24.6	9	41.9	31	-19	56.8	39	5	05	27	5	50	62
14	33	52.2		25.2	24	04.1	32	-20	01.0	4	22	4	49	5	13	34
15	48	52.1		25.9	38	26.2	31		05.1	3	59	3	40	4	56	16
16	63	52.0		26.5	52	48.2	30		09.0	45	19	46	5	05	59	37
17	78	51.9	-18	27.2	67	10.3	31	-20	12.7	3	27	4	05	4	54	57
18	93	51.8	-18	27.8	81	32.3	30	-20	16.3	3	05	3	48	4	40	55
19	108	51.7		28.4	95	54.3	30		19.7	2	35	2	40	22	54	24
20	123	51.6		29.1	110	16.2	29		23.0	20	16	3	58	14	53	33
21	138	51.5		29.7	124	38.2	30		26.1	2	01	3	04	4	06	51
22	153	51.4		30.4	139	00.1	29		29.0	1	37	2	51	3	56	50
23	168	51.3		31.0	153	22.0	29		31.8	1	03	35	29	44	49	21
24	183	51.2	-18	31.6	167	43.9	29	-20	34.4	**	**	2	15	3	31	47
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 20 ^h 22 ^m 7		Mag.: -4.0 PMG: 9 ^h 43 ^m		Mag.: +1.2 PMG: 14 ^h 15 ^m		Mag.: -2.8 PMG: 1 ^h 16 ^m		Mag.: +0.6 PMG: 10 ^h 37 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'				
0	53	30.0	214	17.4	-6	11.7	146	04.4	-24	31.1	340	58.7	+21	38.0	200	18.8
1	68	32.4	229	17.0		12.8	161	04.8		31.1	356	01.5		38.0	215	21.0
2	83	34.9	244	16.6		14.0	176	05.2		31.2	11	04.3		38.0	230	23.2
3	98	37.4	259	16.2		15.1	191	05.6		31.2	26	07.1		37.9	245	25.4
4	113	39.8	274	15.7		16.3	206	06.0		31.3	41	09.9		37.9	260	27.6
5	128	42.3	289	15.3	-6	17.4	221	06.4	-24	31.3	56	12.7	+21	37.9	275	29.8
6	143	44.7	304	14.9	-6	18.6	236	06.8	-24	31.3	71	15.4	+21	37.8	290	31.9
7	158	47.2	319	14.5		19.7	251	07.2		31.4	86	18.2		37.8	305	34.1
8	173	49.7	334	14.1		20.8	266	07.6		31.4	101	21.0		37.8	320	36.3
9	188	52.1	349	13.7		22.0	281	08.0		31.5	116	23.8		37.7	335	38.5
10	203	54.6	4	13.3		23.1	296	08.4		31.5	131	26.6		37.7	350	40.7
11	218	57.1	19	12.9	-6	24.3	311	08.8	-24	31.5	146	29.3	+21	37.7	5	42.8
12	233	59.5	34	12.5	-6	25.4	326	09.2	-24	31.6	161	32.1	+21	37.6	20	45.0
13	249	02.0	49	12.1		26.5	341	09.6		31.6	176	34.9		37.6	35	47.2
14	264	04.5	64	11.7		27.7	356	10.0		31.7	191	37.7		37.6	50	49.4
15	279	06.9	79	11.3		28.8	371	10.4		31.7	206	40.5		37.5	65	51.6
16	294	09.4	94	10.9		30.0	386	10.8		31.7	221	43.3		37.5	80	53.8
17	309	11.9	109	10.5	-6	31.1	401	11.2	-24	31.8	236	46.0	+21	37.5	95	55.9
18	324	14.3	124	10.1	-6	32.2	416	11.6	-24	31.8	251	48.8	+21	37.4	110	58.1
19	339	16.8	139	9.6		33.4	431	12.0		31.8	266	51.6		37.4	126	00.3
20	354	19.2	154	9.2		34.5	446	12.4		31.9	281	54.4		37.4	141	02.5
21	9	21.7	169	8.8		35.7	461	12.8		31.9	296	57.2		37.3	156	04.7
22	24	24.2	184	8.4		36.8	476	13.2		31.9	312	00.0		37.3	171	06.8
23	39	26.6	199	8.0		37.9	491	13.6		32.0	327	02.8		37.3	186	09.0
24	54	29.1	214	7.6	-6	39.1	506	14.0	-24	32.0	342	05.5	+21	37.2	201	11.2
Dif	—		-4		-11		+4		0		+28		0		+22	


JUEVES 15 DE NOVIEMBRE DE 2012

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UT	SOL			● LUNA					Latitud	Puesta de Sol	Crepúsculos			Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 11 ^h 44 ^m 7			SD: 16 ^h 7 Edad: 1 ^d 1 PHE { 4 ^h : 61 ^h /3 12 ^h : 61 ^h /2 20 ^h : 61 ^h /0 PMG: 13 ^h 23 ^m R°: 63 ^m													
	hG ☉	Dec		hG ☾	Dif	Dec	Dif	Civil			Náutico	Hora	R°	Hora	R°		
	°	'	°	°	'	°	'	h			m	h	m	h	m	m	
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m		
0	183	51.2	− 18	167	43.9	− 20	34.4	60 N	15 30	16 19	17 11	10 02	58	16 44	72		
1	198	51.1		182	05.8	29	36.9	58	41	27	15	9 46	59	17 00	71		
2	213	51.0		196	27.7	29	39.2	56	15 51	34	20	33	59	13	70		
3	228	50.9		210	49.6	29	41.4	54	16 00	40	23	21	60	25	69		
4	243	50.8		225	11.4	28	43.4	52	08	46	27	11	60	35	69		
5	258	50.7	− 18	239	33.3	29	45.3	50	16 16	16 51	17 30	9 01	61	17 44	69		
6	273	50.5	− 18	253	55.2	29	46.9	45	16 31	17 03	17 38	8 42	61	18 04	67		
7	288	50.4		268	17.0	28	48.5	40	43	13	45	26	62	20	66		
8	303	50.3		282	38.9	29	49.8	35	16 54	21	52	13	62	33	66		
9	318	50.2		297	00.8	29	51.0	30	17 04	29	17 58	8 01	62	18 45	65		
10	333	50.1		311	22.7	29	52.1	20	20	43	18 10	7 41	63	19 05	64		
11	348	50.0	− 18	325	44.6	29	53.0	10 N	17 35	17 57	18 22	7 24	63	19 22	63		
12	3	49.9	− 18	340	06.5	29	53.7	0	17 48	18 10	18 35	7 08	63	19 38	62		
13	18	49.8		354	28.4	29	54.2	10 S	18 02	24	18 50	6 52	63	19 54	62		
14	33	49.7		8	50.4	30	54.6	20	17	18 40	19 08	35	63	20 11	61		
15	48	49.5		23	12.4	30	54.9	30	34	19 00	32	15	64	31	59		
16	63	49.4		37	34.3	29	55.0	35	44	12	19 46	6 04	64	43	58		
17	78	49.3	− 18	51	56.4	31	54.9	40	18 56	19 26	20 04	5 51	64	20 56	57		
18	93	49.2	− 18	66	18.4	30	54.7	45	19 09	19 43	20 27	5 35	64	21 11	57		
19	108	49.1		80	40.5	31	54.3	50	26	20 05	20 58	16	64	30	55		
20	123	49.0		95	02.6	31	53.7	52	34	16	21 14	5 07	64	40	54		
21	138	48.9		109	24.7	31	53.0	54	43	28	34	4 57	64	21 50	53		
22	153	48.8		123	46.9	32	52.2	56	19 53	20 43	21 59	46	64	22 01	52		
23	168	48.6		138	09.1	32	51.2	58	20 04	21 00	22 38	33	64	14	51		
24	183	48.5	− 18	152	31.3	32	50.0	60 S	20 18	21 21	** **	4 18	64	22 29	50		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG: 20 ^h 18 ^m 7		Mag.: −4.0 PMG: 9 ^h 44 ^m		Mag.: +1.2 PMG: 14 ^h 15 ^m		Mag.: −2.8 PMG: 1 ^h 11 ^m		Mag.: +0.6 PMG: 10 ^h 34 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	54	29.1	214	07.6	− 6	39.1	146	14.0	− 24	32.0	342	05.5	+ 21	37.2	201	11.2	
1	69	31.6	229	07.2		40.2	161	14.4		32.0	357	08.3		37.2	216	13.4	
2	84	34.0	244	06.8		41.4	176	14.7		32.1	12	11.1		37.2	231	15.6	
3	99	36.5	259	06.4		42.5	191	15.1		32.1	27	13.9		37.1	246	17.8	
4	114	39.0	274	06.0		43.6	206	15.5		32.1	42	16.7		37.1	261	19.9	
5	129	41.4	289	05.6	− 6	44.8	221	15.9	− 24	32.2	57	19.5	+ 21	37.1	276	22.1	
6	144	43.9	304	05.1	− 6	45.9	236	16.3	− 24	32.2	72	22.3	+ 21	37.0	291	24.3	
7	159	46.4	319	04.7		47.0	251	16.7		32.2	87	25.0		37.0	306	26.5	
8	174	48.8	334	04.3		48.2	266	17.1		32.2	102	27.8		37.0	321	28.7	
9	189	51.3	349	03.9		49.3	281	17.5		32.3	117	30.6		36.9	336	30.8	
10	204	53.7	4	03.5		50.4	296	17.9		32.3	132	33.4		36.9	351	33.0	
11	219	56.2	19	03.1	− 6	51.6	311	18.3	− 24	32.3	147	36.2	+ 21	36.9	6	35.2	
12	234	58.7	34	02.7	− 6	52.7	326	18.7	− 24	32.4	162	39.0	+ 21	36.8	21	37.4	
13	250	01.1	49	02.2		53.9	341	19.1		32.4	177	41.8		36.8	36	39.6	
14	265	03.6	64	01.8		55.0	356	19.5		32.4	192	44.6		36.8	51	41.8	
15	280	06.1	79	01.4		56.1	11	19.9		32.4	207	47.3		36.7	66	43.9	
16	295	08.5	94	01.0		57.3	26	20.3		32.5	222	50.1		36.7	81	46.1	
17	310	11.0	109	00.6	− 6	58.4	41	20.7	− 24	32.5	237	52.9	+ 21	36.7	96	48.3	
18	325	13.5	124	00.2	− 6	59.5	56	21.0	− 24	32.5	252	55.7	+ 21	36.6	111	50.5	
19	340	15.9	138	59.8	− 7	00.7	71	21.4		32.5	267	58.5		36.6	126	52.7	
20	355	18.4	153	59.3		01.8	86	21.8		32.5	283	01.3		36.6	141	54.9	
21	10	20.9	168	58.9		02.9	101	22.2		32.6	298	04.1		36.5	156	57.0	
22	25	23.3	183	58.5		04.1	116	22.6		32.6	313	06.9		36.5	171	59.2	
23	40	25.8	198	58.1		05.2	131	23.0		32.6	328	09.7		36.5	187	01.4	
24	55	28.2	213	57.7	− 7	06.3	146	23.4	− 24	32.6	343	12.5	+ 21	36.4	202	03.6	
Dif	—		−4		−11		+4		0		+28		0		+22		

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VIERNES 16 DE NOVIEMBRE DE 2012


UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16°2 PMG: 11 ^h 44 ^m 9		SD: 16°6 Edad: 2 ^d 1 PHE $\begin{cases} 4^h: 60'9 \\ 12^h: 60'7 \\ 20^h: 60'5 \end{cases}$ PMG: 14 ^h 26 ^m R°: 60 ^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	183 48.5	− 18 46.7	152 31.3		− 20 50.0		60 N	6 20	7 12	8 01	11 00 41	17 56 83		
1	198 48.4		166 53.6	33	48.7	13	58	15	7 04	7 50	10 45 43	18 11 80		
2	213 48.3		181 15.9	33	47.2	15	56	11	6 57	39	32 45	23 79		
3	228 48.2		195 38.3	34	45.5	17	54	07	50	30	21 46	34 77		
4	243 48.1		210 00.7	34	43.7	18	52	03	45	22	11 48	44 75		
5	258 47.9	− 18 49.8	224 23.2	35	− 20 41.8	19	50	6 00	6 39	7 15	10 02 49	18 53 74		
6	273 47.8	− 18 50.4	238 45.7	35	− 20 39.7	21	45	5 52	6 27	6 59	9 43 51	19 11 71		
7	288 47.7		253 08.3	36	37.4	23	40	45	18	47	28 53	26 69		
8	303 47.6		267 30.9	36	35.1	23	35	38	09	36	15 54	39 67		
9	318 47.5		281 53.6	37	32.5	26	30	32	6 01	26	9 03 56	19 50 66		
10	333 47.3		296 16.3	37	29.8	27	20	20	5 46	6 10	8 44 58	20 09 63		
11	348 47.2	− 18 53.5	310 39.1	38	− 20 27.0	28	10 N	5 07	5 33	5 55	8 27 59	20 25 61		
12	3 47.1	− 18 54.1	325 02.0	39	− 20 24.0	30	0	4 54	5 19	5 41	8 11 61	20 40 60		
13	18 47.0		339 24.9	39	20.8	32	10 S	39	5 05	27	7 55 63	20 56 57		
14	33 46.9		353 47.9	40	17.6	32	20	4 21	4 49	5 13	38 64	21 12 55		
15	48 46.7		8 10.9	40	14.1	35	30	3 58	29	4 55	19 66	30 53		
16	63 46.6		22 34.0	41	10.6	35	35	43	17	45	7 08 66	41 51		
17	78 46.5	− 18 57.2	36 57.2	42	− 20 06.8	38	40	3 25	4 03	4 33	6 55 68	21 53 49		
18	93 46.4	− 18 57.8	51 20.5	43	− 20 03.0	38	45	3 02	3 46	4 20	6 39 70	22 08 47		
19	108 46.3		65 43.8	43	− 19 59.0	40	50	2 31	24	4 03	20 72	25 44		
20	123 46.1		80 07.2	44	54.9	41	52	2 15	13	3 55	11 73	34 42		
21	138 46.0	− 18 59.6	94 30.7	45	50.6	43	54	1 55	3 01	46	6 01 74	43 41		
22	153 45.9	− 19 00.3	108 54.2	45	46.2	44	56	1 30	2 46	36	5 50 75	22 53 39		
23	168 45.8		123 17.8	46	41.7	45	58	0 51	29	25	37 76	23 05 37		
24	183 45.6	− 19 01.5	137 41.5	47	− 19 37.0	47	60 S	** **	2 08	3 11	5 22 78	23 19 34		
UT	ARIES PMG: 20 ^h 14 ^m 8		VENUS Mag.: −4.0 PMG: 9 ^h 44 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 14 ^m		JÚPITER Mag.: −2.8 PMG: 1 ^h 07 ^m		SATURNO Mag.: +0.6 PMG: 10 ^h 30 ^m					
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	°	'	°	'	°	'	°	'	°	'				
h	55 28.2	213 57.7	− 7 06.3		146 23.4	− 24 32.6	343 12.5	+ 21 36.4	202 03.6	− 11 02.9				
1	70 30.7	228 57.3	07.5		161 23.8	32.7	358 15.2	36.4	217 05.8	03.0				
2	85 33.2	243 56.8	08.6		176 24.2	32.7	13 18.0	36.4	232 08.0	03.1				
3	100 35.6	258 56.4	09.7		191 24.6	32.7	28 20.8	36.3	247 10.1	03.2				
4	115 38.1	273 56.0	10.9		206 25.0	32.7	43 23.6	36.3	262 12.3	03.3				
5	130 40.6	288 55.6	− 7 12.0		221 25.4	− 24 32.7	58 26.4	+ 21 36.3	277 14.5	− 11 03.4				
6	145 43.0	303 55.2	− 7 13.1		236 25.8	− 24 32.8	73 29.2	+ 21 36.2	292 16.7	− 11 03.5				
7	160 45.5	318 54.8	14.3		251 26.1	32.8	88 32.0	36.2	307 18.9	03.6				
8	175 48.0	333 54.3	15.4		266 26.5	32.8	103 34.8	36.2	322 21.1	03.7				
9	190 50.4	348 53.9	16.5		281 26.9	32.8	118 37.6	36.1	337 23.2	03.8				
10	205 52.9	3 53.5	17.7		296 27.3	32.8	133 40.4	36.1	352 25.4	03.9				
11	220 55.4	18 53.1	− 7 18.8		311 27.7	− 24 32.8	148 43.2	+ 21 36.1	7 27.6	− 11 04.0				
12	235 57.8	33 52.7	− 7 19.9		326 28.1	− 24 32.9	163 45.9	+ 21 36.0	22 29.8	− 11 04.1				
13	251 00.3	48 52.2	21.1		341 28.5	32.9	178 48.7	36.0	37 32.0	04.2				
14	266 02.7	63 51.8	22.2		356 28.9	32.9	193 51.5	36.0	52 34.2	04.3				
15	281 05.2	78 51.4	23.3		11 29.3	32.9	208 54.3	35.9	67 36.3	04.3				
16	296 07.7	93 51.0	24.4		26 29.7	32.9	223 57.1	35.9	82 38.5	04.4				
17	311 10.1	108 50.5	− 7 25.6		41 30.1	− 24 32.9	238 59.9	+ 21 35.8	97 40.7	− 11 04.5				
18	326 12.6	123 50.1	− 7 26.7		56 30.4	− 24 32.9	254 02.7	+ 21 35.8	112 42.9	− 11 04.6				
19	341 15.1	138 49.7	27.8		71 30.8	33.0	269 05.5	35.8	127 45.1	04.7				
20	356 17.5	153 49.3	29.0		86 31.2	33.0	284 08.3	35.7	142 47.3	04.8				
21	11 20.0	168 48.9	30.1		101 31.6	33.0	299 11.1	35.7	157 49.4	04.9				
22	26 22.5	183 48.4	31.2		116 32.0	33.0	314 13.9	35.7	172 51.6	05.0				
23	41 24.9	198 48.0	32.4		131 32.4	33.0	329 16.7	35.6	187 53.8	05.1				
24	56 27.4	213 47.6	− 7 33.5		146 32.8	− 24 33.0	344 19.5	+ 21 35.6	202 56.0	− 11 05.2				
Dif	—	−4	−11		+4	0	+28	0	+22	−1				

SÁBADO 17 DE NOVIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2 PMG: 11 ^h 45 ^m 1		SD: 16 ^h 4 Edad: 3 ^d 1		PHE { 4 ^h : 60 ^h /2 12 ^h : 60 ^h /0 20 ^h : 59 ^h /7											
	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	183 45.6	− 19 01.5	137 41.5		− 19 37.0		60 N	15 26	16 15	17 08	11 41 28		19 19 87			
1	198 45.5	02.1	152 05.3	48	32.2	48	58	38	24	13	28 31		31 84			
2	213 45.4	02.7	166 29.2	49	27.2	50	56	48	31	17	17 34		42 81			
3	228 45.3	03.3	180 53.1	49	22.2	50	54	15 57	37	21	11 07 36		51 79			
4	243 45.1	03.9	195 17.2	51	17.0	52	52	16 06	43	25	10 59 37		19 59 77			
5	258 45.0	− 19 04.5	209 41.3	51	− 19 11.6	54	50	16 13	16 49	17 28	10 51 39		20 07 75			
6	273 44.9	− 19 05.1	224 05.5	52	− 19 06.2	54	45	16 29	17 01	17 37	10 34 43		20 22 72			
7	288 44.8	05.7	238 29.8	53	− 19 00.6	56	40	42	11	44	21 45		35 69			
8	303 44.6	06.3	252 54.1	53	− 18 54.9	57	35	16 53	20	51	10 09 47		46 67			
9	318 44.5	06.9	267 18.6	55	49.1	58	30	17 03	28	17 57	9 59 49		20 56 64			
10	333 44.4	07.5	281 43.1	55	43.1	60	20	20	43	18 10	42 51		21 12 61			
11	348 44.3	− 19 08.1	296 07.8	57	− 18 37.1	60	10 N	17 35	17 57	18 22	9 26 55		21 26 58			
12	3 44.1	− 19 08.7	310 32.5	57	− 18 30.9	62	0	17 49	18 11	18 36	9 12 57		21 40 55			
13	18 44.0	09.3	324 57.3	58	24.6	63	10 S	18 03	25	18 51	8 58 59		21 53 52			
14	33 43.9	09.9	339 22.2	59	18.2	64	20	18	18 42	19 10	42 62		22 07 49			
15	48 43.7	10.5	353 47.2	60	11.6	66	30	36	19 02	34	25 65		23 45			
16	63 43.6	11.1	8 12.3	61	− 18 05.0	66	35	46	14	19 49	14 67		32 44			
17	78 43.5	− 19 11.7	22 37.5	62	− 17 58.2	68	40	18 58	19 29	20 07	8 03 69		22 42 42			
18	93 43.4	− 19 12.3	37 02.8	63	− 17 51.4	68	45	19 12	19 47	20 30	7 49 71		22 55 38			
19	108 43.2	12.9	51 28.1	63	44.4	70	50	29	20 09	21 02	32 75		23 09 36			
20	123 43.1	13.5	65 53.6	65	37.3	71	52	38	20	19	24 76		16 34			
21	138 43.0	14.1	80 19.2	66	30.1	72	54	47	33	21 40	15 78		24 31			
22	153 42.8	14.7	94 44.8	66	22.8	73	56	19 57	20 48	22 08	7 05 80		32 30			
23	168 42.7	15.3	109 10.6	68	15.4	74	58	20 09	21 06	22 53	6 53 83		42 27			
24	183 42.6	− 19 15.9	123 36.4	68	− 17 08.0	74	60 S	20 23	21 28	** **	6 40 86		23 53 24			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG: 20 ^h 10 ^m 9		Mag.: −4.0 PMG: 9 ^h 45 ^m		Mag.: +1.2 PMG: 14 ^h 13 ^m		Mag.: −2.8 PMG: 1 ^h 03 ^m		Mag.: +0.6 PMG: 10 ^h 27 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'				
0	56 27.4	213 47.6	− 7 33.5		146 32.8	− 24 33.0	344 19.5	+ 21 35.6	202 56.0	− 11 05.2						
1	71 29.9	228 47.2	34.6		161 33.2	33.0	359 22.3	35.6	217 58.2	05.3						
2	86 32.3	243 46.7	35.7		176 33.6	33.0	14 25.1	35.5	233 00.4	05.4						
3	101 34.8	258 46.3	36.9		191 34.0	33.0	29 27.8	35.5	248 02.6	05.5						
4	116 37.2	273 45.9	38.0		206 34.3	33.0	44 30.6	35.5	263 04.7	05.6						
5	131 39.7	288 45.5	− 7 39.1		221 34.7	− 24 33.1	59 33.4	+ 21 35.4	278 06.9	− 11 05.7						
6	146 42.2	303 45.0	− 7 40.2		236 35.1	− 24 33.1	74 36.2	+ 21 35.4	293 09.1	− 11 05.8						
7	161 44.6	318 44.6	41.4		251 35.5	33.1	89 39.0	35.4	308 11.3	05.8						
8	176 47.1	333 44.2	42.5		266 35.9	33.1	104 41.8	35.3	323 13.5	05.9						
9	191 49.6	348 43.8	43.6		281 36.3	33.1	119 44.6	35.3	338 15.7	06.0						
10	206 52.0	3 43.3	44.8		296 36.7	33.1	134 47.4	35.3	353 17.8	06.1						
11	221 54.5	18 42.9	− 7 45.9		311 37.1	− 24 33.1	149 50.2	+ 21 35.2	8 20.0	− 11 06.2						
12	236 57.0	33 42.5	− 7 47.0		326 37.5	− 24 33.1	164 53.0	+ 21 35.2	23 22.2	− 11 06.3						
13	251 59.4	48 42.0	48.1		341 37.8	33.1	179 55.8	35.2	38 24.4	06.4						
14	267 01.9	63 41.6	49.3		356 38.2	33.1	194 58.6	35.1	53 26.6	06.5						
15	282 04.3	78 41.2	50.4		11 38.6	33.1	210 01.4	35.1	68 28.8	06.6						
16	297 06.8	93 40.8	51.5		26 39.0	33.1	225 04.2	35.0	83 30.9	06.7						
17	312 09.3	108 40.3	− 7 52.6		41 39.4	− 24 33.1	240 07.0	+ 21 35.0	98 33.1	− 11 06.8						
18	327 11.7	123 39.9	− 7 53.8		56 39.8	− 24 33.1	255 09.8	+ 21 35.0	113 35.3	− 11 06.9						
19	342 14.2	138 39.5	54.9		71 40.2	33.1	270 12.6	34.9	128 37.5	07.0						
20	357 16.7	153 39.0	56.0		86 40.6	33.1	285 15.4	34.9	143 39.7	07.1						
21	12 19.1	168 38.6	57.1		101 40.9	33.1	300 18.2	34.9	158 41.9	07.2						
22	27 21.6	183 38.2	58.2		116 41.3	33.1	315 21.0	34.8	173 44.1	07.3						
23	42 24.1	198 37.7	− 7 59.4		131 41.7	33.1	330 23.8	34.8	188 46.2	07.3						
24	57 26.5	213 37.3	− 8 00.5		146 42.1	− 24 33.1	345 26.6	+ 21 34.8	203 48.4	− 11 07.4						
Dif	—	−4	−11		+4	0	+28	0	+22	−1						

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DOMINGO 18 DE NOVIEMBRE DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 11 ^h 45 ^m 3		SD: 16 ^h 2 Edad: 4 ^d 1 PHE { 4 ^h : 59 ^h 4 12 ^h : 59 ^h 1 20 ^h : 58 ^h 8 PMG: 16 ^h 22 ^m R°: 52 ^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	h m m
0	183 42.6	− 19 15.9	123 36.4	70	− 17 08.0	76	60 N	6 24	7 16	8 06	12 09 20	20 46 86	20 46 86	20 46 86
1	198 42.4		138 02.4	70	− 17 00.4	76	58	19	08	7 54	11 59 23	20 55 83	20 55 83	20 55 83
2	213 42.3	17.1	152 28.4	70	− 16 52.7	77	56	14	7 00	43	51 25	21 03 80	21 03 80	21 03 80
3	228 42.2	17.7	166 54.5	71		44.9	54	10	6 54	34	43 28	10 78	10 78	10 78
4	243 42.0	18.2	181 20.8	73		37.0	52	06	48	26	36 30	16 76	16 76	16 76
5	258 41.9	− 19 18.8	195 47.1	73	− 16 29.0	80	50	6 02	6 42	7 18	11 30 31	21 22 74	21 22 74	21 22 74
6	273 41.8	− 19 19.4	210 13.5	74	− 16 20.9	81	45	5 54	6 30	7 02	11 17 35	21 34 70	21 34 70	21 34 70
7	288 41.6	20.0	224 40.0	75		12.8	40	47	20	6 49	11 06 38	44 67	44 67	44 67
8	303 41.5	20.6	239 06.6	76	− 16 04.5	83	35	40	11	38	10 56 41	21 53 64	21 53 64	21 53 64
9	318 41.4	21.2	253 33.4	78	− 15 56.2	83	30	33	6 02	28	48 43	22 00 62	22 00 62	22 00 62
10	333 41.2	21.8	268 00.2	78		47.7	20	21	5 47	6 11	33 47	13 58	13 58	13 58
11	348 41.1	− 19 22.4	282 27.1	79	− 15 39.2	85	10 N	5 08	5 34	5 56	10 21 50	22 24 55	22 24 55	22 24 55
12	3 40.9	− 19 23.0	296 54.1	80	− 15 30.6	86	0	4 54	5 20	5 42	10 09 53	22 35 51	22 35 51	22 35 51
13	18 40.8	23.5	311 21.2	81		21.9	10 S	39	5 05	27	9 57 56	45 48	45 48	45 48
14	33 40.7	24.1	325 48.4	82		13.2	20	4 20	4 48	5 12	44 60	22 56 45	22 56 45	22 56 45
15	48 40.5	24.7	340 15.7	83	− 15 04.3	89	30	3 57	28	4 54	30 63	23 08 41	23 08 41	23 08 41
16	63 40.4	25.3	354 43.0	83	− 14 55.4	89	35	41	16	44	21 66	16 38	16 38	16 38
17	78 40.3	− 19 25.9	9 10.5	85	− 14 46.4	90	40	3 23	4 01	4 32	9 12 68	23 24 35	23 24 35	23 24 35
18	93 40.1	− 19 26.5	23 38.1	86	− 14 37.3	91	45	2 59	3 43	4 18	9 00 71	23 33 33	23 33 33	23 33 33
19	108 40.0	27.0	38 05.8	87		28.2	50	27	21	4 00	8 47 74	45 28	45 28	45 28
20	123 39.8	27.6	52 33.5	87		19.0	52	2 10	3 10	3 52	40 77	50 27	50 27	50 27
21	138 39.7	28.2	67 01.4	89		09.7	54	1 50	2 57	43	33 78	23 55 26	23 55 26	23 55 26
22	153 39.6	28.8	81 29.3	89	− 14 00.3	94	56	1 22	42	33	25 81	*** **	*** **	*** **
23	168 39.4	29.4	95 57.4	91	− 13 50.9	94	58	0 36	24	21	16 83	*** **	*** **	*** **
24	183 39.3	− 19 29.9	110 25.5	91	− 13 41.4	95	60 S	** **	2 02	3 07	8 06 86	*** **	*** **	*** **
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 20 ^h 06 ^m 9		Mag.: −4.0 PMG: 9 ^h 46 ^m		Mag.: +1.2 PMG: 14 ^h 13 ^m		Mag.: −2.8 PMG: 0 ^h 58 ^m		Mag.: +0.6 PMG: 10 ^h 23 ^m					
	hG ♈	Dec	hG ♊	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	57 26.5	213 37.3	− 8 00.5	146 42.1	− 24 33.1	345 26.6	+ 21 34.8	203 48.4	− 11 07.4					
1	72 29.0	228 36.9	01.6	161 42.5	33.1	0 29.4	34.7	218 50.6	07.5					
2	87 31.5	243 36.5	02.7	176 42.9	33.1	15 32.2	34.7	233 52.8	07.6					
3	102 33.9	258 36.0	03.9	191 43.3	33.1	30 35.0	34.7	248 55.0	07.7					
4	117 36.4	273 35.6	05.0	206 43.6	33.1	45 37.8	34.6	263 57.2	07.8					
5	132 38.8	288 35.2	− 8 06.1	221 44.0	− 24 33.1	60 40.6	+ 21 34.6	278 59.4	− 11 07.9					
6	147 41.3	303 34.7	− 8 07.2	236 44.4	− 24 33.1	75 43.4	+ 21 34.6	294 01.5	− 11 08.0					
7	162 43.8	318 34.3	08.3	251 44.8	33.1	90 46.2	34.5	309 03.7	08.1					
8	177 46.2	333 33.9	09.5	266 45.2	33.1	105 49.0	34.5	324 05.9	08.2					
9	192 48.7	348 33.4	10.6	281 45.6	33.1	120 51.8	34.4	339 08.1	08.3					
10	207 51.2	3 33.0	11.7	296 46.0	33.1	135 54.6	34.4	354 10.3	08.4					
11	222 53.6	18 32.5	− 8 12.8	311 46.3	− 24 33.1	150 57.4	+ 21 34.4	9 12.5	− 11 08.5					
12	237 56.1	33 32.1	− 8 13.9	326 46.7	− 24 33.1	166 00.2	+ 21 34.3	24 14.7	− 11 08.6					
13	252 58.6	48 31.7	15.1	341 47.1	33.1	181 03.0	34.3	39 16.8	08.6					
14	268 01.0	63 31.2	16.2	356 47.5	33.1	196 05.8	34.3	54 19.0	08.7					
15	283 03.5	78 30.8	17.3	11 47.9	33.0	211 08.6	34.2	69 21.2	08.8					
16	298 06.0	93 30.4	18.4	26 48.3	33.0	226 11.4	34.2	84 23.4	08.9					
17	313 08.4	108 29.9	− 8 19.5	41 48.7	− 24 33.0	241 14.2	+ 21 34.2	99 25.6	− 11 09.0					
18	328 10.9	123 29.5	− 8 20.7	56 49.0	− 24 33.0	256 17.0	+ 21 34.1	114 27.8	− 11 09.1					
19	343 13.3	138 29.1	21.8	71 49.4	33.0	271 19.8	34.1	129 30.0	09.2					
20	358 15.8	153 28.6	22.9	86 49.8	33.0	286 22.6	34.1	144 32.1	09.3					
21	13 18.3	168 28.2	24.0	101 50.2	33.0	301 25.4	34.0	159 34.3	09.4					
22	28 20.7	183 27.7	25.1	116 50.6	33.0	316 28.2	34.0	174 36.5	09.5					
23	43 23.2	198 27.3	26.2	131 51.0	33.0	331 31.0	33.9	189 38.7	09.6					
24	58 25.7	213 26.9	− 8 27.4	146 51.4	− 24 32.9	346 33.8	+ 21 33.9	204 40.9	− 11 09.7					
Dif	—	−4	−11	+4	0	+28	0	+22	−1					

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MARTES 20 DE NOVIEMBRE DE 2012


UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 45 ^m 7		SD: 15'7 Edad: 6 ^d 1 PHE { 4 ^h : 57'6 12 ^h : 57'3 20 ^h : 57'1 PMG: 18 ^h 03 ^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	h m m	h m m	h m m
0	183 35.8	− 19 43.7	98 07.1		− 9 36.7		60 N	6 27	7 20	8 11	12 45 13	23 35 81		
1	198 35.6	44.2	112 37.3	112	25.9	108	58	22	12	7 58	41 15	38 78		
2	213 35.5	44.8	127 07.6	113	15.1	108	56	17	7 04	47	37 18	41 75		
3	228 35.3	45.4	141 38.0	114	− 9 04.3	108	54	13	6 57	38	34 20	44 73		
4	243 35.2	45.9	156 08.5	115	− 8 53.5	108	52	09	51	29	31 22	46 71		
5	258 35.0	− 19 46.5	170 39.1	116	− 8 42.6	109	50	6 05	6 45	7 21	12 28 24	23 48 69		
6	273 34.9	− 19 47.0	185 09.7	116	− 8 31.6	110	45	5 56	6 32	7 05	12 22 27	23 52 65		
7	288 34.7	47.6	199 40.4	117	20.7	109	40	49	22	6 51	17 31	56 62		
8	303 34.6	48.2	214 11.1	117	− 8 09.7	110	35	42	12	40	13 33	23 59 59		
9	318 34.4	48.7	228 41.9	118	− 7 58.7	110	30	35	6 04	29	09 36	** ** **	** ** *	
10	333 34.3	49.3	243 12.8	119	47.7	110	20	22	5 49	6 12	12 03 39	** ** **	** ** *	
11	348 34.1	− 19 49.8	257 43.8	120	− 7 36.6	111	10 N	5 09	5 34	5 57	11 57 43	** ** **	** ** *	
12	3 34.0	− 19 50.4	272 14.8	120	− 7 25.5	111	0	4 55	5 20	5 42	11 51 47	** ** **	** ** *	
13	18 33.8	50.9	286 45.9	121	14.4	111	10 S	39	5 05	28	46 50	** ** **	** ** *	
14	33 33.7	51.5	301 17.1	122	− 7 03.3	111	20	4 20	4 48	5 12	40 54	** ** **	** ** *	
15	48 33.5	52.1	315 48.3	122	− 6 52.1	112	30	3 55	27	4 54	33 58	** ** **	** ** *	
16	63 33.4	52.6	330 19.6	123	41.0	111	35	40	15	43	29 61	** ** **	** ** *	
17	78 33.2	− 19 53.2	344 50.9	123	− 6 29.8	112	40	3 21	4 00	4 31	11 25 63	** ** **	** ** *	
18	93 33.0	− 19 53.7	359 22.3	124	− 6 18.6	112	45	2 57	3 41	4 16	11 20 66	0 06 29		
19	108 32.9	54.3	13 53.8	125	− 6 07.4	112	50	24	18	3 58	14 70	13 26		
20	123 32.7	54.8	28 25.3	125	− 5 56.1	113	52	2 06	3 06	50	11 72	17 23		
21	138 32.6	55.4	42 56.9	126	44.9	112	54	1 44	2 53	40	08 74	21 21		
22	153 32.4	55.9	57 28.5	126	33.6	113	56	1 14	38	29	05 76	25 19		
23	168 32.3	56.5	72 00.2	127	22.3	113	58	0 17	2 19	17	11 01 78	30 17		
24	183 32.1	− 19 57.0	86 32.0	128	− 5 11.0	113	60 S	** ** *	1 55	3 03	10 56 82	0 35 14		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 19 ^h 59 ^m 1		Mag.: −4.0 PMG: 9 ^h 47 ^m		Mag.: +1.2 PMG: 14 ^h 12 ^m		Mag.: −2.8 PMG: 0 ^h 49 ^m		Mag.: +0.7 PMG: 10 ^h 16 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	59 24.8	213 16.2	− 8 54.1		147 00.5	− 24 32.5	347 41.1	+ 21 33.0	205 33.4	− 11 11.9				
1	74 27.3	228 15.8	55.2		162 00.9	32.5	2 43.9	33.0	220 35.5	12.0				
2	89 29.7	243 15.3	56.3		177 01.3	32.5	17 46.7	33.0	235 37.7	12.1				
3	104 32.2	258 14.9	57.4		192 01.7	32.4	32 49.5	32.9	250 39.9	12.2				
4	119 34.7	273 14.4	58.5		207 02.1	32.4	47 52.3	32.9	265 42.1	12.3				
5	134 37.1	288 14.0	− 8 59.6		222 02.5	− 24 32.4	62 55.1	+ 21 32.9	280 44.3	− 11 12.3				
6	149 39.6	303 13.5	− 9 00.7		237 02.8	− 24 32.4	77 57.9	+ 21 32.8	295 46.5	− 11 12.4				
7	164 42.1	318 13.1	01.8		252 03.2	32.3	93 00.7	32.8	310 48.7	12.5				
8	179 44.5	333 12.6	02.9		267 03.6	32.3	108 03.5	32.7	325 50.9	12.6				
9	194 47.0	348 12.2	04.0		282 04.0	32.3	123 06.3	32.7	340 53.0	12.7				
10	209 49.4	3 11.7	05.1		297 04.4	32.3	138 09.1	32.7	355 55.2	12.8				
11	224 51.9	18 11.3	− 9 06.2		312 04.7	− 24 32.2	153 12.0	+ 21 32.6	10 57.4	− 11 12.9				
12	239 54.4	33 10.8	− 9 07.3		327 05.1	− 24 32.2	168 14.8	+ 21 32.6	25 59.6	− 11 13.0				
13	254 56.8	48 10.4	08.5		342 05.5	32.2	183 17.6	32.6	41 01.8	13.1				
14	269 59.3	63 09.9	09.6		357 05.9	32.1	198 20.4	32.5	56 04.0	13.2				
15	285 01.8	78 09.4	10.7		12 06.3	32.1	213 23.2	32.5	71 06.2	13.3				
16	300 04.2	93 09.0	11.8		27 06.6	32.1	228 26.0	32.5	86 08.4	13.4				
17	315 06.7	108 08.5	− 9 12.9		42 07.0	− 24 32.0	243 28.8	+ 21 32.4	101 10.5	− 11 13.4				
18	330 09.2	123 08.1	− 9 14.0		57 07.4	− 24 32.0	258 31.6	+ 21 32.4	116 12.7	− 11 13.5				
19	345 11.6	138 07.6	15.1		72 07.8	32.0	273 34.4	32.3	131 14.9	13.6				
20	0 14.1	153 07.2	16.2		87 08.2	31.9	288 37.2	32.3	146 17.1	13.7				
21	15 16.6	168 06.7	17.3		102 08.6	31.9	303 40.0	32.3	161 19.3	13.8				
22	30 19.0	183 06.3	18.4		117 08.9	31.9	318 42.8	32.2	176 21.5	13.9				
23	45 21.5	198 05.8	19.5		132 09.3	31.8	333 45.7	32.2	191 23.7	14.0				
24	60 23.9	213 05.4	− 9 20.6		147 09.7	− 24 31.8	348 48.5	+ 21 32.2	206 25.9	− 11 14.1				
Dif	—	−5	−11		+4	0	+28	0	+22	−1				

MIÉRCOL 21 DE NOVIEMBRE DE 2012

UT	SOL		☾ LUNA					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna				
	SD: 16 ^h 2 PMG: 11 ^h 46 ^m 0		SD: 15 ^h Edad: 7 ^d 1		PHE { 4 ^h : 56/8 12 ^h : 56/5 20 ^h : 56/3		PMG: 18 ^h 49 ^m R°: 44 ^m			Civil	Náutico	Hora	R°	Hora	R°			
	hG ☉	Dec	hG ☾	Dif	Dec	Dif												
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	h	m		
0	183	32.1	−19	57.0	86	32.0	−5	11.0	60 N	15 18	16 09	17 02	12 58	12	**	**		
1	198	31.9		57.6	101	03.8	−4	59.7	58	31	18	07	56	15	**	**		
2	213	31.8		58.1	115	35.6		48.4	56	42	26	12	55	17	**	**		
3	228	31.6		58.7	130	07.5		37.1	54	15	52	33	17	54	19	**	**	
4	243	31.5		59.2	144	39.5		25.7	52	16 01	39	21	53	20	**	**		
5	258	31.3	−19	59.8	159	11.5	−4	14.4	50	16 09	16 45	17 25	12 52	22	**	**		
6	273	31.2	−20	00.3	173	43.6	−4	03.0	45	16 26	16 58	17 34	12 49	26	**	**		
7	288	31.0		00.8	188	15.7	−3	51.7	40	39	17 09	42	48	28	**	**		
8	303	30.8		01.4	202	47.8		40.3	35	16 51	18	49	46	31	**	**		
9	318	30.7		01.9	217	20.0		29.0	30	17 01	27	17 56	45	33	0	01		
10	333	30.5		02.5	231	52.3		17.6	20	19	43	18 10	42	38	06	53		
11	348	30.4	−20	03.0	246	24.6	−3	06.2	10 N	17 35	17 57	18 23	12 40	41	0	10		
12	3	30.2	−20	03.6	260	56.9	−2	54.8	0	17 50	18 12	18 37	12 38	45	0	14		
13	18	30.0		04.1	275	29.3		43.5	10 S	18 04	27	18 53	36	48	18	42		
14	33	29.9		04.6	290	01.7		32.1	20	21	18 44	19 13	34	52	21	39		
15	48	29.7		05.2	304	34.2		20.7	30	39	19 06	38	31	56	26	34		
16	63	29.5		05.7	319	06.7	−2	09.3	35	18 50	19	19 53	30	58	28	33		
17	78	29.4	−20	06.3	333	39.2	−1	58.0	40	19 03	19 34	20 13	12 28	61	0	31		
18	93	29.2	−20	06.8	348	11.8	−1	46.6	45	19 17	19 52	20 37	12 26	65	0	35		
19	108	29.1		07.3	2	44.4		35.2	50	36	20 16	21 12	24	68	39	22		
20	123	28.9		07.9	17	17.0		23.9	52	45	28	30	23	70	40	22		
21	138	28.7		08.4	31	49.7		12.5	54	19 54	42	21 54	22	72	42	20		
22	153	28.6		08.9	46	22.4	−1	01.2	56	20 05	20 58	22 26	21	74	44	18		
23	168	28.4		09.5	60	55.2	−0	49.8	58	18	21 18	**	19	77	47	15		
24	183	28.2	−20	10.0	75	28.0	−0	38.5	60 S	20 33	21 43	**	12 18	79	0	49		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 55 ^m 1		Mag.: −4.0 PMG: 9 ^h 48 ^m		Mag.: +1.2 PMG: 14 ^h 11 ^m		Mag.: −2.8 PMG: 0 ^h 45 ^m		Mag.: +0.7 PMG: 10 ^h 13 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	60	23.9	213	05.4	−9	20.6	147	09.7	−24	31.8	348	48.5	+21	32.2	206	25.9	−11	14.1
1	75	26.4	228	04.9		21.7	162	10.1		31.8	3	51.3		32.1	221	28.0		14.2
2	90	28.9	243	04.4		22.8	177	10.5		31.7	18	54.1		32.1	236	30.2		14.3
3	105	31.3	258	04.0		23.9	192	10.8		31.7	33	56.9		32.0	251	32.4		14.4
4	120	33.8	273	03.5		25.0	207	11.2		31.7	48	59.7		32.0	266	34.6		14.4
5	135	36.3	288	03.1	−9	26.1	222	11.6	−24	31.6	64	02.5	+21	32.0	281	36.8	−11	14.5
6	150	38.7	303	02.6	−9	27.2	237	12.0	−24	31.6	79	05.3	+21	31.9	296	39.0	−11	14.6
7	165	41.2	318	02.2		28.3	252	12.3		31.6	94	08.1		31.9	311	41.2		14.7
8	180	43.7	333	01.7		29.4	267	12.7		31.5	109	10.9		31.9	326	43.4		14.8
9	195	46.1	348	01.2		30.5	282	13.1		31.5	124	13.7		31.8	341	45.6		14.9
10	210	48.6	3	00.8		31.6	297	13.5		31.4	139	16.6		31.8	356	47.7		15.0
11	225	51.0	18	00.3	−9	32.7	312	13.9	−24	31.4	154	19.4	+21	31.7	11	49.9	−11	15.1
12	240	53.5	32	59.9	−9	33.8	327	14.2	−24	31.4	169	22.2	+21	31.7	26	52.1	−11	15.2
13	255	56.0	47	59.4		34.9	342	14.6		31.3	184	25.0		31.7	41	54.3		15.3
14	270	58.4	62	58.9		36.0	357	15.0		31.3	199	27.8		31.6	56	56.5		15.4
15	286	00.9	77	58.5		37.1	12	15.4		31.2	214	30.6		31.6	71	58.7		15.5
16	301	03.4	92	58.0		38.2	27	15.8		31.2	229	33.4		31.6	87	00.9		15.5
17	316	05.8	107	57.5	−9	39.3	42	16.1	−24	31.1	244	36.2	+21	31.5	102	03.1	−11	15.6
18	331	08.3	122	57.1	−9	40.4	57	16.5	−24	31.1	259	39.0	+21	31.5	117	05.3	−11	15.7
19	346	10.8	137	56.6		41.5	72	16.9		31.1	274	41.9		31.4	132	07.4		15.8
20	1	13.2	152	56.2		42.6	87	17.3		31.0	289	44.7		31.4	147	09.6		15.9
21	16	15.7	167	55.7		43.7	102	17.7		31.0	304	47.5		31.4	162	11.8		16.0
22	31	18.2	182	55.2		44.8	117	18.0		30.9	319	50.3		31.3	177	14.0		16.1
23	46	20.6	197	54.8		45.8	132	18.4		30.9	334	53.1		31.3	192	16.2		16.2
24	61	23.1	212	54.3	−9	46.9	147	18.8	−24	30.8	349	55.9	+21	31.3	207	18.4	−11	16.3
Dif	—		−5		−11		+4		0		+28		0		+22		−1	

