

TU	SOL		LUA				Lat.	CREP		SOL Nascer	LUA - Nascer					
	AHG	Dec	AHG	v	Dec	d		Ph	Naut.		Civil	24	25	26	27	
																h
DOMINGO	00	180 47.2	N20 48.7	165 12.2	10.1	N21 50.9	5.6	55.7	N 70	00 27	01 28	02 15	03 22	04 32	05 52	
	01	195 47.1	49.2	179 41.3	10.0	21 56.5	5.5	55.7	N 70	01 40	02 44	03 44	04 32	05 52		
	02	210 47.1	49.6	194 10.3	9.9	22 02.0	5.4	55.7	68	02 15	03 22	03 44	04 32	05 52		
	03	225 47.0	50.1	208 39.2	9.8	22 07.4	5.2	55.7	66	02 41	03 48	04 18	05 09	06 23		
	04	240 47.0	50.6	223 08.0	9.8	22 12.6	5.2	55.8	64	03 00	04 09	04 43	05 35	06 46		
	05	255 46.9	51.0	237 36.8	9.7	22 17.8	5.0	55.8	62	03 30	04 40	05 19	06 12	07 20		
	06	270 46.8	N20 51.5	252 05.5	9.7	N22 22.8	4.9	55.8	60	04 02	05 14	05 57	06 51	07 55		
	07	285 46.8	51.9	266 34.2	9.6	22 27.7	4.8	55.8	N 58	05 31	06 44	07 49	08 44	09 41		
	08	300 46.7	52.4	281 02.8	9.5	22 32.5	4.7	55.8	56	07 15	08 30	09 39	10 34	11 39		
	09	315 46.7	52.8	295 31.3	9.5	22 37.2	4.6	55.9	54	08 57	10 14	11 26	12 10	13 06		
	10	330 46.6	53.3	309 59.8	9.4	22 41.8	4.4	55.9	52	10 50	12 11	13 15	14 04	15 00		
	11	345 46.5	53.7	324 28.2	9.4	22 46.2	4.4	55.9	50	13 00	14 57	16 44	18 22	20 00		
	12	0 46.5	N20 54.2	338 56.6	9.3	N22 50.6	4.2	55.9	45	15 55	17 44	19 26	21 04	22 42		
	13	15 46.4	54.6	353 24.9	9.2	22 54.8	4.1	55.9	N 40	18 55	20 44	22 28	24 09	25 50		
	14	30 46.4	55.1	7 53.1	9.2	22 58.9	4.0	56.0	35	21 50	23 40	25 26	27 09	28 50		
	15	45 46.3	55.5	22 21.3	9.1	23 02.9	3.9	56.0	30	24 45	26 36	28 22	30 09	31 50		
	16	60 46.2	56.0	36 49.4	9.1	23 06.8	3.7	56.0	20	27 50	29 38	31 26	33 15	35 05		
	17	75 46.2	56.4	51 17.5	9.0	23 10.5	3.6	56.0	N 10	30 55	32 44	34 34	36 25	38 16		
	18	90 46.1	N20 56.9	65 45.5	9.0	N23 14.1	3.5	56.0	0	33 50	35 40	37 32	39 25	41 18		
	19	105 46.0	57.3	80 13.5	8.9	23 17.6	3.4	56.1	S 10	36 55	38 46	40 38	42 31	44 24		
	20	120 46.0	57.8	94 41.4	8.9	23 21.0	3.2	56.1	20	40 00	41 52	43 44	45 37	47 30		
	21	135 45.9	58.2	109 09.3	8.8	23 24.2	3.2	56.1	30	43 05	44 57	46 49	48 42	50 35		
	22	150 45.8	58.7	123 37.1	8.7	23 27.4	3.0	56.1	35	45 20	47 12	49 04	50 57	52 50		
23	165 45.8	59.1	138 04.8	8.7	23 30.4	2.8	56.1	40	47 35	49 26	51 18	53 11	55 04			