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JUEVES 22 DE NOVIEMBRE DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16:2 PMG: 11 ^h 46 ^m 2		SD: 15:3 Edad: 8 ^d 1 PHE $\begin{cases} 4^h: 56'1 \\ 12^h: 55'8 \\ 20^h: 55'6 \end{cases}$ PMG: 19 ^h 33 ^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	28.2	- 20	10.0	75	28.0	- 0 38.5	60 N	6 31	7 24	8 16	13 10	12	0 56	78			
1	198	28.1		10.5	90	00.8	138 27.2	58	26	15	8 03	11 15		56	75			
2	213	27.9		11.1	104	33.6	138 15.8	56	21	07	7 51	12 17		56	73			
3	228	27.7		11.6	119	06.5	139 - 0 04.5	54	16	7 00	41	13 18		57	70			
4	243	27.6		12.1	133	39.4	139 + 0 06.8	52	12	6 54	32	13 21		57	69			
5	258	27.4	- 20	12.7	148	12.4	140 + 0 18.0	50	6 08	6 48	7 24	13 14	22	0 57	67			
6	273	27.2	- 20	13.2	162	45.3	139 + 0 29.3	45	5 59	6 35	7 07	13 15	26	0 57	64			
7	288	27.1		13.7	177	18.3	140 40.6	40	51	24	6 53	16 29		58	60			
8	303	26.9		14.3	191	51.3	140 + 0 51.8	35	43	14	42	17 32		58	58			
9	318	26.7		14.8	206	24.4	141 + 1 03.1	30	36	6 05	31	18 34		58	56			
10	333	26.6		15.3	220	57.4	140 14.3	20	23	5 50	6 13	20 37		59	51			
11	348	26.4	- 20	15.8	235	30.5	141 + 1 25.5	10 N	5 09	5 35	5 57	13 21	41	0 59	48			
12	3 26.2	- 20	16.4		250	03.6	141 + 1 36.7	0	4 55	5 21	5 43	13 23	44	0 59	45			
13	18 26.0		16.9		264	36.7	141 47.8	10 S	39	5 05	28	24 47		1 00	41			
14	33 25.9		17.4		279	09.9	142 + 1 59.0	20	4 19	4 48	5 12	26 50		00	38			
15	48 25.7		17.9		293	43.0	141 + 2 10.1	30	3 54	26	4 53	27 55		00	34			
16	63 25.5		18.5		308	16.2	142 21.2	35	39	4 13	42	28 57		01	31			
17	78 25.4	- 20	19.0		322	49.4	142 + 2 32.3	40	3 19	3 58	4 29	13 29	60	1 01	29			
18	93 25.2	- 20	19.5		337	22.6	142 + 2 43.4	45	2 54	3 39	4 14	13 31	62	1 01	26			
19	108 25.0		20.0		351	55.9	143 + 2 54.5	50	20	15	3 56	32 67		01	23			
20	123 24.8		20.5		6 29.1	142 + 3 05.5	110 16.5	52	2 02	3 03	47	33 68		02	20			
21	138 24.7		21.1		21 02.4	143 16.5	110 16.5	54	1 38	2 50	37	34 70		02	18			
22	153 24.5		21.6		35 35.7	143 27.5	110 16.5	56	1 05	34	26	35 72		02	17			
23	168 24.3		22.1		50 09.0	143 38.4	109 16.5	58	** **	2 14	3 14	36 74		02	15			
24	183 24.2	- 20	22.6		64 42.3	143 + 3 49.4	110 16.5	60 S	** **	1 49	2 58	13 37	77	1 02	12			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 51 ^m 2		Mag.: -4.0 PMG: 9 ^h 49 ^m		Mag.: +1.2 PMG: 14 ^h 10 ^m		Mag.: -2.8 PMG: 0 ^h 40 ^m		Mag.: +0.7 PMG: 10 ^h 09 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
^h	°	'	°	'	°	'	°	'	°	'								
0	61	23.1	212	54.3	- 9	46.9	147	18.8	- 24	30.8	349	55.9	+ 21	31.3	207	18.4	- 11	16.3
1	76	25.5	227	53.8		48.0	162	19.2		30.8	4	58.7		31.2	222	20.6		16.4
2	91	28.0	242	53.4		49.1	177	19.5		30.7	20	01.5		31.2	237	22.8		16.4
3	106	30.5	257	52.9		50.2	192	19.9		30.7	35	04.4		31.1	252	25.0		16.5
4	121	32.9	272	52.4		51.3	207	20.3		30.6	50	07.2		31.1	267	27.1		16.6
5	136	35.4	287	52.0	- 9	52.4	222	20.7	- 24	30.6	65	10.0	+ 21	31.1	282	29.3	- 11	16.7
6	151	37.9	302	51.5	- 9	53.5	237	21.1	- 24	30.6	80	12.8	+ 21	31.0	297	31.5	- 11	16.8
7	166	40.3	317	51.0		54.6	252	21.4		30.5	95	15.6		31.0	312	33.7		16.9
8	181	42.8	332	50.6		55.7	267	21.8		30.5	110	18.4		31.0	327	35.9		17.0
9	196	45.3	347	50.1		56.8	282	22.2		30.4	125	21.2		30.9	342	38.1		17.1
10	211	47.7	2 49.6			57.9	297	22.6		30.4	140	24.0		30.9	357	40.3		17.2
11	226	50.2	17 49.2	- 9	59.0	312	22.9	- 24	30.3		155	26.9	+ 21	30.8	12 42.5	- 11	17.3	
12	241	52.7	32 48.7	- 10	00.0	327	23.3	- 24	30.2		170	29.7	+ 21	30.8	27 44.7	- 11	17.4	
13	256	55.1	47 48.2		01.1	342	23.7		30.2		185	32.5		30.8	42 46.9		17.4	
14	271	57.6	62 47.7		02.2	357	24.1		30.1		200	35.3		30.7	57 49.0		17.5	
15	287	00.0	77 47.3		03.3	12 24.5	30.1		30.1		215	38.1		30.7	72 51.2		17.6	
16	302	02.5	92 46.8		04.4	27 24.8	30.0		30.0		230	40.9		30.7	87 53.4		17.7	
17	317	05.0	107 46.3	- 10	05.5	42 25.2	- 24	30.0			245	43.7	+ 21	30.6	102 55.6	- 11	17.8	
18	332	07.4	122 45.9	- 10	06.6	57 25.6	- 24	29.9			260	46.6	+ 21	30.6	117 57.8	- 11	17.9	
19	347	09.9	137 45.4		07.7	72 26.0		29.9			275	49.4		30.5	133 00.0		18.0	
20	2 12.4	152	44.9		08.7	87 26.3		29.8			290	52.2		30.5	148 02.2		18.1	
21	17 14.8	167	44.4		09.8	102 26.7		29.8			305	55.0		30.5	163 04.4		18.2	
22	32 17.3	182	44.0		10.9	117 27.1		29.7			320	57.8		30.4	178 06.6		18.3	
23	47 19.8	197	43.5		12.0	132 27.5		29.6			336	00.6		30.4	193 08.8		18.3	
24	62 22.2	212	43.0	- 10	13.1	147 27.8	- 24	29.6			351	03.4	+ 21	30.4	208 10.9	- 11	18.4	
Dif	—	-5	-11		+4	+1			+28	0		+22		-1				

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2 PMG: 11 ^h 46 ^m 5		SD: 15 ^h 1 Edad: 9 ^d 1		PHE { 4 ^h : 55 ^h 4 12 ^h : 55 ^h 3 20 ^h : 55 ^h 1										
	PMG: 20 ^h 17 ^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	183	24.2	− 20	22.6	64	42.3	+ 3 49.4	15 14	16 06	16 59	13 22	14	2 14	76	
1	198	24.0		23.1	79	15.6	+ 4 00.3	28	15	17 05	26	15	11	74	
2	213	23.8		23.7	93	48.9	143 11.2	39	23	10	29	18	09	72	
3	228	23.6		24.2	108	22.2	143 22.0	50	31	15	31	20	07	70	
4	243	23.5		24.7	122	55.6	144 32.9	15 59	37	19	34	21	06	67	
5	258	23.3	− 20	25.2	137	28.9	+ 4 43.7	16 07	16 43	17 23	13 36	23	2 04	66	
6	273	23.1	− 20	25.7	152	02.3	+ 4 54.4	16 24	16 57	17 33	13 41	26	2 01	62	
7	288	22.9		26.2	166	35.6	+ 5 05.2	38	17 08	41	45	29	1 58	59	
8	303	22.8		26.7	181	09.0	144 15.9	16 50	18	49	49	31	56	57	
9	318	22.6		27.3	195	42.4	144 26.6	17 01	27	17 56	52	34	54	54	
10	333	22.4		27.8	210	15.7	143 37.2	19	43	18 10	13 57	38	50	51	
11	348	22.2	− 20	28.3	224	49.1	+ 5 47.9	17 35	17 57	18 23	14 02	41	1 47	47	
12	3	22.0	− 20	28.8	239	22.5	+ 5 58.5	17 50	18 12	18 38	14 07	44	1 44	44	
13	18	21.9		29.3	253	55.9	+ 6 09.0	18 05	28	18 54	11	47	41	41	
14	33	21.7		29.8	268	29.3	144 19.5	22	18 46	19 14	16	51	38	37	
15	48	21.5		30.3	283	02.6	143 30.0	41	19 07	39	22	54	34	34	
16	63	21.3		30.8	297	36.0	144 40.5	18 52	21	19 56	25	57	32	31	
17	78	21.2	− 20	31.3	312	09.4	+ 6 50.9	19 05	19 36	20 15	14 29	59	1 30	28	
18	93	21.0	− 20	31.8	326	42.8	+ 7 01.3	19 20	19 55	20 41	14 33	62	1 27	26	
19	108	20.8		32.3	341	16.2	144 11.6	39	20 20	21 16	39	65	24	22	
20	123	20.6		32.9	355	49.5	143 22.0	48	32	21 36	41	67	22	21	
21	138	20.4		33.4	10	22.9	144 32.2	19 58	20 46	22 00	44	69	20	20	
22	153	20.3		33.9	24	56.3	144 42.5	20 09	21 03	22 36	47	71	19	17	
23	168	20.1		34.4	39	29.6	+ 7 52.7	23	23	** **	50	73	17	15	
24	183	19.9	− 20	34.9	54	03.0	+ 8 02.8	20 38	21 50	** **	14 54	76	1 14	13	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 19 ^h 47 ^m 3		Mag.: −4.0 PMG: 9 ^h 49 ^m		Mag.: +1.2 PMG: 14 ^h 10 ^m		Mag.: −2.8 PMG: 0 ^h 36 ^m		Mag.: +0.7 PMG: 10 ^h 06 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec	hG ♅	Dec	
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	62	22.2	212	43.0	− 10	13.1	147	27.8	+ 21	30.4	208	10.9	− 11	18.4	
1	77	24.7	227	42.5		14.2	162	28.2		30.3	223	13.1		18.5	
2	92	27.1	242	42.1		15.3	177	28.6		30.3	238	15.3		18.6	
3	107	29.6	257	41.6		16.3	192	29.0		30.2	253	17.5		18.7	
4	122	32.1	272	41.1		17.4	207	29.3		30.2	268	19.7		18.8	
5	137	34.5	287	40.6	− 10	18.5	222	29.7	− 24	29.3	283	21.9	− 11	18.9	
6	152	37.0	302	40.2	− 10	19.6	237	30.1	− 24	29.2	298	24.1	− 11	19.0	
7	167	39.5	317	39.7		20.7	252	30.5		29.2	313	26.3		19.1	
8	182	41.9	332	39.2		21.8	267	30.9		29.1	328	28.5		19.2	
9	197	44.4	347	38.7		22.8	282	31.2		29.1	343	30.7		19.2	
10	212	46.9	2	38.3		23.9	297	31.6		29.0	358	32.9		19.3	
11	227	49.3	17	37.8	− 10	25.0	312	32.0	− 24	28.9	13	35.0	− 11	19.4	
12	242	51.8	32	37.3	− 10	26.1	327	32.4	− 24	28.9	28	37.2	− 11	19.5	
13	257	54.3	47	36.8		27.2	342	32.7		28.8	43	39.4		19.6	
14	272	56.7	62	36.3		28.2	357	33.1		28.7	58	41.6		19.7	
15	287	59.2	77	35.9		29.3	12	33.5		28.7	73	43.8		19.8	
16	303	01.6	92	35.4		30.4	27	33.9		28.6	88	46.0		19.9	
17	318	04.1	107	34.9	− 10	31.5	42	34.2	− 24	28.5	103	48.2	− 11	20.0	
18	333	06.6	122	34.4	− 10	32.6	57	34.6	− 24	28.5	118	50.4	− 11	20.0	
19	348	09.0	137	33.9		33.6	72	35.0		28.4	133	52.6		20.1	
20	3	11.5	152	33.5		34.7	87	35.4		28.3	148	54.8		20.2	
21	18	14.0	167	33.0		35.8	102	35.7		28.3	163	57.0		20.3	
22	33	16.4	182	32.5		36.9	117	36.1		28.2	178	59.1		20.4	
23	48	18.9	197	32.0		38.0	132	36.5		28.1	194	01.3		20.5	
24	63	21.4	212	31.5	− 10	39.0	147	36.9	− 24	28.1	209	03.5	− 11	20.6	
Dif	—		−5	−11			+4	+1			+28	0		+22	−1

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SÁBADO 24 DE NOVIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 11 ^h 46 ^m 8		SD: 15 ^h 0 Edad: 10 ^d 1		PHE { 4 ^h : 54 ^h 9 12 ^h : 54 ^h 8 20 ^h : 54 ^h 7									
			PMG: 21 ^h 01 ^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	m	h m	m
0	183 19.9	− 20 34.9	54 03.0		+ 8 02.8	101	60 N	6 35	7 28	8 21	13 36	15	3 30	75
1	198 19.7	35.4	68 36.3	143	12.9	101	58	29	19	8 07	41 18		25	73
2	213 19.5	35.9	83 09.7	144	23.0	101	56	24	11	7 55	47 20		21	70
3	228 19.3	36.4	97 43.0	143	33.0	100	54	19	7 03	45	51 22		17	68
4	243 19.2	36.9	112 16.3	143	43.0	100	52	15	6 57	36	55 24		13	67
5	258 19.0	− 20 37.4	126 49.7	144	+ 8 53.0	100	50	6 10	6 51	7 27	13 59	25	3 10	65
6	273 18.8	− 20 37.9	141 23.0	143	+ 9 02.9	99	45	6 01	6 37	7 10	14 07	29	3 03	62
7	288 18.6	38.4	155 56.3	143	12.7	98	40	5 53	26	6 56	14 32		2 57	59
8	303 18.4	38.9	170 29.5	142	22.6	99	35	45	16	43	20 34		53	56
9	318 18.2	39.4	185 02.8	143	32.3	97	30	38	6 07	33	26 35		48	54
10	333 18.1	39.9	199 36.1	143	42.1	98	20	24	5 51	6 14	35 39		41	50
11	348 17.9	− 20 40.4	214 09.3	142	+ 9 51.7	96	10 N	5 10	5 36	5 58	14 43	42	2 34	47
12	3 17.7	− 20 40.8	228 42.6	143	+ 10 01.4	97	0	4 55	5 21	5 43	14 51	44	2 28	44
13	18 17.5	41.3	243 15.8	142	11.0	96	10 S	39	5 05	28	14 58	48	22	41
14	33 17.3	41.8	257 49.0	142	20.5	95	20	4 19	4 47	5 11	15 07	50	15	38
15	48 17.1	42.3	272 22.2	142	30.0	95	30	3 54	26	4 52	16 54		08	34
16	63 16.9	42.8	286 55.4	142	39.4	94	35	37	4 12	41	22 55		2 03	33
17	78 16.8	− 20 43.3	301 28.5	141	+ 10 48.8	94	40	3 18	3 57	4 28	15 28	58	1 58	31
18	93 16.6	− 20 43.8	316 01.7	142	+ 10 58.1	93	45	2 52	3 38	4 13	15 35	61	1 53	27
19	108 16.4	44.3	330 34.8	141	+ 11 07.4	93	50	2 17	13	3 54	44 64		46	24
20	123 16.2	44.8	345 07.9	141	16.7	93	52	1 57	3 01	45	48 66		43	23
21	138 16.0	45.3	359 41.0	141	25.8	91	54	1 33	2 47	35	53 67		40	20
22	153 15.8	45.8	14 14.1	141	35.0	92	56	0 56	30	23	15 58	69	36	19
23	168 15.6	46.2	28 47.2	141	44.0	90	58	** **	2 09	3 10	16 03	72	32	16
24	183 15.4	− 20 46.7	43 20.2	140	+ 11 53.1	91	60 S	** **	1 43	2 55	16 10	74	1 27	14
UT	ARIES PMG: 19 ^h 43 ^m 3		VENUS Mag.: −4.0 PMG: 9 ^h 50 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 09 ^m		JÚPITER Mag.: −2.8 PMG: 0 ^h 31 ^m		SATURNO Mag.: +0.7 PMG: 10 ^h 02 ^m					
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec				
	°	'	°	'	°	'	°	'	°	'				
h	°	'	°	'	°	'	°	'	°	'				
0	63 21.4	212 31.5	− 10 39.0	147 36.9	− 24 28.1	352 11.0	+ 21 29.4	209 03.5	− 11 20.6					
1	78 23.8	227 31.0	40.1	162 37.2	28.0	7 13.8	29.4	224 05.7	20.7					
2	93 26.3	242 30.6	41.2	177 37.6	27.9	22 16.7	29.4	239 07.9	20.8					
3	108 28.7	257 30.1	42.3	192 38.0	27.9	37 19.5	29.3	254 10.1	20.9					
4	123 31.2	272 29.6	43.3	207 38.4	27.8	52 22.3	29.3	269 12.3	20.9					
5	138 33.7	287 29.1	− 10 44.4	222 38.7	− 24 27.7	67 25.1	+ 21 29.2	284 14.5	− 11 21.0					
6	153 36.1	302 28.6	− 10 45.5	237 39.1	− 24 27.6	82 27.9	+ 21 29.2	299 16.7	− 11 21.1					
7	168 38.6	317 28.1	46.6	252 39.5	27.6	97 30.7	29.2	314 18.9	21.2					
8	183 41.1	332 27.6	47.6	267 39.9	27.5	112 33.6	29.1	329 21.1	21.3					
9	198 43.5	347 27.1	48.7	282 40.2	27.4	127 36.4	29.1	344 23.3	21.4					
10	213 46.0	2 26.7	49.8	297 40.6	27.4	142 39.2	29.1	359 25.5	21.5					
11	228 48.5	17 26.2	− 10 50.8	312 41.0	− 24 27.3	157 42.0	+ 21 29.0	14 27.6	− 11 21.6					
12	243 50.9	32 25.7	− 10 51.9	327 41.4	− 24 27.2	172 44.8	+ 21 29.0	29 29.8	− 11 21.7					
13	258 53.4	47 25.2	53.0	342 41.7	27.1	187 47.7	28.9	44 32.0	21.7					
14	273 55.9	62 24.7	54.1	357 42.1	27.1	202 50.5	28.9	59 34.2	21.8					
15	288 58.3	77 24.2	55.1	12 42.5	27.0	217 53.3	28.9	74 36.4	21.9					
16	304 00.8	92 23.7	56.2	27 42.8	26.9	232 56.1	28.8	89 38.6	22.0					
17	319 03.2	107 23.2	− 10 57.3	42 43.2	− 24 26.8	247 58.9	+ 21 28.8	104 40.8	− 11 22.1					
18	334 05.7	122 22.7	− 10 58.3	57 43.6	− 24 26.8	263 01.8	+ 21 28.7	119 43.0	− 11 22.2					
19	349 08.2	137 22.3	− 10 59.4	72 44.0	26.7	278 04.6	28.7	134 45.2	22.3					
20	4 10.6	152 21.8	− 11 00.5	87 44.3	26.6	293 07.4	28.7	149 47.4	22.4					
21	19 13.1	167 21.3	01.5	102 44.7	26.5	308 10.2	28.6	164 49.6	22.5					
22	34 15.6	182 20.8	02.6	117 45.1	26.4	323 13.0	28.6	179 51.8	22.5					
23	49 18.0	197 20.3	03.7	132 45.5	26.4	338 15.8	28.5	194 54.0	22.6					
24	64 20.5	212 19.8	− 11 04.7	147 45.8	− 24 26.3	353 18.7	+ 21 28.5	209 56.1	− 11 22.7					
Dif	—	−5	−11	+4	+1	+28	0	+22	−1					

DOMINGO 25 DE NOVIEMBRE DE 2012

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UT	SOL			LUNA					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 11 ^h 47 ^m 1			SD: 14 ^h 9 Edad: 11 ^d 1 PHE { 4 ^h : 54 ^h /5 12 ^h : 54 ^h /4 20 ^h : 54 ^h /3 PMG: 21 ^h 46 ^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	h m
0	183	15.4	− 20 46.7	43	20.2	+ 11 53.1	89	60 N	15 11	16 03	16 57	13 51	20	4 45	74	
1	198	15.3	47.2	57	53.3	+ 12 02.0	89	58	25	13	17 03	13 59	22	38	71	
2	213	15.1	47.7	72	26.3	10.9	89	56	37	21	08	14 07	24	31	69	
3	228	14.9	48.2	86	59.2	139	89	54	47	29	13	13 26		25	67	
4	243	14.7	48.7	101	32.2	140	88	52	15 57	36	18	19 28		20	65	
5	258	14.5	− 20 49.2	116	05.1	139	87	50	16 05	16 42	17 22	14 24	29	4 15	63	
6	273	14.3	− 20 49.6	130	38.1	140	87	45	16 23	16 55	17 32	14 36	32	4 05	60	
7	288	14.1	50.1	145	11.0	139	86	40	37	17 07	40	46 34		3 56	58	
8	303	13.9	50.6	159	43.8	138	86	35	16 50	17	48	14 54	36	49	55	
9	318	13.7	51.1	174	16.7	139	85	30	17 00	26	17 56	15 01	38	42	54	
10	333	13.5	51.6	188	49.5	138	85	20	19	43	18 10	14 40		31	50	
11	348	13.3	− 20 52.0	203	22.3	138	83	10 N	17 35	17 58	18 24	15 25	43	3 21	48	
12	3	13.2	− 20 52.5	217	55.1	138	84	0	17 51	18 13	18 39	15 35	46	3 12	45	
13	18	13.0	53.0	232	27.9	138	82	10 S	18 06	29	18 55	46 48		3 03	42	
14	33	12.8	53.5	247	00.6	137	82	20	23	18 47	19 16	15 57	50	2 53	40	
15	48	12.6	53.9	261	33.3	137	82	30	42	19 09	41	16 10	53	42	37	
16	63	12.4	54.4	276	06.0	137	81	35	18 54	23	19 58	17 56		36	35	
17	78	12.2	− 20 54.9	290	38.7	137	80	40	19 07	19 39	20 18	16 26	57	2 29	32	
18	93	12.0	− 20 55.4	305	11.3	136	79	45	19 23	19 58	20 44	16 36	60	2 20	30	
19	108	11.8	55.8	319	44.0	137	79	50	42	20 23	21 21	48 63		10	27	
20	123	11.6	56.3	334	16.5	135	78	52	19 51	36	21 41	16 54	64	06	25	
21	138	11.4	56.8	348	49.1	136	78	54	20 02	20 51	22 07	17 00	66	2 00	24	
22	153	11.2	57.3	3	21.6	135	77	56	13	21 08	22 47	07 68		1 55	22	
23	168	11.0	57.7	17	54.2	136	77	58	27	29	** **	15 70		48	20	
24	183	10.8	− 20 58.2	32	26.6	134	75	60 S	20 43	21 57	** **	17 24	72	1 41	18	
UT	ARIES PMG: 19 ^h 39 ^m 4		VENUS Mag.: −4.0 PMG: 9 ^h 51 ^m			MARTE Mag.: +1.2 PMG: 14 ^h 09 ^m			JÚPITER Mag.: −2.8 PMG: 0 ^h 27 ^m			SATURNO Mag.: +0.7 PMG: 9 ^h 59 ^m				
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec			
	h	°	'	°	°	'	°	'	°	°	'	°	°	'		
0	64	20.5	212 19.8	− 11 04.7	147 45.8	− 24 26.3	353 18.7	+ 21 28.5	209 56.1	− 11 22.7						
1	79	23.0	227 19.3	05.8	162 46.2	26.2	8 21.5	28.5	224 58.3	22.8						
2	94	25.4	242 18.8	06.9	177 46.6	26.1	23 24.3	28.4	240 00.5	22.9						
3	109	27.9	257 18.3	07.9	192 47.0	26.0	38 27.1	28.4	255 02.7	23.0						
4	124	30.4	272 17.8	09.0	207 47.3	26.0	53 29.9	28.4	270 04.9	23.1						
5	139	32.8	287 17.3	− 11 10.1	222 47.7	− 24 25.9	68 32.8	+ 21 28.3	285 07.1	− 11 23.2						
6	154	35.3	302 16.8	− 11 11.1	237 48.1	− 24 25.8	83 35.6	+ 21 28.3	300 09.3	− 11 23.2						
7	169	37.7	317 16.3	12.2	252 48.5	25.7	98 38.4	28.2	315 11.5	23.3						
8	184	40.2	332 15.8	13.3	267 48.8	25.6	113 41.2	28.2	330 13.7	23.4						
9	199	42.7	347 15.3	14.3	282 49.2	25.5	128 44.0	28.2	345 15.9	23.5						
10	214	45.1	2 14.8	15.4	297 49.6	25.5	143 46.9	28.1	0 18.1	23.6						
11	229	47.6	17 14.3	− 11 16.5	312 49.9	− 24 25.4	158 49.7	+ 21 28.1	15 20.3	− 11 23.7						
12	244	50.1	32 13.8	− 11 17.5	327 50.3	− 24 25.3	173 52.5	+ 21 28.0	30 22.5	− 11 23.8						
13	259	52.5	47 13.3	18.6	342 50.7	25.2	188 55.3	28.0	45 24.7	23.9						
14	274	55.0	62 12.8	19.6	357 51.1	25.1	203 58.1	28.0	60 26.9	24.0						
15	289	57.5	77 12.3	20.7	12 51.4	25.0	219 01.0	27.9	75 29.1	24.0						
16	304	59.9	92 11.8	21.8	27 51.8	24.9	234 03.8	27.9	90 31.2	24.1						
17	320	02.4	107 11.3	− 11 22.8	42 52.2	− 24 24.8	249 06.6	+ 21 27.8	105 33.4	− 11 24.2						
18	335	04.8	122 10.8	− 11 23.9	57 52.6	− 24 24.8	264 09.4	+ 21 27.8	120 35.6	− 11 24.3						
19	350	07.3	137 10.3	24.9	72 52.9	24.7	279 12.3	27.8	135 37.8	24.4						
20	5	09.8	152 09.8	26.0	87 53.3	24.6	294 15.1	27.7	150 40.0	24.5						
21	20	12.2	167 09.3	27.1	102 53.7	24.5	309 17.9	27.7	165 42.2	24.6						
22	35	14.7	182 08.8	28.1	117 54.0	24.4	324 20.7	27.6	180 44.4	24.7						
23	50	17.2	197 08.3	29.2	132 54.4	24.3	339 23.5	27.6	195 46.6	24.7						
24	65	19.6	212 07.8	− 11 30.2	147 54.8	− 24 24.2	354 26.4	+ 21 27.6	210 48.8	− 11 24.8						
Dif	—	−5	−11		+4	+1	+28	0	+22	−1						

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LUNES 26 DE NOVIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2 PMG: 11 ^h 47 ^m 4		SD: 14 ^h 8 Edad: 12 ^d 1															
			PHE { 4 ^h : 54/3 12 ^h : 54/2 20 ^h : 54/1															
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°				
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m			
0	183	10.8	− 20	58.2	32	26.6	+ 15	11.8	60 N	6 38	7 32	8 25	14 11	25	5 59	70		
1	198	10.6		58.7	46	59.1		135	58	32	23	8 11	21	28	49	67		
2	213	10.4		59.1	61	31.5		134	56	27	14	7 59	31	29	40	65		
3	228	10.2	− 20	59.6	76	03.9		134	54	22	07	48	39	31	32	64		
4	243	10.0	− 21	00.1	90	36.3		134	52	17	7 00	39	47	32	25	62		
5	258	09.8	− 21	00.5	105	08.7		134	50	6 13	6 53	7 30	14 53	34	5 18	62		
6	273	09.6	− 21	01.0	119	41.0		133	45	6 03	6 40	7 12	15 08	36	5 05	58		
7	288	09.4		01.5	134	13.3		133	40	5 55	28	6 58	20 38		4 54	56		
8	303	09.2		01.9	148	45.6		133	35	47	18	45	30 39		44	55		
9	318	09.0		02.4	163	17.8		132	30	39	6 09	34	39 41		36	53		
10	333	08.8		02.9	177	50.0		132	20	25	5 52	6 16	15 54	43	21	51		
11	348	08.6	− 21	03.3	192	22.2		132	10 N	5 11	5 37	5 59	16 08	45	4 09	48		
12	3 08.4	− 21	03.8		206	54.4		132	0	4 56	5 22	5 44	16 21	47	3 57	46		
13	18	08.2		04.3	221	26.5		131	10 S	39	5 06	28	34	48	45	45		
14	33	08.0		04.7	235	58.6		131	20	4 19	4 47	5 11	16 47	51	33	42		
15	48	07.8		05.2	250	30.7		131	30	3 53	25	4 52	17 03	53	19	39		
16	63	07.6		05.6	265	02.7		130	35	36	4 12	40	13	54	11	37		
17	78	07.4	− 21	06.1	279	34.7		130	40	3 16	3 56	4 27	17 23	56	3 01	36		
18	93	07.2	− 21	06.6	294	06.7		130	45	2 50	3 36	4 12	17 36	57	2 50	34		
19	108	07.0		07.0	308	38.7		130	50	2 13	3 11	3 52	51	59	37	31		
20	123	06.8		07.5	323	10.6		129	52	1 53	2 58	43	17 58	61	31	30		
21	138	06.6		07.9	337	42.6		130	54	1 27	44	33	18 06	62	24	28		
22	153	06.4		08.4	352	14.4		128	56	0 47	26	21	15	63	17	26		
23	168	06.2		08.8	6 46.3			129	58	** **	2 05	3 07	25	65	2 08	25		
24	183	06.0	− 21	09.3	21 18.1			128	60 S	** **	1 37	2 51	18 36	68	1 59	22		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 19 ^h 35 ^m 5		Mag.: −4.0 PMG: 9 ^h 52 ^m		Mag.: +1.2 PMG: 14 ^h 08 ^m		Mag.: −2.8 PMG: 0 ^h 22 ^m		Mag.: +0.7 PMG: 9 ^h 55 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	65	19.6	212	07.8	− 11	30.2	147	54.8	− 24	24.2	354	26.4	+ 21	27.6	210	48.8	− 11	24.8
1	80	22.1	227	07.3		31.3	162	55.2		24.1	9 29.2		27.5	225	51.0		24.9	
2	95	24.6	242	06.8		32.3	177	55.5		24.0	24 32.0		27.5	240	53.2		25.0	
3	110	27.0	257	06.3		33.4	192	55.9		23.9	39 34.8		27.4	255	55.4		25.1	
4	125	29.5	272	05.8		34.5	207	56.3		23.8	54 37.6		27.4	270	57.6		25.2	
5	140	32.0	287	05.3	− 11	35.5	222	56.7	− 24	23.7	69 40.5	+ 21	27.4	285	59.8	− 11	25.3	
6	155	34.4	302	04.8	− 11	36.6	237	57.0	− 24	23.7	84 43.3	+ 21	27.3	301	02.0	− 11	25.4	
7	170	36.9	317	04.3		37.6	252	57.4		23.6	99 46.1		27.3	316	04.2		25.4	
8	185	39.3	332	03.8		38.7	267	57.8		23.5	114 48.9		27.3	331	06.4		25.5	
9	200	41.8	347	03.3		39.7	282	58.1		23.4	129 51.8		27.2	346	08.5		25.6	
10	215	44.3	2 02.8			40.8	297	58.5		23.3	144 54.6		27.2	1 10.7			25.7	
11	230	46.7	17 02.3	− 11	41.8		312	58.9	− 24	23.2	159 57.4	+ 21	27.1	16 12.9	− 11	25.8		
12	245	49.2	32 01.7	− 11	42.9		327	59.3	− 24	23.1	175 00.2	+ 21	27.1	31 15.1	− 11	25.9		
13	260	51.7	47 01.2		43.9		342	59.6		23.0	190 03.0		27.1	46 17.3		26.0		
14	275	54.1	62 00.7		45.0		358	00.0		22.9	205 05.9		27.0	61 19.5		26.1		
15	290	56.6	77 00.2		46.0		13 00.4			22.8	220 08.7		27.0	76 21.7		26.1		
16	305	59.1	91 59.7		47.1		28 00.7			22.7	235 11.5		26.9	91 23.9		26.2		
17	321	01.5	106 59.2	− 11	48.1		43 01.1	− 24	22.6		250 14.3	+ 21	26.9	106 26.1	− 11	26.3		
18	336	04.0	121 58.7	− 11	49.2		58 01.5	− 24	22.5		265 17.2	+ 21	26.9	121 28.3	− 11	26.4		
19	351	06.5	136 58.2		50.2		73 01.9		22.4		280 20.0		26.8	136 30.5		26.5		
20	6 08.9	151	57.7		51.3		88 02.2		22.3		295 22.8		26.8	151 32.7		26.6		
21	21 11.4	166	57.1		52.3		103 02.6		22.2		310 25.6		26.7	166 34.9		26.7		
22	36 13.8	181	56.6		53.4		118 03.0		22.1		325 28.4		26.7	181 37.1		26.8		
23	51 16.3	196	56.1		54.4		133 03.3		22.0		340 31.3		26.7	196 39.3		26.8		
24	66 18.8	211	55.6	− 11	55.5		148 03.7	− 24	21.9		355 34.1	+ 21	26.6	211 41.5	− 11	26.9		
Dif	—	—	−5	−11	−11	−11	+4	+1	+1	+28	0	0	+22	−1	−1	−1	−1	−1

MARTES 27 DE NOVIEMBRE DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2		SD: 14 ^h 7		PHE										
	PMG: 11 ^h 47 ^m 8		Edad: 13 ^d 1			$\left\{ \begin{array}{l} 4^{\text{h}}: 54^{\text{h}}1 \\ 12^{\text{h}}: 54^{\text{h}}0 \\ 20^{\text{h}}: 54^{\text{h}}0 \end{array} \right.$									
			PMG: 23 ^h 19 ^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		
0	183	06.0	− 21	09.3	21	18.1	+ 17 51.2	57	60 N	15 08	16 01	16 55	14 36	33	7 09 64
1	198	05.8		09.7	35	49.9	+ 17 56.9	57	58	22	11	17 01	14 49	35	6 56 63
2	213	05.6		10.2	50	21.7	+ 18 02.5	56	56	35	19	07	15 00	37	45 61
3	228	05.4		10.6	64	53.4	08.0	55	54	45	27	12	10 38	36	60
4	243	05.2		11.1	79	25.2	13.4	54	52	15 55	34	17	19 38	27	59
5	258	05.0	− 21	11.5	93	56.9	+ 18 18.8	54	50	16 03	16 40	17 21	15 27	39	6 20 57
6	273	04.8	− 21	12.0	108	28.5	+ 18 24.1	53	45	16 22	16 54	17 31	15 44	41	6 03 56
7	288	04.6		12.4	123	00.2	29.2	51	40	36	17 06	40	15 58	42	5 50 54
8	303	04.4		12.9	137	31.8	34.3	51	35	16 49	17	48	16 09	44	39 53
9	318	04.1		13.3	152	03.4	39.4	51	30	17 00	26	17 55	20 44		29 52
10	333	03.9		13.8	166	34.9	44.3	49	20	19	43	18 10	37 46		5 12 50
11	348	03.7	− 21	14.2	181	06.5	+ 18 49.1	48	10 N	17 36	17 58	18 24	16 53	47	4 57 49
12	3	03.5	− 21	14.7	195	38.0	+ 18 53.9	48	0	17 51	18 14	18 39	17 08	47	4 43 48
13	18	03.3		15.1	210	09.5	+ 18 58.6	47	10 S	18 07	30	18 57	22 49		30 45
14	33	03.1		15.6	224	40.9	+ 19 03.2	46	20	24	18 48	19 17	38 50		4 15 44
15	48	02.9		16.0	239	12.4	07.7	45	30	44	19 11	19 43	17 56	51	3 58 42
16	63	02.7		16.5	253	43.8	12.1	44	35	18 56	25	20 00	18 07	52	48 41
17	78	02.5	− 21	16.9	268	15.2	+ 19 16.4	43	40	19 09	19 41	20 21	18 19	53	3 37 40
18	93	02.3	− 21	17.3	282	46.5	+ 19 20.7	43	45	19 25	20 01	20 47	18 33	54	3 24 38
19	108	02.1		17.8	297	17.9	24.8	41	50	45	27	21 25	50 56		08 36
20	123	01.8		18.2	311	49.2	28.9	41	52	19 54	40	21 46	18 59	56	3 01 35
21	138	01.6		18.7	326	20.5	32.9	40	54	20 05	20 55	22 14	19 08	57	2 52 34
22	153	01.4		19.1	340	51.8	36.7	38	56	17	21 13	23 00	18 58		43 33
23	168	01.2		19.5	355	23.0	40.5	38	58	31	21 35	** **	30 59		33 31
24	183	01.0	− 21	20.0	9	54.3	+ 19 44.2	37	60 S	20 48	22 05	** **	19 44	61	2 21 28
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 19 ^h 31 ^m 5		Mag.: −4.0 PMG: 9 ^h 53 ^m		Mag.: +1.2 PMG: 14 ^h 07 ^m		Mag.: −2.8 PMG: 0 ^h 18 ^m		Mag.: +0.7 PMG: 9 ^h 52 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
^h	°	'	°	'	°	'	°	'	°	'					
0	66	18.8	211	55.6	− 11 55.5	148 03.7	− 24 21.9	355 34.1	+ 21 26.6	211 41.5	− 11 26.9				
1	81	21.2	226	55.1	56.5	163 04.1	21.8	10 36.9	26.6	226 43.7	27.0				
2	96	23.7	241	54.6	57.6	178 04.5	21.7	25 39.7	26.5	241 45.9	27.1				
3	111	26.2	256	54.1	58.6	193 04.8	21.6	40 42.6	26.5	256 48.1	27.2				
4	126	28.6	271	53.5	− 11 59.6	208 05.2	21.5	55 45.4	26.5	271 50.3	27.3				
5	141	31.1	286	53.0	− 12 00.7	223 05.6	− 24 21.4	70 48.2	+ 21 26.4	286 52.5	− 11 27.4				
6	156	33.6	301	52.5	− 12 01.7	238 05.9	− 24 21.2	85 51.0	+ 21 26.4	301 54.7	− 11 27.5				
7	171	36.0	316	52.0	02.8	253 06.3	21.1	100 53.9	26.3	316 56.8	27.5				
8	186	38.5	331	51.5	03.8	268 06.7	21.0	115 56.7	26.3	331 59.0	27.6				
9	201	41.0	346	51.0	04.9	283 07.1	20.9	130 59.5	26.3	347 01.2	27.7				
10	216	43.4	1 50.4	05.9	05.9	298 07.4	20.8	146 02.3	26.2	2 03.4	27.8				
11	231	45.9	16 49.9	− 12 06.9	313 07.8	− 24 20.7	161 05.2	+ 21 26.2	17 05.6	− 11 27.9					
12	246	48.3	31 49.4	− 12 08.0	328 08.2	− 24 20.6	176 08.0	+ 21 26.1	32 07.8	− 11 28.0					
13	261	50.8	46 48.9	09.0	343 08.5	20.5	191 10.8	26.1	47 10.0	28.1					
14	276	53.3	61 48.4	10.1	358 08.9	20.4	206 13.6	26.1	62 12.2	28.2					
15	291	55.7	76 47.8	11.1	13 09.3	20.3	221 16.4	26.0	77 14.4	28.2					
16	306	58.2	91 47.3	12.1	28 09.7	20.2	236 19.3	26.0	92 16.6	28.3					
17	322	00.7	106 46.8	− 12 13.2	43 10.0	− 24 20.1	251 22.1	+ 21 25.9	107 18.8	− 11 28.4					
18	337	03.1	121 46.3	− 12 14.2	58 10.4	− 24 19.9	266 24.9	+ 21 25.9	122 21.0	− 11 28.5					
19	352	05.6	136 45.8	15.3	73 10.8	19.8	281 27.7	25.9	137 23.2	28.6					
20	7	08.1	151 45.2	16.3	88 11.1	19.7	296 30.6	25.8	152 25.4	28.7					
21	22	10.5	166 44.7	17.3	103 11.5	19.6	311 33.4	25.8	167 27.6	28.8					
22	37	13.0	181 44.2	18.4	118 11.9	19.5	326 36.2	25.7	182 29.8	28.8					
23	52	15.4	196 43.7	19.4	133 12.2	19.4	341 39.0	25.7	197 32.0	28.9					
24	67	17.9	211 43.1	− 12 20.4	148 12.6	− 24 19.3	356 41.9	+ 21 25.7	212 34.2	− 11 29.0					
Dif	—	—	−5	−10	+4	+1	+28	0	+22	−1					

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MIÉRCOL 28 DE NOVIEMBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 11 ^h 48 ^m 1		SD: 14 ^h 7 Edad: 14 ^d 1		PHE { 4 ^h : 54 ^h 0 12 ^h : 54 ^h 0 20 ^h : 54 ^h 0									
			PMG: **h **m R°: ***m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	'	°	'	°	h	m	h	m	m	h	m
0	183 01.0	− 21 20.0	9 54.3		+ 19 44.2		60 N	6 42	7 36	8 29	15 09 44	8 13 56		
1	198 00.8	20.4	24 25.5	122	47.8	36	58	35	26	15	24 44	7 59 55		
2	213 00.6	20.8	38 56.7	122	51.4	36	56	30	17	8 02	37 44	46 55		
3	228 00.4	21.3	53 27.8	121	54.8	34	54	25	09	7 51	48 45	36 53		
4	243 00.2	21.7	67 59.0	122	+ 19 58.1	33	52	20	7 02	42	15 57 46	26 53		
5	257 59.9	− 21 22.1	82 30.1	121	+ 20 01.4	33	50	6 15	6 56	7 33	16 06 46	7 17 53		
6	272 59.7	− 21 22.6	97 01.2	121	+ 20 04.6	32	45	6 05	6 42	7 15	16 25 46	6 59 52		
7	287 59.5	23.0	111 32.3	121	07.6	30	40	5 56	30	7 00	40 46	44 52		
8	302 59.3	23.4	126 03.4	121	10.6	30	35	48	20	6 47	16 53 47	32 51		
9	317 59.1	23.9	140 34.5	121	13.5	29	30	41	6 10	36	17 04 47	21 50		
10	332 58.9	24.3	155 05.5	120	16.3	28	20	26	5 53	17	23 48	6 02 50		
11	347 58.7	− 21 24.7	169 36.5	120	+ 20 18.9	26	10 N	5 12	5 38	6 00	17 40 48	5 46 49		
12	2 58.4	− 21 25.2	184 07.5	120	+ 20 21.5	26	0	4 56	5 22	5 44	17 55 49	5 31 48		
13	17 58.2	25.6	198 38.5	120	24.0	25	10 S	39	5 06	29	18 11 49	5 15 48		
14	32 58.0	26.0	213 09.5	120	26.5	25	20	4 19	4 47	5 11	28 49	4 59 47		
15	47 57.8	26.4	227 40.4	119	28.8	23	30	3 52	25	4 52	47 49	40 46		
16	62 57.6	26.9	242 11.4	120	31.0	22	35	36	4 11	40	18 59 49	29 46		
17	77 57.4	− 21 27.3	256 42.3	119	+ 20 33.1	21	40	3 15	3 55	4 26	19 12 49	4 17 44		
18	92 57.1	− 21 27.7	271 13.2	119	+ 20 35.2	21	45	2 48	3 35	4 10	19 27 50	4 02 44		
19	107 56.9	28.1	285 44.1	119	37.1	19	50	2 10	3 09	3 51	46 50	3 44 43		
20	122 56.7	28.6	300 15.0	119	38.9	18	52	1 49	2 56	41	19 55 50	36 42		
21	137 56.5	29.0	314 45.9	119	40.7	18	54	1 22	41	30	20 05 50	26 42		
22	152 56.3	29.4	329 16.8	119	42.3	16	56	0 36	23	18	16 51	16 40		
23	167 56.1	29.8	343 47.6	118	43.9	16	58	** **	2 01	3 04	29 51	3 04 39		
24	182 55.8	− 21 30.3	358 18.5	119	+ 20 45.3	14	60 S	** **	1 31	2 48	20 45 50	2 49 39		
UT	ARIES PMG 19 ^h 27 ^m 6		VENUS Mag.: −4.0 PMG: 9 ^h 53 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 07 ^m		JÚPITER Mag.: −2.8 PMG: 0 ^h 13 ^m		SATURNO Mag.: +0.7 PMG: 9 ^h 48 ^m					
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec				
	°	'	°	'	°	'	°	'	°	'				
h	°	'	°	'	°	'	°	'	°	'				
0	67 17.9	211 43.1	− 12 20.4	148 12.6	− 24 19.3	356 41.9	+ 21 25.7	212 34.2	− 11 29.0					
1	82 20.4	226 42.6	21.5	163 13.0	19.1	11 44.7	25.6	227 36.4	29.1					
2	97 22.8	241 42.1	22.5	178 13.4	19.0	26 47.5	25.6	242 38.6	29.2					
3	112 25.3	256 41.6	23.5	193 13.7	18.9	41 50.3	25.5	257 40.8	29.3					
4	127 27.8	271 41.0	24.6	208 14.1	18.8	56 53.2	25.5	272 43.0	29.4					
5	142 30.2	286 40.5	− 12 25.6	223 14.5	− 24 18.7	71 56.0	+ 21 25.5	287 45.2	− 11 29.4					
6	157 32.7	301 40.0	− 12 26.6	238 14.8	− 24 18.6	86 58.8	+ 21 25.4	302 47.4	− 11 29.5					
7	172 35.2	316 39.5	27.7	253 15.2	18.4	102 01.6	25.4	317 49.6	29.6					
8	187 37.6	331 38.9	28.7	268 15.6	18.3	117 04.5	25.3	332 51.8	29.7					
9	202 40.1	346 38.4	29.7	283 16.0	18.2	132 07.3	25.3	347 54.0	29.8					
10	217 42.6	1 37.9	30.8	298 16.3	18.1	147 10.1	25.3	2 56.2	29.9					
11	232 45.0	16 37.3	− 12 31.8	313 16.7	− 24 18.0	162 12.9	+ 21 25.2	17 58.4	− 11 30.0					
12	247 47.5	31 36.8	− 12 32.8	328 17.1	− 24 17.9	177 15.8	+ 21 25.2	33 00.6	− 11 30.0					
13	262 49.9	46 36.3	33.8	343 17.4	17.7	192 18.6	25.1	48 02.8	30.1					
14	277 52.4	61 35.8	34.9	358 17.8	17.6	207 21.4	25.1	63 05.0	30.2					
15	292 54.9	76 35.2	35.9	13 18.2	17.5	222 24.2	25.1	78 07.2	30.3					
16	307 57.3	91 34.7	36.9	28 18.5	17.4	237 27.1	25.0	93 09.3	30.4					
17	322 59.8	106 34.2	− 12 38.0	43 18.9	− 24 17.2	252 29.9	+ 21 25.0	108 11.5	− 11 30.5					
18	338 02.3	121 33.6	− 12 39.0	58 19.3	− 24 17.1	267 32.7	+ 21 24.9	123 13.7	− 11 30.6					
19	353 04.7	136 33.1	40.0	73 19.7	17.0	282 35.5	24.9	138 15.9	30.7					
20	8 07.2	151 32.6	41.0	88 20.0	16.9	297 38.4	24.9	153 18.1	30.7					
21	23 09.7	166 32.0	42.1	103 20.4	16.7	312 41.2	24.8	168 20.3	30.8					
22	38 12.1	181 31.5	43.1	118 20.8	16.6	327 44.0	24.8	183 22.5	30.9					
23	53 14.6	196 31.0	44.1	133 21.1	16.5	342 46.8	24.7	198 24.7	31.0					
24	68 17.1	211 30.4	− 12 45.1	148 21.5	− 24 16.4	357 49.7	+ 21 24.7	213 26.9	− 11 31.1					
Dif	—	−5	−10	+4	+1	+28	0	+22	−1					

JUEVES 29 DE NOVIEMBRE DE 2012

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UT	SOL			☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 11 ^h 48 ^m 5			SD: 14 ^h 7 Edad: 15 ^d 1 PHE { 4 ^h : 54 ⁰ 12 ^h : 54 ⁰ 20 ^h : 54 ⁰ PMG: 0 ^h 07 ^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
0	182	55.8	− 21 30.3	358	18.5	+ 20 45.3	14	60 N	15 05	15 59	16 53	15 53	54	9 09	46
1	197	55.6	30.7	12	49.3	46.7	118	58	20	16 09	17 00	16 08	54	8 54	46
2	212	55.4	31.1	27	20.1	48.0	13	56	32	18	05	21	53	41	46
3	227	55.2	31.5	41	50.9	49.1	11	54	44	26	11	33	52	29	47
4	242	55.0	31.9	56	21.7	50.2	11	52	15 53	33	15	43	52	19	47
5	257	54.7	− 21 32.3	70	52.5	+ 20 51.2	10	50	16 02	16 39	17 20	16 52	52	8 10	47
6	272	54.5	− 21 32.8	85	23.3	+ 20 52.1	9	45	16 21	16 54	17 30	17 11	51	7 51	47
7	287	54.3	33.2	99	54.1	52.8	7	40	36	17 06	39	26	51	36	47
8	302	54.1	33.6	114	24.9	53.5	7	35	16 49	16	47	40	50	23	47
9	317	53.8	34.0	128	55.7	54.1	6	30	17 00	26	17 55	17 51	50	7 11	48
10	332	53.6	34.4	143	26.4	54.6	5	20	19	43	18 10	18 11	49	6 52	48
11	347	53.4	− 21 34.8	157	57.2	+ 20 55.0	4	10 N	17 36	17 59	18 25	18 28	49	6 35	48
12	2	53.2	− 21 35.2	172	28.0	+ 20 55.3	3	0	17 52	18 14	18 40	18 44	48	6 19	48
13	17	53.0	35.7	186	58.7	55.5	2	10 S	18 08	31	18 58	19 00	47	6 03	48
14	32	52.7	36.1	201	29.5	55.6	1	20	26	18 50	19 18	17	47	5 46	48
15	47	52.5	36.5	216	00.2	55.6	0	30	46	19 13	19 45	36	47	26	49
16	62	52.3	36.9	230	31.0	55.5	1	35	18 58	27	20 02	19 48	46	15	48
17	77	52.1	− 21 37.3	245	01.7	+ 20 55.3	2	40	19 11	19 43	20 23	20 01	45	5 01	49
18	92	51.8	− 21 37.7	259	32.4	+ 20 55.0	3	45	19 28	20 04	20 51	20 17	44	4 46	49
19	107	51.6	38.1	274	03.2	54.6	4	50	48	30	21 29	36	43	27	49
20	122	51.4	38.5	288	33.9	54.1	5	52	19 57	43	21 51	45	43	18	49
21	137	51.2	38.9	303	04.7	53.5	6	54	20 08	20 59	22 21	20 55	43	4 08	49
22	152	50.9	39.3	317	35.4	52.9	6	56	21	21 17	23 15	21 07	41	3 56	49
23	167	50.7	39.7	332	06.2	52.1	8	58	35	21 40	** **	20	41	43	49
24	182	50.5	− 21 40.1	346	36.9	+ 20 51.2	9	60 S	20 52	22 12	** **	21 35	40	3 28	49
UT	ARIES		VENUS			MARTE			JÚPITER			SATURNO			
	PMG 19 ^h 23 ^m 7		Mag.: −4.0 PMG: 9 ^h 54 ^m			Mag.: +1.2 PMG: 14 ^h 06 ^m			Mag.: −2.8 PMG: 0 ^h 09 ^m			Mag.: +0.7 PMG: 9 ^h 45 ^m			
	hG ♈		hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	°	'	°	'	°	°	'	°	°	'	°	'
0	68	17.1	211 30.4	− 12 45.1	148 21.5	− 24 16.4	357 49.7	+ 21 24.7	213 26.9	− 11 31.1					
1	83	19.5	226 29.9	46.1	163 21.9	16.2	12 52.5	24.7	228 29.1	31.2					
2	98	22.0	241 29.3	47.2	178 22.2	16.1	27 55.3	24.6	243 31.3	31.3					
3	113	24.4	256 28.8	48.2	193 22.6	16.0	42 58.1	24.6	258 33.5	31.3					
4	128	26.9	271 28.3	49.2	208 23.0	15.9	58 01.0	24.5	273 35.7	31.4					
5	143	29.4	286 27.7	− 12 50.2	223 23.4	− 24 15.7	73 03.8	+ 21 24.5	288 37.9	− 11 31.5					
6	158	31.8	301 27.2	− 12 51.3	238 23.7	− 24 15.6	88 06.6	+ 21 24.5	303 40.1	− 11 31.6					
7	173	34.3	316 26.7	52.3	253 24.1	15.5	103 09.5	24.4	318 42.3	31.7					
8	188	36.8	331 26.1	53.3	268 24.5	15.4	118 12.3	24.4	333 44.5	31.8					
9	203	39.2	346 25.6	54.3	283 24.8	15.2	133 15.1	24.3	348 46.7	31.8					
10	218	41.7	1 25.0	55.3	298 25.2	15.1	148 17.9	24.3	3 48.9	31.9					
11	233	44.2	16 24.5	− 12 56.3	313 25.6	− 24 15.0	163 20.8	+ 21 24.3	18 51.1	− 11 32.0					
12	248	46.6	31 24.0	− 12 57.4	328 25.9	− 24 14.8	178 23.6	+ 21 24.2	33 53.3	− 11 32.1					
13	263	49.1	46 23.4	58.4	343 26.3	14.7	193 26.4	24.2	48 55.5	32.2					
14	278	51.6	61 22.9	− 12 59.4	358 26.7	14.6	208 29.2	24.1	63 57.7	32.3					
15	293	54.0	76 22.3	− 13 00.4	13 27.0	14.4	223 32.1	24.1	78 59.9	32.4					
16	308	56.5	91 21.8	01.4	28 27.4	14.3	238 34.9	24.1	94 02.1	32.4					
17	323	58.9	106 21.2	− 13 02.4	43 27.8	− 24 14.2	253 37.7	+ 21 24.0	109 04.3	− 11 32.5					
18	339	01.4	121 20.7	− 13 03.5	58 28.2	− 24 14.0	268 40.5	+ 21 24.0	124 06.5	− 11 32.6					
19	354	03.9	136 20.2	04.5	73 28.5	13.9	283 43.4	23.9	139 08.7	32.7					
20	9	06.3	151 19.6	05.5	88 28.9	13.8	298 46.2	23.9	154 10.9	32.8					
21	24	08.8	166 19.1	06.5	103 29.3	13.6	313 49.0	23.8	169 13.1	32.9					
22	39	11.3	181 18.5	07.5	118 29.6	13.5	328 51.8	23.8	184 15.3	33.0					
23	54	13.7	196 18.0	08.5	133 30.0	13.4	343 54.7	23.8	199 17.5	33.0					
24	69	16.2	211 17.4	− 13 09.5	148 30.4	− 24 13.2	358 57.5	+ 21 23.7	214 19.7	− 11 33.1					
Dif	—	−5 −10		+4 +1		+28 0		+22 −1							

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VIERNES 30 DE NOVIEMBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2 PMG: 11 ^h 48 ^m 8		SD: 14 ^h 7 Edad: 16 ^d 1 PHE { 4 ^h : 54 ^h 0 12 ^h : 54 ^h 1 20 ^h : 54 ^h 1 PMG: 0 ^h 55 ^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	^h ^m	^h ^m	^h ^m	
0	182	50.5	- 21	40.1	346	36.9	+ 20	51.2	6 45	7 40	8 34	16 47	64	9 55	35	
1	197	50.3		40.5	1	07.7		50.2	38	29	19	17 02	62	40	36	
2	212	50.0		40.9	15	38.4		49.2	33	20	8 06	14 61		27	38	
3	227	49.8		41.3	30	09.2		48.0	27	12	7 55	25 60		16	39	
4	242	49.6		41.7	44	40.0		46.7	22	7 05	45	35 59		9 06	40	
5	257	49.4	- 21	42.1	59	10.7	+ 20	45.4	6 18	6 58	7 36	17 44	57	8 57	41	
6	272	49.1	- 21	42.5	73	41.5	+ 20	43.9	6 07	6 44	7 17	18 02	56	8 38	42	
7	287	48.9		42.9	88	12.3		42.4	5 58	32	7 02	17 55		23	43	
8	302	48.7		43.3	102	43.1		40.7	50	21	6 49	30 53		8 10	44	
9	317	48.4		43.7	117	13.9		39.0	42	6 12	38	18 41	52	7 59	45	
10	332	48.2		44.1	131	44.7		37.1	27	5 54	18	19 00	51	40	46	
11	347	48.0	- 21	44.5	146	15.5	+ 20	35.2	5 13	5 39	6 01	19 17	49	7 23	47	
12	2 47.8	- 21	44.9		160	46.3	+ 20	33.1	4 57	5 23	5 45	19 32	48	7 07	48	
13	17 47.5		45.3		175	17.1		31.0	40	5 06	29	19 47	47	6 51	49	
14	32 47.3		45.7		189	48.0		28.8	4 19	4 47	5 12	20 04	45	34	50	
15	47 47.1		46.1		204	18.8		26.4	3 52	24	4 51	23 43		15	51	
16	62 46.8		46.5		218	49.7		24.0	35	4 10	39	34 42		6 03	52	
17	77 46.6	- 21	46.9		233	20.6	+ 20	21.5	3 14	3 54	4 26	20 46	41	5 50	53	
18	92 46.4	- 21	47.3		247	51.5	+ 20	18.9	2 46	3 33	4 09	21 01	40	5 35	53	
19	107 46.1		47.6		262	22.3		16.2	2 08	3 07	3 49	19 38		16	55	
20	122 45.9		48.0		276	53.3		13.4	1 46	2 54	39	28 37		5 07	55	
21	137 45.7		48.4		291	24.2		10.5	1 16	38	29	38 35		4 57	56	
22	152 45.4		48.8		305	55.1		07.5	0 22	2 20	16	21 48	35	45	57	
23	167 45.2		49.2		320	26.1		04.4	** **	1 56	3 02	22 01	32	32	58	
24	182 45.0	- 21	49.6		334	57.0	+ 20	01.3	** **	1 25	2 44	22 15	31	4 17	59	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 19 ^h 19 ^m 7		Mag.: -4.0 PMG: 9 ^h 55 ^m		Mag.: +1.2 PMG: 14 ^h 06 ^m		Mag.: -2.8 PMG: 0 ^h 04 ^m		Mag.: +0.7 PMG: 9 ^h 41 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
^h	°	'	°	'	°	'	°	'	°	'	°	'				
0	69	16.2	211	17.4	- 13	09.5	148	30.4	- 24	13.2	358	57.5	+ 21	23.7	214	19.7
1	84	18.7	226	16.9		10.5	163	30.7		13.1	14 00.3		23.7		229	21.9
2	99	21.1	241	16.3		11.5	178	31.1		12.9	29 03.2		23.6		244	24.1
3	114	23.6	256	15.8		12.6	193	31.5		12.8	44 06.0		23.6		259	26.3
4	129	26.0	271	15.2		13.6	208	31.9		12.7	59 08.8		23.6		274	28.5
5	144	28.5	286	14.7	- 13	14.6	223	32.2	- 24	12.5	74 11.6	+ 21	23.5		289	30.7
6	159	31.0	301	14.1	- 13	15.6	238	32.6	- 24	12.4	89 14.5	+ 21	23.5		304	32.9
7	174	33.4	316	13.6		16.6	253	33.0		12.2	104 17.3		23.4		319	35.1
8	189	35.9	331	13.0		17.6	268	33.3		12.1	119 20.1		23.4		334	37.3
9	204	38.4	346	12.5		18.6	283	33.7		12.0	134 22.9		23.4		349	39.5
10	219	40.8	1 11.9			19.6	298	34.1		11.8	149 25.8		23.3		4 41.7	34.0
11	234	43.3	16 11.4	- 13	20.6		313	34.4	- 24	11.7	164 28.6	+ 21	23.3		19 43.9	- 11 34.1
12	249	45.8	31 10.8	- 13	21.6		328	34.8	- 24	11.5	179 31.4	+ 21	23.2		34 46.1	- 11 34.1
13	264	48.2	46 10.3		22.6		343	35.2		11.4	194 34.2		23.2		49 48.3	34.2
14	279	50.7	61 09.7		23.6		358	35.5		11.2	209 37.1		23.2		64 50.5	34.3
15	294	53.2	76 09.2		24.6		13 35.9		11.1		224 39.9		23.1		79 52.7	34.4
16	309	55.6	91 08.6		25.6		28 36.3		11.0		239 42.7		23.1		94 54.9	34.5
17	324	58.1	106 08.1	- 13	26.6		43 36.7	- 24	10.8		254 45.6	+ 21	23.0		109 57.1	- 11 34.6
18	340	00.5	121 07.5	- 13	27.6		58 37.0	- 24	10.7		269 48.4	+ 21	23.0		124 59.3	- 11 34.6
19	355	03.0	136 07.0		28.6		73 37.4		10.5		284 51.2		23.0		140 01.5	34.7
20	10 05.5		151 06.4		29.6		88 37.8		10.4		299 54.0		22.9		155 03.7	34.8
21	25 07.9		166 05.8		30.6		103 38.1		10.2		314 56.9		22.9		170 05.9	34.9
22	40 10.4		181 05.3		31.6		118 38.5		10.1		329 59.7		22.8		185 08.1	35.0
23	55 12.9		196 04.7		32.6		133 38.9		09.9		345 02.5		22.8		200 10.3	35.1
24	70 15.3		211 04.2	- 13	33.6		148 39.2	- 24	09.8		0 05.3	+ 21	22.8		215 12.5	- 11 35.2
Dif	—		-6		-10		+4		+1		+28		0		+22	

SÁBADO 1 DE DICIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna			
	SD: 16 ^h 2 PMG: 11 ^h 49 ^m 2		SD: 14 ^h 8 Edad: 17 ^d 1 PHE { 4 ^h : 54 ^m 2 12 ^h : 54 ^m 3 20 ^h : 54 ^m 4 PMG: 1 ^h 44 ^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	m	h m	m	
0	182 45.0	− 21 49.6	334 57.0		+ 20 01.3		60 N	15 02	15 57	16 52	17 51 70		10 30 26			
1	197 44.8		349 28.0	120	+ 19 58.0	33	58	18	16 07	16 58	18 04 68		16 29			
2	212 44.5		3 59.0	120		54.6	34	56	31	16	17 04	15 66	10 05 30			
3	227 44.3		18 30.0	120		51.2	34	54	42	24	09	25 64	9 55 32			
4	242 44.0		33 01.0	120		47.6	36	52	15 52	32	14	34 62	46 33			
5	257 43.8	− 21 51.5	47 32.0	120	+ 19 44.0		36	50	16 01	16 38	17 19	18 41 62	9 38 34			
6	272 43.6	− 21 51.9	62 03.1	121	+ 19 40.2		38	45	16 20	16 53	17 30	18 58 59	9 20 37			
7	287 43.3		76 34.2	121		36.4	38	40	35	17 05	39	19 12 57	9 06 39			
8	302 43.1		91 05.2	120		32.5	39	35	16 48	16	47	23 55	8 54 41			
9	317 42.9		105 36.4	122		28.5	40	30	17 00	26	17 55	33 54	44 41			
10	332 42.6		120 07.5	121		24.4	41	20	19	43	18 10	19 51 51	26 44			
11	347 42.4	− 21 53.8	134 38.6	121	+ 19 20.2		42	10 N	17 37	17 59	18 25	20 06 49	8 10 46			
12	2 42.2	− 21 54.2	149 09.8	122	+ 19 15.9		43	0	17 53	18 15	18 41	20 20 47	7 55 47			
13	17 41.9		54.5	121		11.6	43	10 S	18 09	32	18 59	34 45	40 49			
14	32 41.7		54.9	122		07.1	45	20	27	18 51	19 20	20 49 43	24 51			
15	47 41.5		55.3	122	+ 19 02.6		45	30	47	19 14	19 47	21 06 40	7 06 53			
16	62 41.2		55.7	123	+ 18 57.9		47	35	18 59	29	20 04	16 39	6 55 55			
17	77 41.0	− 21 56.0	221 45.8	122	+ 18 53.2		47	40	19 13	19 45	20 26	21 27 37	6 43 56			
18	92 40.7	− 21 56.4	236 17.1	123	+ 18 48.4		48	45	19 30	20 06	20 54	21 41 34	6 28 58			
19	107 40.5		56.8	123		43.5	49	50	19 51	33	21 33	21 57 32	11 59			
20	122 40.3		57.2	123		38.5	50	52	20 00	20 47	21 56	22 05 30	6 02 61			
21	137 40.0		57.5	123		33.4	51	54	12	21 03	22 27	13 29	5 53 62			
22	152 39.8		57.9	124		28.3	51	56	24	22	23 40	23 27	42 64			
23	167 39.6		58.3	123		23.0	53	58	39	21 46	** **	33 26	30 65			
24	182 39.3	− 21 58.6	323 25.1	124	+ 18 17.7		53	60 S	20 57	22 19	** **	22 46 23	5 16 67			
UT	ARIES PMG 19 ^h 15 ^m 8		VENUS Mag.: −4.0 PMG: 9 ^h 56 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 05 ^m		JÚPITER Mag.: −2.8 PMG: 23 ^h 55 ^m		SATURNO Mag.: +0.7 PMG: 9 ^h 38 ^m							
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'				
0	70 15.3		211 04.2	− 13 33.6	148 39.2	− 24 09.8		0 05.3	+ 21 22.8		215 12.5	− 11 35.2				
1	85 17.8		226 03.6	34.6	163 39.6	09.6		15 08.2	22.7		230 14.7	35.2				
2	100 20.3		241 03.1	35.6	178 40.0	09.5		30 11.0	22.7		245 16.9	35.3				
3	115 22.7		256 02.5	36.6	193 40.3	09.3		45 13.8	22.6		260 19.1	35.4				
4	130 25.2		271 01.9	37.6	208 40.7	09.2		60 16.7	22.6		275 21.3	35.5				
5	145 27.7		286 01.4	− 13 38.6	223 41.1	− 24 09.0		75 19.5	+ 21 22.5		290 23.5	− 11 35.6				
6	160 30.1		301 00.8	− 13 39.6	238 41.4	− 24 08.9		90 22.3	+ 21 22.5		305 25.7	− 11 35.7				
7	175 32.6		316 00.3	40.6	253 41.8	08.7		105 25.1	22.5		320 27.9	35.7				
8	190 35.0		330 59.7	41.6	268 42.2	08.6		120 28.0	22.4		335 30.2	35.8				
9	205 37.5		345 59.1	42.6	283 42.6	08.4		135 30.8	22.4		350 32.4	35.9				
10	220 40.0		0 58.6	43.6	298 42.9	08.3		150 33.6	22.3		5 34.6	36.0				
11	235 42.4		15 58.0	− 13 44.6	313 43.3	− 24 08.1		165 36.4	+ 21 22.3		20 36.8	− 11 36.1				
12	250 44.9		30 57.4	− 13 45.6	328 43.7	− 24 08.0		180 39.3	+ 21 22.3		35 39.0	− 11 36.2				
13	265 47.4		45 56.9	46.6	343 44.0	07.8		195 42.1	22.2		50 41.2	36.2				
14	280 49.8		60 56.3	47.5	358 44.4	07.7		210 44.9	22.2		65 43.4	36.3				
15	295 52.3		75 55.8	48.5	13 44.8	07.5		225 47.8	22.1		80 45.6	36.4				
16	310 54.8		90 55.2	49.5	28 45.1	07.3		240 50.6	22.1		95 47.8	36.5				
17	325 57.2		105 54.6	− 13 50.5	43 45.5	− 24 07.2		255 53.4	+ 21 22.1		110 50.0	− 11 36.6				
18	340 59.7		120 54.1	− 13 51.5	58 45.9	− 24 07.0		270 56.2	+ 21 22.0		125 52.2	− 11 36.7				
19	356 02.2		135 53.5	52.5	73 46.2	06.9		285 59.1	22.0		140 54.4	36.7				
20	11 04.6		150 52.9	53.5	88 46.6	06.7		301 01.9	21.9		155 56.6	36.8				
21	26 07.1		165 52.4	54.5	103 47.0	06.6		316 04.7	21.9		170 58.8	36.9				
22	41 09.5		180 51.8	55.4	118 47.4	06.4		331 07.5	21.9		186 01.0	37.0				
23	56 12.0		195 51.2	56.4	133 47.7	06.2		346 10.4	21.8		201 03.2	37.1				
24	71 14.5		210 50.7	− 13 57.4	148 48.1	− 24 06.1		1 13.2	+ 21 21.8		216 05.4	− 11 37.2				
Dif	—		−6	−10	+4	+2		+28	0		+22	−1				

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DOMINGO 2 DE DICIEMBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 11 ^h 49 ^m 6		SD: 14 ^h 8 Edad: 18 ^d 1 PHE { 4 ^h : 54 ^s 5 12 ^h : 54 ^s 6 20 ^h : 54 ^s 7 PMG: 2 ^h 31 ^m R°: 47 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
^h 0	182 39.3	— 21 58.6	323 25.1		+ 18 17.7	55	60 N	6 48	7 43	8 38	19 01	75	10 56	21
1	197 39.1		337 56.5	124	12.2	55	58	41	33	22	12 72	45	23	23
2	212 38.8		352 28.0	125	06.7	55	56	35	23	8 09	21 70	35	25	25
3	227 38.6	— 21 59.7	6 59.4	124	+ 18 01.2	55	54	30	15	7 58	29 68	27	27	27
4	242 38.4	— 22 00.1	21 30.9	125	+ 17 55.5	57	52	25	08	47	36 66	19	29	29
5	257 38.1	— 22 00.5	36 02.4	125	+ 17 49.7	58	50	6 20	7 01	7 38	19 43	64	10 12	30
6	272 37.9	— 22 00.8	50 33.9	125	+ 17 43.9	58	45	6 09	6 46	7 19	19 57	61	9 57	33
7	287 37.6	01.2	65 05.4	125	38.0	59	40	6 00	34	7 04	20 09	58	45	35
8	302 37.4	01.5	79 37.0	126	31.9	61	35	5 52	23	6 51	18 57		35	37
9	317 37.1	01.9	94 08.6	126	25.9	60	30	44	6 13	39	27 55		25	39
10	332 36.9	02.3	108 40.2	126	19.7	62	20	28	5 56	19	42 51		9 10	41
11	347 36.7	— 22 02.6	123 11.8	126	+ 17 13.4	63	10 N	5 13	5 40	6 02	20 55	48	8 56	44
12	2 36.4	— 22 03.0	137 43.5	127	+ 17 07.1	63	0	4 58	5 24	5 46	21 07	46	8 42	47
13	17 36.2	03.4	152 15.1	126	+ 17 00.7	64	10 S	40	5 07	29	19 43		29	49
14	32 35.9	03.7	166 46.8	127	+ 16 54.2	65	20	4 19	4 47	5 12	32 40		8 15	52
15	47 35.7	04.1	181 18.5	127	47.6	66	30	3 51	24	4 51	46 38		7 59	54
16	62 35.4	04.4	195 50.2	127	41.0	66	35	34	4 10	39	21 55	35	50	55
17	77 35.2	— 22 04.8	210 22.0	128	+ 16 34.2	68	40	3 13	3 53	4 25	22 04	34	7 39	58
18	92 35.0	— 22 05.1	224 53.8	128	+ 16 27.4	68	45	2 45	3 32	4 09	22 15	32	7 26	60
19	107 34.7	05.5	239 25.6	128	20.5	69	50	2 05	3 05	3 48	29 28		10	63
20	122 34.5	05.8	253 57.4	128	13.6	69	52	1 42	2 52	38	35 27		7 03	65
21	137 34.2	06.2	268 29.2	128	+ 16 06.5	71	54	1 11	36	27	42 25		6 55	66
22	152 34.0	06.5	283 01.1	129	+ 15 59.4	71	56	** ** *	2 17	3 14	50 23		46	68
23	167 33.7	06.9	297 32.9	128	52.2	72	58	** ** *	1 53	2 59	22 59	21	35	71
24	182 33.5	— 22 07.2	312 04.8	129	+ 15 44.9	73	60 S	** ** *	1 19	2 42	23 09	18	6 23	73
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 19 ^h 11 ^m 9		Mag.: -4.0 PMG: 9 ^h 57 ^m		Mag.: +1.2 PMG: 14 ^h 04 ^m		Mag.: -2.8 PMG: 23 ^h 51 ^m		Mag.: +0.7 PMG: 9 ^h 34 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
^h 0	71 14.5	210 50.7	— 13 57.4		148 48.1	— 24 06.1	1 13.2	+ 21 21.8	216 05.4	— 11 37.2				
1	86 16.9	225 50.1	58.4		163 48.5	05.9	16 16.0	21.7	231 07.6	37.2				
2	101 19.4	240 49.5	— 13 59.4		178 48.8	05.8	31 18.9	21.7	246 09.8	37.3				
3	116 21.9	255 48.9	— 14 00.4		193 49.2	05.6	46 21.7	21.6	261 12.0	37.4				
4	131 24.3	270 48.4	01.4		208 49.6	05.4	61 24.5	21.6	276 14.2	37.5				
5	146 26.8	285 47.8	— 14 02.3		223 49.9	— 24 05.3	76 27.3	+ 21 21.6	291 16.4	— 11 37.6				
6	161 29.3	300 47.2	— 14 03.3		238 50.3	— 24 05.1	91 30.2	+ 21 21.5	306 18.6	— 11 37.7				
7	176 31.7	315 46.7	04.3		253 50.7	04.9	106 33.0	21.5	321 20.8	37.7				
8	191 34.2	330 46.1	05.3		268 51.0	04.8	121 35.8	21.4	336 23.0	37.8				
9	206 36.7	345 45.5	06.3		283 51.4	04.6	136 38.6	21.4	351 25.2	37.9				
10	221 39.1	0 44.9	07.2		298 51.8	04.5	151 41.5	21.4	6 27.4	38.0				
11	236 41.6	15 44.4	— 14 08.2		313 52.1	— 24 04.3	166 44.3	+ 21 21.3	21 29.6	— 11 38.1				
12	251 44.0	30 43.8	— 14 09.2		328 52.5	— 24 04.1	181 47.1	+ 21 21.3	36 31.8	— 11 38.2				
13	266 46.5	45 43.2	10.2		343 52.9	04.0	196 50.0	21.2	51 34.0	38.2				
14	281 49.0	60 42.6	11.1		358 53.3	03.8	211 52.8	21.2	66 36.2	38.3				
15	296 51.4	75 42.1	12.1		373 53.6	03.6	226 55.6	21.2	81 38.4	38.4				
16	311 53.9	90 41.5	13.1		388 54.0	03.5	241 58.4	21.1	96 40.7	38.5				
17	326 56.4	105 40.9	— 14 14.1		403 54.4	— 24 03.3	257 01.3	+ 21 21.1	111 42.9	— 11 38.6				
18	341 58.8	120 40.3	— 14 15.0		418 54.7	— 24 03.1	272 04.1	+ 21 21.0	126 45.1	— 11 38.7				
19	357 01.3	135 39.7	16.0		433 55.1	02.9	287 06.9	21.0	141 47.3	38.7				
20	12 03.8	150 39.2	17.0		448 55.5	02.8	302 09.8	20.9	156 49.5	38.8				
21	27 06.2	165 38.6	18.0		463 55.8	02.6	317 12.6	20.9	171 51.7	38.9				
22	42 08.7	180 38.0	18.9		478 56.2	02.4	332 15.4	20.9	186 53.9	39.0				
23	57 11.1	195 37.4	19.9		493 56.6	02.3	347 18.2	20.8	201 56.1	39.1				
24	72 13.6	210 36.8	— 14 20.9		508 56.9	— 24 02.1	2 21.1	+ 21 20.8	216 58.3	— 11 39.1				
Dif	—	—6	—10		+4	+2	+28	0	+22	—1				

LUNES 3 DE DICIEMBRE DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2 PMG: 11 ^h 50 ^m 0		SD: 14 ^h 9 Edad: 19 ^d 1		PHE { 4 ^h : 54 ^h /8 12 ^h : 55 ^h /0 20 ^h : 55 ^h /2										
	PMG: 3 ^h 18 ^m R°: 46 ^m								Civil	Náutico	Hora	R°	Hora	R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif									
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	m
0	182	33.5	− 22 07.2		312	04.8	+ 15 44.9	73	60 N	15 00	15 55	16 50	20 16 77	11 17 16	
1	197	33.2		07.6	326	36.7		129 37.6	58	16	16 06	16 57	24 74	08 19	
2	212	33.0		07.9	341	08.7		130 30.2	56	29	15	17 03	31 72	11 00 22	
3	227	32.7		08.3	355	40.6		129 22.7	54	41	23	09	37 70	10 54 23	
4	242	32.5		08.6	10	12.6		130 15.1	52	15 51	31	14	42 68	48 24	
5	257	32.3	− 22 09.0		24	44.6		130 + 15 07.5	50	16 00	16 38	17 18	20 47 67	10 42 26	
6	272	32.0	− 22 09.3		39	16.6		130 + 14 59.8	45	16 19	16 52	17 29	20 58 63	10 30 30	
7	287	31.8		09.7	53	48.6		130 52.0	40	35	17 05	39	21 07 60	20 33	
8	302	31.5		10.0	68	20.7		131 44.2	35	16 48	16	47	15 57	12 34	
9	317	31.3		10.4	82	52.8		131 36.2	30	17 00	26	17 55	22 55	10 04 37	
10	332	31.0		10.7	97	24.9		131 28.2	20	20	17 44	18 11	33 52	9 51 40	
11	347	30.8	− 22 11.1		111	57.0		131 + 14 20.2	10 N	17 37	18 00	18 26	21 43 49	9 40 43	
12	2	30.5	− 22 11.4		126	29.1		131 + 14 12.0	0	17 54	18 16	18 42	21 53 45	9 29 46	
13	17	30.3		11.7	141	01.2		131 + 14 03.8	10 S	18 10	33	19 00	22 02 43	18 49	
14	32	30.0		12.1	155	33.4		132 + 13 55.6	20	28	18 52	21	12 40	9 07 51	
15	47	29.8		12.4	170	05.6		132 47.2	30	18 49	19 16	19 49	24 36	8 53 55	
16	62	29.5		12.8	184	37.8		132 38.8	35	19 01	30	20 06	30 34	45 57	
17	77	29.3	− 22 13.1		199	10.0		132 + 13 30.4	40	19 15	19 48	20 28	22 38 31	8 37 59	
18	92	29.0	− 22 13.4		213	42.2		132 + 13 21.8	45	19 32	20 09	20 57	22 47 28	8 26 62	
19	107	28.8		13.8	228	14.4		132 13.2	50	19 53	36	21 37	22 57 25	13 66	
20	122	28.5		14.1	242	46.7		133 + 13 04.5	52	20 03	20 50	22 01	23 02 23	08 67	
21	137	28.3		14.4	257	18.9		132 + 12 55.8	54	15	21 06	22 34	07 22	8 01 69	
22	152	28.0		14.8	271	51.2		133 47.0	56	28	26	** **	13 20	7 54 71	
23	167	27.8		15.1	286	23.5		133 38.2	58	20 43	21 51	** **	20 17	46 73	
24	182	27.5	− 22 15.4		300	55.8		133 + 12 29.2	60 S	21 01	22 27	** **	23 27 15	7 36 76	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG 19 ^h 07 ^m 9		Mag.: −4.0 PMG: 9 ^h 58 ^m		Mag.: +1.2 PMG: 14 ^h 04 ^m		Mag.: −2.8 PMG: 23 ^h 46 ^m		Mag.: +0.7 PMG: 9 ^h 31 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	72	13.6	210 36.8	− 14 20.9	148 56.9	− 24 02.1	2 21.1	+ 21 20.8	216 58.3	− 11 39.1					
1	87	16.1	225 36.3	21.8	163 57.3	01.9	17 23.9	20.7	232 00.5	39.2					
2	102	18.5	240 35.7	22.8	178 57.7	01.8	32 26.7	20.7	247 02.7	39.3					
3	117	21.0	255 35.1	23.8	193 58.1	01.6	47 29.5	20.7	262 04.9	39.4					
4	132	23.5	270 34.5	24.8	208 58.4	01.4	62 32.4	20.6	277 07.1	39.5					
5	147	25.9	285 33.9	− 14 25.7	223 58.8	− 24 01.2	77 35.2	+ 21 20.6	292 09.3	− 11 39.6					
6	162	28.4	300 33.3	− 14 26.7	238 59.2	− 24 01.1	92 38.0	+ 21 20.5	307 11.5	− 11 39.6					
7	177	30.9	315 32.8	27.7	253 59.5	00.9	107 40.9	20.5	322 13.7	39.7					
8	192	33.3	330 32.2	28.6	268 59.9	00.7	122 43.7	20.5	337 15.9	39.8					
9	207	35.8	345 31.6	29.6	284 00.3	00.5	137 46.5	20.4	352 18.1	39.9					
10	222	38.3	0 31.0	30.6	299 00.6	00.4	152 49.3	20.4	7 20.3	40.0					
11	237	40.7	15 30.4	− 14 31.5	314 01.0	− 24 00.2	167 52.2	+ 21 20.3	22 22.5	− 11 40.1					
12	252	43.2	30 29.8	− 14 32.5	329 01.4	− 24 00.0	182 55.0	+ 21 20.3	37 24.7	− 11 40.1					
13	267	45.6	45 29.2	33.4	344 01.7	− 23 59.8	197 57.8	20.2	52 27.0	40.2					
14	282	48.1	60 28.7	34.4	359 02.1	59.6	213 00.6	20.2	67 29.2	40.3					
15	297	50.6	75 28.1	35.4	14 02.5	59.5	228 03.5	20.2	82 31.4	40.4					
16	312	53.0	90 27.5	36.3	29 02.8	59.3	243 06.3	20.1	97 33.6	40.5					
17	327	55.5	105 26.9	− 14 37.3	44 03.2	− 23 59.1	258 09.1	+ 21 20.1	112 35.8	− 11 40.5					
18	342	58.0	120 26.3	− 14 38.2	59 03.6	− 23 58.9	273 12.0	+ 21 20.0	127 38.0	− 11 40.6					
19	358	00.4	135 25.7	39.2	74 04.0	58.8	288 14.8	20.0	142 40.2	40.7					
20	13	02.9	150 25.1	40.2	89 04.3	58.6	303 17.6	20.0	157 42.4	40.8					
21	28	05.4	165 24.5	41.1	104 04.7	58.4	318 20.4	19.9	172 44.6	40.9					
22	43	07.8	180 23.9	42.1	119 05.1	58.2	333 23.3	19.9	187 46.8	41.0					
23	58	10.3	195 23.3	43.0	134 05.4	58.0	348 26.1	19.8	202 49.0	41.0					
24	73	12.8	210 22.8	− 14 44.0	149 05.8	− 23 57.8	3 28.9	+ 21 19.8	217 51.2	− 11 41.1					
Dif	—	−6	−10	+4	+2	+28	0	+22	−1						