SEGUNDA	00	180 45.7	N20 59.6	152 32.5	8.7	N23 33.2	2.8	56.2	S 50	49 50	51 42	53 34	55 26	57 18		
	01	195 45.7	21 00.0	167 00.2	8.6	23 36.0	2.6	56.2	52	51 55	53 46	55 37	57 29	59 21		
	02	210 45.6	00.5	181 27.8	8.6	23 38.6	2.5	56.2	54	54 10	56 00	57 51	59 42	61 34		
	03	225 45.5	00.9	195 55.4	8.5	23 41.1	2.4	56.2	52	56 25	58 12	59 53	61 44	63 35		
	04	240 45.5	01.3	210 22.9	8.5	23 43.5	2.2	56.3	56	58 40	60 24	62 05	63 56	65 47		
	05	255 45.4	01.8	224 50.4	8.4	23 45.7	2.1	56.3	58	60 55	62 36	64 27	66 18	68 09		
	06	270 45.3	N21 02.2	239 17.8	8.4	N23 47.8	2.0	56.3	S 60	63 10	65 01	66 52	68 43	70 34		
	07	285 45.3	02.7	253 45.2	8.4	23 49.8	1.8	56.3	Lat.	SOL	CREP	LUA - Pôr				
	08	300 45.2	03.1	268 12.6	8.3	23 51.6	1.7	56.3	Pôr	Pôr	Civil	Naut.	24	25	26	27
	09	315 45.1	03.6	282 39.9	8.2	23 53.3	1.6	56.4	h m	h m	h m	h m	h m	h m	h m	h m
	10	330 45.1	04.0	297 07.1	8.3	23 54.9	1.4	56.4	N 72	00 26	01 02	02 26	02 29	03 01	04 11	05 11
	11	345 45.0	04.4	311 34.4	8.2	23 56.3	1.4	56.4	N 70	02 41	03 27	04 14	05 01	05 48	06 35	07 22
	12	0 44.9	N21 04.9	326 01.6	8.2	N23 57.7	1.1	56.4	68	04 56	05 42	06 29	07 16	08 03	08 50	09 37
	13	15 44.9	05.3	340 28.8	8.1	23 58.8	1.1	56.4	66	07 11	07 57	08 44	09 31	10 18	11 05	11 52
	14	30 44.8	05.7	354 55.9	8.1	23 59.9	0.9	56.5	64	09 26	10 12	10 59	11 46	12 33	13 20	14 07
	15	45 44.7	06.2	9 23.0	8.0	24 00.8	0.8	56.5	62	11 41	12 27	13 14	14 01	14 48	15 35	16 22
	16	60 44.7	06.6	23 50.0	8.1	24 01.6	0.6	56.5	60	14 06	14 52	15 39	16 26	17 13	18 00	18 47
	17	75 44.6	07.0	38 17.1	8.0	24 02.2	0.5	56.5	N 58	16 31	17 17	18 04	18 51	19 38	20 25	21 12
	18	90 44.5	N21 07.5	52 44.1	8.0	N24 02.7	0.4	56.5	56	19 06	19 52	20 39	21 26	22 13	23 00	23 47
	19	105 44.5	07.9	67 11.1	7.9	24 03.1	0.2	56.6	54	21 21	22 07	22 54	23 41	24 28	25 15	26 02
	20	120 44.4	08.3	81 38.0	7.9	24 03.3	0.1	56.6	52	23 36	24 22	25 09	25 56	26 43	27 30	28 17
	21	135 44.3	08.8	96 04.9	7.9	24 03.4	0.0	56.6	50	25 51	26 37	27 24	28 11	28 98	29 05	29 52
	22	150 44.2	09.2	110 31.8	7.9	24 03.4	0.2	56.6	50	28 06	28 52	29 39	30 26	31 13	32 00	32 47
23	165 44.2	09.6	124 58.7	7.9	24 03.2	0.3	56.7	45	30 21	31 07	31 54	32 41	33 28	34 15	35 02	