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MARTES 4 DE DICIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16 ^h 2 PMG: 11 ^h 50 ^m 4		SD: 15 ^h 1 Edad: 20 ^d 1		PHE { 4 ^h : 55 ^m 3 12 ^h : 55 ^m 5 20 ^h : 55 ^m 7										
	PMG: 4 ^h 04 ^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	182	27.5	− 22	15.4	300	55.8	+ 12 29.2	90	6 51	7 46	8 41	21 33	79	11 33	14
1	197	27.3		15.8	315	28.1		133	44	36	26	38	76	27	17
2	212	27.0		16.1	330	00.5		134	38	26	12	43	74	22	18
3	227	26.7		16.4	344	32.8	+ 12 02.1	91	32	18	8 00	47	72	17	21
4	242	26.5		16.8	359	05.2	+ 11 52.9	92	27	10	7 50	50	70	12	23
5	257	26.2	− 22	17.1	13	37.6	+ 11 43.7	92	6 22	7 03	7 41	21 54	68	11 08	25
6	272	26.0	− 22	17.4	28	09.9	+ 11 34.4	93	6 11	6 48	7 22	22 01	65	11 00	27
7	287	25.7		17.8	42	42.3		134	6 02	36	7 06	07	62	10 53	30
8	302	25.5		18.1	57	14.7		134	5 53	25	6 52	12	59	46	33
9	317	25.2		18.4	71	47.1	+ 11 06.2	95	45	6 15	41	17	56	41	35
10	332	25.0		18.7	86	19.5	+ 10 56.7	95	30	5 57	21	25	52	31	39
11	347	24.7	− 22	19.1	100	52.0	+ 10 47.1	96	5 14	5 41	6 03	22 32	49	10 23	42
12	2	24.5	− 22	19.4	115	24.4	+ 10 37.5	96	4 58	5 24	5 47	22 38	46	10 15	45
13	17	24.2		19.7	129	56.8		134	40	5 07	30	45	42	10 07	48
14	32	23.9		20.0	144	29.3		135	4 19	4 48	5 12	22 52	39	9 58	52
15	47	23.7		20.3	159	01.7	+ 10 08.2	98	3 51	24	4 51	23 00	34	48	56
16	62	23.4		20.7	173	34.2	+ 9 58.4	98	34	4 10	39	04	33	42	58
17	77	23.2	− 22	21.0	188	06.6	+ 9 48.5	99	3 12	3 53	4 25	23 09	30	9 36	60
18	92	22.9	− 22	21.3	202	39.1	+ 9 38.5	100	2 44	3 31	4 08	23 15	27	9 28	64
19	107	22.7		21.6	217	11.6		135	2 03	3 04	3 47	22 24		19	67
20	122	22.4		21.9	231	44.0		134	1 39	2 50	37	25	22	15	69
21	137	22.1		22.3	246	16.5	+ 9 08.3	102	1 06	34	25	29	20	10	71
22	152	21.9		22.6	260	49.0	+ 8 58.2	101	** ** *	2 14	3 12	33	18	9 05	73
23	167	21.6		22.9	275	21.4		134	** ** *	1 49	2 57	37	16	8 59	75
24	182	21.4	− 22	23.2	289	53.9	+ 8 37.7	102	** ** *	1 13	2 39	23 42	13	8 52	78
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 19 ^h 04 ^m 0		Mag.: −4.0 PMG: 9 ^h 59 ^m		Mag.: +1.2 PMG: 14 ^h 03 ^m		Mag.: −2.8 PMG: 23 ^h 42 ^m		Mag.: +0.7 PMG: 9 ^h 27 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	73	12.8	210	22.8	− 14 44.0	149 05.8	− 23 57.8	3 28.9	+ 21 19.8	217 51.2	− 11 41.1				
1	88	15.2	225	22.2	44.9	164 06.2	57.7	18 31.7	19.7	232 53.4	41.2				
2	103	17.7	240	21.6	45.9	179 06.5	57.5	33 34.6	19.7	247 55.6	41.3				
3	118	20.1	255	21.0	46.9	194 06.9	57.3	48 37.4	19.7	262 57.8	41.4				
4	133	22.6	270	20.4	47.8	209 07.3	57.1	63 40.2	19.6	278 00.0	41.4				
5	148	25.1	285	19.8	− 14 48.8	224 07.6	− 23 56.9	78 43.1	+ 21 19.6	293 02.3	− 11 41.5				
6	163	27.5	300	19.2	− 14 49.7	239 08.0	− 23 56.7	93 45.9	+ 21 19.5	308 04.5	− 11 41.6				
7	178	30.0	315	18.6	50.7	254 08.4	56.6	108 48.7	19.5	323 06.7	41.7				
8	193	32.5	330	18.0	51.6	269 08.8	56.4	123 51.5	19.5	338 08.9	41.8				
9	208	34.9	345	17.4	52.6	284 09.1	56.2	138 54.4	19.4	353 11.1	41.8				
10	223	37.4	0	16.8	53.5	299 09.5	56.0	153 57.2	19.4	8 13.3	41.9				
11	238	39.9	15	16.2	− 14 54.5	314 09.9	− 23 55.8	169 00.0	+ 21 19.3	23 15.5	− 11 42.0				
12	253	42.3	30	15.6	− 14 55.4	329 10.2	− 23 55.6	184 02.8	+ 21 19.3	38 17.7	− 11 42.1				
13	268	44.8	45	15.0	56.4	344 10.6	55.4	199 05.7	19.3	53 19.9	42.2				
14	283	47.2	60	14.4	57.3	359 11.0	55.2	214 08.5	19.2	68 22.1	42.3				
15	298	49.7	75	13.8	58.3	14 11.3	55.0	229 11.3	19.2	83 24.3	42.3				
16	313	52.2	90	13.2	− 14 59.2	29 11.7	54.9	244 14.2	19.1	98 26.5	42.4				
17	328	54.6	105	12.6	− 15 00.2	44 12.1	− 23 54.7	259 17.0	+ 21 19.1	113 28.7	− 11 42.5				
18	343	57.1	120	12.0	− 15 01.1	59 12.4	− 23 54.5	274 19.8	+ 21 19.0	128 30.9	− 11 42.6				
19	358	59.6	135	11.4	02.0	74 12.8	54.3	289 22.6	19.0	143 33.2	42.7				
20	14	02.0	150	10.8	03.0	89 13.2	54.1	304 25.5	19.0	158 35.4	42.7				
21	29	04.5	165	10.2	03.9	104 13.6	53.9	319 28.3	18.9	173 37.6	42.8				
22	44	07.0	180	09.6	04.9	119 13.9	53.7	334 31.1	18.9	188 39.8	42.9				
23	59	09.4	195	09.0	05.8	134 14.3	53.5	349 33.9	18.8	203 42.0	43.0				
24	74	11.9	210	08.4	− 15 06.8	149 14.7	− 23 53.3	4 36.8	+ 21 18.8	218 44.2	− 11 43.1				
Dif	—		−6	−9		+4	+2	+28	0	+22	−1				

MIÉRCOL 5 DE DICIEMBRE DE 2012

UT	SOL		<div><div><div></div></div>LUNA</div> <div>SD: 15/2 Edad: 21^d1</div> <div>PHE { 4^h: 55/9 12^h: 56/2 20^h: 56/4</div> <div>PMG: 4^h 49^m R°: 46^m</div>				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 16/2 PMG: 11 ^h 50 ^m 8		hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°				
	hG ☉	Dec																
h	°	'	°	'	°	'	°	h m	h m	h m	h m	h m	h m	h m	h m			
0	182	21.4	− 22	23.2	289	53.9	+ 8	37.7	103	60 N	14 58	15 53	16 49	22 52	81	11 47	13	
1	197	21.1		23.5	304	26.4		27.4	103	58	15 14	16 04	16 56	54	79	44	15	
2	212	20.9		23.8	318	58.9		17.1	103	56	28	14	17 02	57	76	40	18	
3	227	20.6		24.1	333	31.3		+ 8 06.6	105	54	39	22	08	22 59	74	38	19	
4	242	20.3		24.5	348	03.8		+ 7 56.2	104	52	50	30	13	23 00	73	35	21	
5	257	20.1	− 22	24.8	2	36.2		+ 7 45.7	105	50	15 59	16 37	17 18	23 02	70	11 33	23	
6	272	19.8	− 22	25.1	17	08.7		+ 7 35.2	105	45	16 19	16 52	17 29	23 06	66	11 27	27	
7	287	19.6		25.4	31	41.2		24.6	106	40	35	17 05	39	09	63	23	30	
8	302	19.3		25.7	46	13.6		14.0	106	35	16 48	16	47	11	60	19	33	
9	317	19.0		26.0	60	46.0		+ 7 03.3	107	30	17 00	26	17 56	13	58	16	35	
10	332	18.8		26.3	75	18.5		+ 6 52.6	107	20	20	17 44	18 11	17	54	10	39	
11	347	18.5	− 22	26.6	89	50.9		+ 6 41.8	108	10 N	17 38	18 00	18 27	23 21	50	11 05	42	
12	2	18.3	− 22	26.9	104	23.3		+ 6 31.0	108	0	17 54	18 17	18 43	23 24	46	11 00	46	
13	17	18.0		27.2	118	55.7		20.2	108	10 S	18 11	34	19 01	27	43	10 55	49	
14	32	17.7		27.5	133	28.1		+ 6 09.3	109	20	29	18 54	23	31	39	50	53	
15	47	17.5		27.8	148	00.5		+ 5 58.4	109	30	18 51	19 18	19 51	34	36	44	57	
16	62	17.2		28.1	162	32.9		47.4	110	35	19 03	32	20 08	37	32	40	60	
17	77	16.9	− 22	28.4	177	05.2		+ 5 36.4	110	40	19 17	19 50	20 30	23 39	30	10 36	63	
18	92	16.7	− 22	28.7	191	37.6		+ 5 25.4	110	45	19 34	20 11	20 59	23 42	27	10 32	65	
19	107	16.4		29.0	206	09.9		14.3	111	50	19 56	39	21 41	46	23	26	69	
20	122	16.2		29.3	220	42.2		+ 5 03.2	111	52	20 06	20 53	22 05	47	22	24	71	
21	137	15.9		29.6	235	14.6		+ 4 52.1	111	54	17	21 10	22 40	49	20	21	73	
22	152	15.6		29.9	249	46.8		40.9	112	56	31	30	** **	51	18	18	75	
23	167	15.4		30.2	264	19.1		29.7	112	58	20 46	21 56	** **	53	15	14	78	
24	182	15.1	− 22	30.5	278	51.4		+ 4 18.4	113	60 S	21 05	22 34	** **	23 55	13	10 10	80	
UT	ARIES PMG 19 ^h 00 ^m 1		VENUS Mag.: −4.0 PMG: 10 ^h 00 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 03 ^m		JÚPITER Mag.: −2.8 PMG: 23 ^h 37 ^m		SATURNO Mag.: +0.7 PMG: 9 ^h 24 ^m									
	hG ♂		hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	74	11.9	210	08.4	− 15	06.8	149	14.7	− 23	53.3	4	36.8	+ 21	18.8	218	44.2	− 11	43.1
1	89	14.4	225	07.8		07.7	164	15.0		53.1	19	39.6		18.8	233	46.4		43.1
2	104	16.8	240	07.2		08.6	179	15.4		52.9	34	42.4		18.7	248	48.6		43.2
3	119	19.3	255	06.6		09.6	194	15.8		52.7	49	45.3		18.7	263	50.8		43.3
4	134	21.7	270	06.0		10.5	209	16.1		52.5	64	48.1		18.6	278	53.0		43.4
5	149	24.2	285	05.3	− 15	11.5	224	16.5	− 23	52.3	79	50.9	+ 21	18.6	293	55.2	− 11	43.5
6	164	26.7	300	04.7	− 15	12.4	239	16.9	− 23	52.1	94	53.7	+ 21	18.5	308	57.4	− 11	43.5
7	179	29.1	315	04.1		13.3	254	17.2		51.9	109	56.6		18.5	323	59.7		43.6
8	194	31.6	330	03.5		14.3	269	17.6		51.7	124	59.4		18.5	339	01.9		43.7
9	209	34.1	345	02.9		15.2	284	18.0		51.6	140	02.2		18.4	354	04.1		43.8
10	224	36.5	0	02.3		16.1	299	18.4		51.4	155	05.0		18.4	9	06.3		43.9
11	239	39.0	15	01.7	− 15	17.1	314	18.7	− 23	51.2	170	07.9	+ 21	18.3	24	08.5	− 11	43.9
12	254	41.5	30	01.1	− 15	18.0	329	19.1	− 23	51.0	185	10.7	+ 21	18.3	39	10.7	− 11	44.0
13	269	43.9	45	00.5		18.9	344	19.5		50.8	200	13.5		18.3	54	12.9		44.1
14	284	46.4	59	59.9		19.9	359	19.8		50.6	215	16.3		18.2	69	15.1		44.2
15	299	48.9	74	59.2		20.8	14	20.2		50.4	230	19.2		18.2	84	17.3		44.3
16	314	51.3	89	58.6		21.7	29	20.6		50.2	245	22.0		18.1	99	19.5		44.3
17	329	53.8	104	58.0	− 15	22.7	44	20.9	− 23	49.9	260	24.8	+ 21	18.1	114	21.7	− 11	44.4
18	344	56.2	119	57.4	− 15	23.6	59	21.3	− 23	49.7	275	27.7	+ 21	18.1	129	24.0	− 11	44.5
19	359	58.7	134	56.8		24.5	74	21.7		49.5	290	30.5		18.0	144	26.2		44.6
20	15	01.2	149	56.2		25.4	89	22.0		49.3	305	33.3		18.0	159	28.4		44.7
21	30	03.6	164	55.6		26.4	104	22.4		49.1	320	36.1		17.9	174	30.6		44.7
22	45	06.1	179	54.9		27.3	119	22.8		48.9	335	39.0		17.9	189	32.8		44.8
23	60	08.6	194	54.3		28.2	134	23.2		48.7	350	41.8		17.8	204	35.0		44.9
24	75	11.0	209	53.7	− 15	29.1	149	23.5	− 23	48.5	5	44.6	+ 21	17.8	219	37.2	− 11	45.0
Dif	—		−6		−9		+4		+2		+28		0		+22		−1	

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JUEVES 6 DE DICIEMBRE DE 2012

UT	SOL			<div><div><div><div><div></div><div>LUNA</div></div><div><div>SD: 15'4</div><div>Edad: 22^d1</div><div>PMG: 5^h 35^m</div></div><div><div>PHE</div><div><div><div>4^h: 56'7</div><div>12^h: 57'0</div><div>20^h: 57'2</div></div></div><div><div>R°: 47^m</div></div></div><div><div>SD: 16'2</div><div>PMG: 11^h 51^m2</div></div></div></div></div>				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna				
	hG ☉	Dec	hG ☾	Dif	Dec	Dif	Náutico		Civil	Hora		R°	Hora	R°				
h	°	'	°	'	°	'	°	'	h	m	h	m	h	m	m	h	m	m
0	182	15.1	− 22	30.5	278	51.4	+ 4	18.4	112	60 N	6 53	7 49	8 45	** ** *		12 00	13	
1	197	14.8		30.8	293	23.6	+ 4	07.2	113	58	47	38	29	** ** *		11 59	15	
2	212	14.6		31.1	307	55.8	+ 3	55.9	114	56	40	29	15	** ** *		58	18	
3	227	14.3		31.4	322	28.0		44.5	114	54	35	20	8 03	** ** *		57	20	
4	242	14.0		31.7	337	00.2		33.2	113	52	29	12	7 53	** ** *		56	22	
5	257	13.8	− 22	32.0	351	32.3	+ 3	21.8	114	50	6 24	7 05	7 43	** ** *		11 56	23	
6	272	13.5	− 22	32.3	6 04.4	131	+ 3	10.3	115	45	6 13	6 50	7 24	** ** *		11 54	27	
7	287	13.3		32.6	20 36.5	131	+ 2	58.9	114	40	6 04	37	7 08	** ** *		53	30	
8	302	13.0		32.9	35 08.6	131		47.4	115	35	5 55	26	6 54	** ** *		52	33	
9	317	12.7		33.2	49 40.7	131		35.9	115	30	46	6 16	42	** ** *		51	35	
10	332	12.5		33.5	64 12.7	130		24.4	115	20	31	5 58	22	** ** *		49	40	
11	347	12.2	− 22	33.7	78 44.7	130	+ 2	12.8	116	10 N	5 15	5 42	6 04	** ** *		11 47	44	
12	2 11.9	− 22	34.0	93 16.7	130	129	+ 2	01.2	116	0	4 59	5 25	5 47	** ** *		11 46	47	
13	17 11.7		34.3	107 48.6	129	116	+ 1	49.6	116	10 S	41	5 08	31	** ** *		44	51	
14	32 11.4		34.6	122 20.5	129	116		38.0	116	20	4 19	4 48	5 12	** ** *		43	54	
15	47 11.1		34.9	136 52.4	129	117		26.3	117	30	3 51	24	4 51	** ** *		41	59	
16	62 10.8		35.2	151 24.2	128	117		14.6	117	35	33	4 10	39	** ** *		40	61	
17	77 10.6	− 22	35.5	165 56.0	128	116	+ 1	03.0	116	40	3 11	3 52	4 25	** ** *		11 39	64	
18	92 10.3	− 22	35.7	180 27.8	128	118	+ 0	51.2	118	45	2 42	3 31	4 07	** ** *		11 37	68	
19	107 10.0		36.0	194 59.5	127	117		39.5	117	50	2 01	3 03	3 46	** ** *		35	72	
20	122 09.8		36.3	209 31.3	128	117		27.8	117	52	1 36	2 49	36	** ** *		35	73	
21	137 09.5		36.6	224 02.9	126	118		16.0	118	54	1 01	32	24	** ** *		34	75	
22	152 09.2		36.9	238 34.6	127	118	+ 0	04.2	118	56	** ** *	2 12	3 11	** ** *		33	77	
23	167 09.0		37.1	253 06.1	125	118	− 0	07.6	118	58	** ** *	1 46	2 55	** ** *		32	80	
24	182 08.7	− 22	37.4	267 37.7	126	118	− 0	19.4	118	60 S	** ** *	1 08	2 37	** ** *		11 30	83	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 56 ^m 2		Mag.: −4.0 PMG: 10 ^h 01 ^m		Mag.: +1.2 PMG: 14 ^h 02 ^m		Mag.: −2.8 PMG: 23 ^h 33 ^m		Mag.: +0.7 PMG: 9 ^h 20 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	75	11.0	209	53.7	149	23.5	5 44.6	+ 21 17.8	219	37.2	− 11 45.0							
1	90	13.5	224	53.1	164	23.9	20 47.4	17.8	234	39.4	45.1							
2	105	16.0	239	52.5	179	24.3	35 50.3	17.7	249	41.6	45.1							
3	120	18.4	254	51.9	194	24.6	50 53.1	17.7	264	43.8	45.2							
4	135	20.9	269	51.2	209	25.0	65 55.9	17.6	279	46.1	45.3							
5	150	23.4	284	50.6	224	25.4	80 58.7	+ 21 17.6	294	48.3	− 11 45.4							
6	165	25.8	299	50.0	239	25.7	96 01.6	+ 21 17.6	309	50.5	− 11 45.5							
7	180	28.3	314	49.4	254	26.1	111 04.4	17.5	324	52.7	45.5							
8	195	30.7	329	48.8	269	26.5	126 07.2	17.5	339	54.9	45.6							
9	210	33.2	344	48.1	284	26.9	141 10.0	17.4	354	57.1	45.7							
10	225	35.7	359	47.5	299	27.2	156 12.9	17.4	9 59.3	45.8								
11	240	38.1	14 46.9	− 15 39.3	314	27.6	171 15.7	+ 21 17.3	25 01.5	− 11 45.9								
12	255	40.6	29 46.3	− 15 40.2	329	28.0	186 18.5	+ 21 17.3	40 03.7	− 11 45.9								
13	270	43.1	44 45.6	41.1	344	28.3	201 21.3	17.3	55 06.0	46.0								
14	285	45.5	59 45.0	42.0	359	28.7	216 24.2	17.2	70 08.2	46.1								
15	300	48.0	74 44.4	42.9	14 29.1	45.4	231 27.0	17.2	85 10.4	46.2								
16	315	50.5	89 43.8	43.9	29 29.4	45.2	246 29.8	17.1	100 12.6	46.3								
17	330	52.9	104 43.1	− 15 44.8	44 29.8	− 23 45.0	261 32.6	+ 21 17.1	115 14.8	− 11 46.3								
18	345	55.4	119 42.5	− 15 45.7	59 30.2	− 23 44.7	276 35.5	+ 21 17.1	130 17.0	− 11 46.4								
19	0 57.8	134 41.9	46.6	74 30.6	44.5		291 38.3	17.0	145 19.2	46.5								
20	16 00.3	149 41.3	47.5	89 30.9	44.3		306 41.1	17.0	160 21.4	46.6								
21	31 02.8	164 40.6	48.4	104 31.3	44.1		321 43.9	16.9	175 23.6	46.7								
22	46 05.2	179 40.0	49.3	119 31.7	43.9		336 46.8	16.9	190 25.9	46.7								
23	61 07.7	194 39.4	50.2	134 32.0	43.7		351 49.6	16.8	205 28.1	46.8								
24	76 10.2	209 38.8	− 15 51.2	149 32.4	− 23 43.5		6 52.4	+ 21 16.8	220 30.3	− 11 46.9								
Dif	—		−6	−9	+4	+2	+28	0	+22	−1								


VIERNES 7 DE DICIEMBRE DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 11 ^h 51 ^m 6		SD: 15 ^h 6 Edad: 23 ^d 1		PHE { 4 ^h : 57/5 12 ^h : 57/8 20 ^h : 58/1									
	PMG: 6 ^h 22 ^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	
0	182 08.7	− 22 37.4	267 37.7		− 0 19.4		60 N	14 56	15 52	16 48	0 13 85		12 13 14	
1	197 08.4	37.7	282 09.2	125	31.2	118	58	15 13	16 03	16 55	13 82		14 17	
2	212 08.2	38.0	296 40.7	125	43.1	119	56	27	13	17 02	13 79		16 19	
3	227 07.9	38.3	311 12.1	124	− 0 54.9	118	54	39	22	07	13 77		17 21	
4	242 07.6	38.5	325 43.5	124	− 1 06.8	119	52	49	29	13	13 74		18 23	
5	257 07.3	− 22 38.8	340 14.8	123	− 1 18.7	119	50	15 59	16 37	17 18	0 12 73		12 19 25	
6	272 07.1	− 22 39.1	354 46.1	123	− 1 30.5	118	45	16 18	16 52	17 29	0 12 69		12 21 29	
7	287 06.8	39.4	9 17.4	123	42.4	119	40	35	17 05	39	12 65		23 32	
8	302 06.5	39.6	23 48.6	122	− 1 54.3	119	35	16 48	16	48	11 63		25 35	
9	317 06.3	39.9	38 19.7	121	− 2 06.2	119	30	17 00	26	17 56	11 60		26 38	
10	332 06.0	40.2	52 50.8	121	18.1	119	20	21	17 44	18 12	11 56		29 42	
11	347 05.7	− 22 40.4	67 21.9	121	− 2 30.0	119	10 N	17 38	18 01	18 27	0 11 51		12 31 46	
12	2 05.4	− 22 40.7	81 52.9	120	− 2 42.0	120	0	17 55	18 18	18 44	0 10 48		12 33 49	
13	17 05.2	41.0	96 23.8	119	− 2 53.9	119	10 S	18 12	35	19 02	10 45		35 53	
14	32 04.9	41.2	110 54.7	119	− 3 05.8	119	20	31	18 55	24	10 41		37 57	
15	47 04.6	41.5	125 25.5	118	17.7	119	30	18 52	19 19	19 52	10 36		40 61	
16	62 04.4	41.8	139 56.3	118	29.6	119	35	19 05	34	20 10	09 34		41 64	
17	77 04.1	− 22 42.0	154 27.0	117	− 3 41.5	119	40	19 19	19 52	20 33	0 09 31		12 43 66	
18	92 03.8	− 22 42.3	168 57.7	117	− 3 53.5	120	45	19 36	20 13	21 02	0 09 28		12 45 70	
19	107 03.5	42.6	183 28.3	116	− 4 05.4	119	50	19 58	42	21 45	09 24		47 74	
20	122 03.3	42.8	197 58.9	116	17.3	119	52	20 08	20 56	22 10	09 22		48 76	
21	137 03.0	43.1	212 29.4	115	29.2	119	54	20	21 13	22 47	09 20		49 78	
22	152 02.7	43.4	226 59.8	114	41.1	119	56	34	21 34	** **	09 18		50 81	
23	167 02.4	43.6	241 30.2	114	− 4 52.9	118	58	20 49	22 00	** **	08 17		52 83	
24	182 02.2	− 22 43.9	256 00.5	113	− 5 04.8	119	60 S	21 09	22 41	** **	0 08 14		12 53 86	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 18 ^h 52 ^m 2		Mag.: −4.0 PMG: 10 ^h 02 ^m		Mag.: +1.2 PMG: 14 ^h 01 ^m		Mag.: −2.8 PMG: 23 ^h 28 ^m		Mag.: +0.7 PMG: 9 ^h 17 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'
0	76 10.2	209 38.8	− 15 51.2		149 32.4	− 23 43.5	6 52.4	+ 21 16.8	220 30.3	− 11 46.9				
1	91 12.6	224 38.1	52.1		164 32.8	43.2	21 55.2	16.8	235 32.5	47.0				
2	106 15.1	239 37.5	53.0		179 33.2	43.0	36 58.1	16.7	250 34.7	47.1				
3	121 17.6	254 36.9	53.9		194 33.5	42.8	52 00.9	16.7	265 36.9	47.1				
4	136 20.0	269 36.2	54.8		209 33.9	42.6	67 03.7	16.6	280 39.1	47.2				
5	151 22.5	284 35.6	− 15 55.7		224 34.3	− 23 42.4	82 06.5	+ 21 16.6	295 41.3	− 11 47.3				
6	166 25.0	299 35.0	− 15 56.6		239 34.6	− 23 42.1	97 09.4	+ 21 16.6	310 43.5	− 11 47.4				
7	181 27.4	314 34.3	57.5		254 35.0	41.9	112 12.2	16.5	325 45.8	47.4				
8	196 29.9	329 33.7	58.4		269 35.4	41.7	127 15.0	16.5	340 48.0	47.5				
9	211 32.3	344 33.1	− 15 59.3		284 35.7	41.5	142 17.8	16.4	355 50.2	47.6				
10	226 34.8	359 32.4	− 16 00.2		299 36.1	41.3	157 20.7	16.4	10 52.4	47.7				
11	241 37.3	14 31.8	− 16 01.1		314 36.5	− 23 41.0	172 23.5	+ 21 16.3	25 54.6	− 11 47.8				
12	256 39.7	29 31.2	− 16 02.0		329 36.9	− 23 40.8	187 26.3	+ 21 16.3	40 56.8	− 11 47.8				
13	271 42.2	44 30.5	02.9		344 37.2	40.6	202 29.1	16.3	55 59.0	47.9				
14	286 44.7	59 29.9	03.8		359 37.6	40.4	217 32.0	16.2	71 01.2	48.0				
15	301 47.1	74 29.3	04.7		14 38.0	40.1	232 34.8	16.2	86 03.5	48.1				
16	316 49.6	89 28.6	05.6		29 38.3	39.9	247 37.6	16.1	101 05.7	48.2				
17	331 52.1	104 28.0	− 16 06.5		44 38.7	− 23 39.7	262 40.4	+ 21 16.1	116 07.9	− 11 48.2				
18	346 54.5	119 27.3	− 16 07.4		59 39.1	− 23 39.5	277 43.3	+ 21 16.1	131 10.1	− 11 48.3				
19	1 57.0	134 26.7	08.3		74 39.5	39.2	292 46.1	16.0	146 12.3	48.4				
20	16 59.4	149 26.1	09.2		89 39.8	39.0	307 48.9	16.0	161 14.5	48.5				
21	32 01.9	164 25.4	10.1		104 40.2	38.8	322 51.7	15.9	176 16.7	48.5				
22	47 04.4	179 24.8	11.0		119 40.6	38.6	337 54.6	15.9	191 19.0	48.6				
23	62 06.8	194 24.1	11.9		134 40.9	38.3	352 57.4	15.8	206 21.2	48.7				
24	77 09.3	209 23.5	− 16 12.8		149 41.3	− 23 38.1	8 00.2	+ 21 15.8	221 23.4	− 11 48.8				
Dif	—	−6	−9		+4	+2	+28	0	+22	−1				

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SÁBADO 8 DE DICIEMBRE DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 11 ^h 52 ^m 1		SD: 15 ^h 9 Edad: 24 ^d 1		PHE { 4 ^h : 58 ^h 4 12 ^h : 58 ^h 7 20 ^h : 59 ^h 1									
	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	182 02.2	− 22 43.9	256 00.5		− 5 04.8	119	60 N	6 56	7 52	8 48	1 38 88	12 27 17		
1	197 01.9	44.1	270 30.8	113	16.7	119	58	49	41	32	35 85	31 20		
2	212 01.6	44.4	285 00.9	111	28.5	118	56	43	31	18	32 83	35 22		
3	227 01.3	44.6	299 31.0	111	40.4	119	54	37	22	8 06	30 80	38 25		
4	242 01.1	44.9	314 01.1	111	− 5 52.2	118	52	31	15	7 55	27 78	41 27		
5	257 00.8	− 22 45.2	328 31.1	110	− 6 04.0	118	50	6 26	7 08	7 46	1 25 76	12 44 29		
6	272 00.5	− 22 45.4	343 01.0	109	− 6 15.8	118	45	6 15	6 52	7 26	1 21 72	12 50 33		
7	287 00.2	45.7	357 30.8	108	27.6	118	40	6 05	39	7 09	17 68	12 55 36		
8	302 00.0	45.9	12 00.6	108	39.3	117	35	5 56	28	6 56	14 65	13 00 38		
9	316 59.7	46.2	26 30.3	107	− 6 51.1	118	30	48	6 18	44	11 63	04 41		
10	331 59.4	46.4	41 00.0	107	− 7 02.8	117	20	32	5 59	23	07 58	11 45		
11	346 59.1	− 22 46.7	55 29.5	105	− 7 14.5	117	10 N	5 16	5 43	6 05	1 02 55	13 17 49		
12	1 58.9	− 22 46.9	69 59.0	105	− 7 26.2	117	0	5 00	5 26	5 48	0 58 51	13 22 53		
13	16 58.6	47.2	84 28.4	104	37.8	116	10 S	4 41	5 08	31	55 47	28 56		
14	31 58.3	47.4	98 57.8	104	− 7 49.4	116	20	4 19	4 49	5 13	51 43	34 60		
15	46 58.0	47.7	113 27.0	102	− 8 01.0	116	30	3 51	24	4 52	46 39	41 64		
16	61 57.7	47.9	127 56.2	102	12.6	116	35	33	4 10	39	43 37	45 66		
17	76 57.5	− 22 48.2	142 25.3	101	− 8 24.1	115	40	3 11	3 52	4 24	0 40 34	13 49 70		
18	91 57.2	− 22 48.4	156 54.3	100	− 8 35.6	115	45	2 42	3 30	4 07	0 37 31	13 55 73		
19	106 56.9	48.7	171 23.3	100	47.1	115	50	1 59	3 02	3 45	33 27	14 01 77		
20	121 56.6	48.9	185 52.2	99	− 8 58.6	115	52	1 34	2 47	35	31 25	04 79		
21	136 56.3	49.1	200 20.9	97	− 9 10.0	114	54	0 57	31	23	29 23	07 81		
22	151 56.1	49.4	214 49.7	98	21.3	113	56	** **	2 10	3 10	27 21	11 83		
23	166 55.8	49.6	229 18.3	96	32.7	114	58	** **	1 43	2 54	25 18	15 86		
24	181 55.5	− 22 49.9	243 46.8	95	− 9 44.0	113	60 S	** **	1 03	2 35	0 22 15	14 19 90		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 18 ^h 48 ^m 3		Mag.: −4.0 PMG: 10 ^h 03 ^m		Mag.: +1.2 PMG: 14 ^h 01 ^m		Mag.: −2.8 PMG: 23 ^h 24 ^m		Mag.: +0.7 PMG: 9 ^h 13 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /		
0	77 09.3	209 23.5	− 16 12.8	149 41.3	− 23 38.1	8 00.2	+ 21 15.8	221 23.4	− 11 48.8					
1	92 11.8	224 22.9	13.7	164 41.7	37.9	23 03.0	15.8	236 25.6	48.9					
2	107 14.2	239 22.2	14.5	179 42.1	37.7	38 05.9	15.7	251 27.8	48.9					
3	122 16.7	254 21.6	15.4	194 42.4	37.4	53 08.7	15.7	266 30.0	49.0					
4	137 19.2	269 20.9	16.3	209 42.8	37.2	68 11.5	15.6	281 32.2	49.1					
5	152 21.6	284 20.3	− 16 17.2	224 43.2	− 23 37.0	83 14.3	+ 21 15.6	296 34.5	− 11 49.2					
6	167 24.1	299 19.6	− 16 18.1	239 43.5	− 23 36.7	98 17.2	+ 21 15.6	311 36.7	− 11 49.2					
7	182 26.6	314 19.0	19.0	254 43.9	36.5	113 20.0	15.5	326 38.9	49.3					
8	197 29.0	329 18.4	19.9	269 44.3	36.3	128 22.8	15.5	341 41.1	49.4					
9	212 31.5	344 17.7	20.8	284 44.7	36.0	143 25.6	15.4	356 43.3	49.5					
10	227 33.9	359 17.1	21.7	299 45.0	35.8	158 28.4	15.4	11 45.5	49.6					
11	242 36.4	14 16.4	− 16 22.5	314 45.4	− 23 35.6	173 31.3	+ 21 15.3	26 47.7	− 11 49.6					
12	257 38.9	29 15.8	− 16 23.4	329 45.8	− 23 35.3	188 34.1	+ 21 15.3	41 50.0	− 11 49.7					
13	272 41.3	44 15.1	24.3	344 46.1	35.1	203 36.9	15.3	56 52.2	49.8					
14	287 43.8	59 14.5	25.2	359 46.5	34.9	218 39.7	15.2	71 54.4	49.9					
15	302 46.3	74 13.8	26.1	14 46.9	34.6	233 42.6	15.2	86 56.6	49.9					
16	317 48.7	89 13.2	26.9	29 47.3	34.4	248 45.4	15.1	101 58.8	50.0					
17	332 51.2	104 12.5	− 16 27.8	44 47.6	− 23 34.2	263 48.2	+ 21 15.1	117 01.0	− 11 50.1					
18	347 53.7	119 11.9	− 16 28.7	59 48.0	− 23 33.9	278 51.0	+ 21 15.1	132 03.2	− 11 50.2					
19	2 56.1	134 11.2	29.6	74 48.4	33.7	293 53.9	15.0	147 05.5	50.3					
20	17 58.6	149 10.6	30.5	89 48.7	33.5	308 56.7	15.0	162 07.7	50.3					
21	33 01.1	164 09.9	31.3	104 49.1	33.2	323 59.5	14.9	177 09.9	50.4					
22	48 03.5	179 09.3	32.2	119 49.5	33.0	339 02.3	14.9	192 12.1	50.5					
23	63 06.0	194 08.6	33.1	134 49.9	32.7	354 05.1	14.8	207 14.3	50.6					
24	78 08.4	209 08.0	− 16 34.0	149 50.2	− 23 32.5	9 08.0	+ 21 14.8	222 16.5	− 11 50.6					
Dif	—	−6	−9	+4	+2	+28	0	+22	−1					


DOMINGO 9 DE DICIEMBRE DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna												
	SD: 16 ^h 2 PMG: 11 ^h 52 ^m 5		SD: 16 ^h 1 Edad: 25 ^d 1 PMG: 8 ^h 02 ^m R°: 55 ^m																						
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°											
h	°	'	°	'	°	'	°	h	m	h	m	h	m	h	m										
0	181	55.5	− 22	49.9	243	46.8	− 9	44.0	112	60 N	14	55	15	51	16	48	3	06	91	12	44	22			
1	196	55.2		50.1	258	15.3	95	− 9	55.2	112	58	15	12	16	03	16	55	3	00	88	51	25			
2	211	54.9		50.3	272	43.7	94	− 10	06.4	112	56	26	12	17	01	2	55	85	12	57	28				
3	226	54.7		50.6	287	11.9	92		17.6	112	54	38	21	07	50	82	13	03	30	13	03				
4	241	54.4		50.8	301	40.1	92		28.7	111	52	49	29	13	45	81	08	32	13	08	32				
5	256	54.1	− 22	51.1	316	08.3	92	− 10	39.8	111	50	15	58	16	36	17	18	2	41	79	13	13	34		
6	271	53.8	− 22	51.3	330	36.3	90	− 10	50.8	110	45	16	18	16	52	17	29	2	33	74	13	23	38		
7	286	53.5		51.5	345	04.2	89	− 11	01.8	110	40	35	17	05	39	25	71	31	41	13	31	41			
8	301	53.3		51.8	359	32.1	89		12.7	109	35	16	48	16	48	19	68	38	44	13	38	44			
9	316	53.0		52.0	13	59.9	88		23.6	109	30	17	00	27	17	56	14	66	45	46	14	59	72		
10	331	52.7		52.2	28	27.5	86		34.4	108	20	21	17	45	18	12	2	05	61	13	56	50			
11	346	52.4	− 22	52.5	42	55.1	86	− 11	45.1	107	10 N	17	39	18	02	18	28	1	57	58	14	06	53		
12	1	52.1	− 22	52.7	57	22.6	85	− 11	55.8	107	0	17	56	18	19	18	45	1	49	55	14	15	56		
13	16	51.9		52.9	71	50.0	84	− 12	06.5	107	10 S	18	13	36	19	03	42	51	24	59	15	59	72		
14	31	51.6		53.2	86	17.3	83		17.1	106	20	32	18	56	25	34	48	34	63	16	59	72			
15	46	51.3		53.4	100	44.5	82		27.6	105	30	18	53	19	21	19	54	25	44	45	67	17	59	72	
16	61	51.0		53.6	115	11.7	82		38.1	105	35	19	06	36	20	12	20	41	51	70	14	59	72		
17	76	50.7	− 22	53.8	129	38.7	80	− 12	48.5	104	40	19	21	19	53	20	35	1	14	39	14	59	72		
18	91	50.4	− 22	54.1	144	05.7	80	− 12	58.8	103	45	19	38	20	15	21	04	1	08	35	15	08	74		
19	106	50.2		54.3	158	32.5	78	− 13	09.1	103	50	20	00	44	21	48	1	00	31	18	79	15	08	74	
20	121	49.9		54.5	172	59.3	78		19.3	102	52	11	20	59	22	14	0	56	30	23	81	15	08	74	
21	136	49.6		54.8	187	25.9	76		29.4	101	54	23	21	16	22	53	52	28	28	83	16	59	72		
22	151	49.3		55.0	201	52.5	76		39.4	100	56	36	21	37	** **	48	25	34	85	17	59	72			
23	166	49.0		55.2	216	19.0	75		49.4	100	58	20	52	22	05	** **	43	22	41	88	18	59	72		
24	181	48.7	− 22	55.4	230	45.4	74	− 13	59.3	99	60 S	21	12	22	47	** **	0	37	20	15	49	91	18	59	72
UT	ARIES		VENUS				MARTE				JÚPITER				SATURNO										
	PMG: 18 ^h 44 ^m 4		Mag.: −4.0 PMG: 10 ^h 04 ^m				Mag.: +1.2 PMG: 14 ^h 00 ^m				Mag.: −2.8 PMG: 23 ^h 19 ^m				Mag.: +0.7 PMG: 9 ^h 10 ^m										
	hG ♈		hG ♀	Dec			hG ♂	Dec			hG ♃	Dec			hG ♄	Dec									
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'							
0	78	08.4	209	08.0	− 16	34.0	149	50.2	− 23	32.5	9	08.0	+ 21	14.8	222	16.5	− 11	50.6							
1	93	10.9	224	07.3		34.8	164	50.6		32.3	24	10.8		14.8	237	18.7		50.7							
2	108	13.4	239	06.6		35.7	179	51.0		32.0	39	13.6		14.7	252	21.0		50.8							
3	123	15.8	254	06.0		36.6	194	51.3		31.8	54	16.4		14.7	267	23.2		50.9							
4	138	18.3	269	05.3		37.5	209	51.7		31.5	69	19.3		14.6	282	25.4		51.0							
5	153	20.8	284	04.7	− 16	38.3	224	52.1	− 23	31.3	84	22.1	+ 21	14.6	297	27.6	− 11	51.1							
6	168	23.2	299	04.0	− 16	39.2	239	52.5	− 23	31.1	99	24.9	+ 21	14.6	312	29.8	− 11	51.1							
7	183	25.7	314	03.4		40.1	254	52.8		30.8	114	27.7		14.5	327	32.0		51.2							
8	198	28.2	329	02.7		40.9	269	53.2		30.6	129	30.5		14.5	342	34.3		51.3							
9	213	30.6	344	02.0		41.8	284	53.6		30.3	144	33.4		14.4	357	36.5		51.3							
10	228	33.1	359	01.4		42.7	299	54.0		30.1	159	36.2		14.4	12	38.7		51.4							
11	243	35.5	14	00.7	− 16	43.5	314	54.3	− 23	29.8	174	39.0	+ 21	14.3	27	40.9	− 11	51.5							
12	258	38.0	29	00.1	− 16	44.4	329	54.7	− 23	29.6	189	41.8	+ 21	14.3	42	43.1	− 11	51.6							
13	273	40.5	43	59.4		45.3	344	55.1		29.4	204	44.6		14.3	57	45.3		51.6							
14	288	42.9	58	58.7		46.1	359	55.4		29.1	219	47.5		14.2	72	47.6		51.7							
15	303	45.4	73	58.1		47.0	14	55.8		28.9	234	50.3		14.2	87	49.8		51.8							
16	318	47.9	88	57.4		47.9	29	56.2		28.6	249	53.1		14.1	102	52.0		51.9							
17	333	50.3	103	56.8	− 16	48.7	44	56.6	− 23	28.4	264	55.9	+ 21	14.1	117	54.2	− 11	52.0							
18	348	52.8	118	56.1	− 16	49.6	59	56.9	− 23	28.1	279	58.7	+ 21	14.1	132	56.4	− 11	52.0							
19	3	55.3	133	55.4		50.5	74	57.3		27.9	295	01.6		14.0	147	58.6		52.1							
20	18	57.7	148	54.8		51.3	89	57.7		27.6	310	04.4		14.0	163	00.9		52.2							
21	34	00.2	163	54.1		52.2	104	58.1		27.4	325	07.2		13.9	178	03.1		52.3							
22	49	02.7	178	53.4		53.0	119	58.4		27.1	340	10.0		13.9	193	05.3		52.3							
23	64	05.1	193	52.8		53.9	134	58.8		26.9	355	12.9		13.9	208	07.5		52.4							
24	79	07.6	208	52.1	− 16	54.8	149	59.2	− 23	26.6	10	15.7	+ 21	13.8	223	09.7	− 11	52.5							
Dif	—		−7		−9		+4		+2		+28		0		+22		−1								

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LUNES 10 DE DICIEMBRE DE 2012

UT	SOL		 LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 53 ^m 0		SD: 16'4 Edad: 26 ^d 1		PHE $\left\{ \begin{array}{l} 4^h: 60'2 \\ 12^h: 60'4 \\ 20^h: 60'7 \end{array} \right.$									
	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	^h ^m ^m
0	181 48.7	− 22 55.4	230 45.4		− 13 59.3		60 N	6 58	7 55	8 51	4 37 91	13 06 31		
1	196 48.5		245 11.6	72	− 14 09.2	99	58	51	43	34	28 88	16 34		
2	211 48.2		259 37.8	72	18.9	97	56	45	33	20	20 85	25 37		
3	226 47.9		274 03.9	71	28.6	97	54	39	25	8 08	12 83	33 39		
4	241 47.6		288 29.9	70	38.2	96	52	33	17	7 57	06 80	40 41		
5	256 47.3	− 22 56.5	302 55.8	69	− 14 47.7	95	50	6 28	7 09	7 48	4 00 79	13 47 42		
6	271 47.0	− 22 56.7	317 21.7	69	− 14 57.1	94	45	6 17	6 54	7 27	3 47 75	14 01 45		
7	286 46.7	57.0	331 47.4	67	− 15 06.4	93	40	6 07	41	7 11	36 73	12 48		
8	301 46.5	57.2	346 13.0	66	15.6	92	35	5 58	29	6 57	27 70	22 50		
9	316 46.2	57.4	0 38.5	65	24.8	92	30	49	19	45	20 68	31 52		
10	331 45.9	57.6	15 04.0	65	33.8	90	20	33	6 00	24	3 06 65	46 55		
11	346 45.6	− 22 57.8	29 29.3	63	− 15 42.8	90	10 N	5 17	5 44	6 06	2 55 61	14 59 58		
12	1 45.3	− 22 58.0	43 54.5	62	− 15 51.7	89	0	5 01	5 27	5 49	2 44 58	15 11 60		
13	16 45.0	58.2	58 19.7	62	− 16 00.5	88	10 S	4 42	5 09	32	33 56	23 63		
14	31 44.7	58.4	72 44.8	61	09.1	86	20	4 20	4 49	5 13	22 52	37 65		
15	46 44.4	58.7	87 09.7	59	17.7	85	30	3 51	25	4 52	09 49	15 52 68		
16	61 44.2	58.9	101 34.6	59	26.2	85	35	33	4 10	39	2 01 47	16 01 70		
17	76 43.9	− 22 59.1	115 59.4	58	− 16 34.6	84	40	3 11	3 52	4 25	1 53 44	16 11 72		
18	91 43.6	− 22 59.3	130 24.1	57	− 16 42.8	82	45	2 41	3 30	4 07	1 43 42	16 22 75		
19	106 43.3	59.5	144 48.7	56	51.0	82	50	1 58	3 01	3 45	31 38	37 77		
20	121 43.0	59.7	159 13.2	55	− 16 59.0	80	52	1 32	2 47	35	26 36	44 79		
21	136 42.7	− 22 59.9	173 37.6	54	− 17 07.0	80	54	0 52	29	23	20 34	51 81		
22	151 42.4	− 23 00.1	188 01.9	53	14.8	78	56	** **	2 08	3 09	13 32	16 59 83		
23	166 42.1	00.3	202 26.1	52	22.5	77	58	** **	1 41	2 53	1 05 30	17 09 85		
24	181 41.9	− 23 00.5	216 50.3	52	− 17 30.1	76	60 S	** **	0 58	2 33	0 57 27	17 20 88		
UT	ARIES PMG 18 ^h 40 ^m 4		VENUS Mag.: −4.0 PMG: 10 ^h 05 ^m		MARTE Mag.: +1.2 PMG: 14 ^h 00 ^m		JÚPITER Mag.: −2.8 PMG: 23 ^h 15 ^m		SATURNO Mag.: +0.7 PMG: 9 ^h 06 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
^h	° /	° /	° /		° /		° /		° /		° /		° /	
0	79 07.6	208 52.1	− 16 54.8	149 59.2	− 23 26.6	10 15.7	+ 21 13.8	223 09.7	− 11 52.5					
1	94 10.0	223 51.4	55.6	164 59.5	26.4	25 18.5	13.8	238 11.9	52.6					
2	109 12.5	238 50.8	56.5	179 59.9	26.1	40 21.3	13.7	253 14.2	52.6					
3	124 15.0	253 50.1	57.3	195 00.3	25.9	55 24.1	13.7	268 16.4	52.7					
4	139 17.4	268 49.4	58.2	210 00.7	25.6	70 27.0	13.6	283 18.6	52.8					
5	154 19.9	283 48.8	− 16 59.0	225 01.0	− 23 25.4	85 29.8	+ 21 13.6	298 20.8	− 11 52.9					
6	169 22.4	298 48.1	− 16 59.9	240 01.4	− 23 25.1	100 32.6	+ 21 13.6	313 23.0	− 11 52.9					
7	184 24.8	313 47.4	− 17 00.7	255 01.8	24.9	115 35.4	13.5	328 25.3	53.0					
8	199 27.3	328 46.8	01.6	270 02.2	24.6	130 38.2	13.5	343 27.5	53.1					
9	214 29.8	343 46.1	02.4	285 02.5	24.4	145 41.0	13.4	358 29.7	53.2					
10	229 32.2	358 45.4	03.3	300 02.9	24.1	160 43.9	13.4	13 31.9	53.2					
11	244 34.7	13 44.7	− 17 04.1	315 03.3	− 23 23.8	175 46.7	+ 21 13.4	28 34.1	− 11 53.3					
12	259 37.2	28 44.1	− 17 05.0	330 03.7	− 23 23.6	190 49.5	+ 21 13.3	43 36.3	− 11 53.4					
13	274 39.6	43 43.4	05.8	345 04.0	23.3	205 52.3	13.3	58 38.6	53.5					
14	289 42.1	58 42.7	06.7	0 04.4	23.1	220 55.1	13.2	73 40.8	53.5					
15	304 44.5	73 42.1	07.5	15 04.8	22.8	235 58.0	13.2	88 43.0	53.6					
16	319 47.0	88 41.4	08.4	30 05.2	22.6	251 00.8	13.1	103 45.2	53.7					
17	334 49.5	103 40.7	− 17 09.2	45 05.5	− 23 22.3	266 03.6	+ 21 13.1	118 47.4	− 11 53.8					
18	349 51.9	118 40.0	− 17 10.1	60 05.9	− 23 22.0	281 06.4	+ 21 13.1	133 49.7	− 11 53.9					
19	4 54.4	133 39.4	10.9	75 06.3	21.8	296 09.2	13.0	148 51.9	53.9					
20	19 56.9	148 38.7	11.7	90 06.6	21.5	311 12.1	13.0	163 54.1	54.0					
21	34 59.3	163 38.0	12.6	105 07.0	21.3	326 14.9	12.9	178 56.3	54.1					
22	50 01.8	178 37.3	13.4	120 07.4	21.0	341 17.7	12.9	193 58.5	54.2					
23	65 04.3	193 36.6	14.3	135 07.8	20.7	356 20.5	12.9	209 00.8	54.2					
24	80 06.7	208 36.0	− 17 15.1	150 08.1	− 23 20.5	11 23.3	+ 21 12.8	224 03.0	− 11 54.3					
Dif	—	−7	−8	+4	+3	+28	0	+22	−1					

MARTES 11 DE DICIEMBRE DE 2012

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UT	SOL			☾ LUNA					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 53 ^m 4			SD: 16'6 Edad: 27 ^d 1 PMG: 9 ^h 57 ^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	m	h m	m
0	181	41.9	− 23	00.5	216	50.3	− 17	30.1	60 N	14 54	15 51	16 47	6 08	85	13 37	46
1	196	41.6		00.7	231	14.3		37.6	58	15 11	16 02	16 54	5 56	82	13 50	48
2	211	41.3		00.9	245	38.3		45.0	56	25	12	17 01	45	80	14 02	49
3	226	41.0		01.1	260	02.2		52.2	54	38	21	07	35	78	12 51	
4	241	40.7		01.3	274	26.0	− 17	59.4	52	48	29	13	26	77	21 52	
5	256	40.4	− 23	01.5	288	49.7	− 18	06.4	50	15 58	16 36	17 18	5 19	75	14 29	53
6	271	40.1	− 23	01.7	303	13.4	− 18	13.3	45	16 18	16 52	17 29	5 02	73	14 46	55
7	286	39.8		01.9	317	36.9		20.0	40	35	17 05	39	4 49	71	15 00	57
8	301	39.5		02.1	332	00.4		26.6	35	16 49	17	48	37	70	12 58	
9	316	39.2		02.3	346	23.8		33.2	30	17 01	27	17 57	28	68	23 59	
10	331	39.0		02.5	0	47.1		39.5	20	22	17 46	18 13	4 11	66	41 60	
11	346	38.7	− 23	02.7	15	10.3	− 18	45.8	10 N	17 40	18 03	18 29	3 56	64	15 57	62
12	1	38.4	− 23	02.9	29	33.5	− 18	51.9	0	17 57	18 20	18 46	3 42	62	16 11	64
13	16	38.1		03.1	43	56.6	− 18	57.9	10 S	18 14	37	19 05	29	60	26 65	
14	31	37.8		03.3	58	19.6	− 19	03.7	20	33	18 58	27	3 14	58	16 42	66
15	46	37.5		03.5	72	42.5		09.4	30	18 55	19 22	19 55	2 58	55	17 00	67
16	61	37.2		03.7	87	05.4		15.0	35	19 08	37	20 14	48	54	11 68	
17	76	36.9	− 23	03.9	101	28.2	− 19	20.4	40	19 22	19 55	20 37	2 37	53	17 23	69
18	91	36.6	− 23	04.0	115	50.9	− 19	25.7	45	19 40	20 17	21 06	2 25	50	17 37	71
19	106	36.3		04.2	130	13.6		30.9	50	20 02	20 46	21 51	09	48	17 54	73
20	121	36.0		04.4	144	36.2		35.9	52	13	21 01	22 17	2 02	46	18 03	73
21	136	35.8		04.6	158	58.7		40.8	54	25	19	22 58	1 54	45	12 74	
22	151	35.5		04.8	173	21.2		45.5	56	39	21 40	** **	45	43	22 75	
23	166	35.2		05.0	187	43.6		50.1	58	20 55	22 08	** **	35	41	34 76	
24	181	34.9	− 23	05.2	202	06.0	− 19	54.5	60 S	21 15	22 53	** **	1 24	38	18 48	78
UT	ARIES			VENUS			MARTE			JÚPITER			SATURNO			
	PMG: 18 ^h 36 ^m 5			Mag.: −4.0 PMG: 10 ^h 06 ^m			Mag.: +1.2 PMG: 13 ^h 59 ^m			Mag.: −2.8 PMG: 23 ^h 10 ^m			Mag.: +0.7 PMG: 9 ^h 02 ^m			
	hG ♈			hG ♀	Dec		hG ♂	Dec		hG ♃	Dec		hG ♄	Dec		
h	°	'	°	'	°	'	°	'	°	°	'	°	'	°	'	°
0	80	06.7	208	36.0	− 17	15.1	150	08.1	− 23	20.5	11 23.3	+ 21 12.8	224	03.0	− 11 54.3	
1	95	09.2	223	35.3		15.9	165	08.5		20.2	26 26.1	12.8	239	05.2	54.4	
2	110	11.7	238	34.6		16.8	180	08.9		20.0	41 29.0	12.7	254	07.4	54.5	
3	125	14.1	253	33.9		17.6	195	09.3		19.7	56 31.8	12.7	269	09.6	54.5	
4	140	16.6	268	33.2		18.4	210	09.6		19.4	71 34.6	12.6	284	11.9	54.6	
5	155	19.0	283	32.6	− 17	19.3	225	10.0	− 23	19.2	86 37.4	+ 21 12.6	299	14.1	− 11 54.7	
6	170	21.5	298	31.9	− 17	20.1	240	10.4	− 23	18.9	101 40.2	+ 21 12.6	314	16.3	− 11 54.8	
7	185	24.0	313	31.2		21.0	255	10.8		18.6	116 43.1	12.5	329	18.5	54.8	
8	200	26.4	328	30.5		21.8	270	11.1		18.4	131 45.9	12.5	344	20.7	54.9	
9	215	28.9	343	29.8		22.6	285	11.5		18.1	146 48.7	12.4	359	23.0	55.0	
10	230	31.4	358	29.1		23.4	300	11.9		17.8	161 51.5	12.4	14	25.2	55.1	
11	245	33.8	13	28.5	− 17	24.3	315	12.3	− 23	17.6	176 54.3	+ 21 12.4	29	27.4	− 11 55.1	
12	260	36.3	28	27.8	− 17	25.1	330	12.6	− 23	17.3	191 57.1	+ 21 12.3	44	29.6	− 11 55.2	
13	275	38.8	43	27.1		25.9	345	13.0		17.0	207 00.0	12.3	59	31.8	55.3	
14	290	41.2	58	26.4		26.8	0	13.4		16.8	222 02.8	12.2	74	34.1	55.4	
15	305	43.7	73	25.7		27.6	15	13.8		16.5	237 05.6	12.2	89	36.3	55.4	
16	320	46.1	88	25.0		28.4	30	14.1		16.2	252 08.4	12.2	104	38.5	55.5	
17	335	48.6	103	24.3	− 17	29.2	45	14.5	− 23	16.0	267 11.2	+ 21 12.1	119	40.7	− 11 55.6	
18	350	51.1	118	23.7	− 17	30.1	60	14.9	− 23	15.7	282 14.0	+ 21 12.1	134	42.9	− 11 55.7	
19	5	53.5	133	23.0		30.9	75	15.3		15.4	297 16.9	12.0	149	45.2	55.7	
20	20	56.0	148	22.3		31.7	90	15.6		15.2	312 19.7	12.0	164	47.4	55.8	
21	35	58.5	163	21.6		32.5	105	16.0		14.9	327 22.5	11.9	179	49.6	55.9	
22	51	00.9	178	20.9		33.4	120	16.4		14.6	342 25.3	11.9	194	51.8	56.0	
23	66	03.4	193	20.2		34.2	135	16.8		14.3	357 28.1	11.9	209	54.0	56.0	
24	81	05.9	208	19.5	− 17	35.0	150	17.2	− 23	14.1	12 30.9	+ 21 11.8	224	56.3	− 11 56.1	
Dif	—		−7		−8		+4		+3		+28		0		+22	−1

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MIÉRCOL 12 DE DICIEMBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16'2 PMG: 11 ^h 53 ^m 9		SD: 16'7 Edad: 28 ^d 1		PHE { 4 ^h : 61'3 12 ^h : 61'4 20 ^h : 61'4									
			PMG: 10 ^h 59 ^m		R°: 65 ^m									
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	° /	° /	° /		° /		° N	h m	h m	h m	h m	m	h m	m
0	181 34.9	− 23 05.2	202 06.0		− 19 54.5		60	7 01	7 57	8 54	7 33	70	14 23	63
1	196 34.6	05.3	216 28.3	33	− 19 58.8	43	58	6 53	46	37	18 69		38 64	
2	211 34.3	05.5	230 50.5	32	− 20 02.9	41	56	47	36	23	7 05	68	14 51	64
3	226 34.0	05.7	245 12.7	32	06.9	40	54	41	27	8 10	6 53	69	15 03	64
4	241 33.7	05.9	259 34.9	32	10.8	39	52	35	19	7 59	43 68		13 64	
5	256 33.4	− 23 06.1	273 57.0	31	− 20 14.4	36	50	6 30	7 11	7 50	6 34	68	15 22	64
6	271 33.1	− 23 06.2	288 19.0	30	− 20 18.0	36	45	6 18	6 56	7 29	6 15	68	15 41	65
7	286 32.8	06.4	302 41.0	30	21.3	33	40	6 08	42	7 13	6 00	67	15 57	64
8	301 32.5	06.6	317 03.0	30	24.6	33	35	5 59	31	6 59	5 47	66	16 10	64
9	316 32.2	06.8	331 24.9	29	27.6	30	30	50	20	47	36 66		22 64	
10	331 31.9	07.0	345 46.8	29	30.6	30	20	34	6 02	26	17 65		41 65	
11	346 31.6	− 23 07.1	0 08.6	28	− 20 33.3	27	10 N	5 18	5 45	6 07	5 00	64	16 59	64
12	1 31.4	− 23 07.3	14 30.4	28	− 20 35.9	26	0	5 02	5 28	5 50	4 44	64	17 15	64
13	16 31.1	07.5	28 52.2	28	38.4	25	10 S	4 43	5 10	33	29 63		31 64	
14	31 30.8	07.7	43 13.9	27	40.6	22	20	4 21	4 50	5 14	4 12	63	17 48	64
15	46 30.5	07.8	57 35.7	28	42.8	22	30	3 52	25	4 52	3 53	62	18 07	64
16	61 30.2	08.0	71 57.4	27	44.7	19	35	33	4 10	40	42 62		19 63	
17	76 29.9	− 23 08.2	86 19.0	26	− 20 46.5	18	40	3 11	3 52	4 25	3 30	60	18 32	63
18	91 29.6	− 23 08.3	100 40.7	27	− 20 48.2	17	45	2 41	3 30	4 07	3 15	60	18 48	62
19	106 29.3	08.5	115 02.3	26	49.7	15	50	1 57	3 01	3 45	2 57	59	19 07	62
20	121 29.0	08.7	129 23.9	26	51.0	13	52	1 30	2 46	34	48 59		16 62	
21	136 28.7	08.8	143 45.5	26	52.2	12	54	0 49	29	22	39 57		26 62	
22	151 28.4	09.0	158 07.1	26	53.2	10	56	** **	2 07	3 08	28 57		37 62	
23	166 28.1	09.2	172 28.7	26	54.0	8	58	** **	1 39	2 52	16 56		19 50	61
24	181 27.8	− 23 09.3	186 50.2	25	− 20 54.7	7	60 S	** **	0 54	2 32	2 02	54	20 06	60
UT	ARIES PMG: 18 ^h 32 ^m 6		VENUS Mag.: −4.0 PMG: 10 ^h 07 ^m		MARTE Mag.: +1.2 PMG: 13 ^h 59 ^m		JÚPITER Mag.: −2.8 PMG: 23 ^h 06 ^m		SATURNO Mag.: +0.7 PMG: 8 ^h 59 ^m					
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec				
	h	° /	° /	° /	° /	° /	° /	° /	° /	° /				
0	81 05.9	208 19.5	− 17 35.0	150 17.2	− 23 14.1	12 30.9	+ 21 11.8	224 56.3	− 11 56.1					
1	96 08.3	223 18.8	35.8	165 17.5	13.8	27 33.8	11.8	239 58.5	56.2					
2	111 10.8	238 18.1	36.6	180 17.9	13.5	42 36.6	11.7	255 00.7	56.3					
3	126 13.3	253 17.4	37.5	195 18.3	13.2	57 39.4	11.7	270 02.9	56.3					
4	141 15.7	268 16.8	38.3	210 18.7	13.0	72 42.2	11.7	285 05.2	56.4					
5	156 18.2	283 16.1	− 17 39.1	225 19.0	− 23 12.7	87 45.0	+ 21 11.6	300 07.4	− 11 56.5					
6	171 20.6	298 15.4	− 17 39.9	240 19.4	− 23 12.4	102 47.8	+ 21 11.6	315 09.6	− 11 56.5					
7	186 23.1	313 14.7	40.7	255 19.8	12.1	117 50.6	11.5	330 11.8	56.6					
8	201 25.6	328 14.0	41.5	270 20.2	11.9	132 53.5	11.5	345 14.0	56.7					
9	216 28.0	343 13.3	42.3	285 20.5	11.6	147 56.3	11.5	0 16.3	56.8					
10	231 30.5	358 12.6	43.2	300 20.9	11.3	162 59.1	11.4	15 18.5	56.8					
11	246 33.0	13 11.9	− 17 44.0	315 21.3	− 23 11.0	178 01.9	+ 21 11.4	30 20.7	− 11 56.9					
12	261 35.4	28 11.2	− 17 44.8	330 21.7	− 23 10.8	193 04.7	+ 21 11.3	45 22.9	− 11 57.0					
13	276 37.9	43 10.5	45.6	345 22.0	10.5	208 07.5	11.3	60 25.2	57.1					
14	291 40.4	58 09.8	46.4	0 22.4	10.2	223 10.3	11.2	75 27.4	57.1					
15	306 42.8	73 09.1	47.2	15 22.8	09.9	238 13.2	11.2	90 29.6	57.2					
16	321 45.3	88 08.4	48.0	30 23.2	09.6	253 16.0	11.2	105 31.8	57.3					
17	336 47.8	103 07.7	− 17 48.8	45 23.6	− 23 09.4	268 18.8	+ 21 11.1	120 34.1	− 11 57.4					
18	351 50.2	118 07.0	− 17 49.6	60 23.9	− 23 09.1	283 21.6	+ 21 11.1	135 36.3	− 11 57.4					
19	6 52.7	133 06.3	50.4	75 24.3	08.8	298 24.4	11.0	150 38.5	57.5					
20	21 55.1	148 05.6	51.2	90 24.7	08.5	313 27.2	11.0	165 40.7	57.6					
21	36 57.6	163 04.9	52.0	105 25.1	08.2	328 30.0	11.0	180 42.9	57.7					
22	52 00.1	178 04.2	52.8	120 25.4	08.0	343 32.9	10.9	195 45.2	57.7					
23	67 02.5	193 03.5	53.6	135 25.8	07.7	358 35.7	10.9	210 47.4	57.8					
24	82 05.0	208 02.8	− 17 54.4	150 26.2	− 23 07.4	13 38.5	+ 21 10.8	225 49.6	− 11 57.9					
Dif	—	−7	−8	+4	+3	+28	0	+22	−1					

JUEVES 13 DE DICIEMBRE DE 2012

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UT	SOL			● LUNA					Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 2 PMG: 11 ^h 54 ^m 4			SD: 16 ^h 7 Edad: 29 ^d 1 PHE { 4 ^h : 61 ^h 4 12 ^h : 61 ^h 4 20 ^h : 61 ^h 3 PMG: 12 ^h 04 ^m R°: 63 ^m												
	hG ☉	Dec		hG ☾	Dif	Dec	Dif				Civil	Náutico	Hora R°		Hora R°	
h	°	'	°	°	'	°	'	°	N	h m	h m	h m	h m m	h m m	h m m	h m m
0	181	27.8	− 23	186	50.2	− 20	54.7	5	58	14 53	15 51	16 47	8 43 51	15 26 80		
1	196	27.5		201	11.8		55.2	3	58	15 10	16 02	16 54	27 52	42 78		
2	211	27.2		215	33.3		55.5	2	56	25	12	17 01	13 54	15 55 77		
3	226	26.9		229	54.9		55.7	1	54	37	21	07	8 02 55	16 07 75		
4	241	26.6		244	16.5		55.8	2	52	48	29	13	7 51 56	17 74		
5	256	26.3	− 23	258	38.0	− 20	55.6	2	50	15 58	16 36	17 18	7 42 57	16 26 73		
6	271	26.0	− 23	272	59.6	− 20	55.3	3	45	16 19	16 52	17 30	7 23 58	16 46 71		
7	286	25.7		287	21.2		54.9	4	40	35	17 06	40	7 07 59	17 01 70		
8	301	25.4		301	42.8		54.3	6	35	16 49	17	49	6 53 60	14 69		
9	316	25.1		316	04.4		53.5	8	30	17 01	28	17 58	42 60	26 68		
10	331	24.8		330	26.0		52.5	10	20	22	17 46	18 14	22 62	17 46 65		
11	346	24.5	− 23	344	47.6	− 20	51.4	11	10 N	17 41	18 04	18 30	6 04 63	18 03 64		
12	1	24.2	− 23	359	09.3	− 20	50.2	12	0	17 58	18 21	18 47	5 48 64	18 19 62		
13	16	23.9		13	31.0		48.8	14	10 S	18 16	39	19 06	32 65	35 61		
14	31	23.6		27	52.7		47.2	16	20	34	18 59	28	5 15 65	18 52 59		
15	46	23.3		42	14.4		45.4	18	30	18 56	19 24	19 57	4 55 66	19 11 57		
16	61	23.1		56	36.1		43.5	19	35	19 09	39	20 15	44 66	22 57		
17	76	22.8	− 23	70	57.9	− 20	41.5	20	40	19 24	19 57	20 38	4 30 68	19 35 55		
18	91	22.5	− 23	85	19.8	− 20	39.3	22	45	19 42	20 19	21 08	4 15 68	19 50 54		
19	106	22.2		99	41.6		36.9	24	50	20 04	20 48	21 53	3 56 69	20 09 51		
20	121	21.9		114	03.5		34.3	26	52	15	21 03	22 20	47 69	18 50		
21	136	21.6		128	25.5		31.7	26	54	27	21	23 04	36 70	28 48		
22	151	21.3		142	47.4		28.8	29	56	41	21 43	** **	25 71	39 47		
23	166	21.0		157	09.5		25.8	30	58	20 57	22 12	** **	3 12 71	20 51 46		
24	181	20.7	− 23	171	31.5	− 20	22.7	31	60 S	21 18	22 59	** **	2 56 73	21 06 43		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO							
	PMG 18 ^h 28 ^m 6		Mag.: −4.0 PMG: 10 ^h 08 ^m		Mag.: +1.2 PMG: 13 ^h 58 ^m		Mag.: −2.8 PMG: 23 ^h 01 ^m		Mag.: +0.7 PMG: 8 ^h 55 ^m							
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec						
h	°	'	°	'	°	'	°	'	°	'						
0	82	05.0	208	02.8	150	26.2	13	38.5	225	49.6						
1	97	07.5	223	02.1	165	26.6	28	41.3	240	51.8						
2	112	09.9	238	01.4	180	26.9	43	44.1	255	54.1						
3	127	12.4	253	00.7	195	27.3	58	46.9	270	56.3						
4	142	14.9	268	00.0	210	27.7	73	49.7	285	58.5						
5	157	17.3	282	59.3	225	28.1	88	52.5	301	00.7						
6	172	19.8	297	58.6	240	28.5	103	55.4	316	03.0						
7	187	22.3	312	57.8	255	28.8	118	58.2	331	05.2						
8	202	24.7	327	57.1	270	29.2	134	01.0	346	07.4						
9	217	27.2	342	56.4	285	29.6	149	03.8	1	09.6						
10	232	29.6	357	55.7	300	30.0	164	06.6	16	11.9						
11	247	32.1	12	55.0	315	30.3	179	09.4	31	14.1						
12	262	34.6	27	54.3	330	30.7	194	12.2	46	16.3						
13	277	37.0	42	53.6	345	31.1	209	15.0	61	18.5						
14	292	39.5	57	52.9	0	31.5	224	17.8	76	20.8						
15	307	42.0	72	52.2	15	31.9	239	20.7	91	23.0						
16	322	44.4	87	51.5	30	32.2	254	23.5	106	25.2						
17	337	46.9	102	50.8	45	32.6	269	26.3	121	27.4						
18	352	49.4	117	50.0	60	33.0	284	29.1	136	29.7						
19	7	51.8	132	49.3	75	33.4	299	31.9	151	31.9						
20	22	54.3	147	48.6	90	33.8	314	34.7	166	34.1						
21	37	56.8	162	47.9	105	34.1	329	37.5	181	36.3						
22	52	59.2	177	47.2	120	34.5	344	40.3	196	38.6						
23	68	01.7	192	46.5	135	34.9	359	43.1	211	40.8						
24	83	04.1	207	45.8	150	35.3	14	45.9	226	43.0						
Dif	—	−7	−8		+4	+3	+28	0	+22	−1						

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VIERNES 14 DE DICIEMBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:2 PMG: 11 ^h 54 ^m 9		SD: 16:7 Edad: 0 ^d 6 PHE { 4 ^h : 61'2 12 ^h : 61'0 20 ^h : 60'8 PMG: 13 ^h 07 ^m R°: 60 ^m								Hora R°		Hora R°	
	hG ☉	Dec	hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora R°	R°	Hora R°	R°
h	° /	° /	° /		° /		°	h m	h m	h m	h m m	h m m	h m m	h m m
0	181 20.7	− 23 13.1	171 31.5	32	− 20 22.7	33	60 N	7 02	7 59	8 56	9 34 35	16 46 89		
1	196 20.4	13.2	185 53.7	31	19.4	35	58	6 55	48	39	19 38	17 00 86		
2	211 20.1	13.4	200 15.8	31	15.9	35	56	48	37	25	9 07 41	12 83		
3	226 19.8	13.5	214 38.0	32	12.3	36	54	42	28	12	8 57 42	22 81		
4	241 19.5	13.6	229 00.3	33	08.5	38	52	37	20	8 01	47 44	31 80		
5	256 19.2	− 23 13.8	243 22.7	34	− 20 04.6	39	50	6 31	7 13	7 51	8 39 45	17 39 78		
6	271 18.9	− 23 13.9	257 45.0	33	− 20 00.6	40	45	6 20	6 57	7 31	8 21 48	17 57 74		
7	286 18.6	14.1	272 07.5	35	− 19 56.4	42	40	10	44	14	8 06 50	18 11 72		
8	301 18.3	14.2	286 30.0	35	52.0	44	35	6 00	32	7 00	7 53 53	23 70		
9	316 18.0	14.3	300 52.6	36	47.5	45	30	5 52	22	6 48	42 54	34 67		
10	331 17.7	14.5	315 15.2	36	42.9	46	20	35	6 03	27	24 56	18 51 65		
11	346 17.4	− 23 14.6	329 37.9	37	− 19 38.1	48	10 N	5 19	5 46	6 08	7 07 59	19 07 62		
12	1 17.1	− 23 14.8	344 00.7	38	− 19 33.2	49	0	5 02	5 29	5 51	6 52 61	19 21 60		
13	16 16.8	14.9	358 23.5	38	28.1	51	10 S	4 44	5 11	34	37 63	36 56		
14	31 16.5	15.0	12 46.4	39	22.9	52	20	4 21	4 50	5 15	20 65	19 51 54		
15	46 16.2	15.2	27 09.4	40	17.6	53	30	3 52	26	4 53	6 01 68	20 08 51		
16	61 15.9	15.3	41 32.5	41	12.1	55	35	34	4 10	40	5 50 70	19 48		
17	76 15.6	− 23 15.4	55 55.6	41	− 19 06.5	56	40	3 11	3 52	4 25	5 38 71	20 30 47		
18	91 15.3	− 23 15.6	70 18.8	42	− 19 00.7	58	45	2 41	3 30	4 07	5 23 73	20 44 44		
19	106 15.0	15.7	84 42.1	43	− 18 54.9	58	50	1 56	3 01	3 45	5 05 76	21 00 41		
20	121 14.6	15.8	99 05.5	44	48.9	60	52	1 29	2 46	34	4 56 77	08 39		
21	136 14.3	15.9	113 29.0	45	42.7	62	54	0 46	28	22	46 79	16 38		
22	151 14.0	16.1	127 52.5	45	36.5	62	56	** **	2 06	3 08	36 80	26 35		
23	166 13.7	16.2	142 16.1	46	30.1	64	58	** **	1 37	2 52	23 83	37 32		
24	181 13.4	− 23 16.3	156 39.8	47	− 18 23.5	66	60 S	** **	0 50	2 32	4 09 85	21 49 30		
UT	ARIES PMG: 18 ^h 24 ^m 7		VENUS Mag.: −4.0 PMG: 10 ^h 09 ^m		MARTE Mag.: +1.2 PMG: 13 ^h 57 ^m		JÚPITER Mag.: −2.8 PMG: 22 ^h 57 ^m		SATURNO Mag.: +0.7 PMG: 8 ^h 52 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /				
h	° /	° /	° /		° /		° /		° /					
0	83 04.1	207 45.8	− 18 13.4	150 35.3	− 23 00.4	14 45.9	+ 21 09.9	226 43.0	− 11 59.6					
1	98 06.6	222 45.0	14.2	165 35.7	− 23 00.2	29 48.8	09.8	241 45.2	59.7					
2	113 09.1	237 44.3	15.0	180 36.0	− 22 59.9	44 51.6	09.8	256 47.5	59.8					
3	128 11.5	252 43.6	15.7	195 36.4	59.6	59 54.4	09.7	271 49.7	59.8					
4	143 14.0	267 42.9	16.5	210 36.8	59.3	74 57.2	09.7	286 51.9	− 11 59.9					
5	158 16.5	282 42.2	− 18 17.3	225 37.2	− 22 59.0	90 00.0	+ 21 09.7	301 54.1	− 12 00.0					
6	173 18.9	297 41.4	− 18 18.1	240 37.5	− 22 58.7	105 02.8	+ 21 09.6	316 56.4	− 12 00.1					
7	188 21.4	312 40.7	18.8	255 37.9	58.4	120 05.6	09.6	331 58.6	00.1					
8	203 23.9	327 40.0	19.6	270 38.3	58.1	135 08.4	09.5	347 00.8	00.2					
9	218 26.3	342 39.3	20.4	285 38.7	57.8	150 11.2	09.5	2 03.1	00.3					
10	233 28.8	357 38.6	21.2	300 39.1	57.5	165 14.0	09.5	17 05.3	00.4					
11	248 31.3	12 37.8	− 18 21.9	315 39.4	− 22 57.2	180 16.8	+ 21 09.4	32 07.5	− 12 00.4					
12	263 33.7	27 37.1	− 18 22.7	330 39.8	− 22 56.9	195 19.7	+ 21 09.4	47 09.7	− 12 00.5					
13	278 36.2	42 36.4	23.5	345 40.2	56.6	210 22.5	09.3	62 12.0	00.6					
14	293 38.6	57 35.7	24.2	0 40.6	56.3	225 25.3	09.3	77 14.2	00.6					
15	308 41.1	72 35.0	25.0	15 41.0	56.0	240 28.1	09.3	92 16.4	00.7					
16	323 43.6	87 34.2	25.8	30 41.3	55.7	255 30.9	09.2	107 18.6	00.8					
17	338 46.0	102 33.5	− 18 26.5	45 41.7	− 22 55.4	270 33.7	+ 21 09.2	122 20.9	− 12 00.9					
18	353 48.5	117 32.8	− 18 27.3	60 42.1	− 22 55.1	285 36.5	+ 21 09.1	137 23.1	− 12 00.9					
19	8 51.0	132 32.1	28.1	75 42.5	54.8	300 39.3	09.1	152 25.3	01.0					
20	23 53.4	147 31.3	28.8	90 42.9	54.5	315 42.1	09.0	167 27.6	01.1					
21	38 55.9	162 30.6	29.6	105 43.3	54.2	330 44.9	09.0	182 29.8	01.1					
22	53 58.4	177 29.9	30.4	120 43.6	53.9	345 47.7	09.0	197 32.0	01.2					
23	69 00.8	192 29.2	31.1	135 44.0	53.5	0 50.5	08.9	212 34.2	01.3					
24	84 03.3	207 28.4	− 18 31.9	150 44.4	− 22 53.2	15 53.3	+ 21 08.9	227 36.5	− 12 01.4					
Dif	—	−7	−8	+4	+3	+28	0	+22	−1					

SÁBADO 15 DE DICIEMBRE DE 2012

UT	SOL		 LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 2 PMG: 11 ^h 55 ^m 3		SD: 16 ^h 5 Edad: 1 ^d 6 PHE { 4 ^h : 60 ^h 6 12 ^h : 60 ^h 4 20 ^h : 60 ^h 1 PMG: 14 ^h 07 ^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	h m	m	h m	m			
0	181	13.4	− 23	16.3	156	39.8	− 18	23.5	60 N	14 53	15 51	16 47	10 09	24	18 15	91		
1	196	13.1		16.5	171	03.6		16.9	58	15 10	16 02	16 55	9 57	28	26	87		
2	211	12.8		16.6	185	27.5		10.1	68	25	12	17 01	48	30	35	84		
3	226	12.5		16.7	199	51.4	− 18	03.2	69	38	21	07	39	32	43	82		
4	241	12.2		16.8	214	15.5	− 17	56.2	70	49	29	13	31	34	51	79		
5	256	11.9	− 23	16.9	228	39.6	− 17	49.1	71	50	15 58	16 37	17 18	9 24	36	18 57	78	
6	271	11.6	− 23	17.1	243	03.9	− 17	41.8	73	45	16 19	16 53	17 30	9 09	40	19 11	74	
7	286	11.3		17.2	257	28.2		34.5	75	40	36	17 06	40	8 56	43	23	71	
8	301	11.0		17.3	271	52.6		27.0	77	35	16 50	18	50	46	45	33	68	
9	316	10.7		17.4	286	17.1		19.4	76	30	17 02	29	17 58	36	48	41	66	
10	331	10.4		17.5	300	41.7		11.7	77	20	23	17 47	18 15	20	51	19 56	62	
11	346	10.1	− 23	17.7	315	06.4	− 17	03.9	78	10 N	17 42	18 05	18 31	8 06	54	20 09	58	
12	1	09.8	− 23	17.8	329	31.2	− 16	56.0	79	0	17 59	18 22	18 48	7 53	57	20 21	55	
13	16	09.5		17.9	343	56.0		48.0	80	10 S	18 17	18 40	19 07	40	60	32	52	
14	31	09.2		18.0	358	21.0		39.9	81	20	35	19 00	29	25	64	45	49	
15	46	08.9		18.1	12	46.1		31.7	82	30	18 57	25	19 58	09	67	20 59	45	
16	61	08.6		18.2	27	11.3		23.3	84	35	19 10	40	20 17	7 00	69	21 07	43	
17	76	08.3	− 23	18.4	41	36.5	− 16	14.9	84	40	19 25	19 58	20 40	6 49	71	21 17	40	
18	91	08.0	− 23	18.5	56	01.9	− 16	06.4	85	45	19 43	20 21	21 10	6 36	74	21 28	36	
19	106	07.7		18.6	70	27.3	− 15	57.8	86	50	20 06	20 50	21 55	21	78	41	33	
20	121	07.4		18.7	84	52.9		49.1	87	52	17	21 05	22 23	13	80	47	31	
21	136	07.1		18.8	99	18.5		40.2	89	54	29	23	23 08	6 05	82	21 54	29	
22	151	06.8		18.9	113	44.3		31.4	88	56	20 43	21 45	** **	5 56	84	22 01	27	
23	166	06.5		19.0	128	10.1		22.4	90	58	21 00	22 15	** **	46	86	09	25	
24	181	06.2	− 23	19.1	142	36.1	− 15	13.3	91	60 S	21 20	23 03	** **	5 34	90	22 19	21	
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 18 ^h 20 ^m 8		Mag.: −4.0 PMG: 10 ^h 11 ^m		Mag.: +1.2 PMG: 13 ^h 57 ^m		Mag.: −2.8 PMG: 22 ^h 52 ^m		Mag.: +0.7 PMG: 8 ^h 48 ^m									
	hG ♂		hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec	hG ♀	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'		°	'			
0	84	03.3	207	28.4	− 18	31.9	150	44.4	− 22	53.2	15	53.3	+ 21	08.9	227	36.5	− 12	01.4
1	99	05.8	222	27.7		32.6	165	44.8		52.9	30	56.2		08.8	242	38.7		01.4
2	114	08.2	237	27.0		33.4	180	45.2		52.6	45	59.0		08.8	257	40.9		01.5
3	129	10.7	252	26.2		34.2	195	45.5		52.3	61	01.8		08.8	272	43.2		01.6
4	144	13.1	267	25.5		34.9	210	45.9		52.0	76	04.6		08.7	287	45.4		01.6
5	159	15.6	282	24.8	− 18	35.7	225	46.3	− 22	51.7	91	07.4	+ 21	08.7	302	47.6	− 12	01.7
6	174	18.1	297	24.1	− 18	36.4	240	46.7	− 22	51.4	106	10.2	+ 21	08.6	317	49.8	− 12	01.8
7	189	20.5	312	23.3		37.2	255	47.1		51.1	121	13.0		08.6	332	52.1		01.9
8	204	23.0	327	22.6		37.9	270	47.4		50.8	136	15.8		08.6	347	54.3		01.9
9	219	25.5	342	21.9		38.7	285	47.8		50.5	151	18.6		08.5	2	56.5		02.0
10	234	27.9	357	21.1		39.4	300	48.2		50.2	166	21.4		08.5	17	58.8		02.1
11	249	30.4	12	20.4	− 18	40.2	315	48.6	− 22	49.9	181	24.2	+ 21	08.4	33	01.0	− 12	02.1
12	264	32.9	27	19.7	− 18	40.9	330	49.0	− 22	49.5	196	27.0	+ 21	08.4	48	03.2	− 12	02.2
13	279	35.3	42	18.9		41.7	345	49.4		49.2	211	29.8		08.4	63	05.4		02.3
14	294	37.8	57	18.2		42.4	0	49.7		48.9	226	32.6		08.3	78	07.7		02.4
15	309	40.2	72	17.5		43.2	15	50.1		48.6	241	35.4		08.3	93	09.9		02.4
16	324	42.7	87	16.7		43.9	30	50.5		48.3	256	38.2		08.2	108	12.1		02.5
17	339	45.2	102	16.0	− 18	44.7	45	50.9	− 22	48.0	271	41.0	+ 21	08.2	123	14.4	− 12	02.6
18	354	47.6	117	15.2	− 18	45.4	60	51.3	− 22	47.7	286	43.8	+ 21	08.2	138	16.6	− 12	02.6
19	9	50.1	132	14.5		46.2	75	51.7		47.4	301	46.6		08.1	153	18.8		02.7
20	24	52.6	147	13.8		46.9	90	52.0		47.0	316	49.4		08.1	168	21.1		02.8
21	39	55.0	162	13.0		47.6	105	52.4		46.7	331	52.2		08.0	183	23.3		02.9
22	54	57.5	177	12.3		48.4	120	52.8		46.4	346	55.1		08.0	198	25.5		02.9
23	70	00.0	192	11.6		49.1	135	53.2		46.1	1	57.9		08.0	213	27.7		03.0
24	85	02.4	207	10.8	− 18	49.9	150	53.6	− 22	45.8	17	00.7	+ 21	07.9	228	30.0	− 12	03.1
Dif	—		−7		−7		+4		+3		+28		0		+22		−1	

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DOMINGO 16 DE DICIEMBRE DE 2012


UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16:3 PMG: 11 ^h 55 ^m 8		SD: 16:3 Edad: 2 ^d 6		PHE { 4 ^h : 59/8 12 ^h : 59/5 20 ^h : 59/2			R°: 52 ^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	181	06.2	− 23	19.1	142	36.1	− 15	13.3	60 N	7 04	8 01	8 59	10 33	18	19 46
1	196	05.9		19.2	157	02.1	70	− 15	04.1	58	6 57	7 49	41	25	53
2	211	05.6		19.3	171	28.3	72	− 14	54.9	56	50	39	26	18	23
3	226	05.3		19.4	185	54.5	72		45.6	54	44	30	14	11	26
4	241	04.9		19.5	200	20.9	74		36.1	52	38	22	8 03	05	28
5	256	04.6	− 23	19.6	214	47.3	74	− 14	26.7	50	6 33	7 14	7 53	10 00	30
6	271	04.3	− 23	19.8	229	13.8	75	− 14	17.1	45	6 21	6 58	7 32	9 49	33
7	286	04.0		19.9	243	40.5	77	− 14	07.4	40	11	45	16	39	37
8	301	03.7		20.0	258	07.2	77	− 13	57.7	35	6 02	33	7 01	31	40
9	316	03.4		20.1	272	34.0	78		47.9	30	5 53	23	6 49	24	42
10	331	03.1		20.2	287	01.0	80		38.1	20	36	6 04	28	11	46
11	346	02.8	− 23	20.3	301	28.0	80	− 13	28.1	10 N	5 20	5 47	6 09	9 00	50
12	1	02.5	− 23	20.3	315	55.1	81	− 13	18.1	0	5 03	5 30	5 52	8 50	53
13	16	02.2		20.4	330	22.3	82	− 13	08.0	10 S	4 44	5 12	35	40	56
14	31	01.9		20.5	344	49.6	83	− 12	57.9	20	4 22	4 51	5 16	29	60
15	46	01.6		20.6	359	17.0	84		47.7	30	3 53	26	4 54	16	64
16	61	01.3		20.7	13	44.6	86		37.4	35	34	4 11	41	09	66
17	76	01.0	− 23	20.8	28	12.2	86	− 12	27.1	40	3 11	3 53	4 26	8 00	70
18	91	00.7	− 23	20.9	42	39.9	87	− 12	16.7	45	2 41	3 30	4 08	7 50	73
19	106	00.4		21.0	57	07.6	87	− 12	06.3	50	1 56	3 01	3 45	39	76
20	121	00.1		21.1	71	35.5	89	− 11	55.8	52	1 28	2 46	35	33	79
21	135	59.8		21.2	86	03.5	90		45.2	54	0 43	28	22	27	81
22	150	59.4		21.3	100	31.6	91		34.6	56	** ** *	2 06	3 08	20	83
23	165	59.1		21.4	114	59.7	91		23.9	58	** ** *	1 36	2 51	12	86
24	180	58.8	− 23	21.5	129	28.0	93	− 11	13.2	60 S	** ** *	0 48	2 31	7 04	89
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO						
	PMG: 18 ^h 16 ^m 8		Mag.: −4.0 PMG: 10 ^h 12 ^m		Mag.: +1.2 PMG: 13 ^h 56 ^m		Mag.: −2.8 PMG: 22 ^h 48 ^m		Mag.: +0.7 PMG: 8 ^h 45 ^m						
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec					
h	°	'	°	'	°	'	°	'	°	'					
0	85	02.4	207	10.8	− 18	49.9	150	53.6	− 22	45.8					
1	100	04.9	222	10.1		50.6	165	54.0		45.5					
2	115	07.4	237	09.3		51.3	180	54.3		45.1					
3	130	09.8	252	08.6		52.1	195	54.7		44.8					
4	145	12.3	267	07.9		52.8	210	55.1		44.5					
5	160	14.7	282	07.1	− 18	53.5	225	55.5	− 22	44.2					
6	175	17.2	297	06.4	− 18	54.3	240	55.9	− 22	43.9					
7	190	19.7	312	05.6		55.0	255	56.3		43.6					
8	205	22.1	327	04.9		55.7	270	56.6		43.2					
9	220	24.6	342	04.1		56.5	285	57.0		42.9					
10	235	27.1	357	03.4		57.2	300	57.4		42.6					
11	250	29.5	12	02.6	− 18	57.9	315	57.8	− 22	42.3					
12	265	32.0	27	01.9	− 18	58.7	330	58.2	− 22	42.0					
13	280	34.5	42	01.2	− 18	59.4	345	58.6		41.6					
14	295	36.9	57	00.4	− 19	00.1	0	58.9		41.3					
15	310	39.4	71	59.7		00.8	15	59.3		41.0					
16	325	41.9	86	58.9		01.6	30	59.7		40.7					
17	340	44.3	101	58.2	− 19	02.3	46	00.1	− 22	40.3					
18	355	46.8	116	57.4	− 19	03.0	61	00.5	− 22	40.0					
19	10	49.2	131	56.7		03.7	76	00.9		39.7					
20	25	51.7	146	55.9		04.5	91	01.3		39.4					
21	40	54.2	161	55.2		05.2	106	01.6		39.0					
22	55	56.6	176	54.4		05.9	121	02.0		38.7					
23	70	59.1	191	53.7		06.6	136	02.4		38.4					
24	86	01.6	206	52.9	− 19	07.3	151	02.8	− 22	38.1					
Dif	—		−7	−7			+4	+3							
									+28	0					
										+22					
										−1					