TERÇA	00	180 44.1	N21 10.1	139 25.6	7.8	N24 02.9	0.5	56.7	N 40	32 36	33 22	34 09	34 56	35 43	36 30	
	01	195 44.0	10.5	153 52.4	7.8	24 02.4	0.5	56.7	35	34 51	35 37	36 24	37 11	37 98	38 05	
	02	210 44.0	10.9	168 19.2	7.8	24 01.9	0.8	56.7	30	37 06	37 52	38 39	39 26	40 13	41 00	
	03	225 43.9	11.3	182 46.0	7.8	24 01.1	0.8	56.7	20	39 21	40 07	40 54	41 41	42 28	43 15	
	04	240 43.8	11.8	197 12.8	7.8	24 00.3	1.0	56.8	N 10	41 36	42 22	43 09	43 56	44 43	45 30	
	05	255 43.8	12.2	211 39.6	7.7	23 59.3	1.2	56.8	0	43 51	44 37	45 24	46 11	46 98	47 05	
	06	270 43.7	N21 12.6	226 06.3	7.7	N23 58.1	1.3	56.8	S 10	46 06	46 52	47 39	48 26	49 13	50 00	
	07	285 43.6	13.1	240 33.0	7.8	23 56.8	1.4	56.8	20	48 21	49 07	49 54	50 41	51 28	52 15	
	08	300 43.5	13.5	254 59.8	7.7	23 55.4	1.5	56.8	30	50 36	51 22	52 09	52 56	53 43	54 30	
	09	315 43.5	13.9	269 26.5	7.7	23 53.9	1.7	56.9	35	52 51	53 37	54 24	55 11	55 98	56 05	
	10	330 43.4	14.3	283 53.2	7.7	23 52.2	1.9	56.9	40	55 06	55 52	56 39	57 26	58 13	59 00	
	11	345 43.3	14.7	298 19.9	7.6	23 50.3	1.9	56.9	45	57 21	58 07	58 54	59 41	60 28	61 15	
	12	0 43.3	N21 15.2	312 46.5	7.7	N23 48.4	2.1	56.9	S 50	59 36	60 22	61 09	61 56	62 43	63 30	
	13	15 43.2	15.6	327 13.2	7.7	23 46.3	2.3	57.0	52	61 51	62 37	63 24	64 11	64 98	65 05	
	14	30 43.1	16.0	341 39.9	7.7	23 44.0	2.4	57.0	54	64 06	64 52	65 39	66 26	67 13	68 00	
	15	45 43.0	16.4	356 06.6	7.6	23 41.6	2.5	57.0	56	66 21	67 07	67 54	68 41	69 28	70 15	
	16	60 43.0	16.9	10 33.2	7.7	23 39.1	2.7	57.0	58	68 36	69 22	70 09	70 56	71 43	72 30	
	17	75 42.9	17.3	24 59.9	7.7	23 36.4	2.8	57.0	S 60	70 51	71 37	72 24	73 11	73 98	74 05	
	18	90 42.8	N21 17.7	39 26.6	7.6	N23 33.6	2.9	57.1	Dia	SOL	LUA					
	19	105 42.8	18.1	53 53.2	7.7	23 30.7	3.1	57.1	ET	(+)	Pass	Pass Merid	Idade	Fase		
	20	120 42.7	18.5	68 19.9	7.7	23 27.6	3.2	57.1	00h	12h	Merid	Sup	Inf			
	21	135 42.6	18.9	82 46.6	7.7	23 24.4	3.4	57.1	d	m s	m s	h m	h m	d	%	
	22	150 42.5	19.4	97 13.3	7.6	23 21.0	3.5	57.2	24	03 09	03 06	11 57	13 27	01 01	02 3	
23	165 42.5	19.8	111 39.9	7.7	N23 17.5	3.6	57.2	25	03 03	03 00	11 57	14 21	01 54	03 8		
	SD 15.8	d 0.4	SD 15.2	15.4	15.5			26	02 57	02 53	11 57	15 16	02 49	04 14		