LUNES 17 DE DICIEMBRE DE 2012

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UT	SOL		☉ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna				
	SD: 16 ^h 3		SD: 16 ^h 1		PHE { 4 ^h : 58/9												
	PMG: 11 ^h 56 ^m 3		Edad: 3 ^d 6		{ 12 ^h : 58/6												
					{ 20 ^h : 58/3												
		PMG: 15 ^h 55 ^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	180 58.8	− 23 21.5	129 28.0		− 11 13.2	107	60 N	14 53	15 51	16 48	10 51	15	21 13	85			
1	195 58.5	21.5	143 56.3	93	− 11 02.5	107	58	15 11	16 02	16 55	46 17		18 81				
2	210 58.2	21.6	158 24.8	95	− 10 51.7	108	56	25	13	17 02	41 20		21 79				
3	225 57.9	21.7	172 53.3	95	40.8	109	54	38	22	08	37 22		25 76				
4	240 57.6	21.8	187 21.9	96	29.9	109	52	49	30	14	33 24		28 74				
5	255 57.3	− 23 21.9	201 50.6	97	− 10 19.0	109	50	15 59	16 37	17 19	10 30	26	21 31	72			
6	270 57.0	− 23 22.0	216 19.4	98	− 10 08.0	110	45	16 20	16 53	17 31	10 22	30	21 37	68			
7	285 56.7	22.0	230 48.3	99	− 9 56.9	111	40	36	17 07	41	16 33		42 65				
8	300 56.4	22.1	245 17.2	99	45.9	110	35	16 51	19	50	11 35		46 62				
9	315 56.1	22.2	259 46.3	101	34.8	111	30	17 03	29	17 59	10 06	38	50 59				
10	330 55.8	22.3	274 15.4	101	23.6	112	20	24	17 48	18 16	9 57	42	21 56	55			
11	345 55.5	− 23 22.4	288 44.7	103	− 9 12.4	112	10 N	17 43	18 05	18 32	9 50	46	22 02	51			
12	0 55.2	− 23 22.4	303 14.0	103	− 9 01.2	112	0	18 00	18 23	18 49	9 43	49	22 07	48			
13	15 54.8	22.5	317 43.3	103	− 8 50.0	112	10 S	18	18 41	19 08	36 53		12 45				
14	30 54.5	22.6	332 12.8	105	38.7	113	20	37	19 01	30	29 56		18 40				
15	45 54.2	22.7	346 42.4	106	27.4	113	30	18 59	26	19 59	20 61		24 36				
16	60 53.9	22.7	1 12.0	106	16.1	113	35	19 12	19 41	20 18	15 64		27 34				
17	75 53.6	− 23 22.8	15 41.7	107	− 8 04.7	114	40	19 27	20 00	20 41	9 10	66	22 31	32			
18	90 53.3	− 23 22.9	30 11.5	108	− 7 53.3	114	45	19 45	20 22	21 12	9 03	70	22 36	28			
19	105 53.0	23.0	44 41.4	109	41.9	114	50	20 07	20 52	21 57	8 55	74	41 25				
20	120 52.7	23.0	59 11.3	109	30.5	114	52	18	21 07	22 25	52 75		44 23				
21	135 52.4	23.1	73 41.3	110	19.0	115	54	30	25	23 11	48 77		47 20				
22	150 52.1	23.2	88 11.4	111	− 7 07.5	115	56	20 45	21 47	** **	43 80		50 18				
23	165 51.8	23.3	102 41.6	112	− 6 56.0	115	58	21 01	22 17	** **	38 83		53 16				
24	180 51.5	− 23 23.3	117 11.8	112	− 6 44.5	115	60 S	21 22	23 07	** **	8 33	85	22 57	14			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO								
	PMG 18 ^h 12 ^m 9		Mag.: −4.0 PMG: 10 ^h 13 ^m		Mag.: +1.2 PMG: 13 ^h 55 ^m		Mag.: −2.8 PMG: 22 ^h 43 ^m		Mag.: +0.7 PMG: 8 ^h 41 ^m								
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec					
h	°	'	°	'	°	'	°	'	°	'	°	'	°	'	°	'	
0	86 01.6	206 52.9	− 19 07.3	151 02.8	− 22 38.1	18 07.9	+ 21 07.0	229 23.5	− 12 04.7								
1	101 04.0	221 52.2	08.1	166 03.2	37.7	33 10.7	06.9	244 25.8	04.8								
2	116 06.5	236 51.4	08.8	181 03.6	37.4	48 13.5	06.9	259 28.0	04.9								
3	131 09.0	251 50.7	09.5	196 04.0	37.1	63 16.3	06.8	274 30.2	05.0								
4	146 11.4	266 49.9	10.2	211 04.3	36.7	78 19.1	06.8	289 32.5	05.0								
5	161 13.9	281 49.2	− 19 10.9	226 04.7	− 22 36.4	93 21.9	+ 21 06.8	304 34.7	− 12 05.1								
6	176 16.4	296 48.4	− 19 11.6	241 05.1	− 22 36.1	108 24.7	+ 21 06.7	319 36.9	− 12 05.2								
7	191 18.8	311 47.6	12.3	256 05.5	35.8	123 27.5	06.7	334 39.2	05.2								
8	206 21.3	326 46.9	13.0	271 05.9	35.4	138 30.3	06.6	349 41.4	05.3								
9	221 23.7	341 46.1	13.8	286 06.3	35.1	153 33.1	06.6	4 43.6	05.4								
10	236 26.2	356 45.4	14.5	301 06.7	34.8	168 35.9	06.6	19 45.9	05.4								
11	251 28.7	11 44.6	− 19 15.2	316 07.0	− 22 34.4	183 38.7	+ 21 06.5	34 48.1	− 12 05.5								
12	266 31.1	26 43.9	− 19 15.9	331 07.4	− 22 34.1	198 41.5	+ 21 06.5	49 50.3	− 12 05.6								
13	281 33.6	41 43.1	16.6	346 07.8	33.8	213 44.3	06.5	64 52.6	05.6								
14	296 36.1	56 42.3	17.3	1 08.2	33.4	228 47.1	06.4	79 54.8	05.7								
15	311 38.5	71 41.6	18.0	16 08.6	33.1	243 49.8	06.4	94 57.0	05.8								
16	326 41.0	86 40.8	18.7	31 09.0	32.8	258 52.6	06.3	109 59.3	05.9								
17	341 43.5	101 40.1	− 19 19.4	46 09.4	− 22 32.4	273 55.4	+ 21 06.3	125 01.5	− 12 05.9								
18	356 45.9	116 39.3	− 19 20.1	61 09.8	− 22 32.1	288 58.2	+ 21 06.3	140 03.7	− 12 06.0								
19	11 48.4	131 38.5	20.8	76 10.1	31.8	304 01.0	06.2	155 06.0	06.1								
20	26 50.8	146 37.8	21.5	91 10.5	31.4	319 03.8	06.2	170 08.2	06.1								
21	41 53.3	161 37.0	22.2	106 10.9	31.1	334 06.6	06.1	185 10.5	06.2								
22	56 55.8	176 36.3	22.9	121 11.3	30.8	349 09.4	06.1	200 12.7	06.3								
23	71 58.2	191 35.5	23.6	136 11.7	30.4	4 12.2	06.1	215 14.9	06.3								
24	87 00.7	206 34.7	− 19 24.3	151 12.1	− 22 30.1	19 15.0	+ 21 06.0	230 17.2	− 12 06.4								
Dif	—	−8	−7	+4	+3	+28	0	+22	−1								

MIÉRCOL 19 DE DICIEMBRE DE 2012

UT	SOL		 LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna					
	SD: 16 ^h 3 PMG: 11 ^h 57 ^m 3		SD: 15 ^h 6 Edad: 5 ^d 6 PMG: 17 ^h 30 ^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	h m	m	h m	m			
0	180	44.1	− 23	24.7	105	37.3	− 2 04.9	60 N	14 54	15 51	16 48	11 19	12	23 58	79			
1	195	43.7		24.8	120	09.0	127 − 1 53.3	58	15 11	16 03	16 56		19 15	57	76			
2	210	43.4		24.8	134	40.9	129 41.6	56		13	17 03		19 17	56	73			
3	225	43.1		24.9	149	12.7	128 30.0	54		39	22 09		19 19	55	71			
4	240	42.8		24.9	163	44.7	130 18.3	52	15 50	31	14 17		19 21	54	69			
5	255	42.5	− 23	24.9	178	16.6	129 − 1 06.7	50	16 00	16 38	17 20	11 19	22	23 53	67			
6	270	42.2	− 23	25.0	192	48.6	130 − 0 55.1	45	16 20	16 54	17 32	11 19	26	23 51	64			
7	285	41.9		25.0	207	20.7	131 43.5	40		37	17 08		19 29	49	61			
8	300	41.6		25.1	221	52.8	131 31.9	35	16 51	20	17 51		19 32	48	58			
9	315	41.3		25.1	236	24.9	131 20.3	30	17 04	30	18 00		19 34	47	55			
10	330	41.0		25.2	250	57.1	132 − 0 08.8	20		25	17 49		19 38	45	51			
11	345	40.7	− 23	25.2	265	29.3	132 + 0 02.8	10 N	17 44	18 06	18 33	11 19	42	23 43	48			
12	0	40.3	− 23	25.2	280	01.6	133 + 0 14.3	0	18 01	18 24	18 50	11 19	45	23 41	45			
13	15	40.0		25.3	294	33.9	133 25.9	10 S		19	18 42		19 49	39	41			
14	30	39.7		25.3	309	06.2	133 37.4	20	18 38	19 02	19 31		19 52	37	38			
15	45	39.4		25.3	323	38.6	134 + 0 48.8	30	19 00		27 20 01		19 57	35	34			
16	60	39.1		25.4	338	11.0	134 + 1 00.3	35		13	19 43		19 20	58	34			
17	75	38.8	− 23	25.4	352	43.5	135 + 1 11.8	40	19 28	20 01	20 42	11 20	61	23 32	29			
18	90	38.5	− 23	25.5	7	16.0	135 + 1 23.2	45	19 46	20 23	21 13	11 20	64	23 31	26			
19	105	38.2		25.5	21	48.5	135 34.6	50	20 08	20 53	21 59		20 68	29	22			
20	120	37.9		25.5	36	21.0	135 46.0	52		19	21 08		22 27	28	21			
21	135	37.6		25.6	50	53.6	136 + 1 57.4	54		32	26 23 14		20 72	27	19			
22	150	37.2		25.6	65	26.2	136 + 2 08.7	56	20 46	21 49	*** **		20 74	26	17			
23	165	36.9		25.6	79	58.8	136 20.0	58	21 03	22 19	*** **		20 77	24	16			
24	180	36.6	− 23	25.6	94	31.5	137 + 2 31.3	60 S	21 23	23 10	*** **	11 20	80	23 23	13			
UT	ARIES PMG 18 ^h 05 ^m 0		VENUS Mag.: −3.9 PMG: 10 ^h 15 ^m		MARTE Mag.: +1.2 PMG: 13 ^h 54 ^m		JÚPITER Mag.: −2.8 PMG: 22 ^h 34 ^m		SATURNO Mag.: +0.7 PMG: 8 ^h 34 ^m									
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	87	59.8	206	16.3	− 19	40.7	151	21.4	− 22	21.8	20	22.0	+ 21	05.1	231	10.8	− 12	08.0
1	103	02.3	221	15.5		41.4	166	21.8		21.5	35	24.8		05.0	246	13.1		08.1
2	118	04.8	236	14.7		42.0	181	22.2		21.1	50	27.6		05.0	261	15.3		08.2
3	133	07.2	251	13.9		42.7	196	22.6		20.8	65	30.4		05.0	276	17.6		08.2
4	148	09.7	266	13.2		43.4	211	23.0		20.4	80	33.2		04.9	291	19.8		08.3
5	163	12.2	281	12.4	− 19	44.1	226	23.4	− 22	20.1	95	36.0	+ 21	04.9	306	22.0	− 12	08.4
6	178	14.6	296	11.6	− 19	44.7	241	23.8	− 22	19.7	110	38.8	+ 21	04.8	321	24.3	− 12	08.4
7	193	17.1	311	10.8		45.4	256	24.2		19.4	125	41.6		04.8	336	26.5		08.5
8	208	19.6	326	10.1		46.1	271	24.6		19.0	140	44.4		04.8	351	28.7		08.6
9	223	22.0	341	09.3		46.7	286	24.9		18.7	155	47.1		04.7	6	31.0		08.6
10	238	24.5	356	08.5		47.4	301	25.3		18.3	170	49.9		04.7	21	33.2		08.7
11	253	26.9	11	07.7	− 19	48.0	316	25.7	− 22	18.0	185	52.7	+ 21	04.7	36	35.5	− 12	08.8
12	268	29.4	26	06.9	− 19	48.7	331	26.1	− 22	17.6	200	55.5	+ 21	04.6	51	37.7	− 12	08.8
13	283	31.9	41	06.2		49.4	346	26.5		17.3	215	58.3		04.6	66	39.9		08.9
14	298	34.3	56	05.4		50.0	1	26.9		16.9	231	01.1		04.5	81	42.2		09.0
15	313	36.8	71	04.6		50.7	16	27.3		16.6	246	03.9		04.5	96	44.4		09.0
16	328	39.3	86	03.8		51.3	31	27.7		16.2	261	06.7		04.5	111	46.7		09.1
17	343	41.7	101	03.0	− 19	52.0	46	28.1	− 22	15.9	276	09.4	+ 21	04.4	126	48.9	− 12	09.2
18	358	44.2	116	02.2	− 19	52.7	61	28.5	− 22	15.5	291	12.2	+ 21	04.4	141	51.1	− 12	09.2
19	13	46.7	131	01.5		53.3	76	28.9		15.1	306	15.0		04.3	156	53.4		09.3
20	28	49.1	146	00.7		54.0	91	29.3		14.8	321	17.8		04.3	171	55.6		09.4
21	43	51.6	160	59.9		54.6	106	29.7		14.4	336	20.6		04.3	186	57.9		09.4
22	58	54.1	175	59.1		55.3	121	30.1		14.1	351	23.4		04.2	202	00.1		09.5
23	73	56.5	190	58.3		55.9	136	30.4		13.7	6	26.2		04.2	217	02.3		09.6
24	88	59.0	205	57.5	− 19	56.6	151	30.8	− 22	13.4	21	29.0	+ 21	04.2	232	04.6	− 12	09.6
Dif	—		−8		−7		+4		+4		+28		0		+22		−1	

VIERNES 21 DE DICIEMBRE DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 11 ^h 58 ^m 3		SD: 15 ^h 1 Edad: 7 ^d 6		PHE $\left\{ \begin{array}{l} 4^{\text{h}}: 55'/4 \\ 12^{\text{h}}: 55'/2 \\ 20^{\text{h}}: 55'/0 \end{array} \right.$									
			PMG: 18 ^h 59 ^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	h m m	
0	180 29.2	− 23 26.1	83 41.5	+	6 53.4	60 N	14 54	15 52	16 49	11 44 15	1 17 76			
1	195 28.9	26.1	98 14.6 ¹⁴¹	+	7 03.8 ¹⁰⁴	58	15 12	16 04	16 57	49 17	13 73			
2	210 28.6	26.1	112 47.7 ¹⁴¹		14.3 ¹⁰⁵	56	27	14	17 03	54 19	09 71			
3	225 28.2	26.1	127 20.8 ¹⁴¹		24.7 ¹⁰⁴	54	39	23	10	11 57 22	06 69			
4	240 27.9	26.1	141 53.9 ¹⁴¹		35.0 ¹⁰³	52	15 51	32	15	12 01 23	03 67			
5	255 27.6	− 23 26.1	156 27.0 ¹⁴¹	+	7 45.3 ¹⁰³	50	16 01	16 39	17 21	12 04 25	1 00 66			
6	270 27.3	− 23 26.1	171 00.1 ¹⁴¹	+	7 55.6 ¹⁰³	45	16 21	16 55	17 32	12 11 28	0 55 62			
7	285 27.0	26.1	185 33.2 ¹⁴¹	+	8 05.8 ¹⁰²	40	38	17 09	43	17 31	50 59			
8	300 26.7	26.1	200 06.3 ¹⁴¹		16.0 ¹⁰²	35	16 52	21	17 52	22 33	46 57			
9	315 26.4	26.1	214 39.4 ¹⁴¹		26.1 ¹⁰¹	30	17 05	31	18 01	27 35	42 55			
10	330 26.1	26.1	229 12.5 ¹⁴¹		36.2 ¹⁰¹	20	26	17 50	18	35 38	36 51			
11	345 25.8	− 23 26.1	243 45.6 ¹⁴¹	+	8 46.2 ¹⁰⁰	10 N	17 45	18 07	18 34	12 42 42	0 31 47			
12	0 25.5	− 23 26.1	258 18.8 ¹⁴²	+	8 56.2 ¹⁰⁰	0	18 02	18 25	18 51	12 49 44	0 26 44			
13	15 25.1	26.1	272 51.9 ¹⁴¹	+	9 06.2 ¹⁰⁰	10 S	20	18 43	19 10	12 55 48	20 42			
14	30 24.8	26.1	287 25.0 ¹⁴¹		16.1 ⁹⁹	20	18 39	19 03	19 33	13 02 51	15 38			
15	45 24.5	26.1	301 58.1 ¹⁴¹		25.9 ⁹⁸	30	19 01	28	20 02	11 54	09 34			
16	60 24.2	26.1	316 31.2 ¹⁴¹		35.8 ⁹⁹	35	14	19 44	20	15 57	05 33			
17	75 23.9	− 23 26.1	331 04.3 ¹⁴¹	+	9 45.5 ⁹⁷	40	19 29	20 02	20 44	13 21 58	0 01 30			
18	90 23.6	− 23 26.1	345 37.4 ¹⁴¹	+	9 55.2 ⁹⁷	45	19 47	20 24	21 14	13 27 62	*** ** *			
19	105 23.3	26.1	0 10.4 ¹⁴⁰	+	10 04.9 ⁹⁶	50	20 10	20 54	22 00	35 65	*** ** *			
20	120 23.0	26.1	14 43.5 ¹⁴¹		14.5 ⁹⁶	52	20	21 09	22 28	38 67	*** ** *			
21	135 22.7	26.1	29 16.6 ¹⁴¹		24.0 ⁹⁵	54	33	27	23 15	42 68	*** ** *			
22	150 22.3	26.1	43 49.7 ¹⁴¹		33.5 ⁹⁵	56	20 47	21 50	*** **	46 71	*** ** *			
23	165 22.0	26.1	58 22.7 ¹⁴⁰		43.0 ⁹⁵	58	21 04	22 20	*** **	51 73	23 56 18			
24	180 21.7	− 23 26.1	72 55.8 ¹⁴¹	+	10 52.4 ⁹⁴	60 S	21 24	23 11	*** **	13 57 75	23 50 16			
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG: 17 ^h 57 ^m 2		Mag.: −3.9 PMG: 10 ^h 18 ^m		Mag.: +1.2 PMG: 13 ^h 53 ^m		Mag.: −2.8 PMG: 22 ^h 25 ^m		Mag.: +0.7 PMG: 8 ^h 27 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	° /	° /	° /		° /		° /		° /					
0	89 58.1	205 38.5	− 20 11.9	151 40.3	− 22 04.6	22 35.8	+ 21 03.2	232 58.4	− 12 11.2					
1	105 00.6	220 37.7	12.5	166 40.7	04.2	37 38.5	03.2	248 00.6	11.3					
2	120 03.0	235 36.9	13.1	181 41.1	03.9	52 41.3	03.2	263 02.9	11.4					
3	135 05.5	250 36.1	13.8	196 41.5	03.5	67 44.1	03.1	278 05.1	11.4					
4	150 08.0	265 35.3	14.4	211 41.9	03.1	82 46.9	03.1	293 07.3	11.5					
5	165 10.4	280 34.5	− 20 15.0	226 42.3	− 22 02.8	97 49.7	+ 21 03.1	308 09.6	− 12 11.6					
6	180 12.9	295 33.7	− 20 15.6	241 42.7	− 22 02.4	112 52.4	+ 21 03.0	323 11.8	− 12 11.6					
7	195 15.4	310 32.9	16.2	256 43.1	02.0	127 55.2	03.0	338 14.1	11.7					
8	210 17.8	325 32.1	16.9	271 43.5	01.6	142 58.0	02.9	353 16.3	11.7					
9	225 20.3	340 31.3	17.5	286 43.9	01.3	158 00.8	02.9	8 18.6	11.8					
10	240 22.8	355 30.5	18.1	301 44.3	00.9	173 03.6	02.9	23 20.8	11.9					
11	255 25.2	10 29.7	− 20 18.7	316 44.7	− 22 00.5	188 06.3	+ 21 02.8	38 23.1	− 12 11.9					
12	270 27.7	25 28.9	− 20 19.3	331 45.1	− 22 00.2	203 09.1	+ 21 02.8	53 25.3	− 12 12.0					
13	285 30.2	40 28.1	19.9	346 45.5	− 21 59.8	218 11.9	02.8	68 27.5	12.1					
14	300 32.6	55 27.3	20.6	1 45.9	59.4	233 14.7	02.7	83 29.8	12.1					
15	315 35.1	70 26.5	21.2	16 46.3	59.0	248 17.5	02.7	98 32.0	12.2					
16	330 37.5	85 25.7	21.8	31 46.7	58.7	263 20.2	02.6	113 34.3	12.3					
17	345 40.0	100 24.9	− 20 22.4	46 47.1	− 21 58.3	278 23.0	+ 21 02.6	128 36.5	− 12 12.3					
18	0 42.5	115 24.1	− 20 23.0	61 47.5	− 21 57.9	293 25.8	+ 21 02.6	143 38.8	− 12 12.4					
19	15 44.9	130 23.3	23.6	76 47.9	57.5	308 28.6	02.5	158 41.0	12.5					
20	30 47.4	145 22.5	24.2	91 48.3	57.1	323 31.3	02.5	173 43.3	12.5					
21	45 49.9	160 21.7	24.8	106 48.7	56.8	338 34.1	02.5	188 45.5	12.6					
22	60 52.3	175 20.9	25.4	121 49.1	56.4	353 36.9	02.4	203 47.7	12.7					
23	75 54.8	190 20.0	26.0	136 49.5	56.0	8 39.7	02.4	218 50.0	12.7					
24	90 57.3	205 19.2	− 20 26.6	151 49.9	− 21 55.6	23 42.4	+ 21 02.3	233 52.2	− 12 12.8					
Dif	—	−8	−6	+4	+4	+28	0	+22	−1					

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SÁBADO 22 DE DICIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 3 PMG: 11 ^h 58 ^m 8		SD: 15 ^h 0 Edad: 8 ^d 6 PHE { 4 ^h : 54 ^m 9 12 ^h : 54 ^m 7 20 ^h : 54 ^m 6 PMG: 19 ^h 44 ^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	h m	h m					
0	180	21.7	− 23	26.1	72	55.8	+ 10	52.4	60 N	7 08	8 05	9 03	11 59	18	2 33	74		
1	195	21.4		26.1	87	28.8	+ 11	01.7	58	7 00	7 53	8 45	12 06	21	26	72		
2	210	21.1		26.1	102	01.8		11.0	56	6 54	43	30	13 22		20	70		
3	225	20.8		26.0	116	34.8		20.3	54	47	34	18	19 24		15	67		
4	240	20.5		26.0	131	07.9		29.4	52	42	25	8 06	24 26		10	66		
5	255	20.2	− 23	26.0	145	40.8	+ 11	38.6	50	6 36	7 18	7 57	12 29	27	2 06	64		
6	270	19.9	− 23	26.0	160	13.8	+ 11	47.6	45	6 25	7 02	7 36	12 39	31	1 57	60		
7	285	19.6		26.0	174	46.8	+ 11	56.6	40	14	6 48	19	48 33		49	58		
8	300	19.2		26.0	189	19.8	+ 12	05.6	35	6 05	37	7 05	12 55	35	43	55		
9	315	18.9		26.0	203	52.7		14.5	30	5 56	26	6 52	13 02	37	37	54		
10	330	18.6		25.9	218	25.6		23.3	20	40	6 07	31	13 40		27	50		
11	345	18.3	− 23	25.9	232	58.5	+ 12	32.1	10 N	5 23	5 50	6 13	13 24	42	1 18	48		
12	0	18.0	− 23	25.9	247	31.4	+ 12	40.8	0	5 06	5 32	5 55	13 33	45	1 10	45		
13	15	17.7		25.9	262	04.3		49.5	10 S	4 47	5 14	37	43 47		1 02	42		
14	30	17.4		25.9	276	37.2	+ 12	58.1	20	4 25	4 54	5 18	13 53	50	0 53	39		
15	45	17.1		25.8	291	10.0	+ 13	06.6	30	3 55	29	4 56	14 05	53	43	36		
16	60	16.8		25.8	305	42.9		15.1	35	37	4 14	43	12 55		38	34		
17	75	16.4	− 23	25.8	320	15.7	+ 13	23.5	40	3 14	3 55	4 28	14 19	58	0 31	32		
18	90	16.1	− 23	25.8	334	48.5	+ 13	31.9	45	2 43	3 33	4 10	14 29	59	0 24	29		
19	105	15.8		25.7	349	21.3		40.2	50	1 57	3 03	3 48	40 63		15	26		
20	120	15.5		25.7	3	54.0		48.4	52	1 29	2 48	37	45 64		11	24		
21	135	15.2		25.7	18	26.8	+ 13	56.6	54	0 42	30	24	50 67		06	23		
22	150	14.9		25.7	32	59.5	+ 14	04.7	56	** **	2 07	3 10	14 57	68	0 01	21		
23	165	14.6		25.6	47	32.2		12.7	58	** **	1 37	2 53	15 04	70	** **	** **		
24	180	14.3	− 23	25.6	62	04.9	+ 14	20.7	60 S	** **	0 46	2 33	15 12	73	** **	** **		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG: 17 ^h 53 ^m 2		Mag.: −3.9 PMG: 10 ^h 19 ^m		Mag.: +1.2 PMG: 13 ^h 52 ^m		Mag.: −2.8 PMG: 22 ^h 21 ^m		Mag.: +0.7 PMG: 8 ^h 23 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec								
h	°	'	°	'	°	'	°	'	°	'								
0	90	57.3	205	19.2	− 20	26.6	151	49.9	− 21	55.6	23	42.4	+ 21	02.3	233	52.2	− 12	12.8
1	105	59.7	220	18.4		27.2	166	50.3		55.2	38	45.2		02.3	248	54.5		12.8
2	121	02.2	235	17.6		27.8	181	50.7		54.9	53	48.0		02.3	263	56.7		12.9
3	136	04.7	250	16.8		28.4	196	51.1		54.5	68	50.8		02.2	278	59.0		13.0
4	151	07.1	265	16.0		29.0	211	51.5		54.1	83	53.6		02.2	294	01.2		13.0
5	166	09.6	280	15.2	− 20	29.6	226	51.9	− 21	53.7	98	56.3	+ 21	02.2	309	03.5	− 12	13.1
6	181	12.0	295	14.4	− 20	30.2	241	52.3	− 21	53.3	113	59.1	+ 21	02.1	324	05.7	− 12	13.2
7	196	14.5	310	13.6		30.8	256	52.7		53.0	129	01.9		02.1	339	08.0		13.2
8	211	17.0	325	12.8		31.4	271	53.1		52.6	144	04.7		02.0	354	10.2		13.3
9	226	19.4	340	11.9		32.0	286	53.5		52.2	159	07.4		02.0	9	12.4		13.4
10	241	21.9	355	11.1		32.6	301	53.9		51.8	174	10.2		02.0	24	14.7		13.4
11	256	24.4	10	10.3	− 20	33.2	316	54.3	− 21	51.4	189	13.0	+ 21	01.9	39	16.9	− 12	13.5
12	271	26.8	25	09.5	− 20	33.8	331	54.7	− 21	51.0	204	15.7	+ 21	01.9	54	19.2	− 12	13.6
13	286	29.3	40	08.7		34.4	346	55.1		50.7	219	18.5		01.9	69	21.4		13.6
14	301	31.8	55	07.9		35.0	1	55.5		50.3	234	21.3		01.8	84	23.7		13.7
15	316	34.2	70	07.1		35.6	16	55.9		49.9	249	24.1		01.8	99	25.9		13.7
16	331	36.7	85	06.2		36.1	31	56.3		49.5	264	26.8		01.8	114	28.2		13.8
17	346	39.1	100	05.4	− 20	36.7	46	56.7	− 21	49.1	279	29.6	+ 21	01.7	129	30.4	− 12	13.9
18	1	41.6	115	04.6	− 20	37.3	61	57.1	− 21	48.7	294	32.4	+ 21	01.7	144	32.7	− 12	13.9
19	16	44.1	130	03.8		37.9	76	57.5		48.3	309	35.2		01.6	159	34.9		14.0
20	31	46.5	145	03.0		38.5	91	57.9		47.9	324	37.9		01.6	174	37.2		14.1
21	46	49.0	160	02.2		39.1	106	58.3		47.6	339	40.7		01.6	189	39.4		14.1
22	61	51.5	175	01.3		39.6	121	58.7		47.2	354	43.5		01.5	204	41.7		14.2
23	76	53.9	190	00.5		40.2	136	59.1		46.8	9	46.2		01.5	219	43.9		14.3
24	91	56.4	204	59.7	− 20	40.8	151	59.5	− 21	46.4	24	49.0	+ 21	01.5	234	46.2	− 12	14.3
Dif	—	—	−8	—	−6	—	+4	—	+4	—	+28	—	0	—	+22	—	—	—

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LUNES 24 DE DICIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna	
	SD: 16:3 PMG: 11 ^h 59 ^m 8		SD: 14:8 Edad: 10 ^d 6		PHE { 4 ^h : 54:2 12 ^h : 54:1 20 ^h : 54:1									
	PMG: 21 ^h 16 ^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	m	h m	m
0	180 06.8	− 23 24.6	51 02.2		+ 17 11.3	62	60 N	7 09	8 06	9 03	12 40 30	4 58 67		
1	195 06.5	24.6	65 34.3	131	17.5	61	58	7 01	7 54	8 46	12 52 32	47 64		
2	210 06.2	24.5	80 06.3	130	23.6	61	56	6 54	44	31	13 03 33	36 63		
3	225 05.9	24.5	94 38.4	131	29.6	60	54	48	35	18	12 35	27 62		
4	240 05.6	24.4	109 10.4	130	35.6	60	52	43	26	8 07	20 36	19 60		
5	255 05.3	− 23 24.4	123 42.3	129	+ 17 41.4	58	50	6 37	7 19	7 57	13 28 37	4 12 59		
6	270 05.0	− 23 24.3	138 14.3	130	+ 17 47.2	58	45	6 26	7 03	7 37	13 44 39	3 57 56		
7	285 04.7	24.3	152 46.2	129	52.9	57	40	15	6 49	20	13 57 41	44 55		
8	300 04.3	24.2	167 18.1	129	+ 17 58.6	57	35	6 06	37	7 06	14 09 41	33 54		
9	315 04.0	24.2	181 50.0	129	+ 18 04.1	55	30	5 57	27	6 53	18 43	24 52		
10	330 03.7	24.1	196 21.8	128	09.6	55	20	40	6 08	32	36 44	3 08 50		
11	345 03.4	− 23 24.0	210 53.6	128	+ 18 15.0	54	10 N	5 24	5 51	6 13	14 50 46	2 54 48		
12	0 03.1	− 23 24.0	225 25.4	128	+ 18 20.3	53	0	5 07	5 33	5 56	15 04 48	2 40 47		
13	15 02.8	23.9	239 57.1	127	25.5	52	10 S	4 48	5 15	38	19 48	27 45		
14	30 02.5	23.9	254 28.9	128	30.7	52	20	4 26	4 55	5 19	34 50	2 13 44		
15	45 02.2	23.8	269 00.6	127	35.7	50	30	3 57	30	4 57	15 51 52	1 57 41		
16	60 01.9	23.7	283 32.3	127	40.7	50	35	38	4 15	44	16 01 53	48 40		
17	75 01.6	− 23 23.7	298 03.9	126	+ 18 45.6	49	40	3 15	3 56	4 29	16 13 54	1 38 38		
18	90 01.3	− 23 23.6	312 35.5	126	+ 18 50.4	48	45	2 44	3 34	4 11	16 26 56	1 25 37		
19	105 00.9	23.5	327 07.1	126	55.1	47	50	1 58	3 04	3 49	43 57	10 34		
20	120 00.6	23.5	341 38.7	126	+ 18 59.8	47	52	1 31	2 49	38	16 51 58	1 03 33		
21	135 00.3	23.4	356 10.3	126	+ 19 04.3	45	54	0 44	31	26	17 00 59	0 55 32		
22	150 00.0	23.4	10 41.8	125	08.8	45	56	** ** *	2 09	3 11	10 60	47 30		
23	164 59.7	23.3	25 13.3	125	13.2	44	58	** ** *	1 39	2 54	21 62	37 28		
24	179 59.4	− 23 23.2	39 44.8	125	+ 19 17.5	43	60 S	** ** *	0 48	2 34	17 34 64	0 26 26		
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 17 ^h 45 ^m 4		Mag.: −3.9 PMG: 10 ^h 22 ^m		Mag.: +1.2 PMG: 13 ^h 51 ^m		Mag.: −2.8 PMG: 22 ^h 12 ^m		Mag.: +0.7 PMG: 8 ^h 16 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec		
h	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "		
0	92 55.5	204 39.9	− 20 54.4	152 09.2	− 21 36.9	25 55.4	+ 21 00.6	235 40.1	− 12 15.8					
1	107 58.0	219 39.1	54.9	167 09.6	36.5	40 58.2	00.6	250 42.4	15.9					
2	123 00.5	234 38.3	55.5	182 10.0	36.1	56 01.0	00.5	265 44.6	15.9					
3	138 02.9	249 37.4	56.0	197 10.4	35.7	71 03.7	00.5	280 46.9	16.0					
4	153 05.4	264 36.6	56.6	212 10.8	35.3	86 06.5	00.4	295 49.1	16.1					
5	168 07.9	279 35.8	− 20 57.1	227 11.2	− 21 34.9	101 09.3	+ 21 00.4	310 51.4	− 12 16.1					
6	183 10.3	294 34.9	− 20 57.7	242 11.6	− 21 34.5	116 12.0	+ 21 00.4	325 53.6	− 12 16.2					
7	198 12.8	309 34.1	58.2	257 12.0	34.1	131 14.8	00.3	340 55.9	16.3					
8	213 15.2	324 33.3	58.8	272 12.4	33.7	146 17.6	00.3	355 58.1	16.3					
9	228 17.7	339 32.4	59.3	287 12.8	33.3	161 20.3	00.3	11 00.4	16.4					
10	243 20.2	354 31.6	− 20 59.9	302 13.2	32.9	176 23.1	00.2	26 02.7	16.4					
11	258 22.6	9 30.8	− 21 00.4	317 13.7	− 21 32.5	191 25.9	+ 21 00.2	41 04.9	− 12 16.5					
12	273 25.1	24 29.9	− 21 00.9	332 14.1	− 21 32.1	206 28.6	+ 21 00.2	56 07.2	− 12 16.6					
13	288 27.6	39 29.1	01.5	347 14.5	31.7	221 31.4	00.1	71 09.4	16.6					
14	303 30.0	54 28.3	02.0	2 14.9	31.3	236 34.1	00.1	86 11.7	16.7					
15	318 32.5	69 27.4	02.6	17 15.3	30.9	251 36.9	00.1	101 13.9	16.7					
16	333 35.0	84 26.6	03.1	32 15.7	30.5	266 39.7	00.0	116 16.2	16.8					
17	348 37.4	99 25.7	− 21 03.6	47 16.1	− 21 30.0	281 42.4	+ 21 00.0	131 18.4	− 12 16.9					
18	3 39.9	114 24.9	− 21 04.2	62 16.5	− 21 29.6	296 45.2	+ 21 00.0	146 20.7	− 12 16.9					
19	18 42.4	129 24.1	04.7	77 16.9	29.2	311 47.9	+ 20 59.9	161 22.9	17.0					
20	33 44.8	144 23.2	05.2	92 17.3	28.8	326 50.7	59.9	176 25.2	17.1					
21	48 47.3	159 22.4	05.8	107 17.7	28.4	341 53.5	59.8	191 27.4	17.1					
22	63 49.7	174 21.6	06.3	122 18.1	28.0	356 56.2	59.8	206 29.7	17.2					
23	78 52.2	189 20.7	06.8	137 18.5	27.6	11 59.0	59.8	221 31.9	17.2					
24	93 54.7	204 19.9	− 21 07.4	152 19.0	− 21 27.2	27 01.8	+ 20 59.7	236 34.2	− 12 17.3					
Dif	—	−8	−5	+4	+4	+28	0	+23	−1					

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MIÉRCOL 26 DE DICIEMBRE DE 2012

UT	SOL			☾ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna			
	SD: 16'3 PMG: 12 ^h 00 ^m 8			SD: 14'7 Edad: 12 ^d 6 PHE { 4 ^h : 54'0 12 ^h : 54'0 20 ^h : 54'0 PMG: 22 ^h 52 ^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	h m m	h m m	h m m		
0	179	52.0	- 23	21.3	28	13.3	+ 20	33.6	60 N	7 09	8 06	9 04	13 50	50	7 04	49	
1	194	51.7		21.2	42	44.3	120	35.6	58	7 02	7 54	8 46	14 05	50	6 49	49	
2	209	51.4		21.1	57	15.2	119	37.5	56	6 55	44	31	18 50		36	49	
3	224	51.1		21.0	71	46.1	119	39.3	54	49	35	19	29 50		24	50	
4	239	50.8		21.0	86	17.0	119	41.1	52	43	27	8 08	39 50		15	49	
5	254	50.5	- 23	20.9	100	47.9	119	42.7	50	6 38	7 20	7 58	14 48	50	6 06	49	
6	269	50.1	- 23	20.8	115	18.7	118	44.2	45	6 26	7 03	7 37	15 07	50	5 47	49	
7	284	49.8		20.7	129	49.6	119	45.7	40	16	6 50	21	23 49		31	49	
8	299	49.5		20.6	144	20.4	118	47.0	35	6 07	38	7 06	36 49		18	49	
9	314	49.2		20.5	158	51.3	119	48.3	30	5 58	28	6 54	15 47	50	5 07	49	
10	329	48.9		20.4	173	22.1	118	49.4	20	41	6 09	33	16 07	49	4 48	48	
11	344	48.6	- 23	20.3	187	52.9	118	+ 20	50.5	5 25	5 52	6 14	16 24	49	4 31	48	
12	359	48.3	- 23	20.2	202	23.6	117	+ 20	51.4	5 08	5 34	5 57	16 40	48	4 15	48	
13	14	48.0		20.1	216	54.4	118		52.3	4 49	5 16	39	16 56	48	3 59	48	
14	29	47.7		20.0	231	25.2	118		53.1	4 27	4 56	5 21	17 13	48	42	48	
15	44	47.4		19.9	245	55.9	117		53.7	3 58	31	4 59	33 47		23	48	
16	59	47.1		19.8	260	26.7	118		54.3	39	4 16	46	44 47		3 12	47	
17	74	46.8	- 23	19.7	274	57.4	117	+ 20	54.8	3 16	3 58	4 31	17 57	47	2 59	47	
18	89	46.5	- 23	19.6	289	28.1	117	+ 20	55.2	2 46	3 35	4 13	18 13	47	2 43	47	
19	104	46.2		19.5	303	58.8	117		55.5	2 00	3 06	3 50	32 46		24	47	
20	119	45.8		19.4	318	29.5	117		55.6	1 33	2 51	39	41 46		16	46	
21	134	45.5		19.3	333	00.2	117		55.7	0 47	33	27	18 52	45	2 06	46	
22	149	45.2		19.2	347	30.9	117		55.7	** **	2 10	3 13	19 03	45	1 54	46	
23	164	44.9		19.1	2	01.6	117		55.6	** **	1 41	2 56	16 45		41	46	
24	179	44.6	- 23	19.0	16	32.3	117	+ 20	55.4	** **	0 51	2 36	19 32	44	1 26	45	
UT	ARIES PMG 17 ^h 37 ^m 5		VENUS Mag.: -3.9 PMG: 10 ^h 25 ^m		MARTE Mag.: +1.2 PMG: 13 ^h 50 ^m		JÚPITER Mag.: -2.8 PMG: 22 ^h 03 ^m		SATURNO Mag.: +0.6 PMG: 8 ^h 09 ^m								
	hG ♈		hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec							
	°	'	°	'	°	'	°	'	°	'							
h	°	'	°	'	°	'	°	'	°	'							
0	94	53.8	203	59.6	- 21	19.7	152	28.8	- 21	17.2	28 07.9	+ 20	58.9	237	28.3	- 12	18.8
1	109	56.3	218	58.7		20.2	167	29.2		16.8	43 10.7		58.9	252	30.6		18.8
2	124	58.7	233	57.9		20.7	182	29.6		16.4	58 13.4		58.8	267	32.8		18.9
3	140	01.2	248	57.0		21.2	197	30.1		16.0	73 16.2		58.8	282	35.1		18.9
4	155	03.7	263	56.2		21.7	212	30.5		15.5	88 18.9		58.8	297	37.3		19.0
5	170	06.1	278	55.3	- 21	22.2	227	30.9	- 21	15.1	103 21.7	+ 20	58.7	312	39.6	- 12	19.1
6	185	08.6	293	54.5	- 21	22.7	242	31.3	- 21	14.7	118 24.4	+ 20	58.7	327	41.8	- 12	19.1
7	200	11.1	308	53.6		23.2	257	31.7		14.3	133 27.2		58.7	342	44.1		19.2
8	215	13.5	323	52.8		23.7	272	32.1		13.8	148 29.9		58.6	357	46.4		19.2
9	230	16.0	338	51.9		24.2	287	32.5		13.4	163 32.7		58.6	12	48.6		19.3
10	245	18.5	353	51.1		24.7	302	32.9		13.0	178 35.4		58.6	27	50.9		19.4
11	260	20.9	8	50.2	- 21	25.2	317	33.4	- 21	12.6	193 38.2	+ 20	58.5	42	53.1	- 12	19.4
12	275	23.4	23	49.4	- 21	25.7	332	33.8	- 21	12.1	208 40.9	+ 20	58.5	57	55.4	- 12	19.5
13	290	25.9	38	48.5		26.2	347	34.2		11.7	223 43.7		58.5	72	57.6		19.5
14	305	28.3	53	47.7		26.7	2	34.6		11.3	238 46.4		58.4	87	59.9		19.6
15	320	30.8	68	46.8		27.1	17	35.0		10.9	253 49.2		58.4	103	02.2		19.7
16	335	33.2	83	45.9		27.6	32	35.4		10.4	268 51.9		58.4	118	04.4		19.7
17	350	35.7	98	45.1	- 21	28.1	47	35.8	- 21	10.0	283 54.7	+ 20	58.3	133	06.7	- 12	19.8
18	5	38.2	113	44.2	- 21	28.6	62	36.3	- 21	09.6	298 57.4	+ 20	58.3	148	08.9	- 12	19.8
19	20	40.6	128	43.4		29.1	77	36.7		09.2	314 00.2		58.3	163	11.2		19.9
20	35	43.1	143	42.5		29.6	92	37.1		08.7	329 02.9		58.2	178	13.4		19.9
21	50	45.6	158	41.7		30.0	107	37.5		08.3	344 05.7		58.2	193	15.7		20.0
22	65	48.0	173	40.8		30.5	122	37.9		07.9	359 08.4		58.2	208	18.0		20.1
23	80	50.5	188	39.9		31.0	137	38.3		07.4	14 11.2		58.1	223	20.2		20.1
24	95	53.0	203	39.1	- 21	31.5	152	38.8	- 21	07.0	29 13.9	+ 20	58.1	238	22.5	- 12	20.2
Dif	—		-9		-5		+4		+4		+28		0	+23		-1	

JUEVES 27 DE DICIEMBRE DE 2012

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UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 01 ^m 3		SD: 14 ^h 7 Edad: 13 ^d 6 PHE { 4 ^h : 54 ^h /1 12 ^h : 54 ^h /1 20 ^h : 54 ^h /2 PMG: 23 ^h 40 ^m R°: 48 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	179 44.6	− 23 19.0	16 32.3		+ 20 55.4		[°] 60 N	^{h m} 14 59	^{h m} 15 57	^{h m} 16 53	^{h m} 14 40	^{h m} 61	^{h m} 7 53	^m 39
1	194 44.3		31 03.0	117	55.1	3	58	15 16	16 08	17 01	14 55	60		38 40
2	209 44.0		45 33.7	117	54.7		56	31	18	07	15 08	59	25	44
3	224 43.7		60 04.3	116	54.2	5	54	44	27	14	19 58		14	44
4	239 43.4		74 35.0	117	53.6	6	52	15 55	35	19	29 57		7 04	42
5	254 43.1	− 23 18.4	89 05.6	116	+ 20 52.9	7	50	16 04	16 43	17 24	15 38	56	6 55	43
6	269 42.8	− 23 18.3	103 36.3	117	+ 20 52.1	8	45	16 25	16 59	17 36	15 57	55	6 36	44
7	284 42.5		118 07.0	117	51.2	9	40	42	17 12	46	16 12	54	20	45
8	299 42.2		132 37.6	116	50.2	10	35	16 56	24	17 56	25 53		6 07	46
9	314 41.9		147 08.3	117	49.2	10	30	17 08	34	18 04	37 51		5 56	46
10	329 41.6		161 38.9	116	48.0	12	20	29	17 53	21	16 56	50	36	47
11	344 41.3	− 23 17.7	176 09.6	117	+ 20 46.7	13	10 N	17 48	18 10	18 37	17 13	49	5 19	48
12	359 40.9	− 23 17.6	190 40.3	117	+ 20 45.3	14	0	18 05	18 28	18 54	17 28	49	5 03	49
13	14 40.6		205 10.9	116	43.8	15	10 S	23	18 46	19 13	17 44	47	4 47	50
14	29 40.3		219 41.6	117	42.3	15	20	18 41	19 06	19 35	18 01	46	30	50
15	44 40.0		234 12.2	116	40.6	17	30	19 03	31	20 04	20 45		4 11	50
16	59 39.7		248 42.9	117	38.8	18	35	16	19 46	23	31 44		3 59	51
17	74 39.4	− 23 17.0	263 13.6	117	+ 20 36.9	19	40	19 31	20 04	20 46	18 44	43	3 46	52
18	89 39.1	− 23 16.9	277 44.3	117	+ 20 35.0	19	45	19 49	20 26	21 16	19 00	41	3 30	53
19	104 38.8		292 15.0	117	32.9	20	50	20 11	20 56	22 01	18 40		11	53
20	119 38.5		306 45.6	116	30.8	21	52	22	21 11	22 28	27 39		3 02	54
21	134 38.2		321 16.3	117	28.5	23	54	34	29	23 12	37 38		2 52	54
22	149 37.9		335 47.0	117	26.2	23	56	20 49	21 51	** **	19 48	37		40 55
23	164 37.6		350 17.7	117	23.7	25	58	21 05	22 20	** **	20 01	36		27 55
24	179 37.3	− 23 16.1	4 48.5	118	+ 20 21.2	25	60 S	21 25	23 08	** **	20 16	34	2 11	56
UT	ARIES PMG 17 ^h 33 ^m 6		VENUS Mag.: −3.9 PMG: 10 ^h 26 ^m		MARTE Mag.: +1.2 PMG: 13 ^h 49 ^m		JÚPITER Mag.: −2.8 PMG: 21 ^h 59 ^m		SATURNO Mag.: +0.6 PMG: 8 ^h 05 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
	^h 0	95 53.0	203 39.1	− 21 31.5		152 38.8	− 21 07.0	29 13.9	+ 20 58.1	238 22.5	− 12 20.2			
1	110 55.4	218 38.2		32.0	167 39.2	06.6	44 16.7	58.1	253 24.7		20.2			
2	125 57.9	233 37.4		32.4	182 39.6	06.1	59 19.4	58.0	268 27.0		20.3			
3	141 00.3	248 36.5		32.9	197 40.0	05.7	74 22.2	58.0	283 29.3		20.4			
4	156 02.8	263 35.6		33.4	212 40.4	05.3	89 24.9	58.0	298 31.5		20.4			
5	171 05.3	278 34.8	− 21 33.9		227 40.8	− 21 04.9	104 27.7	+ 20 57.9	313 33.8	− 12 20.5				
6	186 07.7	293 33.9	− 21 34.3		242 41.3	− 21 04.4	119 30.4	+ 20 57.9	328 36.0	− 12 20.5				
7	201 10.2	308 33.1		34.8	257 41.7	04.0	134 33.2	57.9	343 38.3		20.6			
8	216 12.7	323 32.2		35.3	272 42.1	03.6	149 35.9	57.8	358 40.6		20.7			
9	231 15.1	338 31.3		35.7	287 42.5	03.1	164 38.7	57.8	373 42.8		20.7			
10	246 17.6	353 30.5		36.2	302 42.9	02.7	179 41.4	57.8	388 45.1		20.8			
11	261 20.1	8 29.6	− 21 36.7		317 43.3	− 21 02.3	194 44.1	+ 20 57.7	403 47.3	− 12 20.8				
12	276 22.5	23 28.7	− 21 37.1		332 43.8	− 21 01.8	209 46.9	+ 20 57.7	418 49.6	− 12 20.9				
13	291 25.0	38 27.9		37.6	347 44.2	01.4	224 49.6	57.7	433 51.9		20.9			
14	306 27.5	53 27.0		38.0	2 44.6	00.9	239 52.4	57.6	448 54.1		21.0			
15	321 29.9	68 26.1		38.5	17 45.0	00.5	254 55.1	57.6	463 56.4		21.1			
16	336 32.4	83 25.3		39.0	32 45.4	− 21 00.1	269 57.9	57.6	478 58.6		21.1			
17	351 34.8	98 24.4	− 21 39.4		47 45.9	− 20 59.6	285 00.6	+ 20 57.5	493 00.9	− 12 21.2				
18	6 37.3	113 23.6	− 21 39.9		62 46.3	− 20 59.2	300 03.4	+ 20 57.5	508 03.2	− 12 21.2				
19	21 39.8	128 22.7		40.3	77 46.7	58.8	315 06.1	57.5	523 05.4		21.3			
20	36 42.2	143 21.8		40.8	92 47.1	58.3	330 08.8	57.4	538 07.7		21.4			
21	51 44.7	158 20.9		41.3	107 47.5	57.9	345 11.6	57.4	553 09.9		21.4			
22	66 47.2	173 20.1		41.7	122 47.9	57.4	0 14.3	57.4	568 12.2		21.5			
23	81 49.6	188 19.2		42.2	137 48.4	57.0	15 17.1	57.3	583 14.5		21.5			
24	96 52.1	203 18.3	− 21 42.6		152 48.8	− 20 56.6	30 19.8	+ 20 57.3	598 16.7	− 12 21.6				
Dif	—	−9	−5		+4	+4	+27	0	+23	−1				

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VIERNES 28 DE DICIEMBRE DE 2012

UT	SOL			☉ LUNA			Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna		
	SD: 16'3 PMG: 12 ^h 01 ^m 8			SD: 14'8 Edad: 14 ^d 6											
				PHE { 4 ^h : 54'2 12 ^h : 54'3 20 ^h : 54'4											
	hG ☉	Dec		hG ☾	Dif	Dec	Dif		Náutico	Civil		Hora	R°	Hora	R°
h	°	'	°	°	'	°	'	°	h	m	h	m	h	m	m
0	179	37.3	− 23 16.1	4	48.5	+ 20 21.2	27	60 N	7 09	8 06	9 03	15 41	69	8 32	30
1	194	37.0	16.0	19	19.2	18.5	27	58	7 02	7 55	8 46	15 55	66	18	32
2	209	36.7	15.9	33	49.9	15.8	27	56	6 55	44	32	16 07	64	8 06	33
3	224	36.4	15.7	48	20.7	13.0	28	54	49	35	19	17 63	7	55	35
4	239	36.1	15.6	62	51.4	10.0	30	52	44	27	8 08	26 62		46	36
5	254	35.8	− 23 15.5	77	22.2	+ 20 07.0	30	50	6 38	7 20	7 58	16 34	61	7 38	37
6	269	35.5	− 23 15.3	91	52.9	+ 20 03.9	31	45	6 27	7 04	7 38	16 52	58	7 20	39
7	284	35.2	15.2	106	23.7	+ 20 00.7	32	40	17	6 51	21	17 06	56	7 05	41
8	299	34.9	15.1	120	54.5	+ 19 57.4	33	35	6 07	39	7 07	18 55	6	53	42
9	314	34.5	14.9	135	25.3	54.0	34	30	5 59	28	6 55	28 54		42	43
10	329	34.2	14.8	149	56.1	50.5	35	20	42	6 10	34	17 46	52	23	45
11	344	33.9	− 23 14.7	164	27.0	+ 19 46.9	36	10 N	5 26	5 53	6 15	18 02	50	6 07	47
12	359	33.6	− 23 14.5	178	57.8	+ 19 43.2	37	0	5 09	5 35	5 58	18 17	47	5 52	48
13	14	33.3	14.4	193	28.7	39.5	37	10 S	4 50	5 18	41	31 46		37	49
14	29	33.0	14.3	207	59.5	35.6	39	20	4 28	4 57	22	18 47	44	20	51
15	44	32.7	14.1	222	30.4	31.6	40	30	3 59	32	5 00	19 05	41	5 01	53
16	59	32.4	14.0	237	01.3	27.6	40	35	41	4 17	4 47	15 40	4	50	54
17	74	32.1	− 23 13.8	251	32.3	+ 19 23.4	42	40	3 18	3 59	4 32	19 27	39	4 38	55
18	89	31.8	− 23 13.7	266	03.2	+ 19 19.2	42	45	2 47	3 37	4 14	19 41	37	4 23	56
19	104	31.5	13.6	280	34.1	14.9	43	50	2 02	3 07	3 52	19 58	34	4 04	59
20	119	31.2	13.4	295	05.1	10.4	45	52	1 35	2 52	41	20 06	33	3 56	59
21	134	30.9	13.3	309	36.1	05.9	45	54	0 51	35	29	15 32		46	60
22	149	30.6	13.1	324	07.1	+ 19 01.3	46	56	** **	2 13	3 15	25 30		35	62
23	164	30.3	13.0	338	38.1	+ 18 56.6	47	58	** **	1 43	2 58	37 28		22	64
24	179	30.0	− 23 12.8	353	09.1	+ 18 51.9	47	60 S	** **	0 56	2 38	20 50	25	3 07	66

UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO					
	PMG 17 ^h 29 ^m 7		Mag.: −3.9 PMG: 10 ^h 27 ^m		Mag.: +1.2 PMG: 13 ^h 48 ^m		Mag.: −2.7 PMG: 21 ^h 55 ^m		Mag.: +0.6 PMG: 8 ^h 02 ^m					
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec				
h	°	'	°	'	°	'	°	'	°	'				
0	96	52.1	203	18.3	− 21 42.6	152	48.8	− 20 56.6	30	19.8	+ 20 57.3	239	16.7	− 12 21.6
1	111	54.6	218	17.5	43.1	167	49.2	56.1	45	22.5	57.3	254	19.0	21.6
2	126	57.0	233	16.6	43.5	182	49.6	55.7	60	25.3	57.2	269	21.3	21.7
3	141	59.5	248	15.7	44.0	197	50.0	55.2	75	28.0	57.2	284	23.5	21.8
4	157	02.0	263	14.9	44.4	212	50.5	54.8	90	30.8	57.2	299	25.8	21.8
5	172	04.4	278	14.0	− 21 44.8	227	50.9	− 20 54.4	105	33.5	+ 20 57.1	314	28.0	− 12 21.9
6	187	06.9	293	13.1	− 21 45.3	242	51.3	− 20 53.9	120	36.3	+ 20 57.1	329	30.3	− 12 21.9
7	202	09.3	308	12.3	45.7	257	51.7	53.5	135	39.0	57.1	344	32.6	22.0
8	217	11.8	323	11.4	46.2	272	52.1	53.0	150	41.7	57.0	359	34.8	22.0
9	232	14.3	338	10.5	46.6	287	52.6	52.6	165	44.5	57.0	14	37.1	22.1
10	247	16.7	353	09.6	47.1	302	53.0	52.1	180	47.2	57.0	29	39.4	22.2
11	262	19.2	8	08.8	− 21 47.5	317	53.4	− 20 51.7	195	49.9	+ 20 56.9	44	41.6	− 12 22.2
12	277	21.7	23	07.9	− 21 47.9	332	53.8	− 20 51.3	210	52.7	+ 20 56.9	59	43.9	− 12 22.3
13	292	24.1	38	07.0	48.4	347	54.3	50.8	225	55.4	56.9	74	46.1	22.3
14	307	26.6	53	06.2	48.8	2	54.7	50.4	240	58.2	56.8	89	48.4	22.4
15	322	29.1	68	05.3	49.2	17	55.1	49.9	256	00.9	56.8	104	50.7	22.4
16	337	31.5	83	04.4	49.7	32	55.5	49.5	271	03.6	56.8	119	52.9	22.5
17	352	34.0	98	03.5	− 21 50.1	47	55.9	− 20 49.0	286	06.4	+ 20 56.7	134	55.2	− 12 22.6
18	7	36.5	113	02.7	− 21 50.5	62	56.4	− 20 48.6	301	09.1	+ 20 56.7	149	57.5	− 12 22.6
19	22	38.9	128	01.8	51.0	77	56.8	48.1	316	11.9	56.7	164	59.7	22.7
20	37	41.4	143	00.9	51.4	92	57.2	47.7	331	14.6	56.6	180	02.0	22.7
21	52	43.8	158	00.0	51.8	107	57.6	47.2	346	17.3	56.6	195	04.3	22.8
22	67	46.3	172	59.2	52.3	122	58.1	46.8	1	20.1	56.6	210	06.5	22.8
23	82	48.8	187	58.3	52.7	137	58.5	46.3	16	22.8	56.5	225	08.8	22.9
24	97	51.2	202	57.4	− 21 53.1	152	58.9	− 20 45.9	31	25.5	+ 20 56.5	240	11.0	− 12 23.0
Dif	—		−9		−4	+4		+4	+27		0	+23		−1

SÁBADO 29 DE DICIEMBRE DE 2012

UT	SOL		☾ LUNA				Latitud	Puesta de Sol	Crepúsculos		Salida de Luna		Puesta de Luna	
	SD: 16 ^h 3 PMG: 12 ^h 02 ^m 2		SD: 14 ^h 8 Edad: 15 ^d 6 PMG: 0 ^h 28 ^m R°: 48 ^m											
	hG ☉	Dec	hG ☾	Dif	Dec	Dif			Civil	Náutico	Hora	R°	Hora	R°
^h 0	179 30.0	− 23 12.8	353 09.1		+ 18 51.9		60 N	15 01	15 59	16 55	16 50	74	9 02	22
1	194 29.7	12.7	7 40.2	121	47.0	49	58	19	16 10	17 03	17 01	72	8 50	25
2	209 29.4	12.5	22 11.3	121	42.0	50	56	33	20	09	11 69		39	27
3	224 29.1	12.4	36 42.3	120	37.0	50	54	45	29	15	20 67		30	29
4	239 28.8	12.2	51 13.5	122	31.8	52	52	15 56	37	21	28 65		22	30
5	254 28.5	− 23 12.1	65 44.6	121	+ 18 26.6	52	50	16 06	16 44	17 26	17 35	64	8 15	31
6	269 28.2	− 23 11.9	80 15.7	121	+ 18 21.3	53	45	16 27	17 00	17 38	17 50	61	7 59	34
7	284 27.9	11.8	94 46.9	122	15.9	54	40	43	14	48	18 02	59	46	37
8	299 27.6	11.6	109 18.1	122	10.4	55	35	16 57	25	17 57	13 56		35	38
9	314 27.3	11.5	123 49.3	122	+ 18 04.9	55	30	17 09	36	18 06	22 55		25	40
10	329 27.0	11.3	138 20.5	122	+ 17 59.2	57	20	30	17 54	22	38 52		7 08	43
11	344 26.7	− 23 11.2	152 51.8	123	+ 17 53.5	57	10 N	17 49	18 12	18 38	18 52	49	6 54	45
12	359 26.4	− 23 11.0	167 23.0	122	+ 17 47.6	59	0	18 06	18 28	18 55	19 04	47	6 40	47
13	14 26.1	10.8	181 54.3	123	41.7	59	10 S	23	18 46	19 13	17 45		26	49
14	29 25.8	10.7	196 25.6	123	35.7	60	20	18 42	19 07	19 36	31 42		6 11	52
15	44 25.5	10.5	210 57.0	124	29.6	61	30	19 04	31	20 05	46 39		5 54	54
16	59 25.2	10.4	225 28.3	123	23.5	61	35	17	19 46	23	19 55	37	44	56
17	74 24.9	− 23 10.2	239 59.7	124	+ 17 17.2	63	40	19 32	20 04	20 46	20 06	35	5 33	57
18	89 24.6	− 23 10.0	254 31.1	124	+ 17 10.9	63	45	19 49	20 27	21 16	20 18	32	5 19	60
19	104 24.3	09.9	269 02.5	124	+ 17 04.5	64	50	20 12	20 56	22 00	32 30		5 03	62
20	119 24.0	09.7	283 34.0	125	+ 16 58.0	65	52	22	21 11	22 27	39 28		4 55	64
21	134 23.7	09.6	298 05.4	124	51.4	66	54	34	28	23 09	47 26		46	66
22	149 23.4	09.4	312 36.9	125	44.8	66	56	20 48	21 50	** **	20 55	25	37	67
23	164 23.1	09.2	327 08.4	125	38.1	67	58	21 05	22 19	** **	21 05	22	26	69
24	179 22.8	− 23 09.1	341 40.0	126	+ 16 31.3	68	60 S	21 25	23 04	** **	21 15	20	4 13	72
UT	ARIES PMG 17 ^h 25 ^m 7		VENUS Mag.: −3.9 PMG: 10 ^h 29 ^m		MARTE Mag.: +1.2 PMG: 13 ^h 48 ^m		JÚPITER Mag.: −2.7 PMG: 21 ^h 50 ^m		SATURNO Mag.: +0.6 PMG: 7 ^h 58 ^m					
	hG ♂	Dec	hG ♀	Dec	hG ♂	Dec	hG ♀	Dec	hG ♀	Dec				
	°	'	°	'	°	'	°	'	°	'				
^h 0	97 51.2	202 57.4	− 21 53.1		152 58.9	− 20 45.9		31 25.5	+ 20 56.5		240 11.0	− 12 23.0		
1	112 53.7	217 56.5	53.5		167 59.3	45.4		46 28.3	56.5		255 13.3	23.0		
2	127 56.2	232 55.6	53.9		182 59.7	45.0		61 31.0	56.5		270 15.6	23.1		
3	142 58.6	247 54.8	54.4		198 00.2	44.5		76 33.7	56.4		285 17.8	23.1		
4	158 01.1	262 53.9	54.8		213 00.6	44.1		91 36.5	56.4		300 20.1	23.2		
5	173 03.6	277 53.0	− 21 55.2		228 01.0	− 20 43.6		106 39.2	+ 20 56.4		315 22.4	− 12 23.2		
6	188 06.0	292 52.1	− 21 55.6		243 01.4	− 20 43.2		121 41.9	+ 20 56.3		330 24.6	− 12 23.3		
7	203 08.5	307 51.2	56.0		258 01.9	42.7		136 44.7	56.3		345 26.9	23.4		
8	218 11.0	322 50.4	56.5		273 02.3	42.3		151 47.4	56.3		0 29.2	23.4		
9	233 13.4	337 49.5	56.9		288 02.7	41.8		166 50.1	56.2		15 31.4	23.5		
10	248 15.9	352 48.6	57.3		303 03.1	41.4		181 52.9	56.2		30 33.7	23.5		
11	263 18.3	7 47.7	− 21 57.7		318 03.6	− 20 40.9		196 55.6	+ 20 56.2		45 36.0	− 12 23.6		
12	278 20.8	22 46.8	− 21 58.1		333 04.0	− 20 40.5		211 58.3	+ 20 56.1		60 38.2	− 12 23.6		
13	293 23.3	37 46.0	58.5		348 04.4	40.0		227 01.1	56.1		75 40.5	23.7		
14	308 25.7	52 45.1	58.9		3 04.8	39.6		242 03.8	56.1		90 42.8	23.7		
15	323 28.2	67 44.2	59.3		18 05.3	39.1		257 06.5	56.0		105 45.0	23.8		
16	338 30.7	82 43.3	− 21 59.7		33 05.7	38.6		272 09.3	56.0		120 47.3	23.9		
17	353 33.1	97 42.4	− 22 00.1		48 06.1	− 20 38.2		287 12.0	+ 20 56.0		135 49.6	− 12 23.9		
18	8 35.6	112 41.5	− 22 00.5		63 06.5	− 20 37.7		302 14.7	+ 20 55.9		150 51.8	− 12 24.0		
19	23 38.1	127 40.7	01.0		78 07.0	37.3		317 17.4	55.9		165 54.1	24.0		
20	38 40.5	142 39.8	01.4		93 07.4	36.8		332 20.2	55.9		180 56.4	24.1		
21	53 43.0	157 38.9	01.8		108 07.8	36.4		347 22.9	55.9		195 58.6	24.1		
22	68 45.4	172 38.0	02.2		123 08.2	35.9		2 25.6	55.8		211 00.9	24.2		
23	83 47.9	187 37.1	02.6		138 08.7	35.4		17 28.4	55.8		226 03.2	24.3		
24	98 50.4	202 36.2	− 22 03.0		153 09.1	− 20 35.0		32 31.1	+ 20 55.8		241 05.4	− 12 24.3		
Dif	—	−9	−4		+4	+5		+27	0		+23	−1		

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DOMINGO 30 DE DICIEMBRE DE 2012

UT	SOL		☉ LUNA				Latitud	Crepúsculos		Salida de Sol	Salida de Luna		Puesta de Luna					
	SD: 16 ^h 3		SD: 14 ^h 9		PHE { 4 ^h : 54 ^h 8 12 ^h : 54 ^h 9 20 ^h : 55 ^h 0													
	PMG: 12 ^h 02 ^m 7		Edad: 16 ^d 6		PMG: 1 ^h 16 ^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	179	22.8	− 23	09.1	341	40.0	+ 16	7 10	8 06	9 03	18 04	76	9 24	18				
1	194	22.5		08.9	356	11.5	125	7 02	7 55	8 46	13 74		15 20					
2	209	22.2		08.7	10	43.1	126	6 56	45	32	20 72		9 06	23				
3	224	21.9		08.6	25	14.7	126	50	36	19	27 70		8 59	24				
4	239	21.6		08.4	39	46.3	126	44	28	8 08	33 68		52 26					
5	254	21.3	− 23	08.2	54	18.0	127	6 39	7 20	7 59	18 39	66	8 46	28				
6	269	21.0	− 23	08.1	68	49.7	127	6 27	7 04	7 38	18 51	63	8 33	31				
7	284	20.7		07.9	83	21.4	127	17	6 51	22	19 01	60	23 33					
8	299	20.4		07.7	97	53.1	127	6 08	40	7 08	09 58		13 36					
9	314	20.1		07.5	112	24.8	127	5 59	29	6 55	17 55		8 05	38				
10	329	19.8		07.4	126	56.6	128	43	6 11	34	30 51		7 51	41				
11	344	19.5	− 23	07.2	141	28.3	127	5 27	5 53	6 16	19 41	48	7 39	43				
12	359	19.2	− 23	07.0	156	00.1	128	5 10	5 36	5 59	19 51	46	7 27	46				
13	14	18.9		06.8	170	32.0	129	4 52	5 19	42	20 02	43	15 49					
14	29	18.6		06.7	185	03.8	128	29	4 58	23	13 40		7 03	52				
15	44	18.3		06.5	199	35.7	129	4 00	34	5 01	25 37		6 48	55				
16	59	18.0		06.3	214	07.6	129	3 42	19	4 48	32 35		40 57					
17	74	17.7	− 23	06.1	228	39.5	129	3 19	4 01	4 33	20 41	32	6 30	60				
18	89	17.4	− 23	05.9	243	11.4	129	2 49	3 38	4 16	20 50	30	6 19	62				
19	104	17.1		05.8	257	43.4	130	2 05	3 09	3 53	21 02	26	6 05	65				
20	119	16.8		05.6	272	15.4	130	1 38	2 54	43	07 25		5 59	67				
21	134	16.5		05.4	286	47.4	130	0 56	37	31	13 23		52 68					
22	149	16.2		05.2	301	19.4	130	** ** *	2 15	17	20 21		44 70					
23	164	15.9		05.0	315	51.4	130	** ** *	1 47	3 00	27 19		35 73					
24	179	15.6	− 23	04.8	330	23.5	131	** ** *	1 01	2 40	21 35	16	5 25	75				
UT	ARIES		VENUS		MARTE		JÚPITER		SATURNO									
	PMG 17 ^h 21 ^m 8		Mag.: −3.9 PMG: 10 ^h 30 ^m		Mag.: +1.2 PMG: 13 ^h 47 ^m		Mag.: −2.7 PMG: 21 ^h 46 ^m		Mag.: +0.6 PMG: 7 ^h 54 ^m									
	hG ♈	Dec	hG ♀	Dec	hG ♂	Dec	hG ♃	Dec	hG ♄	Dec	hG ♅	Dec						
h	°	'	°	'	°	'	°	'	°	'	°	'						
0	98	50.4	202	36.2	− 22	03.0	153	09.1	− 20	35.0	32	31.1	+ 20	55.8	241	05.4	− 12	24.3
1	113	52.8	217	35.4		03.3	168	09.5		34.5	47	33.8		55.7	256	07.7		24.4
2	128	55.3	232	34.5		03.7	183	10.0		34.1	62	36.6		55.7	271	10.0		24.4
3	143	57.8	247	33.6		04.1	198	10.4		33.6	77	39.3		55.7	286	12.2		24.5
4	159	00.2	262	32.7		04.5	213	10.8		33.1	92	42.0		55.6	301	14.5		24.5
5	174	02.7	277	31.8	− 22	04.9	228	11.2	− 20	32.7	107	44.7	+ 20	55.6	316	16.8	− 12	24.6
6	189	05.2	292	30.9	− 22	05.3	243	11.7	− 20	32.2	122	47.5	+ 20	55.6	331	19.0	− 12	24.6
7	204	07.6	307	30.0		05.7	258	12.1		31.8	137	50.2		55.5	346	21.3		24.7
8	219	10.1	322	29.1		06.1	273	12.5		31.3	152	52.9		55.5	1	23.6		24.8
9	234	12.6	337	28.3		06.5	288	13.0		30.8	167	55.6		55.5	16	25.8		24.8
10	249	15.0	352	27.4		06.9	303	13.4		30.4	182	58.4		55.5	31	28.1		24.9
11	264	17.5	7	26.5	− 22	07.2	318	13.8	− 20	29.9	198	01.1	+ 20	55.4	46	30.4	− 12	24.9
12	279	19.9	22	25.6	− 22	07.6	333	14.2	− 20	29.4	213	03.8	+ 20	55.4	61	32.7	− 12	25.0
13	294	22.4	37	24.7		08.0	348	14.7		29.0	228	06.5		55.4	76	34.9		25.0
14	309	24.9	52	23.8		08.4	3	15.1		28.5	243	09.3		55.3	91	37.2		25.1
15	324	27.3	67	22.9		08.8	18	15.5		28.1	258	12.0		55.3	106	39.5		25.1
16	339	29.8	82	22.0		09.2	33	16.0		27.6	273	14.7		55.3	121	41.7		25.2
17	354	32.3	97	21.1	− 22	09.5	48	16.4	− 20	27.1	288	17.4	+ 20	55.2	136	44.0	− 12	25.2
18	9	34.7	112	20.2	− 22	09.9	63	16.8	− 20	26.7	303	20.2	+ 20	55.2	151	46.3	− 12	25.3
19	24	37.2	127	19.4		10.3	78	17.2		26.2	318	22.9		55.2	166	48.5		25.4
20	39	39.7	142	18.5		10.7	93	17.7		25.7	333	25.6		55.2	181	50.8		25.4
21	54	42.1	157	17.6		11.0	108	18.1		25.3	348	28.3		55.1	196	53.1		25.5
22	69	44.6	172	16.7		11.4	123	18.5		24.8	3	31.1		55.1	211	55.3		25.5
23	84	47.1	187	15.8		11.8	138	19.0		24.3	18	33.8		55.1	226	57.6		25.6
24	99	49.5	202	14.9	− 22	12.1	153	19.4	− 20	23.9	33	36.5	+ 20	55.0	241	59.9	− 12	25.6
Dif	—		−9		−4		+4		+5		+27		0		+23		−1	

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ESTRELLAS, 2012
POSICIONES APARENTES

A.S.★

Nº	NOMBRE		Mag	Ene	Feb	Mar	Abr	May	Jun	Jul	Agt	Sep	Oct	Nov	Dic
1 - α And.	<i>Alpheratz</i>		2.1	357 [°]	44.7	44.7	44.8	44.7	44.5	44.3	44.0	43.8	43.7	43.6	43.8
2 - β Cas.	<i>Caph</i>		2.3	357	32.5	32.7	32.7	32.6	32.4	32.0	31.6	31.3	31.1	31.2	31.4
3 - γ Peg.	<i>Algenib</i>		2.8	356	32.0	32.1	32.1	32.0	31.8	31.6	31.4	31.2	31.1	31.0	31.1
4 - α Phe.	<i>Ankaa</i>		2.4	353	16.8	16.9	16.9	16.9	16.7	16.5	16.2	16.0	15.8	15.8	16.0
5 - α Cas.	<i>Schedar</i>		2.2	349	41.8	42.0	42.1	42.0	41.8	41.5	41.1	40.8	40.6	40.5	40.7
6 - β Cet.	<i>Diphda</i>		2.0	348	56.9	57.0	57.1	57.0	56.9	56.7	56.4	56.2	56.1	56.0	56.1
7 - γ Cas.	<i>Navi</i>		*2.3	345	38.0	38.3	38.4	38.4	38.2	37.8	37.4	37.0	36.7	36.6	36.8
8 - β And.	<i>Mirach</i>		2.1	342	23.6	23.7	23.8	23.7	23.6	23.4	23.1	22.8	22.6	22.6	22.6
9 - α Eri.	<i>Achernar</i>		0.5	335	27.4	27.7	27.9	27.9	27.8	27.6	27.3	26.9	26.6	26.5	26.7
10 - γ And.	<i>Almak</i>		2.3	328	49.9	50.1	50.2	50.2	50.1	49.9	49.6	49.3	49.1	48.9	48.9
12 - α Ari.	<i>Hamal</i>		2.0	328	1.8	1.9	2.0	2.0	2.0	1.8	1.5	1.3	1.1	0.9	0.9
11 - α UMi.	Polaris		2.0	317	65.9	79.3	90.6	97.2	96.0	87.5	74.4	59.1	45.3	35.5	31.1
13 - θ Eri.	<i>Acamar</i>		3.3	315	18.9	19.1	19.2	19.3	19.3	19.2	19.0	18.7	18.5	18.3	18.3
14 - α Cet.	<i>Menkar</i>		2.5	314	15.9	16.0	16.1	16.2	16.2	16.0	15.8	15.6	15.4	15.2	15.1
15 - β Per.	<i>Algol</i>		*2.8	312	45.1	45.2	45.4	45.5	45.4	45.3	45.0	44.7	44.4	44.2	44.1
16 - α Per.	<i>Mirfak</i>		1.8	308	41.5	41.7	41.9	42.0	42.0	41.8	41.5	41.1	40.8	40.6	40.4
17 - η Tau.	<i>Alcyone</i>		2.9	302	56.4	56.5	56.7	56.8	56.7	56.6	56.4	56.2	55.9	55.7	55.5
18 - γ Eri.	<i>Zaurak</i>		3.0	300	20.7	20.8	20.9	21.0	21.0	20.9	20.8	20.5	20.3	20.2	20.0
19 - α Tau.	<i>Aldebaran</i>		0.9	290	50.2	50.3	50.5	50.6	50.6	50.5	50.4	50.1	49.9	49.7	49.5
20 - β Ori.	<i>Rigel</i>		0.1	281	12.7	12.8	12.9	13.0	13.1	13.1	12.9	12.7	12.5	12.3	12.1
21 - α Aur.	<i>Capella</i>		0.1	280	35.5	35.6	35.8	35.9	36.0	36.0	35.8	35.5	35.2	34.9	34.6
22 - γ Ori.	<i>Bellatrix</i>		1.6	278	32.8	32.8	33.0	33.1	33.1	33.1	33.0	32.8	32.5	32.3	32.2
23 - β Tau.	<i>Elnath</i>		1.7	278	13.5	13.6	13.7	13.9	13.9	13.9	13.7	13.5	13.3	13.0	12.7
24 - δ Ori.	<i>Mintaka</i>		2.2	276	50.1	50.2	50.3	50.4	50.5	50.5	50.3	50.1	49.9	49.7	49.5
25 - ϵ Ori.	<i>Alnilam</i>		1.7	275	47.1	47.1	47.2	47.4	47.4	47.4	47.3	47.1	46.9	46.7	46.5
26 - ζ Ori.	<i>Alnitak</i>		2.1	274	38.9	39.0	39.1	39.2	39.3	39.3	39.2	39.0	38.8	38.6	38.4
27 - κ Ori.	<i>Saiph</i>		2.1	272	54.5	54.6	54.7	54.8	54.9	54.9	54.8	54.6	54.4	54.2	54.0
28 - α Ori.	<i>Betelgeuse</i>		*0.9	271	2.0	2.1	2.2	2.3	2.4	2.4	2.3	2.1	1.9	1.7	1.5
29 - β Aur.	<i>Menkalinan</i>		1.9	269	53.0	53.1	53.2	53.4	53.5	53.5	53.4	53.1	52.8	52.5	52.2
30 - β CMa.	<i>Mirzam</i>		2.0	264	11.0	11.0	11.2	11.3	11.4	11.4	11.3	11.2	11.0	10.8	10.6
31 - α Car.	<i>Canopus</i>		-0.7	263	56.0	56.2	56.4	56.7	56.9	57.0	57.0	56.8	56.5	56.2	55.9
32 - γ Gem.	<i>Alhena</i>		1.9	260	23.2	23.3	23.4	23.5	23.6	23.6	23.5	23.4	23.1	22.9	22.7
33 - α CMa.	<i>Sirius</i>		-1.5	258	34.2	34.3	34.4	34.5	34.7	34.7	34.6	34.5	34.3	34.1	33.8
34 - ϵ CMa.	<i>Adhara</i>		1.5	255	12.9	13.0	13.1	13.2	13.4	13.4	13.4	13.3	13.1	12.8	12.6
35 - δ CMa.	<i>Wezen</i>		1.9	252	46.2	46.2	46.3	46.5	46.6	46.7	46.6	46.5	46.3	46.1	45.9
36 - η CMa.	<i>Aludra</i>		2.5	248	50.8	50.8	51.0	51.1	51.3	51.3	51.3	51.2	51.0	50.8	50.5
37 - α Gem.	<i>Castor</i>		2.0	246	8.8	8.8	8.8	9.0	9.1	9.2	9.1	9.0	8.8	8.5	8.3
38 - α CMi.	<i>Procyon</i>		0.4	244	60.4	60.4	60.5	60.6	60.7	60.8	60.7	60.6	60.4	60.2	60.0
39 - β Gem.	<i>Pollux</i>		1.1	243	28.5	28.5	28.6	28.7	28.9	28.9	28.9	28.7	28.6	28.3	28.1
40 - ζ Puppis			2.3	238	59.2	59.2	59.4	59.5	59.7	59.8	59.8	59.8	59.6	59.4	58.8
41 - γ Vel.	<i>Regor</i>		1.8	237	30.8	30.8	30.9	31.1	31.3	31.5	31.5	31.4	31.2	31.0	30.7
42 - ϵ Car.	<i>Avior</i>		1.8	234	17.8	17.8	18.0	18.3	18.6	18.8	18.9	18.9	18.7	18.3	17.9
43 - δ Velorum			2.0	228	43.7	43.7	43.8	44.0	44.3	44.5	44.6	44.6	44.4	44.1	43.8
44 - ζ Hydrae			3.1	225	59.0	58.9	58.9	59.0	59.1	59.2	59.2	59.2	59.0	58.9	58.6
45 - λ Vel.	<i>Suhail</i>		2.2	222	52.7	52.7	52.7	52.9	53.1	53.2	53.3	53.3	53.2	53.0	52.7
46 - β Car.	<i>Miaplacidus</i>		1.7	221	39.0	39.0	39.2	39.6	40.0	40.4	40.7	40.7	40.5	40.2	39.6
47 - ι Car.	<i>Aspidiske</i>		2.5	220	38.0	37.9	38.0	38.3	38.6	38.8	39.0	39.0	38.9	38.6	38.2
48 - α Lyncis			3.1	219	32.6	32.5	32.5	32.6	32.7	32.8	32.9	32.8	32.7	32.5	32.2
49 - α Hya.	<i>Alphard</i>		2.0	217	56.8	56.7	56.7	56.8	56.9	57.0	57.0	57.0	56.9	56.7	56.5
50 - α Leo.	<i>Regulus</i>		1.4	207	44.3	44.2	44.1	44.2	44.3	44.4	44.4	44.4	44.4	44.2	44.0

* Estrella de magnitud variable. Se presenta el valor promedio.

ESTRELLAS, 2012

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POSICIONES APARENTES

DECLINACIÓN

N°	NOMBRE	Mag	Ene	Feb	Mar	Abr	May	Jun	Jul	Agt	Sep	Oct	Nov	Dic
1 - α And.	<i>Alpheratz</i>	2.1	+29 [°]	9.6	9.6	9.5	9.4	9.4	9.5	9.6	9.7	9.8	9.9	10.0
2 - β Cas.	<i>Caph</i>	2.3	+59	13.3	13.2	13.1	13.0	12.9	12.9	13.0	13.1	13.3	13.5	13.6
3 - γ Peg.	<i>Algenib</i>	2.8	+15	15.2	15.1	15.1	15.1	15.1	15.2	15.3	15.4	15.5	15.5	15.5
4 - α Phe.	<i>Ankaa</i>	2.4	-42	14.6	14.5	14.4	14.3	14.1	14.0	13.9	13.9	14.0	14.1	14.2
5 - α Cas.	<i>Schedar</i>	2.2	+56	36.5	36.5	36.3	36.2	36.1	36.1	36.2	36.3	36.5	36.6	36.8
6 - β Cet.	<i>Diphda</i>	2.0	-17	55.3	55.3	55.2	55.2	55.1	54.9	54.8	54.8	54.8	54.9	55.0
7 - γ Cas.	<i>Navi</i>	*2.3	+60	47.3	47.2	47.1	46.9	46.9	46.8	46.9	47.0	47.2	47.3	47.5
8 - β And.	<i>Mirach</i>	2.1	+35	41.3	41.2	41.2	41.1	41.0	41.1	41.1	41.2	41.4	41.5	41.6
9 - α Eri.	<i>Achernar</i>	0.5	-57	10.8	10.7	10.6	10.5	10.3	10.1	10.0	10.0	10.1	10.2	10.4
10 - γ And.	<i>Almak</i>	2.3	+42	23.5	23.4	23.4	23.3	23.2	23.2	23.3	23.4	23.5	23.6	23.7
12 - α Ari.	<i>Hamal</i>	2.0	+23	31.3	31.2	31.2	31.2	31.1	31.2	31.2	31.3	31.4	31.5	31.5
11 - α UMi.	Polaris	2.0	+89	19.3	19.3	19.3	19.1	19.0	18.8	18.8	18.8	18.9	19.0	19.2
13 - θ Eri.	<i>Acamar</i>	3.3	-40	15.6	15.6	15.6	15.5	15.3	15.2	15.0	15.0	15.0	15.1	15.2
14 - α Cet.	<i>Menkar</i>	2.5	+4	8.2	8.2	8.1	8.2	8.2	8.3	8.3	8.4	8.5	8.5	8.5
15 - β Per.	<i>Algol</i>	*2.8	+41	0.3	0.3	0.2	0.1	0.1	0.0	0.0	0.1	0.2	0.3	0.4
16 - α Per.	<i>Mirfak</i>	1.8	+49	54.4	54.4	54.4	54.3	54.2	54.1	54.1	54.1	54.2	54.3	54.4
17 - η Tau.	<i>Alcyone</i>	2.9	+24	8.6	8.6	8.5	8.5	8.5	8.5	8.5	8.6	8.6	8.7	8.7
18 - γ Eri.	<i>Zaurak</i>	3.0	-13	28.6	28.7	28.7	28.6	28.5	28.4	28.3	28.2	28.2	28.2	28.3
19 - α Tau.	<i>Aldebaran</i>	0.9	+16	32.0	31.9	31.9	31.9	31.9	31.9	32.0	32.0	32.0	32.1	32.1
20 - β Ori.	<i>Rigel</i>	0.1	-8	11.4	11.5	11.5	11.5	11.4	11.3	11.3	11.2	11.1	11.2	11.3
21 - α Aur.	<i>Capella</i>	0.1	+46	0.6	0.7	0.7	0.6	0.6	0.5	0.4	0.4	0.4	0.4	0.5
22 - γ Ori.	<i>Bellatrix</i>	1.6	+6	21.5	21.5	21.5	21.5	21.5	21.5	21.6	21.6	21.7	21.7	21.6
23 - β Tau.	<i>Elnath</i>	1.7	+28	37.0	37.0	37.0	37.0	37.0	36.9	36.9	36.9	36.9	36.9	37.0
24 - δ Ori.	<i>Mintaka</i>	2.2	-0	17.6	17.6	17.6	17.6	17.6	17.5	17.5	17.4	17.4	17.4	17.5
25 - ϵ Ori.	<i>Alnilam</i>	1.7	-1	11.8	11.9	11.9	11.9	11.8	11.8	11.7	11.6	11.6	11.6	11.7
26 - ζ Ori.	<i>Alnitak</i>	2.1	-1	56.3	56.4	56.4	56.4	56.4	56.3	56.2	56.2	56.1	56.1	56.2
27 - κ Ori.	<i>Saiph</i>	2.1	-9	40.1	40.2	40.2	40.2	40.1	40.0	40.0	39.9	39.8	39.9	40.0
28 - α Ori.	<i>Betelgeuse</i>	*0.9	+7	24.4	24.4	24.4	24.4	24.4	24.4	24.5	24.5	24.5	24.5	24.4
29 - β Aur.	<i>Menkalinan</i>	1.9	+44	56.8	56.9	56.9	56.9	56.9	56.8	56.7	56.7	56.7	56.7	56.7
30 - β CMa.	<i>Mirzam</i>	2.0	-17	57.9	58.0	58.0	58.0	58.0	57.9	57.8	57.7	57.6	57.7	57.9
31 - α Car.	<i>Canopus</i>	-0.7	-52	42.3	42.5	42.5	42.5	42.5	42.3	42.2	42.0	41.9	42.0	42.1
32 - γ Gem.	<i>Alhena</i>	1.9	+16	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.1	23.1
33 - α CMa.	<i>Sirius</i>	-1.5	-16	44.1	44.2	44.3	44.3	44.3	44.2	44.1	44.0	43.9	43.9	44.0
34 - ϵ CMa.	<i>Adhara</i>	1.5	-28	59.5	59.6	59.7	59.7	59.6	59.5	59.4	59.3	59.2	59.3	59.5
35 - δ CMa.	<i>Wezen</i>	1.9	-26	24.9	25.1	25.1	25.1	25.1	25.0	24.9	24.8	24.7	24.7	24.8
36 - η CMa.	<i>Aludra</i>	2.5	-29	19.8	19.9	20.0	20.0	20.0	19.9	19.8	19.6	19.6	19.6	19.8
37 - α Gem.	<i>Castor</i>	2.0	+31	51.5	51.6	51.6	51.6	51.6	51.6	51.5	51.5	51.4	51.4	51.3
38 - α CMi.	<i>Procyon</i>	0.4	+5	11.4	11.4	11.4	11.4	11.4	11.4	11.5	11.5	11.5	11.5	11.4
39 - β Gem.	<i>Pollux</i>	1.1	+27	59.6	59.6	59.7	59.7	59.7	59.7	59.6	59.6	59.6	59.5	59.5
40 - ζ Puppis		2.3	-40	2.4	2.5	2.6	2.7	2.7	2.6	2.5	2.3	2.2	2.2	2.3
41 - γ Vel.	<i>Regor</i>	1.8	-47	22.5	22.6	22.8	22.8	22.8	22.7	22.6	22.4	22.3	22.3	22.5
42 - ϵ Car.	<i>Avior</i>	1.8	-59	33.0	33.2	33.3	33.4	33.4	33.3	33.2	33.0	32.9	32.8	32.9
43 - δ Velorum		2.0	-54	45.3	45.5	45.6	45.7	45.7	45.6	45.5	45.4	45.2	45.2	45.3
44 - ζ Hydrae		3.1	+5	53.8	53.7	53.7	53.7	53.7	53.7	53.8	53.8	53.8	53.8	53.7
45 - λ Vel.	<i>Suhail</i>	2.2	-43	29.0	29.1	29.3	29.4	29.4	29.3	29.2	29.1	29.0	28.9	28.9
46 - β Car.	<i>Miaplacidus</i>	1.7	-69	46.0	46.2	46.4	46.5	46.5	46.5	46.4	46.2	46.1	46.0	46.1
47 - ι Car.	<i>Aspidiske</i>	2.5	-59	19.6	19.8	19.9	20.1	20.1	20.0	19.9	19.8	19.6	19.6	19.7
48 - α Lyncis		3.1	+34	20.2	20.2	20.3	20.3	20.4	20.4	20.3	20.3	20.2	20.1	20.0
49 - α Hya.	<i>Alphard</i>	2.0	-8	42.8	42.9	43.0	43.0	43.0	43.0	42.9	42.9	42.8	42.8	42.9
50 - α Leo.	<i>Regulus</i>	1.4	+11	54.3	54.2	54.2	54.2	54.3	54.3	54.3	54.3	54.3	54.2	54.1

* Estrella de magnitud variable. Se presenta el valor promedio.

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ESTRELLAS, 2012
POSICIONES APARENTES

A.S.★

N°	NOMBRE	Mag	Ene	Feb	Mar	Abr	May	Jun	Jul	Agt	Sep	Oct	Nov	Dic
51 - μ Velorum		2.8	198	10.0	9.8	9.8	9.8	10.0	10.2	10.3	10.4	10.4	9.9	9.6
52 - ν Hydrae		3.1	197	26.2	26.1	26.0	26.0	26.1	26.2	26.3	26.3	26.2	26.0	25.7
53 - β UMa. <i>Merak</i>		2.4	194	21.0	20.7	20.6	20.7	20.9	21.1	21.3	21.4	21.2	20.9	20.6
54 - α UMa. <i>Dubhe</i>		1.8	193	52.4	52.1	52.0	52.1	52.4	52.7	52.9	53.0	52.8	52.5	52.1
55 - β Leo. <i>Denebola</i>		2.1	182	34.5	34.3	34.2	34.2	34.3	34.4	34.4	34.5	34.4	34.3	34.0
56 - γ Crv. <i>Gienah</i>		2.6	175	53.2	53.0	52.9	52.8	52.9	53.0	53.0	53.1	53.1	52.9	52.7
57 - α Cru. <i>Acrux</i>		1.3	173	10.3	9.9	9.7	9.6	9.7	9.9	10.2	10.4	10.6	10.5	9.8
58 - γ Cru. <i>Gacrux</i>		*1.6	172	1.9	1.5	1.4	1.3	1.4	1.5	1.7	1.9	2.0	1.8	1.4
59 - γ Cen. <i>Muhli-fain</i>		2.4	169	26.9	26.6	26.4	26.3	26.4	26.5	26.6	26.8	26.9	26.8	26.3
60 - β Cru. <i>Mimosa</i>		1.3	167	53.0	52.6	52.4	52.3	52.4	52.6	52.8	53.0	53.1	52.9	52.5
61 - ε UMa. <i>Alioth</i>		1.8	166	21.4	21.1	20.9	20.8	20.9	21.1	21.3	21.5	21.6	21.5	21.2
62 - α CVn. <i>Cor Caroli</i>		2.9	165	50.9	50.6	50.5	50.4	50.5	50.6	50.7	50.8	50.9	50.8	50.5
63 - ε Vir. <i>Vindemiatrix</i>		2.8	164	18.1	17.8	17.7	17.6	17.6	17.7	17.8	17.9	17.9	17.8	17.6
64 - ζ UMa. <i>Mizar</i>		2.3	158	53.7	53.4	53.2	53.1	53.1	53.3	53.5	53.7	53.9	53.8	53.6
65 - α Vir. <i>Spica</i>		1.0	158	32.3	32.0	31.9	31.8	31.8	31.8	31.9	32.0	32.1	32.0	31.8
66 - η UMa. <i>Alkaid</i>		1.9	152	59.7	59.4	59.1	59.0	59.0	59.2	59.3	59.5	59.7	59.8	59.5
67 - β Cen. <i>Hadard</i>		0.6	148	49.4	49.0	48.6	48.4	48.4	48.5	48.6	48.9	49.1	49.2	48.7
68 - θ Cen. <i>Menkent</i>		2.1	148	8.8	8.5	8.3	8.2	8.1	8.1	8.2	8.3	8.5	8.5	8.2
69 - α Boo. <i>Arcturus</i>		0.0	145	56.7	56.4	56.3	56.1	56.1	56.1	56.2	56.3	56.4	56.5	56.3
70 - α Cen. <i>Rigel Kent</i>		0.0	139	53.4	52.9	52.6	52.3	52.2	52.3	52.5	52.7	53.0	53.1	52.7
71 - α Lib. <i>Zubenelgenubi</i>		2.8	137	6.6	6.4	6.2	6.0	5.9	5.9	6.0	6.1	6.2	6.3	6.1
72 - β UMi. <i>Kochab</i>		2.1	137	20.3	19.7	19.1	18.8	18.8	19.1	19.6	20.1	20.7	21.1	21.0
73 - β Lib. <i>Zubeneschamali</i>		2.6	130	35.0	34.8	34.6	34.4	34.3	34.3	34.3	34.4	34.5	34.6	34.5
74 - α CrB. <i>Alphecca</i>		2.2	126	12.0	11.8	11.6	11.4	11.3	11.3	11.3	11.5	11.6	11.7	11.6
75 - α Ser. <i>Unukalhai</i>		2.7	123	47.0	46.8	46.6	46.4	46.3	46.2	46.3	46.4	46.5	46.6	46.5
76 - α Sco. <i>Antares</i>		*1.4	112	27.7	27.5	27.2	27.0	26.8	26.8	26.8	26.8	27.0	27.1	27.0
77 - α TrA. <i>Atria</i>		1.9	107	30.9	30.3	29.8	29.2	28.8	28.6	28.7	28.9	29.3	29.7	29.7
78 - ε Scorpii		2.3	107	15.8	15.5	15.3	15.0	14.8	14.7	14.7	14.8	14.9	15.1	15.0
79 - η Oph. <i>Sabik</i>		2.6	102	13.6	13.4	13.2	12.9	12.8	12.6	12.6	12.7	12.8	12.9	12.9
80 - α Her. <i>Rasalgethi</i>		3.5	101	12.1	11.9	11.7	11.5	11.3	11.2	11.2	11.3	11.4	11.5	11.6
81 - λ Sco. <i>Shaula</i>		1.6	96	23.6	23.4	23.1	22.8	22.6	22.4	22.4	22.4	22.6	22.8	22.8
82 - α Oph. <i>Rasalhague</i>		2.1	96	7.7	7.5	7.3	7.0	6.9	6.7	6.7	6.8	6.9	7.1	7.1
83 - θ Scorpii		1.9	95	27.3	27.0	26.7	26.4	26.1	26.0	25.9	26.0	26.2	26.3	26.4
84 - γ Dra. <i>Eltanin</i>		2.2	90	47.1	46.9	46.6	46.3	46.0	45.9	45.9	46.1	46.3	46.6	46.8
85 - ε Sgr. <i>Kaus Australis</i>		1.9	83	45.5	45.3	45.0	44.8	44.5	44.3	44.2	44.3	44.4	44.6	44.7
86 - α Lyr. <i>Vega</i>		0.0	80	40.0	39.9	39.7	39.4	39.2	39.0	39.0	39.0	39.2	39.4	39.6
87 - σ Sgr. <i>Nunki</i>		2.0	75	59.9	59.7	59.5	59.2	59.0	58.8	58.7	58.7	58.8	59.0	59.1
88 - α Aql. <i>Altair</i>		0.8	62	9.5	9.4	9.3	9.0	8.8	8.6	8.5	8.5	8.6	8.7	8.9
89 - γ Cyg. <i>Sadr</i>		2.2	54	20.3	20.2	20.1	19.8	19.6	19.3	19.2	19.2	19.3	19.4	19.7
90 - α Pav. <i>Peacock</i>		1.9	53	21.4	21.2	21.0	20.6	20.2	19.9	19.6	19.5	19.6	19.9	20.3
91 - α Cyg. <i>Deneb</i>		1.3	49	32.6	32.6	32.4	32.2	31.9	31.6	31.4	31.4	31.5	31.7	31.9
92 - α Cep. <i>Alderamin</i>		2.4	40	17.5	17.5	17.3	17.0	16.6	16.2	16.0	15.9	16.0	16.2	16.9
93 - ε Peg. <i>Enif</i>		*2.1	33	48.4	48.3	48.3	48.1	47.9	47.6	47.4	47.3	47.3	47.4	47.6
94 - δ Cap. <i>DenebAlgedi</i>		2.9	33	4.5	4.4	4.3	4.2	3.9	3.7	3.5	3.4	3.4	3.4	3.6
95 - α Gru. <i>AlNa'ir</i>		1.7	27	45.3	45.3	45.2	45.0	44.7	44.4	44.1	44.0	43.9	44.0	44.4
96 - β Gruis		*2.1	19	9.4	9.4	9.3	9.2	8.9	8.6	8.3	8.1	8.0	8.1	8.4
97 - α PsA. <i>Fomalhaut</i>		1.2	15	25.3	25.3	25.3	25.1	24.9	24.7	24.4	24.2	24.2	24.3	24.4
98 - β Peg. <i>Scheat</i>		*2.4	13	54.6	54.6	54.6	54.4	54.2	54.0	53.8	53.6	53.5	53.6	53.7
99 - α Peg. <i>Markab</i>		2.5	13	39.5	39.6	39.5	39.4	39.2	39.0	38.7	38.6	38.5	38.6	38.7

* Estrella de magnitud variable. Se presenta el valor promedio.

ESTRELLAS, 2012 379
POSICIONES APARENTES DECLINACIÓN

N°	NOMBRE	Mag	Ene	Feb	Mar	Abr	May	Jun	Jul	Agt	Sep	Oct	Nov	Dic
51 - μ	Velorum	2.8	-49°	29.0	29.2	29.4	29.5	29.6	29.6	29.5	29.4	29.3	29.2	29.2
52 - ν	Hydrae	3.1	-16	15.5	15.6	15.7	15.8	15.8	15.8	15.7	15.6	15.6	15.6	15.7
53 - β	UMa. Merak	2.4	+56	18.7	18.7	18.8	19.0	19.1	19.1	19.0	18.9	18.8	18.6	18.4
54 - α	UMa. Dubhe	1.8	+61	40.7	40.8	40.9	41.1	41.2	41.2	41.1	41.0	40.8	40.7	40.4
55 - β	Leo. Denebola	2.1	+14	30.0	30.0	30.0	30.0	30.1	30.1	30.1	30.1	30.0	29.9	29.8
56 - γ	Crv. Gienah	2.6	-17	36.6	36.7	36.8	36.9	36.9	36.9	36.8	36.8	36.7	36.7	36.8
57 - α	Cru. Acrux	1.3	-63	9.8	9.9	10.1	10.3	10.4	10.5	10.5	10.4	10.3	10.1	10.0
58 - γ	Cru. Gacrux	*1.6	-57	10.7	10.8	11.0	11.2	11.3	11.3	11.3	11.1	11.0	10.9	10.9
59 - γ	Cen. Muhlifain	2.4	-49	1.4	1.6	1.7	1.9	2.0	2.0	1.9	1.8	1.7	1.7	1.7
60 - β	Cru. Mimosa	1.3	-59	45.1	45.2	45.4	45.6	45.7	45.8	45.7	45.6	45.5	45.4	45.3
61 - ε	UMa. Alioth	1.8	+55	53.3	53.3	53.4	53.5	53.6	53.7	53.7	53.5	53.4	53.2	53.1
62 - α	CVn. CorCaroli	2.9	+38	14.9	14.8	14.9	15.0	15.1	15.2	15.2	15.1	15.0	14.8	14.7
63 - ε	Vir. Vindemiatrix	2.8	+10	53.5	53.4	53.4	53.4	53.5	53.5	53.6	53.5	53.5	53.4	53.3
64 - ζ	UMa. Mizar	2.3	+54	51.4	51.4	51.4	51.6	51.7	51.8	51.8	51.7	51.5	51.3	51.2
65 - α	Vir. Spica	1.0	-11	13.5	13.6	13.7	13.7	13.7	13.7	13.6	13.6	13.6	13.6	13.7
66 - η	UMa. Alkaid	1.9	+49	14.8	14.8	14.9	15.0	15.1	15.2	15.3	15.3	15.2	15.0	14.9
67 - β	Cen. Hadar	0.6	-60	25.6	25.7	25.8	26.0	26.1	26.2	26.3	26.3	26.2	26.1	25.9
68 - θ	Cen. Menkent	2.1	-36	25.6	25.7	25.8	25.9	26.0	26.1	26.1	26.0	26.0	25.9	25.8
69 - α	Boo. Arcturus	0.0	+19	7.0	6.9	6.9	6.9	7.0	7.1	7.2	7.2	7.2	7.1	6.8
70 - α	Cen. Rigil Kent	0.0	-60	52.9	52.9	53.0	53.2	53.3	53.4	53.5	53.5	53.4	53.3	53.1
71 - α	Lib. Zubenelgenubi	2.8	-16	5.5	5.6	5.6	5.7	5.7	5.7	5.6	5.6	5.6	5.6	5.6
72 - β	UMi. Kochab	2.1	+74	6.0	6.0	6.0	6.2	6.3	6.5	6.5	6.5	6.4	6.3	5.9
73 - β	Lib. Zubeneschamali	2.6	-9	25.6	25.7	25.8	25.8	25.8	25.7	25.7	25.7	25.7	25.7	25.7
74 - α	CrB. Alphecca	2.2	+26	40.3	40.2	40.2	40.2	40.3	40.5	40.6	40.6	40.6	40.5	40.3
75 - α	Ser. Unukalhai	2.7	+6	23.2	23.1	23.1	23.1	23.2	23.2	23.3	23.3	23.3	23.3	23.2
76 - α	Sco. Antares	*1.4	-26	27.4	27.4	27.5	27.5	27.5	27.6	27.6	27.5	27.5	27.5	27.5
77 - α	TrA. Atria	1.9	-69	2.7	2.6	2.7	2.7	2.8	3.0	3.1	3.2	3.2	3.1	2.8
78 - ε	Scorpii	2.3	-34	18.8	18.8	18.8	18.8	18.9	18.9	18.9	18.9	18.9	18.9	18.8
79 - η	Oph. Sabik	2.6	-15	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3	44.3
80 - α	Her. Rasalgethi	3.5	+14	22.5	22.4	22.4	22.4	22.5	22.6	22.7	22.8	22.8	22.7	22.6
81 - λ	Sco. Shaula	1.6	-37	6.6	6.6	6.6	6.6	6.6	6.7	6.7	6.7	6.7	6.7	6.6
82 - α	Oph. Rasalhague	2.1	+12	33.1	33.0	32.9	33.0	33.1	33.2	33.3	33.3	33.4	33.3	33.2
83 - θ	Scorpii	1.9	-43	0.2	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.2
84 - γ	Dra. Eltanin	2.2	+51	29.2	29.0	29.0	29.0	29.1	29.3	29.5	29.6	29.7	29.6	29.4
85 - ε	Sgr. KausAustralis	1.9	-34	22.6	22.6	22.5	22.5	22.5	22.5	22.6	22.6	22.6	22.6	22.6
86 - α	Lyr. Vega	0.0	+38	47.7	47.6	47.5	47.5	47.6	47.8	47.9	48.1	48.1	48.1	48.0
87 - σ	Sgr. Nunki	2.0	-26	16.8	16.8	16.8	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
88 - α	Aql. Altair	0.8	+8	54.1	54.0	54.0	54.0	54.1	54.2	54.3	54.4	54.4	54.5	54.4
89 - γ	Cyg. Sadr	2.2	+40	17.9	17.7	17.6	17.6	17.7	17.8	18.0	18.1	18.2	18.3	18.2
90 - α	Pav. Peacock	1.9	-56	41.7	41.6	41.5	41.4	41.3	41.3	41.4	41.5	41.6	41.7	41.6
91 - α	Cyg. Deneb	1.3	+45	19.6	19.4	19.3	19.3	19.3	19.5	19.6	19.8	19.9	20.0	20.0
92 - α	Cep. Alderamin	2.4	+62	38.4	38.3	38.1	38.1	38.1	38.2	38.4	38.5	38.7	38.8	38.8
93 - ε	Peg. Enif	*2.1	+9	55.9	55.9	55.8	55.9	55.9	56.0	56.1	56.2	56.3	56.3	56.3
94 - δ	Cap. DenebAlgedi	2.9	-16	4.3	4.3	4.3	4.2	4.1	4.0	4.0	3.9	3.9	4.0	4.0
95 - α	Gru. AlNa'ir	1.7	-46	54.2	54.1	54.0	53.8	53.7	53.7	53.7	53.7	53.8	53.9	54.0
96 - β	Gruis	*2.1	-46	49.4	49.3	49.2	49.0	48.9	48.8	48.8	48.8	48.9	49.0	49.1
97 - α	PsA. Fomalhaut	1.2	-29	33.6	33.5	33.4	33.3	33.2	33.1	33.0	33.0	33.1	33.1	33.2
98 - β	Peg. Scheat	*2.4	+28	9.1	9.0	8.9	8.9	8.9	9.0	9.1	9.2	9.4	9.5	9.5
99 - α	Peg. Markab	2.5	+15	16.4	16.3	16.2	16.2	16.3	16.4	16.5	16.6	16.7	16.7	16.7

* Estrella de magnitud variable. Se presenta el valor promedio.

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ESTRELLAS, 2012

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

* Estrella de magnitud variable. Se presenta el valor promedio.

ESTRELLAS, 2012

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

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

Si esta corrección es mayor que el minuendo, aumentar éste en 23^h 56^m antes de aplicarla.

2ª CORRECCIÓN

Se aplicará a la hora así obtenida, para tener la hora civil del lugar del paso por otro meridiano.

Long	Corr
180 W	-2
136 W	-1
46 W	0
46 E	+1
136 W	+2
180 W	

* Estrella de magnitud variable. Se presenta el valor promedio.

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2012

TABLA I

h.L. \cap Corr.	h.L. \cap Corr.	h.L. \cap Corr.	h.L. \cap Corr.	h.L. \cap Corr.	h.L. \cap Corr.	h.L. \cap Corr.	h.L. \cap Corr.
0° 00' -30.4	26° 00' -39.3	52° 00' -40.3	78° 00' -33.1	104° 00' -19.1	130° 00' - 1.4	156° 00' +16.7	
0 30 -30.7	26 30 -39.4	52 30 -40.2	78 30 -32.8	104 30 -18.8	130 30 - 1.0	156 30 +17.0	
1 00 -30.9	27 00 -39.5	53 00 -40.1	79 00 -32.6	105 00 -18.5	131 00 - 0.7	157 00 +17.3	
1 30 -31.1	27 30 -39.6	53 30 -40.1	79 30 -32.4	105 30 -18.2	131 30 - 0.3	157 30 +17.7	
2 00 -31.4	28 00 -39.7	54 00 -40.0	80 00 -32.2	106 00 -17.9	132 00 + 0.1	158 00 +18.0	
2 30 -31.6	28 30 -39.8	54 30 -39.9	80 30 -32.0	106 30 -17.6	132 30 + 0.4	158 30 +18.3	
3 00 -31.8	29 00 -39.9	55 00 -39.8	81 00 -31.7	107 00 -17.2	133 00 + 0.8	159 00 +18.6	
3 30 -32.0	29 30 -39.9	55 30 -39.8	81 30 -31.5	107 30 -16.9	133 30 + 1.1	159 30 +18.9	
4 00 -32.3	30 00 -40.0	56 00 -39.7	82 00 -31.3	108 00 -16.6	134 00 + 1.5	160 00 +19.3	
4 30 -32.5	30 30 -40.1	56 30 -39.6	82 30 -31.1	108 30 -16.3	134 30 + 1.8	160 30 +19.6	
5 00 -32.7	31 00 -40.2	57 00 -39.5	83 00 -30.8	109 00 -15.9	135 00 + 2.2	161 00 +19.9	
5 30 -32.9	31 30 -40.2	57 30 -39.4	83 30 -30.6	109 30 -15.6	135 30 + 2.6	161 30 +20.2	
6 00 -33.1	32 00 -40.3	58 00 -39.3	84 00 -30.4	110 00 -15.3	136 00 + 2.9	162 00 +20.5	
6 30 -33.3	32 30 -40.3	58 30 -39.2	84 30 -30.1	110 30 -14.9	136 30 + 3.3	162 30 +20.8	
7 00 -33.5	33 00 -40.4	59 00 -39.1	85 00 -29.9	111 00 -14.6	137 00 + 3.6	163 00 +21.1	
7 30 -33.7	33 30 -40.5	59 30 -39.0	85 30 -29.6	111 30 -14.3	137 30 + 4.0	163 30 +21.4	
8 00 -33.9	34 00 -40.5	60 00 -38.9	86 00 -29.4	112 00 -13.9	138 00 + 4.3	164 00 +21.7	
8 30 -34.1	34 30 -40.6	60 30 -38.8	86 30 -29.1	112 30 -13.6	138 30 + 4.7	164 30 +22.0	
9 00 -34.3	35 00 -40.6	61 00 -38.6	87 00 -28.9	113 00 -13.3	139 00 + 5.0	165 00 +22.3	
9 30 -34.5	35 30 -40.6	61 30 -38.5	87 30 -28.6	113 30 -12.9	139 30 + 5.4	165 30 +22.6	
10 00 -34.7	36 00 -40.7	62 00 -38.4	88 00 -28.4	114 00 -12.6	140 00 + 5.8	166 00 +22.9	
10 30 -34.9	36 30 -40.7	62 30 -38.3	88 30 -28.1	114 30 -12.2	140 30 + 6.1	166 30 +23.2	
11 00 -35.1	37 00 -40.7	63 00 -38.2	89 00 -27.8	115 00 -11.9	141 00 + 6.5	167 00 +23.5	
11 30 -35.3	37 30 -40.8	63 30 -38.0	89 30 -27.6	115 30 -11.6	141 30 + 6.8	167 30 +23.8	
12 00 -35.4	38 00 -40.8	64 00 -37.9	90 00 -27.3	116 00 -11.2	142 00 + 7.2	168 00 +24.1	
12 30 -35.6	38 30 -40.8	64 30 -37.8	90 30 -27.1	116 30 -10.9	142 30 + 7.5	168 30 +24.4	
13 00 -35.8	39 00 -40.8	65 00 -37.6	91 00 -26.8	117 00 -10.5	143 00 + 7.9	169 00 +24.7	
13 30 -36.0	39 30 -40.9	65 30 -37.5	91 30 -26.5	117 30 -10.2	143 30 + 8.2	169 30 +24.9	
14 00 -36.1	40 00 -40.9	66 00 -37.3	92 00 -26.2	118 00 - 9.8	144 00 + 8.6	170 00 +25.2	
14 30 -36.3	40 30 -40.9	66 30 -37.2	92 30 -26.0	118 30 - 9.5	144 30 + 8.9	170 30 +25.5	
15 00 -36.5	41 00 -40.9	67 00 -37.0	93 00 -25.7	119 00 - 9.1	145 00 + 9.3	171 00 +25.8	
15 30 -36.6	41 30 -40.9	67 30 -36.9	93 30 -25.4	119 30 - 8.8	145 30 + 9.6	171 30 +26.1	
16 00 -36.8	42 00 -40.9	68 00 -36.7	94 00 -25.1	120 00 - 8.4	146 00 +10.0	172 00 +26.3	
16 30 -36.9	42 30 -40.9	68 30 -36.6	94 30 -24.8	120 30 - 8.1	146 30 +10.3	172 30 +26.6	
17 00 -37.1	43 00 -40.9	69 00 -36.4	95 00 -24.6	121 00 - 7.7	147 00 +10.6	173 00 +26.9	
17 30 -37.2	43 30 -40.9	69 30 -36.2	95 30 -24.3	121 30 - 7.4	147 30 +11.0	173 30 +27.1	
18 00 -37.4	44 00 -40.9	70 00 -36.1	96 00 -24.0	122 00 - 7.0	148 00 +11.3	174 00 +27.4	
18 30 -37.5	44 30 -40.9	70 30 -35.9	96 30 -23.7	122 30 - 6.7	148 30 +11.7	174 30 +27.7	
19 00 -37.7	45 00 -40.8	71 00 -35.7	97 00 -23.4	123 00 - 6.3	149 00 +12.0	175 00 +27.9	
19 30 -37.8	45 30 -40.8	71 30 -35.6	97 30 -23.1	123 30 - 6.0	149 30 +12.4	175 30 +28.2	
20 00 -37.9	46 00 -40.8	72 00 -35.4	98 00 -22.8	124 00 - 5.6	150 00 +12.7	176 00 +28.5	
20 30 -38.1	46 30 -40.8	72 30 -35.2	98 30 -22.5	124 30 - 5.3	150 30 +13.0	176 30 +28.7	
21 00 -38.2	47 00 -40.7	73 00 -35.0	99 00 -22.2	125 00 - 4.9	151 00 +13.4	177 00 +29.0	
21 30 -38.3	47 30 -40.7	73 30 -34.8	99 30 -21.9	125 30 - 4.6	151 30 +13.7	177 30 +29.2	
22 00 -38.5	48 00 -40.7	74 00 -34.7	100 00 -21.6	126 00 - 4.2	152 00 +14.0	178 00 +29.5	
22 30 -38.6	48 30 -40.6	74 30 -34.5	100 30 -21.3	126 30 - 3.9	152 30 +14.4	178 30 +29.7	
23 00 -38.7	49 00 -40.6	75 00 -34.3	101 00 -21.0	127 00 - 3.5	153 00 +14.7	179 00 +30.0	
23 30 -38.8	49 30 -40.5	75 30 -34.1	101 30 -20.7	127 30 - 3.1	153 30 +15.0	179 30 +30.2	
24 00 -38.9	50 00 -40.5	76 00 -33.9	102 00 -20.4	128 00 - 2.8	154 00 +15.4	180 00 +30.4	
24 30 -39.0	50 30 -40.4	76 30 -33.7	102 30 -20.1	128 30 - 2.4	154 30 +15.7	180 30 +30.7	
25 00 -39.1	51 00 -40.4	77 00 -33.5	103 00 -19.8	129 00 - 2.1	155 00 +16.0	181 00 +30.9	
25 30 -39.2	51 30 -40.3	77 30 -33.3	103 30 -19.5	129 30 - 1.7	155 30 +16.4	181 30 +31.1	
26 00 -39.3	52 00 -40.3	78 00 -33.1	104 00 -19.1	130 00 - 1.4	156 00 +16.7	182 00 +31.4	

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2012

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TABLA I

h.L. \cap Corr.	h.L. \cap Corr.	h.L. \cap Corr.	h.L. \cap Corr.	h.L. \cap Corr.	h.L. \cap Corr.	h.L. \cap Corr.	h.L. \cap Corr.
182° 00' +31.4	208° 00' +39.7	234° 00' +40.0	260° 00' +32.2	286° 00' +17.9	312° 00' - 0.1	338° 00' -18.0	
182 30 +31.6	208 30 +39.8	234 30 +39.9	260 30 +32.0	286 30 +17.6	312 30 - 0.4	338 30 -18.3	
183 00 +31.8	209 00 +39.9	235 00 +39.8	261 00 +31.7	287 00 +17.2	313 00 - 0.8	339 00 -18.6	
183 30 +32.0	209 30 +39.9	235 30 +39.8	261 30 +31.5	287 30 +16.9	313 30 - 1.1	339 30 -18.9	
184 00 +32.3	210 00 +40.0	236 00 +39.7	262 00 +31.3	288 00 +16.6	314 00 - 1.5	340 00 -19.3	
184 30 +32.5	210 30 +40.1	236 30 +39.6	262 30 +31.1	288 30 +16.3	314 30 - 1.8	340 30 -19.6	
185 00 +32.7	211 00 +40.2	237 00 +39.5	263 00 +30.8	289 00 +15.9	315 00 - 2.2	341 00 -19.9	
185 30 +32.9	211 30 +40.2	237 30 +39.4	263 30 +30.6	289 30 +15.6	315 30 - 2.6	341 30 -20.2	
186 00 +33.1	212 00 +40.3	238 00 +39.3	264 00 +30.4	290 00 +15.3	316 00 - 2.9	342 00 -20.5	
186 30 +33.3	212 30 +40.3	238 30 +39.2	264 30 +30.1	290 30 +14.9	316 30 - 3.3	342 30 -20.8	
187 00 +33.5	213 00 +40.4	239 00 +39.1	265 00 +29.9	291 00 +14.6	317 00 - 3.6	343 00 -21.1	
187 30 +33.7	213 30 +40.5	239 30 +39.0	265 30 +29.6	291 30 +14.3	317 30 - 4.0	343 30 -21.4	
188 00 +33.9	214 00 +40.5	240 00 +38.9	266 00 +29.4	292 00 +13.9	318 00 - 4.3	344 00 -21.7	
188 30 +34.1	214 30 +40.6	240 30 +38.8	266 30 +29.1	292 30 +13.6	318 30 - 4.7	344 30 -22.0	
189 00 +34.3	215 00 +40.6	241 00 +38.6	267 00 +28.9	293 00 +13.3	319 00 - 5.0	345 00 -22.3	
189 30 +34.5	215 30 +40.6	241 30 +38.5	267 30 +28.6	293 30 +12.9	319 30 - 5.4	345 30 -22.6	
190 00 +34.7	216 00 +40.7	242 00 +38.4	268 00 +28.4	294 00 +12.6	320 00 - 5.8	346 00 -22.9	
190 30 +34.9	216 30 +40.7	242 30 +38.3	268 30 +28.1	294 30 +12.2	320 30 - 6.1	346 30 -23.2	
191 00 +35.1	217 00 +40.7	243 00 +38.2	269 00 +27.8	295 00 +11.9	321 00 - 6.5	347 00 -23.5	
191 30 +35.3	217 30 +40.8	243 30 +38.0	269 30 +27.6	295 30 +11.6	321 30 - 6.8	347 30 -23.8	
192 00 +35.4	218 00 +40.8	244 00 +37.9	270 00 +27.3	296 00 +11.2	322 00 - 7.2	348 00 -24.1	
192 30 +35.6	218 30 +40.8	244 30 +37.8	270 30 +27.1	296 30 +10.9	322 30 - 7.5	348 30 -24.4	
193 00 +35.8	219 00 +40.8	245 00 +37.6	271 00 +26.8	297 00 +10.5	323 00 - 7.9	349 00 -24.7	
193 30 +36.0	219 30 +40.9	245 30 +37.5	271 30 +26.5	297 30 +10.2	323 30 - 8.2	349 30 -24.9	
194 00 +36.1	220 00 +40.9	246 00 +37.3	272 00 +26.2	298 00 + 9.8	324 00 - 8.6	350 00 -25.2	
194 30 +36.3	220 30 +40.9	246 30 +37.2	272 30 +26.0	298 30 + 9.5	324 30 - 8.9	350 30 -25.5	
195 00 +36.5	221 00 +40.9	247 00 +37.0	273 00 +25.7	299 00 + 9.1	325 00 - 9.3	351 00 -25.8	
195 30 +36.6	221 30 +40.9	247 30 +36.9	273 30 +25.4	299 30 + 8.8	325 30 - 9.6	351 30 -26.1	
196 00 +36.8	222 00 +40.9	248 00 +36.7	274 00 +25.1	300 00 + 8.4	326 00 -10.0	352 00 -26.3	
196 30 +36.9	222 30 +40.9	248 30 +36.6	274 30 +24.8	300 30 + 8.1	326 30 -10.3	352 30 -26.6	
197 00 +37.1	223 00 +40.9	249 00 +36.4	275 00 +24.6	301 00 + 7.7	327 00 -10.6	353 00 -26.9	
197 30 +37.2	223 30 +40.9	249 30 +36.2	275 30 +24.3	301 30 + 7.4	327 30 -11.0	353 30 -27.1	
198 00 +37.4	224 00 +40.9	250 00 +36.1	276 00 +24.0	302 00 + 7.0	328 00 -11.3	354 00 -27.4	
198 30 +37.5	224 30 +40.9	250 30 +35.9	276 30 +23.7	302 30 + 6.7	328 30 -11.7	354 30 -27.7	
199 00 +37.7	225 00 +40.8	251 00 +35.7	277 00 +23.4	303 00 + 6.3	329 00 -12.0	355 00 -27.9	
199 30 +37.8	225 30 +40.8	251 30 +35.6	277 30 +23.1	303 30 + 6.0	329 30 -12.4	355 30 -28.2	
200 00 +37.9	226 00 +40.8	252 00 +35.4	278 00 +22.8	304 00 + 5.6	330 00 -12.7	356 00 -28.5	
200 30 +38.1	226 30 +40.8	252 30 +35.2	278 30 +22.5	304 30 + 5.3	330 30 -13.0	356 30 -28.7	
201 00 +38.2	227 00 +40.7	253 00 +35.0	279 00 +22.2	305 00 + 4.9	331 00 -13.4	357 00 -29.0	
201 30 +38.3	227 30 +40.7	253 30 +34.8	279 30 +21.9	305 30 + 4.6	331 30 -13.7	357 30 -29.2	
202 00 +38.5	228 00 +40.7	254 00 +34.7	280 00 +21.6	306 00 + 4.2	332 00 -14.0	358 00 -29.5	
202 30 +38.6	228 30 +40.6	254 30 +34.5	280 30 +21.3	306 30 + 3.9	332 30 -14.4	358 30 -29.7	
203 00 +38.7	229 00 +40.6	255 00 +34.3	281 00 +21.0	307 00 + 3.5	333 00 -14.7	359 00 -30.0	
203 30 +38.8	229 30 +40.5	255 30 +34.1	281 30 +20.7	307 30 + 3.1	333 30 -15.0	359 30 -30.2	
204 00 +38.9	230 00 +40.5	256 00 +33.9	282 00 +20.4	308 00 + 2.8	334 00 -15.4	360 00 -30.4	
204 30 +39.0	230 30 +40.4	256 30 +33.7	282 30 +20.1	308 30 + 2.4	334 30 -15.7		
205 00 +39.1	231 00 +40.4	257 00 +33.5	283 00 +19.8	309 00 + 2.1	335 00 -16.0		
205 30 +39.2	231 30 +40.3	257 30 +33.3	283 30 +19.5	309 30 + 1.7	335 30 -16.4		
206 00 +39.3	232 00 +40.3	258 00 +33.1	284 00 +19.1	310 00 + 1.4	336 00 -16.7		
206 30 +39.4	232 30 +40.2	258 30 +32.8	284 30 +18.8	310 30 + 1.0	336 30 -17.0		
207 00 +39.5	233 00 +40.1	259 00 +32.6	285 00 +18.5	311 00 + 0.7	337 00 -17.3		
207 30 +39.6	233 30 +40.1	259 30 +32.4	285 30 +18.2	311 30 + 0.3	337 30 -17.7		
208 00 +39.7	234 00 +40.0	260 00 +32.2	286 00 +17.9	312 00 - 0.1	338 00 -18.0		

DETERMINACIÓN DE LA LATITUD
POR LA OBSERVACIÓN DE UNA ALTURA DE LA POLAR, 2012

TABLA II

(SIEMPRE POSITIVA)

h.L. \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	0.0	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	0.1
80	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
100	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4
120	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
140	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
160	0.0	0.1	0.1	0.1	0.1	0.1	0.2	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	0.0	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	0.1
260	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2
280	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4
300	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
320	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.5
340	0.0	0.1	0.1	0.1	0.1	0.1	0.2	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

h.L. \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	+ 0.2	+ 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	+ 0.2	+ 0.2	+ 0.1	- 0.1	- 0.2	- 0.3	- 0.4	- 0.3	- 0.2	0.0	+ 0.2	+ 0.4	+ 0.5
40	+ 0.2	+ 0.2	+ 0.2	+ 0.1	- 0.1	- 0.2	- 0.3	- 0.3	- 0.3	- 0.1	+ 0.1	+ 0.2	+ 0.4
60	+ 0.1	+ 0.2	+ 0.3	+ 0.2	+ 0.1	- 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	- 0.1	+ 0.1
100	0.0	+ 0.2	+ 0.3	+ 0.4	+ 0.3	+ 0.2	0.0	- 0.2	- 0.3	- 0.3	- 0.3	- 0.2	- 0.1
120	0.0	+ 0.1	+ 0.3	+ 0.4	+ 0.4	+ 0.3	+ 0.1	- 0.1	- 0.2	- 0.3	- 0.4	- 0.3	- 0.2
140	- 0.1	+ 0.1	+ 0.2	+ 0.3	+ 0.4	+ 0.4	+ 0.2	+ 0.1	- 0.1	- 0.3	- 0.4	- 0.4	- 0.4
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	- 0.4
180	- 0.2	- 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	- 0.2	- 0.2	- 0.1	+ 0.1	+ 0.2	+ 0.3	+ 0.4	+ 0.3	+ 0.2	0.0	- 0.2	- 0.4	- 0.5
220	- 0.2	- 0.2	- 0.2	- 0.1	+ 0.1	+ 0.2	+ 0.3	+ 0.3	+ 0.3	+ 0.1	- 0.1	- 0.2	- 0.4
240	- 0.1	- 0.2	- 0.3	- 0.2	- 0.1	+ 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	+ 0.1	- 0.1
280	0.0	- 0.2	- 0.3	- 0.4	- 0.3	- 0.2	0.0	+ 0.2	+ 0.3	+ 0.3	+ 0.3	+ 0.2	+ 0.1
300	0.0	- 0.1	- 0.3	- 0.4	- 0.4	- 0.3	- 0.1	+ 0.1	+ 0.2	+ 0.3	+ 0.4	+ 0.3	+ 0.2
320	+ 0.1	- 0.1	- 0.2	- 0.3	- 0.4	- 0.4	- 0.2	- 0.1	+ 0.1	+ 0.3	+ 0.4	+ 0.4	+ 0.4
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	+ 0.4
360	+ 0.2	+ 0.1	0.0	- 0.2	- 0.3	- 0.4	- 0.4	- 0.2	- 0.1	+ 0.1	+ 0.3	+ 0.4	+ 0.5

AZIMUTES DE LA POLAR, 2012

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h.L. \cap	LATITUD												h.L. \cap
	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	
0°	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	0°
10	+0.4	+0.4	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.6	+0.7	+0.9	10
20	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.4	+0.5	+0.6	20
30	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	30
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	+0.1	40
50	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	50
60	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.5	60
70	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.6	-0.8	70
80	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-0.6	-0.7	-0.7	-0.8	-1.0	80
90	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.9	-1.0	-1.2	90
100	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.2	-1.4	100
110	-0.6	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	110
120	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.2	-1.3	-1.6	120
130	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-0.9	-1.0	-1.1	-1.2	-1.4	-1.6	130
140	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.0	-1.2	-1.3	-1.6	140
150	-0.7	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.9	-1.0	-1.1	-1.3	-1.5	150
160	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.8	-0.9	-0.9	-1.0	-1.2	-1.4	160
170	-0.5	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.8	-0.8	-0.9	-1.1	-1.3	170
180	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9	-1.1	180
190	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.6	-0.6	-0.7	-0.9	190
200	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.4	-0.4	-0.5	-0.6	200
210	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	210
220	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	220
230	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.1	+0.2	+0.2	+0.2	230
240	+0.2	+0.2	+0.2	+0.2	+0.2	+0.3	+0.3	+0.3	+0.3	+0.4	+0.4	+0.5	240
250	+0.3	+0.3	+0.3	+0.4	+0.4	+0.4	+0.4	+0.5	+0.5	+0.6	+0.6	+0.8	250
260	+0.4	+0.4	+0.4	+0.5	+0.5	+0.5	+0.5	+0.6	+0.7	+0.7	+0.8	+1.0	260
270	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.9	+1.0	+1.2	270
280	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.2	+1.4	280
290	+0.6	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	290
300	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+0.9	+1.0	+1.2	+1.3	+1.6	300
310	+0.7	+0.7	+0.7	+0.8	+0.8	+0.8	+0.9	+1.0	+1.1	+1.2	+1.4	+1.6	310
320	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.0	+1.2	+1.3	+1.6	320
330	+0.7	+0.7	+0.7	+0.7	+0.7	+0.8	+0.8	+0.9	+1.0	+1.1	+1.3	+1.5	330
340	+0.6	+0.6	+0.6	+0.7	+0.7	+0.7	+0.8	+0.9	+0.9	+1.0	+1.2	+1.4	340
350	+0.5	+0.6	+0.6	+0.6	+0.6	+0.7	+0.7	+0.8	+0.8	+0.9	+1.1	+1.3	350
360	+0.5	+0.5	+0.5	+0.5	+0.5	+0.6	+0.6	+0.6	+0.7	+0.8	+0.9	+1.1	360

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

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

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CORRECCIÓN POR RETARDO Y LONGITUD

Long.	RETARDO DIARIO																	
	5 ^m	10 ^m	15 ^m	20 ^m	25 ^m	30 ^m	35 ^m	40 ^m	45 ^m	50 ^m	55 ^m	60 ^m	65 ^m	70 ^m	75 ^m	80 ^m	85 ^m	90 ^m
°	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
10	0	0	0	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3
15	0	0	1	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4
20	0	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	5	5
25	0	1	1	1	2	2	2	3	3	3	4	4	5	5	5	6	6	6
30	0	1	1	2	2	3	3	3	4	4	5	5	5	6	6	7	7	8
35	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
40	1	1	2	2	3	3	4	4	5	6	6	7	7	8	8	9	9	10
45	1	1	2	3	3	4	4	5	6	6	7	8	8	9	9	10	11	11
50	1	1	2	3	3	4	5	6	6	7	8	8	9	10	10	11	12	13
55	1	2	2	3	4	5	5	6	7	8	8	9	10	11	11	12	13	14
60	1	2	3	3	4	5	6	7	8	8	9	10	11	12	13	13	14	15
65	1	2	3	4	5	5	6	7	8	9	10	11	12	13	14	14	15	16
70	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
75	1	2	3	4	5	6	7	8	9	10	11	13	14	15	16	17	18	19
80	1	2	3	4	6	7	8	9	10	11	12	13	14	16	17	18	19	20
85	1	2	4	5	6	7	8	9	11	12	13	14	15	17	18	19	20	21
90	1	3	4	5	6	8	9	10	11	13	14	15	16	18	19	20	21	23
95	1	3	4	5	7	8	9	11	12	13	15	16	17	18	20	21	22	24
100	1	3	4	6	7	8	10	11	13	14	15	17	18	19	21	22	24	25
105	1	3	4	6	7	9	10	12	13	15	16	18	19	20	22	23	25	26
110	2	3	5	6	8	9	11	12	14	15	17	18	20	21	23	24	26	28
115	2	3	5	6	8	10	11	13	14	16	18	19	21	22	24	26	27	29
120	2	3	5	7	8	10	12	13	15	17	18	20	22	23	25	27	28	30
125	2	3	5	7	9	10	12	14	16	17	19	21	23	24	26	28	30	31
130	2	4	5	7	9	11	13	14	16	18	20	22	23	25	27	29	31	33
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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